Z Asset Optimizer Overview

Are you getting the most out of your mainframe investment?
Introducing Z Asset Optimizer

HCL Z Asset Optimize (ZAO) is a **market leading software asset discovery product** for IBM® z/OS® mainframe technology

ZAO recognizes over **15,000+ mainframe software products and features** from IBM and other software vendors and provides comprehensive software inventory reports

Tracks and reports usage of **In-house z/OS applications** – Batch workload, CICS, IMS transactions written in COBOL, PL/I, C/C++, REXX, Java

Software assets and their usage are **discovered automatically** by a batch inquisitor and a real-time usage monitor

**Audit and compliance** – Effectively used for discuss licensing and audit compliance with software vendors

**Optimize Mainframe software cost** by eliminating less frequently used software and ensuring supported software is being used

**Flexible Pricing** options
Z Asset Optimizer Value Proposition

**Asset & License Management**
- Support complete End to End Software inventory management and reporting
- Detail analysis and reporting of Product, Vendor, Version, Release, Feature code (state all versions if multiple versions are installed), LPAR(s) they run on, Status of the product, Installation Libraries & Data set naming conventions.

**Software Cost Optimization**
- Analyze the Software usage of all IBM & ISV Products and Optimize Mainframe Software Licensing cost
- Key Software usage Reports to negotiate licensing cost with vendors.
- Eliminate Less frequently Software products or Not used products
- Consolidate Product with overlapping capabilities

**Auditing & Compliance**
- Audit the usage of z/OS load modules and Unix executables
- Comply with License and Contracts and demonstrate compliance to software vendors
- Automate the process of up-to-date software inventory

**Infrastructure Operation Management**
- Report Product usage by LPARS, Sysplex and CEC’s
- Detail Impact on Applications, Batch Jobs & Users that helps in Planning, Validation & Testing stages
- Go-to tool for Sysprogs on Software/Hardware Upgrade or Migration projects (e.g. COBOL Upgrade)

**APIs’ for Operational Analytics**
- Integrate ZAO Software asset data with local Configuration management database for better insights on Change impact
- Integrate ZAO data for Operational Analytics with SMF & Syslog data for Problem diagnosis and best practice implementation
- Automation and alerts on non compliant situations
ZAO Deployment option on z/OS

Remote Mainframe Components
- STC
- TSO
- Batch
- JAVA
- CICS
- IMS
- All DASD

Central Mainframe Components
- Usage Monitor
- Usage Import
- Repository
- IQ Import
- Inquisitor
- Raw Usage Data
- Raw IQ Data
- GKB
  - Global Knowledge Base
- LKB
  - Local Knowledge Base
- Vendor product registry
  - (maintained by HCL)
- In-House Application registry
  - (maintained by customer)
- ZAO Analytic reports
- Analyzer

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ZAO Deployment option on “Container technology on Linux on Z”

- **Simpler Maintenance**: ZAO for Containers is built ready for deployment into a target container environment.
- **Reduce Cost**: ZAO for Containers runs on Linux on Z instead of z/OS – which can be an LPAR or as simple as a z/VM guest.
- **Proven Reliability**: The Usage Monitor and Inquisitor are proven components of ZAO product with <1% overhead to monitor your mainframe systems.
- **License Validation**: Identify areas of improvement & concerns to keep your mainframe systems optimal.
- **APIs to Extract Data**: APIs are provided to extract asset management data from ZAO for Containers – consume data when you need them.
ZAO Sample Reports

Inventory report: Reporting a list of software products discovered on your systems

Usage report: Reporting the trending of software usage
Input required:
- The following information must be imported into ZAO interactively or in XML file:
  - **Software Details**: product ID, product name, feature, version, etc
  - **License Details**: Scope (LPAR, Machine, Enterprise), License Date, License Renew Date, Capacity, etc
  - **Vendor details**: name, contact info

License Verification Insights:
- The following reports are produced:
  1. Products with a License: no attention is required immediately
  2. **License without a product**: product licensed but not on the system → candidate for removal
  3. Products without a license: possibly installed due to bundled solution by a vendor
  4. **Entitled and Not Used**: candidates for removal to reduce cost
  5. Entitled and used: no attention is required immediately
  6. **Not Entitled and Used**: Need immediate attention to avoid audit penalty
New: License Verification Feature

Sample 1: All License Report

![Screenshot of ZAO License interface showing a list of licenses with details such as vendor, product, feature, version, license date, and license scope.](image)

<table>
<thead>
<tr>
<th>License No</th>
<th>Vendor</th>
<th>Product</th>
<th>Feature</th>
<th>Version</th>
<th>License Date</th>
<th>License Scope</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>BMC Software</td>
<td>APPtune for DB2</td>
<td>$500</td>
<td>V12</td>
<td>2009-03-27</td>
<td>LPAR</td>
</tr>
<tr>
<td>2</td>
<td>BMC Software</td>
<td>APPtune for DB2</td>
<td>$500</td>
<td>V12</td>
<td>2009-03-29</td>
<td>Machine</td>
</tr>
<tr>
<td>3</td>
<td>BMC Software</td>
<td>Backup and Recovery Solution for IMS</td>
<td>$500</td>
<td>V1</td>
<td>2010-03-22</td>
<td>LPAR</td>
</tr>
<tr>
<td>4</td>
<td>BMC Software</td>
<td>Backup and Recovery Solution for IMS</td>
<td>$500</td>
<td>V4</td>
<td>2011-03-22</td>
<td>LPAR</td>
</tr>
<tr>
<td>5</td>
<td>BMC Software</td>
<td>Backup and Recovery Solution for IMS</td>
<td>$500</td>
<td>V5</td>
<td>2012-03-22</td>
<td>LPAR</td>
</tr>
<tr>
<td>6</td>
<td>BMC Software</td>
<td>BMC Control-O</td>
<td>$500</td>
<td>V7</td>
<td>2012-03-22</td>
<td>Machine</td>
</tr>
<tr>
<td>7</td>
<td>BMC Software</td>
<td>BMC Control-O</td>
<td>$500</td>
<td>V9</td>
<td>2012-03-22</td>
<td>Machine</td>
</tr>
<tr>
<td>8</td>
<td>BMC Software</td>
<td>BMC Control-M for z/OS</td>
<td>$500</td>
<td>V7</td>
<td>2012-03-22</td>
<td>Machine</td>
</tr>
<tr>
<td>9</td>
<td>BMC Software</td>
<td>BMC Control-M for z/OS</td>
<td>$500</td>
<td>V9</td>
<td>2012-03-22</td>
<td>Machine</td>
</tr>
<tr>
<td>10</td>
<td>BMC Software</td>
<td>BMC Control-M/Analyzer</td>
<td>$500</td>
<td>V7</td>
<td>2012-03-22</td>
<td>Machine</td>
</tr>
<tr>
<td>11</td>
<td>BMC Software</td>
<td>BMC Control-M/Analyzer</td>
<td>$500</td>
<td>V9</td>
<td>2012-03-22</td>
<td>Machine</td>
</tr>
</tbody>
</table>
## New: License Verification Feature

### Sample 2: Not Entitled and Used

The image displays a screenshot of a license verification tool. The tool appears to be validating the entitlement status of various software licenses for different vendors such as IBM, BMC Software, and others. The screenshot shows a table with columns for Vendor, Product, Feature, Version, PID, RID, SYSPLEX, System, Capacity, License Type, Machine, License Date, Renewal Date, Last Used, and Verified. The table highlights licenses that are not entitled and used.
IBM z14 3906-404

Machine Capacity: 118 MSU

MSU converted into Value units (VU): 49 VU

ZAO Pricing is based on per VU

Mainframe machine model #
Success story: US based Banking customer

The Challenge & need
Reduce the overall mainframe software license expense with a largest Independent software vendor

HCL Approach
Establish facts around software assets and usage to enable the customer to re-negotiate the overall software license cost within the context of overall Enterprise License Agreement.

Vendor Contract Summary
- $71M 3-year EULA ending March 30, 2018
- 153 non-IDMS mainframe products usage up to 41,138
- 31 IDMS mainframe products up to 6,917
- 36 distributed products (various levels)
- No cost access to additional mainframe products

ZAO Asset Management Reports reveal significant cost savings in software license

Mainframe product utilization level is 30%:
- Only 56 of the 189 mainframe products are in use
  - 78% of non-IDMS mainframe products are not in use (only 34 out of 158 non-IDMS mainframe products in use)
  - 29% of IDMS mainframe products are not in use (only 22 out of 31 IDMS products in use)

Over licensed mainframe software:
- 82% of non-IDMS products are using less than 40,000 MIPS – less than originally licensed!
  - Max MIPS used is 43,955 by only 1 product
  - 62% (22 out of 34) using less than 20,000 MIPS
- 81% of IDMS product MIPS are unused
  - IDMS products licensed to 6,917 MIPS, but only using 1,325 MIPS

Cost Reduction!!
Top Financial services company – One of Largest banking institution in United States with over US $3 trillion in client assets.

Business challenge
Monitor the usage of 40,000+ in-house developed applications in ChangeMan which was written in Assembler, COBOL, PL/I, C/C++, Java and need for an in-depth analysis of program execution in z/OS environments.

- Where the application are executing in Mainframe environment– LPARs?
- What are the libraries names and DASD volumes (location of programs)?
- What workloads are calling these application – Batch, Transactions, users?
- What Programming language (COBOL,C/C++,PL/1) and compiler version?
- List the dependency of application to IBM & other vendor Mainframe software’s
- Data & Time of program execution

Solution benefits
✓ Simplified the monitor of thousands of in-house applications.
✓ Increased Productivity by reducing manual & complex efforts.
✓ Automation in discovery and usage reporting of application programs

Automated Solution:
The company exploited the Local Knowledge Base(LKB) feature to register their thousands of in-house applications through the “Batch Tagger” utility and wrote an simple REXX program to automatically identify the new in-house programs from the Load library.
Are you getting the most out of Z software investment?

- How are you currently monitoring your System z software assets, usage and licenses?
- Do you know how many software products you have currently deployed?
- Do you know what they are and what they cost?
- Do you know who is using those software products?
- Do you know how often those products are being used?
- Do you have a clear understanding of the multiple versions of products installed?
- Do you have a clear understanding of products that may be installed in multiple locations?
- Do you know if you are over or undersubscribed?
- Do you know if there are any applications that are redundant, out of date or not being used?
- Can any applications be eliminated or consolidated?
- Are all of your software licenses up to date?
- Would you be in legal or financial danger if you were audited?
Additional Information

Need help?

▪ Our SME consultants can help to install and configure the product with minimal disruption of your daily tasks

▪ Recommendation based on consultation to implement the product most effectively based on your requirements

▪ Customization to ensure ISV software products as well as in-house applications are correctly reported

▪ Review product reports and assist in preparing project plan to optimize your mainframe systems

Visit www.zio-community/products/ZAO for more information

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