Isn’t “Cost Containment” at the top of the agenda for every CIO these days?

Although technology is being relied on to fuel the drive to cut costs, it comes with a caveat. Modernization initiatives like Re-engineering & SOA whilst providing long term benefits of agility, loose coupling, hardware independence etc call for significant upfront investments as well as long ROIs which cannot be justified in the after math of the Global Melt Down.

The simple fact of modern-day enterprise IT systems is that with all the recent technological advances, about 80% of these IT systems are still running on the legacy platform.

And you thought mainframes gonna go?

The worldwide installed base of IBM mainframe exceeded 14 million MIPS* by the end of 2008 — up approximately 20% from year-end 2007 and roughly double of what it was five years ago. In the mainframe world, MIPS growth is a good indicator of actual growth because users pay for systems based on MIPS capacity and the MIPS growth is based on incremental MIPS added.

It is clear that mission critical systems will continue to run on Mainframes & organizations will not risk moving these applications to alternative platforms like UNIX or .Net. Considering the hardware cost per MIPS is around $1500 to $3000 per year. For an average MIPS capacity of 2000 MIPS, the hardware MIPS cost alone will come to WHOPPING $3M to $6M Dollars annually! A saving of 100 MIPS per year will translate to a saving of $150,000 K to $300,000 K in dollar terms.

In light of the above analysis and the single point agenda of ‘cost containment’, MIPS reduction becomes a viable strategy to reduce the Total Cost of Operation (TCO).

How can CIOs contain costs through performance tuning?

Are your typical workloads on Mainframe growing 20-30% every year and you are forced to upgrade once one or two year. Also in growing business times we missed to analyze the performance parameters and paying more today.

What the CIOs would like is any initiative with minimal risk that can ‘squeeze’ more operational efficiencies out of their existing systems within a few months not in a few years as would be the case with most of the modernization initiatives.

Let us unbundle the operational costs of a typical mainframe shop. These are representative only and are given purely to drive home the point that significant component of the box costs are linked to the installed MIPS.

Indicates number below

<table>
<thead>
<tr>
<th>Number of engines/processors</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIPS per Engine</td>
<td>500</td>
</tr>
<tr>
<td>Total Available MIPS per year</td>
<td>4000</td>
</tr>
<tr>
<td>Hardware cost per year</td>
<td>$1500</td>
</tr>
<tr>
<td>Annual Hardware Spend</td>
<td>6 M $</td>
</tr>
<tr>
<td>Annual Software Cost + Third Party</td>
<td>6 M $</td>
</tr>
<tr>
<td>AMC + Disk + Tape Costs</td>
<td>1 M $</td>
</tr>
<tr>
<td>Total Annual Costs</td>
<td>12 M $</td>
</tr>
</tbody>
</table>

So any outcome based MIPS reduction initiative that can pay for it-self quickly is the need of the hour!

Thus performance tuning for “optimum performance” assumes a new significance not only due to tight economic conditions, but also due to proliferation of batch jobs, multiple test environments, sub-systems/shared resources. Performance management is receiving increased attention within IT organizations because it offers a means to measure infrastructure and application health.

Even a well tuned application can have a performance problem over a period of time as program and file attributes change. Performance “ignorance” reduces application availability, causes an escalation in costs due to extraneous processing, surges in batch processing with excessive CPU utilization and unnecessary job wait time.

Any optimization initiative that uses major design changes (including functional redesign) and is critically analyzed for full impact is risk prone. And the optimization through local program changes to avert structural inefficiencies and through validation/optimization of environmental factors has high degree of success achieved in a short time-frame.

Some of the reasons for the high cost of ownership of these mainframe applications could be due to:

High CPU costs due to
- Inefficient code (Poorly structured code)
- Inefficient SQL

*Source: Gartner CIO Agenda Report 2009 - MIPS = million instructions per second
How can CIOs partner with Hexaware to achieve their objective?

Hexaware’s “ProdTune” ™

A comprehensive solution designed for performance improvement in Applications Management is an ideal solution for production involving large-scale Online/batch workloads & data processing environment. The primary objective of this solution is to:

- Free up critical resources (CPU, DASD) for further expansion
- Defer expensive MIPS upgrades

Depending on a particular site and the problems faced, our team of experts would tune the process to ensure that big savings are achieved with the lowest amount of effort. Historical as well current MIPS operational metrics is collected & analyzed to identify the “hotspots”. These can be top O/L transactions or Top Batch jobs or top DB2 packages.

Our representative tuning strategy includes the following:

- MIPS or CPU Reduction
- Batch Window Reduction
- On-line Transaction Optimization
- Technology Replacement/Exploitation
- Critical Path Optimization
- Application Optimization
- Capacity Planning & Consultancy for current application performance

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A comprehensive solution designed for performance improvement in Applications Management is an ideal solution for production involving large-scale Online/batch workloads & data processing environment. The primary objective of this solution is to:

- Provide “immediate” benefits in terms of ROI, primarily by reducing MIPS & IO usage
- Crunch the batch processing cycles, giving larger window times
- Reduce DB2 MIPS
- Improve Online performance

Hexaware’s ProdTune helps client companies bring down their high MIPS consumption of the hotspots in both their online & batch work-loads. Hexaware’s framework design has evolved with several tuning initiatives it has undertaken for its clients in the last decade or so through which clients have realized savings of millions of dollars of operational costs year on year.
About Hexaware

Hexaware is a leading global provider of IT and BPO services. The company has achieved leadership position in domains such as Banking, Financial Services, Insurance, Transportation, Logistics and HR-IT solutions. Hexaware focuses on delivering business results leveraging technology solutions and specializes in Business Intelligence & Analytics, Enterprise Applications, Independent Testing and Legacy Modernization. Hexaware has been providing business technology solutions for over 18 years and offers world class service delivery, technology leadership and skilled human capital.

Key features of the service

- It leverages the existing operational management tools available in the shop
- Provides a faster ROI typically in months
- Pays for itself from the savings it brings in the operational costs of the IT organization
- There is no inherent risk as the core business logic of the components are left 'as is', there are no fundamental redesign of database
- Flexible billing model available to meet the needs to the customer including an "outcome" based model
- The metrics collected & analyzed provides a basis for the application management group to provide application information for "on Demand" analysis by various roles – developers, business analysts, managers, directors, auditors & business people

Where do CIOs partnering with us stand to gain?

With the following credentials of Hexaware, we believe we are the “right sized” IT company to help you manage your spiraling IT operational costs within a very short time frame. We work with the credo “We are partners in your business”.

- Proven track record of tuning complex mainframe applications
- Availability of performance optimization experts
- Wide spectrum of available legacy skill sets (i.e. COBOL, DB2, IMS, CICS, PL1, TPF, Focus, VSAM, IDMS, NATURAL, ADABAS etc.)
- Hands-on experience on variety of third party performance monitoring tools like Omegamon, Strobe, Tritune, IBM PA, Platinum etc
- Ever-growing Optimization Knowledge Repository
- Hexaware’s proven proprietary framework for application performance tuning ‘ProdTune’
- In-house developed tool for statistical analysis and reporting
- Driven by dedicated mainframe Center Of Excellence (COE)
- Low cost, quick ROI operating model

Reach us out at corporatemarketing@hexaware.com to get in touch with our performance management experts who are waiting to help you.

Benefits delivered to the customer

<table>
<thead>
<tr>
<th>Client</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>A leading asset management company in North America</td>
<td>MIPS savings of $ 781 K year on year.</td>
</tr>
<tr>
<td>Leading Insurance company in North America</td>
<td>41% CPU again in the overall assignment Saving of $1M+ annual upgrade</td>
</tr>
<tr>
<td>Global Specialty Insurance Company, USA</td>
<td>Saved 200 Mainframe processing hours per Month</td>
</tr>
</tbody>
</table>

Benefits delivered to the customer

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