



Take StepOne!

IBM's zEnterprise Server, AKA *the Mainframe*, and its companion Operating System, z/OS, combine to create the most powerful and secure transaction processing environment available to your clients. With a single server capable of supporting thousands of users, accessing hundreds of databases and generating billions of financially denominated transactions per day, the z/Enterprise is an Audit target of material interest and should always be included within the scope of any Information Technology Audit.

But where to begin?

Following best practices, the answer seems obvious – “At the beginning”. But, unfortunately the conventional wisdom of too many Audit Plans ignore the obvious and begin deep in the details of the Operating System (OS) and the External Security Manager (ESM).

In doing so, these Plans often fail to establish an independently verifiable System Baseline. Without such a repository of system identity and configuration relationships, zEnterprise System Auditors can become disoriented, losing their way in a world represented only by a seemingly endless set of Audit Checklists.

The results of this conventional approach will more than likely be disappointing and costly, often resulting in disagreement over audit findings and recommendations when they are subject to the client's critical review.

What to do?

StepOne is a software audit tool fully supported and licensed by NewEra Software, Inc. at no charge that will help systems programmers prepare for an audit review and help auditors accelerate their understanding of your zPlatform.

Using **StepOne** you'll explore the DNA of the most powerful Central Processing Complex (CPC) available to your business and governmental clients. The interactive native environment used by **StepOne** allows you to dynamically and automatically create a zEnterprise Configuration Baseline.

Think of this Configuration Baseline as a platform of knowledge upon which you, your team and your client can base ALL more detailed system investigation and remediation. At your fingertips, a click away, are the specifics of all hardware configurations used for Power on Reset (POR) and operating system configurations used for Initial Program Loads (IPL).

For the first time you'll enjoy the advantages of seeing the zEnterprise Fabric from a MACRO perspective. The significance of each individual configuration component and its potential impact on the overall integrity of each Logical Partition (LPAR), the primary control boundary of the zEnterprise, becomes immediately clear.



As you examine the integrity of the zEnterprise, do you long for software tools that can provide help in gathering the basic system configuration information you'll need to begin and end your review?

The Image Control Environment (ICE) has long been a destination for zEnterprise technical staff and management. The ICE primary applications – Image FOCUS and The Control Editor – provide the unique tool set that is needed to implement, enforce and monitor the best practices of zEnterprise System Management. When compliance with such practices is considered critical to organizational success, Image FOCUS can provide assurance that z/OS system configurations match established technical criteria and remain operationally viable now and in the future. As all z/OS configurations change over time, The Control Editor can capture, store and report changes to the Operating System and External Security Manager in real time, satisfying the need for the complete documentation of both staged and dynamic changes.



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Let's Get Started!

To understand the zEnterprise you need to envision the use and function of its resources - processors, channel paths, controllers and devices - and how those resources are connected, each to the other, to form the "Fabric" of interconnectivity that defines for each Logical Partition (LPAR) both its resource limits and its potential for resource sharing. To accomplish this, **StepOne** links you directly to the various Configuration Control Programs (CP) that reside at the heart of the system in the Input/Output Definition File (IODF), the Absolute zEnterprise Control Point.

Let's Talk Specifics!

When you logon for the first time, the benefits of **StepOne** will become readily apparent - full screen interactive worksheets with lots of supporting help. Collectively these worksheets let you start with any processor drilling down into the lowest level of detail. How low you ask? How does a level where you can match UCWs and UCBs to isolate orphaned devices sound? Don't know about those? Don't worry; it is all explained in the documentation. But let's start from the top with a few highlights.

Configuration Naming:

Using the tools of their trade (HCD and HCM), Hardware Engineers create and update the IODF Dataset. As part of this ongoing configuration process, they assign names to each Central Processing Complex (CPC), each Logical Channel Sub-System (LCSS) configured in the CPC, each Logical Partition (LPAR) configured in each LCSS and finally, each Channel Path (CHPID) available within the CPC. Often overlooked, these assigned names represent key control elements that if not fully understood, will lead to misunderstandings, or worse misrepresentations, of a system's state and status.

Configuration Sharing:

One of the principal advantages of any Logical Partition (LPAR) is its ability to share the common resources of the zEnterprise Fabric with other LPARs within the same CPC or other CPCs. Such sharing, common in a Sysplex environment (meaning multiple LPARs acting as a single processing unit), can open the door to exploitation when access to critical data is accomplished along a common path or isolated to a common controller or device. Using integrated baseline and compare functions, **StepOne** isolates permitted access, exposing potential configuration weaknesses.

Matching LOADxx Members:

Each Operating System Configuration Program (OSCP) is identified by a unique Configuration Identifier. This "ConfigId" is called by name from the IODF Keyword that appears in the LOADxx member used during the Initial Program Load (IPL) of an LPAR. With **StepOne**, the time consuming but required task of matching ConfigIds and LOADxx members in order to identify configuration orphans is fast, efficient, and totally automated.

About StepOne

StepOne a Rexx Executable and its Documentation is distributed as a web download file. The **StepOne** Executable is in clear text format while the Documentation is a PDF. Once uploaded to the zEnterprise, the Executable is run directly from the z/OS Time Sharing Option (TSO) Command Shell, generally available under Option 6 of TSO. The Documentation is viewed using the Adobe Acrobat Reader.

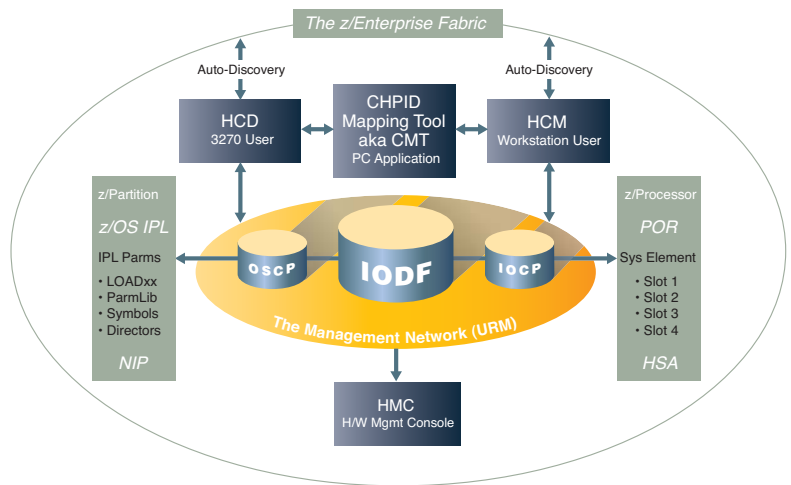
System Operations:

StepOne is uniquely configured for each installation by updating a set of Keyword values found in the heading of the Rexx Executable. The **StepOne** documentation and/or your system programmer can help you select settings that best satisfy your specific needs. Settings can be updated repeatedly at any time. Access to the named or discovered IODF Dataset is accomplished using the standard IBM utility module CBDMGHCP. All working datasets are allocated using the TSO UserId of the user executing and are deleted from the system automatically when users terminate their **StepOne** session. **StepOne** has no appreciable resource requirements and will have little or no noticeable impact on overall system performance.

System Requirements:

- zEnterprise Hardware
- z/OS Operating System
- Valid TSO UserId
- Read access authority of the IODF Dataset
- Authority to allocate datasets using TSO UserId as High Level Qualifier (HLQ)

IODF - The Absolute z/Enterprise Control Point



Clients that are exploiting the z/Enterprise will already be familiar with NewEra Software and its Image Control Environment (ICE).

Resource Links

- http://www.newera.com/IMAFocus/product_description.pdf
- http://www.newera.com/IMAFocus/product_overview.pdf
- http://www.newera.com/IMAFocus/product_documentation.pdf