CA's Mainframe 2.0: Simplifying the Installation, Deployment and Configuration of CA Products on z/OS

Scott Fagen
Distinguished Engineer and Chief Architect
Mainframe Business Unit - CA Technologies

abstract

– To help address declining mainframe skills, CA has introduced Mainframe 2.0, an effort to redefine how the mainframe is managed, to support the transition to next generation of systems programmers. A key element of the Mainframe 2.0 strategy is the CA Mainframe Software Manager, a mainframe based web UI tool that manages the acquisition, installation, deployment, configuration and maintenance of z/OS software. In this session the speaker will provide an overview of Mainframe 2.0, explain why CA has embarked on this initiative, and will cover details about the second release (R3) of CA Mainframe Software Manager, featuring a demo which picks up where we left off with CA MSM R2 in 2009. In the demo, fixes are applied to a product and that product is deployed to a test environment, all from a web browser connected to a mainframe application

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agenda

- Mainframe 2.0 Overview
- Mainframe 2.0 and Mainframe Software Management
- CA MSM Demo
- May 2009 and May 2010 Deliverables
- Future Deliverables
- Q&A

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Changing the way the mainframe is managed forever!

Mainframe 2.0

1. THE MARKET

Mainframe Platform Drivers

- Business Growth
- Hardware Evolution
- Mainframe Virtues

2. THE CHALLENGES

Control Costs	Sustain Critical Skills	Increase Agility
▪ Do More… ▪ "…with less" ▪ "…with nothing"	▪ Build next generation team dynamically ▪ On ramp for next gen is long and complex	▪ Provision services faster ▪ Multiplatform data center ▪ Solve critical issues

4. THE PROGRAMS

Promises Made		Promises Kept
Maximize Value	1	Customer Engagement Technology Exploitation
Simplify Management	2	Mainframe Software Mgmt Mainframe Stack
Practical Innovation	3	Integration, Productivity, and Insight

3. THE STRATEGY

Maximize Value	Simplify Management	Practical Innovation

Best in Class Quality, Support, and Customer Experience

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the programs

Promises Made		Promises Kept
Maximize Value	1	• *Customer Engagement*: MVP, MSAC, Training, Best Practices, Publications • *Technology Exploitation:* Specialty Engines, Application Performance & Tuning
Simplify Management	2	• CA Mainframe Software Manager (CA MSM) • CA Mainframe Stack • Health Checks • Integrated System Testing
Practical Innovation	3	• Cross Enterprise APM • Risk and Compliance Management • Development Environment Integration • Workload Automation

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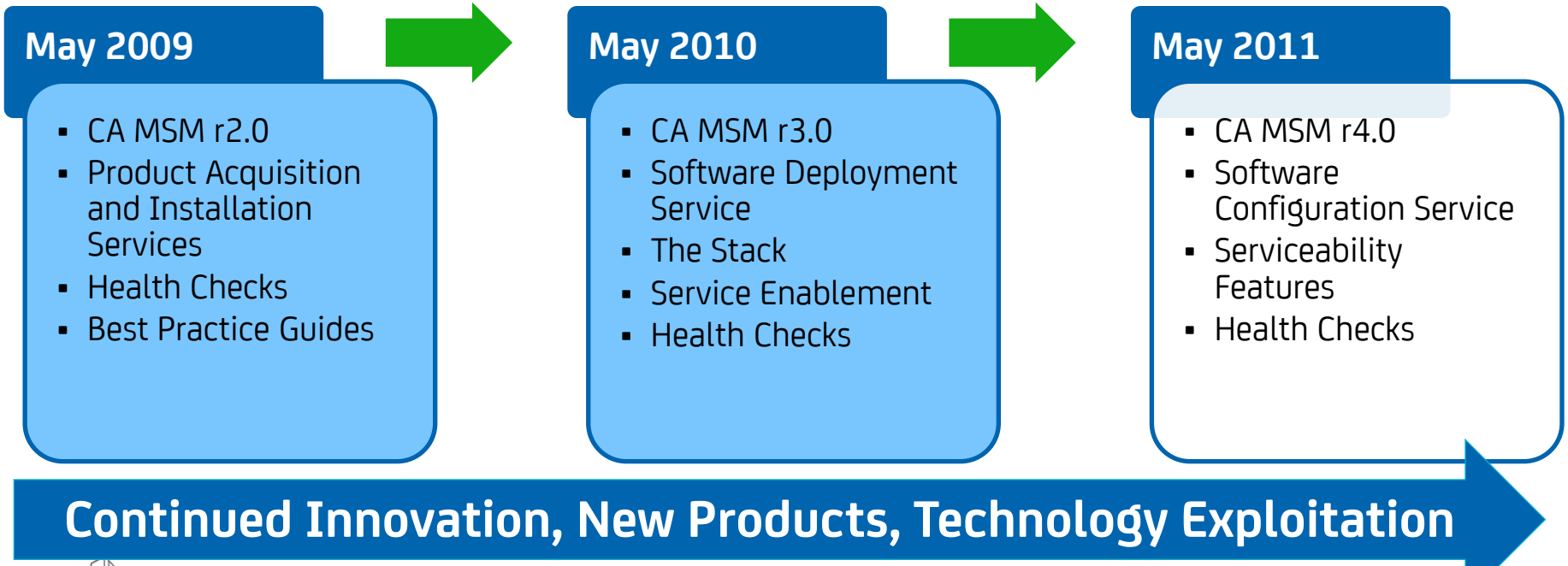
overview - the journey

- An aggressive three-year journey to deliver on our promises and the promises of the platform
- Delivering a CA Mainframe Stack
- Delivering a rich CA Mainframe Software experience



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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
  - Simplify installation, configuration and tuning
  - Sustain the virtues of the platform
  - 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

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install, deploy, configure & maintain

- New Software
- Installation Guides
- Conversion Notebooks
- New Features
- Deprecated Functions

Add up to complex actions for the system programmer

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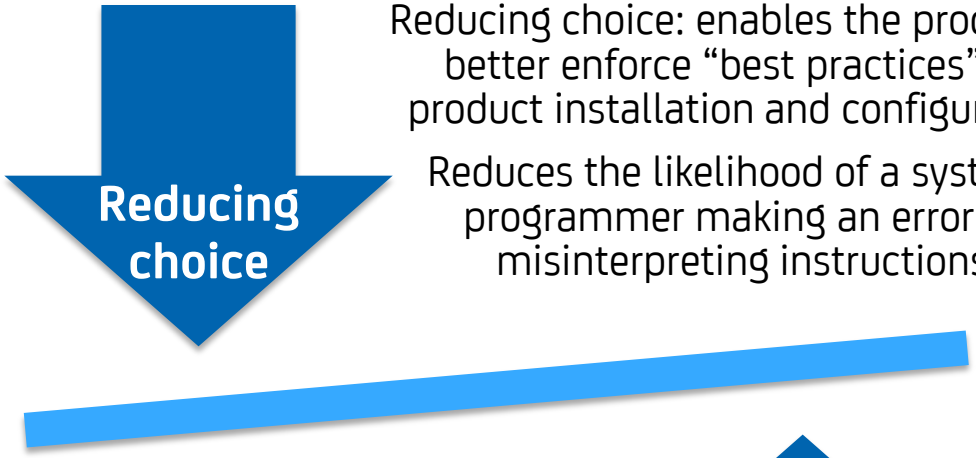
technologies

reducing complexity = improved QoS



Reducing choice: enables the product to better enforce “best practices” for product installation and configuration

Reduces the likelihood of a systems programmer making an error or misinterpreting instructions

Enabling a product (or providing a structure) to handle activities normally tackled by system programmers eliminates errors and automates the enforcement of standards

Both sides of the equation improve the experience of the platform

Both are crucial to reduce the skills requirement while not compromising the strengths of the z/OS platform

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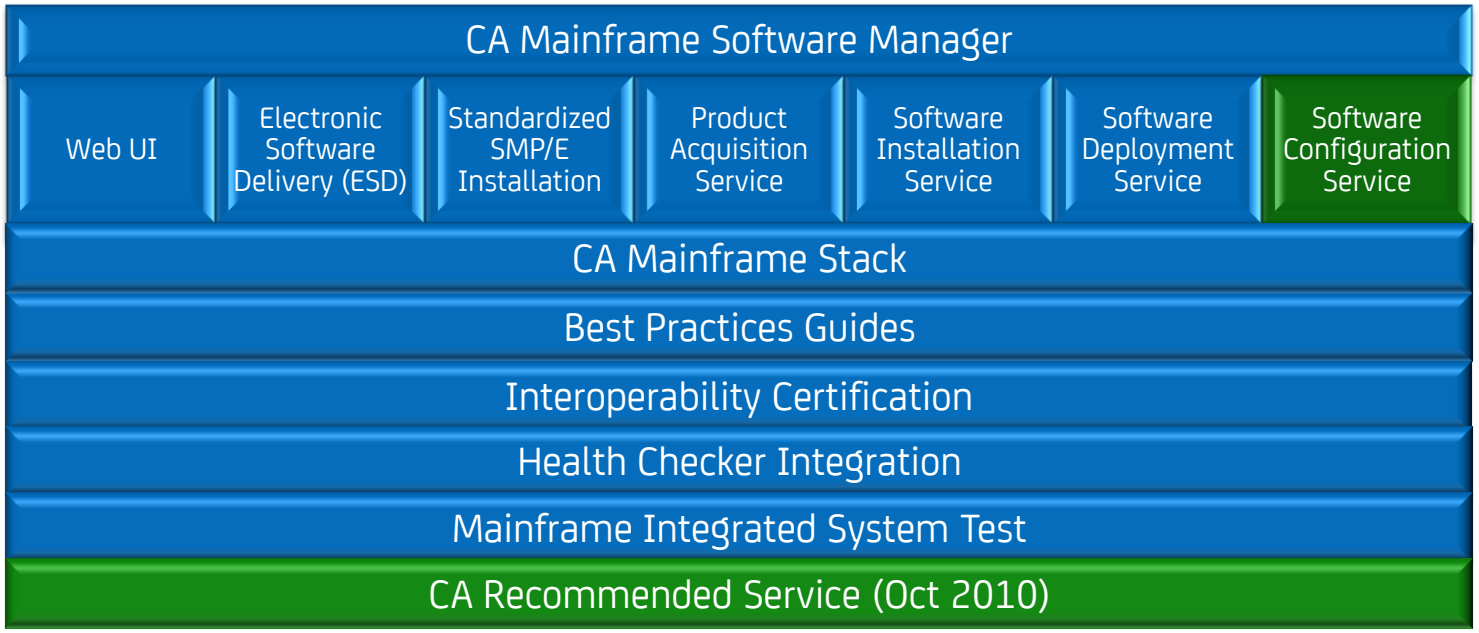
technology delivered in 2009
CA MSM r2.0

Promises Made	Promises Kept
Simplify Management	**CA Mainframe Software Manager**



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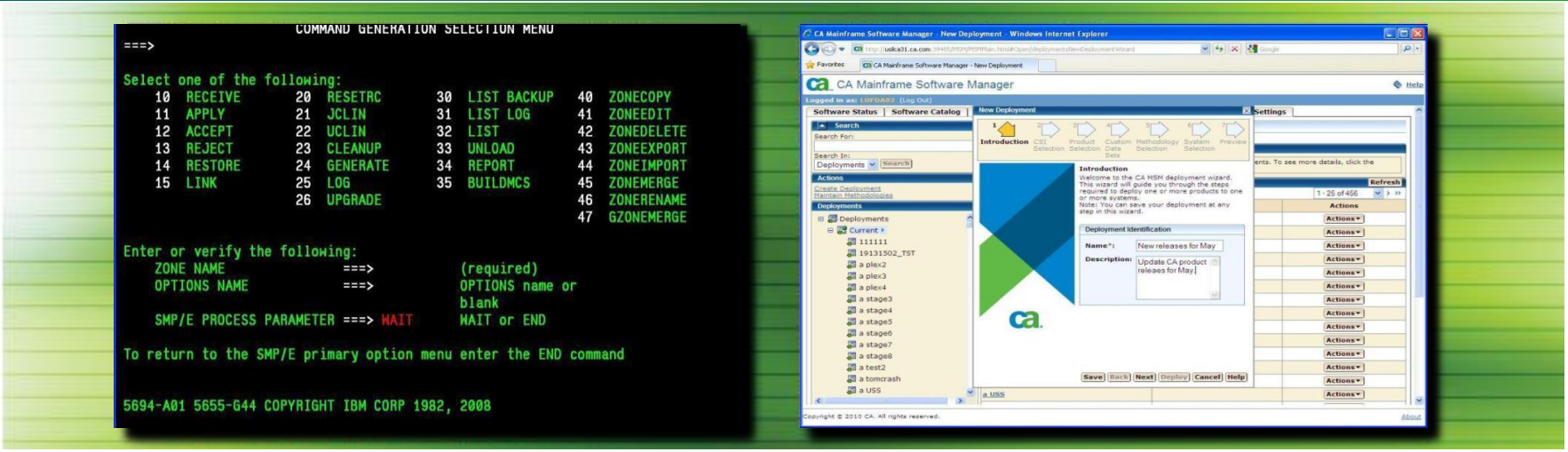
simplify management:
CA Mainframe Software Manager (CA MSM)



Over 250 Customers Using CA MSM!

- InstallShield® and Windows Update for the Mainframe
- Dramatically simplifies software management activities
- Significantly reduces installation, deployment, and maintenance times
- Huge productivity increases for both mainframe experts and novices
- More than 120 deployable products across all major product families
- Included at no additional charge for any active CA Technologies mainframe customers

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what does CA MSM do?

- Downloads software products and service from CA Support Online
  - Includes other artifacts (e.g. PDFs, letters, etc.)
- Creates CSIs
- Evaluates and installs software into CSIs
- Evaluates and installs maintenance into CSIs
- Adds “External Maintenance”
  - e.g. ++APARs, ++USERMODS
- Installs “External Package”
  - e.g. Beta products, other vendor products
- Migrates existing CSIs
- Maintains relationships between products and CSIs

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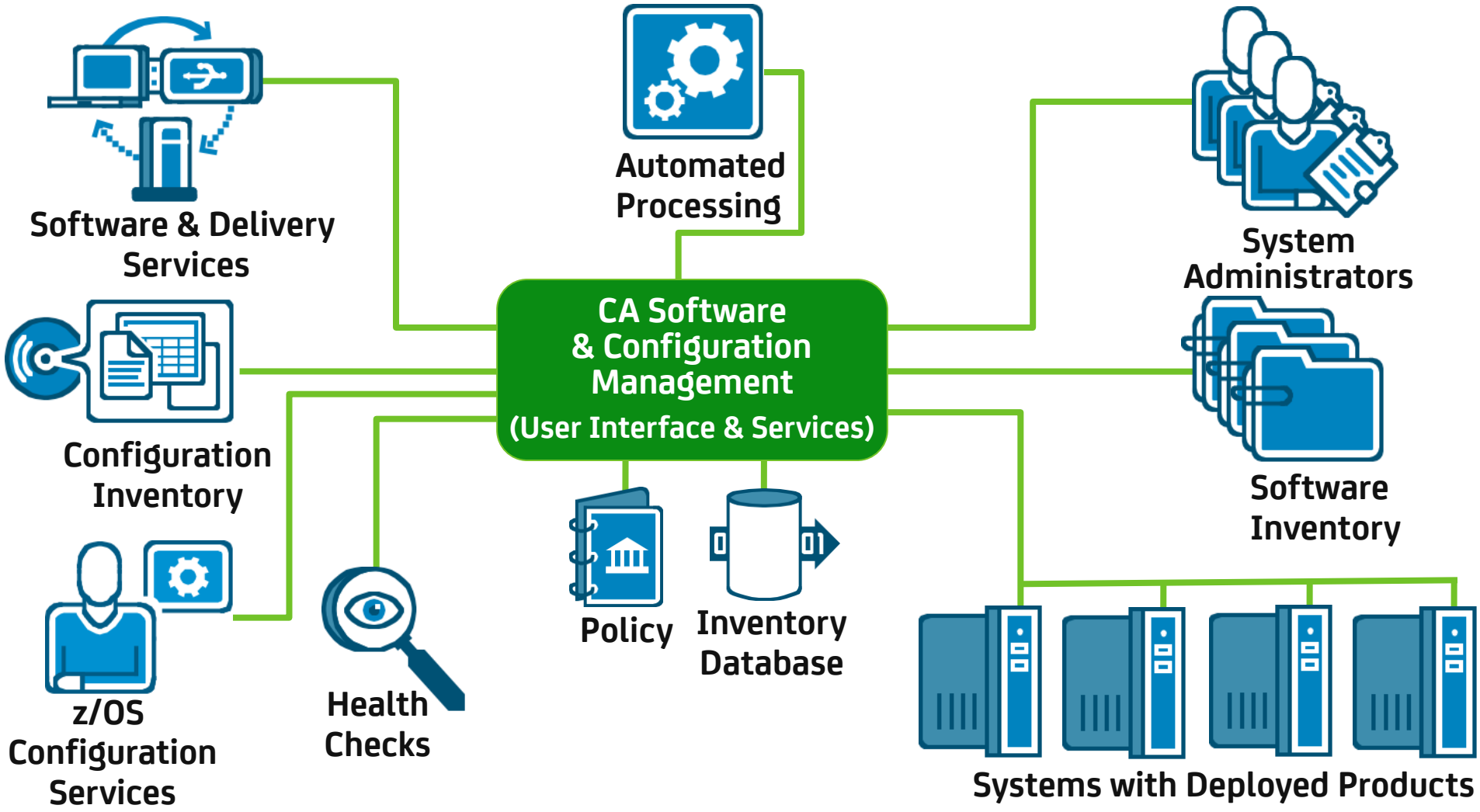
CA MSM architecture



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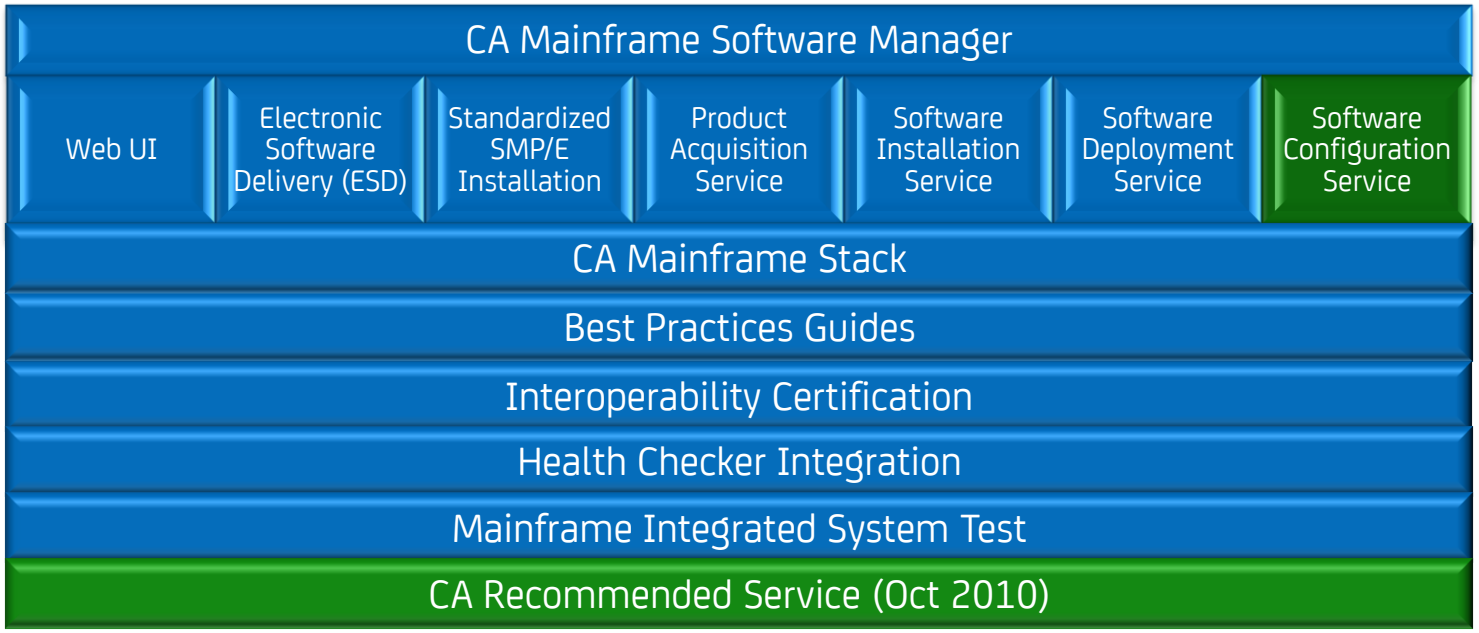
technology delivered in 2010
CA MSM r3.0

Promises Made	Promises Kept
Simplify Management	**CA Mainframe Software Manager**



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CA Mainframe Software Manager r3.0 key features

Software Deployment Service (SDS)	• Deployment of one or more products to one or more Systems • > 120 deployable CA products (compared to 49 installable last year)
Release Migration	• Migration capabilities from CA MSM r2.0 to CA MSM r3.0
Infrastructure Updates	• Support for 31-bit and 64-bit mode Java 1.6 • Tomcat server upgraded to 6.0.20
Installation Improvements	• Modified allocation of these primary files: ○ APLROOT, SCROOT and LJROOT to be one file with directories ○ LJWK file will remain a separate allocation
Usability Enhancements	• Delete CA MSM Task Manager output for specific tasks • Automatic scheduling of product maintenance downloads
Best Practices Guide	• Based on CA MSM expert and customer input

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CA Mainframe Software Manager r3.0 key features

Security Enhancements	• Security for CA MSM SDS • Performing functions such as installation and deployment
CSI Management Updates	• Support for partitioned CSIs to enable multiple CSI target zones • Flexibility in CSI naming to accommodate user preferences
CSI Migration Wizard Updates	• Check zone index, identify zones, add prefix to zones • Addition of DDDEFs • Propagation in Installation Wizard of previously-entered values
CA z/OS Product Installation Flexibility	• Specify GROUP or GROUPEXTEND on SMP/E processing • APPLY CHECK and ACCEPT CHECK • RECEIVE product maintenance but not proceed with further SMP/E processing (executing APPLY and/or ACCEPT)

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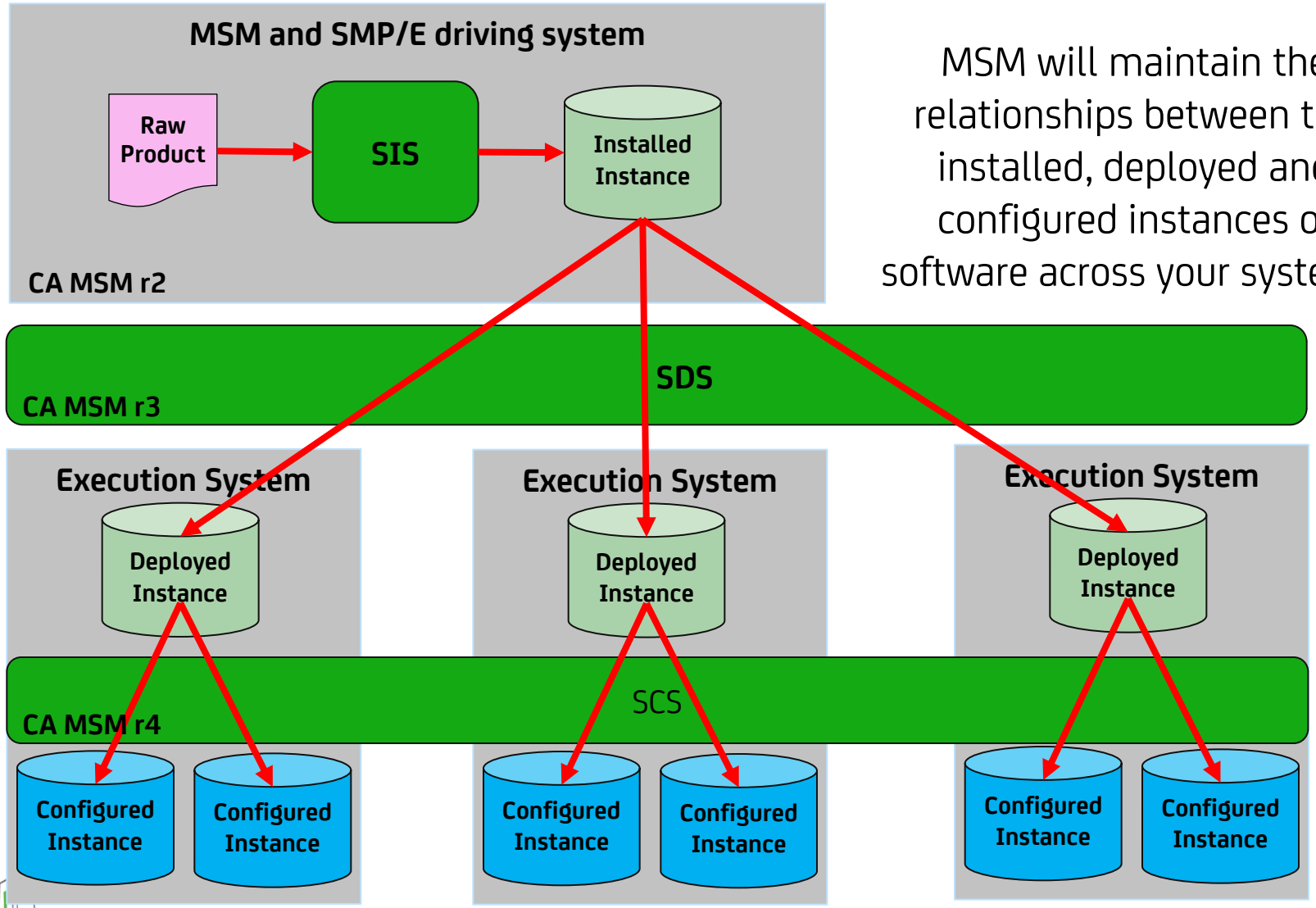
installation/deployment/configuration



MSM will maintain the relationships between the installed, deployed and configured instances of software across your systems.

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CA MSM r3.0 – what is deployment?

- Choose a set of products
- Choose a set of naming rules
- Choose a set of systems
- Create a package
- Create instructions
- (Optional) Move the package

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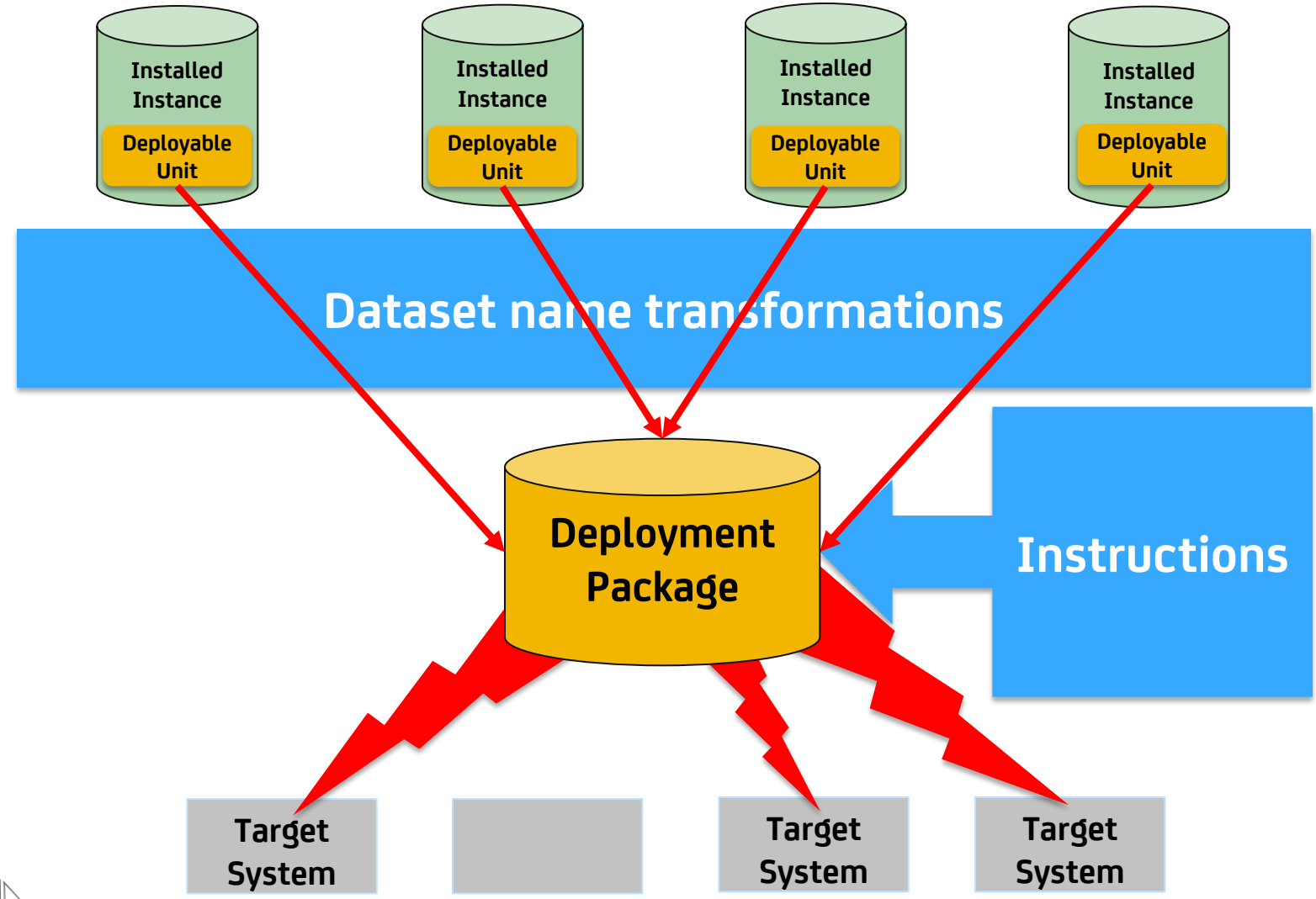
CA MSM r3.0 – what is deployment?



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CA MSM demonstration

Mainframe 2.0 deliverables and results

CA MSM time savings - installation

Time to Install 10 Mainframe Applications*						
Product	Mainframe Expert Install			Mainframe Novice Install		
	Traditional	With CA MSM	Improvement	Traditional	With CA MSM	Improvement
CA 1® Tape Management	36 min	9 min	4X	3 hrs 12 min	14 min	14X
CA Auditor for z/OS	26 min	7 min	4X	2 hrs 22 min	8 min	18X
CA Datacom®	1hr 14 min	6 min	12X	3 hrs 8 min	10 min	19X
CA JARS Resource Accounting	37 min	5 min	7X	1 hr 11 min	6 min	12X
CA Librarian®	28 min	2 min	14X	1 hr 13 min	6 min	12X
CA MIM™ Resource Sharing	30 min	5 min	6X	1 hr 31 min	5 min	18X
CA OPS/MVS® Event Management and Automation	36 min	6 min	6X	1 hr 50 min	7 min	16X
CA Panvalet®	54 min	3 min	18X	1 hr 11 min	5 min	14X
CA SMF Director	40 min	5 min	8X	1 hr 10 min	6 min	12X
CA SymDump® for CICS	38 min	3 min	12X	4 hrs 3 min	6 min	40X
Totals	**6 hrs 39 min**	**51 min**	**8X**	**20 hrs 51 min**	**73 min**	**17X**

87% improvement for installation; 93% improvement for maintenance

Source: CA Technologies Lab Results

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CA MSM time savings - maintenance

Time to Install Maintenance for 7 Mainframe Applications*

Product	Number of Fixes	Mainframe Expert Install			Mainframe Novice Install		
		Traditional	With CA MSM	Improve-ment	Traditional	With CA MSM	Improve-ment
CA Auditor for z/OS	14	23 min	1 min 22 sec	17X	41 min	1 min 30 sec	27X
CA Cleanup for CA ACF2™	1	6 min	38 sec	10X	33 min	1 min 13 sec	27X
CA Easytrieve®	9	24 min	1 min 24 sec	17X	60 min	1 min 59 sec	31X
CA Endevor® Software Change Manager	19	32 min	5 min 5 sec	7X	46 min	10 min 2 sec	5X
CA Librarian®	15	45 min	1 min 58 sec	23X	38 min	2 min 55 sec	13X
CA Panvalet®	12	27 min	1 min 39 sec	17X	62 min	2 min 25 sec	26X
CA View®	4	32 min	1 min 48 sec	18X	37 min	1 min 39 sec	22X
Totals		**3 hrs 09 min**	**13 min 54 sec**	14X	**5 hrs 17 min**	**21 min 43 sec**	**15X**

93% productivity gains for mainframe experts and 94% for novices!

Source: CA Technologies Lab Results

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CA MSM time savings - deployment

Time to Deploy 10 Mainframe Applications						
Product	To A Single Remote System			To Six Remote Systems		
	Traditional	With CA MSM	Improve-ment	Traditional	With CA MSM	Improve-ment
CA 1 Tape Management	55 min	2 min 9 sec	25X	2 hr 30 min	5 min 45 sec	26X
CA 11™ Workload Automation	45 min	1 min 56 sec	23X	1 hr 45 min	3 min 32 sec	30X
CA Cleanup for CA ACF2	39 min	1 min 52 sec	21X	1 hr 22 min	3 min 22 sec	24X
CA Copycat	37 min	2 min 1 sec	18X	1 hr 20 min	3 min 15 sec	25X
CA Deliver ™	36 min	2 min 17 sec	16X	1 hr 17 min	5 min 36 sec	14X
CA Endevor SCM	55 min	3 min 19 sec	17X	2 hr 10 min	11 min 24 sec	11X
CA NetMaster® Suite	1 hr 15 min	6 min 5 sec	12X	3 hr 20 min	21 min 58 sec	9X
CA SYSVIEW® Performance Management	1 hr 40 min	4 min 16 sec	23X	5 hr 10 min	13 min 42 sec	22X
CA TPX	43 min	3 min 41 sec	12X	1 hr 10 min	11 min 1 sec	6X
CA View	58 min	6 min 19 sec	9X	2 hr 40 min	13 min 55 sec	12X
Totals	**9 hrs 3 min**	**33 min 55 sec**	**16X**	**22 hr 44 min**	**93 min 30 sec**	**15X**

93% productivity increase using CA MSM for Deployment!

Source: CA Technologies Lab Results

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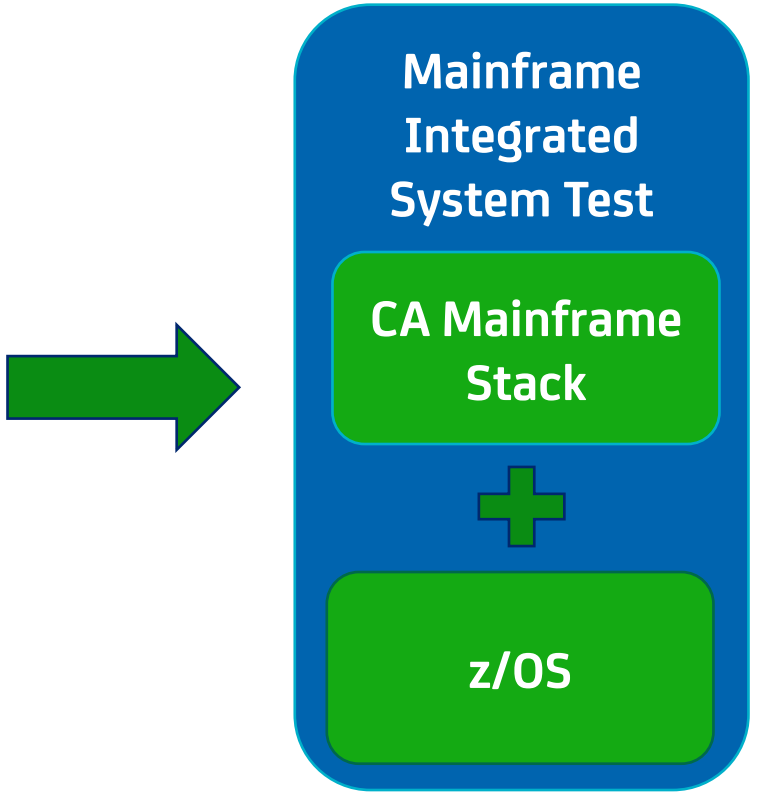
May Mainframe Madness and the CA Mainframe Stack

"May Mainframe Madness"

- A single, major mainframe product announcement in May of each year
  - Defines the CA Mainframe Stack associated with the most current z/OS release
  - Documents products' levels of adoption of Mainframe 2.0
  - Certifies product interoperability
- CA Mainframe Stack –
  The set of products that have adopted levels of the Mainframe 2.0 capabilities
  - Tested for CA product interoperability and as well as compatibility and exploitation of the current release of z/OS



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what is the CA Mainframe Stack?

- The CA Mainframe Stack is (currently) the organization of a set of products that share
  - GA date and z/OS alignment
  - Interoperability Testing
    - Across the stack
    - With a particular z/OS level
  - Service recommendations (CA RS) that extend for the life of the product
- For 2009 and 2010 it is a “virtual” stack
  - Simplified and common product packaging constructs
  - Not a unified package
- Looking at various options to make the stack more ‘real’

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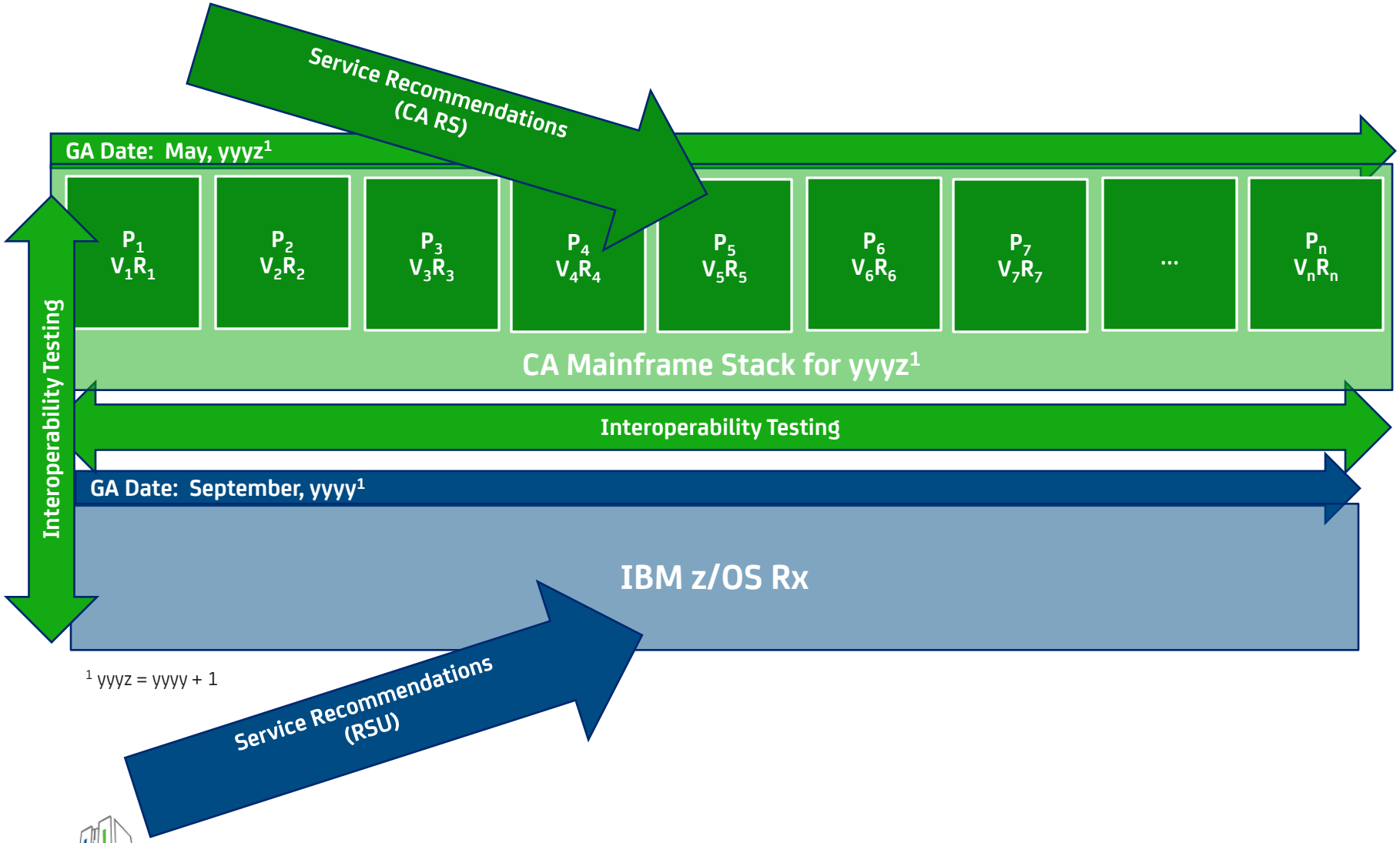
what is the CA Mainframe Stack?



[1] yyyz = yyyy + 1

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Mainframe Integrated System Test (IST)

- Common integration testing environment for products included in the CA Mainframe Stack
  - Similar to IBM's Consolidated Service Test (CST)
  - Additional level of testing beyond what is done today
  - PTFs enter IST after they become generally available
  - IST test scenarios will strive to simulate customer workloads and use of CA products
- Test against all supported IBM z/OS, CICS, DB2, etc. releases
  - Verify PTF installation, function and stress test
  - If problems are discovered, the PTF will be immediately marked PE and removed from IST

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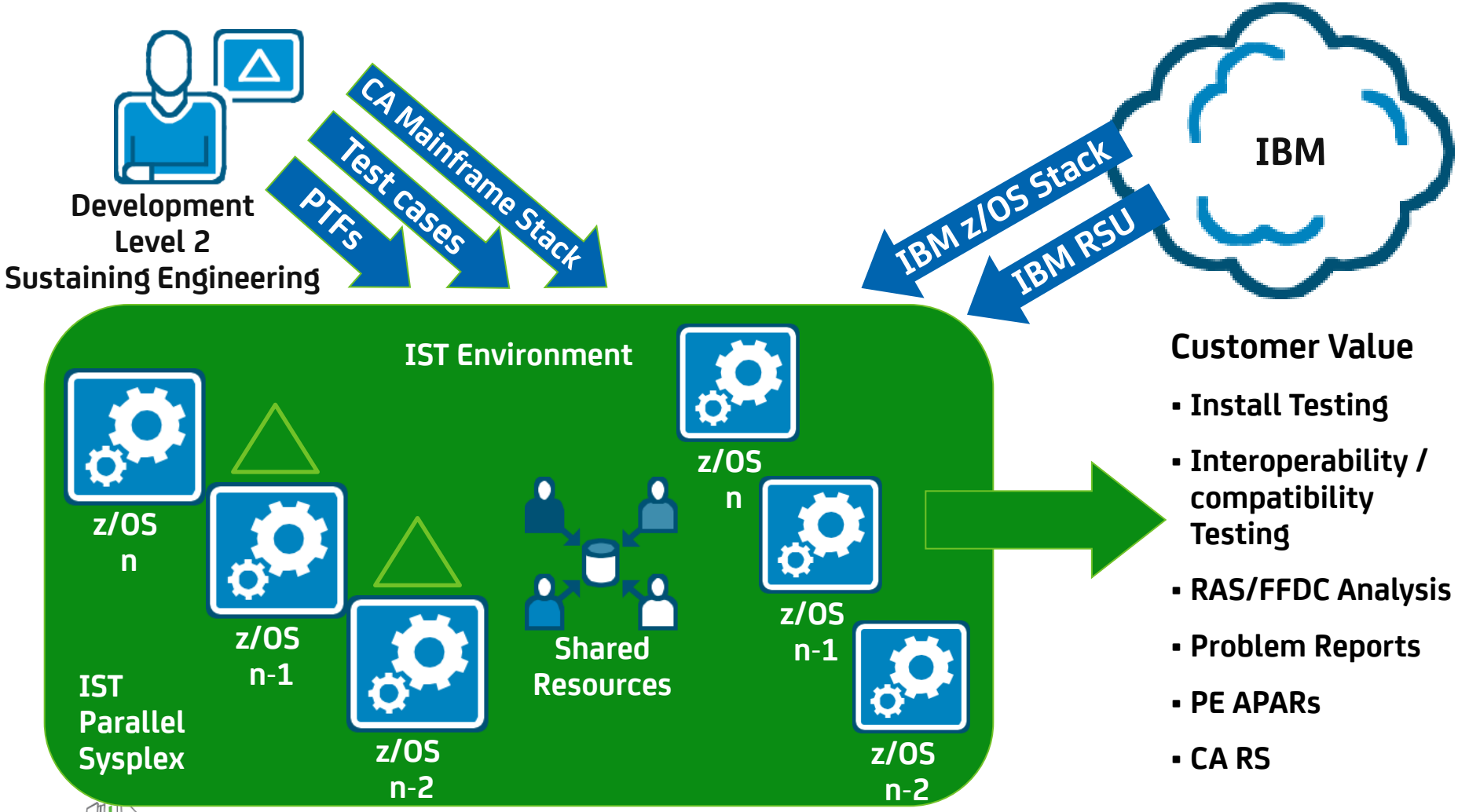
Mainframe Integrated System Test: systematically improving product quality



Customer Value

- Install Testing
- Interoperability / compatibility Testing
- RAS/FFDC Analysis
- Problem Reports
- PE APARs
- CA RS

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the value of the CA Mainframe Stack, IST, and CA RS

– Customer value:
  - Improved predictability in software delivery from CA simplifies planning for their upgrade cycle
    - Customers already plan for z/OS as an integrated upgrade
  - Commonality and simplification in software delivery and implementation reduces cost and commission of errors
  - Keeping current with the CA (and, by extension, the IBM) software stack reduces the opportunity for issues unique to their installation
    - Following the recommended service policy should actually mask issues created by IBM PTFs “breaking” CA software

– None of this replaces CA’s pledge to support z/OS and major subsystem releases on “day one”

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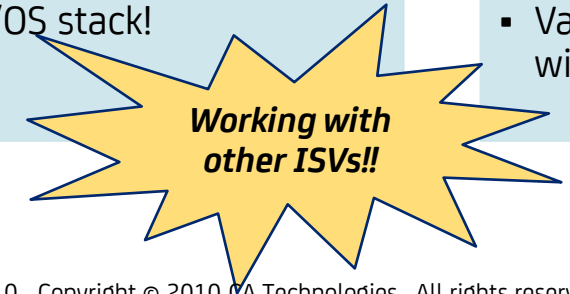
focus on improved quality and confidence

CA Mainframe Stack

- Enables CA to provide a certified set of offerings to enable a greater focus on quality and defect removal. The stack is refreshed on a yearly basis, aligning with IBM software offerings.
- Adoption of the CA Mainframe Stack ensures that a customer receives the most fully tested CA software, verified against IBM software

Delivery of Products

- All products will be packaged in SMP/E format, following z/OS Packaging Standards developed by IBM and augmented by CA
- Electronic delivery in the new tapeless ESD/PAX format
- One way to install, manage and service all software in the z/OS stack!



Delivery of Service *(coming soon)*

- Consistent and systematic testing of the product stack from QA through end of service
- Deliver stack-wide service – ***CA RS***:

  CA
  Recommended
  Service

- Validated and synchronized with IBM's RSU

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Health Checks for CA products

- Run under the IBM Health Checker for z/OS
- CA product health checks continuously monitor the active system environment to ensure CA solutions are optimally configured
  - Validate that best practices are being followed
  - Check for recommended product parameter settings
  - Monitor product resources to ensure they remain at or below predefined thresholds
  - Verify that recent product enhancements are being utilized to maximize return on the customer's investment in CA technology
- CA health checks are written by product developers and included with the product, weaving expert product configuration knowledge directly into the software

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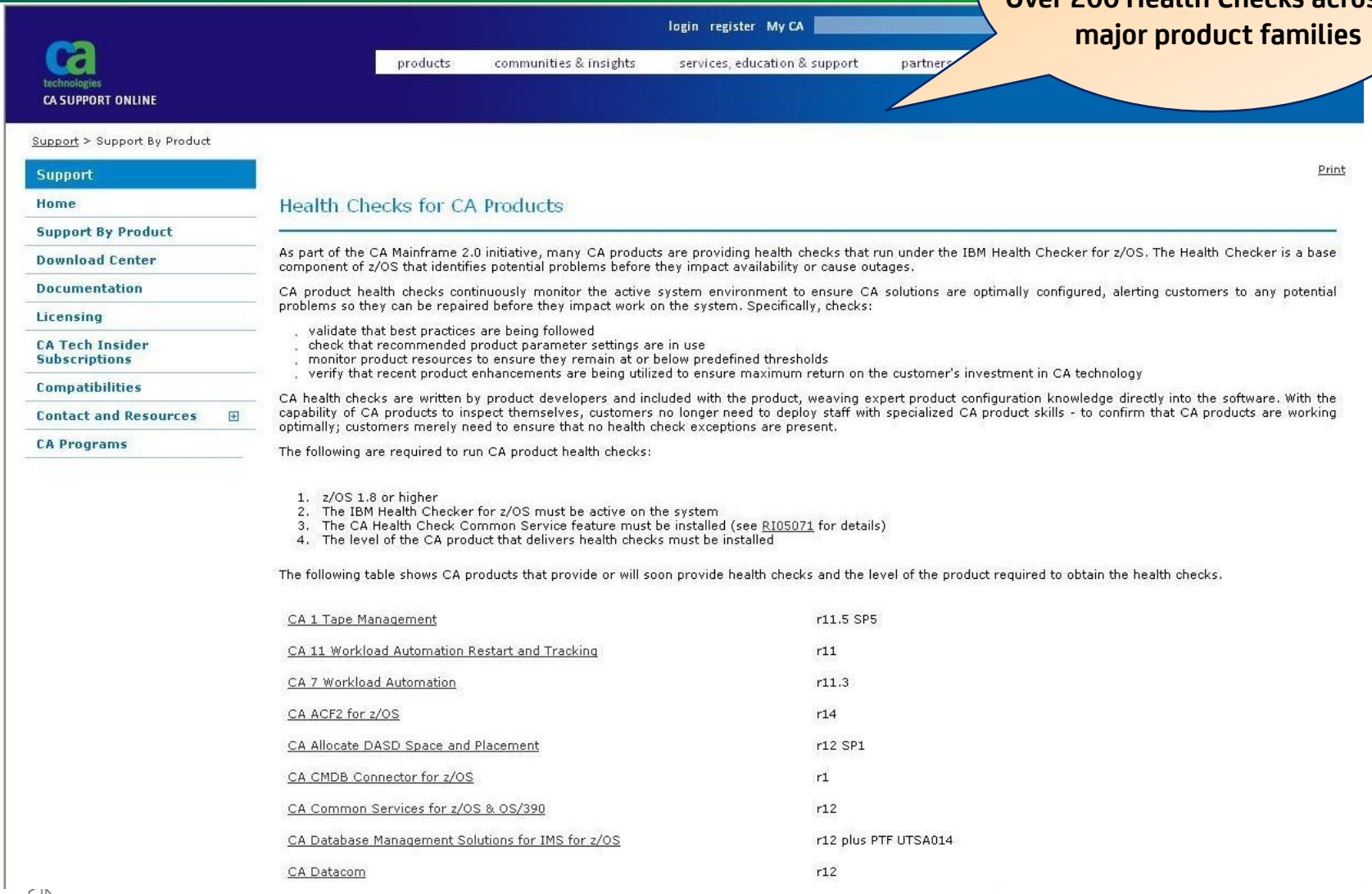
health checks for CA products

http://support.ca.com

Health Checks page on CA Support Online.
Over 200 Health Checks across all major product families



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serviceability

- Common module eyecatcher
  - Establish
    - Product ownership
    - Maintenance level
- Common dump title formatting
  - Messages identify
    - Load module, offset, ownership and maintenance level
    - Environmental information including PSW and Regs
    - Diagnostic dump
  - Messages allows for more granular search of knowledge base
  - Reduce mean time to resolution
- Addition of “event capture” technology to CA common services
  - Enable products to capture more than just the dump

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CA MSM r3.0 planned features – late 2010

- Support for CA Recommended Service (CA RS)
  - Recommended way to maintain CA z/OS products using CA MSM
  - Preventative and timely maintenance visible and downloadable via CA MSM
- Web services support for Product Acquistion Service
  - Web service interface to support.ca.com
  - Improve the performance and usability of CA z/OS product acquisition
- Additional usability enhancements
- Answer customer requirements

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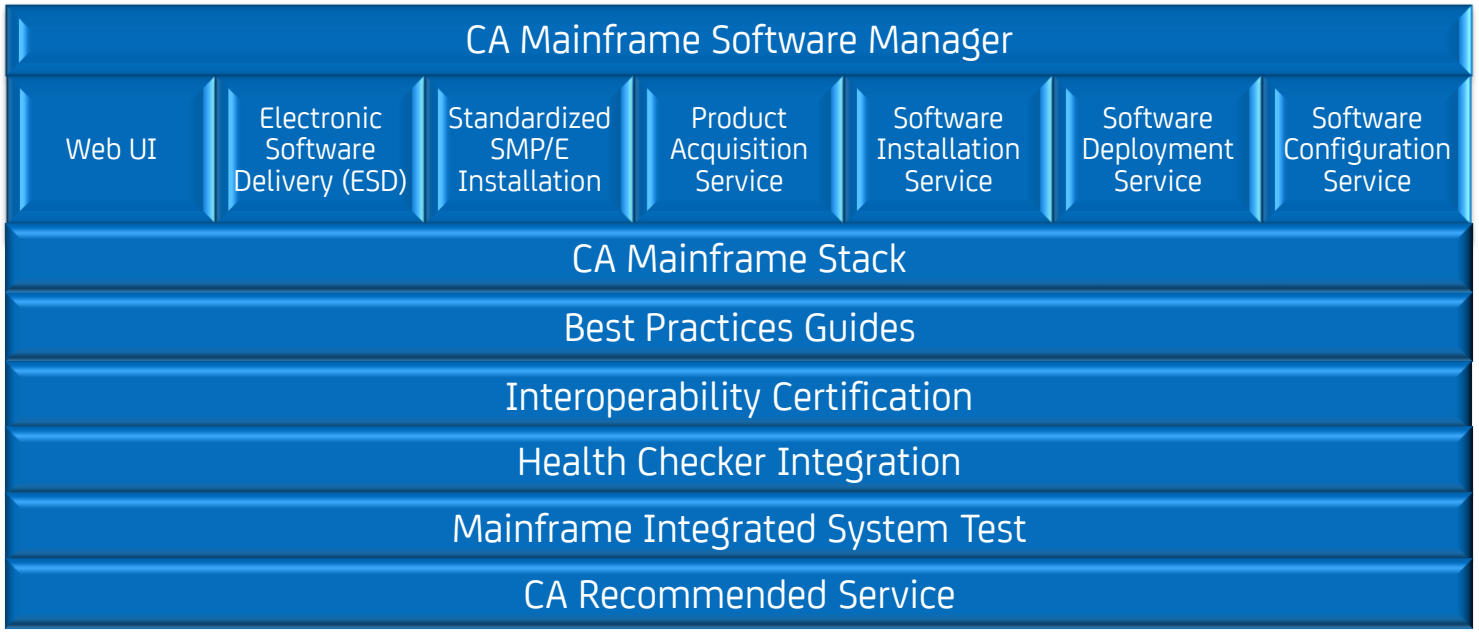
technology planned for delivery in 2011
CA MSM r4.0

Promises Made	Promises Kept
Simplify Management	**CA Mainframe Software Manager**



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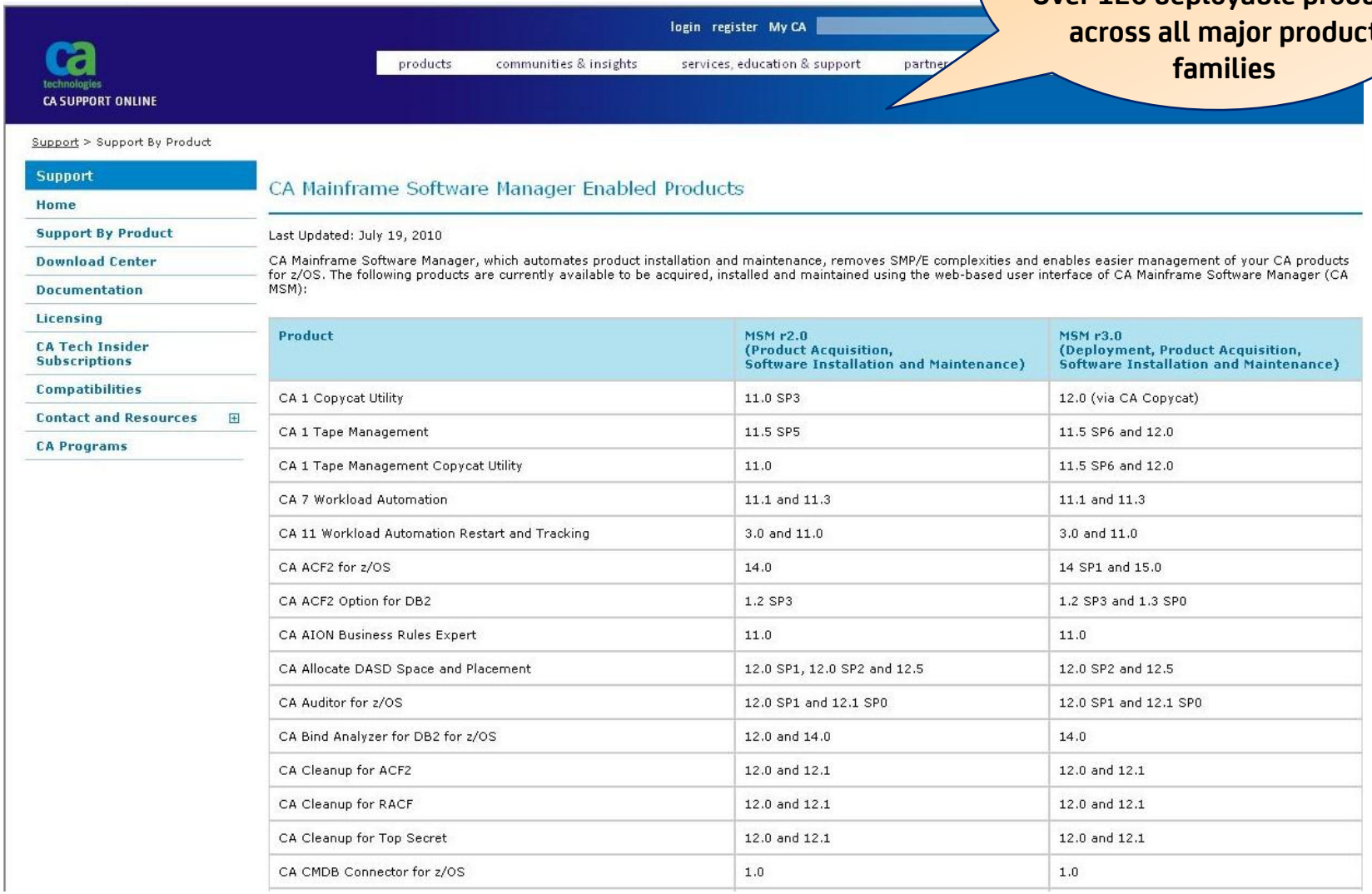
products integrated with CA MSM

http://support.ca.com/prodinfo/msmprods

CA MSM Enabled Products page on CA Support Online. Over 120 deployable products across all major product families



CA Mainframe Software Manager Enabled Products

Last Updated: July 19, 2010

CA Mainframe Software Manager, which automates product installation and maintenance, removes SMP/E complexities and enables easier management of your CA products for z/OS. The following products are currently available to be acquired, installed and maintained using the web-based user interface of CA Mainframe Software Manager (CA MSM):

Product	MSM r2.0 (Product Acquisition, Software Installation and Maintenance)	MSM r3.0 (Deployment, Product Acquisition, Software Installation and Maintenance)
CA 1 Copycat Utility	11.0 SP3	12.0 (via CA Copycat)
CA 1 Tape Management	11.5 SP5	11.5 SP6 and 12.0
CA 1 Tape Management Copycat Utility	11.0	11.5 SP6 and 12.0
CA 7 Workload Automation	11.1 and 11.3	11.1 and 11.3
CA 11 Workload Automation Restart and Tracking	3.0 and 11.0	3.0 and 11.0
CA ACF2 for z/OS	14.0	14 SP1 and 15.0
CA ACF2 Option for DB2	1.2 SP3	1.2 SP3 and 1.3 SP0
CA AION Business Rules Expert	11.0	11.0
CA Allocate DASD Space and Placement	12.0 SP1, 12.0 SP2 and 12.5	12.0 SP2 and 12.5
CA Auditor for z/OS	12.0 SP1 and 12.1 SP0	12.0 SP1 and 12.1 SP0
CA Bind Analyzer for DB2 for z/OS	12.0 and 14.0	14.0
CA Cleanup for ACF2	12.0 and 12.1	12.0 and 12.1
CA Cleanup for RACF	12.0 and 12.1	12.0 and 12.1
CA Cleanup for Top Secret	12.0 and 12.1	12.0 and 12.1
CA CMDB Connector for z/OS	1.0	1.0

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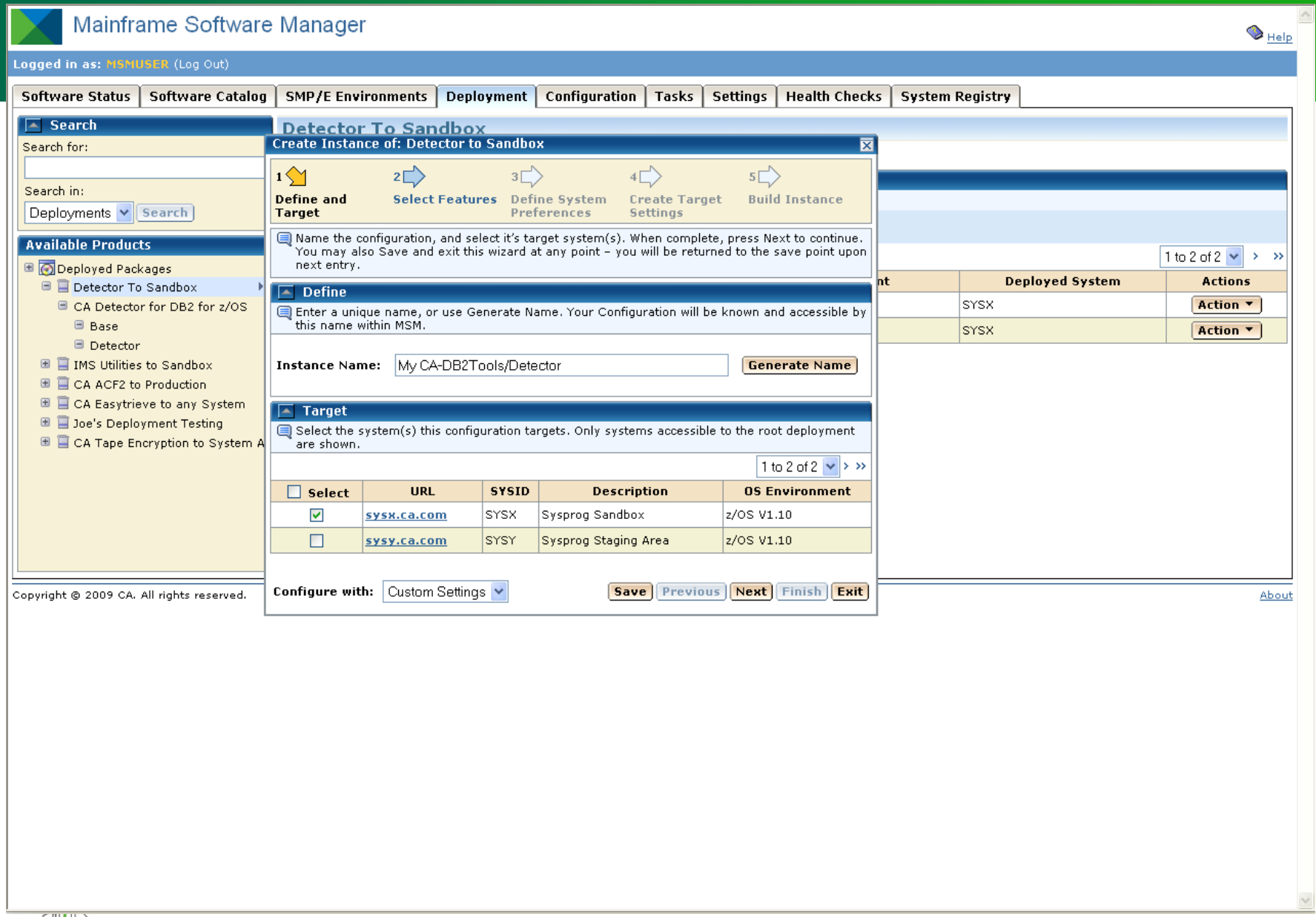

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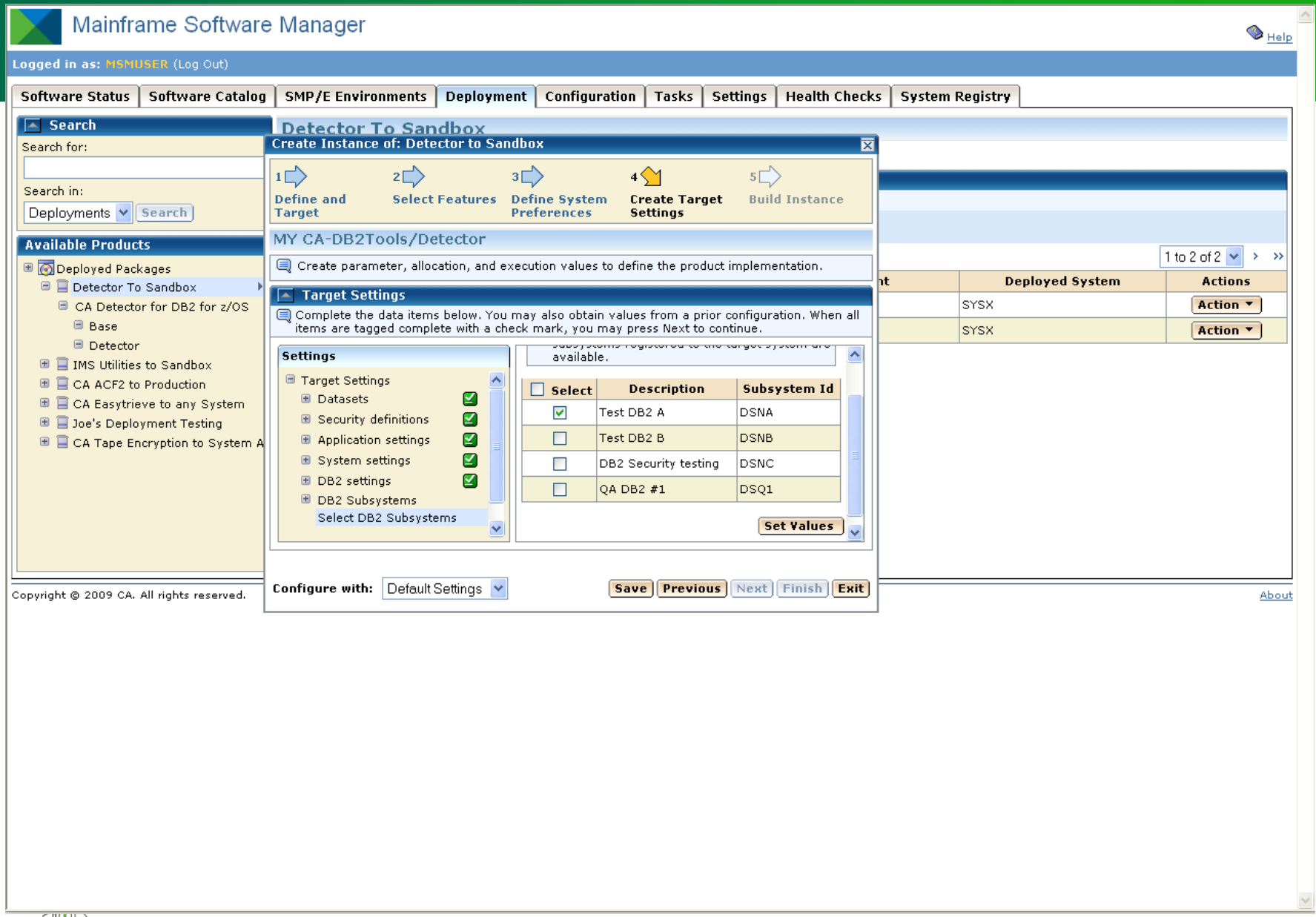

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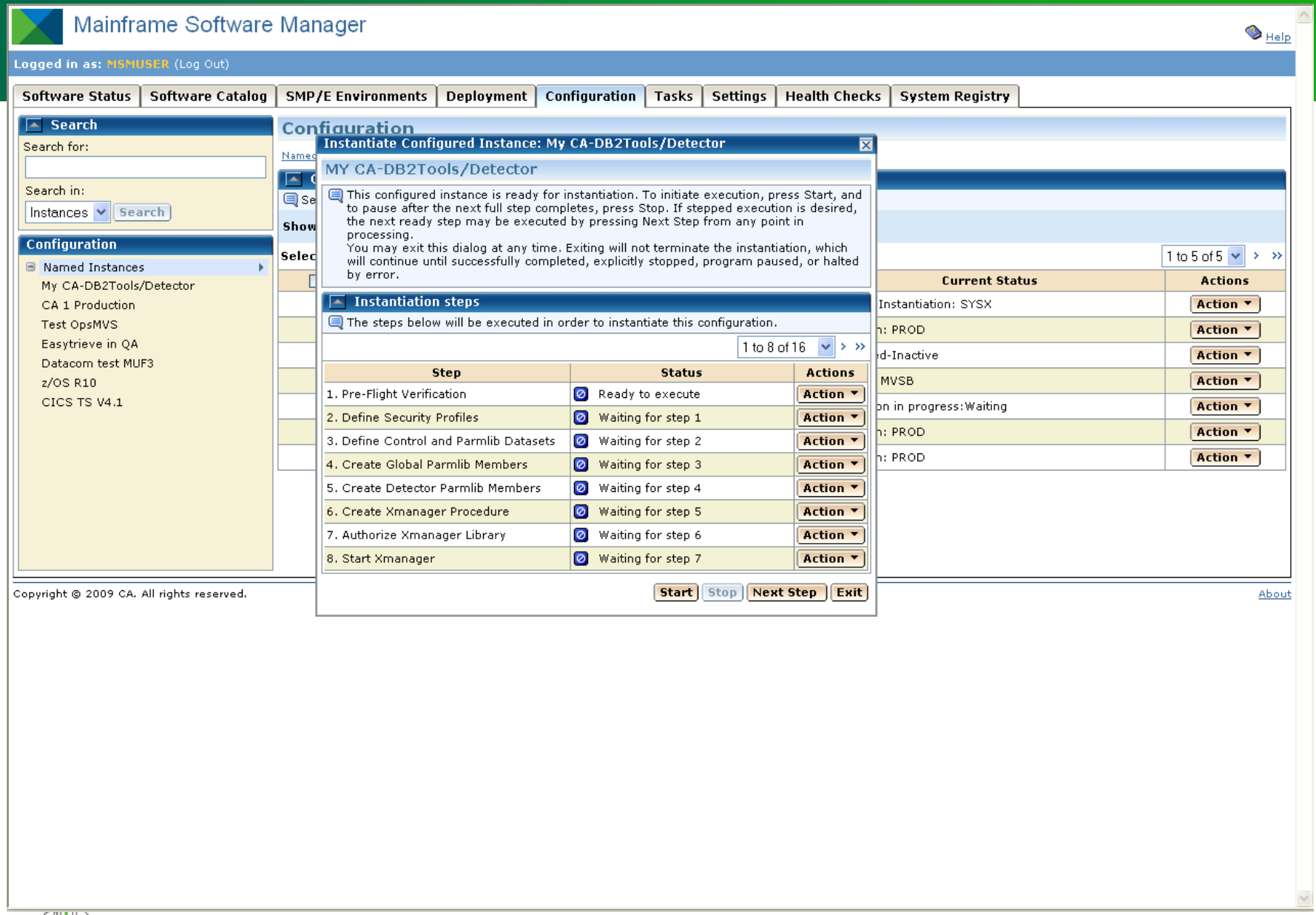

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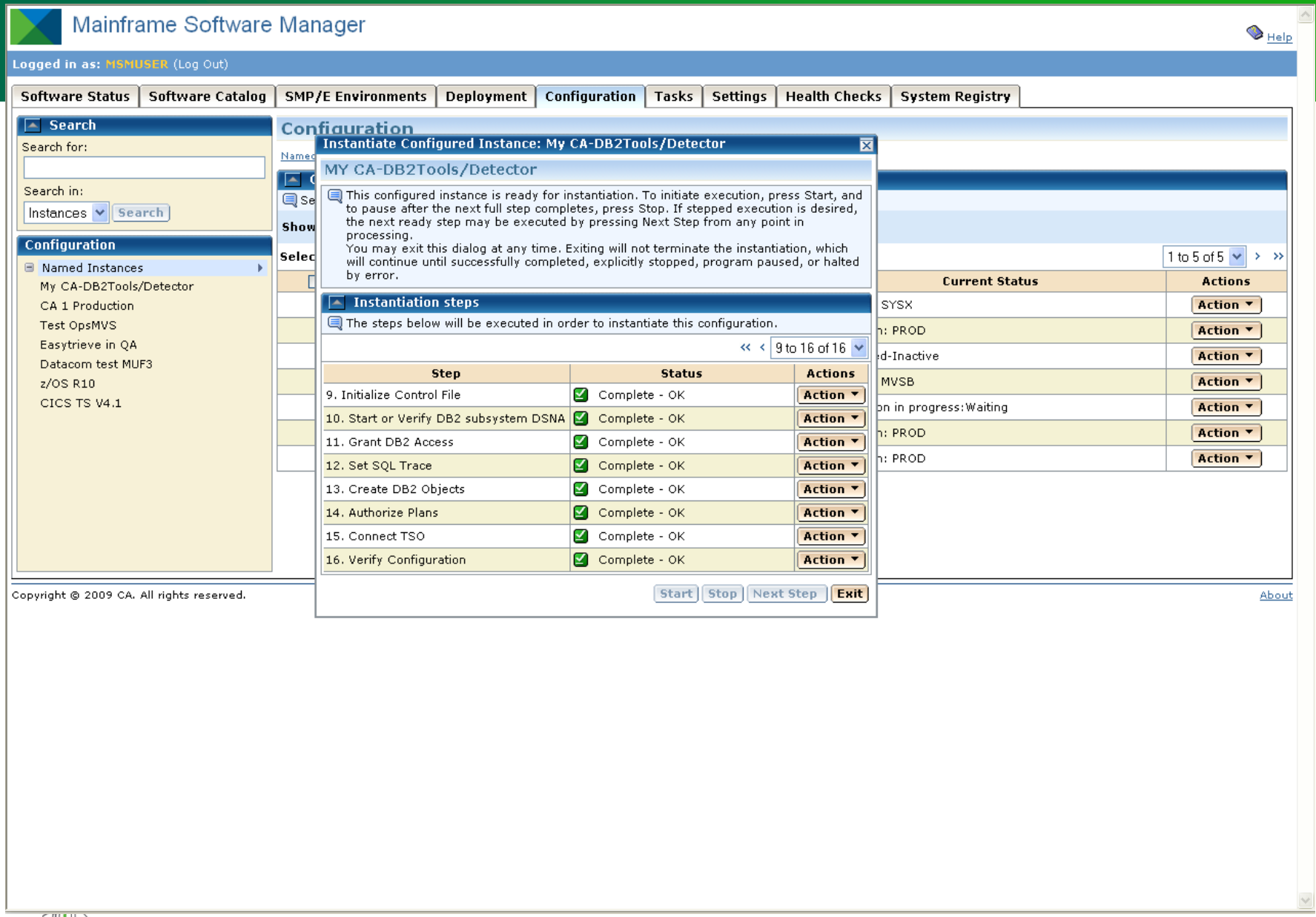

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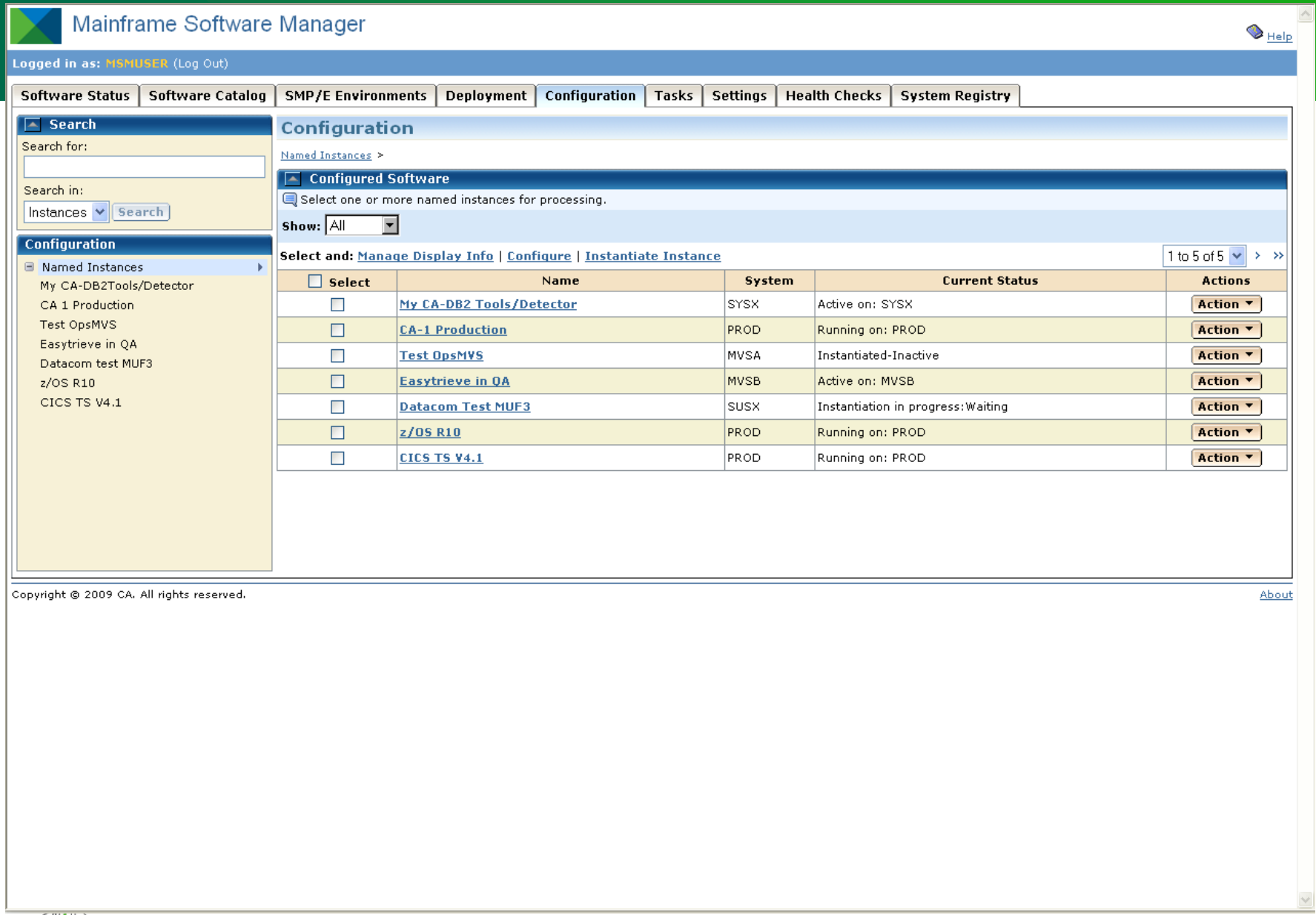

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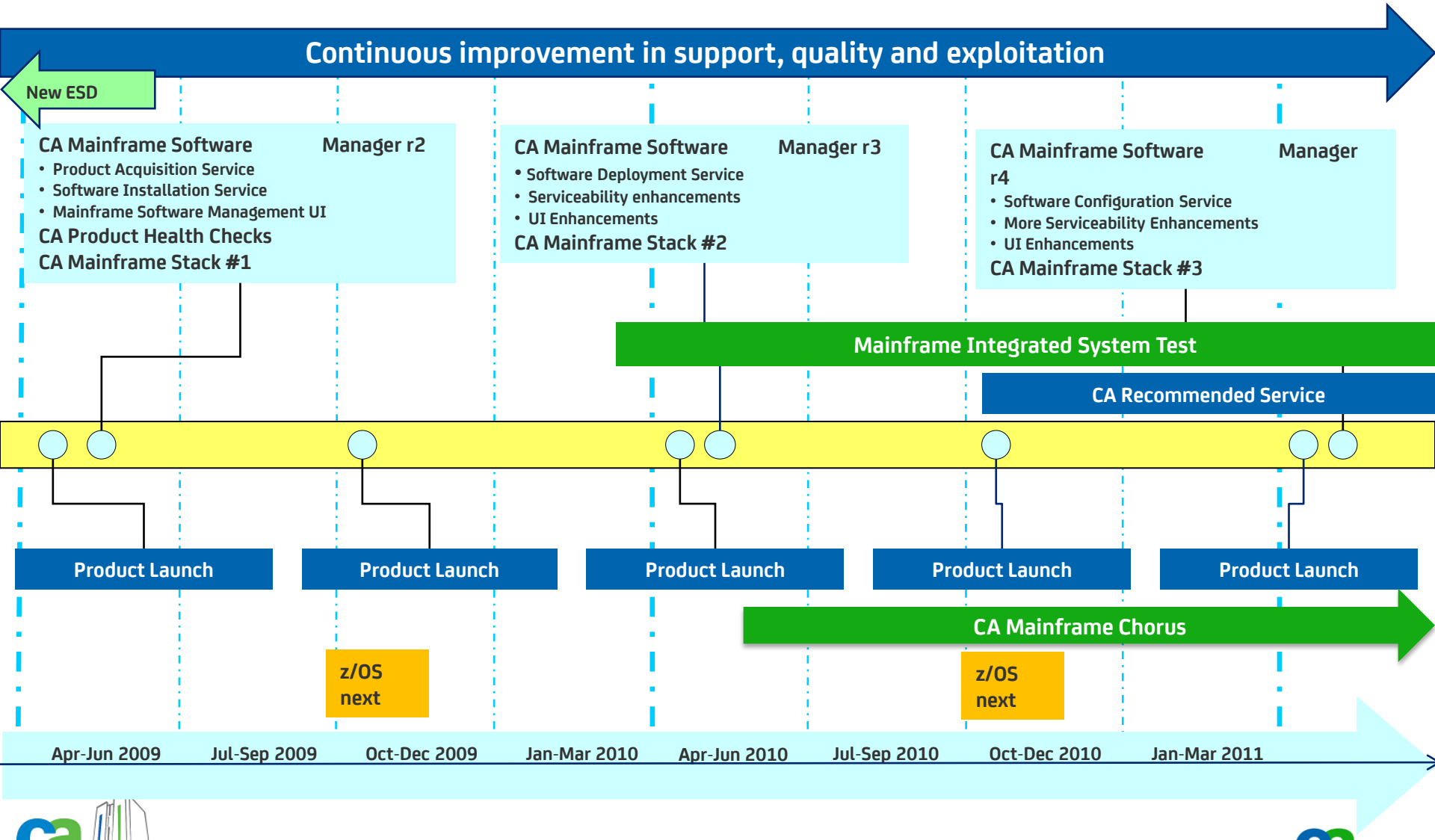
delivering on Mainframe 2.0



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summary

Control Costs

- Significant increase productivity of mainframe staff and reduced TCO
- Improve "Out-of-the-Box Experience" for CA mainframe products – less training required
- Minimize cost due to errors
- Maximize the overall usability and value of the z/OS platform

Sustain Critical Skills

- The "smarts" in the software
- Make routine tasks simple, freeing up bandwidth for more strategic initiatives
- "Getting it right" should not be left to chance
- Speed and accuracy are most important

Increasing Agility

- Automate and speed routine software maintenance tasks allowing greater responsiveness to business
- Making it possible to shift from maintenance to exploitation

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Q&A

Mainframe 2.0

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thank you

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