

**Mainframes Help CIOs**

**Do More**



# With Less

Think big iron is expensive? Mainframes can actually help control data center costs.

| By Tam Harbert

**H**ow low can you go? That's a question many CIOs are asking as they seek new ways to reduce their IT infrastructure costs. The mainframe, increasingly, is part of their answer.

CIOs have always been aware of the mainframe's benefits: lower cost per transaction and high reliability and security. Not to mention that they also require less labor, electric power and real estate than similar distributed systems. Now, as many CIOs want to go even further, they are again looking to the mainframe. These cost-saving, conscientious CIOs are reducing mainframe complexity and costs, and improving mainframe efficiency and productivity. They also are working to ensure that they have enough skilled employees to maintain future mainframe operations, even as many senior staff retire.

"The mainframe is the unsung hero in the data center," says Dayton Semerjian, General Manager, Mainframe, at CA Technologies. "It's the quiet guy in the corner who comes to work every day, doesn't complain and doesn't break down. And just as that same dependable employee will take on more assignments without saying a word, the mainframe is able to scale up quickly and easily as additional workloads come in."

### Working the Process

There's an old adage: You can't assess what you don't measure. And measurement is the first strategy many CIOs are turning to in their quest to reduce costs and complexity. Specifically, they are taking an inventory of their mainframes, uncovering what's installed and how it's being used. Experts say this is significant since it's not uncommon to install an application and forget about it once its purpose is served.

"Very, very few organizations have a decent idea of the amount of software they are actually running, who's using it or why they are using it," says Tony Lock, Program Director at Freeform Dynamics Ltd., a U.K.-based IT industry analysis firm.

While Lock notes that many organizations have a better handle on their mainframe applications than they do on distributed software, CIOs may not be aware of ways they can get more out of their existing applications. That said, the discovery process can be lengthy and painstaking, which is why, for some CIOs, it may

make more sense to outsource at least some of it. CA Technologies, for example, offers two free services that can help. One enables companies to find and use capabilities they may already have in installed software. The other helps them identify redundant software and reduce the number of products and vendors they use.

With the Mainframe Value Program (MVP), CA Technologies experts analyze how customers are using specific products that are key to their businesses. Using this in-depth analysis, the experts produce a detailed report that includes best practice and tuning recommendations. The report also identifies product features that are not being fully utilized.

Often, customers use only a fraction of the functions available from their software, says Semerjian. "We are frequently able to tell customers that they can accomplish their planned initiatives with the CA Technologies software that they already own," he says.

The second service is the Mainframe Software Rationalization program, which addresses the acquisition frenzy that's gone on over the past few years, compounding the proliferation of software. "In some industries, they have five different network management tools delivering the same functionality," says Mike Zinda, Senior VP of Business Strategy for the Mainframe Business at CA Technologies, who oversees the program.

Using specialized tools, CA Technologies scans the mainframe environment, discovers what applications are actually being used, how often and by whom. CA then analyzes the impact that removing certain applications might have on the customer's operations. It estimates risks, costs and potential return on investment. Such an inventory can help CIOs make strategic decisions that will not only reduce overall costs, but improve the efficiency of their operations.

Tieto, an IT services provider based in Finland, is on board with this strategy. The company is now three years into a transformational project to both reduce costs and increase its operating profit margin. The company provides mainframe infrastructure to European customers, some 70 percent of which are banks and other financial institutions. These customers rely on Tieto's two mainframes to support their critical transactions. The challenge is to reduce costs while maintaining — and even improving — service levels,

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according to Juha Parnisto, Tieto's Director of Mainframe and Midrange Services.

Each of Tieto's customers is given a unique logical partition (LPAR) on the mainframe, which means there are more than 700 distinct products for Tieto's IT staff to manage. Redundancy and unnecessary license costs aside, this leads to maintenance and support requirements that take up a significant chunk of the IT department's time. More significant, according to Parnisto, is the fact that the knowledge of some of those products was only in one place: in the head of a soon-to-retire mainframe technician.

As part of its transformation, Tieto analyzed its mainframe environment with the goal of reducing both the number of applications and the number of vendors it deals with. By consolidating vendors and standardizing on certain software, a company can reduce labor and training costs, increase purchasing leverage, and encourage the formation of tight partnerships with a handful of strategic vendors. For instance, after the

analysis, Tieto was able to decrease the number of installed applications by 40 percent and the number of vendors by 60 percent.

Automation — specifically of those tasks that are being done manually — is the next step in the mainframe evaluation process. This step is crucial because, despite the availability of sophisticated automation technologies, a good portion of an IT administrators' time still goes into doing the same mundane tasks, Lock says.

The Mainframe 2.0 initiative of CA Technologies offers such automation. For example, the company's CA Mainframe Software Manager™ (MSM), available free to customers, simplifies and standardizes the installation and updates of applications. Using MSM, "anyone with basic skills can install, configure and deploy our software," says Vince Re, Senior VP and Chief Architect at CA Technologies. "It sounds like a small incremental thing, but when you look at the time saved, it can be very significant."

At Tieto, each application used to be installed separately; each installation

process varied slightly. This required time, specialized documentation and, often, a particular technician with knowledge of the software being installed. Now, Tieto uses MSM from CA Technologies, installing every product in a similar way with the same parameters in each LPAR, says Parnisto.

That, in turn, reduced the number of hours required to install a specific CA Technologies product by 70 percent, Parnisto estimates. More important, now that every installation uses the same process, any mainframe technician can perform the task. Not only can this routine work be offloaded to junior staff, reserving senior staff for more strategic work, but the standardization also ensures that technical expertise won't be lost as senior staff members retire, says Parnisto.

## Catching Zs

Another important step in any mainframe assessment relates to workloads: CIOs must consider whether they're running them in the most efficient way possible. Costs can be reduced by understanding workloads and running them, where appropriate, on IBM specialty processors such as Integrated Facility for Linux (IFL), System z Integrated Information Processor (zIIP) or System z Application Assist Processor (zAAP).

"You can shave quite a bit off the cost of mainframe computing just by making smart decisions about developing your applications and by running them on the right type of engines," notes Re of CA Technologies. Following these two suggestions, IT can not only reduce the processing costs for that software, but can also reduce the amount of capacity that's used by general purpose processors, further reducing the software bill, he explains.

All of these strategies — the process of consolidating vendors, rationalizing software and optimizing workloads — will likely become even more important in the future, as opportunities become available through IBM's new zEnterprise architecture to run applications on whichever platform can process them most efficiently.

"The big data centers of the future will be mainframes for certain applications, a shrinking pool of non-mainframe applications and then cloud for certain applications," Re says. "That hybrid model is where I think the world is heading over the next three to five years." ■

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## INVESTING IN THE FUTURE

The mainframe may be a decades-old technology platform, but as most CIOs and IT executives know, there's still plenty to learn about the topic — especially as many of today's mainframe experts are retiring and leaving the IT fold. A new \$1 million scholarship fund from CA Technologies for use at the newly formed Mainframe Academy can provide a path to that knowledge.

Mainframe Academy with CA Technologies, launched last fall, is a vendor-agnostic immersion program designed to provide core skills to manage the mainframe environment. Attendees have the opportunity to become Certified Mainframe Professionals. Candidates, who work with teachers as well as online via an Apple iPad app, get 220 hours of blended learning over 12 weeks, which culminates in 26 mastery tests and three knowledge exams. Applications are available at [ca.com/mainframe-scholarship](http://ca.com/mainframe-scholarship).

The program also:

- Helps solve the mainframe talent gaps in the workforce.
- Gives IT organizations immediate access to mainframe skills.
- Expands cross-training to give younger employees the skills to deal with mainframes when current workers retire.
- Increases in-house competency in z/OS systems programming skills.
- Improves the ability to detect and troubleshoot issues before they affect the business.

"The mainframe is experiencing a resurgence, and we need to motivate and train young talent to allow it to continue to play a critical role in corporate IT and cloud computing strategies," says Dayton Semerjian, General Manager, Mainframe, at CA Technologies. "We're committed to a leadership role in the mainframe ecosystem, and the scholarship program demonstrates that we intend to do this not only by delivering software to simplify mainframe management, but also by enabling the next generation of mainframe workers."

High school, undergraduate and graduate students, as well as recent college graduates, are eligible for the scholarships. Winners will be chosen by a panel of experts in the mainframe field, including board of director representatives from SHARE's biannual user conference. Applicants will be evaluated based on academic achievement, creativity and/or vision in the use of technology. — T.H.