The Input/Output Definition File (IODF)

is a critical *Control Point*

in the management of the IBM z/Series Platform.

IODF Explorer

Release 4.0

USER GUIDE

Contact us for additional information:

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Rev: 2009-04-24

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➢ Recent Enhancements to the IODF Explorer

- Processor Utilization Reports that remove all the guesswork, making assignments clear and easily understood;
- Operation Manager's Reports that will help to prevent confusion at the time of z/OS system initialization;
- A Group Compare function that identifies changes between elements within different IODFs;
- A Partition Compare function that provides change analysis at a more granular "partition" level;
- Users can select either a Summary or Detail Report for an individual target. This function is also available for comparing OSCP targets;
- The user interface has been enhanced to provide additional display capacity and selection options. This will allow users with larger IODF configurations to mix and match up to 48 OSCP and 48 IOCP targets as needed when using enhanced analysis, worksheet, search and compare functions;
- The FICON/ESCON Switch interface has been enhanced to include new worksheet, search and compare functions, including full mapping of the switch configuration. New analytic functions have been added and are designed to report on component usage: LISTPORT, LISTCHIP, LISTCTLU and LISTIODU and component availability: OPENPORT, OPENCHIP, OPENCTLU and OPENIODU;
- Address Compare has been added to already existing Element, Group, Device, and Partition Compare functions;
- New analytic functions have been added to the I/O Device Search Interface. "FullPath" allows users to trace connectivity from a specified device through the structure to the CHPID. "CandList" allows users to have a precise list of devices that are accessible by partition. These new tools have been designed to assist hardware planners in their examination of I/O Device connectivity across their entire z/Series Hardware Platform;
- Partition Inspection provides validation of IPL Integrity for any partition from within the IODF Explorer.

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➢ System Requirements and Limitations

▪ System Limitations under TSO

The IODF Explorer can be accessed standalone (via TSO), or from the Image Control Environment (ICE). When accessed under TSO, you will note one functional limitation. Under TSO the IODF Explores DOES NOT have access to the Image FOCUS z/OS LPAR inspection functions.

▪ System Requirements for the IODF Explorer

1. Image Control Environment (ICE) 7.0
2. Set the SECURITY=ENABLE option (hlq..PARMLIB(NSEPRM00))
3. Hardware Configuration Definition z/OS V1.7 HCD
4. Recommended: HCD Activity Tracking YES

▪ System Limitations for the IODF Explorer

If you have an extremely large IODF dataset, there is a potential to exhaust memory during IODF Explorer processing. You can change your memory allocation by modifying your Image FOCUS space setting and restarting IFOM.

"Limit Failed", "E37", and "Machine Storage Exhausted" messages indicate the need to increase space and/or memory allocations. Contact support@newera.com for assistance.

▪ Other notes for the IODF Explorer user

"No SWCP Targets were found" – the IODF Explorer searches for IOCP, OSCP, and SWCP targets. If your site doesn't use Switches, you won't have SWCP targets defined within the IODF (and therefore not found within the IODF Explorer).

Press<PF3> to continue processing if you receive this message.
Contact support@newera.com if you have any questions about SWCP targets.

▪ IODF Explorer – difference between TSO and ICE versions

- The IODF Explorer provides full functionality whether running in the Image Control Environment (ICE) or standalone under TSO. If running standalone, follow the installation

instructions in the "IODF Explorer for TSO/ISPF" Guide. Standalone users will find this "Getting Started" Guide provides more detailed operational instructions. There are differences between the TSO and ICE versions that should be noted:

- Within the ICE environment, the IODF Explorer has access to the z/OS inspections whereas the TSO version does not.
- The Partition Compare function provides change analysis at a more granular "partition" level. Within the ICE environment, a "Full Inspection" or "Inspect All" against the LPARs can be invoked. These inspections are not available when running the IODF Explorer under TSO.

➢ Unlocking the Latent Value of the Input/Output Definition File

▪ *The IODF as a z/OS Control Point*

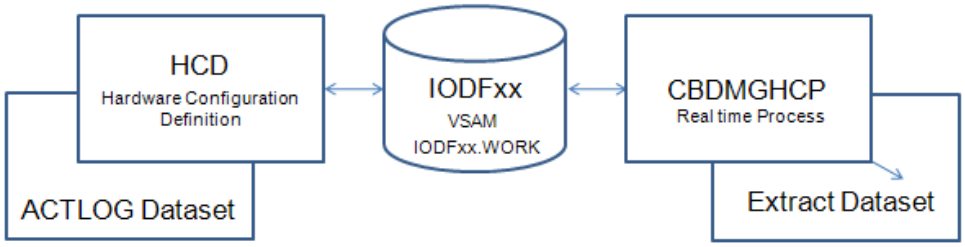
The Input/Output Definition File (IODF) is the set of logical configuration statements that are used to define a network of hardware resources. These resources are generally available to both the z/OS operating system (OSCP) and the z/OS platform hardware (IOCP) and related ESCON/FICON Directors (SWCP), if any. Because of its vital role in shaping the environment, the IODF should be viewed as a major *Control Point* of high informational value in maintaining the accuracy and integrity of the z/OS Operating System and its associated z/Series Hardware Platform (The Mainframe).

▪ *How the IODF Explorer Adds Value*

By definition The Mainframe is a highly adaptable general purpose computer that can be "shaped" into many different forms, formats and configurations to meet varying needs. Some will use the platform exclusively for the z/OS operating system. Others will split the platform between z/OS and z/VM or z/Linux (a form of UNIX). Sometimes it will be configured to run z/OS and z/Linux as guest operating systems under z/VM. The process of shaping the z/Series platform into a unique computing configuration that will meet business requirements is the role of the z/Hardware Planner.

In doing their jobs, these skilled technicians use IBM's HCD and/or HCM to create and maintain one or more IODF Datasets each containing one or more unique hardware and/or software configurations. While powerful and required for their intended purpose, HCD and HCM are often viewed as lacking the depth of reporting and change detection functions that are needed to unlock the IODF.

Because of this the resulting set of hardware and software configurations definitions are not only complex but in many cases confusing to even the most experienced HCD or HCM users. This fact notwithstanding, the IODF does contain a wealth of very valuable information about the design and use of the z/Hardware, information that could be used for management reporting, upgrade justifications, system and audit documentation. The IODF Explorer unlocks this potential by providing several practical and effective methods for using and sharing IODF Configuration Information with anyone who needs to understand the configuration and use of the hardware.



The results of any HCM and/or HCM session are stored in the IODF dataset which is used during a Power on Reset (POR) and/or Initial Program Load (IPL). IBM provides a trusted migration module (CBDMGHCP) that can be directed against an IODF Dataset to produce a listing of highly formatted I/O Macro Statements, sometimes called a "Deck". The IODF Explorer leverages this process by storing these Decks as IODF Statement Extracts. The process is fully automated and very efficient. Extract updates are run interactively on demand and completed in minutes.

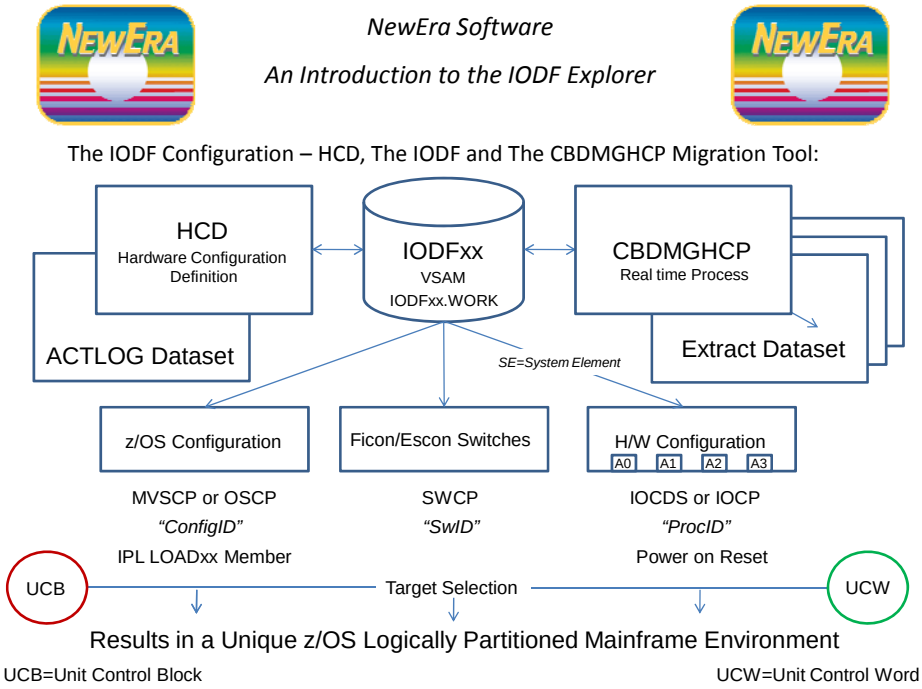
These extracts are used by the IODF Explorer to create attribute style configuration reports. As needed extracts can be stored and used later to detecting changes at various levels of detail within the same IODF or across IODFs. The import of extracts from remote hardware configurations is supported.

In the remainder of this document, we will explain what the IODF Explorer can do for you and how it can unlock the latent value of the IODF and in doing so improve the integrity of your z/OS environment.

➢ What can the IODF Explorer do for you?

▪ *Can I find out what components make up the IODF?*

It is common for an IODF to contain one of more (generally many more) independent and often unrelated OSCP, IOCP and SWCP configurations. The IODF Explorer lets you select, match and/or mix these (a configuration set of individual elements) as needed to achieve your view of what components are in use. For an overview of the full IODF showing all its major elements as shown in the diagram below, the IODF Summary Report on the next page is a good place to start. In this report we find 42 z/OS configurations, 10 Switch configurations and 8 unique z/Hardware configurations. In short; 2 z/10 processors, each with 4 Logical Channel Subsystem each comprised of 16 Logical Partitions which in turn access a unique set of 256 Channel Paths utilizing one or more of 2,560 possible Switch Ports all of which are possibly communicating with over 50,000 named I/0 Devices.



IODF Configuration Overview

```
>BEGINNING SELECTED IODF DATASET TARGET SUMMARY - TARGETS

+-------------------------------------------------------------------+
|                                                                   |
|                     IODF CONFIGURATION TARGETS                    |
|                                                                   |
|                ANYIODF.IODFA2 - 2008-11-11 14:40:19               |
|                                                                   |
+-------------------------------------------------------------------+
|                                                                   |
|   +---------------------------------------------------------------+
|   |             Named MVSCP/OSCP Configurations:42                |
|   +---------------------------------------------------------------+
|   |             +           +           +           +           |
|   |        KMA1 |   KMA1JLR |    KMA1MI |      KMA3 |   KMA3JLR |
|   |      KMA3MI |      KMB1 |   KMB1JLR |     KMB1MI |      KMB7 |
|   |     KMB7JLR |    KMB7MI |      KMC1 |    KMC1JLR |    KMC1MI |
|   |        KMC3 |   KMC3JLR |    KMC3MI |      KMD1 |    KMD1MI |
|   |        KMD9 |    KMD9MI |      KME1 |    KME1MI |      KMG1 |
|   |      KMG1MI |      KMH1 |    KMH1MI |      KMK1 |    KMK1MI |
|   |        KMN1 |      KMN2 |      KMP1 |    KMP1MI |      KMP2 |
|   |      KMP2MI |      KMT1 |    KMT1MI |      KMT2 |    KMT2MI |
|   |        KMZ1 |    KMZ1MI |           |           |           |
|   |             +           +           +           +           |
|   +---------------------------------------------------------------+
|                                                                   |
|   +---------------------------------------------------------------+
|   |            FICON/ESCON Switch Configurations:10               |
|   +---------------------------------------------------------------+
|   |             +           +           +           +           |
|   |    07,9032 |   08,9032 |   09,9032 |    10,9032 |   3E,2032 |
|   |    3F,2032 |   4E,2032 |   4F,2032 |    5E,2032 |   5F,2032 |
|   |             +           +           +           +           |
|   +---------------------------------------------------------------+
|                                                                   |
|   +---------------------------------------------------------------+
|   |             Named IOCDS/IOCP Configurations:08                |
|   +---------------------------------------------------------------+
|   |             +           +           +           +           |
|   |    Z10XXC#0 |  Z10XXC#1 |  Z10XXC#2 |   Z10XXC#3 | Z10XMXC#0 |
|   |   Z10XMXC#1 | Z10XMXC#2 | Z10XMXC#3 |           |           |
|   |             +           +           +           +           |
|   +---------------------------------------------------------------+
|                                                                   |
+-------------------------------------------------------------------+
```

The report continues with an additional summary of each element and ends with the inclusion of entries from the IODF Activity Log (if logging is, in fact, turned on within HCD).

To continue your quest to determine what is being used, an intuitive selection panel interface is provided that allows you to select individual configurations for additional analysis. The reports on the following pages show samples of OSCP and IOCP Configuration Profile Reports. These can be useful in monthly reports to management or used as audit and/or compliance documentation.

OSCP (z/OS/MVSCP) Configuration Profile Report

```
>SELECTED "OSCP" z/OS SOFTWARE CONFIGURATION SUMMARY.

+-------------------------------------------------------------------+
|                                                                   |
|                     OSCP CONFIGURATION SUMMARY                    |
|       IODFPRI.IODF01 - 2007-11-20 15:34:05 - ID:00/MVS/LOOK       |
|                                                                   |
+---------+------+------+-----------------------------------------+
|  NAMES  |  ID  | TYPE |            TARGET DESCRIPTION           |
+---------+------+------+-----------------------------------------+
>  GREEN  |  00  |  MVS | ---                                     |
+------+----+----+------+--------------+-------------+-------------+
| NIPS | ET |       TABLE ENTRIES       |  CNTLUNITS  |    DEVICES  |
+------+----+---------------------------+-------------+-------------+
|   4  |  1 |       35/71         0     |      2   688|     18  9999|
| ---- | -- | -------------- --------- | ------ ----- | ------ ----- |
| UNIT | ID | ESOTERIC/TOKS   GENERIC   |  TYPES COUNT |  TYPES COUNT |
| ---- | -- | --------/-----+--------- | ------ ----- | ------ ----- |
| 0500 | 00 |    ACS00/59   |          |   FCTC   352 |   3211   004 |
| 0520 |    |    ACS01/60   |          |   SCTC   336 |   SWCH    12 |
| 0600 |    |     AUTO/51   |          |              |   2032     9 |
| 0620 |    |   BBBB11/68   |          |              |   3490   830 |
|      |    |    BBBB5/65   |          |              |   3270    16 |
|      |    |    BBBB7/66   |          |              |   3705    11 |
|      |    |    BBBB9/67   |          |              |    TWX    96 |
|      |    |     CART/8    |          |              |   BSC3    36 |
|      |    | CARTCNTG/10   |          |              |   BSC1    28 |
|      |    |   CRTAPE/28   |          |              |  3390B  4812 |
|      |    |    CTAPE/7    |          |              |  3390A  3308 |
|      |    |     LOOK/70   |          |              |   3380    24 |
|      |    |   MANUAL/52   |          |              |    IQD   015 |
|      |    |     M860/17   |          |              |   FCTC   352 |
|      |    |   M860-0/18   |          |              |    OSA    60 |
|      |    |   M860-1/19   |          |              |   OSAD     4 |
|      |    |   M860-2/20   |          |              |   3745    30 |
|      |    |   M860-3/21   |          |              |   SCTC   352 |
|      |    |   M860-4/22   |          |              |              |
|      |    |   M860-5/23   |          |              |              |
|      |    |   M860-6/24   |          |              |              |
|      |    |   M860-7/25   |          |              |              |
|      |    |  OAMAUTO/56   |          |              |              |
|      |    |    TAPE9/3    |          |              |              |
|      |    |    T9490/58   |          |              |              |
|      |    |      VIO/69   |          |              |              |
|      |    |               |          |              |              |
+------+----+---------------+----------+--------------+--------------+
```

In addition to the summary configuration information, note this report is also useful to operational personnel and z/OS Systems Programmers. Note the presentation of NIP Consoles unit addresses. Are they under lock and key? The listing includes Esoteric names, their corresponding tokens and the value of the next available Token. Use this information in the hunt for JCL allocation failures that may be caused by changes in Esoteric naming.

IOCP (Hardware) Configuration Profile Report

```
>SELECTED "IOCP" HARDWARE CONFIGURATION SUMMARY.

+-----------------------------------------------------------------+
|                                                                 |
|                     IOCP CONFIGURATION SUMMARY                  |
|         IODFPRI.IODF01 - 2007-11-20 15:34:05 - TARGET:PXX       |
|                                                                 |
+---------+---------+------+---------------+------+---------+--------+
|  NAMES  |  UNITS  | MODL | SERIAL NUMBER | MODE |  LEVEL  |  LSYS  |
+---------+---------+------+---------------+------+---------+--------+
|     PXX |    2084 |  C24 |    0B39BF2084 | LPAR | H040331 |    --- |
+-----------------------------------------+-------------------------+
|DESC=West                                |SNAADDR=IBM390PS,WESTC07 |
+-----------+-----+----------+----+--------+------+------------------+
| PARTITION | CSS |  CHPIDS  | SW | CONTROL UNITS |      DEVICE      |
+-----------+-----+----------+----+---------------+------------------+
|      20   |  2  |   12 332 | 20 |     13   651  |       19   41770 |
| ------- - | --- | ---- --- | -- | ------- ----- | -------- ------- |
|  NAMES  # | NAM | TYPS CNT | ID |  TYPES  COUNT |   TYPES   COUNTS |
| ------- - | --- | ---- --- | -- | ------- ----- | -------- ------- |
|    PXXA A |   0 |  CFP  10 | ?? |    2105   167 |    3390B   20821 |
|    PXXB B |   1 |  CBP   5 | 4A |    3490   136 |    3390A   18251 |
|    PXXC C |     |  OSD  14 | 40 |    3705     3 |     3390      40 |
|    PXX1 1 |     |  OSE   4 | 48 |    3745    17 |     3380      42 |
|    PXX2 2 |     |  OSC   4 | 43 |     OSC     2 |     3490    1096 |
|    PXX3 3 |     |  CNC 186 | 41 |     OSA    14 |     3705       3 |
|    PXX4 4 |     |  CTC   4 | 45 |     IQD     2 |      TWX      64 |
|    PXX5 5 |     |  CBY   3 | 46 |    3174    21 |     BSC3      36 |
|    PXX6 6 |     |   FC  80 | 42 |    3590    16 |     BSC1      12 |
|    PXX7 7 |     |  IQD   2 | 49 |    SWCH    10 |     3745      68 |
|    PXX8 8 |     |  FCV  14 | 47 |    2032     9 |     3270      16 |
|    PXX9 9 |     |  ICP   6 | 7F |    FCTC   126 |      OSA     138 |
|       * D |     |          | 75 |    SCTC   128 |     OSAD      14 |
|       * F |     |          | 74 |               |      IQD      30 |
|    PXXD D |     |          | 73 |               |     3590      16 |
|    PXXE E |     |          | 78 |               |     SWCH      10 |
|    PXXF F |     |          | 71 |               |     2032       9 |
|    PXXG 1 |     |          | 72 |               |     FCTC     592 |
|    PXXH 2 |     |          | 77 |               |     SCTC     512 |
|    PXXF F |     |          | 71 |               |     2032       9 |
|    PXXG 1 |     |          | 72 |               |     FCTC     592 |
|    PXXH 2 |     |          | 77 |               |     SCTC     512 |
|       * 3 |     |          | 76 |               |                  |
|           |     |          |    |               |                  |
+-----------+-----+----------+----+---------------+------------------+
```

Note that this report profiles the entire processor (2 logical channel subsystems across 17 named and 3 configurable Logical Partitions). The report can be limited to a selected Logical Channel Subsystem or a specifically named Logical Partition. Again such reports are useful for management and as audit or compliance documentation.

But to truly understand a configuration and its use, you need to dig deeper.

IODF Configurations in Detail – Worksheets

Once you have reviewed and selected a configuration, you can continue to explore it using Worksheet and Query Tools.

Worksheet Tools are interactive ISPF Tables that present a set of worksheets within the context of the configuration. As shown below, one set deals specifically with the IOCP, another with the OSCP and finally, one set deals only with the Switch configuration. One very powerful function of these worksheets is that you can include/exclude similar but not necessarily related configurations. This allows you to compare them interactively for similarities and/or differences.

The IOCP Worksheet Set:

```
---------------------- IMAGE Sentry - IODF Explorer 4.0 -- Row 1 to 31 of 484
 -ICE 7.0-                                                      -Logical View-
------------------ ANYIODF.IODFA2 - 2008-11-11 14:40:19 - IOCP ----------------
Row Select: Attributes Descriptions
--------------- To View a Configuration Select a Component Type ---------------
Partitions    Channel Paths    FiEscon Switches    Control Units    I/O Devices
--- To Sort select a Sub-Head, To Query enter above Sub-Head, PFK1 for Help ---
-------Targets------- ---------Input-Output Devices Defined to Targets---------
_ ____ ___________ __ ____ ___ _____ _____ ____ 9A04 _________ ____________________
S Line --ProcIds-- Mg Unit Rng -Type- Model Ctlu --Serial-- ----Description----
_ 0001      Z10EXX 01 001F 001   OSAD ----- 0003 ---------- ------------------
_ 0002      Z10EXX 01 0060 015    OSA ----- 0004 ---------- Open_System_Adapter
```

The OSCP Worksheet Set:

```
---------------------- IMAGE Sentry - IODF Explorer 4.0 --- Row 1 to 31 of 54
 -ICE 7.0-                                                      -Logical View-
------------------ ANYIODF.IODFA2 - 2008-11-11 14:40:19 - OSCP ----------------
Row Select: Attributes Descriptions
--------------- To View a Configuration Select a Component Type ---------------
NIP Consoles   Generic Devices   Esoteric Devices   Control Units   I/O Devices
--- To Sort select a Sub-Head, To Query enter above Sub-Head, PFK1 for Help ---
-----Targets------ -----------Input-Output Devices Defined to Target-----------
_ ____ ________ __ 0100 ___ ____ _____ _____ ____ __________ ____________________
S Numb ConfigId Mg Unit Rng -Type- Model Ctlu --Serial-- ------Description-----
_ 0001   SYE1MI 01 0000 015    OSA ----- B170 ---------- Open_System_Adapter___
_ 0002   SYE1MI 01 000F 001   OSAD ----- B170 ---------- ----------------------
```

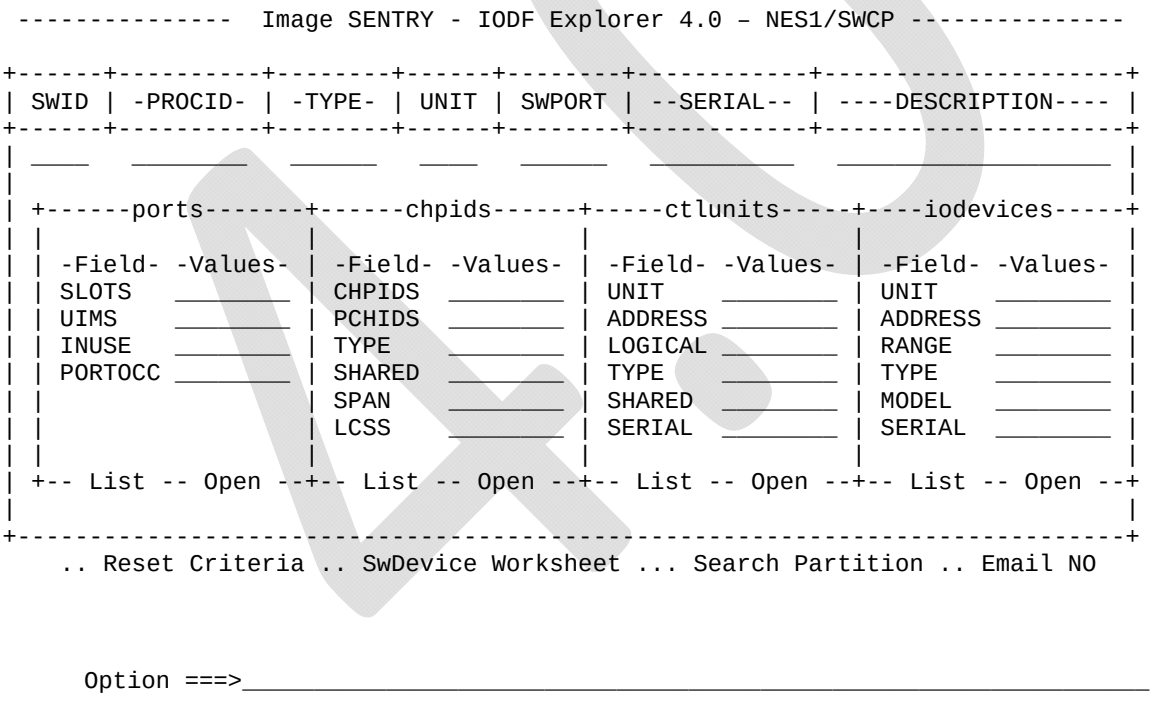
The Switch Worksheet Set:

```
---------------------- IMAGE Sentry - IODF Explorer 4.0  Row 1 to 31 of 1,514
 -ICE 7.0-                                                      -Logical View-
------------------ ANYIODF.IODFA2 - 2008-11-11 14:40:19 - SWCP ----------------
Row Select: Attributes Descriptions
--------------- To View a Configuration Select a Component Type ---------------
Switch/Chpids   Switch/Ports    Switch/Ctlunits    Switch/Devices   S/W Devices
--- To Sort select a Sub-Head, To Query enter above Sub-Head, PFK1 for Help ---
-------Switches------ -----Chpids---- -Ctl Units- ---------IO Devices----------
_ ____ ________ __ __ ___ __ ___ ____ ____ _____ __ ___ ____ _____ __________
S Numb -ProcId- Id Fi Css Cp Pid Type Ctlu -Type- Ad Num Unit -Type- --Serial--
_ 0001   Z10EXX 07 -- (0) 05 360  CNC 10D0   3174 -- --- ----    --- ----------
_ 0002   Z10EXX 07 -- (0) 05 360  CNC 10E0   3174 -- --- ----    --- ----------
```

IODF Configurations in Detail – Query Tools

Once you have selected and reviewed a configuration you can continue to explore it using Worksheet and Query Tools.

IODF Explorer provides several powerful query and display functions. The first of these is a simple but very effective search interface into the data contained in each of the IODF extracted elements: IOCP, OSCP and Switch. In each of these there is an interactive ISPF Panel Driven Window into a selected configuration. Output from a query can be in report or worksheet format and an optional .csv file can be routed to an attached printer or desktop via the internal email client. Each configuration element IOCP, OSCP and Switch has its own unique set of outputs. The Switch Query Interface shown below provides the most expansive access by integrating the Switch and Hardware configuration elements of a selected z/Series Processor.



The “Option Line” command entries (LISTPORT, LISTCHIP, LISTCTLU and LISTIODU) present a complete picture of component use while (OPENPORT, OPENCHIP, OPENCTLU and OPENIODU) allow you to change your “what’s in use” questions into concerns about “what’s available for use”. Nothing is more frustrating than searching HCD or HCM panels for the next available/open address.

The LISTXXXX Reports noted above all use the Logical Channel Subsystem and Channel Path as a “Backbone” for reporting. In this way it becomes obvious what’s in use and at the same time what’s available. A LISTCTLU Report Sample is shown on the following page.

The LISTCTLU Report – A Snippet

```
CHANNEL PATH "CHPID" LIST WITH DASD UNITS FOR NAMED  PROCID:Z10A@1.

+-------------------------------------------------------------------+
|                                                                   |
|                Logical Channel SubSystem - LCSS:0                 |
|                                                                   |
+-------------------------------------------------------------------+
|                                                                   |
| Lpar Access Lists -Lpar Candidates- --Chpids-- ---Control Units---- |
| --Name-- --Name-- --Name-- --Name-- Id Typ Pid >Addr Addr Addr Addr |
| -------- -------- -------- -------- -- --- --- ----- ---- ---- ---- |
|                                                                   |
|   ----     ----     ----     ----   00 --- --- ----- ---- ---- ---- |
| MAI2     MBI2       ==       ==     -- --- --- ----- ---- ---- ---- |
| MCI2     MJI2       ==       ==     -- --- --- ----- ---- ---- ---- |
| MKI2     MNI2       ==       ==     01 OSD 100 >OSA:(1/1)          |
|                                                   0B40 ---- ---- ---- |
| MKI2     MNI2       ==       ==     03 OSC 200 >OSC:(1/1)          |
|                                                   1080 ---- ---- ---- |
| MBI2       ----   MAI2     MCI2     -- --- --- ----- ---- ---- ---- |
|   ----     ----   MJI2     MKI2     2A CNC 17B >3174:(1/32)        |
|                                                   2060 ---- ---- ---- |
| MKI2     MNI2       ==       ==     2B CNC 17C ----- ---- ---- ---- |
| MKI2     MNI2       ==       ==     2C CNC 17D ----- ---- ---- ---- |
| MKI2     MNI2       ==       ==     2D CNC 17E ----- ---- ---- ---- |
| MKI2     MNI2       ==       ==     2E CNC 1E0 ----- ---- ---- ---- |
| MAI2     MBI2       ==       ==     -- --- --- ----- ---- ---- ---- |
| MCI2     MJI2       ==       ==     -- --- --- ----- ---- ---- ---- |
| MKI2     MNI2       ==       ==     2F CNC 1E1 >3990:(2/64)         |
|                                                   1B00 1B40 ---- ---- |
|                                                  >3990-6:(1/32)       |
|                                                   1B20 ---- ---- ---- |
| MJI2       ----   MAI2     MBI2     -- --- --- ----- ---- ---- ---- |
|   ----     ----   MCI2     MKI2     30 CVC 1E2 >NOCHECK:(2/64)      |
|                                                   0980 09A0 ---- ---- |
| MBI2       ----   MAI2     MCI2     -- --- --- ----- ---- ---- ---- |
|   ----     ----   MJI2     MKI2     31 CNC 1E3 >3791L:(1/32)        |
|                                                   2C75 ---- ---- ---- |
| MAI2     MBI2       ==       ==     -- --- --- ----- ---- ---- ---- |
| MCI2     MJI2       ==       ==     -- --- --- ----- ---- ---- ---- |
| MKI2       ----     ==     ----     32 CNC 1E4 >SCTC:(10/80)        |
|                                                   6118 6128 6138 6148 |
|                                                   6158 6218 6228 6238 |
|                                                   6248 6258 ---- ---- |
| MJI2       ----   MAI2     MBI2     -- --- --- ----- ---- ---- ---- |
|   ----     ----   MCI2     MKI2     33 CNC 1E5 >3174:(1/32)        |
|                                                   3060 ---- ---- ---- |
| MBI2       ----   MAI2     MCI2     -- --- --- ----- ---- ---- ---- |
|   ----     ----   MJI2     MKI2     34 CNC 1E6 >3174:(1/16)        |
|                                                   0900 ---- ---- ---- |
```

But questions often arise as to what I/O Devices are in use and what open slots may be used in already defined Control Units. When availability is in question, the OPENXXXX Reports are available. The sample report on the next page shows addresses by Control Unit.

The OPENCTLU Report – A Snippet

```
+--------------------------------------------------------------------+
|                                                                    |
|                 Logical Channel SubSystem - LCSS:0                 |
|                                                                    |
+--------------------------------------------------------------------+
|                                                                    |
| C ----------Chpids with Their Types-------- ---CtlUnit--- ---UCW--- |
| s id/typ id/typ id/typ id/typ id/typ id/typ --Type-- Addr >Rng/Last |
| s ------ ------ ------ ------ ------ ------ -------- ---- --------- |
|                                                                    |
| 0 02/OSD   ----   ----   ----   ----   ----      OSA 0B50 >015/0B5E |
| 0 09/OSD   ----   ----   ----   ----   ----      OSA 0B60 >015/0B6E |
| 0 0A/OSD   ----   ----   ----   ----   ----      OSA 0B70 >015/0B7E |
|                                                                    |
| 0 0B/OSC   ----   ----   ----   ----   ----      OSC 1180 >120/11F7 |
|                                                                    |
| 0 1D/CNC   ----   ----   ----   ----   ----   9032-5 00D0 >001/00D0 |
| 0 11/CNC 1E/CNC   ----   ----   ----   ----   9032-5 00D1 >001/00D1 |
| 0 70/FCV 78/FCV   ----   ----   ----   ----   9032-5 00D2 >001/00D2 |
| 0 74/FCV 7C/FCV   ----   ----   ----   ----   9032-5 00D3 >001/00D3 |
|                                                                    |
| 0 21/CVC   ----   ----   ----   ----   ----     3174 0040 >030/005D |
| 0 34/CNC   ----   ----   ----   ----   ----     3174 0900 >016/XX0F |
| 0 24/CNC   ----   ----   ----   ----   ----     3174 0911 >---/---- |
| 0 25/CNC   ----   ----   ----   ----   ----     3174 0913 >---/---- |
| 0 6C/CNC   ----   ----   ----   ----   ----     3174 1040 >032/105F |
|                                                                    |
| 0 29/CVC   ----   ----   ----   ----   ----     3803 0700 >004/0703 |
| 0 23/CVC   ----   ----   ----   ----   ----     3803 0701 >---/---- |
|                                                                    |
| 0 27/CNC   ----   ----   ----   ----   ----     SCTC 0CB0 >016/0CBF |
| 0 42/CTC   ----   ----   ----   ----   ----     SCTC 5110 >008/5117 |
| 0 52/CTC   ----   ----   ----   ----   ----     SCTC 5118 >008/511F |
| 0 42/CTC   ----   ----   ----   ----   ----     SCTC 5120 >008/5127 |
| 0 52/CTC   ----   ----   ----   ----   ----     SCTC 5128 >008/512F |
| 0 42/CTC   ----   ----   ----   ----   ----     SCTC 5130 >008/5137 |
| 0 52/CTC   ----   ----   ----   ----   ----     SCTC 5138 >008/513F |
| 0 42/CTC   ----   ----   ----   ----   ----     SCTC 5140 >008/5147 |
|                                                                    |
| 0 30/CVC   ----   ----   ----   ----   ----  NOCHECK 09A0 >032/XXBF |
| 0 45/CVC   ----   ----   ----   ----   ----  NOCHECK 09C0 >032/XXDF |
| 0 45/CVC   ----   ----   ----   ----   ----  NOCHECK 09E0 >032/XXFF |
|                                                                    |
| 0 5C/CNC   ----   ----   ----   ----   ----    3791L 2C7A >---/---- |
| 0 5C/CNC   ----   ----   ----   ----   ----    3791L 2C7B >---/---- |
|                                                                    |
| 0 60/CNC   ----   ----   ----   ----   ----     3745 0A00 >064/0A3F |
| 0 50/CNC 68/CNC   ----   ----   ----   ----     3745 0A40 >064/0A7F |
```

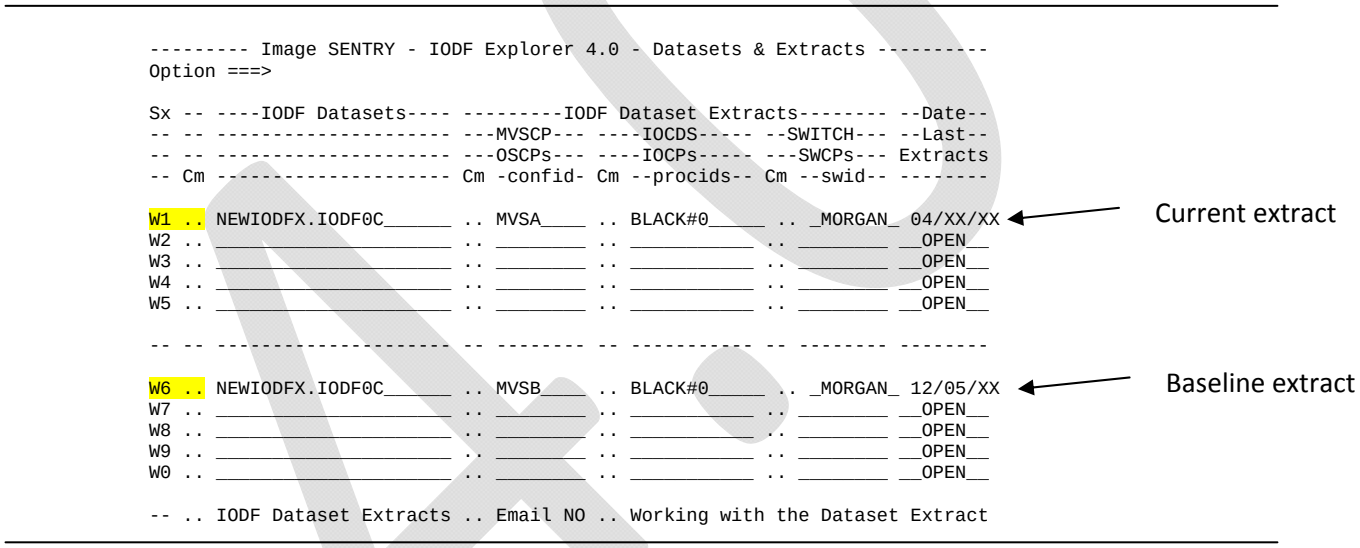
Reports created using the IODF Explorer are generally considered self-explanatory. But, when questions do arise, PF1 HELP is always available to answer questions.

▪ *Can I find out what components have changed in an IODF?*

Before you can determine what's changed in an IODF, you are going to have to set up an IODF Baseline. Once this baseline is in place, you can next determine changes at several different configuration levels, as shown below, presenting these changes as management summaries or detail report.

Setting up an IODF Baseline

To detect IODF changes, a copy of the content of the IODF derived from an extract at a point in time will be needed. This baseline or blueprint is easily created from the ***Datasets & Extracts*** panel using the "Wx" command, where "x" is the line number of the work location that will house the baseline.



Once one or more extract baselines are available, you can compare each with the others using the various Compare Tools described below. In some cases you will compare the full IODF; in other situations you will compare individual IODF Elements: OSCP, IOCP and SWCP. At a more detailed level, you will compare named configurations within individual Elements.

When comparing configurations within an IODF Element, you will need to select specific named targets. To select targets, place the cursor under any existing target name, including LIST, in the "-confid-", "—procid—" or "—swid—" columns and press <ENTER>. This will display a panel that lists individually named targets within the selected element. Place the cursor under the target of interest and press <ENTER> to return to the ***Datasets & Extracts*** panel. The selected target name now appears in the panel and is available for comparison to any other equivalent target. This process of target selection and use allows you to compare the same target (A to A) at different points in time or to compare dissimilar targets (A to B) at the same point in time.

Full IODF Content Compare

This tool works against the full IODF and is used to detect changes in the makeup of IODF Elements: OSCP, IOCP and SWCP. If you want to know if ConfigID, ProcID or SwID has been added or deleted from the total configuration place “CX” before any two targets listed in the IODF Datasets column and press <ENTER>.

```
--------- Image SENTRY - IODF Explorer 4.0 - Datasets & Extracts ----------
 Option ===>

 Sx -- ----IODF Datasets---- ---------IODF Dataset Extracts-------- --Date--
 -- -- --------------------- ---MVSCP--- ----IOCDS----- --SWITCH--- --Last--
 -- -- --------------------- ---OSCPs--- ----IOCPs----- ---SWCPs--- Extracts
 -- Cm --------------------- Cm -confid- Cm --procids-- Cm --swid-- --------

 W1 cx NEWIODFX.IODF0C______ .. MVSB____ .. BLUE#0_____ .. _MORGAN_ 04/XX/XX
 W2 .. ____________________ .. ________ .. ____________ .. ________ __OPEN__
 W3 .. ____________________ .. ________ .. ____________ .. ________ __OPEN__
 W4 .. ____________________ .. ________ .. ____________ .. ________ __OPEN__
 W5 .. ____________________ .. ________ .. ____________ .. ________ __OPEN__

 -- -- --------------------- -- -------- -- ------------ -- -------- --------

 W6 cx NEWIODFX.IODF0C______ .. MVSB____ .. BLUE#0_____ .. _MORGAN_ 12/05/XX
 W7 .. ____________________ .. ________ .. ____________ .. ________ __OPEN__
 W8 .. ____________________ .. ________ .. ____________ .. ________ __OPEN__
 W9 .. ____________________ .. ________ .. ____________ .. ________ __OPEN__
 W0 .. ____________________ .. ________ .. ____________ .. ________ __OPEN__

 -- .. IODF Dataset Extracts .. Email NO .. Working with the Dataset Extract
```

The resulting IODF Change Summary Report shown on the next page is the highest level of IODF change reporting available.

The IODF Dataset Change Summary

```
>IODF TO IODF DATASET CHANGE SUMMARY - TARGETS

       +-------------------------------------------------------------------+
       |                                                                   |
       |             IODF TO IODF LEVEL ONE CONGIFURATION COMPARE          |
       |                                                                   |
       |      ANYIODF.IODFA2 - 2008-11-11 14:40:19 - TARGET:All Named      |
       |                   -- As Compared Against --                       |
       |      ANYIODF.IODFA2 - 2008-12-12 14:40:19 - TARGET:All Named      |
       |                                                                   |
       +-------------------------------------------------------------------+
       |     OSCP TARGETS     |     SWCP TARGETS     |     IOCP TARGETS     |
       +---------osid---------+---------swid---------+--------procid--------+
       |     add-del-chg      |     add-del-chg      |     add-del-chg      |
       |      --- --- ---     |      --- --- ---     |      --- --- ---     |
       |        0   0   1     |        0   0   0     |        1   1   0     |
       |     === === ===      |     === === ===      |     === === ===      |
       +-add------------------+----------------------+------------------add-+
       |                      |                      |       Z10XXC         |
       +-del------------------+----------------------+------------------del-+
       |                      |                      |       Z10EXX         |
       +-chg------------------+----------------------+------------------chg-+
       |         SYA1         |                      |                      |
       +----------------------+----------------------+----------------------+
```

The Report continues on with additional detail on each reported change.

```
>IODF TO IODF DATASET CHANGE SUMMARY –

       OSCP TARGETS >IODF TO IODF DATASET CHANGE SUMMARY - OSCP TARGETS

       +-----+---------+------+------+-------------------------------------+
       | CNG |  NAMES  |  ID  | TYPE |          TARGET DESCRIPTION         |
       +-----+---------+------+------+-------------------------------------+
       |     |         |      |      |                                     |
       | Now |    SYA1 |  00  |  VMS | A1 Production                       |
       | Was |    SYA1 |  00  |  MVS | A1 Production                       |
       |     |         |      |      |                                     |
       +-----+---------+------+------+-------------------------------------+

       >IODF TO IODF DATASET CHANGE SUMMARY - IOCP TARGETS

       +-----+---------+-------+------+------------+------+---------+-------+
       | CNG |  NAMES  | UNITS | MODL | SERIAL NUM | MODE |  LEVEL  |  LSYS |
       +-----+---------+-------+------+------------+------+---------+-------+
       | Add |  Z10XXC |  2097 |  E40 | 05F7822222 | LPAR | H080130 |Z10XXC |
       +-----------------------------------------+------+---------+-------+
       |DESC=XXC Processor 5F722                 |SNAADDR=IBM390PS,Z10XXC |
       +-----+---------+-------+------+---------+------+---------+-------+
       | Del |  Z10YYC |  2097 |  E40 | 05F7822333 | LPAR | H080130 |Z10YYC |
       +-----------------------------------------+------+---------+-------+
       |DESC=YYC Processor 5F733                 |SNAADDR=IBM390PS,Z10YYC |
       +-----+---------+-------+------+---------+------+---------+-------+
```

If you are not familiar with a specific IODF or have just taken over responsibility for one, this is a good place to start any change investigation as if will eliminate the need to attempt understanding “MACRO LEVEL” IODF Changes in which whole z/Series processors and/or z/OS configurations are added and/or deleted from the configuration. Also if you are merging configurations, creating a baseline first of the survivor and then comparing it to the resultant configuration following the merger will reveal if the additions were made as expected. Corrections to target labels, i.e., descriptions, type, and serial numbers are common.

Change records captured in the HCD Change Log (if active) can also be displayed by placing “PX” before any single target in the IODF Dataset column.

```
--------- Image SENTRY - IODF Explorer 4.0 - Datasets & Extracts ----------
Option ===>

Sx -- ----IODF Datasets---- ---------IODF Dataset Extracts-------- --Date--
-- -- -------------------- ---MVSCP--- ----IOCDS----- --SWITCH--- --Last--
-- -- -------------------- ---OSCPs--- ----IOCPs----- ---SWCPs--- Extracts
-- Cm -------------------- Cm -confid- Cm --procids-- Cm --swid-- --------

W1 px NEWIODFX.IODF0C______ .. MVSB____ .. BLACK#0____ .. _MORGAN_ 04/XX/XX
W2 .. ____________________ .. ________ .. ___________ .. ________ __OPEN__
W3 .. ____________________ .. ________ .. ___________ .. ________ __OPEN__
W4 .. ____________________ .. ________ .. ___________ .. ________ __OPEN__
W5 .. ____________________ .. ________ .. ___________ .. ________ __OPEN__

-- -- -------------------- -- -------- -- ----------- -- -------- --------

W6 .. NEWIODFX.IODF0C______ .. MVSA____ .. BLACK#1____ .. _MORGAN_ 12/05/XX
W7 .. ____________________ .. ________ .. ___________ .. ________ __OPEN__
W8 .. ____________________ .. ________ .. ___________ .. ________ __OPEN__
W9 .. ____________________ .. ________ .. ___________ .. ________ __OPEN__
W0 .. ____________________ .. ________ .. ___________ .. ________ __OPEN__

-- .. IODF Dataset Extracts .. Email NO .. Working with the Dataset Extract
```

If the messages shown below appear in the report, it means that the IODF Explorer was unable to access either the production and/or work IODF Dataset or that IODF Activity Logging is turned off. Whatever the case, if this information is an important part of your change management policy, you will need to resolve the specifics before the internal change information can be captured and displayed.

```
|
ISN1610I  >BEGINNING IODF DATASET ACTIVITY LOG - PRODUCTION
|
ISN1611I    PRODUCTION IODF ACTIVITY LOGDSN:ANYIODF.IODFA2.ACTLOG
ISN1611I    <>UNABLE TO ACCESS THE PRODUCTION ACTIVITY LOG.
|
ISN1620I  >BEGINNING IODF DATASET ACTIVITY LOG - WORKING
|
ISN1621I    WORKING IODF ACTIVITY LOGDSN:ANYIODF.IODFA2.WORK.ACTLOG
ISN1621I    <>UNABLE TO ACCESS THE WORKING ACTIVITY LOG.
```

Group Compare

When there are many configurations for the same IODF element type, it is easy to determine the impact that one “simple” change might have on other configurations. When this is the case or if more detailed analysis of changes to individual IODF Elements: OSCP, IOCP and SWCP is needed, place “GC” before any two targets in the “-confid-“, “—procid—“ or “—swid—“ columns and press <ENTER>. The resulting panel will display, in detail, the additions, deletions and changes detected. Use the additional panel commands (PFK1 for explanation) to drill-down into more detail.

```
--------- Image SENTRY - IODF Explorer 4.0 - Datasets & Extracts ----------
Option ===>

Sx -- ----IODF Datasets---- ---------IODF Dataset Extracts-------- --Date--
-- -- --------------------- ---MVSCP--- ----IOCDS----- --SWITCH--- --Last--
-- -- --------------------- ---OSCPs--- ----IOCPs----- ---SWCPs--- Extracts
-- Cm --------------------- Cm -confid- Cm --procids-- Cm --swid-- --------

W1    NEWIODFX.IODF0C______ .. MVSB____ gc BLUE#0_____ .. _MORGAN_ 04/XX/XX
W2 .. ____________________ .. ________ .. ___________ .. ________ __OPEN__
W3 .. ____________________ .. ________ .. ___________ .. ________ __OPEN__
W4 .. ____________________ .. ________ .. ___________ .. ________ __OPEN__
W5 .. ____________________ .. ________ .. ___________ .. ________ __OPEN__

-- -- --------------------- -- -------- -- ----------- -- -------- --------

W6 .. NEWIODFX.IODF0C______ .. MVSB____ gc BLUE#0_____ .. _MORGAN_ 12/05/XX
W7 .. ____________________ .. ________ .. ___________ .. ________ __OPEN__
W8 .. ____________________ .. ________ .. ___________ .. ________ __OPEN__
W9 .. ____________________ .. ________ .. ___________ .. ________ __OPEN__
W0 .. ____________________ .. ________ .. ___________ .. ________ __OPEN__

-- .. IODF Dataset Extracts .. Email NO .. Working with the Dataset Extract
```

Group Compare results are shown in a panel similar to the one on the next page. Note that the panel is divided into three sections: Elements added, Elements in common and Elements that have been deleted. Note in the common section that one Element is highlighted in yellow. This is to indicate that this common element has in fact changed. To view a Summary Report of Changes, place the cursor under the highlighted text and press enter. Or if you prefer, place an “S” before the highlighted text and press enter. For more detail, enter the word “DETAIL” on the Option Line, repeat the selection process and press enter. In the example presented, a Channel Path has been deleted; the details of which can be seen in the Detail Change Report.

Group Compare Results Panel

```
------- Image SENTRY - IODF Explorer 4.0 - Target Selection - IOCP -------

              -------------- IOCP Group Compare ---------------

Cm ----Add---- Cm ----------- Cm ----------- Cm ----------- Cm ----Add----
.. ____________ .. ____________ .. ____________ .. ____________ .. ____________
.. ____________ .. ____________ .. ____________ .. ____________ .. ____________
.. ____________ .. ____________ .. ____________ .. ____________ .. ____________
Cm ----Cmm---- Cm ----------- Cm ----------- Cm ----------- Cm ----Cmm----
.. Z9CF21#0___ .. Z9CF22#0___ .. Z10A21#0    .. Z10A21#1___ .. Z10A22#0___
.. ____________ .. ____________ .. ____________ .. ____________ .. ____________
.. ____________ .. ____________ .. ____________ .. ____________ .. ____________
.. ____________ .. ____________ .. ____________ .. ____________ .. ____________
.. ____________ .. ____________ .. ____________ .. ____________ .. ____________
.. ____________ .. ____________ .. ____________ .. ____________ .. ____________
.. ____________ .. ____________ .. ____________ .. ____________ .. ____________
Cm ----Del---- Cm ----------- Cm ----------- Cm ----------- Cm ----Del----
.. ____________ .. ____________ .. ____________ .. ____________ .. ____________
.. ____________ .. ____________ .. ____________ .. ____________ .. ____________
.. ____________ .. ____________ .. ____________ .. ____________ .. ____________

                  Working directly with IOCP Change Targets .. Email NO
```

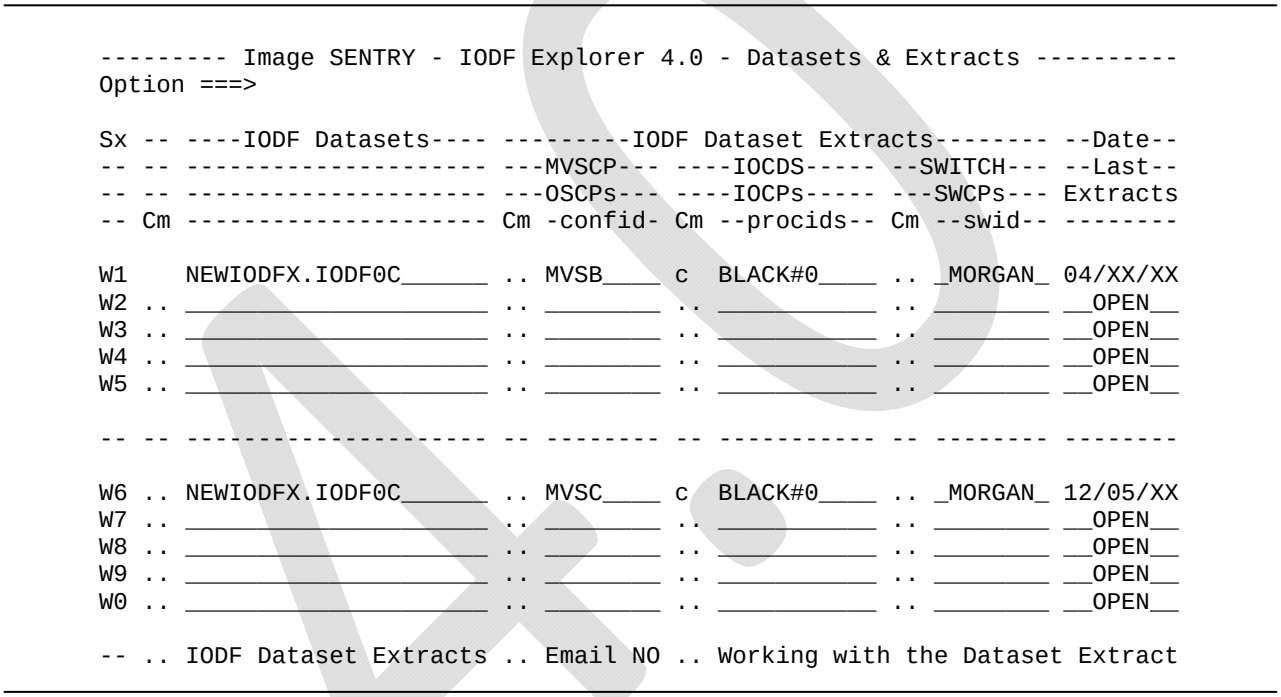
Detail Change Report

```
<>CHPID STATEMENT COMPARISON - CURRENT TO PRIOR.

     +-------------------------------------------------------------------+
     |                                                                   |
     |              IOCP CONFIGURATION MAP - CHPID CHANGES               |
     |                                                                   |
     |         HCD.IODFA3 - 2009-02-23 14:33:14 - TARGET:Z10A21#0        |
     |                      -- As Compared Against --                    |
     |         HCD.IODFA3 - 2009-02-23 14:33:14 - TARGET:Z10A21#0        |
     |                                                                   |
     +-------------------------------------------------------------------+
     | ...NO CHPID STATEMENTS HAVE BEEN ADDED.                           |
     +-------------------------------------------------------------------+
     | ...1 CHPID STATEMENT HAS BEEN DELETED.                            |
     +------+-----+-----+----+-----+-----+-------------------------------+
     | CHIP | PID | SHR | SW | TYP | REC |        CHPID DESCRIPTION      |
     +------+-----+-----+----+-----+-----+-------------------------------+
     > 0A,0 | 211 | YES | -- | OSD | --- |          ---------           <
     |      +------chpid_attributes------+-----TPATH=_cf_channel_path-----+
     |      |                            |                               |
     |      | CHPARM,OS= ---   PORT= --- | (CSS(0),Z9CF#1,12)            |
     |      | IOCLUSTER= ---    AID= --- | (CSS(0),Z10A#1,FF,FFFD,FFC8)  |
     |      |    SWPORT= ---             |                               |
     |      |                            |                               |
     +------+-----+-----+----+-----+-----+-------------------------------+
     | ...NO CHPID STATEMENTS HAVE BEEN CHANGED.                         |
     |-------------------------------------------------------------------+
```

Element Compare

When you know which elements of a given type you want to compare with another of the same type: OSCP, IOCP or SWCP, you can do so directly from the primary menu by place “C” before the targets and press <ENTER>. The report displayed is in Summary Format. For a more detailed report, type “DETAIL” on the Option Line and press <ENTER> again.

You will find Element Compare is very useful when you want to compare an element, “A” against a match “A” from a different IODF time period or with perhaps an element “B” from the same IODF time period as “A”.



Partition Compare

This function only works with IOCP Targets and is used to compare the Logical Partitions in configuration to those in another. To start the process, place “PC” before any two targets in the “—procid—“ column and press <ENTER>. The compare results are displayed in a panel from which you select entries to display changes: additions, deletions and changes detected. Use the additional panel commands (PFK1 for explanation) to drill-down into more detail.

```
--------- Image SENTRY - IODF Explorer 4.0 - Datasets & Extracts ----------
Option ===>

Sx -- ----IODF Datasets---- ---------IODF Dataset Extracts-------- --Date--
-- -- --------------------- ---MVSCP--- ----IOCDS----- --SWITCH--- --Last--
-- -- --------------------- ---OSCPs--- ----IOCPs----- ---SWCPs--- Extracts
-- Cm --------------------- Cm -confid- Cm --procids-- Cm --swid-- --------

W1    NEWIODFX.IODF0C______ .. MVSB____ pc BLUE#0_____ .. _MORGAN_ 04/XX/XX
W2 .. ____________________ .. ________ .. ___________ .. ________ __OPEN__
W3 .. ____________________ .. ________ .. ___________ .. ________ __OPEN__
W4 .. ____________________ .. ________ .. ___________ .. ________ __OPEN__
W5 .. ____________________ .. ________ .. ___________ .. ________ __OPEN__

-- -- --------------------- -- -------- -- ----------- -- -------- --------

W6 .. NEWIODFX.IODF0C______ .. MVSB____ pc PINK#0_____ .. _MORGAN_ 12/05/XX
W7 .. ____________________ .. ________ .. ___________ .. ________ __OPEN__
W8 .. ____________________ .. ________ .. ___________ .. ________ __OPEN__
W9 .. ____________________ .. ________ .. ___________ .. ________ __OPEN__
W0 .. ____________________ .. ________ .. ___________ .. ________ __OPEN__

-- .. IODF Dataset Extracts .. Email NO .. Working with the Dataset Extract
```

Partition Compare results are shown in a panel similar to the one on the next page. Note that the panel is divided into three sections: Elements added, Elements in common and Elements that have been deleted. Note in the common section that one Element is highlighted in yellow. This is to indicate that this common element has in fact changed. To view a Summary Report of changes, place the cursor under the highlighted text and press enter. Or if you prefer, place an “S” before the highlighted text and press enter. For more detail, enter the word “DETAIL” to the Option Line, repeat the selection process and press enter. In the case presented, a Channel Path has been deleted; a summary of which can be seen in the Summary Change Report. Note that the report reflects the impact that removing the CHPID has on the connectivity of the effected LPARs to talk to their Control Units and I/O Devices. Even though these Control Units and I/O Devices were not actually deleted, they “Appear” to the affected LPARs as if they were.

Partition Compare Results Panel

```
----------- Image SENTRY - IODF Explorer 4.0 - Partition Selection ------------

    |-ProcId-|  ------ IODFA3:09-02-23 <-> IODFA3:09-02-23 -------  |-ProcId-|

Cm C---Adds---N Cm C---Lpar---N Cm C---Lpar---N Cm C---Lpar---N Cm C---Adds---N
.. _____________ .. _____________ .. _____________ .. _____________ .. _____________
.. _____________ .. _____________ .. _____________ .. _____________ .. _____________
.. _____________ .. _____________ .. _____________ .. _____________ .. _____________
.. C Z10A@1#0 N Cm C---Lpar---N Cm C---Cmms---N Cm C---Lpar---N .. C Z10A@1#0 N
.. 0___MAI2___1 .. 0___MBI2___2 .. 0___MC22___3 .. 0___MJI2___4 .. 0___MKI2___5
.. 0___MNI2___6 .. _____________ .. _____________ .. _____________ .. _____________
.. _____________ .. _____________ .. _____________ .. _____________ .. _____________
.. _____________ .. _____________ .. _____________ .. _____________ .. _____________
.. _____________ .. _____________ .. _____________ .. _____________ .. _____________
.. _____________ .. _____________ .. _____________ .. _____________ .. _____________
.. _____________ .. _____________ .. _____________ .. _____________ .. _____________
Cm C---Dels---N Cm C---Lpar---N Cm C---Lpar---N Cm C---Lpar---N Cm C---Dels---N
.. _____________ .. _____________ .. _____________ .. _____________ .. _____________
.. _____________ .. _____________ .. _____________ .. _____________ .. _____________
.. _____________ .. _____________ .. _____________ .. _____________ .. _____________

                    Working directly with z/OS Partition Targets .. Email NO
```

Partition Compare Change Summary

```
>CURRENT TO PRIOR IOCP/LPAR CHANGE SUMMARY.

     +-------------------------------------------------------------------------+
     |                                                                         |
     |                IOCP CONFIGURATION MAP - CHANGE SUMMARY                  |
     |                                                                         |
     |       IODFA3:09-02-23 - TARGET:IDD00001/IOCP/Z10A21#0/MC22/0            |
     |                       -- As Compared Against --                         |
     |       IODFA3:09-02-23 - TARGET:IDD00001/IOCP/Z10A21#0/MC22/0            |
     |                                                                         |
     +-------------+-------------+------------+-------------+-------------+
     |  PARTITION  |  CSSCHPIDS  |  FI/ESCON  |  CNTLUNITS  |  IODEVICES  |
     +-------------+-------------+------------+-------------+-------------+
     | add-del-chg | add-del-chg | add-dl-chg | add-del-chg | add-del-chg |
     | --- --- --- | --- --- --- | --- -- --- | --- --- --- | --- --- --- |
     |   0   0   0 |   0   1   0 |   0  0   0 |   0   1   0 |   0   2   0 |
     | === === === | === === === | === == === | === === === | === === === |
     +-add---------+-------------+------------+-------------+---------add-+
     | SS/NAME/NUM | SS/CHPID/PA |  SID/UNIT  |  UNIT/TYPE  | DEVUN/CTLUN |
     +-add---------+-------------+------------+-------------+---------add-+
     |             |             |            |             |             |
     +-del---------+-------------+------------+-------------+---------del-+
     | SS/NAME/NUM | SS/CHPID/PA |  SID/UNIT  |  UNIT/TYPE  | DEVUN/CTLUN |
     +-del---------+-------------+------------+-------------+---------del-+
     |             |   0/0A/211  |            |  0B70/OSA   |  0B70/0B70  |
     |             |             |            |             |  0B7F/0B70  |
     +-chg---------+-------------+------------+-------------+---------chg-+
     | SS/NAME/NUM | SS/CHPID/PA |  SID/UNIT  |  UNIT/TYPE  | DEVUN/CTLUN |
     +-chg---------+-------------+------------+-------------+---------chg-+
     |             |             |            |             |             |
     +-------------+-------------+------------+-------------+-------------+
```

Device Compare

This compare process will isolate changes in OSCP and IOCP Device Configurations: Control Units and I/O Devices. It is invoked by placing “DC” before any two OSCP or IOCP targets and pressing <ENTER>. The report displays, in detail, devices that are “Exclusive” to one configuration or the other and those which are common or shared. Device Compare may also be invoked from within LPAR Compare using the “DC” line command.

```
--------- Image SENTRY - IODF Explorer 4.0 - Datasets & Extracts ----------
Option ===>

Sx -- ----IODF Datasets---- ---------IODF Dataset Extracts-------- --Date--
-- -- --------------------- ---MVSCP--- ----IOCDS----- --SWITCH--- --Last--
-- -- --------------------- ---OSCPs--- ----IOCPs----- ---SWCPs--- Extracts
-- Cm --------------------- Cm -confid- Cm --procids-- Cm --swid-- --------

W1 .. NEWIODFX.IODF0C_____ .. MVSB____ dc BLACK#0____ .. _MORGAN_ 04/XX/XX
W2 .. ____________________ .. ________ .. ___________ .. ________ __OPEN__
W3 .. ____________________ .. ________ .. ___________ .. ________ __OPEN__
W4 .. ____________________ .. ________ .. ___________ .. ________ __OPEN__
W5 .. ____________________ .. ________ .. ___________ .. ________ __OPEN__

-- -- --------------------- -- -------- -- ----------- -- -------- --------

W6 .. NEWIODFX.IODF0C_____ .. MVSE____ dc BLACK#0____ .. _MORGAN_ 12/05/XX
W7 .. ____________________ .. ________ .. ___________ .. ________ __OPEN__
W8 .. ____________________ .. ________ .. ___________ .. ________ __OPEN__
W9 .. ____________________ .. ________ .. ___________ .. ________ __OPEN__
W0 .. ____________________ .. ________ .. ___________ .. ________ __OPEN__

-- .. IODF Dataset Extracts .. Email NO .. Working with the Dataset Extract
```

This Device Compare Detail Report shown on the next page details, by unit address, those Control Units and I/O Devices which are unique to one target or the other and which are common and/or shared by both targets.

I/O Device Compare Detail Report

<>IOCP TO IOCP COMPARISON - Z10A21#1 vs. Z10A21#0

IOCP vs. IOCP I/O DEVICE CONFIGURATION COMPARISON

HCD.IODFA3 - 2009-02-23 14:33:14 - TARGET:IOCP/Z10A21#1

-- As Compared Against --

HCD.IODFA3 - 2009-02-23 14:33:14 - TARGET:IOCP/Z10A21#0

IOCP	CONTROL UNITS			I/O DEVICES		
	Z10A21#1	COMMON	Z10A21#0	Z10A21#1	COMMON	Z10A21#0
SUMMARY	139	0	358	80	455	24

Unique:Z10A21#1

0188 0193 0198 0199 01D0
0290 0342 0343 0344 0352
0353 0354 0401 0410 0500

Common/Shared:0

Unique:Z10A21#0

0040 00D0 00D1 00D2 00D3
00DA 00DB 00DC 00DD 04B0
04BA 04C4 04CE 04D8 04E2
0550 0551 0552 0700 0701
0710 0711 0730 0731 0790
0791 07B0 07B1 07C0 0800
0801 0810 0811 0820 0821
0830 0831 0840 0841 0850
0851 0860 0861 0870 0871
0900 0902 0911 0913 0980
09A0 09C0 09E0 0A00 0A40
0B40 0B50 0B60 0B70 0B80

Unique:Z10A21#1

0950 0340 0350 1E0A 1E0B
1E0C 1E0D 1E0E 1E18 1E19
1E1A 1E1B 1930 1931 29C0

Common/Shared:455

0040 005E 00D0 00D1 00D2
00D3 00DA 00DB 00DC 00DD
0300 0320 0301 0400 0410
04B0 04BA 04C4 04CE 04D8
04E2 0500 0550 0551 0700
0710 0718 0730 0790 0798
07B0 07C0 0800 0810 0820

Unique:Z10A21#0

1040 1140 0C7A 0C7B 5110
5118 5120 5128 5130 5138
5140 5148 5150 5158 6110
6118 6120 6128 6130 6138
6140 6148 6150 6158

Address Compare

Address Compare is by far the most detailed compare available in the IODF Explorer. It begins its compare process by building either the OSCP/UCB or the IOCP/UCW device address chains as reflected in matching OSCP or IOCP targets. The chain for each target is then compared and all "Voids" created by either target are identified. The chain is then sorted by I/O Device Type. Next each entry point into the chain is identified and matched with its corresponding Control Unit and CHPID detail. Results are presented in both summary and detail format.

To initiate Address Compare, place "AC" before two targets and press <ENTER>. The resulting Summary Compare Report is sorted by Device Type and can be useful for detecting changes at the device type level. For additional detail, add the text string "DETAIL" on the Option Line and press <ENTER>. The resulting Detail Compare Report is again sorted by Device Type but now shows the full UCB/UCW chain for each device. This level of detail can be useful in not only understanding changes but also in identifying possible openings in an I/O Device Chain itself, useful when planning I/O additions.

```
--------- Image SENTRY - IODF Explorer 4.0 - Datasets & Extracts ----------
Option ===>

Sx -- ----IODF Datasets---- ---------IODF Dataset Extracts-------- --Date--
-- -- --------------------- ---MVSCP--- ----IOCDS----- --SWITCH--- --Last--
-- -- --------------------- ---OSCPs--- ----IOCPs----- ---SWCPs--- Extracts
-- Cm --------------------- Cm -confid- Cm --procids-- Cm --swid-- --------

W1 .. NEWIODFX.IODF0C______ .. MVSB____ ac BLACK#0____    _MORGAN_ 04/XX/XX
W2 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W3 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W4 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W5 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__

-- -- --------------------- -- -------- -- ----------- -- -------- --------

W6 .. NEWIODFX.IODF0C______ .. MVSB____ ac BLACK#0____    _MORGAN_ 12/05/XX
W7 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W8 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W9 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W0 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__

-- .. IODF Dataset Extracts .. Email NO .. Working with the Dataset Extract
```

Both Summary and Detail Address Compare Report Snippets are show on the following pages.

Address Compare Summary

<>IOCP TO IOCP I/O DEVICE UCW ADDRESS COMPARISON.

IOCP vs. IOCP I/O DEVICE UCW ADDRESS COMPARISON

HCD.IODFA3 - 2009-02-23 14:33:14 - TARGET:Z10A21#1
-- As Compared Against --
HCD.IODFA3 - 2009-02-23 14:33:14 - TARGET:Z10A21#0

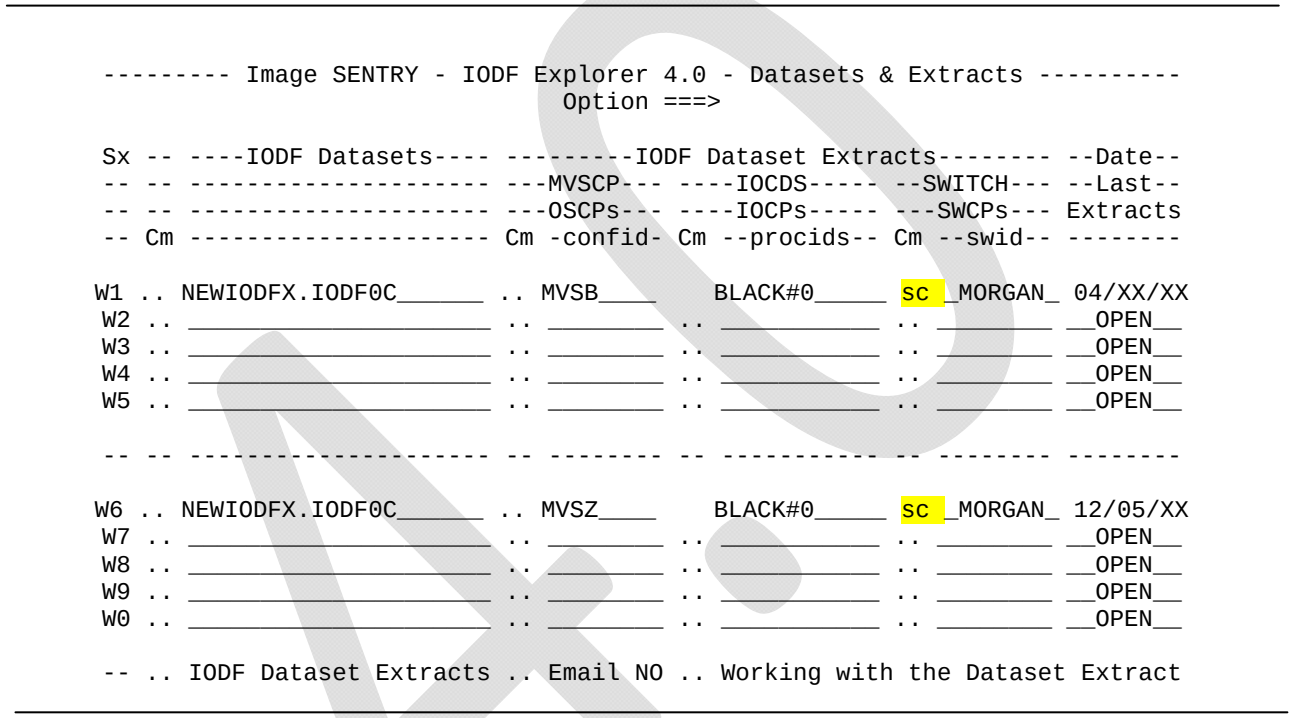
IOCP	UPPER CONFIGURATION		LOWER CONFIGURATION
	Total Voids	UCWAddresses	Total Voids
	-480	42024	-321
	Device Type	Addrs	Addrs	Device Type
	3270	513	545	3270
	3286	6	6	3286
	9032	4	4	9032
	2032	4	4	2032
	3490	901	809	3490
	3590	102	102	3590
	3380	1	1	3380
	3420	56	4	3420
	3480	12	12	3480
	SCTC	273	336	SCTC
	3174	32	32	3174
	BSC1	256	256	BSC1
	OSA	69	60	OSA
	OSAD	8	8	OSAD
	IQD	128	128	IQD
	3390	7209	7405	3390
	3390B	14470	14528	3390B
	3390A	18624	18624	3390A
	AFP1	34	-----	AFP1
	3791L	1	3	3791L
	4245	5	-----	4245
	3835	1	1	3835

Address Compare Detail

```
<>IOCP TO IOCP I/O DEVICE UCW ADDRESS COMPARISON.

+-----------------------------------------------------------------+
|          IOCP vs. IOCP  I/O DEVICE UCW ADDRESS COMPARISON       |
|                                                                 |
|         HCD.IODFA3 - 2009-02-23 14:33:14 - TARGET:Z10A@1#1      |
|                      -- As Compared Against --                  |
|         HCD.IODFA3 - 2009-02-23 14:33:14 - TARGET:Z10A@1#0      |
+----------+----------------------------++----------------------------+
|   IOCP   |    UPPER CONFIGURATION     ||     LOWER CONFIGURATION    |
|----------+----------------------------++----------------------------+
|          |                                                         |
|          |    Total Voids       UCWAddresses        Total Voids    |
|          | +---------------+--------------------+----------------+ |
|          | |     -480      |       42024        |      -321      | |
|          | +---------------+--------------------+----------------+ |
|          |                                                         |
|          |    Device Type     Addrs      Addrs     Device Type     |
|          | +---------------+---------++---------+----------------+ |
|          | |      3270     |    513  ||  545    |     3270       | |
|          | +---------------+---------++---------+----------------+ |
|          |                                                         |
|          |   Entry Point                          Entry Point      |
|          | ------------- >                      < -------------    |
|          | Cp,Ctlu,Ad,Cnt > Cnt Key Addr Key Cnt < Cnt,Ad,Ctlu,Cp  |
|          | ------------- > --- --- ---- --- --- < -------------    |
|          |                                                         |
|          | --,0040,--,--- > 030 n/c 0040 -x- 030 < 032,40,0040,21  |
|          |                      n/c 0041 -x-                       |
|          |                      n/c 0042 -x-                       |
|          |                      n/c 0043 -x-                       |
|          |                      n/c 0044 -x-                       |
|          |                      n/c 0045 -x-                       |
|          |                      n/c 0046 -x-                       |
|          |  =============== === === ==== === === ================  |
|          |                                                         |
|          |    Device Type     Addrs      Addrs     Device Type     |
|          | +---------------+---------++---------+----------------+ |
|          | |      3420     |     56  ||  4       |     3420       | |
|          | +---------------+---------++---------+----------------+ |
|          |                                                         |
|          |   Entry Point                          Entry Point      |
|          | ------------- >                      < -------------    |
|          | Cp,Ctlu,Ad,Cnt > Cnt Key Addr Key Cnt < Cnt,Ad,Ctlu,Cp  |
|          | ------------- > --- --- ---- --- --- < -------------    |
|          |                                                         |
|          | --,0701,--,--- > 004 n/c 0700 -x- 004 < 016,00,0701,23  |
|          |                      n/c 0701 -x-                       |
|          |                      n/c 0702 -x-                       |
|          |                      n/c 0703 -x-                       |
|          | 2D,2DA2,C0,008 > 008 -x- 29C0 n/s                       |
|          |                      -x- 29C1 n/s                       |
|          |                      -x- 29C2 n/s                       |
|          |                      -x- 29C3 n/s                       |
|          |                      -x- 29C4 n/s                       |
|          |                      -x- 29C5 n/s                       |
```

Switch Compare

For purposes of this function, the configuration of FICON/ESCON Switches is matched with the requirements of the selected “ProcIDs”. This will likely result in some Switches defined within the IODF as being in a state of “NoConnect” relative to the selected “ProcID”. To compare targets, place “SC” before the target names and press <ENTER>. In the display that follows, “Connected” Switches are presented within Logical Channel Subsystems. Use the additional panel commands (PFK1 for explanation) to drill-down into more detail.



- ***Can I find out if something might be wrong with the IODF?***

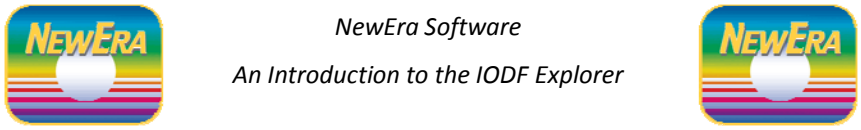
In general HCD and HCM do a great job of managing the I/O configuration, creating and passing trusted configuration statements (The DECK) to z/OS and the z/Series Hardware. So no effort has been made by the IODF Explorer Developers to check syntax. No need for this type of inspection exists.

This notwithstanding, it is possible that there could be problems in an IODF not indentified by HCD or HCM or possibly identified but "accepted" by the user. These type of problems often result in "Configuration Drift", an annoying condition that exists when the UCB Device Address Chain built by z/OS from the OSCP Configuration does not have corresponding Device Addresses in the UCW Address Chain built at Power-On-Reset from the IOCP Configuration.

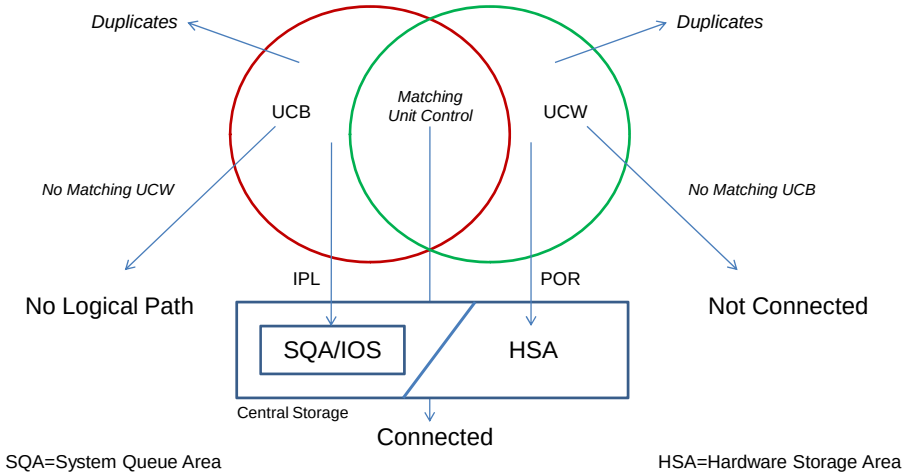
Other problems are much more subtle in nature. They fall into two types; those which result from automatic entries created by HCD or HCM are the first type. An example is when an LPAR is deleted from a configuration but a corresponding Device Candidate List containing that single LPAR is not updated. The second type often results in system security concerns when, for example, OSD type Channel Paths are defined but not adequately documented and reported to the downstream operators of VTAM and/or TCP/IP. Such an oversight could result, under the described conditions, in a loss of LPAR integrity.

Exposing Configuration Drift - In the UCB/UCW Address Chain

Configuration Drift exists whenever a set of matching OSCP/UCS and IOCP/UCW Device Address Chains do not match. This adversely affects device connectivity and (in older processors) waste limited HSA.



The IODF Configuration – Configuration Drift – Missing Devices:



Reporting Configuration Drift between matched OSCP and IOCP Configurations

Unlike the other Compare Reports discussed, this report set DOES NOT disclose changes. Instead it seeks out any differences in "Matched" OSCP and IOCP configurations that, should they exist, will likely result in a loss of I/O Device connectivity.

```
+-------------------------------------------------------------------------+
|          IOCP vs. OSCP I/O DEVICE CONFIGURATION COMPARISON              |
|                                                                         |
|        SYSM.IODF02 - 2008-05-09 11:04:08 - TARGET:IOCP/MVS6             |
|                     -- As Compared Against --                           |
|        SYSM.IODF02 - 2008-05-09 11:04:08 - TARGET:OSCP/NEW2             |
+----------+-----------------------+----------+----------------------+
|MVSCP/OSCP|  TARGET DESCRIPTION   |IOCDS/IOCP|  TARGET DESCRIPTION  |
+----------+-----------------------+----------+----------------------+
|    NEW2  | Auto system           |    MVS6  | 2094 Home Center     |
+----------+-----------------------+----------+----------------------+
|    DUPLICATE UCB REQUESTS:None   |    DUPLICATE UCW REQUESTS:None  |
+----------------------------------+---------------------------------+
|      UCW MATCHES UCB = CONNECTED DEVICES BY UNIT ADDRESS:5316       |
+----------------------------------+---------------------------------+
|   UCB NOT IN AVAILABLE UCW POOL  |  UCW NOT IN AVAILABLE UCB POOL  |
|       --------------------      |       --------------------      |
|    Device has no logical paths   |    Device has no connections    |
+----------+-----------+----------+----------+-----------+----------+
| REQUESTS |  MATCHED  |  DENIED  | REQUESTS |  MATCHED  |  DENIED  |
+----------+-----------+----------+----------+-----------+----------+
|   5420   |   5316    |    104   |   6348   |   5316    |  1032    |
+----------+-----------+----------+----------+-----------+----------+
|    OSCP STATEMENT ORPHANS:93     |   IOCP STATEMENT ORPHANS:36     |
+---------unit,range,type----------+---------unit,range,type---------+
|                                  |                                 |
|  0015,004,3745   004F,016,SCTC   |  0006,003,3745   0009,001,3745  |
```

0087,008,SCTC	0201,002,3590	0016,001,3745	0060,010,SCTC
FD30,008,FCTC	FD38,008,FCTC	003F,001,OSAD	003E,001,2032
FD40,008,FCTC	FD48,008,FCTC	0702,002,DUMMY	004E,001,2032
FD50,008,FCTC	FD58,008,FCTC	07F2,002,DUMMY	07F4,002,DUMMY
FE00,004,FCTC	FE04,004,FCTC	005E,001,2032	0100,060,OSA
FE10,004,FCTC	FE14,004,FCTC	0340,016,3270	0300,016,3270
FE18,004,FCTC	FE1C,004,FCTC	0790,002,DUMMY	0792,002,DUMMY
FE20,004,FCTC	FE24,004,FCTC	0794,002,DUMMY	0796,002,DUMMY
FE28,004,FCTC	FE2C,004,FCTC	0798,002,DUMMY	079A,002,DUMMY
FE30,004,FCTC	FE34,004,FCTC	079C,002,DUMMY	079E,002,DUMMY
FE38,004,FCTC	FE3C,004,FCTC	07A0,002,DUMMY	07A2,002,DUMMY
FE40,004,FCTC	FE44,004,FCTC	07A8,002,DUMMY	07AA,002,DUMMY
FE48,004,FCTC	FE4C,004,FCTC	0840,001,3705	0841,047,BSC3
FE50,004,FCTC	FE54,004,FCTC	0C0B,001,3745	0EB0,016,3490
FE58,004,FCTC	FE5C,004,FCTC	0140,016,3279	0160,004,3279
FE60,004,FCTC	FE64,004,FCTC	0164,001,3286	0165,002,3279
FE78,004,FCTC	FE7C,004,FCTC	0167,009,3278	0C40,023,3279
FE80,004,FCTC	FE84,004,FCTC	0C57,009,3286	0260,012,3279
FE88,004,FCTC	FE8C,004,FCTC	026C,001,3287	026D,003,3279
FE90,004,FCTC	FE94,004,FCTC	0270,001,3278	0271,007,3279
FEC0,004,FCTC	FEC4,004,FCTC	0278,002,3287	027A,003,3279
FEC8,004,FCTC	FEXX,004,FCTC	027D,003,3287	0240,012,3279
		024C,001,3286	024D,003,3279
		0250,008,3278	0258,002,3286
		025A,006,3279	0200,004,3279

What are Matched OSCP and IOCP Configurations?

To complete system initialization, system programmers and hardware planners cooperate to create a matched set of UCB and UCW Address Chains. The UCB chain comes from the OSCP and becomes active during Initial Program Load (IPL) by a call to the IODF for a specific configuration defined in the LOADxx IPLPARM Member. The UCW chain comes from a similar call defined in the System Element to the IOCP and is initialized at Power-On-Reset (POR). As discussed above, if these chains don't match (and they often don't for very good reasons), a request by z/OS using an unmatched device address will result in an I/O failure. Since there can be many OSCP and IOCP configurations defined in a single IODF, the IODF Explorer uses the Mix and Match interface shown below. To display the interface, enter the "MX" line command before an IODF dataset shown on the primary menu.

```
---------------- Image SENTRY - IODF Explorer 4.0 - NESI0001 -----------------

------------OSCP Targets----------- | --------------IOCP Targets---------------
.. ANYIODF.IODFA2.08-11-11.14:40:19 | .. ANYIODF.IODFA2.08-11-11.14:40:19
------------Ext/01/06/XX----------- | --------------Wks/01/06/XX---------------
.. DXA1____ .. DXC3JLR_ .. DXP1____ | .. Z10XCC#0__ .. __________ .. __________
.. DXA1JLR_ .. DXC3MI__ .. DXP1MI__ | .. Z10XCC#1__ .. __________ .. __________
.. DXA1MI__ .. DXD1____ .. DXP2____ | .. Z10XCC#2__ .. __________ .. __________
.. DXA3____ .. DXD1MI__ .. DXP2MI__ | .. Z10XCC#3__ .. __________ .. __________
.. DXA3JLR_ .. DXD9____ .. DXT1____ | .. Z10XZCC#0_ .. __________ .. __________
.. DXA3MI__ .. DXD9MI__ .. DXT1MI__ | .. Z10XZCC#1_ .. __________ .. __________
.. DXB1____ .. DXE1____ .. DXT2____ | .. Z10XZCC#2_ .. __________ .. __________
.. DXB1JLR_ .. DXE1MI__ .. DXT2MI__ | .. Z10XZCC#3_ .. __________ .. __________
.. DXB1MI__ .. DXG1____ .. DXZ1____ | .. __________ .. __________ .. __________
.. DXB7____ .. DXG1MI__ .. DXZ1MI__ | .. __________ .. __________ .. __________
.. DXB7JLR_ .. DXH1____ .. ________ | .. __________ .. __________ .. __________
.. DXB7MI__ .. DXH1MI__ .. ________ | .. __________ .. __________ .. __________
.. DXC1____ .. DXK1____ .. ________ | .. __________ .. __________ .. __________
.. DXC1JLR_ .. DXK1MI__ .. ________ | .. __________ .. __________ .. __________
.. DXC1MI__ .. DXN1____ .. ________ | .. __________ .. __________ .. __________
.. DXC3____ .. DXN2____ .. ________ | .. __________ .. __________ .. __________
R=Report - W=WKSheet - I=Inspection - S=Search - T=EDTab - C=Compare - Email NO
```

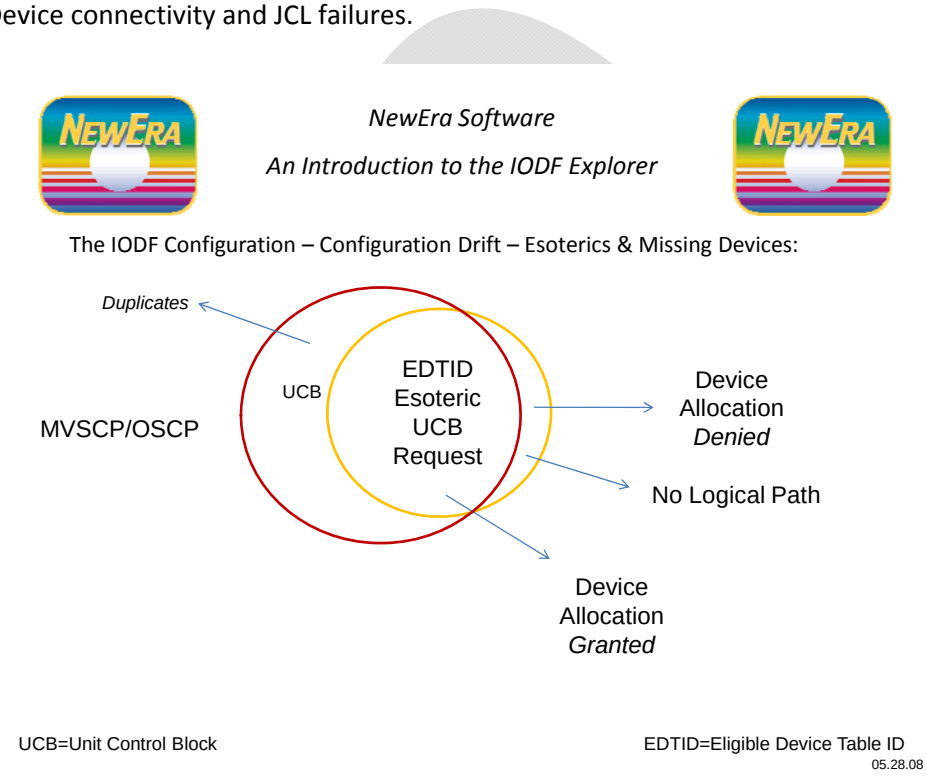
Note the functions (Report, Worksheets, Inspection, Search, EDTable, Compare and Email) that are available. The report described above was created by placing "I" before an OSCP and IOCP Target. The report described below was created by placing "T" before a single OSCP Target.

The Panels and Commands section of this document provide significant detail on the use this panel. Once in the Panel, PFK1 HELP will provide even more.

Exposing Configuration Drift – In the Eligible Device Table (EDT)

Reporting Configuration Drift between an OSCP and its internal Eligible Device Table

Unlike the other Compare Reports discussed, this report set DOES NOT disclose changes. Instead it seeks out differences in internal OSCP configurations. The existing differences are likely to result in a loss of Esoteric I/O Device connectivity and JCL failures.



The OSCP/EDT Report shown on the next page is used to report esoteric devices without logical device paths.

Reporting Eligible Device Table Failures

```
<>OSCP TO ITS EDT COMPARISON - SYB1 DEVICES vs. INTERNAL EDTIDS

+-------------------------------------------------------------------+
|           OSCP vs. EDT I/O DEVICE CONFIGURATION COMPARISON         |
|                                                                   |
|      ANYIODF.IODFA2 - 2008-11-11 14:40:19 - TARGET:OSCP/SYB1      |
|                      -- As Compared Against --                    |
|    ANYIODF.IODFA2 - 2008-11-11 14:40:19 - TARGET:OSCP/SYB1/EDT    |
+--------------+------+------+-----------------------------------+
|  MVSCP/OSCP  |  ID  | TYPE |     z/OS Configuration Description    |
+--------------+------+------+-----------------------------------+
|       SYB1   |  08  |  MVS | B1 Production                     |
+--------------+------+------+-----------------------------------+
|                                                                   |
|   +-----------------------------------------------------------+   |
|   |            Duplicate z/OS Device Definitions:None         |   |
|   +-----------------------------------------------------------+   |
|                                                                   |
+--------------+------+------+-----------------------------------+
|    EDTIDS    | ESOS | GENS |   Eligible Device Table Description   |
+--------------+------+------+-----------------------------------+
|      10      | 0007 | 0000 | ---                               |
+--------------+------+------+--------------+-----------+--------+
|   ESOTERIC   | TOKS | VIOS | UCB REQUESTS |  GRANTED  |  DENIED  |
+--------------+------+------+--------------+-----------+--------+
|  As Defined  |  00  |  00  |       8608   |    8607   |       1  |
+--------------+------+------+--------------+-----------+--------+
|                                                                   |
|   +----------+------+------+--------------+-----------+--------+
|   | DISK     |  01  | ---- |       4160   |    4160   |       0  |
|   +----------+------+------+--------------+-----------+--------+
|   |  None Denied                                              |
|   +----------+------+------+--------------+-----------+--------+
|   | LDE11111 |  11  | ---- |         64   |      64   |       0  |
|   +----------+------+------+--------------+-----------+--------+
|   |  None Denied                                              |
|   +----------+------+------+--------------+-----------+--------+
|   | LDGW3495 |  07  | ---- |         64   |      64   |       0  |
|   +----------+------+------+--------------+-----------+--------+
|   |  None Denied                                              |
|   +----------+------+------+--------------+-----------+--------+
|   | LDG11111 |  12  | ---- |         64   |      63   |       1  |
|   +----------+------+------+--------------+-----------+--------+
|   |  Addr                                                     |
|   |  ----                                                     |
|   |  00A0                                                     |
|   +----------+------+------+--------------+-----------+--------+
```

Overlooking extra "Hop" following a Switch Migration

Migrating from one switch configuration (SWID) to another is a common practice. The SWPORT macro (SWID,PORT) is provided as a migration aid. Once the migration is complete, it is considered a best practice to match the SWITCH and SWPORT SWID values or eliminate the SWPORT macro altogether. If allowed to remain, an extra "Hop" will be introduced into the overall path configuration, potentially affecting performance.

```
CHPID PATH=(CSS(0),0B),                                              *
      PARTITION=((SYA1SYS1),(SYA3SYS1,SYP1SYS1,SYP2SYS1,SYT1SY*
      S1,SYT2SYS1),REC),SWITCH=01,SWPORT=((02,BD)),PCHID=363, *
      TYPE=CNC
```

Note in the CHPID Macro shown above that the SWITCH and SWPORT SWID values do not match. This, while legal, has the potential to create a longer I/O Device access path than necessary, adversely affecting I/O Device response time.

Reporting Switch Migration Status

In the "CHPID" List Report shown below, note how SWITCH and SWPORT values are reported. A quick scan by a knowledgeable mainframe professional would reveal any potential problems and a resulting need for configuration clean-up.

```
CHANNEL PATH "CHPID" LIST FOR NAMED PROCID:Z10XXC.

+-------------------------------------------------------------------------+
|                Logical Channel SubSystem - LCSS:0                       |
+-------------------------------------------------------------------------+
|                                                                         |
| Lpar Access Lists -Lpar Candidates- --Chpids-- ---State--- -Switch-     |
| --Name-- --Name-- --Name-- --Name-- Id Typ Pid De Re Sh Sp Id Sw,Pt     |
| -------- -------- -------- -------- -- --- --- -- -- -- -- -- --,--     |
|                                                                         |
| DXT1LPAR   ----     ==       ----   00 CNC 260 Ok -- -- -- 08 10,82<|
| DXD1LPAR   ----     ==       ----   01 OSD 520 -- -- Ok -- -- --,--  |
| DXP2LPAR DXT1LPAR   ==        ==    -- --- --- -- -- -- -- -- --,--  |
| DXT2LPAR   ----     ==       ----   02 OSC 5A0 -- -- Ok -- -- --,--  |
| DXK1LPAR   ----     ==       ----   03 CNC 570 Ok -- -- -- 08 10,56<|
| DXA1LPAR DXA3LPAR   ==        ==    -- --- --- -- -- -- -- -- --,--  |
| DXG1LPAR DXH1LPAR   ==        ==    -- --- --- -- -- -- -- -- --,--  |
| DXK1LPAR   ----     ==       ----   04 CNC 261 -- -- Ok -- 09 09,5A  |
| DXA1LPAR   ----     ==       ----   05 CNC 360 Ok -- -- -- 07 09,8B<|
| DXA1LPAR   ----     ==       ----   06 CVC 262 Ok -- -- -- -- --,--  |
| DXA1LPAR   ----     ==       ----   07 CBY 36C Ok -- -- -- -- --,--  |
| DXA1LPAR   ----     ==       ----   08 CVC 160 Ok -- -- -- -- --,--  |
| DXD1LPAR   ----     ==       ----   09 OSD 1B0 -- -- Ok -- -- --,--  |
| DXH1LPAR   ----     ==       ----   0A CNC 161 Ok -- -- -- 09 09,97<|
| DXA1LPAR   ----   DXA3LPAR DXP1LPAR -- --- --- -- -- -- -- -- --,--  |
|   ----     ----   DXP2LPAR DXT1LPAR -- --- --- -- -- -- -- -- --,--  |
|   ----     ----   DXT2LPAR   ----   0B CNC 363 Ok Ok -- -- 10 10,BD<|
| DXA3LPAR   ----     ==       ----   0C CNC 3F0 Ok -- -- -- 09 09,93<|
|   ----     ----     ----     ----   0D --- --- -- -- -- -- -- --,--  |
| DXG1LPAR   ----     ==       ----   0E CNC 571 Ok -- -- -- 07 09,87<|
```

Exposing a possible LPAR Orphans

Both CHPID and IODEVICE definitions allow for the specification of an affirmative/negative Access and/or Candidate LPAR List.

LPAR Orphans resulting from the CHPID Statement

In the CHPID statement shown below, the Null Access List is suspected of either a miscoding or restatement of the Access List by HCD/HCM.

```
CHPID PATH=(CSS(1),BC),PARTITION=((0),(SYSTEMA),REC),              *
      DESC='SYSP/SYSM CONSOLES 320-32F',PCHID=1E6,TYPE=CVC
```

A zero (0) indicates a null access list and specifies that no LPARs in the CSS can access the channel path following LPAR activation for the initial POR of the IOCP/IOCDS.

There is no reason to code the Access List this way and it is indicative of the need to do some IODF clean up.

In a test of this condition, it was noted that if the last LPAR in an Access List was deleted, then HCD/HCM would create the statement as shown above.

Reporting LPAR Orphans

In the "CHPID" List Report shown below, note how Orphan LPARs and their CHPIDs are reported.

```
CHANNEL PATH "CHPID" LIST FOR NAMED PROCID:Z10A@1.

+-------------------------------------------------------------------+
|                Logical Channel SubSystem - LCSS:0                 |
+-------------------------------------------------------------------+
|                                                                   |
| Lpar Access Lists -Lpar Candidates- --Chpids-- ---State--- -Switch- |
| --Name-- --Name-- --Name-- --Name-- Id Typ Pid De Re Sh Sp Id Sw,Pt |
| -------- -------- -------- -------- -- --- --- -- -- -- -- -- --,-- |
|                                                                   |
| SYSK     SYSLDR      ==       ==    -- --- --- -- -- -- -- -- --,-- |
| SYSM     SYSSDR      ==       ==    -- --- --- -- -- -- -- -- --,-- |
| SYST       ----      ==      ----   BA CNC 5E4 -- -- Ok -- 02 --,-- |
| SYSLDR   SYSM        ==       ==    BB CNC 5E5 -- -- Ok -- -- --,-- |
| 0          ----    SYST      ----   BC CVC 1E6 Ok Ok -- -- -- --,-- |
|    ----      ----     ----     ----   BD --- --- -- -- -- -- -- --,-- |
|    ----      ----     ----     ----   BE --- --- -- -- -- -- -- --,-- |
| SYSLDR   SYSM        ==       ==    BF CNC 5E7 -- -- Ok -- 20 --,-- |
| SYSK     SYSLDR      ==       ==    -- --- --- -- -- -- -- -- --,-- |
| SYSM     SYSSDR      ==       ==    -- --- --- -- -- -- -- -- --,-- |
| SYST       ----      ==      ----   C0 CNC 5E8 -- -- Ok -- 02 --,-- |
```

LPAR Orphans resulting from the IODEVICE Statement

In the IODEVICE statement shown below, the Null Candidate List, though legal, is suspected of either a miscoding or restatement of the Access List by HCD/HCM.

```
IODEVICE ADDRESS=(1E0B,1),UNITADD=0B,CUNUMBR=(0802),STADET=Y, *
      PARTITION=((CSS(1),0)),DESC='PDSP CTC TO SYSM HUB',     *
      UNIT=SCTC
```

A zero (0) indicates a null device candidate list. The device is excluded from the specified CSS and cannot be accessed by any LPAR in the CSS. A zero cannot be specified in the NOTPART keyword.

In a test where we begin with only one LPAR in the access list for the IODEVICE, HCD and HCM would not allow it to be deleted when it was the last LPAR in the access list for a device. So, in general, the condition shown above should not occur.

Reporting LPAR Orphans

In the "LISTIODU" Report shown below, note how Orphaned I/O Devices, LPARs and CHPIDs are reported.

```
I/O DEVICE "LISTIODU" LIST FOR NAMED PROCID:Z10A@1.

+-------------------------------------------------------------------+
|               Logical Channel SubSystem - LCSS:0                  |
+-------------------------------------------------------------------+
| Lpar Access Lists -Lpar Candidates- --Chpids-- ---Control Units---- |
| --Name-- --Name-- --Name-- --Name-- Id Typ Pid >Ctlu:(Type/AddrRng) |
| -------- -------- -------- -------- -- --- --- ----- ----- -------- |
|                                                                   |
> SYSK     SYSLDR      ==       ==     -- --- --- ----- ----- -------- |
| SYSM     SYSSDR      ==       ==     -- --- --- ----- ----- -------- |
| SYST       ----      ==      ----    08 CTC 1F5 >0802:(SCTC/14)      <
|  +--Dedicated I/O Devices:(5/5)-------------------------------------+
|  |                                                                  |
|  |  Unit Cnt --Type-- --State-- --Lpar-- --Lpar-- --Lpar-- --Lpar-- |
|  |  ---- --- -------- --------- -------- -------- -------- -------- |
|  |  1E0A 001     SCTC Grants to   SYSSDR   ----     ----     ----    |
|  |  1E0B 001     SCTC Grants to        0   ----     ----     ----    |
|  |  1E0C 001     SCTC Grants to     SYSK   ----     ----     ----    |
|  |  1E0E 001     SCTC Grants to   SYSLDR   ----     ----     ----    |
|  +------------------------------------------------------------------+
|                                                 >080F:(SCTC/13)      <
|  +--Dedicated I/O Devices:(4/4)-------------------------------------+
|  |                                                                  |
|  |  Unit Cnt --Type-- --State-- --Lpar-- --Lpar-- --Lpar-- --Lpar-- |
|  |  ---- --- -------- --------- -------- -------- -------- -------- |
|  |  1E18 001     SCTC Grants to   SYSSDR   ----     ----     ----    |
|  |  1E19 001     SCTC Grants to        0   ----     ----     ----    |
|  |  1E1A 001     SCTC Grants to     SYSK   ----     ----     ----    |
|  |  1E1B 001     SCTC Grants to     SYST   ----     ----     ----    |
```

Exposing a potential Loss of LPAR Integrity

The IODF plays a central role in z/Series integrity (z/OS, JES, VTAM, TCP/IP and CICS). Because of this important role, it is critical that Hardware Planners be able to clearly communicate to others in the IS organization the state of a given configuration and changes to it over time. Any well intended configuration construct that would cause a loss of LPAR integrity must be avoided.

One example of such a potential loss of LPAR integrity exists when an OSD type Channel Path is shared between LPARs. First researched and verified in April 2009, the basic premise of this exposure, as researched is described below.

The Premise

> *"Queued Direct I/O (QDIO) mode allows for an efficient data transfer method. Using system memory queues, data is directly exchanged between OSA-Express microprocessor and network software, using data queues in main memory and using Direct Memory Access (DMA).*
>
> *Dynamic OSA Address Table (OAT) builds an LPAR to LPAR communication to facilitate system-defined routing of IP traffic between IP stacks running in different LPARs. OAT building results in all IP HOME addresses and routing information defined in the IP stacks for each LPAR to be loaded to the OSA at start-up. The LPAR to LPAR communication (using QDIO) sends IP packets between LPARs sharing an OSA adapter based on the next-hop address in the IP packet header.*
>
> *If the next-hop address has been registered by another IP stack supported by the same OSA adapter (recorded in the OAT), the packet is sent directly from one IP stack to another – the traffic never travels across LANs external to the z/System."*

The Implication to others

A VTAM interface is required to run OSA adapters in QDIO mode. (A VTAM Transport Resource List (TRL) major node must be defined and active – a resulting TRLE is used with the IP stack configuration).

In the IP stack configuration, each port must have a DEVICE and LINK statement matching the port name in the TRLE.

Multiple HOME and ROUTE statements must be present as they identify different networks.

The Exposure

When all of these conditions exist (which is an accepted performance tuning strategy), the z/System will route IP packets between networks that are not otherwise connected, bypassing ALL firewalls.

How the IODF Explorer can help

The step in controlling this type of exposure begins by identifying those components that make it possible. Using both the LISTCHIP and LISTIODU and searching with the criteria Channel Path Type = OSD, the potential offenders are quickly identified.

LISTCHIP Reporting

Note in the report snippet shown below that all the OSD Type Channel Paths have been identified. This includes the Logical Partitions they serve (Access and Candidate List), and more importantly their state, SHARED.

```
z/SERIES PLATFORM DESCRIPTION FOR NAMED PROCID:Z10X#1.

+---------+---------+------+---------------+------+---------+---------+
|  NAMES  |  UNITS  | MODL | SERIAL NUMBER | MODE |  LEVEL  |  LSYS   |
+---------+---------+------+---------------+------+---------+---------+
|  Z9EC@1 |    2094 |  S18 |    004D202094 | LPAR | H050331 |    ---  |
+-----------------------------------------+--------------------------+
|DESC=z10XC @1 04D20                      |SNAADDR=IBM390PS,Z10X1    |
+-----------------------------------------+--------------------------+

CHANNEL PATH "CHPID" LIST FOR NAMED PROCID:Z10X#1.

+-------------------------------------------------------------------+
|                                                                   |
|               Logical Channel SubSystem - LCSS:0                  |
|                                                                   |
+-------------------------------------------------------------------+
|                                                                   |
| Lpar Access Lists -Lpar Candidates- --Chpids-- ---State--- -Switch- |
| --Name-- --Name-- --Name-- --Name-- Id Typ Pid De Re Sh Sp Id Sw,Pt |
| -------- -------- -------- -------- -- --- --- -- -- -- -- -- --,-- |
|                                                                   |
| XXI2     XYI2        ==       ==    -- --- --- -- -- -- -- -- --,-- |
| XCI2     XJI2        ==       ==    -- --- --- -- -- -- -- -- --,-- |
| XKI2     XNI2        ==       ==    01 OSD 100 -- -- Ok -- -- --,-- |
| XXI2     XBI2        ==       ==    -- --- --- -- -- -- -- -- --,-- |
| XCI2     XJI2        ==       ==    -- --- --- -- -- -- -- -- --,-- |
| XKI2     XNI2        ==       ==    02 OSD 101 -- -- Ok -- -- --,-- |
| XXI2     XBI2        ==       ==    -- --- --- -- -- -- -- -- --,-- |
| XCI2     XJI2        ==       ==    -- --- --- -- -- -- -- -- --,-- |
| XKI2     XNI2        ==       ==    09 OSD 210 -- -- Ok -- -- --,-- |
|                                                                   |
+-------------------------------------------------------------------+
```

While such a report will be useful for identifying possible exposures, additional detail will be needed in order to make such information actionable to VTAM and TCP/IP Planners. To accomplish this, rerun the query; only this time, request the LISTIODU Report. The output from such a request is shown on the following page.

LISTIODU Reporting

In addition to the information shown in LISTCHIP, this report completes the picture for VTAM and TCP/IP Planners by including specific Control Unit and I/O Device connectivity information. Using the reported UNIT ADDRESS and DEVICE TYPE information, TRLs definitions and TCP/IP DEVICE and/or LINK definitions can be easily traced and possible exposures identified.

```
I/O DEVICE "LISTIODU" LIST FOR NAMED PROCID:Z10C#1.

+-------------------------------------------------------------------+
|                 Logical Channel SubSystem - LCSS:0                |
+-------------------------------------------------------------------+
|                                                                   |
| Lpar Access Lists -Lpar Candidates- --Chpids-- ---Control Units---- |
| --Name-- --Name-- --Name-- --Name-- Id Typ Pid >Ctlu:(Type/AddrRng) |
| -------- -------- -------- -------- -- --- --- ----- ----- -------- |
|                                                                   |
> XAI2     XBI2        ==       ==    -- --- --- ----- ----- -------- |
| XCI2     XJI2        ==       ==    -- --- --- ----- ----- -------- |
| XKI2     XNI2        ==       ==    01 OSD 100 >0B40:(OSA/1)       <
|                                                                   |
|  +--Shared I/O Devices:(2/16)-------------------------------------+
|  |                                                                |
|  |  Unit Cnt --Type--  +  Unit Cnt --Type--  +  Unit Cnt --Type--  |
|  |  ---- --- --------     ---- --- --------     ---- --- --------  |
|  |  0B40 015      OSA     0B4F 001     OSAD     ---- ---   ----    |
|  |                                                                |
|  +----------------------------------------------------------------+
|                                                                   |
> XAI2     XBI2        ==       ==    -- --- --- ----- ----- -------- |
| XCI2     XJI2        ==       ==    -- --- --- ----- ----- -------- |
| XKI2     XNI2        ==       ==    02 OSD 101 >0B50:(OSA/1)       <
|                                                                   |
|  +--Shared I/O Devices:(2/16)-------------------------------------+
|  |                                                                |
|  |  Unit Cnt --Type--  +  Unit Cnt --Type--  +  Unit Cnt --Type--  |
|  |  ---- --- --------     ---- --- --------     ---- --- --------  |
|  |  0B50 015      OSA     0B5F 001     OSAD     ---- ---   ----    |
|  |                                                                |
|  +----------------------------------------------------------------+
|                                                                   |
> XAI2     XBI2        ==       ==    -- --- --- ----- ----- -------- |
| XCI2     XJI2        ==       ==    -- --- --- ----- ----- -------- |
| XKI2     XNI2        ==       ==    09 OSD 210 >0B60:(OSA/1)       <
|                                                                   |
|  +--Shared I/O Devices:(2/16)-------------------------------------+
|  |                                                                |
|  |  Unit Cnt --Type--  +  Unit Cnt --Type--  +  Unit Cnt --Type--  |
|  |  ---- --- --------     ---- --- --------     ---- --- --------  |
|  |  0B60 015      OSA     0B6F 001     OSAD     ---- ---   ----    |
|  |                                                                |
|  +----------------------------------------------------------------+
|                                                                   |
+-------------------------------------------------------------------+
```

Exposing weaknesses in LPAR Operational Integrity

Evaluating the IPL integrity of a z/OS LPAR is a job for Image FOCUS. If you are running the IODF Explorer from within the ICE Environment, you have direct access to the z/OS Core Inspector. This is helpful to those who are both Hardware Planners and z/OS System Programmers. Or if not, this gives the Hardware Planner an opportunity to additionally evaluate the integrity of the z/OS LPAR configurations for which she is directly responsible. More "EYES" potentially means fewer overall problems!

When called from within the IODF Explorer, Inspection results are reported so that they not only address z/OS IPL integrity but also are related directly back to the specifics of the device configuration supporting the IPL process. In the sample report shown below, an ERROR is reported as a RED FLAG. Next each "unit_address.system_dataset" is evaluated

```
BEGINNING SYSTEM INSPECTION SUMMARY - *ERROR*

+--System Summary-----------------------------------------------------+
|                                                                     |
|    Unit LoadParm OSCPName ---------Filters---------- + Results     |
|    ---- -------- -------- -HwName- LparNam- -VmUser- + -------     |
|                                                                     |
|    1000 0CE3W1M1     OSCP VM-TOKEN   ----    HILUSER + *ERROR*     |
|                                                                     |
+---------------------------------------------------------------------+

ENDING SYSTEM INSPECTION SUMMARY - *ERROR*

BEGIN SYSTEM DATASET REPORT - BY VOLUME PLACEMENT.

+--System Datasets and Volumes----------------------------------------+
|                                                                     |
|                      Sorted by Volume Placement                     |
|                                                                     |
+-----------Dataset Name----------- Sm Type DClass %Ex %Dr GACC APF-+
|                                                                     |
|  1001.VTMVSC.3390 - 46 ---------- -- ---- ------ --- --- ---- --- |
|                                                                     |
|                       CEE.SCEELPA NO  PDS LPALST 071 040 NONE --- |
|                       ISF.SISFLPA NO  PDS LPALST 020 010 NONE YES |
|                       ISP.SISPLPA NO  PDS LPALST 070 060 NONE YES |
|                                                                     |
|  0CE2.VPSMSB.3390 - 8 ----------- -- ---- ------ --- --- ---- --- |
|                                                                     |
|                    COUPLE.PXCF.CDS OK  SEQ SYSTEM 100 --- NONE --- |
|                   COUPLE.PCFRM.CDS OK  SEQ SYSTEM 100 --- NONE --- |
|                    COUPLE.WLMCDS01 OK  SEQ SYSTEM 100 --- NONE --- |
|                   COUPLE.PLOGR.CDS OK  SEQ SYSTEM 100 --- NONE --- |
|                  COUPLE.OMVS.CDS01 OK  SEQ SYSTEM 100 --- NONE --- |
|                      OMVS.S0W1.TMP OK  HFS SYSTEM --- --- NONE --- |
|                                                                     |
|  0CE3.VPMVSB.3390 - 7 ----------- -- ---- ------ --- --- ---- --- |
|                                                                     |
|                       SYS1.RACFPRM1 NO  SEQ SYSTEM 084 --- READ --- |
|                        SYS1.IPLPARM NO  PDS SYSTEM 013 040 READ --- |
|                        SYS1.IODF00 NO VSAM SYSTEM --- --- READ --- |
```

```
|                SYS1.S0W1.LOGREC NO  SEQ SYSTEM 100 --- READ --- |
```

➢ IODF Explorer Panels and Commands

▪ *Log onto the IODF Explorer for TSO:*

1. The IODF Explorer can be launched from ISPF Option 6 (command found in the HLQ..USERLIB library) or can be specified as an option from the ***ISPF Primary Menu***. If selecting from the ***ISPF Primary Menu***, make the menu selection and skip the following ISPF Option 6 instructions.
2. Navigate to ISPF Option 6.
3. Invoke the IODF Explorer by issuing the following command:
    a. EX 'HLQ..USERLIB (IODFTSO)'
4. A message is displayed which includes product release information as well as the instruction to, "Press Enter to Continue and Reach the Main Menu". Press <ENTER>.
5. If selecting from the ***ISPF Primary Menu*** or following ISPF Option 6 instructions, the IODF Explorer ***Custom Compliance Reports*** panel is displayed.

```
-------------------------- Custom Compliance Reports ------ Settings------
Option ===>

            -------- Image SENTRY z/OS Application Options --------

              .. Hardware - MVSCP and IOCDS Reports and Changes


              .. ICE Menu - Return to the ICE Primary Menu

NewEra Software, Inc.
    Our Job? Help you make repairs, avoid problems & improve z/OS integrity.
```

1. The first time you invoke the IODF Explorer after initial installation or following upgrades, you'll need to initialize the panels. Place your cursor under "Settings" (upper right) and press <ENTER>. *Do not make any changes to the Settings member*; press <PF3> to initialize. Once initialization is complete, press <PF3> again to continue.
2. From the Sentry Custom Compliance Reports menu, select "Hardware".

- ***Log onto the IODF Explorer for ICE:***

Step 1 - Log onto the Image Control Environment (ICE).

```
                    Image Control Environment: ICE
Option  ===>

   P   Production   - Image Focus Production              Userid   - PROBI1
                                                         Time     - 17:52
   W   Workbench    - Image Focus Workbench             Terminal - 3278
                                                         System   - S0W1
   R   Recovery     - Image Focus Recovery              Applid   - IFOB
                                                          Image Focus 7.0
   C   Control      - Control Editor Functions           Patch Level  P8

   S   Sentry       - Custom Compliance Reports

   D   Definitions  - Definitions & Settings

                     *************************
                     * Control Task: DOWN     *
                     * Recovery    : DOWN     *
                     *************************

   X   Exit         - Terminate

NewEra Software, Inc.
   Our Job? Help you make repairs, avoid problems, and improve IPL integrity.
```

Step 2, From the ICE primary menu, select “S” for Sentry Custom Compliance Reports.

```
------------------------- Custom Compliance Reports ------ Settings------
Option ===>

            -------- Image SENTRY z/OS Application Options --------

              .. Auditing - Work Papers, Gap Analysis and Changes

              .. OSHealth - Health Indicator Reports and Changes

              .. Hardware - MVSCP and IOCDS Reports and Changes

              .. CICSApps - CICS Integrity Reports and Changes

              .. Networks - VTAM Integrity Reports and Changes



              .. ICE Menu - Return to the ICE Primary Menu

NewEra Software, Inc.
    Our Job? Help you make repairs, avoid problems & improve z/OS integrity.
```

1. The first time you invoke the IODF Explorer after initial installation or following upgrades, you'll need to initialize the panels. Place your cursor under "Settings" (upper right) and press <ENTER>. *Do not make any changes to the Settings member*; press <PF3> to initialize. Once initialization is complete, press <PF3> again to continue.

2. From the Sentry Custom Compliance Reports menu, select "Hardware".

▪ *Scenario Definition/Selection Panel commands*

```
----------------- Image SENTRY - Scenario Selection/Definition -- IODF ----
Option ===>

Cm -Labels- -------Descriptions----- Cm -Labels- -------Descriptions-------
-- -------- ------------------------ -- -------- -------------------------
.. WEST1___ Western IODF extracts    .. ________ _____________________________
.. EAST1___ Eastern IODF extracts    .. ________ _____________________________
.. SOUTH___ Southern IODF extracts   .. ________ _____________________________
.. ________ _____________________________ .. ________ _____________________________
.. ________ _____________________________ .. ________ _____________________________
.. ________ _____________________________ .. ________ _____________________________
.. ________ _____________________________ .. ________ _____________________________
.. ________ _____________________________ .. ________ _____________________________
.. ________ _____________________________ .. ________ _____________________________
.. ________ _____________________________ .. ________ _____________________________
.. ________ _____________________________ .. ________ _____________________________
.. ________ _____________________________ .. ________ _____________________________
.. ________ _____________________________ .. ________ _____________________________
.. ________ _____________________________ .. ________ _____________________________
.. ________ _____________________________ .. ________ _____________________________
.. ________ _____________________________ .. ________ _____________________________

S=Selecting a Scenario - I=Importing - E=Exporting - C=To Compare Scenarios
```

The Scenario panel is used to park different views to help you analyze your environment. You can have different views of the IODFs on your own machine(s), Import/Export IODFs from other sites, and separate views for IODFs defined for different business units or clients.

The Import/Export functions utilize the same programs that you may have used to send your IODF extracts to NewEra Software for the initial product demonstration. You can utilize the same procedure to retrieve extracts from remote sites and import them into your IODF Explorer.

Note: There is a compare feature that allows you to analyze the data between different scenarios.

If you do not wish to setup a scenario, simply place your cursor under “IODF” (upper right) and press <ENTER>. The IODF Explorer will locate your current running IODF file, and continue to the Extracts panel.

▪ *Datasets & Extracts Panel commands (IODF Datasets – left side)*

```
--------- Image SENTRY - IODF Explorer 4.0 - Datasets & Extracts ----------
Option ===>

Sx -- ----IODF Datasets---- ------------IODF Extracts------------- --Date--
-- -- --------------------- ---MVSCP--- ----IOCDS----- --SWITCH--- --Last--
-- -- --------------------- ---OSCPs--- ----IOCPs----- ---SWCPs--- Extracts
-- Cm --------------------- Cm -confid- Cm --procids-- Cm --swid-- --------

W1 .. SYS1.IODF00__________ .. ________ .. ___________ .. ________ __OPEN__
W2 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W3 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W4 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W5 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__

-- -- --------------------- -- -------- -- ----------- -- -------- --------

W6 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W7 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W8 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W9 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W0 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__

-- .. IODF Dataset Extracts .. Email NO .. Working with the Element Extract
```

The Datasets & Extracts Panel is where you invoke the extract command and work with the extracted data. The left side of the panel focuses on the IODF Dataset Extracts; the right side focuses on the Element Extracts (OSCP, IOCP, SWCP).

Enter the fully qualified name of any available 'WORK' or 'PRODUCTION' IODF dataset under the “IODF Datasets” column. An “Eye Catcher” may be appended as a suffix to the dataset name using either an '-' or ':' as separator. For example, if you use slot A0 in the System Element for an IOCDS derived from a named IODF, you could enter the IODF dataset alias name as:

SYS1.IODF00.WORK-A0 or SYS1.IODF.WORK:A0.

Extract the content of an IODF by placing 'XX' on the command line adjacent to the dataset name, and pressing <ENTER>. Once the extract has completed, type 'PX' on the command line and press <ENTER> to display the IODF Configuration Target Summary report (press <PF3> when finished). Select each of the line commands explained in the list below to learn additional dataset related functions.

▪ *Dataset Extracts Panel commands (IODF Extracts– right side)*

```
--------- Image SENTRY - IODF Explorer 4.0 - Datasets & Extracts ----------
Option ===>

Sx -- ----IODF Datasets---- ------------IODF Extracts------------ --Date--
-- -- --------------------- ---MVSCP--- ----IOCDS----- --SWITCH--- --Last--
-- -- --------------------- ---OSCPs--- ----IOCPs----- ---SWCPs--- Extracts
-- Cm --------------------- Cm -confid- Cm --procids-- Cm --swid-- --------

W1 .. SYS1.IODF00__________ .. List____ .. List_______ .. List____ __OPEN__
W2 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W3 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W4 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W5 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__

-- -- --------------------- -- -------- -- ----------- -- -------- --------

W6 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W7 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W8 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W9 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W0 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__

-- .. IODF Dataset Extracts .. Email NO .. Working with the Element Extract
```

The Datasets & Extracts Panel is where you invoke the extract command and work with the extracted data. The right side focuses on the Element Extracts (OSCP, IOCP, SWCP).

When the Extract completes, either 'List' or 'ER' will appear below each of the IODF configuration Elements: OSCP, SWCP & IOCP of the selected IODF dataset. Adjacent to each 'OK' will be the label 'List'. Place the cursor under 'List', press <ENTER> to display the list of the Targets found in the selected Element. Examine the List of Targets to find one of interest.

To select a Target, place the cursor under it and press <ENTER>. This will return you to the starting menu, replacing 'List' with the name of the selected Target. You can return to the selection list at any time to change your selection, mixing and matching targets as needed.

You may also work with targets directly within the Target List – the available line commands are explained below.

▪ *Manipulating Extracts ("MX") Panel commands*

The "MX" command from the Datasets & Extracts Panel displays the Manipulating Extracts panel.

```
 ----------------- Image SENTRY - IODF Explorer 4.0 - WESTERN1 -----------------
  Option ===>

------------OSCP Targets----------- | --------------IOCP Targets---------------
.. PSYSS.IODF92.09-02-05.15:58:21   | .. PSYSS.IODF92.09-02-05.15:58:21
------------Ext/12/02/XX----------- | --------------Wks/12/02/XX---------------
.. GDPP3B00 .. SYS13300 .. ________ | .. NEZ0#0____ .. __________ .. ___________
.. GDPP7B00 .. SYS14300 .. ________ | .. NEZ0#1____ .. __________ .. ___________
.. GDPT3B10 .. SYS17300 .. ________ | .. NEZ1#0____ .. __________ .. ___________
.. GDPT7B10 .. SYS23300 .. ________ | .. NEZ1#1____ .. __________ .. ___________
.. SYSL3200 .. SYS24300 .. ________ | .. __________ .. __________ .. ___________
.. SYSL4200 .. SYS27300 .. ________ | .. __________ .. __________ .. ___________
.. SYSL7200 .. SYS43300 .. ________ | .. __________ .. __________ .. ___________
.. SYST3300 .. SYS44300 .. ________ | .. __________ .. __________ .. ___________
.. SYST4300 .. SYS47300 .. ________ | .. __________ .. __________ .. ___________
.. SYST7300 .. VM1A3900 .. ________ | .. __________ .. __________ .. ___________
.. SYSU3200 .. VM1A4900 .. ________ | .. __________ .. __________ .. ___________
.. SYSU4200 .. VM1A7900 .. ________ | .. __________ .. __________ .. ___________
.. SYSU7200 .. ________ .. ________ | .. __________ .. __________ .. ___________
.. SYSX3200 .. ________ .. ________ | .. __________ .. __________ .. ___________
.. SYSX4200 .. ________ .. ________ | .. __________ .. __________ .. ___________
.. SYSX7200 .. ________ .. ________ | .. __________ .. __________ .. ___________
R=Report - W=WKSheet - I=Inspection - S=Search - T=EDTab - C=Compare - Email NO
```

This panel provides Target Selection for the Interactive Worksheets. Each IODF contains the possible elements: OSCP and IOCP. As each is extracted, its Target Configurations are identified and displayed on this panel. Selecting a Target with a 'W' will display the Worksheet designed specifically to aid in the exploration of the Target.

Each Target is also supported by a collection of Blueprints and Reports. To display the Blueprint/Report Library interface, type an 'R' next to the desired target. You can work with two targets at once by placing an 'R' before a second within the same element class. It is considered a best practice to update your blueprints frequently and reconcile all changes.

▪ *Group Compare Panel commands*

The “GC” command from the Datasets & Extracts Panel displays the Group Compare panel.

```
------- Image SENTRY - IODF Explorer 4.0 - Target Selection - OSCP ------
Option ===>

              -------------- OSCP Group Compare ---------------

  Cm --Adds-- Cm -------- Cm -------- Cm -------- Cm -------- Cm --Adds--
  .. VM1A7900 .. ________ .. ________ .. ________ .. ________ .. ________
  .. ________ .. ________ .. ________ .. ________ .. ________ .. ________
  .. ________ .. ________ .. ________ .. ________ .. ________ .. ________
  Cm --Cmms-- Cm -------- Cm -------- Cm -------- Cm -------- Cm --Cmms--
  .. GDPP3B00 .. GDPP7B00 .. GDPT3B10 .. GDPT7B10 .. SYSL3200 .. SYSL4200
  .. SYSL7200 .. SYST3300 .. SYST4300 .. SYST7300 .. SYSU3200 .. SYSU4200
  .. SYSU7200 .. SYSX3200 .. SYSX4200 .. SYSX7200 .. SYS13300 .. SYS14300
  .. SYS17300 .. SYS23300 .. SYS24300 .. SYS27300 .. SYS43300 .. SYS44300
  .. SYS47300 .. VM1A3900 .. ________ .. ________ .. ________ .. ________
  .. ________ .. ________ .. ________ .. ________ .. ________ .. ________
  .. ________ .. ________ .. ________ .. ________ .. ________ .. ________
  Cm --Dels-- Cm -------- Cm -------- Cm -------- Cm -------- Cm --Dels--
  .. VM1A4900 .. ________ .. ________ .. ________ .. ________ .. ________
  .. ________ .. ________ .. ________ .. ________ .. ________ .. ________
  .. ________ .. ________ .. ________ .. ________ .. ________ .. ________

                  Working directly with Element Change Targets .. Email NO
```

An IODF Dataset may contain OSCP, SWCP and IOCP Elements. Within each Element you will find a set of named Targets that match the configuration of your installation. Each is planned for a specific purpose. Each Element Target is called into action by name and plays a unique role in building the full system configuration. OSCP Targets are used exclusively by the operating system at IPL, while SWCP Targets are uploaded to FICON and ESCON Switches. IOCP Targets are staged in the System Element (SE) and called during a Power-On-Reset (POR) to build the base hardware and related logical partition configurations.

The Target List serves two primary functions. The first is the selection of Targets to be matched with other Targets from different IODFs. For this purpose, place the cursor under a Target name, press <ENTER>. This will return you to the prior panel inserting the name at your selection point. Second, if you want to work exclusively with the Targets found in a selected IODF-Element, do so using this panel. To do this, you will use a set of Line Selection Commands. To review the operation of commands, place the cursor under last line and press <ENTER>.

Before you begin to use the Group Compare, you must master selecting the IODF Elements and their Targets. If you have yet to do so, press PF3, then PF1. To invoke a Group Compare, type 'GC' on the command line adjacent to two IOCP (or two OSCP) targets, then press <ENTER>. The Group Compare panel is displayed. The three sections of this panel show Targets which contain either Adds, Commons, or Deletes. Yellow reverse-video shows changes between common Targets.

To view the results of a compare, type 'C' adjacent to the desired Target and press <ENTER>. The results depend upon the Target status:

- Target selections will display Profile Reports;
- Yellow reverse-video Targets will display Compare Summary Report.

For Compare Detail, type 'Detail' on the Command Line when you select the Target.

Cross Comparing Targets Displayed in Group Compare: The Targets displayed in this panel may be compared one to the other by simply placing a 'C' on the Command Line before TWO Targets and pressing <ENTER>. To avoid any confusion over compare results, please note the date, time and target names shown in the IODF Dataset Source Header that appears at the top of the Compare Report.

▪ *Partition Compare Panel commands*

The “PC” command (for IOCP Targets only) from the Datasets & Extracts Panel displays the Partition Compare panel.

```
----------- Image SENTRY - IODF Explorer 4.0 - Partition Selection ------------
  Option ===>

    |-ProcId-|  ------ IODF92:09-02-05 <-> IODF92:09-02-05 -------  |-ProcId-|

Cm C---Adds---N Cm C---Lpar---N Cm C---Lpar---N Cm C---Lpar---N Cm C---Adds---N
.. 0___VM1A___C .. _____________ .. _____________ .. _____________ .. _____________
.. _____________ .. _____________ .. _____________ .. _____________ .. _____________
.. _____________ .. _____________ .. _____________ .. _____________ .. _____________
.. C _NEZ0#0_ N Cm C---Lpar---N Cm C---Cmms---N Cm C---Lpar---N .. C _NEZ0#0_ N
.. 0___CFP1___2 .. 0___CFT1___3 .. 0__GDPPA___5 .. 0__GDPTA___6 .. 0__SYSLA___A
.. 0__SYSTA___8 .. 0__SYSUA___B .. 0__SYSXA___9 .. 0__SYS1A___1 .. 0__SYS2A___7
.. _____________ .. _____________ .. _____________ .. _____________ .. _____________
.. _____________ .. _____________ .. _____________ .. _____________ .. _____________
.. _____________ .. _____________ .. _____________ .. _____________ .. _____________
.. _____________ .. _____________ .. _____________ .. _____________ .. _____________
.. _____________ .. _____________ .. _____________ .. _____________ .. _____________
Cm C---Dels---N Cm C---Lpar---N Cm C---Lpar---N Cm C---Lpar---N Cm C---Dels---N
.. 0__SYS4A___4 .. _____________ .. _____________ .. _____________ .. _____________
.. _____________ .. _____________ .. _____________ .. _____________ .. _____________
.. _____________ .. _____________ .. _____________ .. _____________ .. _____________

                    Working directly with z/OS Partition Targets .. Email NO
```

Working with Logical z/OS Partitions, this panel displays the results of a comparison between the IOCP Targets selected from the prior panel. These results are subdivided into the three change categories: LPARs Added, LPARs Deleted & LPARs that were Common to both IOCPs.

The Common LPARs that changed are highlighted in yellow. To display a summary of the changes, place the cursor under a highlighted LPAR or a 'S' before it, press <ENTER>. For a more detailed report, enter 'DETAIL' on the Option Line, and reselect.

The Configuration Profile of Added, Deleted and Unchanged Common LPARS is displayed by placing the cursor under the LPAR or a 'P' before it and pressing <ENTER>. Type the 'DETAIL' option for the IOCP/LPAR Map.

Any LPAR displayed, regardless of category, may be compared with any other by placing a 'C' before the two targets and pressing enter. By default the Summary Report is displayed. Add 'DETAIL' to the Option Line to display the Detail LPAR Compare Report. LPARs that have been defined for inspection, using the 'PI' command against a IOCP Target, may be directly inspected by placing an 'I' before the Target LPAR and pressing <ENTER> to display the LPAR Dataset and Volume Summary. Specify 'DETAIL' on the Command Line to display the Inspection Message Log.

SWCP Compare Panel commands

The “SC” command (for SWCP Targets only) from the Datasets & Extracts Panel displays the SWCP Compare panel.

```
------------ Image SENTRY - IODF Explorer 4.0 - WESTERN1/SWCP -- Connected --
Option ===>

  | ---ProcId#Css-- | ---ProcId#Css-- | ---ProcId#Css-- | ---ProcId#Css-- |
  | .. NEZ0#0       | .. NEZ0#1       | .. NEZ0#2       | .. NEZ0#3       |
  | Active_Switches | Active_Switches | Active_Switches | Active_Switches |
  |    .. 01 .. __  |    .. 05 .. __  |    .. __ .. __  |    .. __ .. __  |
  |    .. 02 .. __  |    .. 06 .. __  |    .. __ .. __  |    .. __ .. __  |
  |    .. 05 .. __  |    .. __ .. __  |    .. __ .. __  |    .. __ .. __  |
  |    .. 06 .. __  |    .. __ .. __  |    .. __ .. __  |    .. __ .. __  |
  |    .. __ .. __  |    .. __ .. __  |    .. __ .. __  |    .. __ .. __  |
  |    .. __ .. __  |    .. __ .. __  |    .. __ .. __  |    .. __ .. __  |
  |    .. __ .. __  |    .. __ .. __  |    .. __ .. __  |    .. __ .. __  |
  |    .. __ .. __  |    .. __ .. __  |    .. __ .. __  |    .. __ .. __  |
  |    .. __ .. __  |    .. __ .. __  |    .. __ .. __  |    .. __ .. __  |
  |    .. __ .. __  |    .. __ .. __  |    .. __ .. __  |    .. __ .. __  |
  |    .. __ .. __  |    .. __ .. __  |    .. __ .. __  |    .. __ .. __  |
  |    .. __ .. __  |    .. __ .. __  |    .. __ .. __  |    .. __ .. __  |
  |    .. __ .. __  |    .. __ .. __  |    .. __ .. __  |    .. __ .. __  |
  |    .. __ .. __  |    .. __ .. __  |    .. __ .. __  |    .. __ .. __  |
  |    .. __ .. __  |    .. __ .. __  |    .. __ .. __  |    .. __ .. __  |
  |    .. __ .. __  |    .. __ .. __  |    .. __ .. __  |    .. __ .. __  |
```

The Switch Interface classifies individual Switches by SWID as either 'Connected' or 'NoConnect' (indicated in the upper right of the panel) within a named Logical Channel Subsystem (LCSS). To be classified 'Connected' a SWID must be referenced by a defined CHPID within the LCSS. If the SWID is not referenced, it is considered a 'NoConnect' within the LCSS.

To display the 'NoConnect' List, place the cursor under the label 'Connected' in upper right, press enter. Repeat under 'NoConnect' to toggle back to the 'Connected' List.

The '??' SWID Label in 'NoConnect' List is used to indicate CHPIDs within a LCSS that are not connected to a Switch.

To display a Report on any Switch, type a 'P' to get a Port List.

▪ *Partition Inspection Panel commands*

The “PI” command (for IOCP or OSCP Targets only) from the Datasets & Extracts Panel displays the Partition Inspection panel.

```
-- HltChk --- Image SENTRY - IODF Explorer 4.0 - LPAR Inspections --- RunSys --
  Option ===>

                -------- ProcId:NEZ0 - LPARs within CSS:0 --------

  Cm LparName IPLUnit LoadParm OSCPName Cm LparName IPLUnit LoadParm OSCPName
  .. CFP1____ 1000___ 03E3W1.1 _________ .. _________ _______ _________ _________
  .. CFT1____ 1000___ 03E3W1.1 _________ .. _________ _______ _________ _________
  .. GDPPA___ 1000___ 03E3W1.1 _________ .. _________ _______ _________ _________
  .. GDPTA___ 1000___ 03E3W1.1 _________ .. _________ _______ _________ _________
  .. SYSLA___ 1000___ 03E3W1.1 _________ .. _________ _______ _________ _________
  .. SYSTA___ 1000___ 03E3W1.1 _________ .. _________ _______ _________ _________
  .. SYSUA___ 1000___ 03E3W1.1 _________ .. _________ _______ _________ _________
  .. SYSXA___ 1000___ 03E3W1.1 _________ .. _________ _______ _________ _________
  .. SYS1A___ 1000___ 03E3W1.1 _________ .. _________ _______ _________ _________
  .. SYS2A___ 1000___ 03E3W1.1 _________ .. _________ _______ _________ _________
  .. SYS4A___ 1000___ 03E3W1.1 _________ .. _________ _______ _________ _________
  .. VM1A____ 1000___ 03E3W1.1 _________ .. _________ _______ _________ _________
  .. _________ _______ _________ _________ .. _________ _______ _________ _________
  .. _________ _______ _________ _________ .. _________ _______ _________ _________
  .. _________ _______ _________ _________ .. _________ _______ _________ _________
  .. _________ _______ _________ _________ .. _________ _______ _________ _________
  .. IPLState          Working with z/OS Logical Partition        .. Email NO
```

'RunSys' will populate the IPLUnit and LoadParm values on this panel by performing an Inspection of the Running System. You may need to modify these values to match individual LPAR requirements, and as needed, provide a matching OSCPName. Once these have been defined, you can initiate an LPAR Inspection by placing an 'I' before the LPAR Name and pressing <ENTER>. This action will display the Inspection Confirmation panel. Use 'S' or <ENTER> to continue the Inspection, or <PF3> to abort. By default, when the Inspection is complete the LPAR Volume Report is displayed. To display the Inspection Log, type ‘DETAIL’ on the Command Line before you confirm and continue the Inspection. Use 'IR' to display Volume Summary Report. 'IL' will display the detailed Inspection Log.

'HltChk' will query the Health Checks for the Running System only. To extend this function to individual LPARs, place an 'H' before an LPAR Name and press enter. This will display a list of possible related System Names. Select a System Name that relates to the LPAR, press <ENTER> to continue. When the Health Check is complete, the Health Check Exception Summary is displayed. Place 'HR' before an LPAR Name and press <ENTER> to display the last Health Check associated with the selected LPAR.

▪ *IOCP, OSCP, and SWCP Worksheet commands*

For IOCP and OSCP Targets: The "MX" command from the Datasets & Extracts Panel displays the Manipulating Extracts panel. The "W" line command from the Manipulating Extracts panel displays the IOCP or OSCP Worksheet.

For SWCP Targets: The "W" command (for the SWCP Target) from the Datasets & Extracts Panel displays the SWCP Worksheet.

```
----------------------- IMAGE Sentry - IODF Explorer 4.0 -------- Row 1 of 249
 -ICE 7.0-                        Wks/12/02/XX                      -Logical View-
------------------- PSYSS.IODF92 - 2009-02-05 15:58:21 - IOCP -----------------
Option ===>                                                  Scroll ===> PAGE
Row Select: Attributes Descriptions
--------------- To View a Configuration Select a Component Type ---------------
Partitions    Channel Paths    FiEscon Switches    Control Units    I/O Devices
--- To Sort select a Sub-Head, To Query enter above Sub-Head, PFK1 for Help ---
-------Targets------- ---------Input-Output Devices Defined to Targets---------
_ ____ __________ __ ____ ___ _____ _____ ____ _________ ____________________
S Line --ProcIds-- Mg Unit Rng -Type- Model Ctlu --Serial-- ----Description----
_ 0001      NEZ0#0 01 0001 001   9032     3 0001    '21987' ESCON_Director_(Swi
_ 0002      NEZ0#0 01 0002 001   9032     3 0002    '21988' ESCON_Director_(Swi
_ 0003      NEZ0#0 01 0005 001   2032 ----- 0005 'DEC2C9C84 Cisco_MDS_9513_Dire
_ 0004      NEZ0#0 01 0006 001   2032 ----- 0006 'DEC2C9A45 Cisco_MDS_9513_Dire
_ 0005      NEZ0#0 01 0120 024   3270     X 0120    '120CD' -------------------
_ 0006      NEZ0#0 01 0138 004   3270     X 0120    '120CD' -------------------
_ 0007      NEZ0#0 01 013C 020   3270     X 0120    '120CD' -------------------
_ 0008      NEZ0#0 01 0220 024   3270     X 0220    '120CE' -------------------
_ 0009      NEZ0#0 01 0238 004   3270     X 0220    '120CE' -------------------
_ 0010      NEZ0#0 01 023C 020   3270     X 0220    '120CE' -------------------
_ 0011      NEZ0#0 01 0310 006   3490 ----- 0310    '65168' -------------------
_ 0012      NEZ0#0 01 0310 006   3490 ----- 0311    '65168' -------------------
_ 0013      NEZ0#0 01 0316 002   3490 ----- 0310    '65168' -------------------
```

When you first display a set of worksheets, the view is automatically determined and highlighted in white. Select an alternate worksheet in the set by placing the cursor under the worksheet name and pressing <ENTER>. The view will change to display the selected worksheet and its name will be highlighted in white. When finished using the worksheet, press <PF3> to return to Manipulating Extracts (Target Selection) panel.

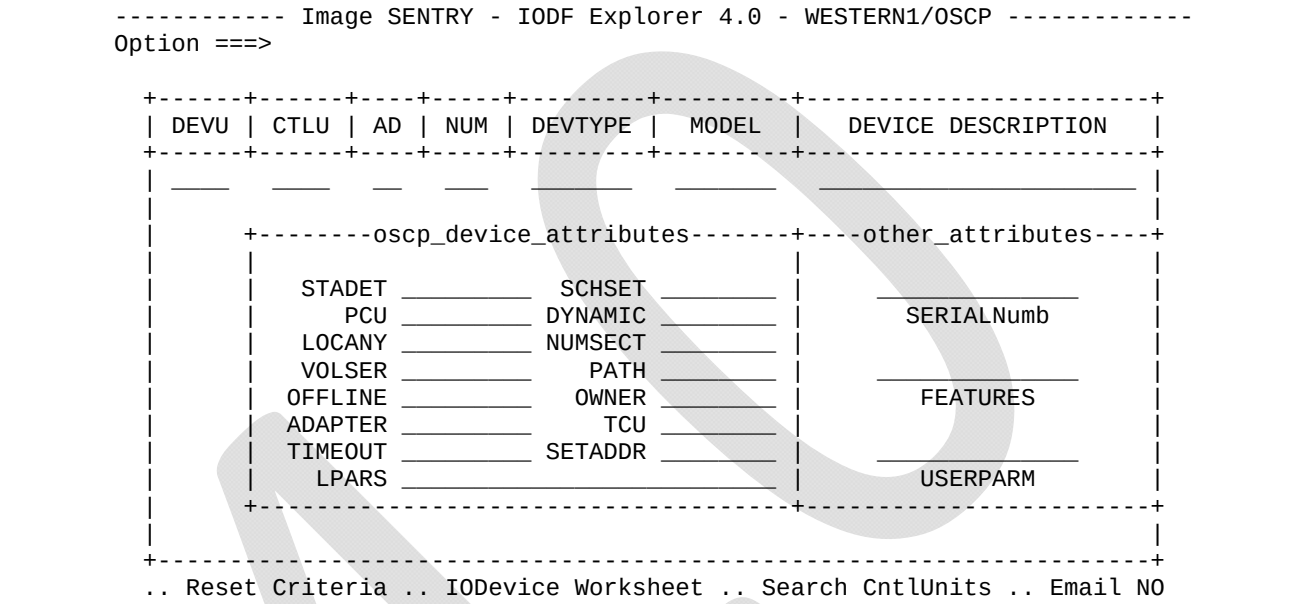
The Row Selection Commands, shown in the worksheet, are used to access the individual configuration records. Attribute reports display the keyword values that define an element. Use the Instruction command to display the Logical Record. The values: Serial Number, Description & Model are required input before the Logical Record is updated.

Line Commands: Command Syntax = Command,Service

Command	Service	Functional Use
REPORT	COPY	REPORT = Full formatted report
EXPORT	PRINT	EXPORT = Comma delimited source data
TUTORIAL	MAIL	TUTORIAL = Exploring Configuration Status

▪ *IOCP, OSCP, and SWCP Device Search commands*

The "S" command from the ***Datasets & Extracts*** Panel displays the search panel. Listed below is an example of an OSCP search panel.



The Search Criteria dialog box allows you to Search the selected Control Unit target(s) for specific keyword parameters and values. Place the cursor under a keyword (i.e. CTLU) and press <ENTER>. An IODF Field Value Availability report is displayed. It shows all of the values found for that specific keyword. <PF3> to return. Type a desired value in the field under a keyword and press <ENTER>. Attributes of Named Control Units are displayed. It shows the detail information for specified devices (keyword & value). <PF3> to return.

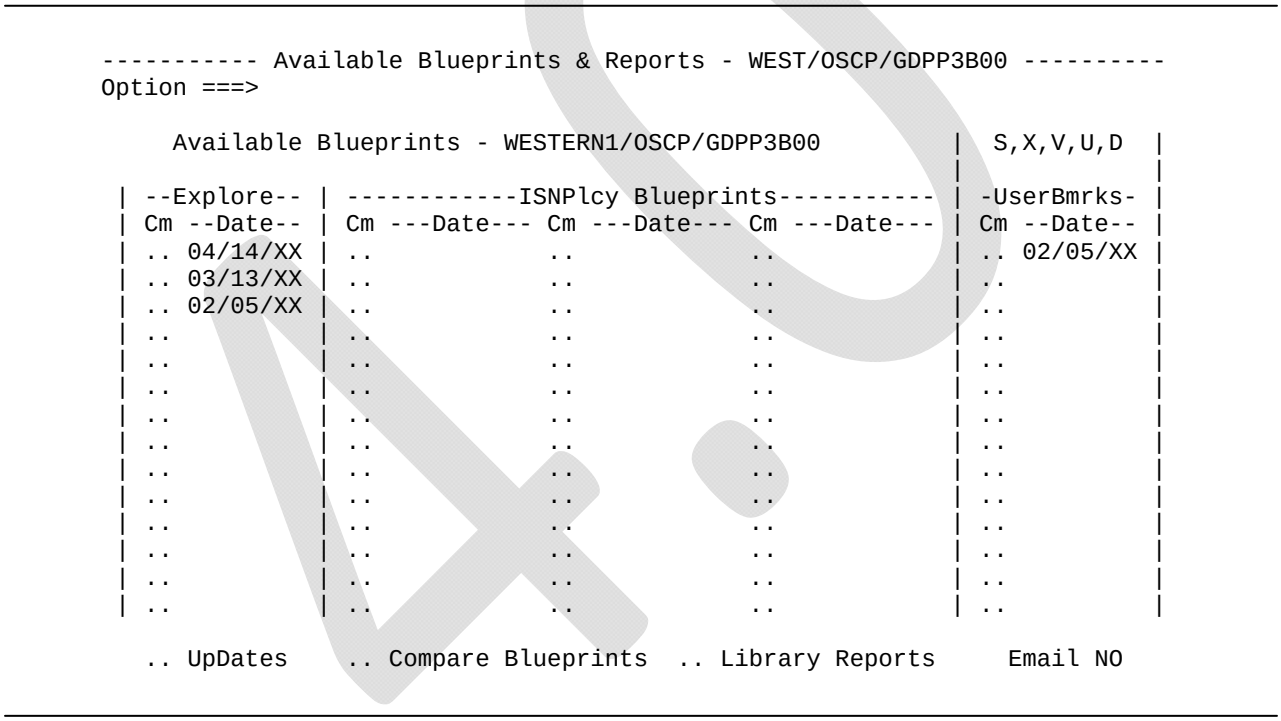
Note: When searching by CTLU, leading zeros need not be specified. Attributes of Named Control Units show details for all selected target(s) by ProcId where a Target will have a numerical value appended to the ProcId. If only one Target was specified, '.1' will be appended. If multiple Targets were specified and there are duplicate Target names, '.1', '.2', etc., will be appended to distinguish Targets.

Use the REPORT (MAIL,PRINT,COPY) Line Commands to Email Search Results or route them to an attached printer or an MVS Dataset you name. Or, place the cursor under EMAIL to toggle the function NO/OK (send reports via the Email Client).

▪ *IOCP Blueprints & Report Library Panel commands*

For IOCP and OSCP Targets: The "MX" command from the Datasets & Extracts Panel displays the Manipulating Extracts panel. The "R" line command from the Manipulating Extracts panel displays the IOCP or OSCP Available Blueprints & Reports panel. Select "Library Reports" (bottom right) for the IOCP or OSCP Report Library panel.

For SWCP Targets: The "R" command (for the SWCP Target) from the Datasets & Extracts Panel displays the SWCP Available Blueprints & Reports panel. Select "Library Reports" (bottom right) for the IOCP or OSCP Report Library panel.



To compare two Blueprints, place a 'C' before the date of any two. Next select with 'S' or place the cursor under Compare Blueprints and press <ENTER>. If changes are detected, the Configuration Change Reports are added to the Library Reports. If no change is detected, a message is displayed.

To Update a Blueprint, select Update with 'S' or place the cursor under the label and press enter. The Blueprint is updated and the current date is added to the Blueprint Stack. To Benchmark a Blueprint, place 'X' before the Blueprint date and press enter. This will display the Benchmark Documentation panel. Select Update Benchmark to continue the process.

A separate set of Configuration Reports is maintained for each Target within each selected IODF. To display the Library, type 'S' before Library or place the cursor under it and press ENTER. This will display

a report list. If no reports are shown in the list or if you want to update the reports, then select Update Configuration Reports or issue the Update Line Command.

Email Setting: Toggles OK/NO to send reports via the Email Client.

```
--------- Image Sentry - OSCP Report Library – WEST1/OSCP/ALTNIP ----------
Option ===>

     Status Last Update:04/XX/XX and Time:12:51:49 - Update User:PROBI1

Cm -Member- -----Status Summaries--- Cm -Member- -------Full Reports-------
.. $OSCPSUM OSCP z/OS Software______ .. $OSCPMAP OSCP z/OS Software________
.. $NIPSSUM NIP Consoles____________ .. $NIPSMAP NIP Consoles_____________
.. $ETABSUM Eligible Devices________ .. $ETABMAP Eligible Devices__________
.. $CTLUSUM Control Units___________ .. $CTLUMAP Control Units_____________
.. $OSDVSUM I/O Devices_____________ .. $OSDVMAP I/O Devices_______________
.. ________ _____________________________ .. ________ _____________________________
.. ________ _____________________________ .. ________ _____________________________
.. ________ _____________________________ .. ________ _____________________________
.. ________ _____________________________ .. ________ _____________________________
.. ________ _____________________________ .. ________ _____________________________
.. ________ _____________________________ .. ________ _____________________________
Cm -Member- -----Change Summaries--- Cm -Member- ------Change Details------
.. $OSCNSUM Last Change Report______ .. $OSCNMAP Last Change Report________
.. ________ _____________________________ .. ________ _____________________________
.. ________ _____________________________ .. ________ _____________________________

     .. Update OSCP Reports                                  EMAIL NO
```

Configuration Report Library - Status Reports: To populate this panel with reports, place your cursor under “Update OSCP Reports” and press <ENTER>.

Status Reports reflect the current state of the configuration as determined from the selected IODF for the selected Target. Reports may be viewed by selecting with S or placing the cursor under the Member or Report Name. Update these reports within the panel using the Update Command.

Change Reports reflect changes as determined from the LAST Blueprint Comparison run from the prior panel. To update the Change Reports, you need to back up one panel, PF3, select the Blueprints you wish to compare and then select Compare Blueprints. You can return to this panel to view your reports.

Line Commands: Command Syntax = Command, Service

```
Command     Service       Functional Use            Process Steps
--------    --------    ------------------     ----------------------
 REPORT      COPY        Dataset Copy             1:Enter Command
             PRINT       Hardcopy Utility         2:Select Report
             MAIL        Email Client             3:View then PF3
             UPDATE      Update Status Reports    4:Function then PF3
```

Email Setting: Toggles OK/NO to send reports via the Email Client.

➢ Getting Started with the IODF Explorer

In this section, we will take you on a tour of the IODF Explorer. Follow the step-by-step instructions to exercise the product's main functions.

▪ *Step 1: Log onto ICE, select Image SENTRY*

We begin this exercise by selecting the **Image SENTRY** option (Sentry – Custom Compliance Reports) from the ***Image Control Environment*** panel.

Note1: If you have the IODF Explorer for TSO, you will not log onto ICE, but will select the IODF Explorer from the ***ISPF Primary Menu*** (or invoke the IODFTSO command from ISPF Option 6 instructions to display the IODF Explorer ***Custom Compliance Reports*** panel. Also, you may skip to Step 4 as the first three steps were covered in the "fast path" tour.

Note2: If you are unfamiliar with the **Image Control Environment (ICE)** and **Image FOCUS**, you may want to review the ***Image FOCUS Getting Started Guide*** (www.newera.com/startifo).

```
                    Image Control Environment: ICE
Option  ===>

   P   Production   - Image Focus Production                Userid    - PROBI1
                                                           Time      - 16:16
   W   Workbench    - Image Focus Workbench                 Terminal - 3278
                                                           System    - S0W1
   R   Recovery     - Image Focus Recovery                  Applid    - IFOB
                                                            Image Focus 7.0
   C   Control      - Control Editor Functions              Patch Level  P8

   S   Sentry       - Custom Compliance Reports

   D   Definitions  - Definitions & Settings

                      *************************
                      * Control Task: DOWN     *
                      * Recovery    : DOWN     *
                      *************************


   X   Exit         - Terminate

NewEra Software, Inc.
   Our Job? Help you make repairs, avoid problems, and improve IPL integrity.
```

- ☐ Log onto **ICE**.
- ☐ Select the "S" Option (Sentry – Custom Compliance Reports) from the Image Control Environment panel.

Step 2: Select Image SENTRY Application Option

From Step 1, the ***Custom Compliance Reports*** panel has been displayed. This is the entry point for the six **Image SENTRY** Application Options.

```
------------------------- Custom Compliance Reports ------ Settings ------
Option ===>

            -------- Image SENTRY z/OS Application Options --------

              .. Auditing - Work Papers, Gap Analysis and Changes

              .. OSHealth - Health Indicator Reports and Changes

              .. Hardware - MVSCP and IOCDS Reports and Changes

              .. CICSApps - CICS Integrity Reports and Changes

              .. Networks - VTAM Integrity Reports and Changes

              .. Software - IPL Integrity Reports and Changes


              .. ICE Menu - Return to the ICE Primary Menu

NewEra Software, Inc.
   Our Job? Help you make repairs, avoid problems & improve z/OS integrity.
```

Throughout **Image SENTRY**, there are several ways you can select options – "traditional" and "point-and-shoot" methods:

- Placing an "S" or "/" next to the desired option, and press <ENTER>.
- Placing the cursor over the desired option, and press <ENTER>.
- Double-clicking on your mouse when the cursor is over the desired option.

To initialize **Image SENTRY**, you must view the Settings the first time this panel is displayed:

- Select "Settings" at the top right corner on the ***Custom Compliance Reports*** panel by placing the cursor under "Settings" and pressing <ENTER>.
- Press <PF3> to return.

For this Getting Started guide, we will focus on the "z/OS Hardware" option.

- Select "Hardware".

▪ *Step 3: Detect the Current IODF*

From the previous step, the ***Scenario Selection/Definition*** panel has been displayed. There will be no Scenario entries because none have been defined yet.

```
------------------ Image SENTRY - Scenario Selection/Definition -- IODF ----
Option ===>

 Cm -Labels- -------Descriptions-----  Cm -Labels- -------Descriptions-------
 -- -------- --------------------------  -- -------- --------------------------
 .. ________ ____________________________  .. ________ ____________________________
 .. ________ ____________________________  .. ________ ____________________________
 .. ________ ____________________________  .. ________ ____________________________
 .. ________ ____________________________  .. ________ ____________________________
 .. ________ ____________________________  .. ________ ____________________________
 .. ________ ____________________________  .. ________ ____________________________
 .. ________ ____________________________  .. ________ ____________________________
 .. ________ ____________________________  .. ________ ____________________________
 .. ________ ____________________________  .. ________ ____________________________
 .. ________ ____________________________  .. ________ ____________________________
 .. ________ ____________________________  .. ________ ____________________________
 .. ________ ____________________________  .. ________ ____________________________
 .. ________ ____________________________  .. ________ ____________________________
 .. ________ ____________________________  .. ________ ____________________________
 .. ________ ____________________________  .. ________ ____________________________
 .. ________ ____________________________  .. ________ ____________________________
 .. ________ ____________________________  .. ________ ____________________________
 .. ________ ____________________________  .. ________ ____________________________

 S=Selecting a Scenario - I=Importing - E=Exporting - C=To Compare Scenarios
```

- Select “IODF” at the top right corner on the ***Datasets & Extracts*** panel.

The IODF Explorer automatically detects the current IODF file name. A dialog box is displayed:

Profile In/Output Definition File - IODFDSN - SYS1.IODF00

- Press <ENTER> to continue.

Note: If switches were not defined in your IODF, you will receive a warning message. Press <ENTER> to acknowledge the message and continue.

Before we perform extracts, we will back up one panel to define a Scenario.

- Press <PF3> to display the ***Scenario Selection/Definition*** panel.

▪ *Step 4: Define a Scenario*

The ***Scenario Selection/Definition*** panel will have no Scenario entries until you define them.

```
----------------- Image SENTRY - Scenario Selection/Definition -- IODF ----
Option ===>

 Cm -Labels- -------Descriptions----- Cm -Labels- -------Descriptions-------
 -- -------- ------------------------ -- -------- -------------------------
 s. WEST1    West US IODF             .. ________ _________________________
 .. ________ _________________________ .. ________ _________________________
 .. ________ _________________________ .. ________ _________________________
 .. ________ _________________________ .. ________ _________________________
 .. ________ _________________________ .. ________ _________________________
 .. ________ _________________________ .. ________ _________________________
 .. ________ _________________________ .. ________ _________________________
 .. ________ _________________________ .. ________ _________________________
 .. ________ _________________________ .. ________ _________________________
 .. ________ _________________________ .. ________ _________________________
 .. ________ _________________________ .. ________ _________________________
 .. ________ _________________________ .. ________ _________________________
 .. ________ _________________________ .. ________ _________________________
 .. ________ _________________________ .. ________ _________________________
 .. ________ _________________________ .. ________ _________________________
 .. ________ _________________________ .. ________ _________________________
 .. ________ _________________________ .. ________ _________________________

 S=Selecting a Scenario - I=Importing - E=Exporting - C=To Compare Scenarios
```

- Press <PF1> to review the help for this panel. When finished, press <PF3>.
- Place the cursor under the “S=Selecting a Scenario” label (bottom left), and press <ENTER>. The help panel for this function is displayed. When finished, press <PF3>.
- Place the cursor under the other labels (bottom of the panel), and press <ENTER>. The corresponding help panel for the selected function is displayed. When finished, press <PF3>.
- On the first line, type a Label and corresponding Description. Type the “s” line command and press <ENTER>. Your first Scenario has been defined, and the ***Datasets & Extracts*** panel is displayed.

Note: If switches were not defined in your IODF, you will receive a warning message. Press <ENTER> to acknowledge the message and continue.

▪ *Step 5: Perform an Extract*

The first time that the ***Datasets & Extracts*** panel is displayed there will be only one entry – the IODF Dataset listed on line W1.

```
  --------- Image SENTRY - IODF Explorer 4.0 - Datasets & Extracts ----------
Option ===>

Sx -- ----IODF Datasets---- ------------IODF Extracts------------- --Date--
-- -- --------------------- ---MVSCP--- ----IOCDS----- --SWITCH--- --Last--
-- -- --------------------- ---OSCPs--- ----IOCPs----- ---SWCPs--- Extracts
-- Cm --------------------- Cm -confid- Cm --procids-- Cm --swid-- --------

W1 .. SYS1.IODF00_________ .. ________ .. __________ .. ________ 03/17/XX
W2 .. ____________________ .. ________ .. __________ .. ________ __OPEN__
W3 .. ____________________ .. ________ .. __________ .. ________ __OPEN__
W4 .. ____________________ .. ________ .. __________ .. ________ __OPEN__
W5 .. ____________________ .. ________ .. __________ .. ________ __OPEN__

-- -- -------------------- -- -------- -- ---------- -- -------- --------

W6 .. ____________________ .. ________ .. __________ .. ________ __OPEN__
W7 .. ____________________ .. ________ .. __________ .. ________ __OPEN__
W8 .. ____________________ .. ________ .. __________ .. ________ __OPEN__
W9 .. ____________________ .. ________ .. __________ .. ________ __OPEN__
W0 .. ____________________ .. ________ .. __________ .. ________ __OPEN__

-- .. IODF Dataset Extracts .. Email NO .. Working with the Element Extract
```

The ***Datasets & Extracts*** panel is the IODF Workspace – you can park, move, and change extracts from your IODF dataset. The left hand side displays the "IODF Datasets", the middle section displays the "IODF Extracts", and the right hand side displays either an extract date or status ("Open" or "Redo").

☐ Perform an IODF extract. Place an "XX" next to the IODF Dataset on line W1 and press <ENTER>.

Note: If switches were not defined in your IODF, you will receive a warning message. Press <ENTER> to acknowledge the message and continue.

After your first IODF extract, the OSCP, SWCP (if any), and IOCP Extract columns will contain the label "List". Before proceeding, we will select an OSCP and an IOCP target.

☐ Place the cursor under the OSCP "List" label and press <ENTER>. The ***Target Selection*** panel is displayed.

☐ Place the cursor under one of the OSCP target names and press <ENTER>. The ***Datasets & Extracts*** panel is displayed, and the selected OSCP target name is shown.

- Place the cursor under the IOCP “List” label and press <ENTER>. The ***Target Selection*** panel is displayed.
- Place the cursor under one of the IOCP target names and press <ENTER>. The ***Datasets & Extracts*** panel is displayed, and the selected IOCP target name is shown.
- Place the cursor under the SWCP “List” label and press <ENTER>. The ***Target Selection*** panel is displayed.
- Place the cursor under one of the SWCP target names and press <ENTER>. The ***Datasets & Extracts*** panel is displayed, and the selected SWCP target name is shown.

- Create an IODF Profile Report. Type “PX” on line W1 and press <ENTER>.

```
BROWSE    IFO.PATEXP.$ISENTRY.$REPORTS($IODFSUM)     Line 00000000 Col 001 080
 Command ===>                                                 Scroll ===> CSR
******************************** Top of Data ********************************
/*****************************************************************************/
/*                                                                           */
/*              Image SENTRY - IODF Configuration Target Summary             */
/*                                                                           */
/*               Update:02/13/XX and Time:16:09:46 - User:PROBI1             */
/*                                                                           */
/*****************************************************************************/
|
ISN1550I  >BEGINNING SELECTED IODF DATASET TARGET SUMMARY - TARGETS
|
ISN1551I  +-------------------------------------------------------------------+
ISN1551I  |                                                                   |
ISN1551I  |                      IODF CONFIGURATION TARGETS                   |
ISN1551I  |                                                                   |
ISN1551I  |                ANYIODF.IODFA2 - 2008-11-11 14:40:19               |
ISN1551I  |                                                                   |
ISN1551I  +-------------------------------------------------------------------+
```

The Profile or Configuration Summary Report can be useful in a number of different ways. Consider using the Report as part of your system documentation that describes the configuration and planned changes. You may also want to use it as part of your Operator Manual or RunBook.

- Scroll through and validate the information contained in the IODF Profile Report.
  - Look at the named MVSCP/OSCP Configurations – do they accurately reflect your system?
  - Look at the FICON/ESCON Switch Configurations (if any). Are they correct?
  - Look at the named IOCDS/IOCP Configurations – do they accurately reflect your system?
  - Look at the IODF DATASET ACTIVITY LOG(s). Are they correct?

- When finished reviewing the report, press <PF3>. The ***Datasets & Extracts*** panel is displayed.

- View the OSCP Extract. Place a “V” next to the OSCP target on line W1 and press <ENTER>.

```
BROWSE    IFO.PATEXP.IODFWKS1.PATSIODF(OSCP01)       Line 00000000 Col 001 080
 Command ===>                                          Scroll ===> CSR
******************************** Top of Data ********************************
        TITLE 'ANYIODF.IODFA2 - 2008-11-11 14:40:19  '
*
         IOCONFIG ID=00,NAME=SYA1,TYPE=MVS,DESC='A1 Production'
         IODEVICE ADDRESS=(0000,15),UNIT=OSA,OFFLINE=NO,DYNAMIC=YES,   *
               LOCANY=NO,CUNUMBR=1140
         IODEVICE ADDRESS=(000F,1),UNIT=OSAD,OFFLINE=NO,DYNAMIC=YES,   *
               LOCANY=NO,CUNUMBR=1140
         IODEVICE ADDRESS=(0010,15),UNIT=OSA,OFFLINE=NO,DYNAMIC=YES,   *
               LOCANY=YES,CUNUMBR=0005
         IODEVICE ADDRESS=(001F,1),UNIT=OSAD,OFFLINE=NO,DYNAMIC=YES,   *
               LOCANY=YES,CUNUMBR=0005
         IODEVICE ADDRESS=(0120,4),UNIT=3278,MODEL=2,                  *
               FEATURE=(DOCHAR,EBKY3277,KB78KEY),DYNAMIC=YES,          *
               CUNUMBR=10F0
         IODEVICE ADDRESS=(0124,1),UNIT=3279,MODEL=2A,                 *
               FEATURE=(DOCHAR,OCKY3277,KB78KEY),DYNAMIC=YES,          *
               CUNUMBR=10F0
```

The Element Source Macro Statements found in the IODF Dataset will be displayed in ISPF BROWSE.

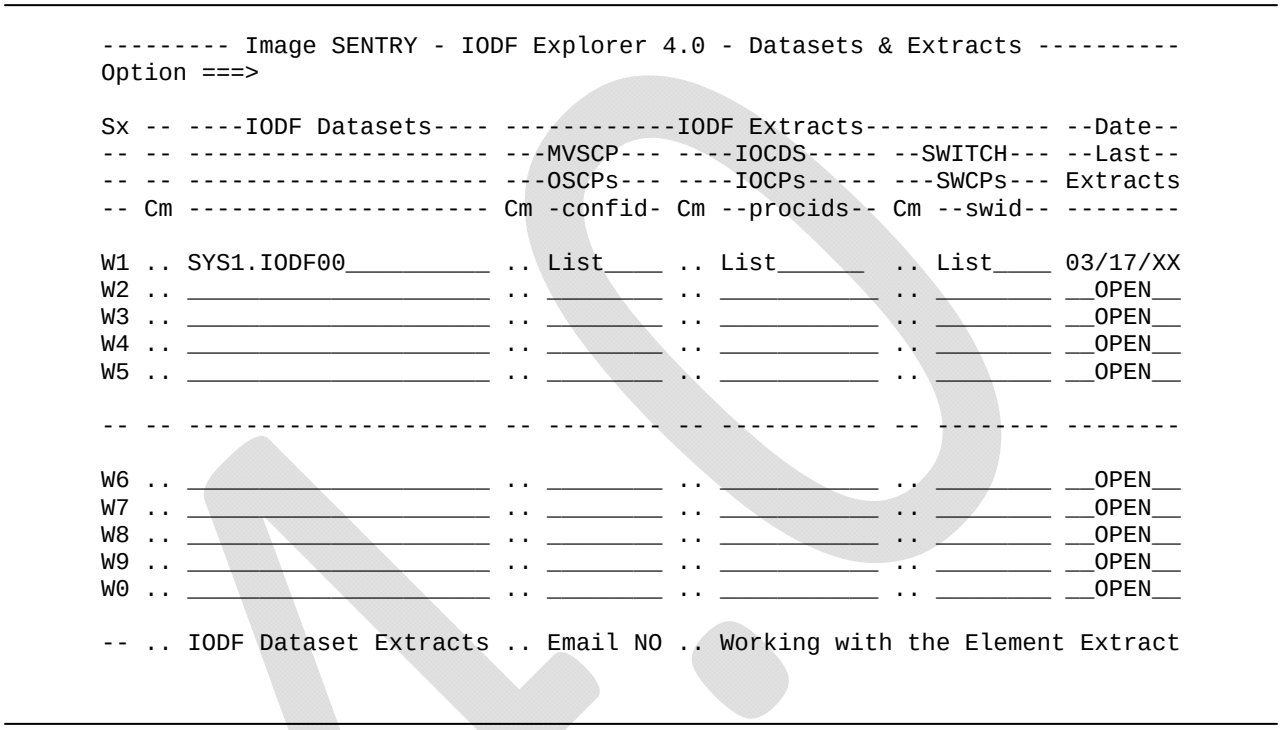
- Scroll through and validate the information contained in the OSCP Extract.
- When finished reviewing the extract, press <PF3>. The ***Datasets & Extracts*** panel is displayed.

- View the IOCP Extract. Place a “V” next to the IOCP target on line W1 and press <ENTER>.
- Scroll through and validate the information contained in the OSCP Extract.
- When finished reviewing the extract, press <PF3>. The ***Datasets & Extracts*** panel is displayed.

Note: At any time, you may exit the IODF Explorer by typing “RETURN” on the command line and pressing <ENTER>. Depending upon how you invoked the IODF Explorer, either the **Image Control Environment** main panel or ISPF Option 6 is displayed.

Step 6: Selecting Targets

When the ***Datasets & Extracts*** panel is first displayed, you will see the text "List" under the three IODF Target columns (MVSCP, Switch, and IOCDS) for "W1".



```
--------- Image SENTRY - IODF Explorer 4.0 - Datasets & Extracts ----------
Option ===>

Sx -- ----IODF Datasets---- ------------IODF Extracts------------- --Date--
-- -- --------------------- ---MVSCP--- ----IOCDS----- --SWITCH--- --Last--
-- -- --------------------- ---OSCPs--- ----IOCPs----- ---SWCPs--- Extracts
-- Cm --------------------- Cm -confid- Cm --procids-- Cm --swid-- --------

W1 .. SYS1.IODF00__________ .. List____ .. List______  .. List____ 03/17/XX
W2 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W3 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W4 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W5 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__

-- -- --------------------- -- -------- -- ----------- -- -------- --------

W6 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W7 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W8 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W9 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W0 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__

-- .. IODF Dataset Extracts .. Email NO .. Working with the Element Extract
```

- Place the cursor over “List” for the MVSCP column and press <ENTER>. A list of the MVSCP targets associated with the W1 IODF Extract will be displayed:

```
------- Image SENTRY - IODF Explorer 4.0 - Target Selection - OSCP ------
Option ===>

           ------- SYS1.IODF66 - 2009-02-05 15:58:21 -------
  Cm -------- Cm -------- Cm -------- Cm -------- Cm -------- Cm --------

  .. GDPP3B00 .. GDPP7B00 .. GDPT3B10 .. GDPT7B10 .. SYSL3200 .. SYSL4200

  .. SYSL7200 .. SYST3300 .. SYST4300 .. SYST7300 .. SYSU3200 .. SYSU4200

  .. SYSU7200 .. SYSX3200 .. SYSX4200 .. SYSX7200 .. SYS13300 .. SYS14300

  .. SYS17300 .. SYS23300 .. SYS24300 .. SYS27300 .. SYS43300 .. SYS44300

  .. SYS47300 .. VM1A3900 .. VM1A4900 .. VM1A7900 .. ________ .. ________

  .. ________ .. ________ .. ________ .. ________ .. ________ .. ________

  .. ________ .. ________ .. ________ .. ________ .. ________ .. ________

  .. ________ .. ________ .. ________ .. ________ .. ________ .. ________

         Working directly with Targets found in an IODF Element
```

- View the help panel by pressing <PF1>. When finished reviewing this information, press <PF3>.
- Additional help information is available by placing the cursor over “Working directly with Targets found in an IODF Element” and pressing <ENTER>. When finished reviewing this information, press <PF3>.
- Select the first target by placing the cursor over the first target name and press <ENTER>. Note that you will be returned to the ***Datasets & Extracts*** panel. The selected target name will appear under the MVSCP column for W1.
- Follow the same procedure to select an IOCDS target.
- Follow the same procedure to select a SWITCH target.

▪ *Step 7: Invoke the Target Options*

There should be specific targets listed for MVSCP, SWITCH, and IOCDS on the ***Datasets & Extracts*** panel for "W1".

```
--------- Image SENTRY - IODF Explorer 4.0 - Datasets & Extracts ----------
Option ===>

Sx -- ----IODF Datasets---- ------------IODF Extracts------------- --Date--
-- -- --------------------- ---MVSCP--- ----IOCDS----- --SWITCH--- --Last--
-- -- --------------------- ---OSCPs--- ----IOCPs----- ---SWCPs--- Extracts
-- Cm --------------------- Cm -confid- Cm --procids-- Cm --swid-- --------

W1 .. SYS1.IODF00__________ .. FEPS____ .. MKZ3______  .. 01_____  03/17/XX
W2 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W3 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W4 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W5 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__

-- -- --------------------- -- -------- -- ----------- -- -------- --------

W6 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W7 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W8 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W9 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W0 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__

-- .. IODF Dataset Extracts .. Email NO .. Working with the Element Extract
```

Explore each of the three targets with the following commands:

- Profile the MVSCP target by placing a "P" next to the MVSCP Target and press <ENTER>. When finished viewing the report, press <PF3>.
- Profile the SWITCH target by placing a "P" next to the SWITCH Target and press <ENTER>. When finished viewing the report, press <PF3>.
- Profile the IOCDS target by placing a "P" next to the IOCDS Target and press <ENTER>. When finished viewing the report, press <PF3>.
- View the Element Extract for the MVSCP target by placing a "V" next to the MVSCP Target and press <ENTER>. When finished viewing the report, press <PF3>.
- View the Element Extract for the SWITCH target by placing a "V" next to the SWITCH Target and press <ENTER>. When finished viewing the report, press <PF3>.

- View the Element Extract for the IOCDS target by placing a “V” next to the IOCDS Target and press <ENTER>. When finished viewing the report, press <PF3>.

- Search the MVSCP target for IODevices by placing an “S” next to the MVSCP Target and press <ENTER>. The Search Criteria dialog box is displayed. Experiment by specifying search criteria. When finished, press <PF3>.

- Search the SWITCH target for IODevices by placing an “S” next to the SWITCH Target and press <ENTER>. Experiment by specifying search criteria. When finished, press <PF3>.

- Search the IOCDS target for IODevices by placing an “S” next to the IOCDS Target and press <ENTER>. Experiment by specifying search criteria. When finished, press <PF3>.

- Display the Target Worksheet for the MVSCP target by placing a “W” next to the MVSCP Target and press <ENTER>. For more information on the worksheet, press <PF1> for the help panel. When finished viewing the worksheet, press <PF3>.

- Display the Target Worksheet for the SWITCH target by placing a “W” next to the SWITCH Target and press <ENTER>. When finished viewing the worksheet, press <PF3>.

- Display the Target Worksheet for the IOCDS target by placing a “W” next to the IOCDS Target and press <ENTER>. When finished viewing the worksheet, press <PF3>.

- Display the Blueprint and Library Report Interface for the MVSCP target by placing a “R” next to the MVSCP Target and press <ENTER>. For more information, press <PF1> for the help panel. When finished viewing the worksheet, press <PF3>.

- Display the Blueprint and Library Report Interface for the SWITCH target by placing an “R” next to the SWITCH Target and press <ENTER>. When finished viewing the worksheet, press <PF3>.

- Display the Blueprint and Library Report Interface for the IOCDS target by placing an “R” next to the IOCDS Target and press <ENTER>. When finished viewing the worksheet, press <PF3>.

- Type “RETURN” on the command line and press <ENTER> to exit the IODF Explorer.

Note: At any time, you may exit the IODF Explorer by typing “RETURN” on the command line and pressing <ENTER>. Depending upon how you invoked the IODF Explorer, either the **Image Control Environment** main panel or ISPF Option 6 is displayed.

-

Step 8: Log onto HCD and make changes to the Work IODF

Image SENTRY's IODF Explorer extracts data from any "Work" or "Production" IODF. In this exercise, you will make changes to a "Work" IODF and validate the data within the IODF Explorer.

Note: It's very important that you are familiar with HCD and that you specify a separate Work IODF for this exercise.

We begin this exercise by selecting the **HC-HCD** option (Hardware Configuration Dialogs) from either the **Image FOCUS – ISPF Interface** panel or the **ISPF Primary Menu**.

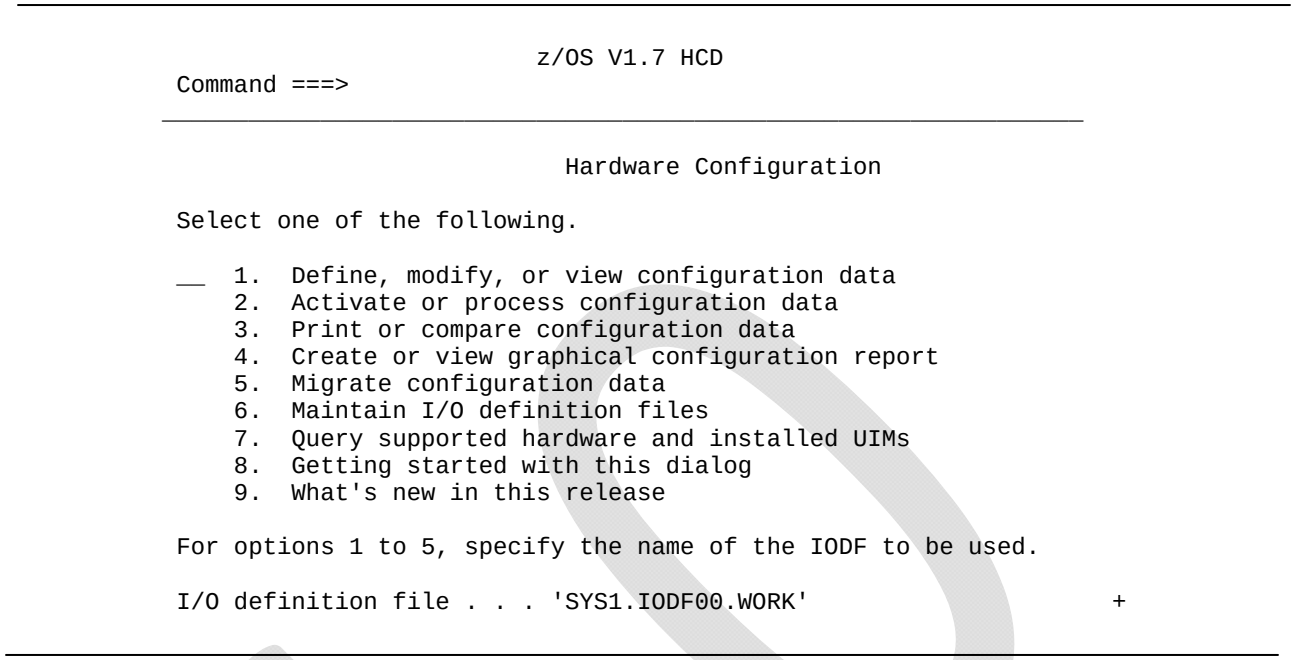
```
                Image Focus - ISPF Interface
Option  ===>

   0   Settings     - Terminal and user parameters          Userid   - PROBI1
   1   View         - Display source data or listings       Time     - 17:40
   2   Edit         - Create or change source data          Terminal - 3278
   3   Utilities    - Perform utility functions             System   - S0W1
   6   Command      - Enter TSO commands                    Applid   - IFOH
   HC  HCD          - Hardware Configuration Dialogs         Image Focus 7.0
   IS  ISMF         - Integrated Storage Management Facility Patch Level  P1
   RA  RACF         - Resource Access Control Facility
   SM  SMP/E        - System Modification Program / Extended
   RM  RMFMON       - RMF Monitor II (TSO MODE)
   SD  SDSF         - Spool Search and Display Facility




   X   Exit         - Return to Image Focus Primary Menu

Enter END command to return to Image Focus Primary Menu
```

- Select the "HC" Option (Hardware Configuration Dialogs).

Note: Invocation of HCD may vary. In this example, users access HCD by selecting the "HC" option from the ISPF Primary Menu or the Image FOCUS – ISPF Interface panel ("Recovery" then "Access" options from the Image Control Environment main panel).

4.0

The ***Hardware Configuration*** panel is displayed.



- Verify that you're running HCD V1.7 or above (top of the panel).
- Verify the name of your IODF – I/O definition file (bottom of panel). *Note: It's very important that you specify a separate Work IODF for this exercise.*
- Select the "Define, modify" Option (type option "1" and press <ENTER>).

The Define, Modify, or View Configuration Data dialog box is displayed.

```
                    z/OS V1.7 HCD
                Define, Modify, or View Configuration Data

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

           __ 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
```

Note: It's very important that you are familiar with HCD and that you specify a separate Work IODF for this exercise.

- Add and/or delete Processors (Option 3. Processors).
- Add and/or delete MVS Configurations (Option 1. Operating system configurations).
- Add, delete, and/or change IODevices (Option 5. I/O devices).
- Add, delete, and/or change Control Units (Option 4. Control units).
- Exit HCD.

▪ *Step 9: Log onto ICE, select Image SENTRY*

Select the **Image SENTRY** option (Sentry – Custom Compliance Reports) from the ***Image Control Environment*** panel.

```
                        Image Control Environment: ICE
Option  ===>

   P   Production   - Image Focus Production                Userid    - PROBI1
                                                           Time      - 17:38
   W   Workbench    - Image Focus Workbench                Terminal  - 3278
                                                           System    - SAW1
   R   Recovery     - Image Focus Recovery                 Applid    - IFOB
                                                            Image Focus 7.0
   C   Control      - Control Editor Functions             Patch Level  P8

   S   Sentry       - Custom Compliance Reports

   D   Definitions  - Definitions & Settings

                      *************************
                      * Control Task: DOWN     *
                      * Recovery    : DOWN     *
                      *************************

   X   Exit         - Terminate

NewEra Software, Inc.
   Our Job? Help you make repairs, avoid problems, and improve IPL integrity.
```

- Log onto **ICE** (or invoke IODF Explorer for TSO).
- Select the "S" Option (Sentry – Custom Compliance Reports) from the ***Image Control Environment*** panel.
- Select the "z/OS Hardware" Option from the ***Custom Compliance Reports*** panel.
- Select the first Scenario by placing the cursor over the Label and pressing <ENTER>.

▪ *Step 10: Perform a new Extract*

There is one extract displayed on line W1 from our last session. For this step, we will move a copy to line W6 and perform a new extract from the updated Work IODF Dataset.

```
--------- Image SENTRY - IODF Explorer 4.0 - Datasets & Extracts ----------
Option ===>

Sx -- ----IODF Datasets---- ------------IODF Extracts------------- --Date--
-- -- --------------------- ---MVSCP--- ----IOCDS----- --SWITCH--- --Last--
-- -- --------------------- ---OSCPs--- ----IOCPs----- ---SWCPs--- Extracts
-- Cm --------------------- Cm -confid- Cm --procids-- Cm --swid-- --------

W1 .. SYS1.IODF00__________ .. FEPS____ .. MKZ3______  .. 01_____  03/17/XX
W2 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W3 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W4 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W5 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__

-- -- --------------------- -- -------- -- ----------- -- -------- --------

W6 .. SYS1.IODF00__________ .. FEPS____ .. MKZ3______  .. 01_____  03/17/XX
W7 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W8 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W9 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W0 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__

-- .. IODF Dataset Extracts .. Email NO .. Working with the Element Extract
```

- If necessary, review the PF1 Help, “Extracting IODF Dataset”, or “Using an IODF Dataset Extract” help topics. To select the help topics shown at the bottom of the panel, place the cursor over the text and press <ENTER> for these help panels.
- Place a “W6” next to the IODF Dataset (shown on line W1) and press <ENTER>. Note that “OK” will appear in the “CM” (line command) column for successful copies and the Date field will reflect the date when the extraction was performed.
- Place an “XX” next to the IODF WORK Dataset (shown on line W1) created in the previous step and press <ENTER>. Note that “OK” will appear in the “CM” (line command) column for successful extractions and the Date field will reflect the date when the extraction was performed (today’s date).
- To view the IODF Profile Report, place a “PX” next to the IODF Dataset shown on line W1 and press <ENTER>. Validate that your changes are reflected in this report.
- Carefully review and validate the information contained in the IODF Profile Report.

- When finished reviewing the report, press <PF3>.

▪ *Step 11: Perform a Level-One Compare*

We call comparisons of two IODF Datasets a “Level-One” compare.

```
--------- Image SENTRY - IODF Explorer 4.0 - Datasets & Extracts ----------
Option ===>

Sx -- ----IODF Datasets---- ------------IODF Extracts------------- --Date--
-- -- --------------------- ---MVSCP--- ----IOCDS----- --SWITCH--- --Last--
-- -- --------------------- ---OSCPs--- ----IOCPs----- ---SWCPs--- Extracts
-- Cm --------------------- Cm -confid- Cm --procids-- Cm --swid-- --------

W1 .. SYS1.IODF00.WORK_____ .. FEPS____ .. MKZ3______  .. 01_____  03/17/XX
W2 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W3 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W4 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W5 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__

-- -- --------------------- -- -------- -- ----------- -- -------- --------

W6 .. SYS1.IODF00__________ .. FEPS____ .. MKZ3______  .. 01_____  03/17/XX
W7 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W8 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W9 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W0 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__

-- .. IODF Dataset Extracts .. Email NO .. Working with the Element Extract
```

- Place a “CX” next to the IODF Dataset (shown on line W1), a “CX” next to the IODF Dataset (shown on line W6), and press <ENTER>.

Note: If you did not make any changes to the Work IODF Dataset, you will receive a message:
Selected IODF Datasets have matching Date and Timestamps

- Review the comparison reports and validate that your changes were accurately detected. When finished viewing the report, press <PF3>.

- Move the cursor to the other IODF Dataset “target” and press <ENTER>.

- Note that the “adds” are now listed as “deletes”, and vice versa. Review the comparison reports and validate the changes. When finished viewing the report, press <PF3>.

Note: The “CX” command is used to compare the entire IODF. BUT this compare is limited to the TARGETS within the IODF and does not discriminate and report on any detail changes within a given

target. The “C” command detects changes in a specific target at the lowest level of detail possible within an IODF elements (OSCP, SWCP or IOCP) data structure.

▪ *Step 12: Perform a Level-Two Compare*

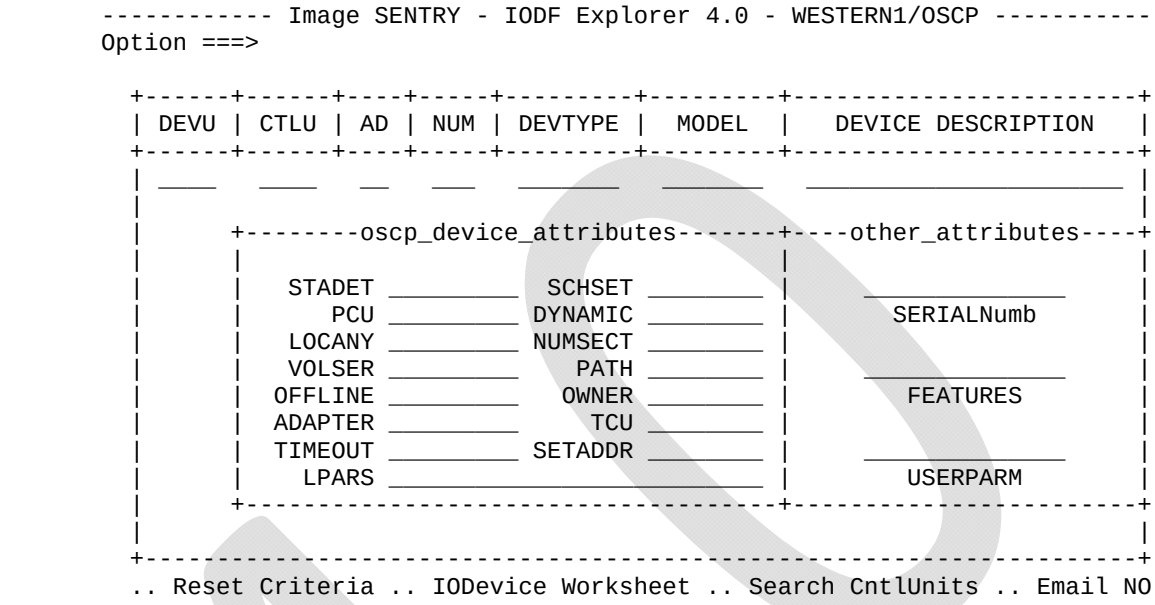
We call comparisons of two IODF Targets a “Level-Two” compare.

```
--------- Image SENTRY - IODF Explorer 4.0 - Datasets & Extracts ----------
Option ===>

Sx -- ----IODF Datasets---- ------------IODF Extracts------------- --Date--
-- -- --------------------- ---MVSCP--- ----IOCDS----- --SWITCH--- --Last--
-- -- --------------------- ---OSCPs--- ----IOCPs----- ---SWCPs--- Extracts
-- Cm --------------------- Cm -confid- Cm --procids-- Cm --swid-- --------

W1 .. SYS1.IODF00.WORK_____ .. FEPS____ .. MKZ3______  .. 01_____  03/17/XX
W2 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W3 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W4 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W5 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__

-- -- --------------------- -- -------- -- ----------- -- -------- --------

W6 .. SYS1.IODF00__________ .. FEPS____ .. MKZ3______  .. 01_____  03/17/XX
W7 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W8 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W9 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W0 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__

-- .. IODF Dataset Extracts .. Email NO .. Working with the Element Extract
```

- Select the same MVSCP target for line W1 as is shown for line W6. Place the cursor over “List” and press <ENTER>. Then select the first target name and press <ENTER>. Note that you will be returned to the ***IODF Workspace - Extraction and Selection*** panel. The selected target name will appear under the MVSCP column for W1.
- Follow the same procedure to select a SWITCH target. Skip if you don’t have SWCPs.
- Follow the same procedure to select an IOCDS target.
- Compare the MVSCP Targets – place a “C” next to the MVSCP Target on lines W1 and W6, then press <ENTER>. Review the comparison report, and press <PF3> when finished. Place the cursor under the other target and press <ENTER>. Notice that the comparison has changed (“adds” have become “deletes”, and vice versa). After reviewing the report, press <PF3>.
- Compare the SWITCH Targets using the same procedure. Skip if you don’t have SWCPs.
- Compare the IOCDS Targets using the same procedure.

▪ *Step 13: Search Multiple Targets*

This exercise will show you how to search across multiple targets.



- Search the MVSCP Targets – place an “S” next to the MVSCP Target on lines W1 and W6, then press <ENTER>. The Search Criteria panel is displayed.
- Place the cursor under “DEVU” and press <ENTER>. This will show all the found values. After reviewing and locating a value, press <PF3>.
- Type the located value on the line under “DEVU” and press <ENTER>. A report showing that specific device is listed. Note there’s a number appended to the target (since the targets bear the same name, the number distinguishes each occurrence). After reviewing the report, press <PF3>.
- Using the same procedure, locate information found in all the available fields. After searching and reviewing the reports, press <PF3> to return to the ***Datasets & Extracts*** panel.
- Search the SWITCH Targets using the same procedure. After searching and reviewing the reports, press <PF3> to return to the ***Datasets & Extracts*** panel.
- Search the IOCDS Targets using the same procedure. After searching and reviewing the reports, press <PF3> to return to the ***Datasets & Extracts*** panel.

▪ *Step 14: Merge Multiple Targets into a single Worksheet*

This exercise will show you how to merge multiple targets into a single worksheet.

```
----------------------- IMAGE Sentry - IODF Explorer 4.0 -------- Row 1 of 244
 -ICE 7.0-                                                        -Logical View-
------------------- PSYSS.IODF92 - 2009-02-05 15:58:21 - OSCP -----------------
Option ===>                                                   Scroll ===> PAGE
Row Select: Attributes Descriptions
--------------- To View a Configuration Select a Component Type ---------------
NIP Consoles   Generic Devices   Esoteric Devices   Control Units   I/O Devices
--- To Sort select a Sub-Head, To Query enter above Sub-Head, PFK1 for Help ---
-----Targets------ -----------Input-Output Devices Defined to Target-----------
_ ____ ________ __ ____ ___ ______ _____ ____ __________ ______________________
S Numb ConfigId Mg Unit Rng -Type- Model Ctlu --Serial-- ------Description-----
_ 0001 VM1A4900 01 0003 004   2032 ----- -VM- ---------- ----------------------
_ 0002 VM1A4900 01 0138 004   3270     X -VM- ---------- ----------------------
_ 0003 VM1A4900 01 0238 004   3270     X -VM- ---------- ----------------------
_ 0004 VM1A4900 01 0300 016   3490 ----- -VM- ---------- ----------------------
_ 0005 VM1A4900 01 0550 016   3490 ----- -VM- ---------- ----------------------
_ 0006 VM1A4900 01 0AE0 016   3490 ----- -VM- ---------- ----------------------
_ 0007 VM1A4900 01 1000 008   3745 ----- -VM- ---------- ----------------------
_ 0008 VM1A4900 01 1008 007    OSN ----- -VM- ---------- ----------------------
_ 0009 VM1A4900 06 100F 001   OSAD ----- -VM- ---------- ----------------------
_ 0010 VM1A4900 06 1100 015    OSA ----- -VM- ---------- ----------------------
_ 0011 VM1A4900 06 110F 001   OSAD ----- -VM- ---------- ----------------------
_ 0012 VM1A4900 06 1200 008   3745 ----- -VM- ---------- ----------------------
_ 0013 VM1A4900 06 1208 007    OSN ----- -VM- ---------- ----------------------
```

- Merge the MVSCP Targets. From the ***Datasets & Extracts*** panel, place a “W” next to the MVSCP Target on lines W1 and W6, then press <ENTER>. A merged worksheet is displayed.
- Place the cursor under one of the “Unit” values and press <ENTER>. This will show only the occurrences of the selected values. Note the “Config” and “M” columns – they correspond to the Target and the number appended to the target (since the targets bear the same name, the “Merged” number distinguishes each occurrence). After reviewing the data, press <PF3>.
- Merge the SWITCH Targets using the same procedure. Skip if you don’t have SWCPs.
- Merge the IOCDS Targets using the same procedure.

-

- ## *Step 15: Log onto HCD and make changes to the Work IODF*

Similar to the last set of exercises you will make more complex changes to the Work IODF and validate the data within the IODF Explorer.

Note: It's very important that you are familiar with HCD and that you specify a separate Work IODF for this exercise.

We begin this exercise by selecting the **HC-HCD** option (Hardware Configuration Dialogs) from either the **Image FOCUS – ISPF Interface** panel or the **ISPF Primary Menu**.

```
                    Image Focus - ISPF Interface
Option  ===>

   0   Settings     - Terminal and user parameters          Userid   - PROBI1
   1   View         - Display source data or listings       Time     - 17:40
   2   Edit         - Create or change source data          Terminal - 3278
   3   Utilities    - Perform utility functions             System   - SAW1
   6   Command      - Enter TSO commands                    Applid   - IFOH
   HC  HCD          - Hardware Configuration Dialogs         Image Focus 7.0
   IS  ISMF         - Integrated Storage Management Facility Patch Level  P1
   RA  RACF         - Resource Access Control Facility
   SM  SMP/E        - System Modification Program / Extended
   RM  RMFMON       - RMF Monitor II (TSO MODE)
   SD  SDSF         - Spool Search and Display Facility




   X   Exit         - Return to Image Focus Primary Menu

Enter END command to return to Image Focus Primary Menu
```

- Select the "HC" Option (Hardware Configuration Dialogs).

Note: Invocation of HCD may vary. In this example, users access HCD by selecting the "HC" option from the ISPF Primary Menu or the Image FOCUS – ISPF Interface panel ("Recovery" then "Access" options from the Image Control Environment main panel).

4.0

The ***Hardware Configuration*** panel is displayed.

```
                          z/OS V1.7 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 . . . 'SYS1.IODF00.WORK'                    +
```

- Verify the name of your IODF – I/O definition file (bottom of panel).
  Note: It's very important that you specify a separate Work IODF for this exercise.
- Select the "Define, modify" Option (type option "1" and press <ENTER>).

The Define, Modify, or View Configuration Data dialog box is displayed.

```
                    z/OS V1.7 HCD
               Define, Modify, or View Configuration Data

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

         __ 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
```

Note: It's very important that you are familiar with HCD and that you specify a separate Work IODF for this exercise.

- Add and/or delete Processors
- Add and/or delete LPARs
- Add and/or delete MVS Configurations
- Modify the Eligible Device Table (Esoteric Definitions)
- Add, delete, and/or change IODevices
- Add, delete, and/or change the CHPIDs
- Add, delete, and/or change the PARTITIONs
- Exit HCD.

▪ *Step 16: Log onto ICE, select Image SENTRY*

Before starting this step, install any Image SENTRY or Image FOCUS updates (if instructed).

Select the **Image SENTRY** option (Sentry – Custom Compliance Reports) from the ***Image Control Environment*** panel.

```
                        Image Control Environment: ICE
Option  ===>

   P   Production   - Image Focus Production                Userid   - PROB1
                                                           Time     - 19:17
   W   Workbench    - Image Focus Workbench                Terminal - 3278
                                                           System   - SAW1
   R   Recovery     - Image Focus Recovery                 Applid   - IFOB
                                                            Image Focus 8.0
   C   Control      - Control Editor Functions             Patch Level  P9A

   S   Sentry       - Custom Compliance Reports

   D   Definitions  - Definitions & Settings

                      *************************
                      * Control Task: RUNNING  *
                      * Recovery    : RUNNING  *
                      *************************

   X   Exit         - Terminate

NewEra Software, Inc.
   Our Job? Help you make repairs, avoid problems, and improve IPL integrity.
```

- ☐ Log onto **ICE** (or invoke IODF Explorer for TSO).
- ☐ Select the "S" Option (Sentry – Custom Compliance Reports) from the ***Image Control Environment*** panel.
- ☐ Select the "z/OS Hardware" Option from the ***Custom Compliance Reports*** panel.
- ☐ Select the first Scenario by placing the cursor over the Label and pressing <ENTER>.

▪ *Step 17: Perform a new Extract*

There is one extract displayed on line W1 from our last session. For this step, we will move a copy to line W6 and perform a new extract from the updated Work IODF Dataset

```
  --------- Image SENTRY - IODF Explorer 4.0 - Datasets & Extracts ----------
Option ===>

Sx -- ----IODF Datasets---- ------------IODF Extracts------------ --Date--
-- -- --------------------- ---MVSCP--- ----IOCDS----- --SWITCH--- --Last--
-- -- --------------------- ---OSCPs--- ----IOCPs----- ---SWCPs--- Extracts
-- Cm --------------------- Cm -confid- Cm --procids-- Cm --swid-- --------

W1 .. SYS1.IODF00.WORK_____ .. FEPS____ .. MKZ3_____  .. 01_____  03/17/XX
W2 .. _____________________ .. ________ .. __________ .. ________ __OPEN__
W3 .. _____________________ .. ________ .. __________ .. ________ __OPEN__
W4 .. _____________________ .. ________ .. __________ .. ________ __OPEN__
W5 .. _____________________ .. ________ .. __________ .. ________ __OPEN__

-- -- --------------------- -- -------- -- ---------- -- -------- --------

W6 .. SYS1.IODF00__________ .. FEPS____ .. MKZ3______  .. 01_____  03/17/XX
W7 .. _____________________ .. ________ .. __________ .. ________ __OPEN__
W8 .. _____________________ .. ________ .. __________ .. ________ __OPEN__
W9 .. _____________________ .. ________ .. __________ .. ________ __OPEN__
W0 .. _____________________ .. ________ .. __________ .. ________ __OPEN__

-- .. IODF Dataset Extracts .. Email NO .. Working with the Element Extract
```

- If necessary, review the PF1 Help, “Extracting IODF Dataset”, or “Using an IODF Dataset Extract” help topics. To select the help topics shown at the bottom of the panel, place the cursor over the text and press <ENTER> for these help panels.
- Place a “W7” next to the IODF Dataset (shown on line W1) and press <ENTER>. Note that “OK” will appear in the “CM” (line command) column for successful copies and the Date field will reflect the date when the extraction was performed.
- Place an “XX” next to the IODF Dataset (shown on line W1) and press <ENTER>. Note that “OK” will appear in the “CM” (line command) column for successful extractions and the Date field will reflect the date when the extraction was performed (today’s date).
- To view the IODF Profile Report, place a “PX” next to the IODF Dataset shown on line W1 and press <ENTER>. Validate that your changes are reflected in this report.
- Carefully review and validate the information contained in the IODF Profile Report.

- When finished reviewing the report, press <PF3>.

▪ *Step 18: Perform a Level-One Compare*

We call comparisons of two IODF Datasets a “Level-One” compare.

```
  --------- Image SENTRY - IODF Explorer 4.0 - Datasets & Extracts ----------
Option ===>

Sx -- ----IODF Datasets---- ------------IODF Extracts------------- --Date--
-- -- --------------------- ---MVSCP--- ----IOCDS----- --SWITCH--- --Last--
-- -- --------------------- ---OSCPs--- ----IOCPs----- ---SWCPs--- Extracts
-- Cm --------------------- Cm -confid- Cm --procids-- Cm --swid-- --------

W1 .. SYS1.IODF00.WORK_____ .. List____ .. List______ .. List____  03/17/XX
W2 .. _____________________ .. ________ .. __________ .. ________ __OPEN__
W3 .. _____________________ .. ________ .. __________ .. ________ __OPEN__
W4 .. _____________________ .. ________ .. __________ .. ________ __OPEN__
W5 .. _____________________ .. ________ .. __________ .. ________ __OPEN__

-- -- --------------------- -- -------- -- ---------- -- -------- --------

W6 .. SYS1.IODF00__________ .. FEPS____ .. MKZ3______ .. 01_____  03/17/XX
W7 .. SYS1.IODF00.WORK_____ .. FEPS____ .. MKZ3______ .. 01_____  03/17/XX
W8 .. _____________________ .. ________ .. __________ .. ________ __OPEN__
W9 .. _____________________ .. ________ .. __________ .. ________ __OPEN__
W0 .. _____________________ .. ________ .. __________ .. ________ __OPEN__

-- .. IODF Dataset Extracts .. Email NO .. Working with the Element Extract
```

- Place a “CX” next to the IODF Dataset (shown on line W1), a “CX” next to the IODF Dataset (shown on line W7), and press <ENTER>.

Note: If you did not make any changes to the Work IODF Dataset, you will receive a message: **Selected IODF Datasets have matching Date and Timestamps**

- Review the comparison reports and validate that your changes were accurately detected. When finished viewing the report, press <PF3>.
- Move the cursor to the other “target” and press <ENTER>.
- Note that the “adds” are now listed as “deletes”, and vice versa. Review the comparison reports and validate the changes. When finished viewing the report, press <PF3>.

▪ *Step 19: Perform a Level-Two Compare*

We call comparisons of two IODF Targets a “Level-Two” compare.

```
  --------- Image SENTRY - IODF Explorer 4.0 - Datasets & Extracts ----------
Option ===>

Sx -- ----IODF Datasets---- ------------IODF Extracts------------- --Date--
-- -- --------------------- ---MVSCP--- ----IOCDS----- --SWITCH--- --Last--
-- -- --------------------- ---OSCPs--- ----IOCPs----- ---SWCPs--- Extracts
-- Cm --------------------- Cm -confid- Cm --procids-- Cm --swid-- --------

W1 .. SYS1.IODF00.WORK_____ .. List____ .. List______  .. List____  03/17/XX
W2 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W3 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W4 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W5 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__

-- -- --------------------- -- -------- -- ----------- -- -------- --------

W6 .. SYS1.IODF00__________ .. FEPS____ .. MKZ3______  .. 01_____  03/17/XX
W7 .. SYS1.IODF00.WORK_____ .. FEPS____ .. MKZ3______  .. 01_____  03/17/XX
W8 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W9 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W0 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__

-- .. IODF Dataset Extracts .. Email NO .. Working with the Element Extract
```

- Select the same MVSCP target for line W1 as is shown for line W7. Place the cursor over “List” and press <ENTER>. Then select the first target name and press <ENTER>. Note that you will be returned to the ***IODF Workspace - Extraction and Selection*** panel. The selected target name will appear under the MVSCP column for W1.
- Follow the same procedure to select an IOCDS target.
- Follow the same procedure to select a SWITCH target. Skip if you don’t have SWCPs.
- Compare the MVSCP Targets – place a “C” next to the MVSCP Target on lines W1 and W7, then press <ENTER>. Review the comparison report, and press <PF3> when finished. Place the cursor under the other target and press <ENTER>. Notice that the comparison has changed (“adds” have become “deletes”, and vice versa). After reviewing the report, press <PF3>.
- Compare the IOCDS Targets using the same procedure.
- Compare the SWITCH Targets using the same procedure. Skip if you don’t have SWCPs.

▪ *Step 20: Inspecting for Potential Allocation Denials*

This exercise will show you how to inspect IOCP and OSCP Targets for potential allocation denials from the single IODF Working Interface.

```
----------------- Image SENTRY - IODF Explorer 4.0 - WESTERN1 -----------------

        Option ===>

    ------------OSCP Targets----------- | --------------IOCP Targets---------------
    .. PSYSS.IODF92.09-02-05.15:58:21   | .. PSYSS.IODF92.09-02-05.15:58:21
    ------------Ext/12/02/XX----------- | --------------Wks/12/02/XX---------------
    .. GDPP3B00 .. SYS13300 .. ________ | .. NEZ0#0____ .. __________ .. __________
    .. GDPP7B00 .. SYS14300 .. ________ | .. NEZ0#1____ .. __________ .. __________
    .. GDPT3B10 .. SYS17300 .. ________ | .. NEZ1#0____ .. __________ .. __________
    .. GDPT7B10 .. SYS23300 .. ________ | .. NEZ1#1____ .. __________ .. __________
    .. SYSL3200 .. SYS24300 .. ________ | .. __________ .. __________ .. __________
    .. SYSL4200 .. SYS27300 .. ________ | .. __________ .. __________ .. __________
    .. SYSL7200 .. SYS43300 .. ________ | .. __________ .. __________ .. __________
    .. SYST3300 .. SYS44300 .. ________ | .. __________ .. __________ .. __________
    .. SYST4300 .. SYS47300 .. ________ | .. __________ .. __________ .. __________
    .. SYST7300 .. VM1A3900 .. ________ | .. __________ .. __________ .. __________
    .. SYSU3200 .. VM1A4900 .. ________ | .. __________ .. __________ .. __________
    .. SYSU4200 .. VM1A7900 .. ________ | .. __________ .. __________ .. __________
    .. SYSU7200 .. ________ .. ________ | .. __________ .. __________ .. __________
    .. SYSX3200 .. ________ .. ________ | .. __________ .. __________ .. __________
    .. SYSX4200 .. ________ .. ________ | .. __________ .. __________ .. __________
    .. SYSX7200 .. ________ .. ________ | .. __________ .. __________ .. __________
    R=Report - W=WKSheet - I=Inspection - S=Search - T=EDTab - C=Compare - Email NO
```

- From the ***Datasets & Extracts*** panel, type "MX" next to the IODF Dataset on line W1. The IODF Target Selection panel is displayed.
- View the help panel by pressing <PF1>. After reviewing the information, press <PF3>. Additional command help is available by placing the cursor under each of the line commands at the bottom of the panel and pressing <ENTER>. View the help panels for Report, Worksheets, Inspection, Search, EDTables, and Compares. Press <PF3> when finished.
- Inspect selected targets for potential allocation denials. Place an "I" next to one of the IOCP Targets and next to a corresponding OSCP Target, then press <ENTER>. The ***IOCP to OSCP Drift Report*** is displayed in ISPF Browse.
- Scroll through the report. Look at the "DUPLICATE UCB REQUESTS" section. Verify that there were no duplicates. Look at the "DUPLICATE UCW REQUESTS" section. Verify that there were no duplicates.

- Scroll down to the “Device has no logical paths” section. If there are “Denials” and “Orphans”, review the detailed information to validate the data. Report any discrepancies to NewEra Software.
- Scroll down to the “Device has no connections” section. If there are “Denials” and “Orphans”, review the detailed information to validate the data. Report any discrepancies to NewEra Software.
- After viewing ***IOCP to OSCP Drift Report***, press <PF3>.

▪ *Step 21: Validating the EDT and Related Esoterics*

This exercise will show you how to validate the Eligible Device Table (EDT) and related Esoterics from the single IODF Working Interface.

```
------------------ Image SENTRY - IODF Explorer 4.0 - WEST1 -------------------
  Option ===>

------------OSCP Targets----------- | --------------IOCP Targets---------------
.. PSYSS.IODF92.09-02-05.15:58:21    | .. PSYSS.IODF92.09-02-05.15:58:21
------------Ext/12/02/XX----------- | --------------Wks/12/02/XX---------------
.. GDPP3B00 .. SYS13300 .. ________ | .. NEZ0#0____ .. __________ .. __________
.. GDPP7B00 .. SYS14300 .. ________ | .. NEZ0#1____ .. __________ .. __________
.. GDPT3B10 .. SYS17300 .. ________ | .. NEZ1#0____ .. __________ .. __________
.. GDPT7B10 .. SYS23300 .. ________ | .. NEZ1#1____ .. __________ .. __________
.. SYSL3200 .. SYS24300 .. ________ | .. __________ .. __________ .. __________
.. SYSL4200 .. SYS27300 .. ________ | .. __________ .. __________ .. __________
.. SYSL7200 .. SYS43300 .. ________ | .. __________ .. __________ .. __________
.. SYST3300 .. SYS44300 .. ________ | .. __________ .. __________ .. __________
.. SYST4300 .. SYS47300 .. ________ | .. __________ .. __________ .. __________
.. SYST7300 .. VM1A3900 .. ________ | .. __________ .. __________ .. __________
.. SYSU3200 .. VM1A4900 .. ________ | .. __________ .. __________ .. __________
.. SYSU4200 .. VM1A7900 .. ________ | .. __________ .. __________ .. __________
.. SYSU7200 .. ________ .. ________ | .. __________ .. __________ .. __________
.. SYSX3200 .. ________ .. ________ | .. __________ .. __________ .. __________
.. SYSX4200 .. ________ .. ________ | .. __________ .. __________ .. __________
.. SYSX7200 .. ________ .. ________ | .. __________ .. __________ .. __________
R=Report - W=WKSheet - I=Inspection - S=Search - T=EDTab - C=Compare - Email NO
```

- Generate an ***OSCP to Internal EDT Inspection*** report. Place a “T” next to one of the OSCP Targets, then press <ENTER>. The generated report is displayed in ISPF Browse.
- Scroll through the report to validate the data. Verify that there were no duplicates or denials. Report any discrepancies to NewEra Software.
- After viewing the ***OSCP to Internal EDT Inspection*** report, press <PF3>.

▪ *Step 22: Validating the EDT and Esoterics of an OSCP with an IOCP*

This exercise will show you how to validate the Eligible Device Table (EDT) and related Esoterics from a selected OSCP with a selected IOCP using the single IODF Working Interface.

```
------------------- Image SENTRY - IODF Explorer 4.0 - WEST -------------------
  Option ===>

------------OSCP Targets----------- | --------------IOCP Targets---------------
.. PSYSS.IODF92.09-02-05.15:58:21   | .. PSYSS.IODF92.09-02-05.15:58:21
------------Ext/12/02/XX----------- | --------------Wks/12/02/XX---------------
.. GDPP3B00 .. SYS13300 .. ________ | .. NEZ0#0____ .. __________ .. ___________
.. GDPP7B00 .. SYS14300 .. ________ | .. NEZ0#1____ .. __________ .. ___________
.. GDPT3B10 .. SYS17300 .. ________ | .. NEZ1#0____ .. __________ .. ___________
.. GDPT7B10 .. SYS23300 .. ________ | .. NEZ1#1____ .. __________ .. ___________
.. SYSL3200 .. SYS24300 .. ________ | .. __________ .. __________ .. ___________
.. SYSL4200 .. SYS27300 .. ________ | .. __________ .. __________ .. ___________
.. SYSL7200 .. SYS43300 .. ________ | .. __________ .. __________ .. ___________
.. SYST3300 .. SYS44300 .. ________ | .. __________ .. __________ .. ___________
.. SYST4300 .. SYS47300 .. ________ | .. __________ .. __________ .. ___________
.. SYST7300 .. VM1A3900 .. ________ | .. __________ .. __________ .. ___________
.. SYSU3200 .. VM1A4900 .. ________ | .. __________ .. __________ .. ___________
.. SYSU4200 .. VM1A7900 .. ________ | .. __________ .. __________ .. ___________
.. SYSU7200 .. ________ .. ________ | .. __________ .. __________ .. ___________
.. SYSX3200 .. ________ .. ________ | .. __________ .. __________ .. ___________
.. SYSX4200 .. ________ .. ________ | .. __________ .. __________ .. ___________
.. SYSX7200 .. ________ .. ________ | .. __________ .. __________ .. ___________
R=Report - W=WKSheet - I=Inspection - S=Search - T=EDTab - C=Compare - Email NO
```

- Generate an ***IOCP to OSCP/EDT Inspection Report***. Place a "T" next to one of the OSCP Targets and a "T" next to a corresponding IOCP Target, then press <ENTER>. The generated report is displayed in ISPF Browse.
- Scroll through the report to validate the data. Verify that there were no duplicates or denials. Report any discrepancies to NewEra Software.
- After viewing the ***IOCP to OSCP/EDT Inspection Report***, press <PF3>.

▪ *Step 23: Performing an Element Compare*

This exercise will show you how to perform an Element Compare between like Elements.

Comparing two IOCP targets is helpful when determining the differences between two IOCPs used (at different times) on the same LPAR or IOCPs used on different LPARs. To compare, place a 'C' adjacent to two IOCP targets and press enter.

Comparing two OSCP targets is helpful when determining the differences between two OSCPs used (at different times) on the same LPAR or OSCPs used on different LPARs. To compare, place a 'C' adjacent to two OSCP targets and press enter.

```
------------------- Image SENTRY - IODF Explorer 4.0 - WEST -------------------
  Option ===>

------------OSCP Targets----------- | --------------IOCP Targets---------------
.. PSYSS.IODF92.09-02-05.15:58:21   | .. PSYSS.IODF92.09-02-05.15:58:21
------------Ext/12/02/XX----------- | --------------Wks/12/02/XX---------------
.. GDPP3B00 .. DXS13300 .. ________ | .. CPW0#0____ .. __________ .. ___________
.. GDPP7B00 .. DXS14300 .. ________ | .. CPW0#1____ .. __________ .. ___________
.. GDPT3B10 .. DXS17300 .. ________ | .. CPW1#0____ .. __________ .. ___________
.. GDPT7B10 .. DXS23300 .. ________ | .. CPW1#1____ .. __________ .. ___________
.. DXSL3200 .. DXS24300 .. ________ | .. __________ .. __________ .. ___________
.. DXSL4200 .. DXS27300 .. ________ | .. __________ .. __________ .. ___________
.. DXSL7200 .. DXS43300 .. ________ | .. __________ .. __________ .. ___________
.. DXST3300 .. DXS44300 .. ________ | .. __________ .. __________ .. ___________
.. DXST4300 .. DXS47300 .. ________ | .. __________ .. __________ .. ___________
.. DXST7300 .. VM1A3900 .. ________ | .. __________ .. __________ .. ___________
.. DXSU3200 .. VM1A4900 .. ________ | .. __________ .. __________ .. ___________
.. DXSU4200 .. VM1A7900 .. ________ | .. __________ .. __________ .. ___________
.. DXSU7200 .. ________ .. ________ | .. __________ .. __________ .. ___________
.. DXSX3200 .. ________ .. ________ | .. __________ .. __________ .. ___________
.. DXSX4200 .. ________ .. ________ | .. __________ .. __________ .. ___________
.. DXSX7200 .. ________ .. ________ | .. __________ .. __________ .. ___________
R=Report - W=WKSheet - I=Inspection - S=Search - T=EDTab - C=Compare - Email NO
```

- Generate an ***IOCP to IOCP Compare Report***. Place a “C” next to two of the IOCP Targets and press <ENTER>. The generated report is displayed in ISPF Browse.
- The summary section shows the number of Control Units and I/O Devices unique to the first target, those common to the two targets, and those unique to the second target. A detail section follows the summary.
- Scroll through the report to validate the data. After viewing the report, press <PF3>.

- Generate an ***OSCP to OSCP Compare Report***. Place a "C" next to two of the OSCP Targets and press <ENTER>. After viewing the report, press <PF3>.

Step 24: Log onto HCD and make changes to the Work IODF

You are asked to make some more complex changes to the Work IODF and validate the data within the IODF Explorer.

Note: It's very important that you are familiar with HCD and that you specify a separate Work IODF for this exercise.

We begin this exercise by selecting the **HC-HCD** option (Hardware Configuration Dialogs) from either the **Image FOCUS – ISPF Interface** panel or the **ISPF Primary Menu**.

```
                        Image Focus - ISPF Interface
Option  ===>

   0   Settings     - Terminal and user parameters          Userid    - PROBI1
   1   View         - Display source data or listings       Time      - 17:40
   2   Edit         - Create or change source data          Terminal  - 3278
   3   Utilities    - Perform utility functions             System    - S0W1
   6   Command      - Enter TSO commands                    Applid    - IFOH
   HC  HCD          - Hardware Configuration Dialogs         Image Focus 7.0
   IS  ISMF         - Integrated Storage Management Facility Patch Level  P1
   RA  RACF         - Resource Access Control Facility
   SM  SMP/E        - System Modification Program / Extended
   RM  RMFMON       - RMF Monitor II (TSO MODE)
   SD  SDSF         - Spool Search and Display Facility




   X   Exit         - Return to Image Focus Primary Menu

Enter END command to return to Image Focus Primary Menu
```

- Select the "HC" Option (Hardware Configuration Dialogs).

Note: Invocation of HCD may vary. In this example, users access HCD by selecting the "HC" option from the ISPF Primary Menu or the Image FOCUS – ISPF Interface panel ("Recovery" then "Access" options from the Image Control Environment main panel).

4.0

The ***Hardware Configuration*** panel is displayed.

```
                                  z/OS V1.7 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 . . . 'SYS1.IODF00.WORK'                    +
```

- Verify the name of your IODF – I/O definition file (bottom of panel). Note: It's very important that you specify a separate Work IODF for this exercise.
- Select the "Define, modify" Option (type option "1" and press <ENTER>).

The Define, Modify, or View Configuration Data dialog box is displayed.

```
                    z/OS V1.7 HCD
               Define, Modify, or View Configuration Data

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

      __ 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
```

Note: It's very important that you are familiar with HCD and that you specify a separate Work IODF for this exercise.

- Add and/or delete Processors
- Add and/or delete LPARs
- Add and/or delete MVS Configurations
- Modify the Eligible Device Table (Esoteric Definitions)
- Add, delete, and/or change IODevices
- Add, delete, and/or change the CHPIDs
- Add, delete, and/or change the PARTITIONs
- Exit HCD.

Step 25: Log onto ICE, select Image SENTRY

Before starting this step, install any Image SENTRY or Image FOCUS updates (if instructed).

Select the **Image SENTRY** option (Sentry – Custom Compliance Reports) from the ***Image Control Environment*** panel.

```
                      Image Control Environment: ICE
Option  ===>

   P   Production   - Image Focus Production                Userid    - PROBI1
                                                           Time      - 19:34
   W   Workbench    - Image Focus Workbench                Terminal  - 3278
                                                           System    - S0W1
   R   Recovery     - Image Focus Recovery                 Applid    - IFOB
                                                            Image Focus 7.0
   C   Control      - Control Editor Functions             Patch Level  P9A

   S   Sentry       - Custom Compliance Reports

   D   Definitions  - Definitions & Settings

                     *************************
                     * Control Task: RUNNING  *
                     * Recovery    : DOWN     *
                     *************************

   X   Exit         - Terminate

NewEra Software, Inc.
   Our Job? Help you make repairs, avoid problems, and improve IPL integrity.
```

- Log onto **ICE** (or invoke IODF Explorer for TSO).
- Select the "S" Option (Sentry – Custom Compliance Reports) from the ***Image Control Environment*** panel.
- Select the "z/OS Hardware" Option from the ***Custom Compliance Reports*** panel.
- Select the "TRIAL001" Scenario by placing the cursor over "TRIAL001" and pressing <ENTER>.

▪ *Step 26: Perform a new Extract*

There is one extract displayed on line W1 from our last session. For this step, we will move a copy to line W8 and perform a new extract from the updated Work IODF Dataset.

```
--------- Image SENTRY - IODF Explorer 4.0 - Datasets & Extracts ----------
Option ===>

Sx -- ----IODF Datasets---- ------------IODF Extracts------------- --Date--
-- -- --------------------- ---MVSCP--- ----IOCDS----- --SWITCH--- --Last--
-- -- --------------------- ---OSCPs--- ----IOCPs----- ---SWCPs--- Extracts
-- Cm --------------------- Cm -confid- Cm --procids-- Cm --swid-- --------

W1 .. SYS1.IODF00.WORK_____ .. List____ .. List______  .. List____  03/17/XX
W2 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W3 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W4 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W5 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__

-- -- --------------------- -- -------- -- ----------- -- -------- --------

W6 .. SYS1.IODF00__________ .. FEPS____ .. MKZ3______  .. 01_____  03/17/XX
W7 .. SYS1.IODF00.WORK_____ .. FEPS____ .. MKZ3______  .. 01_____  03/17/XX
W8 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W9 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W0 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__

-- .. IODF Dataset Extracts .. Email NO .. Working with the Element Extract
```

- If necessary, review the PF1 Help, “Extracting IODF Dataset”, or “Using an IODF Dataset Extract” help topics. To select the help topics shown at the bottom of the panel, place the cursor over the text and press <ENTER> for these help panels.
- Place a “W8” next to the IODF Dataset (shown on line W1) and press <ENTER>. Note that “OK” will appear in the “CM” (line command) column for successful copies and the Date field will reflect the date when the extraction was performed.
- Place an “XX” next to the IODF Dataset (shown on line W1) and press <ENTER>. Note that “OK” will appear in the “CM” (line command) column for successful extractions and the Date field will reflect the date when the extraction was performed (today’s date).
- To view the IODF Profile Report, place a “PX” next to the IODF Dataset shown on line W1 and press <ENTER>. Validate that your changes are reflected in this report.
- Carefully review and validate the information contained in the IODF Profile Report.

- When finished reviewing the report, press <PF3>.

▪ *Step 27: Perform a Level-One Compare*

We call comparisons of two IODF Datasets a “Level-One” compare.

```
--------- Image SENTRY - IODF Explorer 4.0 - Datasets & Extracts ----------
Option ===>

Sx -- ----IODF Datasets---- ------------IODF Extracts------------- --Date--
-- -- --------------------- ---MVSCP--- ----IOCDS----- --SWITCH--- --Last--
-- -- --------------------- ---OSCPs--- ----IOCPs----- ---SWCPs--- Extracts
-- Cm --------------------- Cm -confid- Cm --procids-- Cm --swid-- --------

W1 .. SYS1.IODF00.WORK_____ .. List____ .. List______  .. List____  03/17/XX
W2 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W3 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W4 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W5 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__

-- -- --------------------- -- -------- -- ----------- -- -------- --------

W6 .. SYS1.IODF00__________ .. FEPS____ .. MKZ3______  .. 01_____  03/17/XX
W7 .. SYS1.IODF00.WORK_____ .. FEPS____ .. MKZ3______  .. 01_____  03/17/XX
W8 .. SYS1.IODF00.WORK_____ .. FEPS____ .. MKZ3______  .. 01_____  03/17/XX
W9 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W0 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__

-- .. IODF Dataset Extracts .. Email NO .. Working with the Element Extract
```

- Place a “CX” next to the IODF Dataset (shown on line W1), a “CX” next to the IODF Dataset (shown on line W8), and press <ENTER>.
- *Note: If you did not make any changes to the Work IODF Dataset, you will receive a message:* **Selected IODF Datasets have matching Date and Timestamps**
- Review the comparison reports and validate that your changes were accurately detected. When finished viewing the report, press <PF3>.
- Move the cursor to the other “target” and press <ENTER>.

Note that the “adds” are now listed as “deletes”, and vice versa. Review the comparison reports and validate the changes. When finished viewing the report, press <PF3>.

▪ *Step 28: Perform a Level-Two Compare*

We call comparisons of two IODF Targets a “Level-Two” compare.

```
--------- Image SENTRY - IODF Explorer 4.0 - Datasets & Extracts ----------
Option ===>

Sx -- ----IODF Datasets---- ------------IODF Extracts------------- --Date--
-- -- --------------------- ---MVSCP--- ----IOCDS----- --SWITCH--- --Last--
-- -- --------------------- ---OSCPs--- ----IOCPs----- ---SWCPs--- Extracts
-- Cm --------------------- Cm -confid- Cm --procids-- Cm --swid-- --------

W1 .. SYS1.IODF00.WORK_____ .. List____ .. List______  .. List____  03/17/XX
W2 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W3 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W4 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W5 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__

-- -- --------------------- -- -------- -- ----------- -- -------- --------

W6 .. SYS1.IODF00__________ .. FEPS____ .. MKZ3______  .. 01_____  03/17/XX
W7 .. SYS1.IODF00.WORK_____ .. FEPS____ .. MKZ3______  .. 01_____  03/17/XX
W8 .. SYS1.IODF00.WORK_____ .. FEPS____ .. MKZ3______  .. 01_____  03/17/XX
W9 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W0 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__

-- .. IODF Dataset Extracts .. Email NO .. Working with the Element Extract
```

- Select the same MVSCP target for line W1 as is shown for line W8. Place the cursor over “List” and press <ENTER>. Then select the first target name and press <ENTER>. Note that you will be returned to the ***IODF Workspace - Extraction and Selection*** panel. The selected target name will appear under the MVSCP column for W1.
- Follow the same procedure to select a SWITCH target. Skip if you don’t have SWCPs.
- Follow the same procedure to select an IOCDS target.
- Compare the MVSCP Targets – place a “C” next to the MVSCP Target on lines W1 and W8, then press <ENTER>. Review the comparison report, and press <PF3> when finished. Place the cursor under the other target and press <ENTER>. Notice that the comparison has changed (“adds” have become “deletes”, and vice versa). After reviewing the report, press <PF3>.
- Compare the SWITCH Targets using the same procedure. Skip if you don’t have SWCPs.
- Compare the IOCDS Targets using the same procedure.

▪ *Step 29: Display Profiles and Macro Statements*

We will look at the target Profiles and Macro Statements.

```
--------- Image SENTRY - IODF Explorer 4.0 - Datasets & Extracts ----------
Option ===>

Sx -- ----IODF Datasets---- ------------IODF Extracts------------- --Date--
-- -- --------------------- ---MVSCP--- ----IOCDS----- --SWITCH--- --Last--
-- -- --------------------- ---OSCPs--- ----IOCPs----- ---SWCPs--- Extracts
-- Cm --------------------- Cm -confid- Cm --procids-- Cm --swid-- --------

W1 .. SYS1.IODF00.WORK_____ .. List____ .. List_____  .. List____  03/17/XX
W2 .. _____________________ .. ________ .. __________ .. ________ __OPEN__
W3 .. _____________________ .. ________ .. __________ .. ________ __OPEN__
W4 .. _____________________ .. ________ .. __________ .. ________ __OPEN__
W5 .. _____________________ .. ________ .. __________ .. ________ __OPEN__

-- -- --------------------- -- -------- -- ---------- -- -------- --------

W6 .. SYS1.IODF00__________ .. FEPS____ .. MKZ3______  .. 01_____  03/17/XX
W7 .. SYS1.IODF00.WORK_____ .. FEPS____ .. MKZ3______  .. 01_____  03/17/XX
W8 .. SYS1.IODF00.WORK_____ .. FEPS____ .. MKZ3______  .. 01_____  03/17/XX
W9 .. _____________________ .. ________ .. __________ .. ________ __OPEN__
W0 .. _____________________ .. ________ .. __________ .. ________ __OPEN__

-- .. IODF Dataset Extracts .. Email NO .. Working with the Element Extract
```

- View the Profile for the MVSCP Target – place a “P” next to the MVSCP Target on line W1, then press <ENTER>. Review the report, and press <PF3> when finished.
- Follow the same procedure to view a SWITCH target profile. Skip if you don’t have SWCPs.
- Follow the same procedure to view an IOCDS target profile.
- View the Macro Statements for the MVSCP Target – place a “V” next to the MVSCP Target on line W1, then press <ENTER>. Review the report, and press <PF3> when finished.
- Follow the same procedure to view the SWITCH target Macro Statements. Skip if you don’t have SWCPs.
- Follow the same procedure to view the IOCDS target Macro Statements.

▪ *Step 30: Search for IO Devices*

We will look at the search function to find IO Devices.

```
--------- Image SENTRY - IODF Explorer 4.0 - Datasets & Extracts ----------
Option ===>

Sx -- ----IODF Datasets---- ------------IODF Extracts------------- --Date--
-- -- --------------------- ---MVSCP--- ----IOCDS----- --SWITCH--- --Last--
-- -- --------------------- ---OSCPs--- ----IOCPs----- ---SWCPs--- Extracts
-- Cm --------------------- Cm -confid- Cm --procids-- Cm --swid-- --------

W1 .. SYS1.IODF00,WORK_____ .. List____ .. List______  .. List____  03/17/XX
W2 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W3 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W4 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W5 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__

-- -- --------------------- -- -------- -- ---------- -- -------- --------

W6 .. SYS1.IODF00__________ .. FEPS____ .. MKZ3______  .. 01_____  03/17/XX
W7 .. SYS1.IODF00.WORK_____ .. FEPS____ .. MKZ3______  .. 01_____  03/17/XX
W8 .. SYS1.IODF00.WORK_____ .. FEPS____ .. MKZ3______  .. 01_____  03/17/XX
W9 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W0 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__

-- .. IODF Dataset Extracts .. Email NO .. Working with the Element Extract
```

☐ Search the MVSCP Target for IO Devices – place an “S” next to the MVSCP Target on line W1, then press <ENTER>. The IO Devices Search Criteria panel is displayed.

```
------------ Image SENTRY - IODF Explorer 4.0 - WESTERN1/OSCP -------------
Option ===>

  +------+------+----+-----+---------+---------+------------------------+
  | DEVU | CTLU | AD | NUM | DEVTYPE |  MODEL  |   DEVICE DESCRIPTION   |
  +------+------+----+-----+---------+---------+------------------------+
  | ____   ____   __   ___   ________   _______   _____________________ |
  |                                                                      |
  |      +--------oscp_device_attributes-------+----other_attributes----+
  |      |                                     |                        |
  |      |   STADET __________  SCHSET _______ |     _______________    |
  |      |      PCU __________ DYNAMIC _______ |       SERIALNumb       |
  |      |   LOCANY __________ NUMSECT _______ |                        |
  |      |   VOLSER __________    PATH _______ |     _______________    |
  |      |  OFFLINE __________   OWNER _______ |       FEATURES         |
  |      |  ADAPTER __________     TCU _______ |                        |
  |      |  TIMEOUT __________ SETADDR _______ |     _______________    |
  |      |    LPARS _____________________________ |       USERPARM         |
  |      +-------------------------------------+------------------------+
  |                                                                      |
  +----------------------------------------------------------------------+
  .. Reset Criteria .. IODevice Worksheet .. Search CntlUnits .. Email NO
```

- Place the cursor over “DEVU” and press <ENTER>. Review the list of devices, and press <PF3> when finished.
- Type one of the devices in the field under “DEVU” and press <ENTER>. Scroll down and validate the data. Press <PF3> when finished.
- Follow the same procedure to search for additional information. Press <PF3> when finished.

Step 31: Search for Control Units

We will look at the search function to find Control Units.

```
--------- Image SENTRY - IODF Explorer 4.0 - Datasets & Extracts ----------
Option ===>

Sx -- ----IODF Datasets---- ------------IODF Extracts------------ --Date--
-- -- --------------------- ---MVSCP--- ----IOCDS----- --SWITCH--- --Last--
-- -- --------------------- ---OSCPs--- ----IOCPs----- ---SWCPs--- Extracts
-- Cm --------------------- Cm -confid- Cm --procids-- Cm --swid-- --------

W1 .. SYS1.IODF00.WORK_____ .. __List__ .. __List____  .. __List__  03/17/XX
W2 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W3 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W4 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W5 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__

-- -- --------------------- -- -------- -- ----------- -- -------- --------

W6 .. SYS1.IODF00_________ .. FEPS____ .. MKZ3______  .. 01_____  03/17/XX
W7 .. SYS1.IODF00.WORK____ .. FEPS____ .. MKZ3______  .. 01_____  03/17/XX
W8 .. SYS1.IODF00.WORK____ .. FEPS____ .. MKZ3______  .. 01_____  03/17/XX
W9 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W0 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__

-- .. IODF Dataset Extracts .. Email NO .. Working with the Element Extract
```

- Search the IOCP Target for Control Units – place an “S” next to the IOCP Target on line W1, then press <ENTER>. The IO Devices Search Criteria panel is displayed.

```
-------------- Image SENTRY - IODF Explorer 4.0 - WEST/IOCP ------------
Option ===>

  +------+------+----+-----+---------+---------+------------------------+
  | DEVU | CTLU | AD | NUM | DEVTYPE |  MODEL  |   DEVICE DESCRIPTION   |
  +------+------+----+-----+---------+---------+------------------------+
  | ____   ____   __   ___   _______   _______   _____________________ |
  |                                                                     |
  |      +--------iocp_device_attributes-------+----other_attributes----+
  |      |                                     |                       |
  |      |   STADET __________  SCHSET _______ |     _______________   |
  |      |      PCU __________ DYNAMIC _______ |       SERIALNumb      |
  |      |   LOCANY __________ NUMSECT _______ |                       |
```

```
|      |   VOLSER _________    PATH _________ |      _______________      |
|      |  OFFLINE _________   OWNER _________ |        FEATURES           |
|      |  ADAPTER _________     TCU _________ |                           |
|      |  TIMEOUT _________ SETADDR _________ |      _______________      |
|      |    LPARS _____________________________ |        USERPARM           |
|      +-----------------------------------+------------------------+
|                                                                           |
+---------------------------------------------------------------------------+
.. Reset Criteria .. IODevice Worksheet .. Search CntlUnits .. Email NO
```

- Place the cursor over “CntlUnits” at the bottom of the panel and press <ENTER>. The Control Unit Search Criteria panel is displayed.
- Place the cursor over “CTLU” and press <ENTER>. Scroll down and validate the data. Take note of one of the CUNUMBRs. Press <PF3> when finished.
- Type one of the CUNUMBRs in the field under “CTLU” and press <ENTER>. Scroll down and validate the data. Press <PF3> when finished.

```
-------------- Image SENTRY - IODF Explorer 4.0 - WEST/IOCP ---------------
Option ===>

  +------+------+----+-----+------+------------+------------------------+
  | CTLU | TYPE | AD | SHR | POCL | SERIALNumb |  CNTLUNIT DESCRIPTION  |
  +------+------+----+-----+------+------------+------------------------+
  | ____   ____   __   ___   ____   __________   _____________________ |
  |                                                                     |
  |      +----------iocp_css/path/link---------+-----swport/unitadd-----+
  |      |                                     |                       |
  |      | PATH ______ _____________________ | SWPORT _______________ |
  |      |                                     |                       |
  |      | LINK ______ _____________________ | UNITAD _______________ |
  |      |                                     |                       |
  |      +-------------------------------------+-----------------------+
  |                                                                     |
  +---------------------------------------------------------------------+
  .. Reset Criteria .. CntlUnit Worksheet .. Search IODevices .. Email NO
```

Place the cursor over “SWPORT” and press <ENTER>. Scroll down and validate the data. Take note of one of the entries (if you don’t have Switches defined, skip the rest of this step). Press <PF3> when finished.

```
BROWSE    IFO.IFOB.$ISENTRY.$REPORTS($IODFHLP)       Line 00000000 Col 001 080
 Command ===>                                            Scroll ===> CSR
******************************** Top of Data ********************************
/*************************************************************************/
/*                                                                       */
/*        Image SENTRY - IODF Field Value Availability - Rnum:Help102    */
```

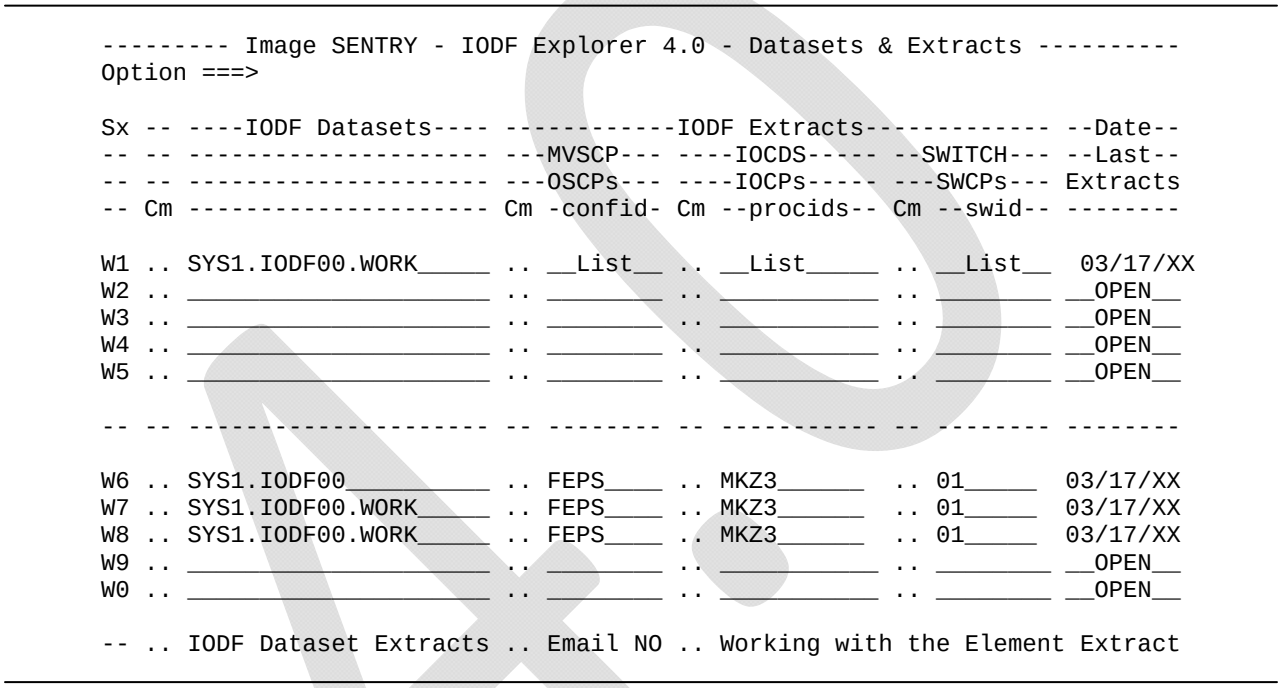
```
/*            As Defined in - ANYIODF.IODFA2 - 2008-11-11 14:40:19            */
/*                                                                            */
/*               Update:01/22/XX and Time:17:30:16 - User:PROBI1              */
/*                                                                            */
/******************************************************************************/
|
ISN7210I Field/Attribute Description:
|
ISN7220I   SWPORT Specifies switch ports to which the control unit is
ISN7220I   connected (optional).
|
ISN7230I Available Field Values: 0093
|
ISN7240I   0001 (07,96)
ISN7240I   0002 (3E,FE)
ISN7240I   0003 (07,80)
```

- Type one of the entries in the field next to “SWPORT” and press <ENTER>. Following the above example, type 07,96 corresponding to the first switch port entry. Scroll down and validate the data. Press <PF3> when finished.
- Follow the same procedure to search for additional information.
- Press <PF3> as needed to return to the ***Datasets & Extracts*** panel.

▪ *Step 32: Create the Operation Manager's Report*

Consider using this report as part of your system documentation. This report presents just enough detail to enable management to understand the OSCP Configuration without being overwhelmed. Information includes Unit Addresses for NIP Consoles, Esoteric and Generic Device data (Token or DevPref), Defined IO Device data, and I/O Device Status at Initialization (Online, Offline, or Undeclared). Note that the Operation Manager's Report is applicable to OSCP Targets.

Reports can easily be sent to management – Copy, Print or Email by using the Line Commands.



```
--------- Image SENTRY - IODF Explorer 4.0 - Datasets & Extracts ----------
Option ===>

Sx -- ----IODF Datasets---- ------------IODF Extracts------------- --Date--
-- -- --------------------- ---MVSCP--- ----IOCDS----- --SWITCH--- --Last--
-- -- --------------------- ---OSCPs--- ----IOCPs----- ---SWCPs--- Extracts
-- Cm --------------------- Cm -confid- Cm --procids-- Cm --swid-- --------

W1 .. SYS1.IODF00.WORK_____ .. __List__ .. __List_____ .. __List__  03/17/XX
W2 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W3 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W4 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W5 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__

-- -- --------------------- -- -------- -- ----------- -- -------- --------

W6 .. SYS1.IODF00__________ .. FEPS____ .. MKZ3______  .. 01_____  03/17/XX
W7 .. SYS1.IODF00.WORK_____ .. FEPS____ .. MKZ3______  .. 01_____  03/17/XX
W8 .. SYS1.IODF00.WORK_____ .. FEPS____ .. MKZ3______  .. 01_____  03/17/XX
W9 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W0 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__

-- .. IODF Dataset Extracts .. Email NO .. Working with the Element Extract
```

- Select the Operation Manager's Report for an MVSCP Target – place an "O" next to the MVSCP Target on line W1, then press <ENTER>. The ***Operation Manager's Report*** is displayed in ISPF Browse.

```
******************************** Top of Data ********************************
/*****************************************************************************/
/*                                                                           */
/*       Image SENTRY - Operation Manager's Report -                         */
/*                                                                           */
/*               Update:01/22/XX and Time:17:42:59 - User:PROBI1             */
/*                                                                           */
/*****************************************************************************/
|
ISN5770I THE Z/OS OPERATION MANAGER'S REPORT.
ISN5770I
ISN5770I +-----------------------------------------------------------------+
ISN5770I |                     OSCP CONFIGURATION SUMMARY                  |
ISN5770I |       ANYIODF.IODFA2 - 2008-11-11 14:40:19 - ID:00/MVS/SYA1     |
ISN5770I +----------+--------+--------+-------------------------------------+
ISN5770I |   NAME   | EDTIDS | OSTYPE |      CONFIGURATION DESCRIPTION      |
ISN5770I +----------+--------+--------+-------------------------------------+
ISN5770I |     SYA1 |   00   |   MVS  |  A1 Production                      |
```

- Scroll down and validate the data. Press <PF3> when finished.

▪ *Step 33: Create the CHPID Utilization Report*

Consider using this report as part of your system documentation. Information read from the IODF extract and incorporated into the report includes the Physical CHPID Address (PID) and the Total Unique Address Paths (NBR). Copy, Print or Email by using the Line Commands. Note that the CHPID Report is only applicable to IOCP Targets.

```
--------- Image SENTRY - IODF Explorer 4.0 - Datasets & Extracts ----------
Option ===>

Sx -- ----IODF Datasets---- ------------IODF Extracts------------ --Date--
-- -- --------------------- ---MVSCP--- ----IOCDS----- --SWITCH--- --Last--
-- -- --------------------- ---OSCPs--- ----IOCPs----- ---SWCPs--- Extracts
-- Cm --------------------- Cm -confid- Cm --procids-- Cm --swid-- --------

W1 .. SYS1.IODF00.WORK_____ .. List____ .. List______  .. List____  03/17/XX
W2 .. _____________________ .. ________ .. __________ .. ________ __OPEN__
W3 .. _____________________ .. ________ .. __________ .. ________ __OPEN__
W4 .. _____________________ .. ________ .. __________ .. ________ __OPEN__
W5 .. _____________________ .. ________ .. __________ .. ________ __OPEN__

-- -- --------------------- -- -------- -- ---------- -- -------- --------

W6 .. SYS1.IODF00__________ .. FEPS____ .. MKZ3______  .. 01_____  03/17/XX
W7 .. SYS1.IODF00.WORK_____ .. FEPS____ .. MKZ3______  .. 01_____  03/17/XX
W8 .. SYS1.IODF00.WORK_____ .. FEPS____ .. MKZ3______  .. 01_____  03/17/XX
W9 .. _____________________ .. ________ .. __________ .. ________ __OPEN__
W0 .. _____________________ .. ________ .. __________ .. ________ __OPEN__

-- .. IODF Dataset Extracts .. Email NO .. Working with the Element Extract
```

☐ Select the CHPID Utilization Report for an IOCP Target – place a “U” next to the IOCP Target on line W1, then press <ENTER>. The CHPID Utilization Report is displayed in ISPF Browse.

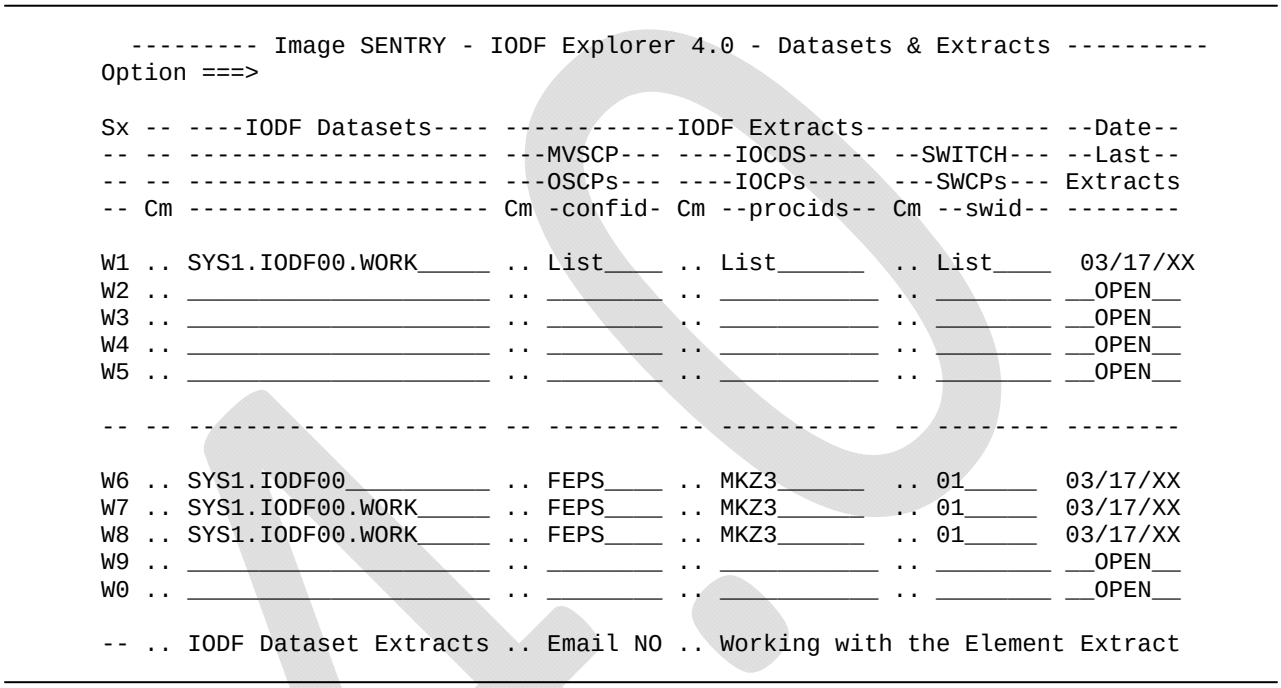
```
******************************** Top of Data ********************************
/*****************************************************************************/
/*                                                                           */
/*               Image SENTRY - Processor Utilization Report                 */
/*                                                                           */
/*              Update:01/22/XX and Time:17:54:16 - User:PROBI1              */
/*                                                                           */
/*****************************************************************************/
|
ISN5670I SYSTEM UTILIZATION REPORT - PROCESSOR, CHANNEL SUBSYSTEMS & LPARS
ISN5670I
ISN5670I +-------------------------------------------------------------------+ |
ISN5670I |                     IOCP CONFIGURATION SUMMARY                    |
ISN5670I |       SYS1.IODF66    - 2008-11-11 14:40:19 - TARGET: MKZ3          |
ISN5670I +---------+---------+------+--------------+------+---------+--------+
ISN5670I |  NAMES  |  UNITS  | MODL | SERIAL NUMBER | MODE |  LEVEL  |  LSYS  |
ISN5670I +---------+---------+------+--------------+------+---------+--------+
ISN5670I |  MKZ3   |    2097 |  E40 |    05F7822097 | LPAR | H080130 |  MKZ3  |
```

- Scroll down and validate the data. Press <PF3> when finished.

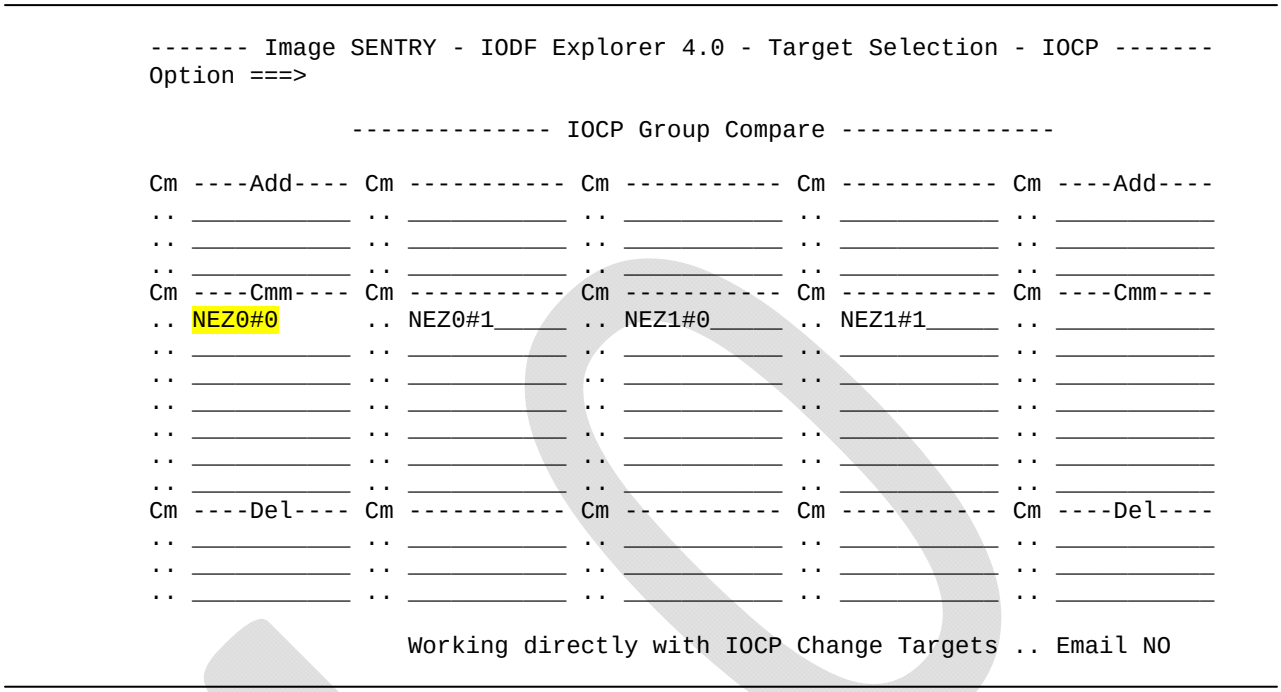
Note: If an IOCP definition was broken into parts based upon the CMR number (e.g. A#0, A#1, A#2), these can be combined into a single report by simply changing the A#x target to A (removing "#x" from the name) before entering the CHPID Utilization Report line command.

Step 34: Perform Element Group Compares

Compares on the IODF Explorer extracts panel (“C” line command for Targets and “CX” line command for the IODF Datasets) provide a high-level summary of changes between the two entities. However, they do not include more detailed “generational” information. The Element Group Compare (“GC” line command for Targets) provides this detail.



- Select the Element Group Compare for two IOCP Targets – place a “GC” next to the IOCP Targets on line W1 and W6, then press <ENTER>. The ***Group Compare*** panel is displayed.



- The three sections of this panel show Targets which contain either Adds, Commons, or Deletes. To view the results of a compare, type ‘S’ adjacent to the desired Target and press <ENTER>.

The resulting report depends upon the Target status (signified by the way the Target is displayed on the Group Compare panel). If the Target name is displayed in Yellow reverse-video (indicating a change), the Compare Summary Report is shown. Otherwise, the Profile report is shown.

For the Compare Detail Report, type 'Detail' on the Command Line when you’re selecting the Target.

- View a report – type an “S” next to one of the Targets, then press <ENTER>. Scroll down and validate the data. Press <PF3> when finished.

- If you have a Target that indicates a change (Target name is highlighted in Yellow reverse-video), type ‘DETAIL’ on the Command Line, type an “S” next to the Target, then press <ENTER>. Scroll down and validate the data. Press <PF3> when finished.

- Press <PF3> when finished.

▪ *Step 35: Display Blueprints and Reports*

We will display the Blueprints and Reports for the selected targets.

```
  --------- Image SENTRY - IODF Explorer 4.0 - Datasets & Extracts ----------
Option ===>

Sx -- ----IODF Datasets---- ------------IODF Extracts------------- --Date--
-- -- --------------------- ---MVSCP--- ----IOCDS----- --SWITCH--- --Last--
-- -- --------------------- ---OSCPs--- ----IOCPs----- ---SWCPs--- Extracts
-- Cm --------------------- Cm -confid- Cm --procids-- Cm --swid-- --------

W1 .. SYS1.IODF00.WORK_____ .. FEPS____ .. MKZ3_____  .. 01_____  03/17/XX
W2 .. _____________________ .. ________ .. __________ .. ________ __OPEN__
W3 .. _____________________ .. ________ .. __________ .. ________ __OPEN__
W4 .. _____________________ .. ________ .. __________ .. ________ __OPEN__
W5 .. _____________________ .. ________ .. __________ .. ________ __OPEN__

-- -- --------------------- -- -------- -- ---------- -- -------- --------

W6 .. SYS1.IODF00__________ .. FEPS____ .. MKZ3_____  .. 01_____  03/17/XX
W7 .. SYS1.IODF00.WORK_____ .. FEPS____ .. MKZ3_____  .. 01_____  03/17/XX
W8 .. SYS1.IODF00.WORK_____ .. FEPS____ .. MKZ3_____  .. 01_____  03/17/XX
W9 .. _____________________ .. ________ .. __________ .. ________ __OPEN__
W0 .. _____________________ .. ________ .. __________ .. ________ __OPEN__

-- .. IODF Dataset Extracts .. Email NO .. Working with the Element Extract
```

- Select the Blueprints panel for an MVSCP Target – place an “R” next to the MVSCP Target on line W1, then press <ENTER>. The ***Available Blueprints & Reports*** panel is displayed.

```
----------- Available Blueprints & Reports - WEST/OSCP/VM1A4900 -----------
Option ===>

     Available Blueprints - WEST/OSCP/VM1A4900             |  S,X,V,U,D  |
                                                           |             |
 | --Explore-- | ------------ISNPlcy Blueprints----------- | -UserBmrks- |
 | Cm --Date-- | Cm ---Date--- Cm ---Date--- Cm ---Date--- | Cm --Date-- |
 | .. 03/26/XX | ..            ..            ..            | .. 03/26/XX |
 | ..          | ..            ..            ..            | ..          |
 | ..          | ..            ..            ..            | ..          |
 | ..          | ..            ..            ..            | ..          |
 | ..          | ..            ..            ..            | ..          |
 | ..          | ..            ..            ..            | ..          |
 | ..          | ..            ..            ..            | ..          |
 | ..          | ..            ..            ..            | ..          |
 | ..          | ..            ..            ..            | ..          |
 | ..          | ..            ..            ..            | ..          |
 | ..          | ..            ..            ..            | ..          |
 | ..          | ..            ..            ..            | ..          |
 | ..          | ..            ..            ..            | ..          |
 | ..          | ..            ..            ..            | ..          |

   .. UpDates    .. Compare Blueprints  .. Library Reports     Email NO
```

- Review the PF1 Help for this panel. Press <PF3> when finished. Another help panel is available for the “S,X,V,U,D” UserBmrks commands (place cursor over the commands and press <ENTER> to display).

- Place the cursor over “Updates” and press <ENTER>. A Blueprint is now stored under the “Explore” column with today’s date.

- Type an “X” next to the Blueprint and press <ENTER>. A description panel is displayed. Type “First Benchmark” on the description line, place the cursor over “Update Benchmark”, and press <ENTER>. The Blueprint is now stored as a User Benchmark under the UserBmrks column with today’s date.

- Place the cursor over “Library Reports” and press <ENTER>. The ***OSCP Report Library*** panel is displayed.

```
--------- Image Sentry - OSCP Report Library - WEST/OSCP/VM1A4900 ---------
Option ===>

     Status Last Update:03/26/XX and Time:19:47:22 - Update User:PROBI1

Cm -Member- -----Status Summaries--- Cm -Member- -------Full Reports-------
.. $OSCPSUM OSCP z/OS Software______ .. $OSCPMAP OSCP z/OS Software________
.. $NIPSSUM NIP Consoles____________ .. $NIPSMAP NIP Consoles_______________
.. $ETABSUM Eligible Devices________ .. $ETABMAP Eligible Devices___________
.. $CTLUSUM Control Units___________ .. $CTLUMAP Control Units_____________
.. $OSDVSUM I/O Devices_____________ .. $OSDVMAP I/O Devices_______________
.. ________ _____________________________ .. ________ _____________________________
.. ________ _____________________________ .. ________ _____________________________
.. ________ _____________________________ .. ________ _____________________________
.. ________ _____________________________ .. ________ _____________________________
.. ________ _____________________________ .. ________ _____________________________
.. ________ _____________________________ .. ________ _____________________________
Cm -Member- -----Change Summaries--- Cm -Member- ------Change Details------
.. $OSCNSUM Last Change Report______ .. $OSCNMAP Last Change Report________
.. ________ _____________________________ .. ________ _____________________________
.. ________ _____________________________ .. ________ _____________________________

          .. Update OSCP Reports                                EMAIL NO
```

- Place the cursor over “Update OSCP Reports” and press <ENTER>. The ***OSCP Report Library*** panel is populated with these reports.
- Review the PF1 Help for this panel. Press <PF3> when finished.
- Select several reports (select one at a time). Use the information found on the Help Panel to save, print, and email the reports.
- When finished, press <PF3> to return to the ***OSCP Report Library*** panel.
- Press <PF3> when finished to return to the ***Available Blueprint & Reports*** panel.
- Press <PF3> when finished to return to the ***Datasets & Extracts*** panel.

▪ *Step 36: General Navigation within the IODF Explorer Worksheet*

The IODF Explorer Worksheet allows you to analyze your IODF data in several ways. You can sort (ascending or descending order), filter (specify a specific value), and query (specify a value for a specific data column).

- Type a "W" next to an MVSCP Target on line W1 of the ***Datasets & Extracts*** panel, and press <ENTER>. The ***IODF Explorer Worksheet*** is displayed.

- Review the Help Panel by pressing <PF1>. When finished, press <PF3>.

```
---------------------- IMAGE Sentry - IODF Explorer 4.0 --------- Row 1 of 45
 -ICE 7.0-                                                        -Logical View-
------------------- PSYSS.IODF92 - 2009-02-05 15:58:21 - OSCP -----------------
Option ===>                                                  Scroll ===> PAGE
Row Select: Attributes Descriptions
--------------- To View a Configuration Select a Component Type ---------------
NIP Consoles   Generic Devices   Esoteric Devices   Control Units   I/O Devices
--- To Sort select a Sub-Head, To Query enter above Sub-Head, PFK1 for Help ---
-----Targets------ -----------Input-Output Devices Defined to Target-----------
_ ____ ________ __ ____ ___ ______ _____ ____ __________ ______________________
S Numb ConfigId Mg Unit Rng -Type- Model Ctlu --Serial-- ------Description-----
_ 0001 VM1A4900 01 0003 004   2032 ----- -VM- ---------- ----------------------
_ 0002 VM1A4900 01 0138 004   3270     X -VM- ---------- ----------------------
_ 0003 VM1A4900 01 0238 004   3270     X -VM- ---------- ----------------------
_ 0004 VM1A4900 01 0300 016   3490 ----- -VM- ---------- ----------------------
_ 0005 VM1A4900 01 0550 016   3490 ----- -VM- ---------- ----------------------
_ 0006 VM1A4900 01 0AE0 016   3490 ----- -VM- ---------- ----------------------
_ 0007 VM1A4900 01 1000 008   3745 ----- -VM- ---------- ----------------------
_ 0008 VM1A4900 01 1008 007    OSN ----- -VM- ---------- ----------------------
_ 0009 VM1A4900 01 100F 001   OSAD ----- -VM- ---------- ----------------------
_ 0010 VM1A4900 01 1100 015    OSA ----- -VM- ---------- ----------------------
_ 0011 VM1A4900 01 110F 001   OSAD ----- -VM- ---------- ----------------------
_ 0012 VM1A4900 01 1200 008   3745 ----- -VM- ---------- ----------------------
_ 0013 VM1A4900 01 1208 007    OSN ----- -VM- ---------- ----------------------
```

Sort: You can sort the data in ascending or descending order. Using this panel as an example, look at the data in the "Numb" column. Each line entry has a number associated with it. Initially, the numbers are sorted in ascending order.

- Place your cursor on the "Numb" column heading and press <ENTER>. Notice that the line items are now sorted in descending order.

- Placing your cursor on the "Numb" column heading and pressing <ENTER> again will return the column to ascending order.

- Now try sorting the "Unit" and "Type" fields.

Filter: You can filter the data by selecting a specific value from the data column. Using this panel as an example, look at the data in the “Type” column. Initially, the entries are not sorted.

- Place your cursor on the first data line with a “Type” of “3390A”, and press <ENTER>. Notice that only the line items for Type=3390A are shown.
- Placing your cursor on the “3390A” you selected and pressing <ENTER> twice will clear the filter (e.g. display the worksheet in its original format).

Column Query: You can column query the data by specifying a value for a specific data column. Using this panel as an example, look at the data in the “Type” column. Initially, the entries are not sorted.

- Place your cursor on the field above the “Type” column heading, type “3390A”, and press <ENTER>. Notice that only the line items for Type=3390A are shown.
- Place your cursor on the “Numb” column heading and press <ENTER> to clear the column query (e.g. display the worksheet in its original format).

▪ *Step 37: Reporting within the IODF Explorer Worksheet*

The IODF Explorer Worksheet allows you to generate reports from your IODF data in several ways. You can view summaries or detailed reports, copy to an MVS dataset, and create a comma delimited dataset (import into MS-Excel, DB2, etc.). Reports can also be routed to a printer or sent via email.

```
---------------------- IMAGE Sentry - IODF Explorer B.1 -------- Row 1 of 564
 -Image FOCUS 6.3-                                                -Logical View-
------------------- SYS1.IODF66 - 2008-04-08 16:11:01 - OSCP ------------------
Option ===>                                                  Scroll ===> PAGE
Row Select: Attributes Instructions Descriptions
--------------- To View a Configuration Select a Component Type ---------------
NIP Consoles   Generic Devices   Esoteric Devices   Control Units   I/O Devices
--- To Sort select a Sub-Head, To Query enter above Sub-Head, PFK1 for Help ---
----Targets---- --------------Input-Output Devices Defined to OS---------------
_ ____ ______ _ ____ ___ ______ _____ ____ __________ _ ______________________
S Numb Config M Unit Rng -Type- Model Ctlu --Serial-- I ------Description------
_ 0001   GDPS 1 0061 003   3745 ----- 0061 ---------- - 3745_ESCON_Channel_Adap
_ 0002   GDPS 1 0261 003   3745 ----- 0261 ---------- - 3745_ESCON_Channel_Adap
_ 0003   GDPS 1 0280 008   SCTC ----- 0280 ---------- - ----------------------
_ 0004   GDPS 1 0288 008   SCTC ----- 0288 ---------- - ----------------------
_ 0005   GDPS 1 0290 008   RS6K ----- 0290 ---------- - ----------------------
_ 0006   GDPS 1 0298 008   RS6K ----- 0298 ---------- - ----------------------
_ 0007   GDPS 1 0300 003   3745 ----- 0300 ---------- - ----------------------
_ 0008   GDPS 1 0303 003   3745 ----- 0303 ---------- - ----------------------
_ 0009   GDPS 1 0306 003   3745 ----- 0306 ---------- - ----------------------
```

The reports will be generated from the data shown on the screen. If you've sorted, filtered, or column queried the data, only that data will be contained in your report.

- Place your cursor on the "3390A" above the "Type" column heading, and press <ENTER>.
- Type "report" on the Command Line and press <ENTER>. A report covering the data from the IODF Explorer worksheet is displayed. Press <PF3> to return.
- Type "report,copy" on the Command Line and press <ENTER>. The report is displayed.
- Press <PF3> to display the ISPF Move/Copy Utility panel.
- Press <ENTER> to fill-in the "From" dataset name.
- Type "C" on the Command Line and press <ENTER>.
- Type "To" dataset name and press <ENTER>. If not allocated, you will be prompted.
- The ISPF Move/Copy Utility panel is displayed. The message "Member IODTEMPS copied" is displayed in the upper right hand corner of the panel.
- Press <PF3> to return.

▪ *Step 38: Emailing a Report within the IODF Explorer Worksheet*

As previously mentioned reports can also be routed to a printer or sent via email.

- Type “report,mail” on the Command Line and press <ENTER>. A report is displayed.
- Press <PF3> to display the ***Email Client/Server*** panel.

```
---------- Email Client/Server - Configure, Test & Send Email ------------
Option ===>

  > MailServer: MAIL.LOOKZONE.NET_________ Port: 25__ Status: Responding
  > Your Email: PAT@NEWERA.COM_____________________________________________
  > Recipients: PAT@NEWERA.COM_____________________________ Addresses
  > EMail Copy: _____________________________________________________________
  > Subject is: OSCP DEVICES_____________________________________________

    ------------------ Transmittal Email Annotation Text ----------------
  > _____________________________________________________________________
  > _____________________________________________________________________
  > _____________________________________________________________________
  > _____________________________________________________________________
  > _____________________________________________________________________
  > _____________________________________________________________________
  > _____________________________________________________________________
  > _____________________________________________________________________
  > _____________________________________________________________________
  > _____________________________________________________________________
  > _____________________________________________________________________

     .. Reset Panel  .. Attachment  .. Send TEXT Mail
```

- Complete the information on the panel. Be certain to change the MAILSERVER to reflect your MAILSERVER client. Include your email address for both the “Your Email” and “Recipients” fields.
- Place the cursor on “Send Text Email” (bottom right) and press <ENTER>.
- The status field (upper right) will display “Email Sent”.
- Press <PF3> to return.
- Verify that you received the email.

Operational Best Practices: Set up and test Image FOCUS Background Email to validate Server/Port. View and validate the attachment before you send it. When you need a copy, specify your email address as a CC Recipient. Reset the Panel to clear transmittal Text, subject and addresses.

Email Report Attachments: To ensure that your recipients’ email server and client will accept and display these Email Report Attachments, they are sent in TEXT format only.

Step 39: Exporting a Report within the IODF Explorer Worksheet

As previously mentioned reports can also be routed to a printer or sent via email.

- Type “export,mail” on the Command Line and press <ENTER>. A comma delimited report is displayed.
- Press <PF3> to display the ***Email Client/Server*** panel.
- Complete the information on the panel. Include your email address for both the “Your Email” and “Recipients” fields.
- Place the cursor on “Send Text Email” (bottom right) and press <ENTER>.
- The status field (upper right) will display “Email Sent”.
- Press <PF3> to return.
- Verify that you received the email.
- Import the file into MS-Excel (or similar spreadsheet).

▪ *Step 40: Perform a Partition Compare between two IOCP Targets*

For this step, we will explore comparisons of Partitions within two IOCP Targets.

```
--------- Image SENTRY - IODF Explorer 4.0 - Datasets & Extracts ----------
Option ===>

Sx -- ----IODF Datasets---- ------------IODF Extracts------------- --Date--
-- -- --------------------- ---MVSCP--- ----IOCDS----- --SWITCH--- --Last--
-- -- --------------------- ---OSCPs--- ----IOCPs----- ---SWCPs--- Extracts
-- Cm --------------------- Cm -confid- Cm --procids-- Cm --swid-- --------

W1 .. SYS1.IODF00.WORK_____ .. FEPS____ .. MKZ3______  .. 01_____  03/17/XX
W2 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W3 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W4 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W5 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__

-- -- --------------------- -- -------- -- ----------- -- -------- --------

W6 .. SYS1.IODF00__________ .. FEPS____ .. MKZ3______  .. 01_____  03/17/XX
W7 .. SYS1.IODF00.WORK_____ .. FEPS____ .. MKZ3______  .. 01_____  03/17/XX
W8 .. SYS1.IODF00.WORK_____ .. FEPS____ .. MKZ3______  .. 01_____  03/17/XX
W9 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__
W0 .. _____________________ .. ________ .. ___________ .. ________ __OPEN__

-- .. IODF Dataset Extracts .. Email NO .. Working with the Element Extract
```

Partition Compare is a new function that provides change analysis at a more granular "partition" level. The IODF contains IOCP and OSCP element definitions. The next level down from the IOCP is the CSS (Channel Sub-System) and then the LPAR, which executes the work. The Partition Compare can be used to determine whether two LPARs share the same resources. The reports show a further refinement of change activities – resolving device definitions between LPARs (e.g., a device with the associated LPARs). This is helpful when you need to show changes in device connectivity.

- Return to the ***Datasets & Extracts*** panel (use <PF3> as needed).
- Place the cursor under the "List" in the IOCP column for line W1, and press <ENTER>. The ***Target Selection – IOCP*** panel is displayed.
- Place the cursor under the first IOCP target and press <ENTER>. The ***Datasets & Extracts*** panel is displayed, and the selected IOCP target is shown for line W1.
- Place the cursor under the IOCP column for line W2, and press <ENTER>. The ***Target Selection – IOCP*** panel is displayed.
- Place the cursor under the first IOCP target and press <ENTER>. The ***Datasets & Extracts*** panel is displayed, and the selected IOCP target is shown for line W6.

- Type the “PC” (Partition Compare) line command next to the IOCP targets on lines W1 and W6, and press <ENTER>. The Partition Selection panel is displayed.

```
----------- Image SENTRY - IODF Explorer 4.0 - Partition Selection ------------
  Option ===>

    |-ProcId-|  ------ IODF92:09-02-05 <-> IODF92:09-02-05 -------  |-ProcId-|

.. C _NEZ1#1_ N Cm C---Lpar---N Cm C---Adds---N Cm C---Lpar---N .. C _NEZ1#1_ N
.. 0___CFP1___2 .. 0___CFT1___3 .. 0__GDPPA___5 .. 0__GDPTA___6 .. 0__SYSLA___A
.. 0__SYSTA___8 .. 0__SYSUA___B .. 0__SYSXA___9 .. 0__SYS1A___1 .. 0__SYS2A___7
.. 0__SYS4A___4 .. 0___VM1A___C .. ____________ .. ____________ .. ____________
.. C _NEZ1#1_ N Cm C---Lpar---N Cm C---Cmms---N Cm C---Lpar---N .. C _NEZ0#0_ N
.. ____________ .. ____________ .. ____________ .. ____________ .. ____________
.. ____________ .. ____________ .. ____________ .. ____________ .. ____________
.. ____________ .. ____________ .. ____________ .. ____________ .. ____________
.. ____________ .. ____________ .. ____________ .. ____________ .. ____________
.. ____________ .. ____________ .. ____________ .. ____________ .. ____________
.. ____________ .. ____________ .. ____________ .. ____________ .. ____________
.. ____________ .. ____________ .. ____________ .. ____________ .. ____________
.. C _NEZ0#0_ N Cm C---Lpar---N Cm C---Dels---N Cm C---Lpar---N .. C _NEZ0#0_ N
.. 1__GDPAB___5 .. 1__GDPBB___6 .. 1__SYSQB___A .. 1____*_____D .. 1____*_____E
.. 1____*_____F .. ____________ .. ____________ .. ____________ .. ____________
.. ____________ .. ____________ .. ____________ .. ____________ .. ____________

                    Working directly with z/OS Partition Targets .. Email NO
```

This panel displays the results of a comparison between the IOCP Targets selected from the prior panel. These results are subdivided into the three change categories: LPARs Added, LPARs Deleted & LPARs that were Common to both IOCPs. The Common LPARs that changed are highlighted in yellow.

The Configuration Profile of Added, Deleted and Unchanged Common LPARS is displayed by placing the cursor under the LPAR or a “P” before it and pressing <ENTER>. “DETAIL” for the IOCP/LPAR Map.

- Type “P” (Profile) next to one of the Partitions and press <ENTER>. The ***IOCP Configuration Summary*** report is displayed. Review and verify the report. When finished viewing the report, press <PF3>.

- Type “P” (Profile) next to one of the Partitions, type “DETAIL” on the command line, and press <ENTER>. The ***IOCP Configuration Mapping*** report is displayed. Review and verify the report. When finished viewing the report, press <PF3>.

Any Partition displayed may be compared with any other by placing a “C” before the two targets and pressing <ENTER>. By default the Summary Report is displayed. Add “DETAIL” to the Option Line to display the Detail LPAR Compare Report.

- Type “C” (Compare) next to two of the Partitions and press <ENTER>. The ***IOCP/LPAR Change Report*** “summary report” is displayed. Review the report and validate the changes. When finished viewing the report, press <PF3>.

- Type “C” (Compare) next to one of the Partitions, type “DETAIL” on the command line, and press <ENTER>. The ***IOCP/LPAR Change Report*** “detail report” is displayed.

```
BROWSE    IFO.IFOB.IODFWKS1.TRIAL001($IOCNMAP)       Line 00000000 Col 001 080
 Command ===>                                              Scroll ===> CSR
******************************** Top of Data ********************************
/*****************************************************************************/
/*           Image SENTRY - IOCP/LPAR Change Report - Rnum:LCng175           */
/*             As Defined in - PSYSS.IODF92 - 2009-02-05 15:58:21            */
/*                                                                           */
/*               Update:03/02/XX and Time:11:10:58 - User:PROBI1             */
/*****************************************************************************/
|
ISN8890I <>CHPID STATEMENT COMPARISON - CURRENT TO PRIOR.
|
ISN8890I +-------------------------------------------------------------------+
ISN8890I |              IOCP CONFIGURATION MAP - CHPID CHANGES                |
ISN8890I |       IODF92:09-02-05 - TARGET:WEST/IOCP/NEZ0#0/SYSTA/0           |
ISN8890I |                       -- As Compared Against --                   |
ISN8890I |       IODF92:09-02-05 - TARGET:WEST/IOCP/NEZ0#0/SYS4A/0           |
ISN8890I +-------------------------------------------------------------------+
ISN8891I | ...NO CHPID STATEMENTS HAVE BEEN ADDED.                           |
ISN8891I +-------------------------------------------------------------------+
ISN8891C | ...2 CHPID STATEMENTS HAVE BEEN DELETED.                          |
ISN8891I +------+-----+-----+----+-----+-----+-------------------------------+
ISN8891I | CHIP | PID | SHR | SW | TYP | REC |        CHPID DESCRIPTION      |
ISN8891I +------+-----+-----+----+-----+-----+-------------------------------+
ISN8892I > 2F,0 | 167 | --- | -- | CVC | --- |          ---------            <
ISN8893I |      +------chpid_attributes------+-----TPATH=_cf_channel_path-----+
ISN8893I |      |                           |                                 |
ISN8893I |      | CHPARM,OS= ---   PORT= --- | (CSS(0),NEZ0,FD,FFFD,FFF2)      |
ISN8893I |      | IOCLUSTER= ---    AID= --- | (CSS(0),NEZ0,FF)                |
ISN8893I |      |    SWPORT= ---              |                                 |
ISN8893I +------+-----+-----+----+-----+-----+-------------------------------+
ISN8892I > 3F,0 | 1E6 | --- | -- | CVC | --- |          ---------            <
ISN8893I |      +------chpid_attributes------+-----TPATH=_cf_channel_path-----+
ISN8893I |      |                           |                                 |
ISN8893I |      | CHPARM,OS= ---   PORT= --- | (CSS(0),NEZ0,FF)                |
ISN8893I |      | IOCLUSTER= ---    AID= --- |                                 |
ISN8893I |      |    SWPORT= ---              |                                 |
ISN8892I +------+-----+-----+----+-----+-----+-------------------------------+
ISN8891C | ...46 CHPID STATEMENTS HAVE CHANGED.                              |
...
```

Review the report and validate the changes. When finished, press <PF3> twice.

▪ *Step 41: Perform a Partition Compare within a single IOCP Target*

For this step, we will explore comparisons of Partitions within the same IOCP Target.

☐ On the ***Datasets & Extracts*** panel, type the "PC" (Partition Compare) line command next to the IOCP target on line W1, and press <ENTER>. The ***Partition Selection*** panel is displayed.

```
---------- Image SENTRY - IODF Explorer 4.0 - Partition Selection ------------
  Option ===>

    |-ProcId-|  ------ IODF92:09-02-05 <-> IODF92:09-02-05 -------  |-ProcId-|

.. C _NEZ1#1_ N Cm C---Lpar---N Cm C---Adds---N Cm C---Lpar---N .. C _NEZ1#1_ N
.. 0___CFP1___2 .. 0___CFT1___3 .. 0__GDPPA___5 .. 0__GDPTA___6 .. 0__SYSLA___A
.. 0__SYSTA___8 .. 0__SYSUA___B .. 0__SYSXA___9 .. 0__SYS1A___1 .. 0__SYS2A___7
.. 0__SYS4A___4 .. 0___VM1A___C .. ____________ .. ____________ .. ____________
.. C _NEZ1#1_ N Cm C---Lpar---N Cm C---Cmms---N Cm C---Lpar---N .. C _NEZ0#0_ N
.. ____________ .. ____________ .. ____________ .. ____________ .. ____________
.. ____________ .. ____________ .. ____________ .. ____________ .. ____________
.. ____________ .. ____________ .. ____________ .. ____________ .. ____________
.. ____________ .. ____________ .. ____________ .. ____________ .. ____________
.. ____________ .. ____________ .. ____________ .. ____________ .. ____________
.. ____________ .. ____________ .. ____________ .. ____________ .. ____________
.. C _NEZ0#0_ N Cm C---Lpar---N Cm C---Dels---N Cm C---Lpar---N .. C _NEZ0#0_ N
.. 1__GDPAB___5 .. 1__GDPBB___6 .. 1__SYSQB___A .. 1____*_____D .. 1____*_____E
.. 1____*_____F .. ____________ .. ____________ .. ____________ .. ____________
.. ____________ .. ____________ .. ____________ .. ____________ .. ____________

                    Working directly with z/OS Partition Targets .. Email NO
```

Any Partition displayed may be compared with any other by placing a "C" before the two targets and pressing <ENTER>. By default the Summary Report is displayed. Add "DETAIL" to the Option Line to display the Detail LPAR Compare Report.

☐ Type "C" (Compare) next to two of the Partitions and press <ENTER>. The ***IOCP/LPAR Change Report*** "summary report" is displayed. Review the report and validate the changes. When finished viewing the report, press <PF3>.

☐ Type "C" (Compare) next to one of the Partitions, type "DETAIL" on the command line, and press <ENTER>. The ***IOCP/LPAR Change Report*** "detail report" is displayed.

☐ Review the report and validate the changes. When finished, press <PF3> twice.

Step 42: Perform a Partition Inspection

For this step, we will perform a Partition Inspection.

```
--------- Image SENTRY - IODF Explorer 4.0 - Datasets & Extracts ----------
Option ===>

Sx -- ----IODF Datasets---- ------------IODF Extracts------------- --Date--
-- -- --------------------- ---MVSCP--- ----IOCDS----- --SWITCH--- --Last--
-- -- --------------------- ---OSCPs--- ----IOCPs----- ---SWCPs--- Extracts
-- Cm --------------------- Cm -confid- Cm --procids-- Cm --swid-- --------

W1 .. SYS1.IODF00.WORK_____ .. FEPS____ .. MKZ3______  .. 01_____  03/17/XX
W2 .. ____________________ .. ________ .. ___________ .. ________ __OPEN__
W3 .. ____________________ .. ________ .. ___________ .. ________ __OPEN__
W4 .. ____________________ .. ________ .. ___________ .. ________ __OPEN__
W5 .. ____________________ .. ________ .. ___________ .. ________ __OPEN__

-- -- --------------------- -- -------- -- ----------- -- -------- --------

W6 .. SYS1.IODF00__________ .. FEPS____ .. MKZ3______  .. 01_____  03/17/XX
W7 .. SYS1.IODF00.WORK_____ .. FEPS____ .. MKZ3______  .. 01_____  03/17/XX
W8 .. SYS1.IODF00.WORK_____ .. FEPS____ .. MKZ3______  .. 01_____  03/17/XX
W9 .. ____________________ .. ________ .. ___________ .. ________ __OPEN__
W0 .. ____________________ .. ________ .. ___________ .. ________ __OPEN__

-- .. IODF Dataset Extracts .. Email NO .. Working with the Element Extract
```

Partitions/LPARs can be defined for inspection using the “PI” command against an IOCP Target. This will allow the IOCP Targets to be directly inspected from the ***Partition Selection*** panel by placing an “I” before the Target LPAR and pressing <ENTER> to display the “LPAR Dataset and Volume Summary” report. Specify “DETAIL” for the “Inspection Message Log.”

- Type “PI” (Partition Inspection) next to the IOCP Target on line W1 and press <ENTER>. The ***LPAR Inspections*** panel is displayed.

```
-- HltChk --- Image SENTRY - IODF Explorer 4.0 - LPAR Inspections --- RunSys --
  Option ===>

                ------- ProcId:NEZ1 - LPARs within CSS:1 --------

  Cm LparName IPLUnit LoadParm OSCPName Cm LparName IPLUnit LoadParm OSCPName
  .. GDPAB___ ________ ________ ________ .. ________ ________ ________ ________
  .. GDPBB___ ________ ________ ________ .. ________ ________ ________ ________
  .. SYSQB___ ________ ________ ________ .. ________ ________ ________ ________
  .. ________ ________ ________ ________ .. ________ ________ ________ ________
  .. ________ ________ ________ ________ .. ________ ________ ________ ________
  .. ________ ________ ________ ________ .. ________ ________ ________ ________
  .. ________ ________ ________ ________ .. ________ ________ ________ ________
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  .. ________ ________ ________ ________ .. ________ ________ ________ ________
  .. ________ ________ ________ ________ .. ________ ________ ________ ________
  .. ________ ________ ________ ________ .. ________ ________ ________ ________
  .. ________ ________ ________ ________ .. ________ ________ ________ ________
  .. ________ ________ ________ ________ .. ________ ________ ________ ________
  .. IPLState         Working with z/OS Logical Partition        .. Email NO
```

RunSys (upper right panel) will populate the IPLUnit and LoadParm values on this panel by performing an Inspection of the running system (you may manually insert the corresponding OSCPName). Once these have been defined, you can initiate an LPAR Inspection.

- Place the cursor under EMAIL (lower right panel) and press <ENTER>. The Email option will toggle from “No” to “OK”, and will enable the email facility.
- Place the cursor under RunSys (upper right panel) and press <ENTER>. The ***Confirm Inspection*** panel is displayed.
- Press <ENTER> to continue the Inspection. A Virtual IPL/Inspection of the Running System is performed. When finished, a ***z/OS System Integrity Report – z/OS Volumes*** is displayed.
- When finished viewing the report, press <PF3>. The ***Email Client/Server*** panel is displayed.
- Specify the appropriate MailServer, Port, and Your Email address on the panel.
- Type "support@newera.com" in the Recipients field.
- Type your email address in the Email Copy field.
- Type a message in the "Transmittal Email" section.
- Place the cursor under Send TEXT Mail (bottom panel) and press <ENTER>.

- Status (upper right) should change from "Responding" to "Email Sent".
- Press <PF3>. The ***LPAR Inspections*** panel is displayed. Verify that IPLUnit and LoadParm values have been populated on this panel.
- Place the cursor under EMAIL (lower right panel) and press <ENTER>. The Email option will toggle from “OK” to “No”, and will enable the email facility.
- Initiate an LPAR Inspection. Type an “I” before the first Partition/LPAR Name and press <ENTER>. The ***Confirm Inspection*** panel is displayed.
- Press <ENTER> to continue the Inspection. A Virtual IPL/Inspection of the Running System is performed. When finished, a ***z/OS System Integrity Report – z/OS Volumes*** is displayed.
- When finished viewing the report, press <PF3>. The ***LPAR Inspections*** panel is displayed.
- By default when the Inspection is complete, the LPAR Volume Report is displayed. To display the Inspection Log instead, type “DETAIL” on the Command before you confirm and continue the Inspection.
- View the Volume Summary Report. Type an “IR” before the first Partition/LPAR Name and press <ENTER>. The ***z/OS System Integrity Report – z/OS Volumes*** is displayed.
- When finished viewing the report, press <PF3>. The ***LPAR Inspections*** panel is displayed.
- View the detailed Inspection Log. Type an “IL” before the first Partition/LPAR Name and press <ENTER>. The ***z/OS INSPECTION REPORT*** is displayed.
- When finished viewing the report, press <PF3>. The ***Email Client/Server*** panel is displayed.
- This time, we will not email the report. Press <PF3> to return. The ***LPAR Inspections*** panel is displayed.

▪ *Step 43: Perform a Health Check Query*

For this step, we will perform a query of the z/OS Health Checker.

```
-- HltChk --- Image SENTRY - IODF Explorer 4.0 - LPAR Inspections --- RunSys --
  Option ===>

                 ------- ProcId:NEZ1 - LPARs within CSS:1 --------

  Cm LparName IPLUnit LoadParm OSCPName Cm LparName IPLUnit LoadParm OSCPName
  .. GDPAB___ ________ ________ ________ .. ________ ________ ________ ________
  .. GDPBB___ ________ ________ ________ .. ________ ________ ________ ________
  .. SYSQB___ ________ ________ ________ .. ________ ________ ________ ________
  .. ________ ________ ________ ________ .. ________ ________ ________ ________
  .. ________ ________ ________ ________ .. ________ ________ ________ ________
  .. ________ ________ ________ ________ .. ________ ________ ________ ________
  .. ________ ________ ________ ________ .. ________ ________ ________ ________
  .. ________ ________ ________ ________ .. ________ ________ ________ ________
  .. ________ ________ ________ ________ .. ________ ________ ________ ________
  .. ________ ________ ________ ________ .. ________ ________ ________ ________
  .. ________ ________ ________ ________ .. ________ ________ ________ ________
  .. ________ ________ ________ ________ .. ________ ________ ________ ________
  .. ________ ________ ________ ________ .. ________ ________ ________ ________
  .. ________ ________ ________ ________ .. ________ ________ ________ ________
  .. ________ ________ ________ ________ .. ________ ________ ________ ________
  .. ________ ________ ________ ________ .. ________ ________ ________ ________
  .. ________ ________ ________ ________ .. ________ ________ ________ ________
  .. IPLState          Working with z/OS Logical Partition        .. Email NO
```

HltChk (upper left panel) will query the Health Checks for the running system. When the Health Check is complete, the Health Check Exception Summary is displayed.

- Place the cursor under HltChk (upper left panel) and press <ENTER>. The ***Confirm Health Check*** panel is displayed.
- Press <ENTER> to continue the Inspection. A Query of the z/OS Health Checker for the Running System is performed. When finished, a ***Policy Inspector - Check Exception Summary*** report is displayed.
- When finished viewing the report, press <PF3>. The ***Email Client/Server*** panel is displayed.
- Verify that "support@newera.com" is in the Recipients field, and that your email address in the Email Copy field.
- Type a message in the "Transmittal Email" section.
- Place the cursor under Send TEXT Mail (bottom panel) and press <ENTER>.
- Status (upper right) should change from "Responding" to "Email Sent".

- Press <PF3>. The ***LPAR Inspections*** panel is displayed.
- Type an “H” before the first Partition/LPAR Name and press <ENTER>. This will display a list of possible related System Names. Each LPAR is indirectly related to a specific System Name. Select a related name and press <ENTER> to continue.
- Type an “HR” before the first Partition/LPAR Name and press <ENTER>. This will display the last Health Check associated with the selected LPAR.
- When finished viewing the report, press <PF3>. The ***LPAR Inspections*** panel is displayed.

➢ Appendix - A

▪ *Quick Reference*

---------- Brief Functional Descriptions ----------

Scenario Definition/Selection

	Cmm	
Selecting a Scenario	S	Displays the IODF Primary Menu for selected Scenario
Deleting a Scenario	D	Deletes the Panel Entry and Work Datasets (Hide Option)
Exporting IODF Extracts	E	Export an IODF Extract for use in another Explorer
Importing IODF Extracts	I	Import an IODF Extract created by another Explorer
Comparing Scenarios	C	Compare a selected Scenario to any other

IODF Dataset

	Cmm	
Update IODF Extract	XX	Extracting information from the IODF Dataset
View IODF Extract	VX	Viewing the IODF Extracts: OSCP, IOCP and SWCP
Delete IODF Extract	DX	Deleting the IODF Extract
Profile IODF Dataset	PX	Profiling the Elements of an IODF Extract
Copy Extract to Position	Wx	Copying an Extract to a new Generational Location
Compare two Extracts	CX	Comparing one Extract to another Extract - Detail Option
Manipulating Extracts	MX	Manipulating the OSCP and IOCP Extracts
LPAR Inspection Summary	IX	View the LPAR Inspection Summary

IODF Extracts

	Cmm	OSCP	IOCP	SWCP	
Edit Source Deck	E	X	X	X	Editing an Element IODF MACRO Source Statements
View Source Deck	V	X	X	X	Viewing an Element IODF MACRO Source Statements
Element Worksheet	W	X	X	X	Displaying an Element Worksheet Set
Element Search	S	X	X	X	Displaying an Element Search Interface
Element Profile	P	X	X	X	Display an Element IODF Profile
Element BP & Rept	R	X	X	X	Display an Element Blueprint and Report Library
Element Compare	C	X	X	X	Compare a named Element to another similar Element
Group Compare	GC	X	X	X	Compare all Sub-Elements (ConfigId, ProcId, SwId)
Device Compare	DC	X	X	--	Compare I/O Devices in a configuration with any other

Partition Compare	PC	--	X	--	Compare all Logical Partitions in one ProcId to another
Switch/Port Compare	SC	--	--	X	Compare all Ficon/Escon Switches in one ProcId to another
Partition Inspection	PI	X	X	--	Inspect the z/OS Configuration of a named LPAR
Operation Mgr. Report	O	X	--	--	Display the Operation Mangers Report
CHIP Utilization	U	--	X	--	Display the CHIP Utilization Report
Element Selection	Cursor	X	X	--	Cursor under Named Element and press enter
Email Client	Cursor	--	--	--	Cursor under "Email" to "On/Off" Email Client Interface

Manipulating Extracts

	Cmm
OSCP and IOCP Reports	R
OSCP and IOCP Worksheets	W
OSCP and IOCP Device Search	S
OSCP and IOCP Element Compare	C
OSCP and IOCP Device Compare	DC
Inspection (Config Drift)	I
OSCP EDT Profile Report	T

Group Compare

	Cmm			
Compare Entry to Entry	C			Compare any Panel Entry to any other Panel Entry
Profile an Entry	P			Display the Profile of a selected Panel Entry
Device Compare	DC	X	X	Compare I/O Device of one Panel Entry to another

Partition Compare

	Cmm			
Compare Entry to Entry	C			Compare any Panel Entry to any other Panel Entry
Profile an Entry	P			Display the Profile of a selected Panel Entry
Device Compare	DC	--	X	Compare I/O Devices of one LPAR Entry to another

Switch Compare

	Cmm	
Compare Entry to Entry	C	Compare any Panel Entry to any other Panel Entry
Profile an Entry	P	Display the Profile of a selected Panel Entry
Toggle Connected/NoConnect	Cursor	Cursor under Connected/NoConnect to Toggle View

Partition Inspection

	Cmm	
Inspect an LPAR	I	Inspect a selected LPAR
z/OS Health Checker	Cursor	Cursor under "HltChk" for status of z/OS Health Checker
Inspect the Running System	Cursor	Cursor under "RunSys" to Inspect the Running System
IPL State	S	Display the IPL State Report

IOCP Worksheets

Point, Shoot, Sort, Filter and Change Views

	Cmm	
I/O Devices		I/O Devices in one or more selected ProcId#LCCS
Control Units		Control Units in one or more selected ProcId#LCCS
Switches		Ficon/Escon I/O in one or more selected ProcId#LCCS
CHPID		CHPID usage in one or more selected ProcId#LCCS
Partitions		Partition access in one or more selected ProcId#LCCS
Reporting Options		"Report" on Option Line press enter
Export Options		"Export" on Option Line, press enter
Attributes	A	Display Attributes of Selected Entry
Description	D	Display the Global Device Definition Table

OSCP Worksheets

	Cmm	
I/O Devices		I/O Devices in one or more selected ConfigId
Control Units		Control Units in one or more selected ConfigId
Esoterics		Esoteric Device in one or more selected ConfigId
Generics		Generic Device in one or more selected ConfigId
NIP Consoles		NIP Console(s) in one or more selected ConfigId
Reporting Options		"Report" on Option Line, press enter
Export Options		"Export" on Option Line, press enter
Attributes	A	Display Attributes of Selected Entry
Description	D	Display the Global Device Definition Table

SWCP Worksheets

Switches	SWIDs (Connected/NoConnect) defined to selected ProcId
Switch/Devices	Related SWID and I/O Devices defined to selected ProcId
Switch/Control Units	Related SWID and Control Units defined to selected ProcId
Switch/Ports	SWID and their Ports as defined to selected ProcId
Switch/CHPIDs	SWID and CHIP Relationships defined to selected ProcId

Reporting Options		"Report" on Option Line, press enter
Export Options		"Export" on Option Line, press enter
Attributes	A	Display Attributes of Selected Entry
Description	D	Display the Global Device Definition Table

IOCP Device Search

I/O Device Search Interface	Search I/O Device values in one/more ProcIds
Control Unit Search Interface	Search Control Unit values in one/more ProcIds
Reporting Options	Default Attribute Report of search results (Email Option)
Export Options	Export on option line for Export Format (Email Option)
Worksheet Options	Worksheet display of search results (Report/Export)

OSCP Device Search

I/O Device Search Interface	Search I/O Device values in one/more ConfigId
Control Unit Search Interface	Search Control Unit values in one/more ConfigId
Reporting Options	Default Attribute Report of search results (Email Option)
Export Options	Export on option line for Export Format (Email Option)
Worksheet Options	Worksheet display of search results (Report/Export)

SWCP Device Search

Switch/Device Search Interface	Search Switch values in one/more ProcId/SWID
Switch/Partition Search Interface	Search Partition values in one/more ProcID/SWID
Reporting Options	Default Attribute Report of search results (Email Option)
Export Options	Export on option line for Export Format (Email Option)
Worksheet Options	Worksheet display of search results (Report/Export)

Configuration "LIST" Reports

	List elements related to selection as filtered by criteria
- LISTPORT	List Switch Ports associated with a given Switch Set
- LISTCHIP	List Channel Paths by LCSS within a given processor
- LISTCTLU	List Control Units by LCSS by Channel Path in processor
- LISTIODU	List I/O Devices by LCSS by Control Unit/LCSS/processor

Configuration "OPEN" Reports

List only available elements to selection as filtered

- OPENPORT — List OPEN/available Ports
- OPENCHIP — List OPEN/available Channel Paths
- OPENCTLU — List OPEN/and possibly available Control Units slots
- OPENIODU — List OPEN/available I/O Device addresses in UCW chain

IOCP Blueprints & Report

Update	Updating the Blueprint of a selected ProcId#LCSS
Benchmark	Updating the Benchmark of a selected ProcId#LCSS
Compare	Comparing Blueprints/Benchmarks to others
Library	Accessing and Updating the Library Reports

- IOCPSUM/IOCPMAP
- LPARSUM/LPARMAP
- CHIPSUM/CHIPMAP
- CTLUSUM/CTLUMAP
- IODUSUM/IODUMAP
- SWCPSUM/SWCPMAP
- KEYEXPS

OSCP Blueprints & Report

Update	Updating the Blueprint of a selected ConfigId
Benchmark	Updating the Benchmark of a selected ConfigId
Compare	Comparing Blueprints/Benchmarks to others
Library	Accessing and Updating the Library Reports

- OSCPSUM/OSCPMAP
- NIPSSUM/NIPSMAP
- ETABSUM/ETABMAP
- CTLUSUM/CTLUMAP
- OSDUSUM/OSDUMAP

SWCP Blueprints & Report

Update	Updating the Blueprint of a selected ProcId
Benchmark	Updating the Benchmark of a selected ProcId
Compare	Comparing Blueprints/Benchmarks to others
Library	Accessing and Updating the Library Reports

Email Client Interface

Client Settings	Mail Setting Attributes: Server, Port (OMVS Segment)
Input Fields	Mail Fields: Sender, Recipient, Subject, Mail Body
Attachment Types	Attachments: Text, HTML
Sending the Mail	Upon request: Mail Sent, Mail Failed Flags

➢ Appendix – B

▪ *Installation*

Downloading

All Image SENTRY Applications are distributed via the worldwide web and downloaded from www.newera.com directly to your desktop. The download contains application components that have been zipped into a single distribution file. The application components are:

1. ISNBASE – The Image SENTRY Application Base
2. ISNIODF – IOCP and OSCP Interface Functions
3. ISNSWCP – Switch Interface Functions
4. ISNTEXT – Help Panels
5. DOCUMENTATION

Unzip and Upload

Once the download is on your desktop, you will need to unzip it and upload the application MODULES to a pre-allocated dataset on your z/OS Host or upload them directly into the Image Control Environment (ICE) created "USERLIB" using the member names noted above. To maintain product integrity, certain application MODULES are distributed in a proprietary encoded format; others are not. DO NOT attempt to alter the encoded MODULES in any way as doing so will result in unpredictable product failures.

The product documentation is distributed as a PDF file. To view the documentation, you will need the ADOBE Acrobat Reader. If you do not currently have the Reader, a copy can be downloaded from www.adobe.com.

The License Key

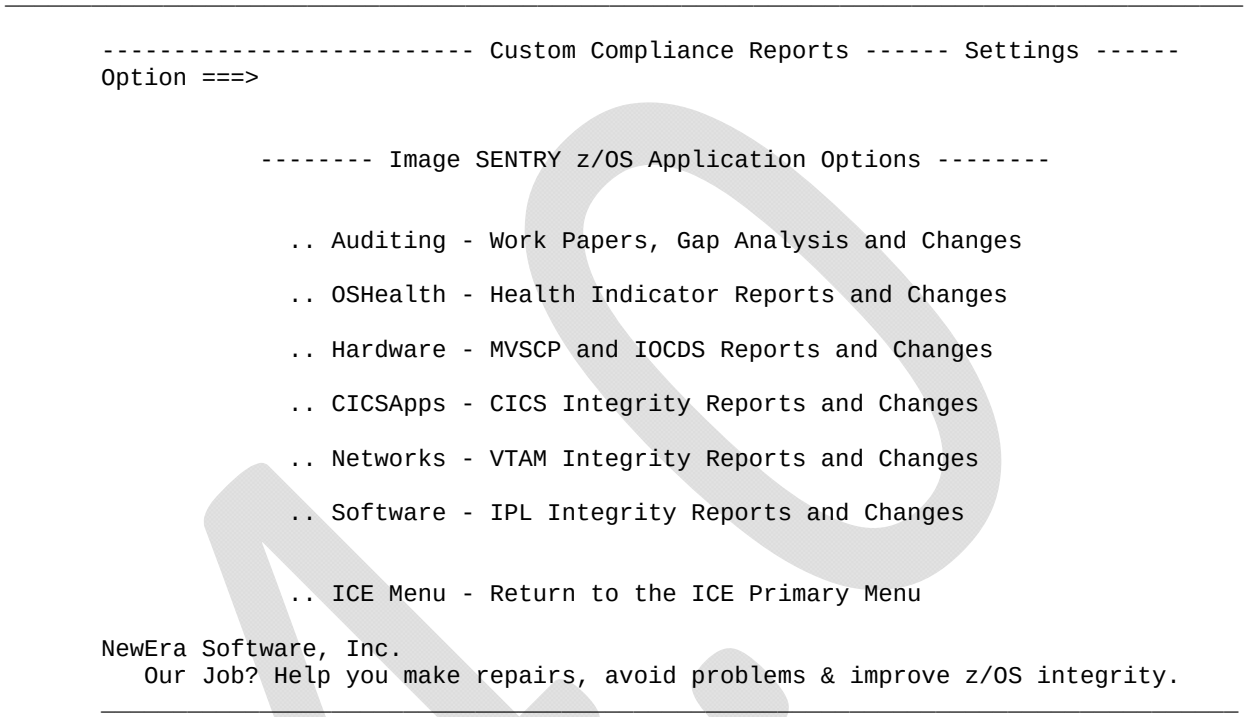
Whether you are an existing Image Control Environment user, or using the product on a trial basis, you will need to add the License Key(s) to your Image Control Environment ParmLib dataset NSEPRM00. Once the License Key is inserted, ALL Image Sentry Application functions will be unlocked the next time you logon to Image Control Environment.

If you downloaded Image Control Environment using the 'Pre-Authorize' link, you are not required to insert control cards into NSEPRM00. NewEra does it for you during the download!

Installation and Setup

Once you have downloaded and moved the application components described above into the ICE "USERLIB", the IODF Explorer is ready for use; no additional installation is required.

When you first logon to the IODF Explorer, you will encounter the Image SENTRY Primary Menu. All Image SENTRY Applications share this customizable menu. Note in the upper right of the menu heading the word “Settings”. You will need to place the cursor under it and press enter. This action will display the Image SENTRY Configuration File. PLEASE DO NOT MODIFY THIS FILE. Now PFK3 back. This action will force build and/or update of the Image SENTRY Help Panels. Failing to perform this setup step will result in an ISPF System failure when PFK1 is used.



Product Updates

As product updates and new releases become available, you will be automatically notified. When you want to update you product installation, reuse your original download link or request a new one from NewEra Technical Support.

New Application MODULES can be moved directly in to the “ICE USERLIB”; no additional installation is needed. You will, however, ALWAYS want to update your “Settings” to ensure you have the latest Image SENTRY Help.

➢ Index

Contact us for additional information:

NewEra Software Technical Support

800-421-5035

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