Mainframe 2.0:
Changing the way the mainframe is managed forever

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Abstract

Mainframe 2.0: Changing the way the mainframe is managed forever

Organizations around the world are recommitting to the mainframe as they discover the unique energy, performance, and management advantages it offers in today’s challenging business environment. However, as budgets tighten and experienced mainframe professionals approach retirement, IT decision-makers have to aggressively seek more from their mainframes while rigorously controlling ownership costs.

At CA World 2008, CA announced a far-reaching initiative called Mainframe 2.0 to change the way mainframes are managed forever. CA made four promises to help users fully realize the value of the mainframe through best in class quality, support and platform exploitation:

> Simplification through Automation
> Managing for the Future
> Releasing Latent Value
> Extending Mainframe Skills

Mainframe 2.0 extends CA’s mainframe performance leadership by quickly delivering value through an enhanced customer experience and technical innovation — and by changing the way the mainframe is managed forever.
The Mainframe Challenge

“I predict that the last mainframe will be unplugged on 15 March 1996.”
-- Stewart Alsop (1991)
### The Mainframe in the Datacenter

**The Mainframe is the cornerstone for performing mission-critical data processing for business**

- The Mainframe and z/OS provide unparalleled capability
- Capability
- Reliability
- Availability
- Serviceability
- Recoverability
- Business Resilience

- 70% of business-critical data is processed and maintained on the platform\(^1\)

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**Current events and conditions**

- The “Mainframe Renaissance” is driven by:
  - Energy
  - Floor space
  - Scalability

- 14 million MIPS installed
- Growing 20-30% CAGR\(^2\)

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\(^1\) Various sources, including Illuminata and Arcati, plus CA’s own internal research.  \(^2\) IBM
The Mainframe in the Datacenter

The Mainframe is here to stay
- It is simply the best, world-class solution to a set of business problems
- There is a high level of risk to the business to migrate certain kinds of work off the mainframe

Requirement for a high level of expertise to maintain the Mainframe environment
- The effect of a 40-year focus on “squeezing every cycle” out of the machine
- Many z/OS system programmers are retirement age or older

As the skill pool dwindles, uncertainty about the viability of the platform increases
- Is the real “Y2K event” coming in the next few years?
Challenges

> Competition for skilled IT staff
  - The mainframe is no longer the “only game in town”

> Perception of the platform as “dead”

> Recession notwithstanding, skills will be leaving the platform over the next few years
  - 72% of mainframe installations report that they have mainframe employees that are retirement eligible now
  - 80% of mainframe installations report that they have mainframe employees that are retirement eligible within two years

> The platform has a 40+ year legacy and it shows
  - The downside of “investment protection”
Answering the Challenge

Technology consumers must make their education/training needs known to educators and technology vendors. They must also encourage and provide opportunities for training to current employees as well as career possibilities for new employees.

Vendors must “answer the call” and innovate to make their products “more relevant” to the current and next generation of IT professionals: UI, integration capabilities, adherence to standards. Vendors must also take an advocacy position for the platform overall and participate in the creation of mainframe curricula, becoming partners with their customers and academia.

Educators must answer the needs of the market and students, partnering with the industry to build curricula to support generating “enterprise class” IT professionals – trained to understand the needs of the business and in understanding the values that each platform brings to the table.

Today’s students must step up to new challenges, accepting a larger role in defining the use of IT for delivering business value and advantage to their employers, while also advocating for and assisting in the transition of current mainframe technology to more modern capabilities.
Mainframe 2.0 Overview
CA responds to the needs of the market

“Installed mainframe MIPS have gone from 3.5 million in 2000 to over 14 million in 2008.”
-- IBM

“IBM’s z/OS-based mainframes outperformed the worldwide server market for the fifth consecutive quarter...They accounted for 9% of all server revenue in 2009 Q1, the highest first-quarter revenue share for System z in five years.”
-- IDC
Changing the way the mainframe is managed forever!

1. THE MARKET

Factors driving business base for the mainframe
- Current economic conditions
- Insight from governance solutions that expose true costs
- Broader vigilance that workloads align to the most effective platform

2. THE OPPORTUNITY

Challenge
QoS on the mainframe relies on a highly skilled, aging workforce that since 2000 is less in number, but supporting 4x the workload

Our Strategy
Uniquely overcomes this challenge by both accelerating and broadening the compelling business value derived from the mainframe

3. THE GOALS

MF Value Leader
- Customer Experience
- Innovation
- Agility

4. THE PROGRAMS

Promises Made
- Simplification through Automation
- Managing the Future
- Releasing Latent Value
- Extending Mainframe Skills

Promises Kept
1. Mainframe Software Management
2. Innovation
3. Customer Engagement MVP and MSC
4. Out-Tasking

Best in Class Quality, Support and Platform Exploitation
The Mainframe 2.0 Promise

> CA pledges to reduce the “experience pool” requirement and improve the quality of the management of the mainframe

> The CA Mainframe 2.0 solutions:
  - Will be significantly easier to use
  - Will simplify installation, configuration and tuning
  - Will sustain the virtues of the platform
  - Will enable the platform to be managed without a significant skills investment:
    - Enable a transition from other platforms
    - Enable a new hire to be effective immediately

> CA intends to be the clear leader in end user experience for mainframe administration and operation
Managing the Mainframe Environment

Promises Made
- Simplification through Automation

Promises Kept
- Mainframe Software Management

CA Mainframe Software Manager

Web UI
- Electronic Software Delivery (ESD)
- Standardized SMP/E Installation
- Product Acquisition Service
- Software Installation Service
- Software Deployment Service
- Software Configuration Service

Mainframe Software Management

CA Mainframe Stack
- Best Practices Guides
- Interoperability Certification
- Health Checker Integration
- Mainframe Integrated System Test
- CA Recommended Service
- Common Web UI
### Mainframe Software Manager

#### CA Deliver 11.0

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#### Related SMP/E Environments

This table shows SMP/E environments where the product is installed. You can choose some of them as the Working Set to which maintenance status is related.

**Select and: Use as Working Set**

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<thead>
<tr>
<th>Name</th>
<th>Dataset</th>
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Mainframe Software Manager

Dashboard | Software Catalog | SMP/E Environments | Target Systems | Tasks | Settings

Logged in as: PLAPE03 (Log Out)

Actions
- Show Main Screen
- Automatic Downloads
- Update Product List

Available Products
- CA Datacom/AD
- CA Datacom/DB
- CA Datacom CICS Services
- CA Datacom Server
- CA Deliver
  - 11.0
  - 1.7
  - 1.6
- CA Ideal for CA Datacom
- CA Endeavor SCM

CA Deliver 11.0

Base Installs | Maintenance

Maintenance Packages

Show: All maintenance All levels

Select and: Download Install

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Please Wait. Downloading...

Cancel

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### Maintenance Packages

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You have selected to install functions Q099910, RO02431, RO02447, RO02894, RO02893 into the SMP/E environment Deliver Test.

Start Installation: Now

Later at Time: 11:34:03AM
The Mainframe 2.0 Advantage

Ease of use improves productivity and accuracy

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<th>ESD Install - Novice</th>
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<td>0:08</td>
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New Innovations

Promises Made
- Managing the Future

Promises Kept
- Innovation

New Innovations
- New Products for z/OS
- Linux on System z offering
- zIIP Processor Exploitation
CA Compliance Manager for z/OS

> Provides continuous real-time monitoring of security events, and security and operating system configuration, with real-time alerts

> Provides comprehensive collection of security event information for security and compliance audits and forensics

> Provides robust reporting that automatically and reliably demonstrates compliance to internal policies and government regulations
“Click to Glass” APM Monitoring

Traditionally, the mainframe is not well represented distributed application monitors.
"Click to Glass" APM Monitoring

Wily Introscope

Collectors EM

Agent

J2EE Applications

Application Server

JVM

"Legacy" Applications

Application Server

Mainframe

 collector EM

 Alerts, Events and Performance Data

Alerts, Events and Performance Data

Workstation Real-time, Historical, and Performance Alerting

App Health, SLA and Capacity Planning reports

Collector EM

Agent

Application Server

"Legacy" Applications

Application Server

Database Server

Trilog

Sysview

Application Server

Security

Load Balancing

Network

Batch

Storage

Monitors

OPS/MVS

Vantage

DB Insight

NetMaster

Mainframe

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Managing Linux on System z

> Development priority: A complete management and security solution for mainframe Linux – integrated with z/OS solutions:

- z/VM Management
- Security
- Provisioning
- Workload Scheduling and Management
- Application Performance Management
- Data Backup and Protection
- Event Automation
Exploiting Specialty Processors

> IBM has provided a unique capability to reduce System z hardware and software TCO through the advent of specialty processors

- Specialty processors are priced at a fraction of general purpose processors
- Some software licensing models do not charge for specialty purpose processor capacity

> CA has taken a leadership position in both the support and exploitation of specialty processors to provide real value to our customers by enabling this technology in many of our products
CA Products Exploiting zIIP

> CA NetMaster, IP Packet Trace Analysis and SmartTrace
> CA Detector and CA Subsystem Analyzer
  - Collections run on zIIPs when the SQL being measured runs on a zIIP
> CA Vtape, Virtualization and Compression
> CA Tape Encryption, Encryption and Compression
> CA SYSVIEW, CA MICS, and CA Insight for DB2 Monitor and Report on Specialty Engine Use
> CA Datacom r12 and scheduled for CA IDMS r17
Customer Engagement

Promises Made
- Releasing Latent Value

Promises Kept
- MVP and MSC

Mainframe Value Program

Mainframe Solution Center
Mainframe Value Program

> Mainframe Value Program (MVP) is a no-cost offering for large enterprise accounts designed to increase efficiencies of their mainframe product portfolio to maximize value
  - Assess product usage to identify areas for improvement that lead to increased productivity, better performance, and optimal use
  - Measure product usage against industry tested best practices as well as share “tips and tricks” learned from our experts
  - Identify areas for potential cost saving
> Identify how CA solutions support the customer’s current and future key business initiatives
> Formal, professional-looking report of these findings is presented to senior customer management
> On an ongoing basis, engage with CA to make sure you continue to receive maximum value from your CA software
Mainframe Value Report

> Executive Summary
> Project Overview
> Recommendations Summary
> Key Findings and Recommendations by Product
> Additional CA Product-Related Recommendations
> Action Plan
Mainframe Solution Center

> The Mainframe Solution Center (MSC) is a new CA team comprised of highly experienced mainframe technology specialists

- Focused on the *entire System z platform*, not just CA products
- Comprised of leading members of the mainframe community
- Capable of assisting multi-national customers whose IT infrastructure spans across continents
- Customer voice back into development
Mainframe Solution Center ...

> The MSC provides technical mainframe resources for CA customers

- Provides strategic advice to customers
- Advocates System z as a key part of the Enterprise Architecture
- Assists with major IT initiatives
  - Exploitation and adoption of Mainframe 2.0 features
  - High Availability
  - Business Resilience
  - Data center consolidation due to mergers and acquisitions
  - Virtualization and TCO optimization
What is Out-Tasking?

> A single priced offering that combines access to software tools with services defined by a fixed SOW that addresses specific IT tasks
  - Guaranteed, fast ROI. Customer receives the true value of buying the software rather than the potential for it
  - Product is offered as a monthly subscription on 1, 2 or 3 year contract terms
  - Software is not owned, but effectively leased for the contract term

> CA sells and provides the offering, subcontracting to a service provider to fulfill the services that are performed remotely
Conclusions – the Mainframe 2.0 Opportunity

> The strengths of the mainframe platform make it clear that it will continue to be the foundation for enterprise class IT solutions

> There are ample opportunities for success in the mainframe marketplace

- **IT Professionals** – Gaining and honing mainframe skills enhances your value to the business, the looming staffing shortage means greater demand for these skills in the next decade, the opportunity is immense for those who are prepared

- **Education** – Institutions that provide mainframe as a part of a rounded curriculum will better serve the needs of their students and the business community

- **The Market** – Those customers who get ahead of the curve by hiring for and encouraging the development of mainframe skills will be far better positioned as the workforce transitions to the next generation of IT professionals

- **Vendors** – Those vendors who drive the transition, by leading the technology charge, partnering with customers and participating in the development and delivery of education will gain significant mindshare over their competitors in the IT space
Questions

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