Integrity Controls Environment (ICE) Unique Tools from NewEra Software, Inc.

ICEDIRECT

ICEDirect is a web-based application platform that uses a secure TCP/IP connection between its z/OS resident webserver and an internet browser to access and visualize the Integrity Controls Environment (ICE) information for analysis and administration of Image FOCUS (IFO) and The Control Editor (TCE).

ICEDirect also supports additional optional applications, z/OS Visual and RACF Visual. They exploit this unique z/OS to Browser platform by presenting traditional 3270 information and administration tools in a modern visual form that results in a more productive interactive user experience and provides a deeper understanding of complex z/OS and RACF controls.

z/OS Visual provides the ability to analyze and manage key z/OS functions such as the IODF and the z/OS Heath Checker from a modern interface. MVS commands can be selected and entered directly from the browser is assist in the management and problem detection of any z/OS LPAR configuration.

The RACF Visual application provides for inspection and administration of key RACF controls with interfaces into SETROPTS for providing a web-based command access for managing users profile and class definitions. It also provides an application, Certificate Intelligence, for the inspection and management of Certifications and RINGS. It also provides a RACF log of change activity for audit and compliance reporting.

ICEDirect can be used as a web application with security of the user established by the security rights established based upon the z/OS security profile for the user. It can also be an application run under the control of z/OSMF for increased security and control.

SUMMARY

The Integrity Controls Environment (ICE) from NewEra Software provides capabilities not available in any other software products from any other source.

Image FOCUS provides for:
- Inspection and risk analysis of any IPL and start up configuration
- Validation in all logic including symbols, variables, parameters, etc. and impact of any changes – static & dynamic - across all defined Members, LPARs, SYSPLEXes
- Change detection of the configuration elements and inspection results
- Testing and simulation functions to reduce the risk of failures or loss of service
- Optimal Operational integrity and Readiness

The Control Editor provides for:
- Extended and Improved access rights controls
- Enforcement of standards for change activity
- Backup of changes
- Enforcement of documentation requirements
- Immediate notification of events
- Audit compliance for recording changes to critical resources
- A method to create a ZERO TRUST Architecture, or enforcement of organization standards

ICEDirect provides for:
An easy-to-use modern interface into the data space for ICE and other applications.

ICE DIRECT ACCESS POINT

Welcome to z/OS

The highly secure, scalable and resilient enterprise operating system for the IBM z Systems mainframe.

z/OS USER ID

z/OS PASSWORD

LOG IN

Securing the Browser

ICE Direct

MFI Authentication

Token Material

IEIP

ICE PassTicket

Authenticate

ICE DIRECT MAKES ANALYSIS GRAPHICAL AND EASY

ICEBATA Source Inspection Log Worksheet - 5 WksRows

Update the Worksheet

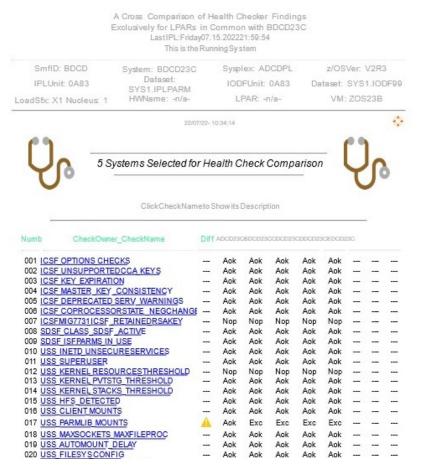| Row	Launch	Finding	IPLPath	ICEBATA Inspection Logs	Packs	Chk	Chk	Snaps	GASP
01	🚀	Err	⚙️	IFO.IFOB.ICEBATA.ADCD23C.LOG Inspection Date:22/03/09 and Time:09:39:21	📋	☑	☐	📷	⚖️
02	🚀	Err	⚙️	IFO.IFOB.ICEBATA.BDCD23C.LOG Inspection Date:22/06/13 and Time:11:00:49	📋	☑	☐	📷	⚖️
03	🚀	Err	⚙️	IFO.IFOB.ICEBATA.CDCD23C.LOG Inspection Date:22/03/09 and Time:09:39:21	📋	☑	☐	📷	⚖️
04	🚀	Err	⚙️	IFO.IFOD.ICEBATA.DDCD23C.LOG Inspection Date:21/05/06 and Time:11:19:24	📋	☑	☐	📷	⚖️
05	🚀	Err	⚙️	IFO.IFOE.ICEBATA.EDCD23C.LOG Inspection Date:21/05/06 and Time:11:19:24	📋	☑	☐	📷	⚖️

Show LPAR Analytics   Show LPAR XCompare

Bill,
With this we can see all the LPARs to ensure there are no problems instead of looking at each individually. The Snapshot will show us any changes detected.
T H

z/OS VISUAL FROM ICE DIRECT

A Cross Comparison of Health Checker Findings
Exclusively for LPARs in Common with BDCD23C
LastIPL:Friday07.15.202221:59:54
This is the RunningSystem

SmfID: BDCD	System: BDCD23C	Sysplex: ADCDPL	z/OSVer: V2R3
IPLUnit: 0A83	Dataset: SYS1.IPLPARM	IODFUnit: 0A83	Dataset: SYS1.IODF99
LoadSfx: X1 Nucleus: 1	HWName: -n/a-	LPAR: -n/a-	VM: ZOS23B

22/07/22- 10:34:14

5 Systems Selected for Health Check Comparison

ClickCheckNameto Showits Description

Numb	CheckOwner_CheckName	Diff	ADCD23C	BDCD23C	CDCD23C	DDCD23C	EDCD23C			
001	ICSF OPTIONS CHECKS	---	Aok	Aok	Aok	Aok	Aok	---	---	---
002	ICSF UNSUPPORTEDCCA KEYS	---	Aok	Aok	Aok	Aok	Aok	---	---	---
003	ICSF KEY EXPIRATION	---	Aok	Aok	Aok	Aok	Aok	---	---	---
004	ICSF MASTER KEY CONSISTENCY	---	Aok	Aok	Aok	Aok	Aok	---	---	---
005	ICSF DEPRECATED SERV WARNINGS	---	Aok	Aok	Aok	Aok	Aok	---	---	---
006	ICSF COPROCESSORSTATE NEGCHANGE	---	Aok	Aok	Aok	Aok	Aok	---	---	---
007	ICSFMIG7731ICSF RETAINEDRSAKEY	---	Nop	Nop	Nop	Nop	Nop	---	---	---
008	SDSF CLASS SDSF ACTIVE	---	Aok	Aok	Aok	Aok	Aok	---	---	---
009	SDSF ISFPARMS IN USE	---	Aok	Aok	Aok	Aok	Aok	---	---	---
010	USS INETD UNSECURESERVICES	---	Aok	Aok	Aok	Aok	Aok	---	---	---
011	USS SUPERUSER	---	Aok	Aok	Aok	Aok	Aok	---	---	---
012	USS KERNEL RESOURCESTHRESHOLD	---	Nop	Nop	Nop	Nop	Nop	---	---	---
013	USS KERNEL PVTSTG THRESHOLD	---	Aok	Aok	Aok	Aok	Aok	---	---	---
014	USS KERNEL STACKS THRESHOLD	---	Aok	Aok	Aok	Aok	Aok	---	---	---
015	USS HFS DETECTED	---	Aok	Aok	Aok	Aok	Aok	---	---	---
016	USS CLIENT MOUNTS	---	Aok	Aok	Aok	Aok	Aok	---	---	---
017	USS PARMLIB MOUNTS	⚠️	Aok	Exc	Exc	Exc	Exc	---	---	---
018	USS MAXSOCKETS MAXFILEPROC	---	Aok	Aok	Aok	Aok	Aok	---	---	---
019	USS AUTOMOUNT DELAY	---	Aok	Aok	Aok	Aok	Aok	---	---	---
020	USS FILESYSCONFIG	---	Aok	Aok	Aok	Aok	Aok	---	---	---

Kathy,
This should be helpful to our help desk and system programmers to see the entire SYSPLEX at a glance.
T H

RACF VISUAL - ANALYZING THE RACF DATABASE

IBM Resource Access Control Facility (RACF) - Release:7791

RACF Special: Yes		RACF Auditor: Yes
RACF Operations: Yes	Last IPL:Friday 07.15.2022 21:59:54	RACF ROAuditor: ---

This is the Running System

SmfID: BDCD	System: BDCD23C	Sysplex: ADCDPL	z/OSVer: V2R3
IPLUnit: 0A83	Dataset: SYS1.IPLPARM	IODFUnit: 0A83	Dataset: SYS1.IODF99
LoadSfx: X1 Nucleus: 1	HWName: -n/a-	LPAR: -n/a-	VM: ZOS23B

SYS1.RACFDS	None Found	None Found
Db Name	Db Profile	Db UACC
	22/07/22 - 14:27:19	

SETROPTS Class Definition and Group Distribution
6 Profiles in Selected Class - APPL

APPL Class - Controls access to applications

Rule and/or Policy Control Groups | Event Logging

Row	Stats	Active	GenPfl	GenCmd	GenLst	GblChk	SRacLst	GblRLst	Audit	Always	Never	Success	Failure	Default
01	---	Yes	Yes	Yes	Yes	---	Yes	Yes	---	---	---	---	---	Yes

Update the Group Distribution

UserIds with access to APPL Class Profiles

Indicates Orphan UserId

Row	Name 01	Name 02	Name 03	Name 04	Name 05	Name 06	Name 07	Name 08	Name 09	Name 10
01	*	ADCDMST	CFZADMGP	CFZSRV	CFZUSRGP	IBMUSER	IZUADMIN	IZUGUEST	IZUSECAD	IZUUSER
02	WSCFG1	WSGUEST	ZOSMFAD	ZOSUGST						

Discrete APPL Class Profiles

Row	Owner	UACC	Gen	Orph	Click Profile Name to Permit Additional Users	Warn	Permit
01	SYS1	NONE	---	01	BBGZDFLT	---	3
02	IBMUSER	NONE	---	---	BBNBASE	---	6
03	ADCDMST	READ	---	---	BLZAPPL	---	1

CERTIFICATE INTELLIGENCE - OLD VS. NEW

```
                RACF - Connect a Digital Certificate to a Key Ring
COMMAND ===>

Ring Owner: PROBI1

Ring Name:  _____
            _____
            _____

                Personal
                (user ID)      or Certificate Authority
Certificate Type =>  ___

Label name:  _____  (in quotes)

                Personal   or Site   or Certificate Authority
Usage       =>  _          =>  _      =>  _

Default     =>  _   (blank defaults to NO)
```
OLD

```
                            ISPF Command Shell
Enter TSO or Workstation commands below:

===>  RACDCERT ADD('RACFADM.NETBOY.ECC.CERT')
      ID(NETBOY) TRUST
      WITHLABEL(Saving Account ECC')

Place cursor on choice below and press enter to Retrieve command

=> LU RFAUL2
=> DELUSER JAMIE0A
=> DELUSER JAMIEA0
=> SETROPTS NOCLASSACT(TERMINAL)
=> SETROPTS CLASSACT(TERMINAL)
=> SETROPTS LIST
```
OLD

```
//**
//CERTAUTH   EXEC PGM=IKJEFT01
//SYSTSPRT   DD SYSOUT=*
//SYSPRINT   DD SYSOUT=*
//SYSUDUMP   DD SYSOUT=*
//SYSTSIN    DD *
  RACDCERT ID(certificate-owner) GENCERT -
    SUBJECTSDN ( -
      O('YourOrganization') -
      CN('certificate_owner.servername.yourdomain.com') -
      OU('zOS.Admin') -
      C('GB') -
      )            -
    WITHLABEL('CERTUSRPCCert')-
    SIGNWITH(CERTAUTH LABEL('LOCALCA'))

/*
```
OLD

Setup a New Key Ring and Define its Purpose

Documented Key Ring Purpose | Add & Purpose a New Key Ring

Ring Name:	ADDRING(Enter a New Certificate Key Ring Name)		
Ring Owner:	ID(PROBI1)		
Ring Profile:	RDEFINE RDATALIB (Ring Name)	NONE	
Ring Permit:	Id	Id	Id
Ring Supports:	Server	at Dom	Domain Target WWW Address
Ring Purpose:	Description describes the Purpose of the Key Ring		
Ring Usage:	DSN/File Enter a Fully Qualified Usage Configuration	Validate	
Authorization		Reference	
Event Descriptor			
SETROPTS Refresh:	SETROPTS RACLIST(DIGTCERT, DIGTRING, RDATALIB) REFRESH		
	RACLIST Refresh?		

NEW