



Research Brief

The Mainframe March to Simplification

Executive Summary

Clabby Analytics has recently published two perspectives on IBM's System z:

1. The first *Research Brief* (“*Does System z Offer Better TCO than Scale-up, Distributed Unix and Linux Servers?*”) examined System z TCO characteristics and found that System z has better TCO than scale-up distributed systems environments (especially in the areas of network equipment, power/cooling/administration and management).
2. The second *Research Brief* (“*System z: Technology Update*”) argues that the System z is a technology pacesetter, not a dinosaur as some information technology (IT) executives believe. In this report we point to System z security, energy efficiency, specialty engines, and virtualization capabilities to prove our point.

In this *Research Brief*, *Clabby Analytics* examines the skill/usability situation that surrounds System z. Our key finding is that locating mainframe skills can be difficult in certain geographies — and this is a real problem for IBM going forward as it seeks to expand mainframe usage worldwide. But we also observe that IBM is actively and aggressively involved in fixing these skill set shortage/usability problems as part of its mainframe charter, its focus on building a vibrant community around System z, and its “Mainframe March” to Simplification initiative.

The Skill Set Issue

Mainframes have been with us for almost fifty years. In that time, hundreds — if not thousands — of mainframe management software programs, tools and utilities have been written. These packages are generally very sophisticated — and many are driven with command line interfaces that are familiar to an aging group of mainframe administrators.

Now, what happens as these administrators reach retirement age? Who's going to run both today's and tomorrow's mainframe systems?

The current generation of systems managers has been raised on graphically-driven Windows and Linux environments. These IT administrators and managers want tools and utilities that look and act like the tools and utilities they've grown up with.

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So one of the first challenges that IBM faces as it seeks to grow the next generation of System z administrators is that it must update its existing mainframe management applications, tools and utilities to appeal to a new generation of systems managers and program developers.

Another major problem that IBM is faced with is that the number of schools actually aggressively involved in providing education on mainframes declined in the 1990s. The move to distributed midrange minicomputers in the 1980s and 1990s changed the focus of technical educational institutions. Emphasis was placed on teaching Windows and Unix skills, while mainframe skills were largely deemphasized.

So the other major problem that IBM is faced with is getting more schools signed up to participate in System z training initiatives.

What's IBM Doing About These Issues?

To deal with these usability, skills, and training issues, IBM has focused strongly on building a supportive community around the System z. As part of its charter, IBM is focusing on ensuring that there will be a next generation of IT professionals in place to carry mainframe architecture forward by working closely with academic institutions; by helping customers solve new problems; by working with business partners to ensure that the products and services that will carry the mainframe into the next generation remain in place – and the company provides its community with technical support, industry roadmaps, and standards-based products.

We also observe that IBM recently announced its “Mainframe March to Simplification”. The goal of this program is to reduce the time it takes to learn systems management and programming from several years to a few months. It involves making the mainframe far easier to operate (using graphically driven user interfaces) — and it focuses on making it easier to develop applications on System z environments.

Usability

To streamline systems management and to make the user interface more like Unix and Windows environments, IBM has built a systems management utility known as Healthchecker that allows administrators to check on the health of hardware and software in a given configuration – as well as help administrators maintain best practices in several areas. Further, using a familiar wizard approach (often found in Windows management environments), Healthchecker automates tasks such as software distribution and installation.

Expect IBM to adapt more and more of its systems management products to graphically-driven, wizard-oriented interfaces. This approach should yield a more appealing and familiar “look-and-feel” for current generation IT managers and administrators.

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Skills

About five years ago IBM identified that a mainframe skills shortage could become a major impediment to future mainframe sales, and the company focused some of its financial and developmental resources on mainframe education on the campuses of about twenty colleges and universities (IBM's mainframe education initiative at this time was called the "zSeries Scholars Program"). But, over the past two years, IBM has greatly expanded this program as part of its "Academic Initiative Program", a program that now serves over 200 schools and universities around the world. And the company has set a goal, as part of its mainframe charter, to help the industry add 20,000 new mainframe skilled individuals by 2010.

Further, a few months ago IBM announced that it would be spending \$100 million to improve the management interface to its mainframe systems — focusing on usability, easier manageability, and easier programmability. The take-away from this announcement is that IBM will retool its interfaces to appeal to "non-traditional" mainframe managers (in other words, it will make the mainframe management interface more like managing a Windows or Unix environment). By doing this, IBM hopes to attract a new class of mainframe manager — thus helping to address the mainframe skills management gap.

Although many of today's System z administrators and managers are approaching retirement age, a new crop of systems administrators and managers are being drawn to the mainframe world. Better pay than is available on other platforms is certainly a motivating factor. But the availability of higher education for mainframes as well as an improved, PC-like interface will also serve to bring the "younger set" to the mainframe world.

Summary Observations

IBM has made definite provable progress in reenlisting educational institutions in mainframe educational initiatives. Further, IBM has opened a major System z training center in China to help serve new and growing markets in South East Asia.

It is too early to tell if IBM's \$100 million investment in code modernization and new interfaces is going to pay off by attracting a new generation of System z administrators and managers. But, from our perspective, IBM's "Mainframe March to Simplification" initiative is certainly a step in the right direction.

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