The ICE Viewer provides an interactive Focal Point from which users can access and analyze reports and worksheets derived from the findings of
The IBM Health Checker for z/OS
and
Integrity Controls Environment (ICE) Applications
running on
Local and/or Remote Systems.

The ICE Viewer

ICE18.0

USER GUIDE

Contact us for additional information:

NewEra Software Technical Support

800-421-5035 or 408-520-7100
Or text support requests to 669-888-5061

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www.newera.com

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1 Foreword

1.1 Copyright, Trademark and Legal Notices

1.1.1 Copyrights

1.1.2 License Agreement

1.1.3 Trademarks and Copyrights of Others

1.2 General Information

1.2.1 Who Should Read this Document

Those given the responsibility to install, maintain, and use The ICE Viewer should read this document. It will explain in detail how The ICE Viewer is installed, configured, maintained and used.

1.2.2 Other Documents and Resources

In addition to this document, new users will benefit from the content of these three additional documents:

- Image FOCUS and/or the ICE Read Me;
- Image FOCUS and/or the ICE User Guide;
- Getting Started With Image FOCUS and/or ICE.

All of these documents are available in PDF format as downloads on the NewEra web site or can be requested directly by contacting NewEra Technical Support by email at the following email address: support@newera.com.

1.2.3 Reporting Problems

When reporting ICE Viewer problems to NewEra Technical Support, please provide the following information so that we may resolve the issue expeditiously.

- The JOBLOG/JCL/MESSAGE output from the IFOM/IFOS/ICEDET Address Space(s).

1.3 Technical Support Information

Around-the-clock-support	NewEra Software is dedicated to providing the highest level of technical support to meet our customers' growing needs. In order to meet these needs, NewEra provides technical support, 7 days a week, 24 hours a day.
Reach us by Telephone during Business Hours	Please use the following phone numbers to reach our technical support staff during normal business hours (6 AM to 4 PM Pacific Time): • In North America, dial 1-800-421-5035 • Outside North America, dial 1-408-520-7100 • Support inquiries may also be texted to 669-888-5061
Reach us by Telephone during non-Business Hours	In case of an emergency, during non-business hours, phone the above numbers to receive instructions on how to contact a Technical Support Representative or a Technical Support Manager.
Sending Email	Our technical support staff can be reached by email at support@newera.com. Email messages will be answered by the next business day. Product technical questions or product recommendations may be sent via email.
Help through the NewEra website	You can access technical support from www.newera.com. Click the Support tab at the top of the screen to reach our Technical Support Request page.
Service Levels	NewEra is committed to providing the highest level of quality to our customers by adopting the following criteria for responding to customer requests: • All critical questions received by phone during working hours will be answered within 15 minutes of receiving the request; • Technical questions sent by email, or messages sent through our Technical Support Request page, will be answered by the next business day.
We Want Your Suggestions!	NewEra understands the significance of providing our customers with the highest quality support and welcomes all suggestions as to how we may improve Technical Support.

1.4 About The ICE Viewer

The ICE Viewer provides an interactive Focal Point from which individual users may access reports and worksheets derived from findings provided by the IBM Health Checker for z/OS and the family of ICE Applications: Image FOCUS, The Control Editor and The Supplementals as they are configured to run on local and/or remote systems.

As used in this document, an *"Access Point"* is an ICE Viewer specific Line Command that provides direct access to the Worksheets and Reports that contain the *"Findings"* provided and/or reported by supported applications.

1.5 Limitations of ICE Viewer

The ICE Viewer provides access to various system and application findings. Like you might find when viewing the ICE Primary Menu, certain Access Points within the ICE Viewer require license keys that, when not present in the ICE Control Member NSEPRMxx, will diminish Viewer functionality. If you are not licensed for an ICE Application that would enable a Viewer Access Point, you may request a License Key from NewEra Technical Support at any time.

While the ICE Viewer provides access to findings on a remote system it is not a "Session Manager" and is dependent on the following:

- That the Dataset naming conventions specified in the IPLCheck, Image FOCUS, Control Editor and Supplemental User Guides are strictly implemented. For example, the documented dataset qualifiers for IPLCheck – Core and IPLCheck – Plus are:
    1. your_hlq.IPLCHECK.system_name.Log
    2. your_hlq.IPLALT.system_name.Log

- That the Datasets that store the source findings used by the ICE Viewer be housed on DASD UNITS that are fully shared with the system running the ICE Viewer Application.

- That the system catalogs that index the source finding Datasets be fully shared with the system running the ICE Viewer Application.

- That an individual user has the authority to allocate working datasets using his/her TSO Used ID as the Dataset High-Level Qualifier.

- That an individual user has the authority to issue certain system and cross-system operator commands; for example, the authority to issue cross-system operator commands that query the IBM Health Checker for z/OS for Check Status.

- Individual ICE Applications may have additional restrictions that are detailed in the Installation Section of their respective User Guides.

1.6 Enhancements in this Release

- The release of the ICE Viewer is built on the latest ICE code base Version 18.0 GA. Numerous changes improving the availability, reliability and serviceability of the Image FOCUS Core have been made. They are listed in the Image FOCUS 18.0 Read Me. In addition, in this release of Image FOCUS the z/OS Core has been enhanced to provide support z/OS V2R4. It is recommended that current users upgrade to this new release as soon as possible.

1.6.1 This Release

- In this release of Image FOCUS the z/OS Core and its Subsystem and Supplemental Inspectors has been enhanced to provide support for z/OS V2R4. It is recommended that current users upgrade to this new release as soon as possible.

1.6.2 Prior Releases

- This release of The ICE Viewer provides a unique Access Point to the Baselines and Configuration Change findings detected by the Image Manager. The optional feature will benefit ICE Supplementals users by leveraging the Inspection Logs created by IPLCheck-Core and IPLCheck-Plus using their content and findings for building Configuration Baselines and using them to detect Configuration Changes.

- StepOne has been enhanced to afford users of the ICE Supplementals the ability to create and store Baselines of the Input/Output Control Program (IOCP) configuration that defines the hardware components that make up a specific zEnterprise Class Processor. Following the creation of the Baseline, StepOne will automatically determine if a Baseline has changed. Users may explore identified changes using a combination of Text Reports and Interactive ISPF Worksheets. Change Reports may be stored, printed or emailed to co-workers on demand.

- Access to The Control Editor Background Report Entities.
- Access to Image FOCUS Background Report Clusters.
- Access to The Control Editor Event Timelines.
- Access to The IBM Health Checker for z/OS.
- Access to StepOne, an IODF analysis tool.
- Access to The Supplemental Detectors.

1.7 Functions Regressed in The Control Editor

- From time to time new interfaces and functions will replace those found in prior releases of The ICE Viewer. It is recommended that all users upgrade to the latest ICE and ICE Viewer releases.

1.8 System Requirements

1.8.1 Prerequisites

To use any ICE Viewer application, you will need Integrity Controls Environment (ICE) 18.0 and z/OS V1R8 or higher, VTAM and ISPF. You can access the latest ICE download at www.newera.com.

1.8.2 The License Key

A single License Key for either “Full” ICE or “Free” ICE is needed to activate the Integrity Controls Environment (ICE). No additional License Key is required to activate the ICE Viewer. When “Full” ICE is in use one or more additional License Key(s) may be required to unlock and activate the specific ICE applications that are accessible via The ICE Viewer. All License Key(s), “Free” or “Full”, must be inserted in the ICE Control Member NSEPRM00.

1.9 Solving Real-World Problems

- "...When we did the math, it was pretty clear that the partnership of the IBM Health Checker for z/OS and the IPLCheck product family represented an insurance policy we just couldn't live without. I mean the RACF Resource Checks alone help us to avoid negative Security Audit Findings. And the z/OS, Sub-system and Dynamic Checks provided by NewEra assure us that z/OS and Sub-System initializations will go as planned. What would an initialization failure cost us? Well in our organization a lot more than $500.00 per LPAR per year. Working together these system tools represent the best Insurance Policy against security and Initialization failure available anywhere. We're all satisfied with the improvements in z/OS integrity and the savings." Problem solved.

- "...money is always a problem in our shop; it's become a way of life to look for the best value, highest return on investment in everything we do. We've been following NewEra and its z/OS Inspection Technology for a long time and were convinced it could help us guard against future IPL failures. We wrote and submitted our justification for approval, but management just couldn't give the 'Green Light' because of other financial priorities. I am happy to say that the IPLCheck Family solved all financial concerns. We acquired a license only for our six production LPARs. Management now thinks of LPAR Inspection as *MUST HAVE*." LPARs protected; management happy." Problem solved.

- "…the thing we like best about the way NewEra is approaching the distribution of its system software environment and applications is that it allowed us to get started with minimal effort and expense, focusing on what we believed to be our most critical issue, LPAR integrity. As we get comfortable with the process we can, at any time, move on to more global z/OS concerns: Sysplex and Sub-System Inspections, Baselines, Change Detection, Release Analysis, Compensating Configuration Control and IODF Configuration Management. We're not at all certain we'll ever need them, but our business is growing and that to us means more regulations and more oversight. It's good to know that the tools we'll need to solve these complex problems are already installed and available." LPARs protected, future assured." Problem solved.

2 Table of Contents

3 The Integrity Controls Environment (ICE)

The Integrity Controls Environment (ICE) is a VTAM Application that provides access to the ICE Applications Image FOCUS, The Control Editor and The Supplementals, The IPLCheck Family and The ICE Viewer. When you are ready to move beyond the functions of The ICE Viewer, NewEra Technical Support can provide you with the required License Keys. Contact them via Email at support@newera.com.

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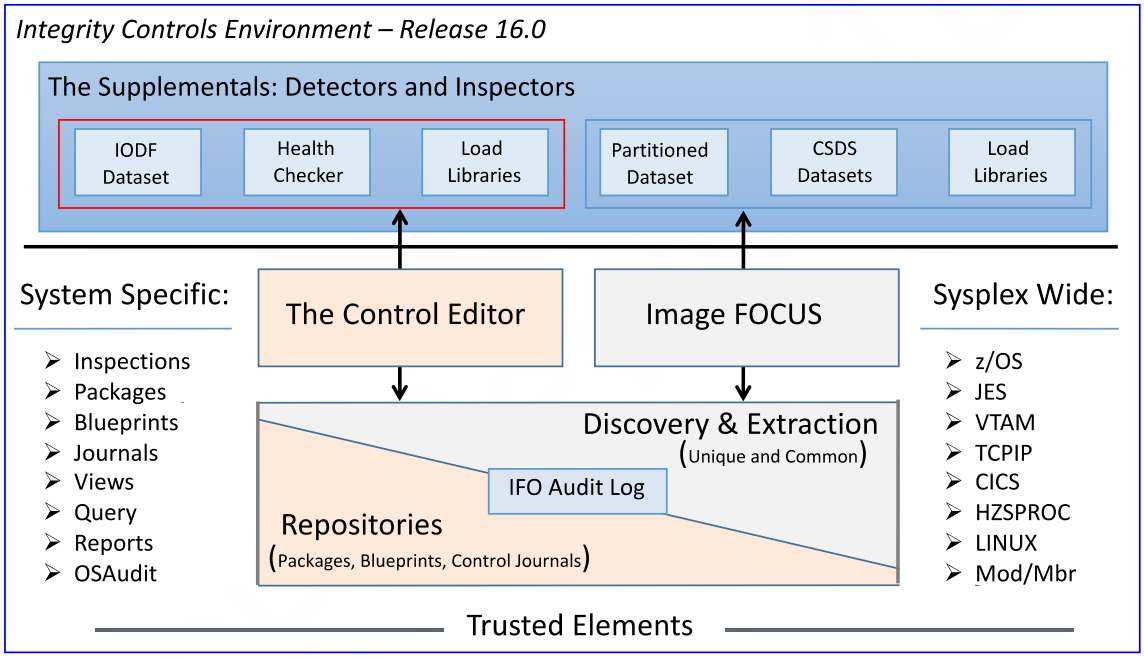
z/OS Integrity and Compliance

z/OS Configuration Management and Compliance – ICE 16.0 - Overview



3.1 Image FOCUS

The Image FOCUS Application set automatically discovers, extracts, blueprints and inspects the z/OS configuration components that comprise a Sysplex and its Images. Process findings are shared with other ICE applications including the ICE Viewer. Systematic monitoring of an entire Sysplex and all of its' Images is achieved using the Production View while the effort required for technical staff to advance to a new release of the operating system or a subsystem is mitigated through the use of New Release Analysis.

3.2 The Control Editor

The Control Editor is a “Compensating Control” that provides a layer of non-invasive security over the z/OS configuration components housed in defined sets of partitioned datasets. TCE significantly enhances the level of security generally provided by the site’s External Security Manager (ESM). In addition, TCE can be customized to identify the occurrence of specific System and Health Checker Messages and record change events detected by the Supplemental Detectors.

3.3 The Supplementals

These optional ICE applications provide both additional Inspection and Monitoring functions that extend the scope of the ICE configuration processing to include: First, the Inspection of Load Libraries, Member Libraries and CSDS Datasets. Second the Detection of changes in IODF Datasets, The Health Checkers, the External Security Managers: RACF, ACF2, Top Secret; DB2, IMS and CICS Configurations, System SVCs, Volumes, Program Property Table, APF Authorization and other z/OS configuration elements.

3.4 The IPLCheck Family

The IPLCheck Family is an integrated set of Predictive Failure Analysis (PFA) “Health Checks” that evaluate production and alternate z/OS and sub-system configuration settings against ‘Industry Best Practices’ to pinpoint the causes of potential system initialization failures and to document dynamic changes in the LNKLST, LPALST, APFLST and System Symbols that often limit system resources access in a Post-IPL environment.

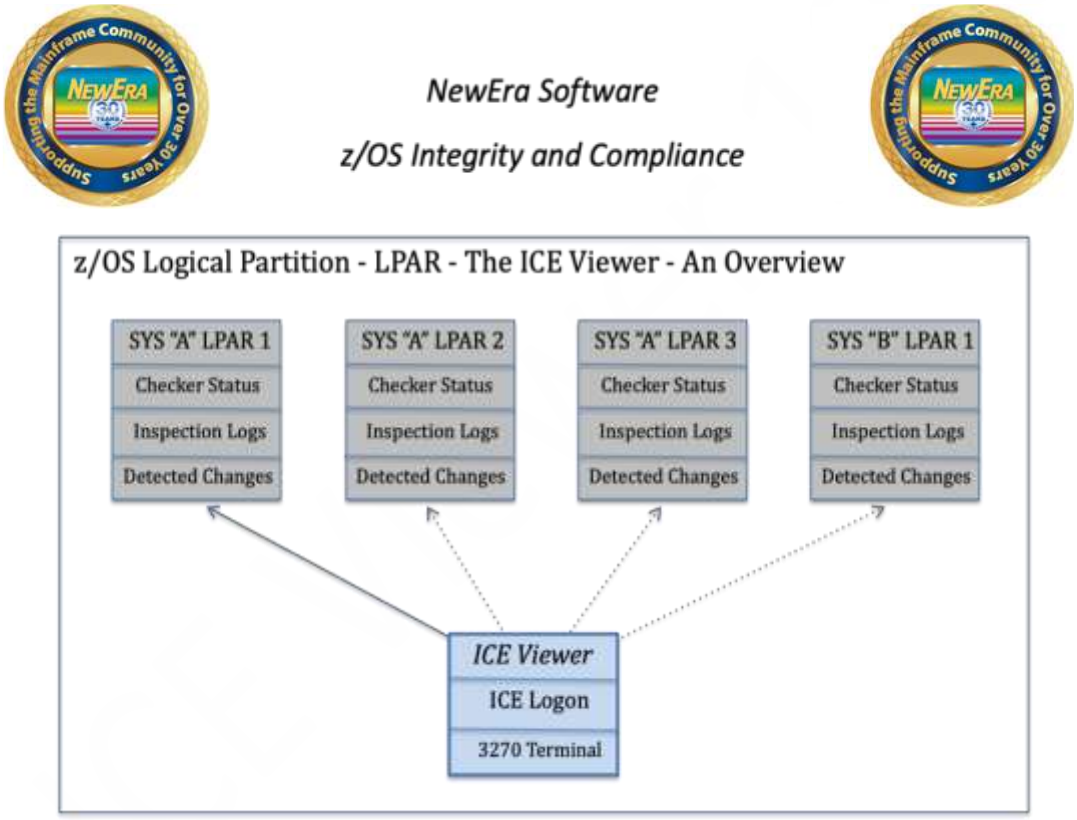
3.5 The ICE Viewer

The ICE Viewer provides an interactive Focal Point from which individual users may access reports and worksheets derived from findings provided by the IBM Health Checker for z/OS and the ICE Applications: Image FOCUS, The Control Editor and The Supplementals as they are configured to run on local and/or remote systems.

4 Getting Started with The ICE Viewer

You will learn as you review this User Guide that the ICE Viewer serves as a Focal Point for the Sysplex-Wide finding for the IBM Health Checker for z/OS and the NewEra family of ICE Applications. While all of these applications must be configured in conformity with their published documentation it is not necessary that they all be active in order for the ICE Viewer to do it its job.

As Used in this document an *"Access Point"* is an ICE Viewer specific Line Command that provides directed access to the Worksheets and Reports that contain the *"Findings"* reported or provided by supported applications.



4.1 What should I do First?

If you are just getting started with the ICE Viewer consider following this roadmap during your early usage:

- First, get the IBM Health Checker for z/OS operational on the LPAR that you plan to use for your ICE installation. We call this your local or running system.

You will find what you need in SYS1.SAMPLIB on every z/OS LPAR and must ultimately start HZSPROC.

- Next, install ICE and setup the required VTAM APPLID. Logon to the ICE Primary Menu. If you are using "FREE ICE" only the Viewer Application will be functional.
- Now, select the Viewer option to display the Viewer Primary Menu. From the Viewer Menu select the "zChecks" access point. This action will display an Access Point Worksheet showing the running system's Check Status.
- Now, start the IBM Health Checker on other LPARs of interest returning to the Viewer, from time to time, to add those added to the "zChecks" Access Point Worksheet.
- Next, start the ICE procedure IPLCHECK on the running system to automatically register the IPLCheck - Core application with the IBM Health Checker for z/OS. This action will kick-off the first Inspection of the z/OS configuration of the running system.
- Now, return to the ICE Viewer and select "IPLCore" to display the current Check Status of the running system in the IPLCheck - Core Access Point Worksheet.
- Finally start IPLCheck – Core on all other LPARs of interest returning to ICE Viewer and the IPLCheck – Access Point to view their Inspection findings.

4.2 What's Next?

Once you have the IBM Health Checker for z/OS and IPLCheck – Core installed and operationally connected to "zCheck" and "IPLCore" you will next want to do the following:

- Enable the other "Free" ICE Applications - StepOne and Level-One Detectors.
- Enable licensed "Full" ICE Applications - Image FOCUS, The Control Editor and the remainder of the IPLCheck Family of Checks.

4.2.1 StepOne

The StepOne Application/Access Point requires that you have read access to the local, running system IODF and all other IODF Datasets that you may want to define and add to the StepOne Access Point. You can test your access authority to the local, running system IODF by simply typing “S” on the command line of the ICE Viewer Primary Menu and pressing enter. If you have authorized access the Access Point Worksheet will be displayed. If not, a message indicating a CBDMGHCP extraction failure will appear and then the Access Point Worksheet. Note: the Dataset Name shown in the first row of the worksheet and ask you Security Administrator for READ access to it and others you may want to access. Use PFK1 for additional help or request the StepOne User Guide from NewEra Technical Support. StepOne is part of the “Free” ICE Suite and requires no License Keys.

4.2.2 Level-One Detectors

Before the Detectors Access Point becomes operational you will need to activate the Level-One Supplemental Detectors. To do this you should first request the Supplemental Detectors User Guide from NewEra Technical Support. Next, update the NSEDET00 and NSEENS00 members found in ICE Parameter Library Dataset. NSEDET00 is used to define the detector specific settings and reporting intervals; NSEENS00 is used to define the list of email recipients that will receive notification of detector events and/or findings. The Level-One Detectors are part of “Free” ICE Suite and require no License Keys.

4.2.3 Image FOCUS

Before the IReport Access Points become operational you will need to activate Image FOCUS and define Image FOCUS Background Reports using the Image FOCUS Production View Option. To do this you should first request the Image FOCUS User Guide from NewEra Technical Support. A full access Evaluation Key is provided to those requesting it from NewEra Technical Support. Once you have promoted images to the background and the defined background inspection cycle has run you will be able to access the resulting reports.

4.2.4 The Control Editor

Before the JEvents Access Point become operational you will need to activate The Control Editor and its Control Journals. To do this you should first request The Control Editor User Guide from NewEra Technical Support. A full access Evaluation Key is provided to those requesting it from NewEra Technical Support. Once you have defined a Dataset and Other Control Lists, and The Control Editor has detected and recorded change events, you will be able to access their historical time lines via the JEvents Access Point.

4.2.5 The IPLCheck Family

Before the IPLPlus Access Point becomes operational you will need to activate IPLCheck – Plus. Like IPLCheck – Core the other members of the IPLCheck Family – Plus, Dynamic and Sub-systems – operate under the control of the IBM Health Checker for z/OS. Each is started using its own unique system procedure (PROC) and/or activated by an additional License Key. To activate additional Checks, you should first request the IPLCheck Family Guide from NewEra Technical Support and/or additional License Keys.

The incremental findings provided by IPLCheck – Dynamic – Changes in the LNKLST, LPALST, APFLST and Symbol List - and IPLCheck – Sub-system – JES2/3, VTAM, TCP/IP and CICS are automatically incorporated into both the IPLCore and IPLPlus Access Points when the required Licensed Keys are present. Full access Evaluation Keys are provided to those requesting them from NewEra Technical Support.

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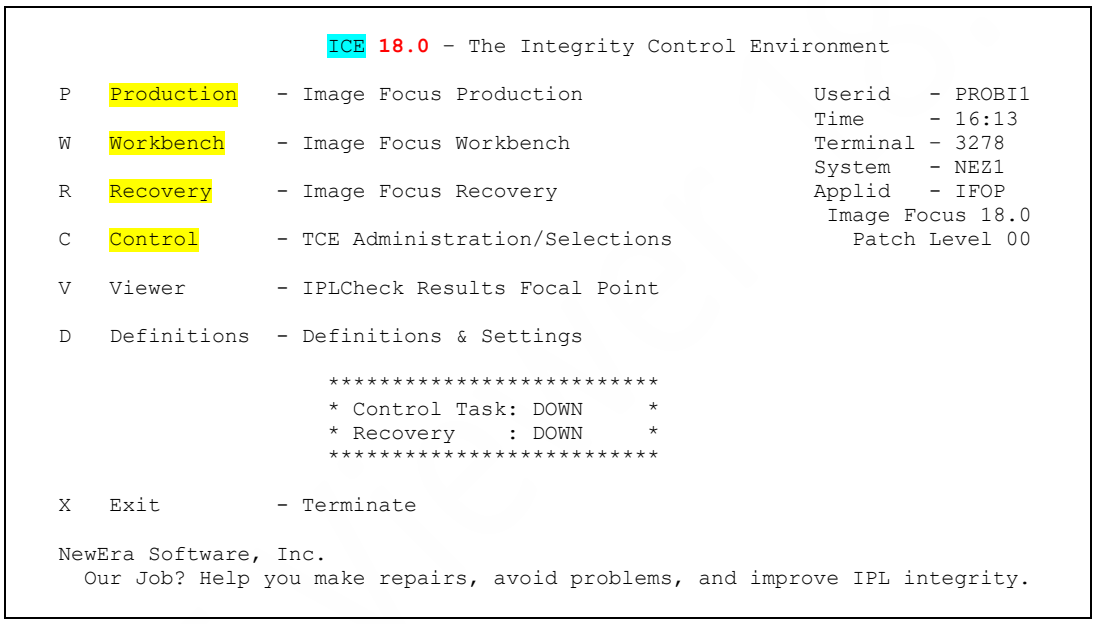
IPLCheck Family - Licensing Matrix

License Key \ Function	Core Production	Plus Alternate	Dynamic Changes	Sub-System VTAM, TCP/IP
None Required	✓			
+ Health Checker	✓	✓		
+ New Release Analysis	✓	✓	✓	
+ Sub-System Inspectors	✓	✓	✓	✓

4.3 Logging On

The Logon Panel provides access to the ICE Applications. When ICE Applications are licensed the Application Option Names will appear in white text. Those that appear in yellow text are not licensed and cannot be accessed until they are. All ICE Applications are included in the ICE Download so that they can be turned on at any time, without additional download or installation steps, by requesting a License Key from NewEra Technical Support.

The Logon Panel shown below is as it would appear to a "Free" ICE user. Note that only the ICE Viewer Application is accessible.



To display the ICE Viewer Primary Menu, insert a "V" on the command line and press enter.

4.4 The Primary Menu

The ICE Viewer Primary Menu provides access to a variety of system and application findings. Like the ICE Primary Menu those Access Points shown in yellow, if any, require licenses keys that are not present in the ICE Control Member NSEPRMxx. If you are not licensed for an ICE Application that would make the Access Point viable you may request a License Key from NewEra Technical Support.

The ICE Viewer Primary Menu shown below is as it would appear to a "Free" ICE User.

```
                    VUE 18 - Integrity Control Environment Viewer

C   IPLCore      - Production IPL Configurations          Userid   - PROBI1
                                                         Time     - 16:27
P   IPLPlus      - Alternative IPL Configurations         Sysplex  - SVSCPLEX
                                                         System   - NEZ1
M   Manager      - View Managed Peer Image Changes        IFOhlq   - IFOP
                                                         --NSIMVUE 0930--
S   StepOne      - Explores all IODF Configurations        Patch Level 00

J   JEvents      - Access a Timeline of Change Events

Z   zChecks      - z/OS Health Checks for Named Systems

D   Detects      - Baseline Named z/OS Control Boundaries

I   IReport      - Access Image FOCUS Background Inspections


X   Exit         - Return to the ICE Primary Menu

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```

Take note that the Access Points shown in yellow are activated by adding the following License Keys to the ICE Control Member NSEPRMxx.

Access Points	Description	Application License Key
IPLPlus	Alternative IPL Configurations	IPLCheck - Plus
Manager	Access Image Manager Change Reports	Supplementals
JEvents	Access Journaled Event Timelines	Control Editor
IReport	Image FOCUS Background Inspections	Production View

If an Access Point is shown in white text you may access it by placing the associated, single character line command on the command line and pressing enter. This action will display an Application Specific Selection List Worksheet. Using the Worksheet, you may select local or remote systems and/or data sources and add or delete remote system and/or data sources. Information specific to the local, the running system is automatically populated and updated, with each entry, into the various Selection Lists. Each Selection List is supported by a specific Help Panel, which can be displayed by pressing PFK1. Options vary from List to List, so a review of each Help Panel is highly recommended.

4.5 Access Points to Application Findings

The ICE Viewer is an interactive reporting and analysis tool that is dependent on the findings of other applications, specifically the IBM Health Checker for z/OS, The IPLCheck Family of Predictive Failure Analysis Tools, The StepOne IODF Decomposition Tool and other ICE Applications: Image Focus, The Control Editor and The Supplemental Detectors.

If you are a "Free" ICE user your data sources are limited to the IBM Health Checker for z/OS, IPLCheck – Core, StepOne and the Level One Supplemental Detectors.

What follows is a brief description of the Access Point Options available to you from The ICE Viewer Primary Menu.

4.5.1 IPLCore

This Access Point, entered as "C" on the command line, requires IPLCheck – Core which is provided with "Free" ICE, requires the IBM Health Checker for z/OS and directs you to the IPLCheck - Core Setup Selection Worksheet. Note that on entry the system automatically detects if IPLCheck - Core is active on the local or running system by doing a directory search for the IPLCheck - Core report dataset IFOHLQ.IPLCHECK.*system_name.LOG*; where IFOHLQ is the set of High Level Qualifiers that were used to define the ICE Control Datasets during system installation and *system_name* is the name of the local system. If this local, running, system configuration is not found a message is displayed, not the worksheet and you are returned to the Primary Menu.

4.5.2 IPLPlus

This Access Point, entered as "P" on the command line, requires IPLCheck – Plus which in turn requires the optional Health Checker License Key, the IBM Health Checker for z/OS and directs you to the IPLCheck - Plus Setup Selection Worksheet. Note that on entry the system automatically detects if IPLCheck - Plus is active on the local or running system by doing a directory search on IPLCheck - Plus report dataset *IFOHLQ.IPLALT.system_name.LOG*; where IFOHLQ is the set of High Level Qualifiers that were used to define the ICE Control Datasets during system installation. If this local, running system configuration is not found a message is displayed, not the worksheet and you are returned to the Primary Menu.

4.5.3 Image Manager

The Image Manager creates three distinct Image Configuration Baselines for each identified LPAR, one baseline each for the Production and Alternate configurations as identified by IPLCheck (The Moving Baselines) and a startup Snapshot of LPAR Environment following the most recent IPL (The Fixed Baseline). As these Baselines are compared to actual, current configurations, 5 unique compare reports are created and stored in a change log dataset. This optional Access Point provides access to Image Manager Change Findings.

4.5.4 StepOne

This Access Point, entered as "S" on the command line, has no prerequisite and is provided with "Free" ICE, requires to the IBM system utility module CBDMGHCP and directs you to the IODF Dataset Configuration Selection Worksheet. Note that on entry the system automatically detects the local, running system IODF. If this local, running system IODF Dataset is not found (could it be offline?) a message is displayed, not the worksheet and you are returned to the Primary Menu.

4.5.5 JEvents

This Access Point, entered as "J" on the command line, requires The Control Editor, which in turn requires the optional Control Editor License Key, access to the TCE Control Journals and directs you to the Event Timeline Setup Selection Worksheet. Note that on entry the system automatically detects if the TCE Control Journals are active on the local or running system by way of a query for all available TCE Control Journals. If this local, running system has no TCE Control Journals a message is displayed, not the worksheet and you are returned to the Primary Menu.

4.5.6 zChecks

This Access Point, entered as "Z" on the command line, has no prerequisite and is provided with "Free" ICE, requires only the IBM Health Checker for z/OS and directs you to the z/OS System Setup Selection Worksheet. Note that on entry the system makes a query to determine if the IBM Health Checker for z/OS is active on the local, running system. If this local, running system does not have an active HZSPROC (does it need to be started?) a message is displayed, not the worksheet and you are returned to the Primary Menu.

4.5.7 Detects

This Access Point, entered as “D” on the command line, requires The ICE Supplementals. Level-One Supplemental Detectors are provided with “Free” ICE, other Detectors require additional License Keys. This Access Point directs you to the Detector Setup Selection Worksheet. Note that on entry the system automatically detects if the Level-One Detectors are active on the local or running system by way of a query to the Detector Background Report Set. If this local, running system has no Detector Reports a message is displayed, not the worksheet and you are returned to the Primary Menu.

4.5.8 IReport

This Access Point, entered as “I” on the command line, requires The ICE Image FOCUS Application, specifically the optional Production View License Keys and directs you to the Cluster Setup Selection Worksheet. Note that on entry the system automatically detects if Image FOCUS Background Reports are available on the local or running system by way of a query to the Background Report Cluster Set. If this local, running system has no Image FOCUS Reports a message is displayed, not the worksheet and you are returned to the Primary Menu.

5 Building Your Access Point Worksheets

Access points provide a pathway to the underlying Reports and Worksheets from the various data sources supported by the ICE Viewer. Each is specific to its purpose and underlying data, but all Worksheets share more or less similar formats and features, support a common set of row line commands and importantly are specific to you.

5.1 Similar Worksheet Formats and Features

Each Worksheet is an interactive ISPF Table that is supported by its own unique Help Panel. Once in a Worksheet press PFK1 to display its associated Help Panel. Each Help Panel explains the column heading used in the Worksheet and its supported Row Line Commands.

As you explore each Worksheet it is recommended that you review each Help Panel carefully as doing so will aid you in learning the many functions of the ICE Viewer and serve as a refresher if you need one later.

5.1.1 Sorting the Worksheet

You can sort the data in ascending or descending order. For example, look at the data in the “Numb” or “Row” column. Each line entry has a number associated with it. Initially, the numbers are sorted in ascending order and highlighted in a color that is different than the other columns to indicate that it is the column being used to control the sort sequence.

- Place your cursor on the “Numb” or “Row” column heading, and press enter. Notice that the line items are now sorted in descending order.
- Placing your cursor on the “Numb” or “Row” column heading and pressing enter again will return the column to ascending order.
- Now try sorting any other column in the worksheet by placing the cursor under the heading and pressing enter. Note the order of the sort and the change in column color.

5.1.2 Filtering a Worksheet

You can filter the data shown in a worksheet by selecting a specific value in any data column. To filter a Worksheet, you will need to do the following:

- Place the cursor under a target value and press enter. Note that when the Worksheet is redisplayed only those rows that contain values that match the target value appear in the worksheet.
- To re-expand the Worksheet, place the cursor again under the target and press enter. Note that all the rows will be returned.

5.1.3 Worksheet Column Query

Certain lower-level Worksheets (not all) support a function called “Column Query”. For you to use this function the Worksheet must provide a data entry space above the Column Heading. If an entry space is available do the following:

- Enter a target value in the space and press enter. The result will be the same as if you filtered the worksheet. If no match is found to the criteria you specify, a message is displayed to indicate no matching values. All criteria are case sensitive. A “wild card” value of “*” may be specified to limit the number of matching positions. For example, if you are searching for System Names like, “SYSWEST” but really want all systems that begin with “SYS” specify “SYS*”. This will return all values that begin with “SYS”.
- To perform a Compound Criteria Search, allow the value that you first specified to remain and specify a second value above any other column and press enter. This will return only rows with values that match both of the specified criteria. Compound searching is limited to the number of columns supported by the Worksheet.
- To return the Worksheet to its original state (or any intermediate state of a compound) simply blank one or all of the columns used, and press enter.

5.2 Common Row Line Commands

The Row Line Commands supported by the individual Worksheets are shown in the Worksheet Header. The commands themselves, a single character, are highlighted in red and begin with each command's brief description. Each command is most commonly, but not always, used to access the data that underlies a specific row in a worksheet. Those un-common line commands that are not specific to a given row may be entered on any row. The Worksheets' associated Help Panel will define and distinguish each Row Line Command.

To use a Row Line Command enter it on the two dot ".." entry point that precedes the target row and press enter. At the Access Point Worksheet Level, the most common Row Line Commands are: "S,A,D,U".

5.2.1 The Show Line Command

Use the "Show" Row Line Command "S" to show a Worksheet that displays, at the highest level, a summarization of the associated underlying data related to the selected Access Point. You will use this Worksheet to begin the process of drilling-down to points of interest.

5.2.2 The Add Line Command

Use the "Add" Row Line Command "A" to add a new data entry point. For example, if you are using "zChecks" the worksheet will already contain a summary of "Check Status" for the local or running system. If you have other z/OS Systems (LPARs) that are of interest you can access them as well by adding them to the Worksheet. To do this place "A" on the row entry point and press enter. This action will open a new row below the point of entry. Enter the required data, System Name, in this case and optional data, Sysplex Name, Release Level and Row Label and press enter. Now place "U" on the entry point that precedes the new added row and press enter. This action will request Check Status from the Health Checker running on the newly added system and update the row with a summary of the latest state and the date and time of the update. Repeat the process to add additional systems.

5.2.3 The Delete Line Command

Use the “Delete” Row Line Command “D” to remove a new data entry point. For example, if you make a mistake and want to start over again just place “D” on the entry point that precedes the offending row and press enter. The row will be immediately removed from the Worksheet. There is no “UNDO”.

5.2.4 The Update Line Command

Use the “Update” Row Line Command “U” to update the data shown in a specific row of the Worksheet. For example, if you are using the “zChecks” Entry Point and have added new systems to the Worksheet the values shown for Check Status will be as of the last update. To force a current update place “U” on the entry point that precedes the System Target and press enter. This action will request Check Status from the Health Checker running on the target system and update the row with a summary of the latest state as well as the date and time of the update. Repeat the process for all other systems. Note: it is not necessary to update the local or running system status as this is done automatically each time you enter an Access Point Worksheet.

5.3 Worksheets are Specific to You

All Access Point Worksheets are “User Specific”. This means that what you specify in populating a Worksheet- your adds, deletes and updates- are specific to you and tied directly to your TSO Logon User ID. Logging on with the same ID will allow you, and only you, to use the Worksheets you specify; other users enjoy the same privacy as well and may customize the ICE Viewer and its Access Point Worksheets to meet their own special needs.

6 ICE Viewer Access Points

6.1 IPLCore – Accessing IPLCheck – Core Findings

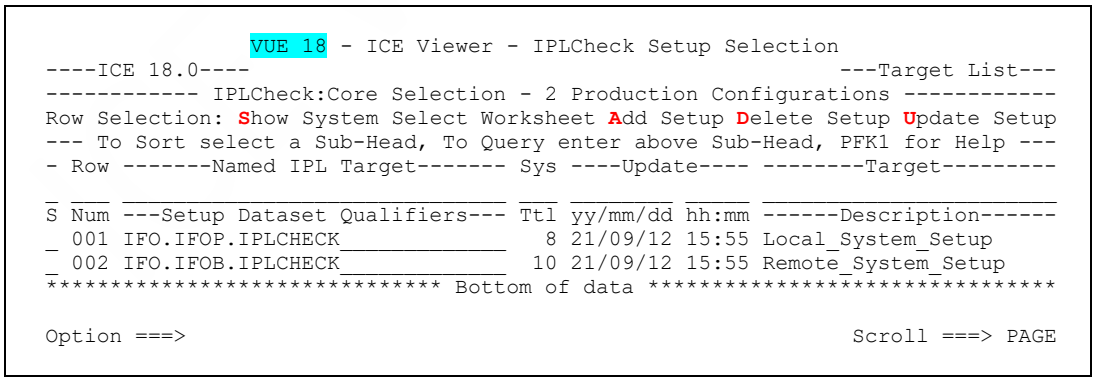
IPLCheck – Core is designed to identify potential problems through a virtual z/OS IPL that will likely occur along the IPL path of Production z/OS LPAR configurations. It operates exclusively under the control of the IBM Health Checker for z/OS. When active, meaning the IPLCHECK procedure has been started and is running, all IPLCheck Applications create summary and detail output.

The summary output, the Inspection Message Summary, is routed to the Health Checker Framework where it is routed to a message buffer for viewing or to a message stream for post processing.

The detail output, the Inspection Log, is stored as a sequential dataset using a set up high-level qualifier you select and sub-qualifiers of IPLCHECK and the name of the system under inspection.

When the high-level qualifier of the local or running system is the same as that used during the installation of ICE, the IPLCore Access Worksheet displays it in the first row along with additional setup information: the number of systems named within a setup, the date and time of the most recent Inspection Log Update regardless of system name.

6.1.1 IPLCore Access Worksheet



The purpose of "IPLCore" Access Point Worksheet is to:

- Provide an overview of Production LPAR Inspection Status. When possible the running systems' inspection status is automatically detected and added to or updated in the Worksheet each time it is accessed.

- Allow you to add and/or delete additional remote z/OS Systems Monitored by the Health Checker and running IPLCheck - Core to the worksheet.

- Update the check status of remote z/OS Systems Monitored by the Health Checker and running IPLCheck - Core that have been added to the worksheet.

- Provide access to a supporting worksheet that displays a more detailed status of individual systems within a specific setup, meaning that they have the same high-level qualifier and that their full Inspection Log Dataset name differs only as to the specific system name. See also the IPLCheck – Family User Guide.

6.1.2 IPLCore – IPLCheck Core Selection Interface

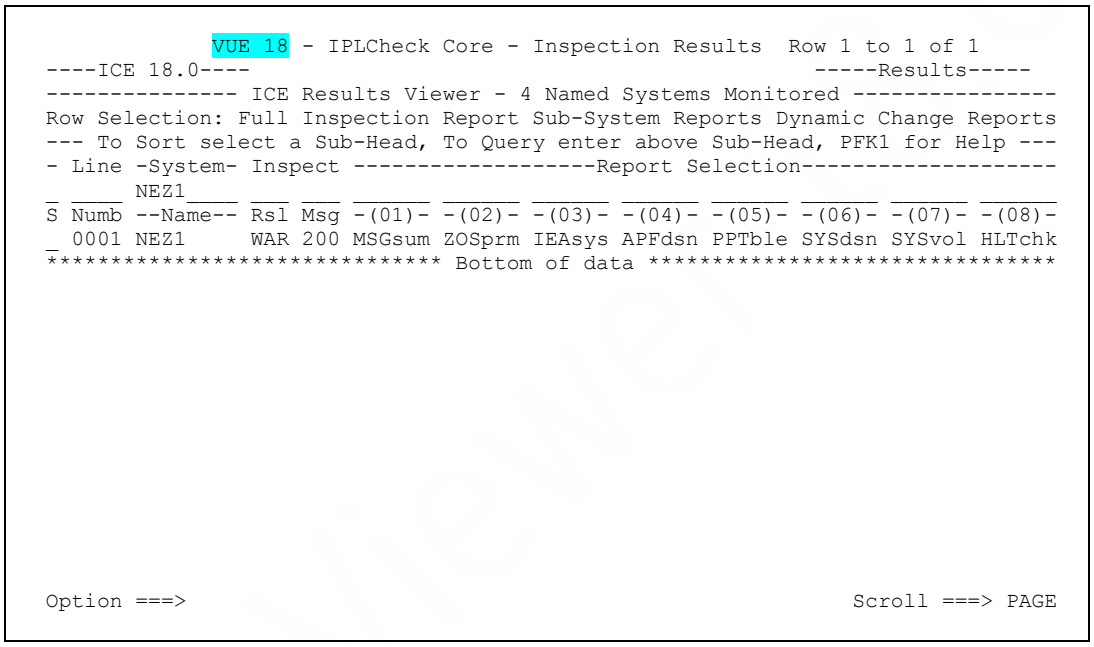
The System Selection Interface summarizes for each system, within a selected IPLCheck – Core Setup, its Inspection Results, IPL Initialization Values (IPL PARMS) and the date and time of the last Check/Inspection.

Row Selection permits you to “Show” the IPLCheck Report Library for each system and to “Update” Inspection Results by passing the displayed Initialization Values to Image FOCUS. The Inspection Log produced by such foreground inspections will replace the last Inspection Log created under Health Checker Control.

```
                  VUE 18 - IPLCheck Core - Inspection Results
----ICE 18.0----                                              -----Results-----
------------- ICE Results Viewer - 4 Alternate Systems Monitored --------------
Row Selection: Show the Report Libraries Update the Image Inspection XAnalytics
--- To Sort select a Sub-Head, To Query enter above Sub-Head, PFK1 for Help ---
- Line -System- Inspect ---------Initialization Values---------- -Last Checked-

_ ____ ________ ___ ___ ____ ________ ________ ________ ________ ________ _____
S Numb --Name-- Rsl Msg Unit LoadParm HardWare LparName VMUserId yy/mm/dd hh:mm
_ 0001 NEZ1     NOT 052 1001 0CE3W1M1 VM-TOKEN NEZ1      ETPGM7Q 21/08/27 08:54
_ 0002 S0W2     AOK 048 1002 0CE3W2M1 VM-TOKEN S0W2      ETPGM7Q 21/08/28 10:04
_ 0003 S0W3     AOK 072 1003 0CE3W3M1 VM-TOKEN S0W3      ETPGM7Q 21/08/29 11:03
_ 0004 S0W4     AOK 012 1004 0CE3W4M1 VM-TOKEN S0W4      ETPGM7Q 21/08/29 12:05
****************************** Bottom of data ********************************


Option ===>                                                 Scroll ===> PAGE
```

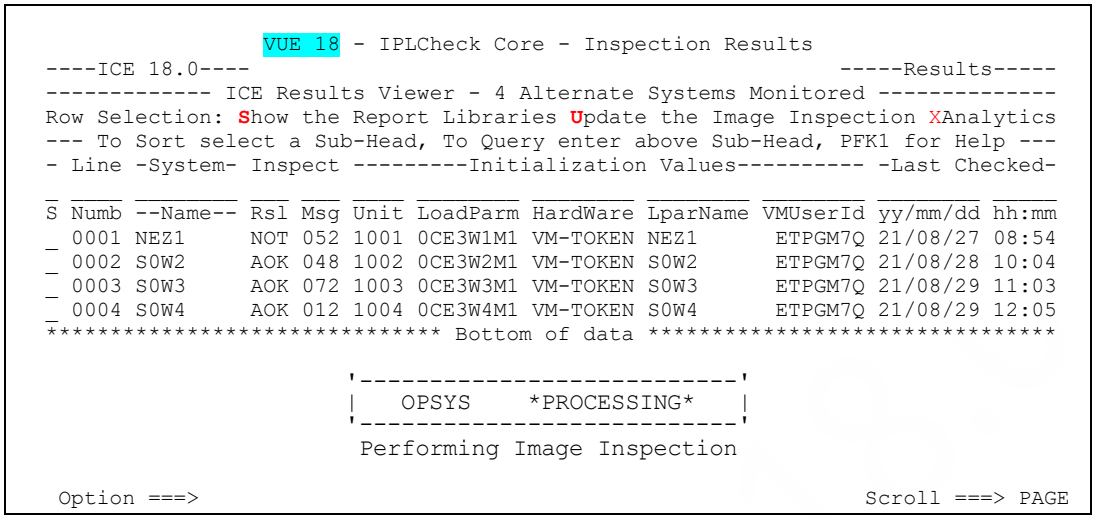
6.1.3 IPLCore – IPLCheck Inspection Report Library

The IPLCheck Inspection Report Library contains a collection of links to supporting worksheets that will assist you in understanding inspection findings at a detail level. To display a specific Library Report Worksheet cursor under any of the eight white Report Selection Titles and press enter. Note that the selected system name appears in the “System Name”. If you would like to display the full Library for all systems in a selected setup, blank the displayed system name by overtyping it and press enter.

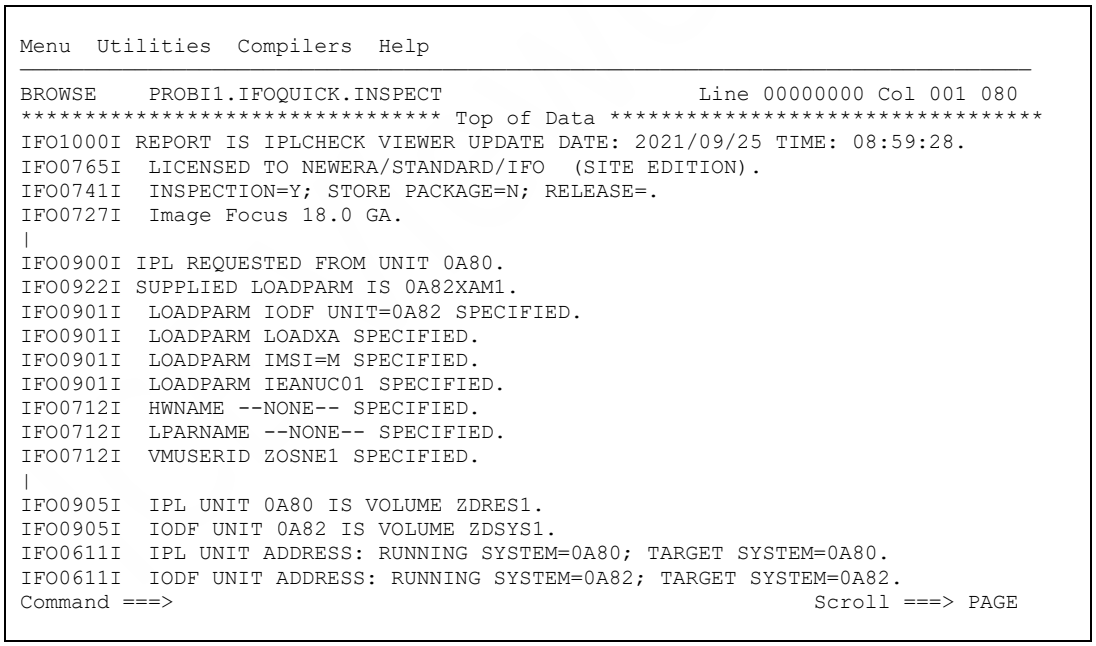


When in either the Access Point Worksheet, the System Selection Interface or the Report Library, use PFK1 for additional panel specific help.

6.1.4 IPLCore – Update the Image Inspection



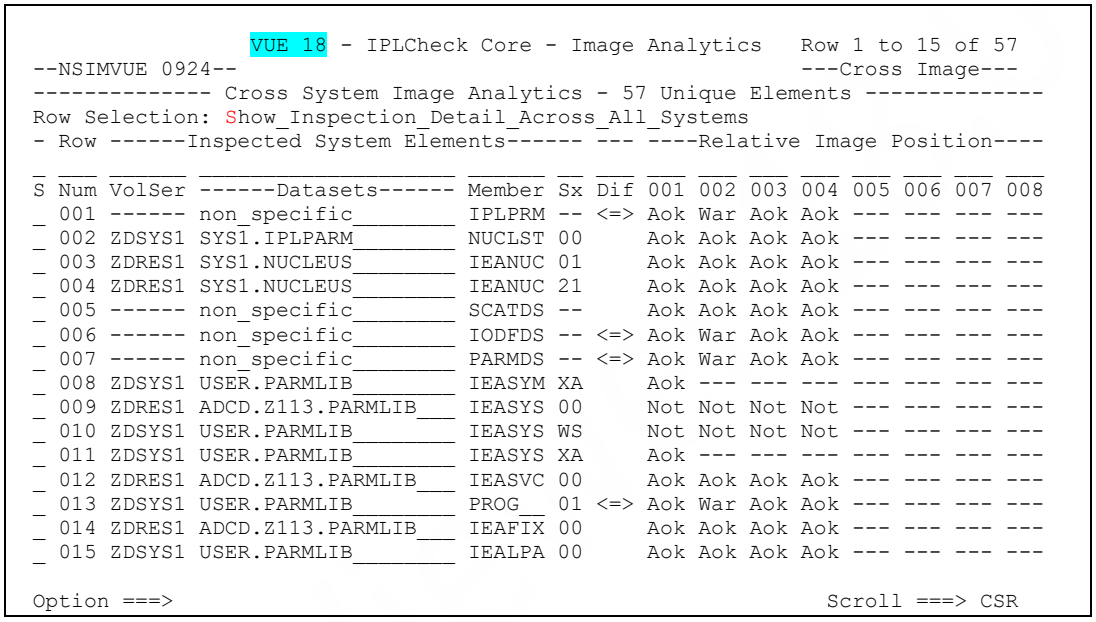
6.1.4.1 Updated Image Inspection Report



6.1.5 IPLCore – XAnalytics

6.1.5.1 Cross System Image Analytics

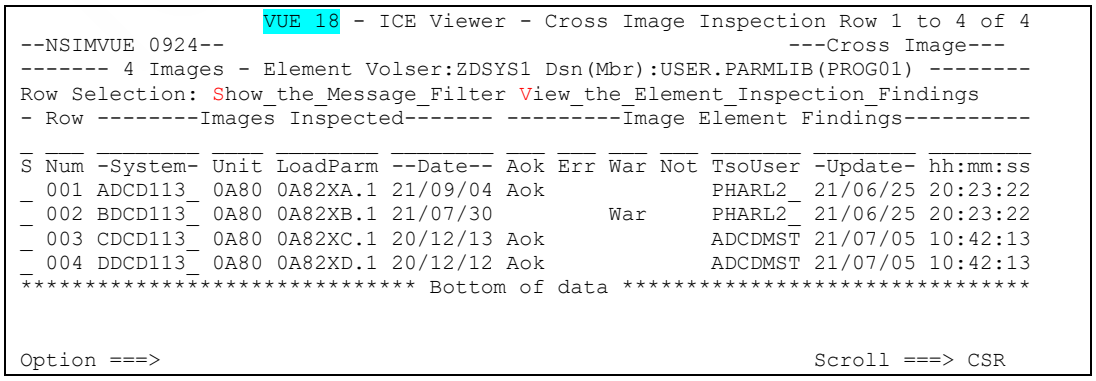
Cross System Analytics Worksheet is useful when comparing the inspection results of one image against all others defined to IPLCheck. To reveal the Name and its LoadParm cursor under its Relative Image Position and Press Enter. For more inspection detail select and element using the “S” Row Command.



```
                  VUE 18 - IPLCheck Core - Image Analytics   Row 1 to 15 of 57
--NSIMVUE 0924--                                             ---Cross Image---
-------------- Cross System Image Analytics - 57 Unique Elements --------------
Row Selection: Show_Inspection_Detail_Across_All_Systems
- Row ------Inspected System Elements------ --- ----Relative Image Position----

_ ___ ______ ______________________ ______ __ ___ ___ ___ ___ ___ ___ ___ ___ ___
S Num VolSer ------Datasets------ Member Sx Dif 001 002 003 004 005 006 007 008
_ 001 ------ non_specific________ IPLPRM -- <=> Aok War Aok Aok --- --- --- ---
_ 002 ZDSYS1 SYS1.IPLPARM________ NUCLST 00     Aok Aok Aok Aok --- --- --- ---
_ 003 ZDRES1 SYS1.NUCLEUS________ IEANUC 01     Aok Aok Aok Aok --- --- --- ---
_ 004 ZDRES1 SYS1.NUCLEUS________ IEANUC 21     Aok Aok Aok Aok --- --- --- ---
_ 005 ------ non_specific________ SCATDS --     Aok Aok Aok Aok --- --- --- ---
_ 006 ------ non_specific________ IODFDS -- <=> Aok War Aok Aok --- --- --- ---
_ 007 ------ non_specific________ PARMDS -- <=> Aok War Aok Aok --- --- --- ---
_ 008 ZDSYS1 USER.PARMLIB________ IEASYM XA     Aok --- --- --- --- --- --- ---
_ 009 ZDRES1 ADCD.Z113.PARMLIB___ IEASYS 00     Not Not Not Not --- --- --- ---
_ 010 ZDSYS1 USER.PARMLIB________ IEASYS WS     Not Not Not Not --- --- --- ---
_ 011 ZDSYS1 USER.PARMLIB________ IEASYS XA     Aok --- --- --- --- --- --- ---
_ 012 ZDRES1 ADCD.Z113.PARMLIB___ IEASVC 00     Aok Aok Aok Aok --- --- --- ---
_ 013 ZDSYS1 USER.PARMLIB________ PROG__ 01 <=> Aok War Aok Aok --- --- --- ---
_ 014 ZDRES1 ADCD.Z113.PARMLIB___ IEAFIX 00     Aok Aok Aok Aok --- --- --- ---
_ 015 ZDSYS1 USER.PARMLIB________ IEALPA 00     Aok Aok Aok Aok --- --- --- ---

Option ===>                                                  Scroll ===> CSR
```

6.1.5.2 Element Analytic Inspection Detail and Comparison

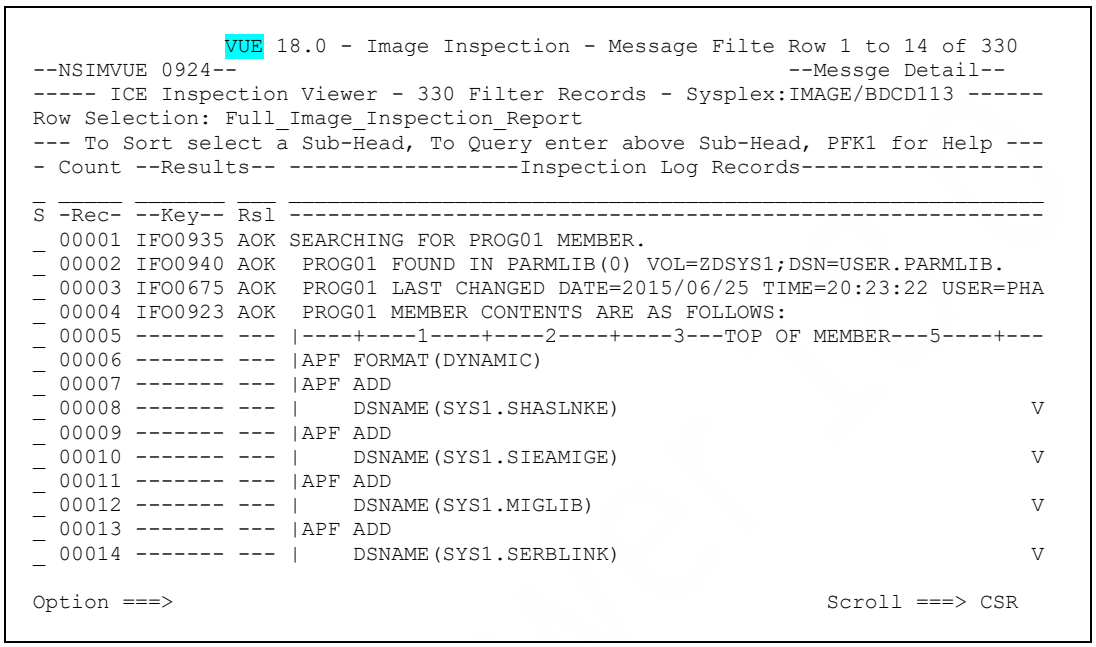
The Inspection Detail Worksheet shows a comparison of Inspection Results for the selected Image Element for all defined Images. To review Inspection findings related to an Element by Image/System use the “V” Row Command.



```
                  VUE 18 - ICE Viewer - Cross Image Inspection Row 1 to 4 of 4
--NSIMVUE 0924--                                             ---Cross Image---
------- 4 Images - Element Volser:ZDSYS1 Dsn(Mbr):USER.PARMLIB(PROG01) --------
Row Selection: Show_the_Message_Filter View_the_Element_Inspection_Findings
- Row --------Images Inspected------- ---------Image Element Findings----------

_ ___ ________ ____ ________ ________ ___ ___ ___ ___ _______ ________ ________
S Num -System- Unit LoadParm --Date-- Aok Err War Not TsoUser -Update- hh:mm:ss
_ 001 ADCD113_ 0A80 0A82XA.1 21/09/04 Aok             PHARL2_ 21/06/25 20:23:22
_ 002 BDCD113_ 0A80 0A82XB.1 21/07/30         War     PHARL2_ 21/06/25 20:23:22
_ 003 CDCD113_ 0A80 0A82XC.1 20/12/13 Aok             ADCDMST 21/07/05 10:42:13
_ 004 DDCD113_ 0A80 0A82XD.1 20/12/12 Aok             ADCDMST 21/07/05 10:42:13
****************************** Bottom of data ********************************


Option ===>                                                  Scroll ===> CSR
```

6.1.5.3 View Element Inspection Detail

The View provided is of the full set of Inspection Log Records created for the selected Element by Image/System. These records may be sorted and filtered. To filter for Inspection Errors, enter 'ERR' above 'Rsl Column' and press enter. Only Error records will be displayed.



6.2 IPLPlus – Accessing IPLCheck – Plus Findings

IPLCheck – Plus is designed to identify potential problems through a virtual z/OS IPL that will likely occur along the IPL path of Alternate or Staged z/OS LPAR configurations. It operates exclusively under the control of the IBM Health Checker for z/OS. When active, meaning the IPLALT procedure has been started and is running, all IPLCheck Applications create summary and detail output.

The summary output, the Inspection Message Summary, is routed to the Health Checker Framework where it is routed to a message buffer for viewing or to a data stream for post processing.

The detail output, the Inspection Log, is stored as a sequential dataset using a set up high-level qualifier you select and sub-qualifiers of IPLALT and the name of the system under inspection.

When the high-level qualifier of the local or running system is the same as that used during the installation of ICE, the IPLPlus Access Worksheet displays it in the first row along with additional setup information; the number of systems named within a setup, the date and time of the most recent Inspection Log Update regardless of system name.

6.2.1 IPLPlus Access Worksheet

```
                VUE 18 - ICE Viewer - IPLCheck Setup Selection
----ICE 18.0----                                              ---Target List---
------------ IPLCheck:Plus Selection - 2 Alternate Configurations -------------
Row Selection: Show System Select Worksheet Add Setup Delete Setup Update Setup
--- To Sort select a Sub-Head, To Query enter above Sub-Head, PFK1 for Help ---
- Row -------Named IPL Target------- Sys ----Update---- --------Target---------

_ ___ _____________________________ ___ ________ _____ _________________________
S Num ---Setup Dataset Qualifiers--- Ttl yy/mm/dd hh:mm ------Description------
_ 001 IFO.IFOP.IPLALT_______________   8 21/09/12 15:55 Local_System_Setup
_ 002 IFO.IFOB.IPLALT_______________  10 21/09/12 15:55 Remote_System_Setup
****************************** Bottom of data ********************************


Option ===>                                                Scroll ===> PAGE
```

The purpose of "IPLPlus" Access Point Worksheet is to:

- Provide an overview of Alternate or Staged LPAR Inspection Status. When possible the running systems' inspection status is automatically detected and added to (or updated in) the Worksheet each time it is accessed.

- Allow you to add and/or delete additional remote z/OS Systems Monitored by the Health Checker and running IPLCheck - Plus to the worksheet.

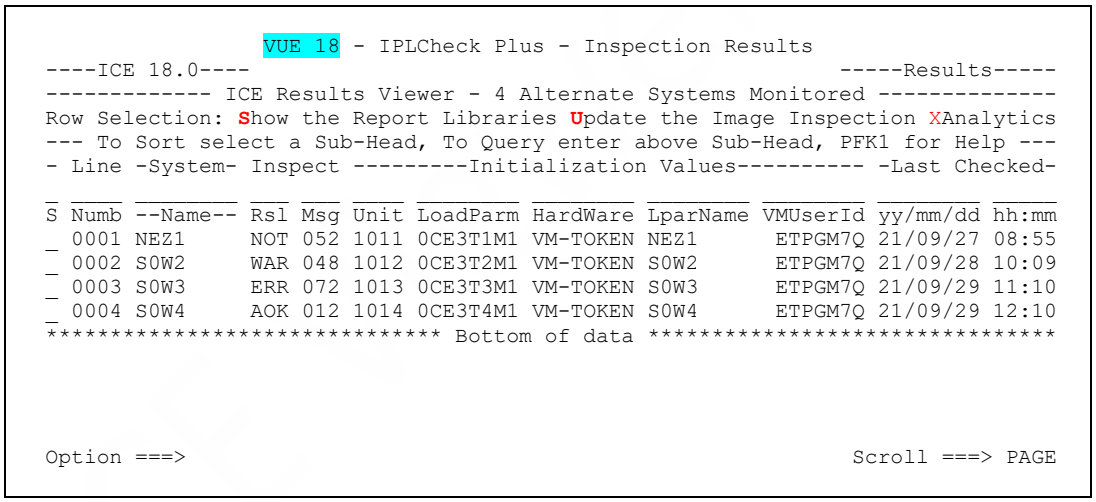
- Update the check status of remote z/OS Systems Monitored by the Health Checker and running IPLCheck - Plus that have been added to the worksheet.

- Provide access to a supporting worksheet that displays a more detailed status of individual systems within a specific setup, meaning that they have the same high-level qualifier and that their full Inspection Log Dataset name differs only as to the specific system name. See also the IPLCheck – Family User Guide.

6.2.2 IPLPlus – IPLCheck System Selection Interface

The System Selection Interface summarizes, for each system within a selected IPLCheck – Core Setup, its Inspection Results, IPL Initialization Values (IPL PARMS) as well as the date and time of the last Check/Inspection.

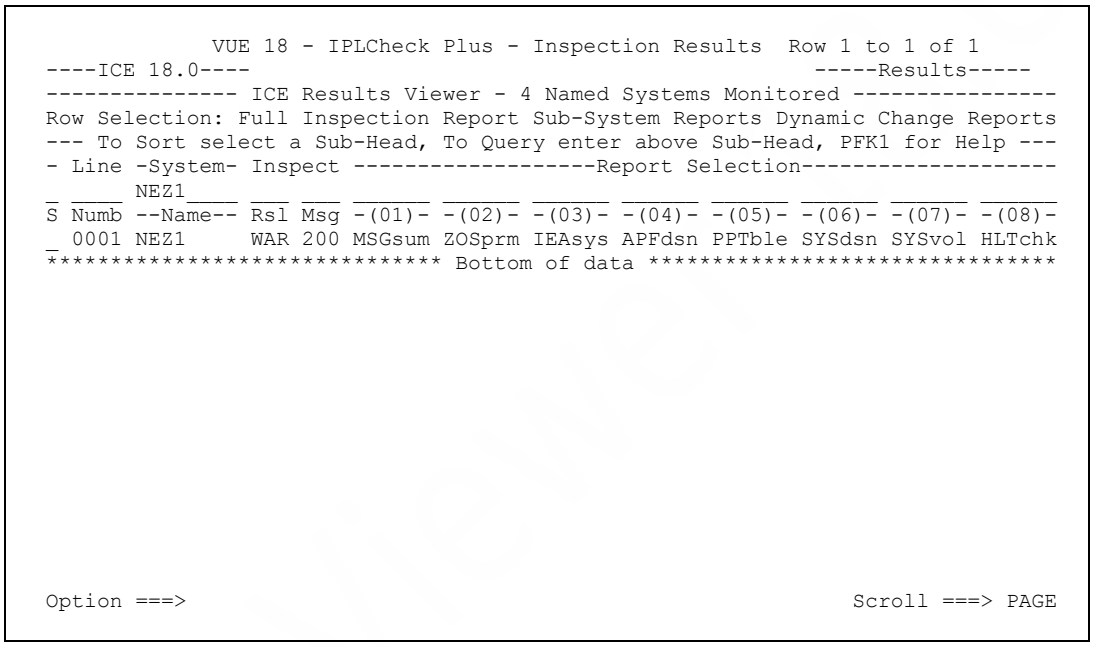
Row Selection permits you to “Show” the IPLCheck Report Library for each system and to “Update” Inspection Results by passing the displayed Initialization Values to Image FOCUS. The Inspection Log produced by such foreground inspections will replace the last Inspection Log created under Health Checker Control.



```
                VUE 18 - IPLCheck Plus - Inspection Results
----ICE 18.0----                                              -----Results-----
------------- ICE Results Viewer - 4 Alternate Systems Monitored --------------
Row Selection: Show the Report Libraries Update the Image Inspection XAnalytics
--- To Sort select a Sub-Head, To Query enter above Sub-Head, PFK1 for Help ---
- Line -System- Inspect ---------Initialization Values---------- -Last Checked-

_ ____ ________ ___ ___ ____ ________ ________ ________ ________ ________ _____
S Numb --Name-- Rsl Msg Unit LoadParm HardWare LparName VMUserId yy/mm/dd hh:mm
_ 0001 NEZ1     NOT 052 1011 0CE3T1M1 VM-TOKEN NEZ1      ETPGM7Q 21/09/27 08:55
_ 0002 S0W2     WAR 048 1012 0CE3T2M1 VM-TOKEN S0W2      ETPGM7Q 21/09/28 10:09
_ 0003 S0W3     ERR 072 1013 0CE3T3M1 VM-TOKEN S0W3      ETPGM7Q 21/09/29 11:10
_ 0004 S0W4     AOK 012 1014 0CE3T4M1 VM-TOKEN S0W4      ETPGM7Q 21/09/29 12:10
****************************** Bottom of data ********************************



Option ===>                                                 Scroll ===> PAGE
```

6.2.3 IPLPlus - IPLCheck Inspection Report Library

The IPLCheck Inspection Report Library contains a collection of links to supporting worksheets that will assist you in understanding inspection findings at a detail level. To display a specific Library Report Worksheet cursor under any of the eight white Report Selection Titles and press enter. Note that the selected system name appears in the “System Name”. If you would like to display the full Library for all systems in a selected setup, blank the displayed system name by overtyping it and press enter.



When in the Access Point Worksheet, the System Selection Interface or the Report Library, use PFK1 for additional panel specific help.

6.2.4 IPLPlus – Update the Image Inspection

```
                VUE 18 - IPLCheck Core - Inspection Results
----ICE 18.0----                                              -----Results-----
------------- ICE Results Viewer - 4 Alternate Systems Monitored --------------
Row Selection: Show the Report Libraries Update the Image Inspection XAnalytics
--- To Sort select a Sub-Head, To Query enter above Sub-Head, PFK1 for Help ---
- Line -System- Inspect ---------Initialization Values---------- -Last Checked-

_ ____ ________ ___ ___ ____ ________ ________ ________ ________ ________ _____
S Numb --Name-- Rsl Msg Unit LoadParm HardWare LparName VMUserId yy/mm/dd hh:mm
_ 0001 NEZ1     NOT 052 1001 0CE3W1M1 VM-TOKEN NEZ1      ETPGM7Q 21/09/27 08:54
_ 0002 S0W2     AOK 048 1002 0CE3W2M1 VM-TOKEN S0W2      ETPGM7Q 21/09/28 10:04
_ 0003 S0W3     AOK 072 1003 0CE3W3M1 VM-TOKEN S0W3      ETPGM7Q 21/09/29 11:03
_ 0004 S0W4     AOK 012 1004 0CE3W4M1 VM-TOKEN S0W4      ETPGM7Q 21/09/29 12:05
******************************* Bottom of data ********************************

                      '--------------------------'
                      |   OPSYS    *PROCESSING*   |
                      '--------------------------'
                       Performing Image Inspection

 Option ===>                                                Scroll ===> PAGE
```

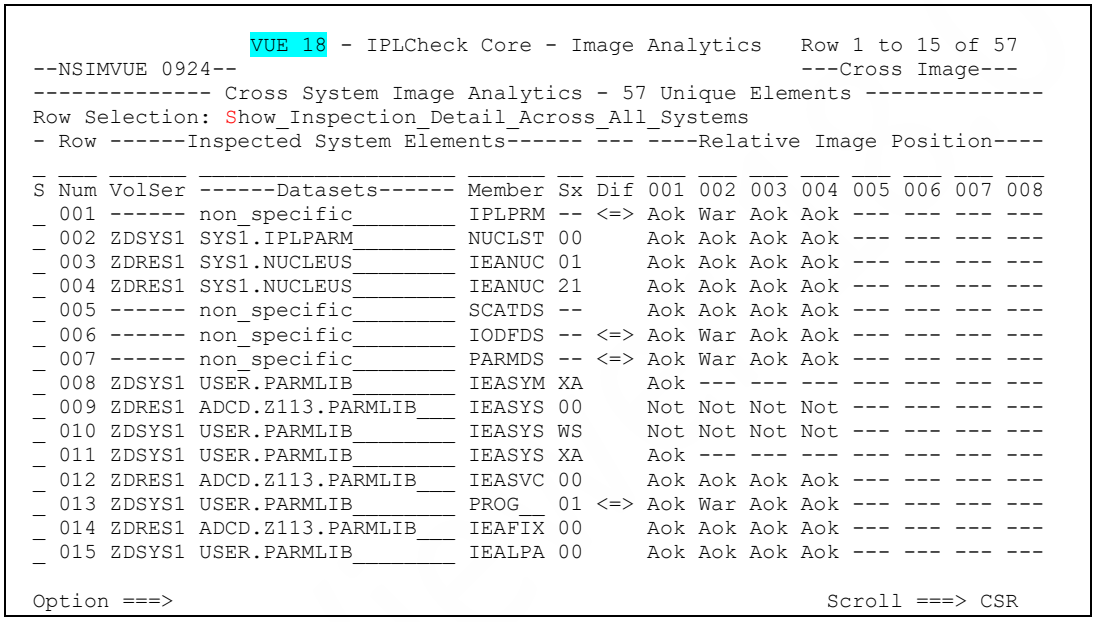
6.2.4.1 Updated Image Inspection Report

```
Menu  Utilities  Compilers  Help
_____________________________________________________________________________
BROWSE    PROBI1.IFOQUICK.INSPECT                   Line 00000000 Col 001 080
******************************** Top of Data ***********************************
IFO1000I REPORT IS IPLCHECK VIEWER UPDATE DATE: 2021/09/25 TIME: 08:59:28.
IFO0765I  LICENSED TO NEWERA/STANDARD/IFO  (SITE EDITION).
IFO0741I  INSPECTION=Y; STORE PACKAGE=N; RELEASE=.
IFO0727I  Image Focus 18.0 GA.
|
IFO0900I IPL REQUESTED FROM UNIT 0A80.
IFO0922I SUPPLIED LOADPARM IS 0A82XAM1.
IFO0901I  LOADPARM IODF UNIT=0A82 SPECIFIED.
IFO0901I  LOADPARM LOADXA SPECIFIED.
IFO0901I  LOADPARM IMSI=M SPECIFIED.
IFO0901I  LOADPARM IEANUC01 SPECIFIED.
IFO0712I  HWNAME --NONE-- SPECIFIED.
IFO0712I  LPARNAME --NONE-- SPECIFIED.
IFO0712I  VMUSERID ZOSNE1 SPECIFIED.
|
IFO0905I  IPL UNIT 0A80 IS VOLUME ZDRES1.
IFO0905I  IODF UNIT 0A82 IS VOLUME ZDSYS1.
IFO0611I  IPL UNIT ADDRESS: RUNNING SYSTEM=0A80; TARGET SYSTEM=0A80.
IFO0611I  IODF UNIT ADDRESS: RUNNING SYSTEM=0A82; TARGET SYSTEM=0A82.
Command ===>                                                Scroll ===> PAGE
```

6.2.5 IPLPlus – XAnalytics

6.2.5.1 Cross System Image Analytics

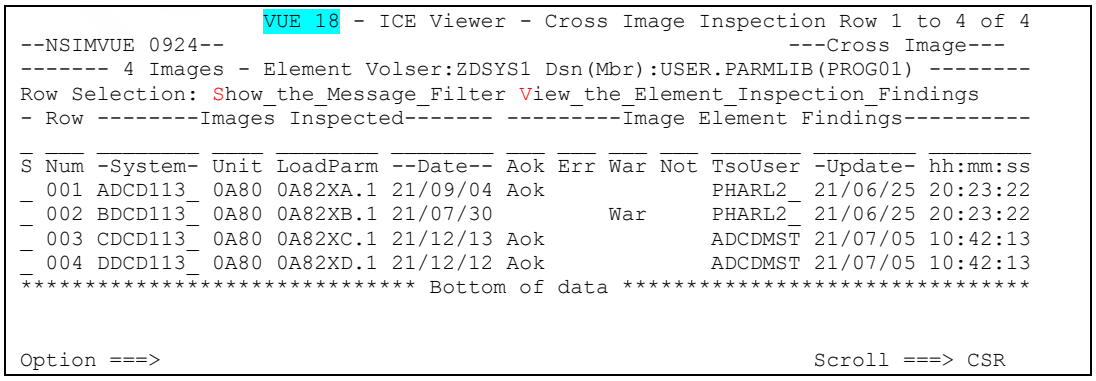
Cross System Analytics Worksheet is useful when comparing the inspection results of one image against all others defined to IPLCheck. To reveal the Name and its LoadParm cursor under its Relative Image Position and Press Enter. For more inspection detail select and element using the “S” Row Command.



```
                  VUE 18 - IPLCheck Core - Image Analytics   Row 1 to 15 of 57
--NSIMVUE 0924--                                             ---Cross Image---
-------------- Cross System Image Analytics - 57 Unique Elements --------------
Row Selection: Show_Inspection_Detail_Across_All_Systems
- Row ------Inspected System Elements------ --- ----Relative Image Position----

_ ___ ______ ______________________ ______ __ ___ ___ ___ ___ ___ ___ ___ ___ ___
S Num VolSer ------Datasets------ Member Sx Dif 001 002 003 004 005 006 007 008
_ 001 ------ non_specific_________ IPLPRM -- <=> Aok War Aok Aok --- --- --- ---
_ 002 ZDSYS1 SYS1.IPLPARM_________ NUCLST 00     Aok Aok Aok Aok --- --- --- ---
_ 003 ZDRES1 SYS1.NUCLEUS_________ IEANUC 01     Aok Aok Aok Aok --- --- --- ---
_ 004 ZDRES1 SYS1.NUCLEUS_________ IEANUC 21     Aok Aok Aok Aok --- --- --- ---
_ 005 ------ non_specific_________ SCATDS --     Aok Aok Aok Aok --- --- --- ---
_ 006 ------ non_specific_________ IODFDS -- <=> Aok War Aok Aok --- --- --- ---
_ 007 ------ non_specific_________ PARMDS -- <=> Aok War Aok Aok --- --- --- ---
_ 008 ZDSYS1 USER.PARMLIB_________ IEASYM XA     Aok --- --- --- --- --- --- ---
_ 009 ZDRES1 ADCD.Z113.PARMLIB____ IEASYS 00     Not Not Not Not --- --- --- ---
_ 010 ZDSYS1 USER.PARMLIB_________ IEASYS WS     Not Not Not Not --- --- --- ---
_ 011 ZDSYS1 USER.PARMLIB_________ IEASYS XA     Aok --- --- --- --- --- --- ---
_ 012 ZDRES1 ADCD.Z113.PARMLIB____ IEASVC 00     Aok Aok Aok Aok --- --- --- ---
_ 013 ZDSYS1 USER.PARMLIB_________ PROG__ 01 <=> Aok War Aok Aok --- --- --- ---
_ 014 ZDRES1 ADCD.Z113.PARMLIB____ IEAFIX 00     Aok Aok Aok Aok --- --- --- ---
_ 015 ZDSYS1 USER.PARMLIB_________ IEALPA 00     Aok Aok Aok Aok --- --- --- ---

Option ===>                                                  Scroll ===> CSR
```

6.2.5.2 Element Analytic Inspection Detail and Comparison

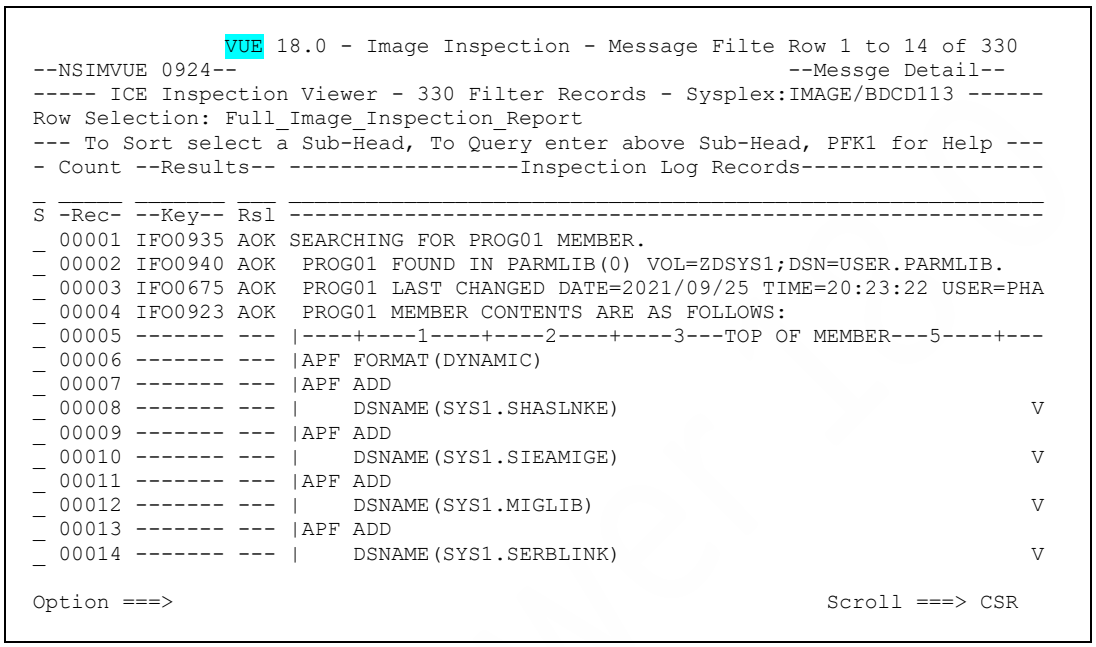
The Inspection Detail Worksheet shows a comparison of Inspection Results for the selected Image Element for all defined Images. To review Inspection findings related to an Element by Image/System use the “V” Row Command.



```
                  VUE 18 - ICE Viewer - Cross Image Inspection Row 1 to 4 of 4
--NSIMVUE 0924--                                             ---Cross Image---
------- 4 Images - Element Volser:ZDSYS1 Dsn(Mbr):USER.PARMLIB(PROG01) --------
Row Selection: Show_the_Message_Filter View_the_Element_Inspection_Findings
- Row --------Images Inspected------- ---------Image Element Findings----------

_ ___ ________ ____ ________ ________ ___ ___ ___ ___ _______ ________ ________
S Num -System- Unit LoadParm --Date-- Aok Err War Not TsoUser -Update- hh:mm:ss
_ 001 ADCD113_ 0A80 0A82XA.1 21/09/04 Aok             PHARL2_ 21/06/25 20:23:22
_ 002 BDCD113_ 0A80 0A82XB.1 21/07/30         War     PHARL2_ 21/06/25 20:23:22
_ 003 CDCD113_ 0A80 0A82XC.1 21/12/13 Aok             ADCDMST 21/07/05 10:42:13
_ 004 DDCD113_ 0A80 0A82XD.1 21/12/12 Aok             ADCDMST 21/07/05 10:42:13
****************************** Bottom of data ******************************


Option ===>                                                  Scroll ===> CSR
```

6.2.5.3 View Element Inspection Detail

The View provided is of the full set of Inspection Log Records created for the selected Element by Image/System. These records may be sorted and filtered. To filter for Inspection Errors enter 'ERR' above 'Rsl Column' and press enter. Only Error records will be displayed.



6.3 The Image Manager

The Image Manager turns the IPLCheck LPAR Inspection Logs into baseline and uses them to build a z/OS Change Management and Reporting System. This system can be used to track changes between:

1. Production Settings vs. Production Baseline
2. Production Settings vs. Production Snapshot
3. Alternate Settings vs. Alternate Baseline
4. Alternate Settings vs. Alternate Snapshot
5. Production Settings vs. Alternate Settings

Using the Image Manager you can monitor each of these Compare Points for every LPAR where IPLCheck-Core and IPLCheck-Plus are running. This will work not only for IPL problems but also for IPL configuration changes and other critical change profiles. Change profiles include:

1. Inspection Findings
2. Health Checker Status
3. Runtime Diagnostics
4. Prevailing Parmlib Members
5. Member Content
6. System Modules (LPA, LNK, APF)
7. System Datasets
8. System Volumes
9. TCE Change Events
10. Dynamic Changes (LPA, LNK, APF, SYM, TSO Commands/Programs)

Each Compare Point and each profile is reported in both a summary and detailed format making it very easy to drill down into configuration changes on an LPAR by LPAR basis.

This optional ICE Viewer Access Point requires The Supplemental License Key. When the Key is present you may access each monitored LPAR simply by adding them to the panel shown below.

6.3.1 Image Manager Access Point Worksheet

```
VUE 18 - ICE Viewer - Target Setup Selection Row 1 to 3 of 3
  --NSIMVUE 0930--                                          ---Target List---
  ------------ Peer System Selection - 3 Production Configurations ------------
  Row Selection: Show_Report_Select_Interface Add_Setup Delete_Setup Update_Setup
  --- To Sort select a Sub-Head, To Query enter above Sub-Head, PFK1 for Help ---
  - Row ---Managed IPL Target Setup--- Rpt ----Update---- ------Description------

  _ ___ _____________________________ ___ ________ _____ ________________________
  S Num ------Dataset Qualifiers------ Ttl yy/mm/dd hh:mm ------Description------
  _ 001 IFO.IFOP.$TCEDIPL.@NEZ1_______   1 21/08/28 18:21 Running_System_Setup
  _ 002 IFO.TEST.$TCEDIPL.@NEZ1_______   9 21/08/28 10:18 Test_System_Setup
  _ 003 IFO.PROD.$TCEDIPL.@NEZ1_______  12 21/08/28 09:26 ATM_Production
****************************** Bottom of data ********************************

  Option ===>                                                Scroll ===> PAGE
```

Selecting and entry from the Image Manager Setup Selection Panel will immediately display the Image Manger Interface.

6.3.2 The Image Manager Interface Panel

The Image Manager interface panel is divided into two halves. To the left are shown the Date and Time Stamps of the available Change Reports; to the right is shown a summary of changes contained in the selected report.

```
                    VUE 18 - ICE Viewer - Image Manager Interface

 --Manager Reports--- | --  --Date--  --Time--  ----Peer Manager Findings----
 Cm   Date     Time   | Cm  21/08/30  12:32:56  Production   Alternate  Cross
 -- -------- -------- | -- --Profiled Element-- Prime Snaps Prime Snaps Image
 .. 21/08/30 12:32:56 | .. Inspection Findings   ---   ---   ---   ---   ---
 .. 21/08/30 10:30:54 | .. z/OS Health Checks    ---   ---   ---   ---   ---
 .. 21/08/30 08:28:51 | -- -------------------- ----- ----- ----- ----- -----
 .. 21/08/30 06:26:49 | .. Runtime Diagnostics   ---   ---   ---   ---   ---
 .. 21/08/30 04:24:47 | .. Prevailing Members    ---   ---   ---   ---   ---
 .. 21/08/30 02:22:44 | -- -------------------- ----- ----- ----- ----- -----
 .. 21/08/30 00:20:42 | .. Full Member Content   ---   ---   ---   ---   ---
 .. 21/08/29 22:18:40 | .. System Modules        CNG   CNG   CNG   CNG   ---
 .. 21/08/29 20:16:37 | -- -------------------- ----- ----- ----- ----- -----
 .. 21/08/29 18:14:34 | .. System Datasets       ---   ---   ---   CNG   ---
 .. 21/08/29 16:12:32 | .. System Volumes        ---   ---   ---   ---   ---
 .. 21/08/29 14:10:29 | -- -------------------- ----- ----- ----- ----- -----
 .. 21/08/28 23:56:09 | .. TCE Journal Events    ---   ---   ---   ---   ---
 .. 21/08/28 21:54:06 | .. Dynamic Changes       ---   ---   ---   ---   ---
 -- -------- -------- | -- -------------------- ----- ----- ----- ----- -----

  Report Options: .. Sheet NO  .. Store NO  .. Print NO  .. Email NO  .. Reset

 Option ===>                                              Scroll ===> PAGE
```

Take note that the selected report is highlighted in green on the left and its Date and Time shown in green at the top left of the right half of the panel. By default the most recent report, always shown at the top of the report list, is selected. To select any other report cursor under its Date and/or Time or place an “S” on the entry point that precedes, and press enter. This action will immediately switch reports. Note that changes, if any, identified in the report are highlighted in the white, underlined, text “CNG” shown in the right half of the display. To view the underlying change details in an ISPF Browse session cursor under “CNG” and press enter. To switch to an interactive worksheet, change the “Sheet” Option from “NO” to “OK” before you select “CNG”. To do this cursor under “Sheet” or place an “S” on the entry point that precedes, and press enter.

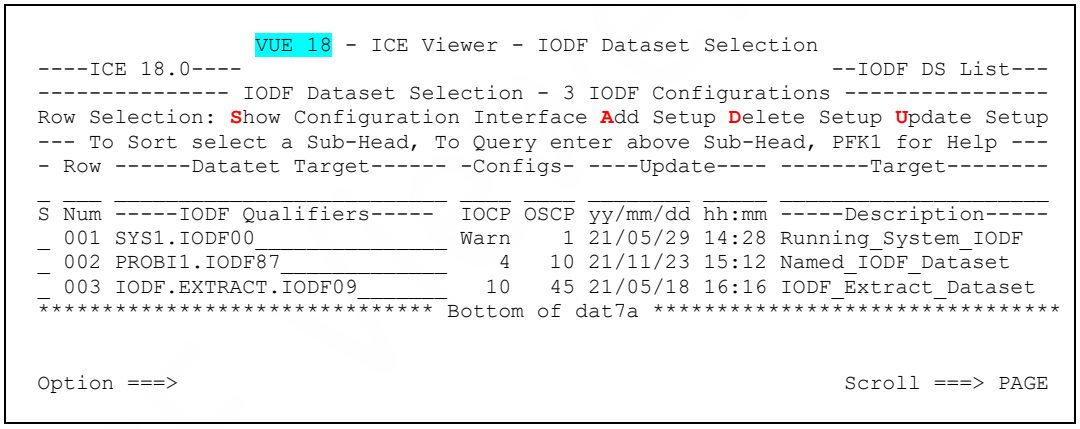
Additional options are provided which allow you to Print, Store and Email Reports. Each must be toggled to “OK” before you select “CNG” or any other underlined white text.

6.4 StepOne – Accessing IODF Dataset Contents

The IODF Dataset is stored as a VSAM Cluster accessible via HCD and/or HCM. Generally only those with a specialized knowledge of zEnterprise Configurations are allowed to manipulate its content. This tends to fence-off others, often those with a legitimate need to know more about a given configuration, from being able to access that information on their own or without becoming a nuisance to those with knowledge and access. The StepOne Application is designed to solve this dilemma by allowing most knowledgeable system staff to explore an IODF Dataset, on their own without fear of altering it in any way.

To do its job StepOne relies on the IBM Utility CBDMGHCP to read and extract the zEnterprise configurations locked inside a targeted IODF. By default, it will identify the local, running system IODF each time the "StepOne" access point is selected presenting its findings in the first row of the Access Point Worksheet.

6.4.1 StepOne Access Point Worksheet



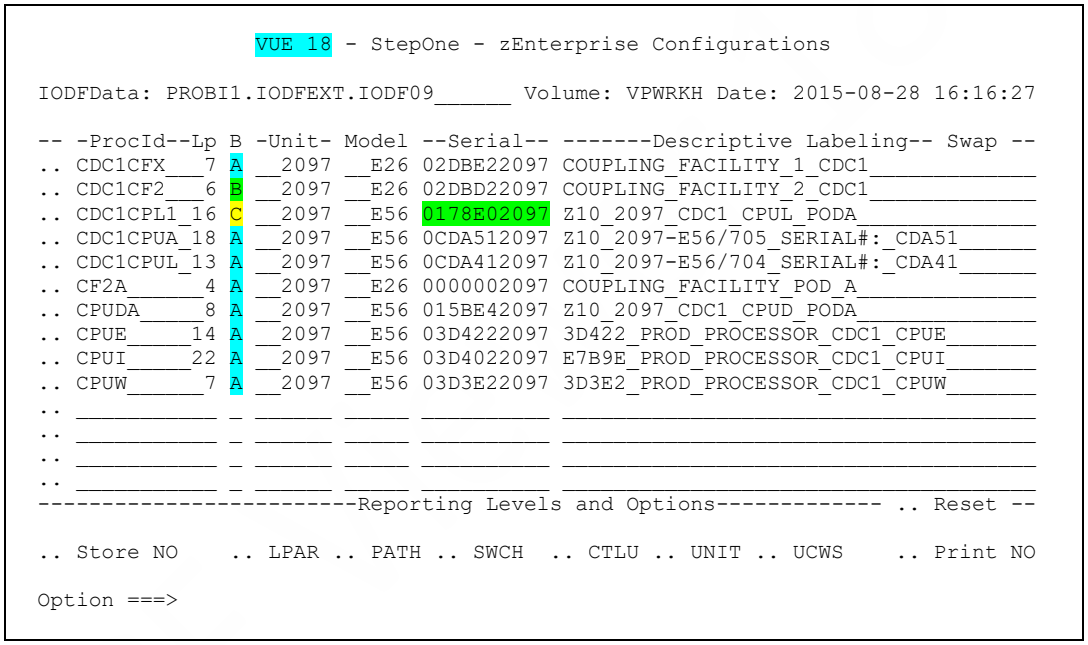
The purpose of "StepOne" Access Point Worksheet is to:

- Provide an overview of a targeted IODF. When possible the running system IODF Dataset is automatically detected and added to (or updated in) the Worksheet each time it is accessed.
- Allow you to add and/or delete additional IODF Datasets. For example, you might elect to add one or more "Work" IODF Datasets or IODF Extract Datasets to the worksheet.
- Update the configuration status of additional IODF Datasets that have been added to the worksheet.

- Provide access to a set of supporting worksheets that will display a more detailed view(s) of the zEnterprise configuration elements; IOCP, OSCP found in a selected IODF Dataset. See also the StepOne User Guide.

6.4.2 zEnterprise Configuration Selection Worksheet

The zEnterprise Configuration Selection Worksheet displays a listing of all Processors found in the selected IODF. If the serial number of the Processor ICE is installed on is found, its serial number is highlighted in green. If the processor is not found a message is displayed stating that the serial number is not available with the selected IODF.



When in either the Access Point Worksheet or the zEnterprise Configuration Interface use PFK1 for additional panel specific help.

6.4.3 The Supplemental License Option

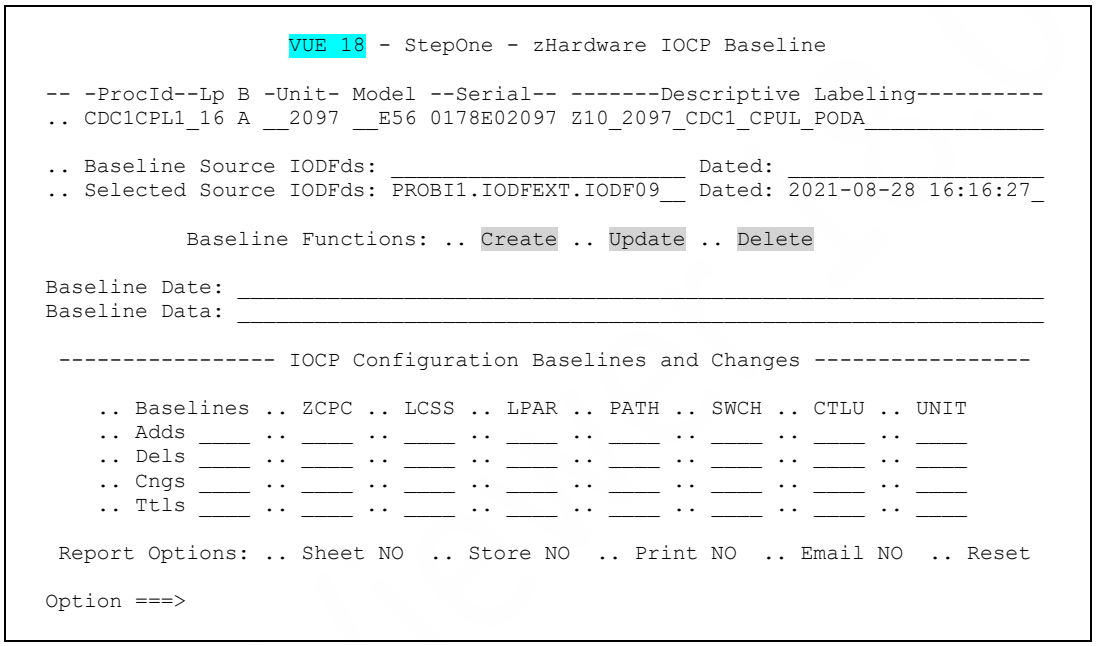
When the Supplemental License Key is detected the Configuration Selection Worksheet will “Open Up” Hardware, IOCP, configuration Baselines and Change Detection.

You will likely note this when the “B” column in the worksheet displays the highlighted character “A” next to each Processor Identifier. If you have been working with these optional functions, you will see the highlighted character “B” to indicate

that a baseline exists for a related processor but that no change has been detected. When you see the highlighted character "C" it indicates that a change has been detected in the related processors IOCP configuration.

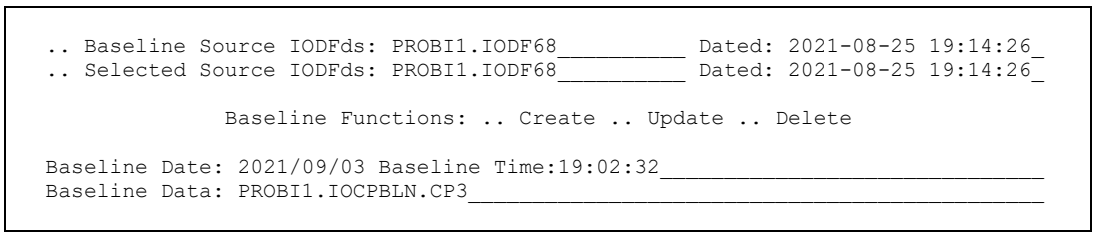
All baselines are examined for changes in real-time so if any changes do exist, they are reported immediately upon entry into the panel.

To setup or view a baseline or reported changes cursor under "A,B,C" on place "B" in the access point proceeding the Processor Identifier and press enter. This action will immediately display the zHardware IOCP Baseline Interface Panel.



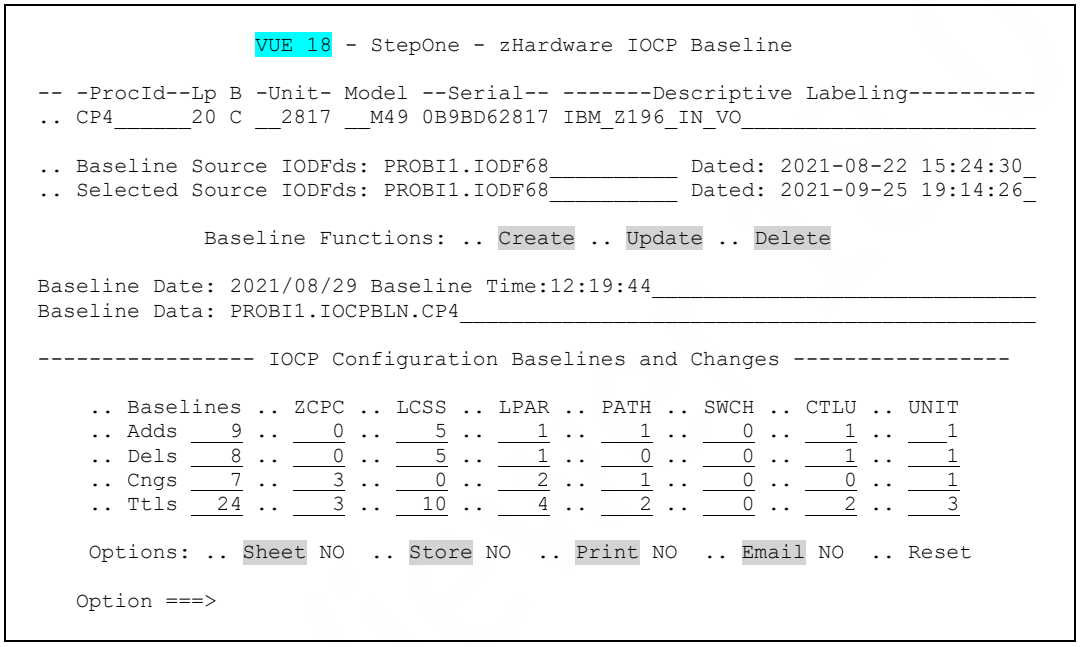
The panel will display processor specific information only until you build a baseline.

Use the "Create" function to build a baseline. To do this cursor under "Create" or place an "S" on the access point preceding it a press enter. You will be asked to confirm your intention to build the baseline. If confirmed the process will continue displaying a confirmation of successful completion and redisplay the panel with source and baseline fields updated. Placing the cursor under any underlined white text and pressing enter will display a related report or baseline.

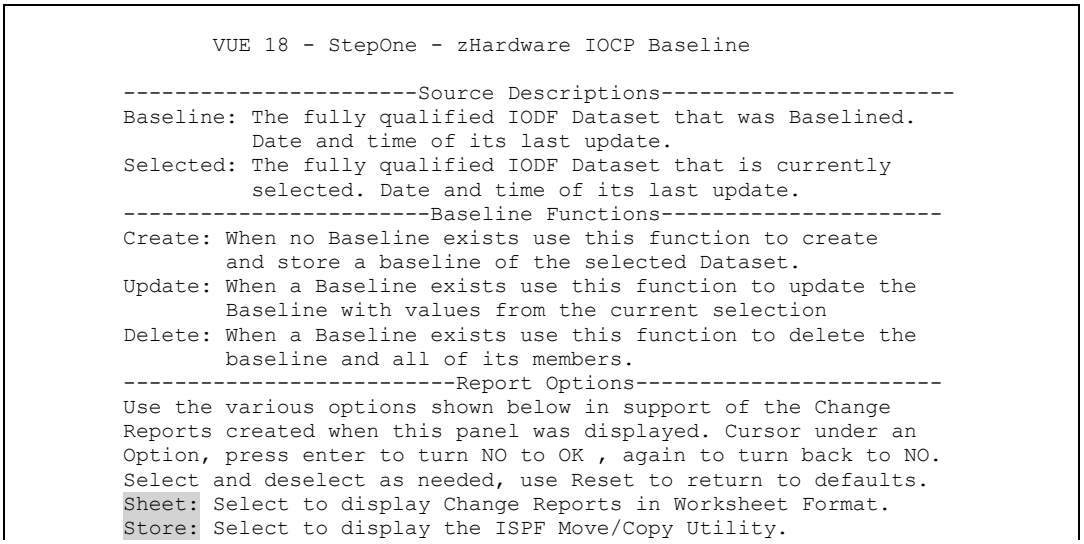


As needed, update the baseline to reestablish a neutral compare point or “Delete” to delete an existing baseline.

When changes are detected and reported on the primary menu reentering the Baseline Interface panel will reveal the changes on an IOCP by IOCP element basis. Placing the cursor under any underlined white, positive value, will display a report on the discovered changes.



Selecting PFK1 will display the following HELP Panel.



```
Print: Select to display the ISPF Hardcopy Utility.
Email: Select to display the Email Client Interface
```

JEvents – Accessing TCE Event Timelines

The Control Editor is designed to detect and record changes to members in named Controlled Datasets to detect and record the use of Operator Commands that are used; for example, to change External Security Manager (ESM) Policy settings and/or z/OS Configuration settings to detect and record named System Messages and other Defined System Events. Recorded Changes and Events are date and time stamped as well as stored in the Control Editor maintained Control Journals.

The "JEvents" Access Point Worksheet uses the journaled event date and time stamps to construct a Timeline of activity for each Event Class. Each Event Class, in turn, has a number of sub-classes whose activity can be viewed in supporting Worksheets. Individual daily timelines can be compressed into weekly, monthly, quarterly or annual timelines; each may be useful in identifying activity trends.

Unlike the other Access Points that allow you to add other configurations, clusters or entities the "JEvents" Access Point currently only supports the local, running system that is actively hosting The Control Editor and its Control Journals.

6.4.4 JEvents Access Point Worksheet

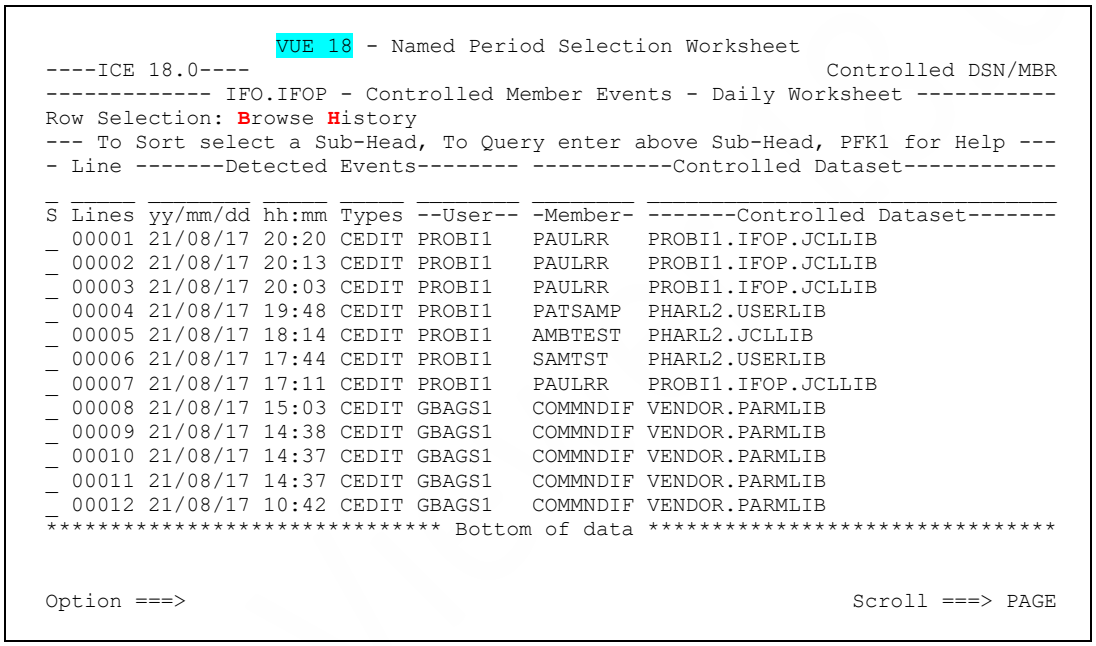
```
                  VUE 18 - Period Event Timeline Worksheet
----ICE 18.0----                                              ----Day-By-Day----
-------------- IFO.IFOP - The Day-By-Day Event Worksheet Interface ------------
Row Selection: Browse a Day
---------Alternate Views--------- - ---------Default Period Selection----------
Sysplex  System  CauseId  Periods - Daily  Weeks  Month  Quarter  Annual  Total
------ To Reorder the Columns select a related Event Class, PFK1 for Help -----
S Line ---Date--- Total Stage Dtec Xmit Oper Supp Mess ESMp TCEp Excp Insp Note
_ 0001 2021/01/26    43     0    0    0    0    0   16    0    0    0    3   24
_ 0002 2021/01/25   100     0    0    0    0    1   24    1    0    0    3   71
_ 0003 2021/01/24   203     3    0    0    0    0   12    2   60    0    3  123
_ 0004 2021/01/23   201     4    2    0    3    1    0    5   44    1    3  138
_ 0005 2021/01/22    61     1    0    0    0    0   14    0    6    0    4   36
_ 0006 2021/01/21   370     0    0    0    0   14   24    4   75    0    4  249
_ 0007 2021/01/20   361     0    0    0    0   16   22    0   82    0    4  237
_ 0008 2021/01/19   312     3    2    2   16    2   25    2   80    0    4  176
_ 0009 2021/01/18   171     9    6    2    5    0   10    0   72    0    0   67
_ 0010 2021/01/17   254    12    0    0    0    0   44    0   56    0   10  132
_ 0011 2021/01/16   287     8    5    0    0    4   44    0   70    0   11  145
_ 0012 2021/01/15   177     0    0    0    0    5   48    0   42    0    4   78
_ 0013 2021/01/14   171     0    0    0    0    0   48    0   14    0    4  105
_ 0014 2021/01/13   179     6    2    0    0    0   48    0   10    0    4  109

Option ===>                                                Scroll ===> PAGE
```

When a set of events along a Timeline is of interest to you simply cursor under it and press enter to display The Period/Event Selection Worksheet.

6.4.5 Period/Event Selection Worksheet

The Period/Event Selection Worksheet displays the list of recorded events within the selected Event Class that took place at the same time period along the Timeline. For example, if the Timeline is for a day, then all of the events within the selected class for that specific day will be displayed.

Two Row Selection Options are supported. Use “B” to Browse the lowest level of detail available about the selected event and use “H” to view the complete History of the Member associated with the selected event.



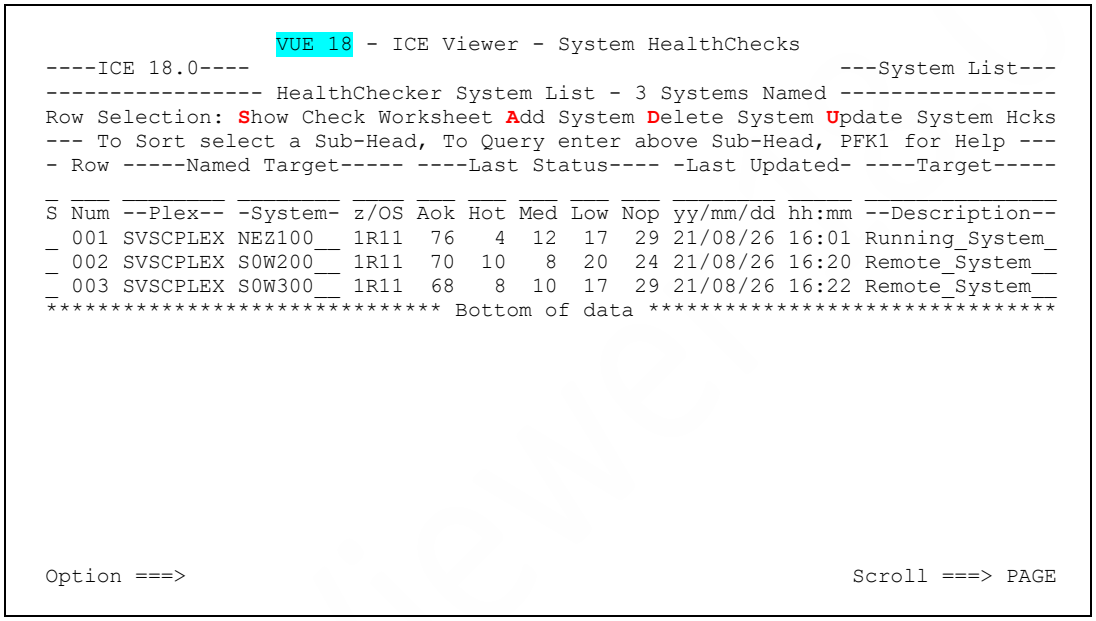
```
                  VUE 18 - Named Period Selection Worksheet
----ICE 18.0----                                              Controlled DSN/MBR
------------- IFO.IFOP - Controlled Member Events - Daily Worksheet -----------
Row Selection: Browse History
--- To Sort select a Sub-Head, To Query enter above Sub-Head, PFK1 for Help ---
- Line -------Detected Events-------- -----------Controlled Dataset------------
_ _____ ________ _____ _____ ________ ________ ________________________________
S Lines yy/mm/dd hh:mm Types --User-- -Member- -------Controlled Dataset-------
_ 00001 21/08/17 20:20 CEDIT PROBI1   PAULRR   PROBI1.IFOP.JCLLIB
_ 00002 21/08/17 20:13 CEDIT PROBI1   PAULRR   PROBI1.IFOP.JCLLIB
_ 00003 21/08/17 20:03 CEDIT PROBI1   PAULRR   PROBI1.IFOP.JCLLIB
_ 00004 21/08/17 19:48 CEDIT PROBI1   PATSAMP  PHARL2.USERLIB
_ 00005 21/08/17 18:14 CEDIT PROBI1   AMBTEST  PHARL2.JCLLIB
_ 00006 21/08/17 17:44 CEDIT PROBI1   SAMTST   PHARL2.USERLIB
_ 00007 21/08/17 17:11 CEDIT PROBI1   PAULRR   PROBI1.IFOP.JCLLIB
_ 00008 21/08/17 15:03 CEDIT GBAGS1   COMMNDIF VENDOR.PARMLIB
_ 00009 21/08/17 14:38 CEDIT GBAGS1   COMMNDIF VENDOR.PARMLIB
_ 00010 21/08/17 14:37 CEDIT GBAGS1   COMMNDIF VENDOR.PARMLIB
_ 00011 21/08/17 14:37 CEDIT GBAGS1   COMMNDIF VENDOR.PARMLIB
_ 00012 21/08/17 10:42 CEDIT GBAGS1   COMMNDIF VENDOR.PARMLIB
******************************* Bottom of data ********************************


Option ===>                                                 Scroll ===> PAGE
```

When in either the Access Point Worksheet or Period Selection use PFK1 for additional panel specific help.

6.5 zChecks – Accessing Sysplex-Wide Check Status

The IBM Health Checker for z/OS (V1R13) is distributed with over 180 specific Checks. Of these approximately 160 are related to system operations while the remainder focus on system migration. It is quite likely that each of your specific Health Checker installation(s) will have a varying number.

6.5.1 zChecks Access Worksheet



The purpose of "zChecks" Access Point Worksheet is to:

- Provide an overview of Check Status. The running system Health Check status is automatically detected and added to (or updated in) the Worksheet each time it is accessed.
- Allow you to add and/or delete additional remote z/OS Systems Monitored by the Health Checker to the worksheet.
- Update the check status of remote z/OS Systems Monitored by the Health Checker that have been added to the worksheet.
- Provide access to a supporting worksheet that displays the full status of individual checks or specific by classifications; Aok, Hot, Med, Low and Nop by named system.

6.5.2 Health Check Results Worksheet

The Health Check Results Worksheet show, check by check, the status/finding of each individual check. The Row Selection Option, Show, allows you to drill down into "Check Reports" that detail the policies controlling the check, the specific check findings and possible remediation strategies. The Row Selection Option, Compare, allows you to compare the content of the current worksheet to a baseline that was previously saved. The baseline can be refreshed at any time. See also The Control Editor User Guide.

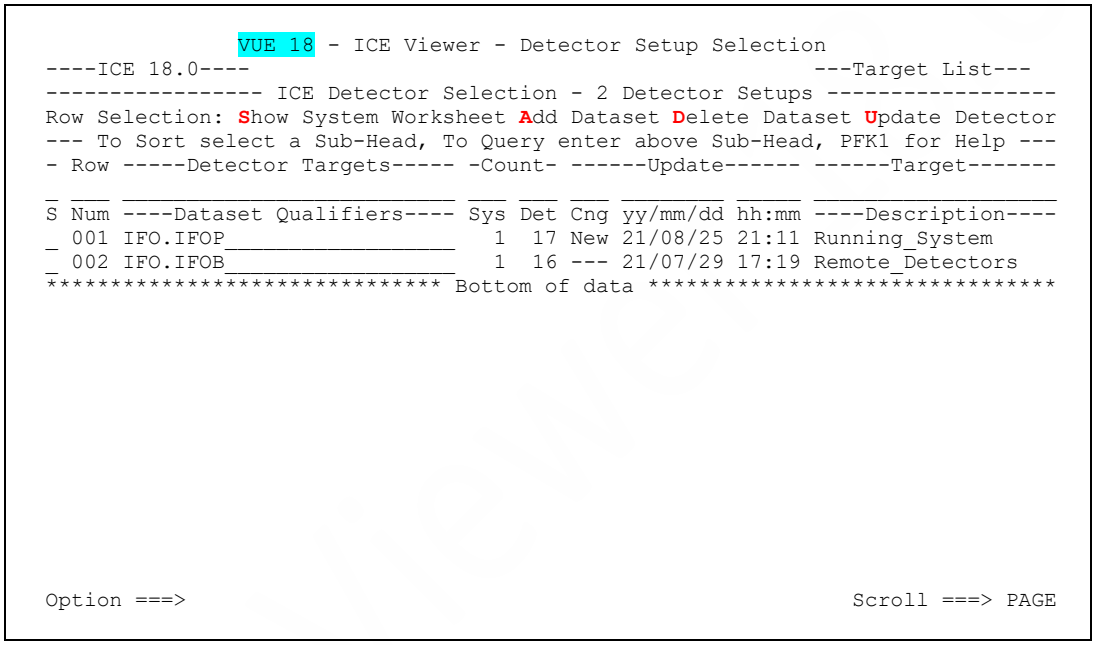
```
                    VUE 18 - ICE Viewer - Health Check Results
----ICE 18.0----                                                --Health Checks--
----------- Configuration Worksheet - 138 Health Checks Discovered ------------
Row Selection: Show Full Health Check Report Compare with Health Check Baseline
--- To Sort select a Sub-Head, To Query enter above Sub-Head, PFK1 for Help ---
- Rec -System- --------------------Health Check Results----------------------
_ ___ ________ ___ ________ ____________________________________ ________ _______
S Num --Name-- Sev -Result- ------------Check Names----------- -Policy- -State-
_ 001 NEZ1     LOW EXCEPTS  USS_HFS_DETECTED                    ACTIVE   ENABLED
_ 002 NEZ1     AOK SUCCESS  USS_CLIENT_MOUNTS                   ACTIVE   ENABLED
_ 003 NEZ1     AOK SUCCESS  USS_PARMLIB_MOUNTS                  ACTIVE   ENABLED
_ 004 NEZ1     LOW EXCEPTS  USS_MAXSOCKETS_MAXFILEPROC          ACTIVE   ENABLED
_ 005 NEZ1     NOP ENV      USS_AUTOMOUNT_DELAY                 ACTIVE   DISABLE
_ 006 NEZ1     AOK SUCCESS  USS_FILESYS_CONFIG                  ACTIVE   ENABLED
_ 007 NEZ1     NOP ENV      CSTCP_CINET_PORTRNG_RSV_TCPIP       ACTIVE   DISABLE
_ 008 NEZ1     AOK SUCCESS  CSTCP_SYSPLEXMON_RECOV_TCPIP        ACTIVE   ENABLED
_ 009 NEZ1     AOK SUCCESS  CSTCP_TCPMAXRCVBUFRSIZE_TCPIP       ACTIVE   ENABLED
_ 010 NEZ1     AOK SUCCESS  CSTCP_SYSTCPIP_CTRACE_TCPIP         ACTIVE   ENABLED
_ 011 NEZ1     NOP INACTIVE ZOSMIGV1R11_CS_DNSBIND9             INACTIVE ENABLED
_ 012 NEZ1     NOP INACTIVE ZOSMIGV1R11_CS_RFC4301              INACTIVE ENABLED
_ 013 NEZ1     AOK SUCCESS  CSVTAM_T1BUF_T2BUF_NOEE             ACTIVE   ENABLED
_ 014 NEZ1     NOP ENV      CSVTAM_T1BUF_T2BUF_EE               ACTIVE   DISABLE
_

Option ===>                                                     Scroll ===> PAGE
```

When in either the Access Point Worksheet or the Check Results Interface use PFK1 for additional panel specific help.

6.6 Detects – Accessing Detected Change Reports

Detectors are designed to detect changes in z/OS Configuration elements, for example, DB2, IMS, SVC, Volume, RACF and many others. While in general, all detectors are configured using the NSEDET00 and NSEENS00, ICE control members each may have specific/unique setup requirements. For example ICE address space will need "Auditor Authority" in order to run the RACF Profile Change Detector.

6.6.1 Detects Access Worksheet



The purpose of "Detects" Access Point Worksheet is to:

- Provide an overview of Detector Status. The running system Detector setup is automatically detected and added to or updated in the Worksheet each time it is accessed.
- Allow you to add and/or delete additional remote z/OS System setups Monitored by the Supplemental Detectors to the worksheet.
- Update the Detector status of remote z/OS System setups Monitored by the Supplemental Detectors that have been added to the worksheet.
- Provide access to a supporting worksheet that displays the full status of the individual Detector setups.

6.6.2 Supplemental Detector Interface

The Supplemental Detector Interface shows the current status of each individual Detector by both long and short name. If it is currently set to produce Background Reports, the configuration policies that control it- Baseline Type, its Background Interval and whether or not it has been enabled to send email, the date and time of the last Background Execution and finding- and finally whether or not the latest report has previously been called to your attention.

Worksheet Row Selection options are provided. “S” will direct you to the Detectors Background Settings, “V” to the Background Report Inventory and “C” allows you to execute the Detector interactively directing it against the last available Baseline.

```
                    VUE 18 - Supplemental Detector Interface

---------------- Environment is IFO.IFOP - 17 Local Detectors -----------------
Row Selections: Setup Background Report View Latest Report Cycle for New Report
- Rec -----------Detectors----------- Bkg ----Policy---- ---Last Results--- New
S Num -Module- ---------Name--------- Set -Base- Cyc Eml yy/mm/dd hh:mm Cng Rpt
_ 001 NSIMSVCX z/OS System SVCS       Yes Moving Day Yes 21/08/25 20:14 --- ---
_ 002 NSIMVOLX System DASD Volumes    Yes Moving Day Yes 21/08/25 20:21 --- ---
_ 003 NSIMLODX Module Libraries       Yes Moving Day Yes 21/08/25 20:28 --- ---
_ 004 NSIMMBRX Member Datasets        Yes Moving Day Yes 21/08/25 20:05 --- ---
_ 005 NSIMIODX IODF Configuration     Yes Moving Day Yes 21/08/25 21:19 --- ---
_ 006 NSIMCHKX System Health Checks   Yes Moving Day Yes 21/08/25 20:45 --- ---
_ 007 NSIMCSDX CICS CSDS Settings     Yes Moving Day Yes 21/08/25 21:38 --- ---
_ 008 NSIMDB2X DB2 Parameters         Yes Moving Day Yes 21/08/25 21:26 Yes ---
_ 009 NSIMIMSX IMS PROCS and PARMS    Yes Moving Day Yes 21/08/25 21:37 --- ---
_ 010 NSIMUSRX System IPL Date/Time   Yes Fixed  Mth Yes 21/08/26 11:28 Yes ---
_ 011 NSIMDSMX IBM/RACF Profile       Yes Moving Day Yes 21/08/25 21:11 --- ---
_ 012 NSIMIFOX Image FOCUS Messages   Yes Moving Day Yes 21/08/25 21:31 --- ---
_ 013 NSIMPPTX Program Properties     Yes Fixed  Day Yes 21/08/25 21:39 --- ---
_ 014 NSIMAPFX APF Authorization      Yes Fixed  Day Yes 21/08/25 19:46 Yes ---
_ 015 NSIMPAKX Image FOCUS Packages   Yes Fixed  Day Yes 21/08/25 19:47 --- ---
_ 016 NSIMXCFX Coupling Facility      Yes Fixed  Day Yes 21/08/25 20:27 --- ---
_ 017 NSIMCEWX TCE Controlled Events  Yes Moving Day Yes 21/08/25 20:36 Yes ---

Option ===>                                                Scroll ===> PAGE
```

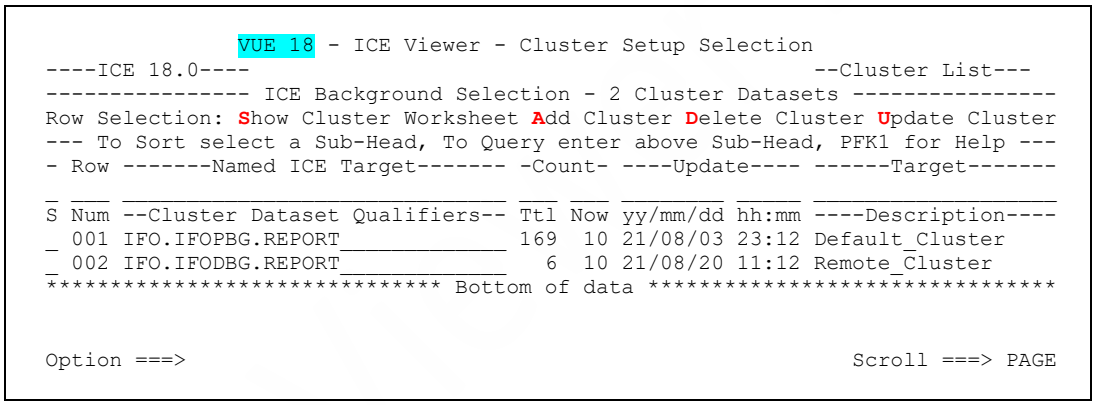
When in either the Access Point Worksheet or the Detector Interface use PFK1 for additional panel specific help.

6.7 IReport - Accessing Background Inspection Reports

Image FOCUS is designed to perform a virtual IPL of an Image and when configured, a Sysplex and all of its Images. These Sysplex configurations can be promoted, a process of copying workbench definitions to production, and then inspected automatically in the background at a defined interval all managed under the control of the Image FOCUS Production View. The resulting inspection findings, one for each individual Image and one for the Sysplex, are stored in sequential datasets called Report Clusters.

When Background Monitoring and Reporting is operational Background Report Clusters can be viewed using the Reports options provided by the Image FOCUS Production View or via the ICE Viewer Access Control Point "IReport".

6.7.1 Image FOCUS Report Cluster Access Worksheet



The purpose of "IReport" Access Point Worksheet is to:

- Provide an overview of Image Focus Background Reporting Status. The running system Report Clusters are automatically detected and added to or updated in the Worksheet each time it is accessed.
- Allow you to add and/or delete additional remote setup clusters operating under the control of Image FOCUS to the worksheet.
- Update the setup cluster status of remote clusters operating under the control of Image FOCUS that were added to the worksheet.
- Provide access to a supporting worksheet that displays the full status of the individual Report Clusters.

6.7.2 Image FOCUS Background Interface

The Image FOCUS Background Results Worksheet breaks down the content of each Sysplex Reporting Cluster into two primary elements: Sysplex Inspection and Image Inspection(s). The results of each are noted for the Sysplex in the "Plx" Column while the results of the Image Inspection- z/OS, JES, VTAM, TCP/IP and CICS- are shown in their respective columns under the heading "Conditional Messages". Changes noted during the latest Inspection as compared to the prior are noted at the Image level in the "Cng" column.

Row Selection commands allow you to "Show" the Inspection Report Library, a worksheet from which you drill down into content of the Image Inspection Log, "Display" configuration changes, if any, and finally "View" an Image's Configuration.

Note: The actual number of Report Clusters included in this worksheet is determined by the value appearing in the "Now" column of the Cluster Access Point Worksheet described above. By Default the number is 10.

```
                    VUE 18 - ICE Viewer - Background Results
----ICE 18.0----                                                -----Results-----
--------- Background Reports - 19 Inspections - Dsn:IFO.IFOPBG.REPORT ---------
Row Selection: Show Report Library Display System Changes View a Configuration
--- To Sort select a Sub-Head, To Query enter above Sub-Head, PFK1 for Help ---
- Row ---------Target--------- --Conditional Message-- ---Interval--- -Cluster-

S Num --Plex-- Plx Nm -Images- zOS Jes Vtm Tcp Cic Cng yy/mm/dd hh:mm DsnSuffix
_ 001 PROD0008 Not 01 IMAGTST3 Err War Aok Aok Err Nop 21/08/21 19:49 294.T1948
_ 002 DRSYSTEM Err 01 IAMGTST4 Err War Aok Aok Err Nop 21/08/22 19:53 295.T1949
_ 003              02 IAMGTS4A Err War Aok Aok Err Nop 21/08/22 19:53 295.T1949
_ 004              03 IMAGTST2 Err War Aok Aok Err Nop 21/08/22 19:53 295.T1949
_ 005 PROD0001 Err 01 IMAGTST2 Err War Aok Aok Err Nop 21/08/22 19:55 295.T1953
_ 006              02 IMAGTS2A Err War Aok Aok Err Nop 21/08/22 19:55 295.T1953
_ 007 PROD0005 Err 01 IMAGTST5 Err War Aok Aok Err Nop 21/08/22 19:57 295.T1955
_ 008              02 IMAGTS5A Err War Aok Aok Err Nop 21/08/22 19:57 295.T1955
_ 009 PROD0006 Err 01 IMAGTST1 War War Aok Aok Aok Nop 21/08/22 20:01 295.T1957
_ 010              02 IMAGTS1A War War Aok Aok Aok Nop 21/08/22 20:01 295.T1957
_ 011              03 IMAGTS1B War War Aok Aok Aok Nop 21/08/22 20:01 295.T1957
_ 012 PROD0008 Not 01 IMAGTST3 Err War Aok Aok Err Nop 21/08/22 20:02 295.T2001
_ 013 DRSYSTEM Err 01 IAMGTST4 Err War Aok Aok Err Yes 21/08/03 23:02 307.T2300
_ 014              02 IAMGTS4A Err War Aok Aok Err Yes 21/08/03 23:02 307.T2300

Option ===>                                                 Scroll ===> PAGE
```

When in either the Access Point Worksheet or the Image FOCUS Background Report Interface, use PFK1 for additional panel specific help.

7 Downloading and Installing “Full” or “Free” ICE

7.1 Planning for Installation

This section describes the steps necessary to prepare for installation of ICE, including: 1) Planning for Cataloging Datasets, 2) Selecting an index, and 3) Authorizing load libraries.

NOTE: There is an Installation Checklist available in the ICE readme file. The readme file is available via a download link, which is included in the Product Services Resource Links email that is sent by NewEra Support.

7.1.1 Selecting a High Level Qualifier

Select a high level qualifier (&nssprfx) to be used for the ICE related dataset names.

7.1.2 Select a Volume for Dataset Allocation

Select a volume to be used for the ICE datasets. This volume will be used in the symbolic DSKVOLU.

7.1.3 Authorizing Load Libraries

The ICE load library must be authorized in SYS1.PARMLIB member IEAAAPFxx or PROGxx.

7.1.4 JCL Symbolics

The following symbolic parameters may need to be changed to conform to your installation standards in the Image FOCUS PROC and installation JOBS:

```
Mnemonic      Mnemonic Description
SPFPRFX    - IBM ISPF dataset prefix
NSSPRFX    - Image FOCUS chosen dataset prefix
DSKUNIT    - DASD unit for new ICE datasets
DSKVOLU    - VolSer for new ICE datasets
```

7.1.5 Upgrading from a Prior Release

If you are upgrading to a new release from an older, prior release you will need to reinstall.

In addition, if you are back-leveled to a much older release you may need to update your License Authorization Code(s). To receive new License Authorization Codes, provide NewEra Technical Support with the CPU MODEL and SERIAL NUMBER(s) of the CPU(s) on which you plan to install.

Please contact NewEra Technical Support using one of the following:

- 1-800-421-5035 or 408-520-7100
- support@newera.com

7.1.6 Customizing an Installation

Once ICE is installed, follow these instructions to customize as needed:

7.1.7 Authorizing Load Library

To authorize the ICE load library (&nssprfx.LOAD):

- Add the dataset name and volume serial number of the load library to the APF member list in either IEAAPFxx or PROGxx.

- If IEAAPFxx is used, edit the IEAAPFxx member in SYS1.PARMLIB adding the following line:

```
"&nssprfx".LOAD volser,
```

  Where "volser" is the volume serial number on which the ICE LOAD library will reside. "&nssprfx" is the chosen dataset prefix for ICE.

  Note: If &nssprf.LOAD volser is not the last entry in the member, a comma must follow.

- If PROGxx is used, edit an appropriate in-line PROGxx member adding the following line:

```
APF ADD DSNAME("&nssprfx".LOAD) VOLUME(volser
```

Where “volser” is the volume serial number on which the ICE LOAD library will reside. “&nssprfx” is the chosen dataset prefix for ICE.

7.2 Security and Usage Accountability

This section describes the type of security and accountability ICE utilizes to allow user access to its functions. ICE does not bypass any of the security and auditing features of z/OS.

7.2.1 System Security

ICE utilizes the standard Security Access Facility (SAF) interface used by the major MVS security products (e.g., RACF, ACF2, Top Secret). It allows the ICE user to utilize currently assigned passwords or the same user ID used for access to TSO. The security level assigned to ICE is the same level as the security level assigned to the user ID of the ICE Application user.

7.2.2 Alternate Password

In the event that the security system address space is unavailable (or the security system is inoperable) an alternate password may be used in order to access ICE. As an option, the alternate password can be Enabled/Disabled during installation. To obtain the Alternate Password, please contact NewEra Technical Support using one of the following:

1-800-421-5035 or 408-520-7100
email support@newera.com

7.2.3 Accountability

z/OS provides accountability for ICE via SMF and other generally available system reporting tools. This allows records of the appropriate type to be written to the SMF log. These records can then be processed using the site’s existing system tools.

7.2.4 Dataset Security

The ICE datasets should be protected, using the appropriate security facilities, to prevent unauthorized access.

7.2.5 Alternate Security Password

If you would like to Enable/Disable Alternate Security, you will need to customize Member NSEPRM00, contained in the &nssprfx.PARMLIB dataset.

To Enable/Disable Alternate Security, add the following line to member NSEPRM00: ALTPASS=ENABLE or DISABLE (Begin in column 1)

The default is DISABLE. To obtain the Alternate Password, contact NewEra Software Technical Support.

1-800-421-5035 or 408-520-7100
support@newera.com

7.3 Product Installation

The ICE Viewer is one of several applications that execute within the Integrity Controls Environment (ICE). To install ICE and use the ICE Viewer, please refer to the **ICE Installation and Configuration User Guide**, a link to which may be found on this page of the NewEra website:

http://www.newera-info.com/Docs.html

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Contact us for additional information:

NewEra Software Technical Support

800-421-5035 or 408-520-7100
Or text support requests to 669-888-5061

support@newera.com

www.newera.com