



CA Recommended Service, FIXCAT Exploitation, and Other Enhancements to CA Service Delivery

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Abstract

CA Technologies recently introduced CA Recommended Service (CA RS) for most of its z/OS products. CA RS provides preventive service in a consistent and more granular way than the productspecific service packs it has replaced. CA RS is built upon results from CA's Integrated System Test (IST) environment where PTFs are tested with other CA products and various releases of z/OS and major subsystems. In addition FIXCAT holds are now provided to automate the installation of product maintenance needed to support new z/OS releases and new hardware. In this session, the speaker will review the new service deliverables and will explain how you can use them to effectively maintain your CA products.



Agenda

- Next-Generation Mainframe Management and CA Mainframe Software Manager™ (CA MSM)
- The CA Mainframe Stack
- Quality and Service Improvements
 - Goals and Overview
 - Integrated System Test
 - CA Recommended Service (CA RS)
 - FIXCAT Exploitation
- Summary What's YOUR Preventive Maintenance Philosophy?



CA's Next-Generation Mainframe Management Review of New Functions Delivered

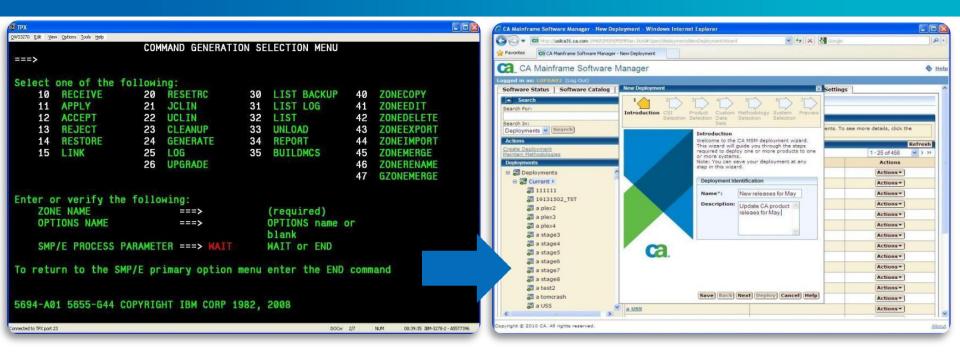
May 2009 **May 2010** May 2011 **May 2012** • CA MSM 2.0 • CA MSM 3.0 • CA MSM 4.0 • CA MSM 5.0 Software Deployment Software FIXCAT Installation Product Acquisition **Service Service Configuration Service** Support Software Installation The CA Mainframe CA RS support PAS Maintenance **Service** Stack Download Health Checks **Enhancements** Health Checks Service Enablement Chorus DBA Chorus Security Best Practice Guides Health Checks Chorus Storage Continued Innovation, New Products, Technology Exploitation

Focus on mainframe simplification via:

- CA Mainframe Software Manager[™] (CA MSM)
- CA Mainframe Chorus ™
- Health Checks for the IBM Health Checker for z/OS
- Service Improvements (CA RS, FIXCAT, etc.)



CA Mainframe Software Manager™ (CA MSM)



- Download, install, deploy, and configure products from a Web-based UI
- Dramatically simplifies software management activities
- Significantly reduces installation times



What does CA MSM do?

- Downloads software products and service from CA Support Online (CSO)
 - Eliminates manual searches/downloads on CSO
- Installs products into new or existing CSIs
- Evaluates and installs maintenance into CSIs
 - Corrective fixes
 - CA Recommended Service
 - FIXCAT categories
- Installs "External Maintenance" and "External Packages"
- Migrates preexisting CSIs into CA MSM
- Deploys product target libraries to local or external systems
- Configures deployed products for production use
- Saves time!...





CA MSM time savings with product installation

Product	Mainfr	ame Expert Ir	nstall	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
TOTAL	6 hrs 39 min	51 min	8X	20 hrs 51 min	73 min	17X

93% productivity gain

Source: CA Technologies Lab Results



CA MSM time savings with applying maintenance

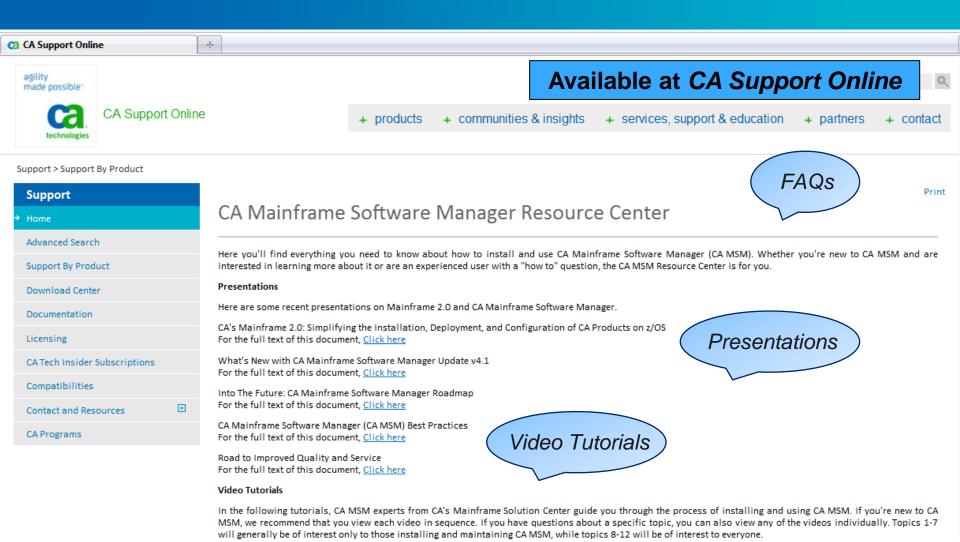
Product	# Fixes	Mainframe Expert Install			Mainframe Novice Install			
		Traditional	With CA MSM	Improvement	Traditional	With CA MSM	Improvement	
CA Auditor for z/OS	14	23 min	1 min 22 sec	17X	41 min	1 min 30 sec	27X	
CA Cleanup for CA ACF2™	1	6 min	38 sec	10X	33 min	1 min 13 sec	27X	
CA Easytrieve®	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 9 min	14 min	14X	5 hrs 17 min	22 min	15X	

93% productivity gain

Source: CA Technologies Lab Results



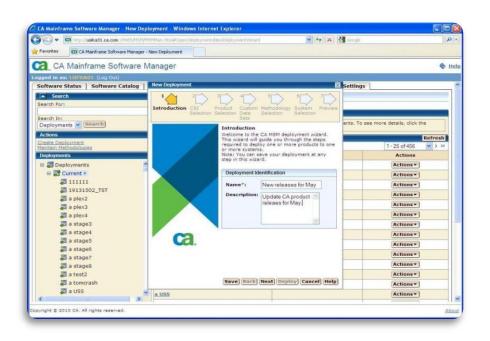
Getting Started – the CA MSM Resource Center





CA MSM Lab – Later Today!

CA Mainframe Software Manager V5 Hands-on Lab
Thursday, February 7, 2013: 12:15 PM-1:15 PM
Union Square 23-24, Fourth Floor



Get hands-on experience with using CA MSM to install products!



Announcing CA Chorus™ Software Manager (CA CSM) 5.1 Generally Available February 3, 2013

- Enhanced CA MSM functionality with a Chorus look-and-feel
 - Task Output Management wizard
 - FIXCAT offline mode
 - Space Manager to manage temporary space
 - Java 7 support
 - HTTPS support for maintenance, CA RS and HOLDDATA
 - Product hiding and displaying in the Product Tree
 - Prerequisite resolution during product installation
 - CA Support Online ID multiple user support
 - Prerequisite validator and installation enhancements
- Still free of charge to licensees of any CA product for z/OS

See session 13037: CA Mainframe Software Manager: User Experiences and V5.1 Update





The CA Mainframe Stack

- The CA Mainframe Stack is the set of CA products that have adopted key Next-Generation Mainframe Management initiatives
 - Are packaged in SMP/E using common standards
 - Are installable, deployable, and configurable using CA CSM/MSM
 - Have provided health checks (where appropriate)
 - Have undergone additional interoperability testing with other
 CA products and supported z/OS releases and major IBM subsystems
 - Deliver maintenance via CA Recommended Service

CA Mainframe Stack product families

CA 1[®] Tape Management

CA ACF2™ Option for DB2

CA ACF2™

CA Aion® Business Rules Expert

CA Allocate™ DASD Space and Placement

CA Auditor for z/OS

CA Cleanup for CA ACF2

CA Cleanup for RACF

CA Cleanup for CA Top Secret

CA CMDB Connector for z/OS

CA Common Services

CA Compliance Manager for z/OS

CA Copycat Utility

CA Datacom[®]/DB

CA DB2 for z/OS Tools

CA Deliver™

CA Disk™ Backup and Restore

CA Dispatch™

CA Easytrieve®

CA Endevor® Software Change

Manager

CA File Master™ Plus

CA File Master™ Plus for IMS

CA Gen Encyclopedia Server / Implementation Toolset

CA IMS for z/OS Tools

CA InterTest™ Batch

CA InterTest™ for CICS

CA JARS® Resource Accounting

CA JCLCheck™ Workload Automation

CA Librarian®

CA MIM™ Resource Sharing

CA NetMaster® Network Management for TCP/IP

CA NetMaster® Network Management for SNA

CA NetMaster® File Transfer

Management

CA NetMaster® Network Automation

CA NetSpy™ Network Performance

CA OPS/MVS® Event Management and Automation

CA Optimizer®/II

CA PanAPT®

CA Panvalet®

CA PDSMAN® PDS Library Management

CA SMF Director

CA SOLVE:Access™ Session

Management

CA Spool™

CA SymDump® Batch

CA SymDump® for CICS

CA SymDump® System

CA SYSVIEW® Performance Management

CA Tape Encryption

CA Telon® Application Generator

CA TLMS® Tape Management

CA Top Secret®

CA Top Secret® Option for DB2

CA TPX™ Session Management

CA Vantage™ Storage Resource Manager

CA Verify® for CICS Automated Regression Testing

CA Verify® for VTAM Automated Regression Testing

CA View®

CA Vtape™ Virtual Tape System

CA Workload Automation ESP Edition

CA Workload Automation Restart
Option for z/OS Schedulers

CA Workload Automation CA 7[®] Edition

CA XCOM™ Data Transport® for z/OS



CA Mainframe Stack maintenance improvementsGoals

- Improve the preventive maintenance experience for all products in the CA Mainframe Stack
 - Provide a consistent process across all products
- Provide thorough, integrated testing across CA products, z/OS releases and related subsystems (CICS, DB2, etc.)
- Provide recommended preventive service over predictable intervals
 - Let customers choose to install current service whenever it fits their maintenance schedules
 - Make it easy to keep all CA products at the same maintenance level
 - Remove PTFs from "recommended" status if problems are discovered
- Simplify planning for "external events"
 - z/OS upgrades, new hardware installations, etc.



CA Mainframe Stack maintenance improvements what's new?

- PTFs are tested by product QA and affected customer(s), then published to CA Support Online (CSO)
 - Immediately available for download if needed for corrective service
 - No change here
- After publication, PTFs are installed into a new Integrated System Test (IST) environment
 - Additional level of testing above and beyond what was done previously
- Each month, we publish a list of PTFs that have successfully completed IST testing and are now "CA Recommended"
- Customers install CA Recommended Service whenever they choose
- Service Packs for individual products are no longer provided
 Note: The above applies to CA Mainframe Stack products only



Integrated System Test

- The Integrated System Test (IST) environment provides an additional level of testing after PTFs are published
 - Battery of test cases, simulating customer-like workloads
 - Currently includes 2800+ test cases
 - Similar to IBM's Consolidated Service Test (CST)
- The IST is comprised of systems in a sysplex running different combinations of software, including:
 - All current z/OS releases
 - Popular subsystems (DB2, CICS, IMS) at different releases
 - CA Mainframe Stack products
 - Installed and maintained using CA CSM
- Two types of testing environments:
 - 1. All published PTFs
 - 2. PTFs that are candidates for the next CA RS level



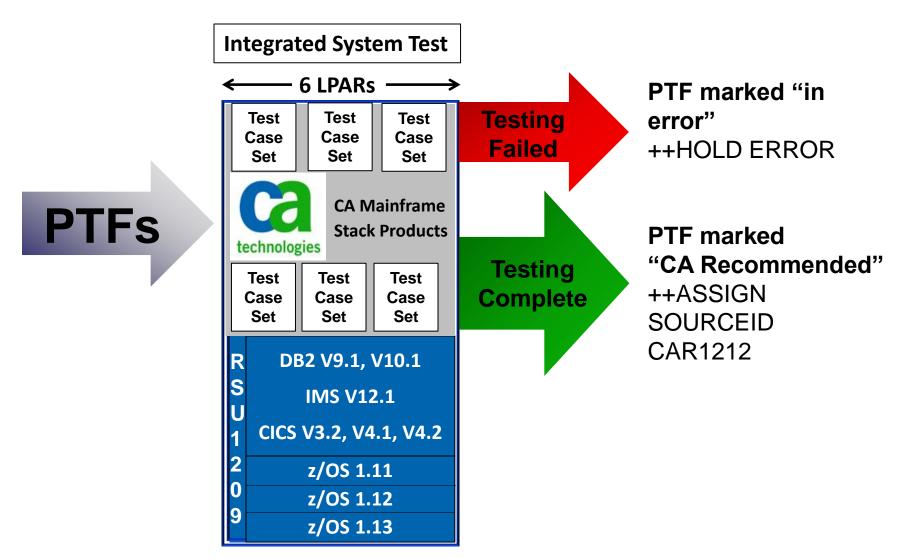
low risk

CA Recommended Service (CA RS)

- CA Recommended Service (CA RS) provides a way to "flag" PTFs that have been tested in IST over a measured time cycle
 - Quarterly (January, April, July, October) CA RS include all PTFs tested for at least 90 days and HIPER or PRP (PE Resolving) PTFs tested for at least 30 days
 - Monthly CA RS include HIPER or PRP PTFs tested for at least 30 days
- For each CA RS level we publish:
 - A list of PTFs included
 - SMP/E ++ASSIGN SOURCEID(CARyymm) statements
 - Product Service Reports listing each PTF by product
 - A Release Grid showing the IBM software and levels (e.g. z/OS releases, RSU levels, etc.) we tested against and the level of CSM used
- PTFs with a CAR SOURCEID that are not held by an ERROR hold are recommended for installation



Integrated System Test and CA Recommended ServiceTesting to create CAR1212



CA RS Release Grid Available from the *CA Recommended Service (CA RS)* CSO page

 For each CAR level, documents what was tested and against what IBM software levels

	CA RS Level Details					IBM software stack used during the testing				
CA RS SOURCEID	Publish Date	PTF Date Range	HIPER/PRP Cutoff Date	CA MSM Level Used	MF 2.0 Stack Level(s)	z/OS Release	RSU Level	DB2 rels	IMS rels	CICS rels
CAR1212	1/4/2013	Jul'12 - Sep'12	Nov'12	5.0 build 37	2010, 2011 , 2012	1.13	RSU1209	10.1, 9.1	12.1	4.2, 4.1, and 3.2
CAR1212	1/4/2013	Jul'12 - Sep'12	Nov'12	5.0 build 37	2010, 2011 , 2012	1.12	RSU1209	10.1, 9.1	12.1	4.2, 4.1, and 3.2
CAR1212	1/4/2013	Jul'12 - Sep'12	Nov'12	5.0 build 37	2010, 2011 , 2012	1.11	RSU1209	10.1, 9.1	12.1	4.2, 4.1, and 3.2
CAR1210	10/3/2012	Apr'12 - Jun'12	Aug'12	5.0 build 37	2010, 2011 , 2012	1.13	RSU1206	10.1, 9.1	12.1	4.2, 4.1, and 3.2
CAR1210	10/3/2012	Apr'12 - Jun'12	Aug'12	5.0 build 37	2010, 2011 , 2012	1.12	RSU1206	10.1, 9.1	12.1	4.2, 4.1, and 3.2
CAR1210	10/3/2012	Apr'12 - Jun'12	Aug'12	5.0 build 37	2010, 2011 , 2012	1.11	RSU1206	10.1, 9.1	12.1	4.2, 4.1, and 3.2
CAR1207	7/5/2012	Jan'12 - Mar'12	May'12	4.1 build 664	2010, 2011 , 2012	1.13	RSU1203	10.1, 9.1	12.1	4.2, 4.1, and 3.2
CAR1207	7/5/2012	Jan'12 - Mar'12	May'12	4.1 build 664	2010, 2011 , 2012	1.12	RSU1203	10.1, 9.1	12.1	4.2, 4.1, and 3.2
CAR1207	7/5/2012	Jan'12 - Mar'12	May'12	4.1 build 664	2010, 2011 , 2012	1.11	RSU1203	10.1, 9.1	12.1	4.2, 4.1, and 3.2



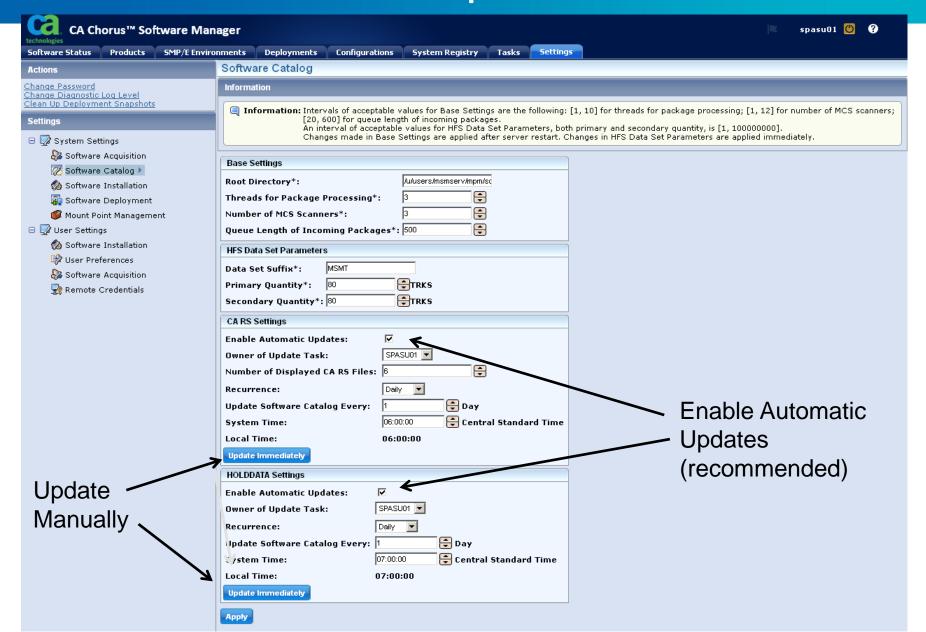
CA RS Product Service Report Available from the CA Recommended Service (CA RS) CSO page

CA MIM Resource Sharing 11.9 CA RS 1212 Service List

Release	Service	Description	Hiper
11.9	RO47990	MIM00867I MSG # 2225 TEXT CHANGED BY TABLE MIAMSGS	
	RO48306	U0095 RC=3610	
	RO48737	IPCS VERBXIT INCORRECT	
	RO49756	S0C4 IN MIMCMHRT	**HIPER**
	RO50190	ABENDS213-30 MSM SCS DEPLOYMENT LIBRARY COPY OPERATION	
	RO50262	CLOSELOG MIMLOG S0C3 S0C4	**HIPER**
	RO51252	DUPLICATE ECMF PROCESSING	**HIPER**
		The CA RS 1212 service count for this release is 7	



Before installing maintenance make sure you have the latest CA RS and HOLDDATA updates!



If not using CSM/MSM, download and RECEIVE the latest CA RS and HOLDDATA files from CSO

1. CA RS ++ASSIGN statements

Tip: Use CA CSM instead

- <u>ftp://ftp.ca.com/pub/ASSIGNS/</u> (published monthly)
- RECEIVE in SMPPTFIN

2. HOLDDATA

- ftp://ftp.ca.com/pub/HoldData (daily, monthly, quarterly, yearly, or ALL)
- RECEIVE in SMPHOLD

```
//SMPHOLD DD DSN=holddatafile,DISP=SHR
//SMPPTFIN DD DSN=ptffile,DISP=SHR
// DD DSN=carsfile-1,DISP=SHR
// DD DSN=carsfile-2,DISP=SHR
// DD DSN=carsfile-n,DISP=SHR
//SMPCNTL DD*
SET BDY(GLOBAL).
RECEIVE.
```



installing CA Recommended Service with CA CSM



- Click the Settings tab
- Click <u>Software Catalog</u> under the **Systems Settings** tree
- Scroll down to the CA RS Settings and HOLDDATA Settings at the bottom of the page
- Click the **Update Immediately** buttons under each to download the latest from information from CSO
- Click the SMP/E Environments tab
- Click the name of the CSI you want to upgrade
- Click the Actions dropdown, then Upgrade CA RS Level
- This will launch the CA RS Installation wizard
 - CA CSM will automatically download any needed PTFs from CSO



Installing CA Recommended Service without CA CSM/MSM

Tip: Use CA CSM instead

- 1. Download and RECEIVE all available PTFs
 - More on this later
- 2. Download and RECEIVE the latest CA RS and HOLDDATA files
- APPLY PTFs by SOURCEID CAR*recommended

```
//SMPCNTL DD *
SET BDY(target-zone).
APPLY SOURCEID(CAR*) BYPASS(HOLDSYS) CHECK.
```



Service Packs vs. CA Recommended Service

Service Packs	CA Recommended Service			
Self-contained maintenance package for a specific product	 PTFs CAR files (++ASSIGN statements) HOLDDATA files (++HOLD ERROR stmts) 			
 Provided by each individual product team for that product only Can have significant packaging differences between products 	Provided across all CA Mainframe Stack products in a common way using standardized packaging			
Inconsistent delivery schedule	Consistent delivery each quarter/month			
Must upgrade to the Service Pack level	Upgrade to any available CA RS level desired			
Tested by the individual product QA team	Tested in IST with all Mainframe Stack products against various IBM software levels			
Once included, PTF cannot be removed from a service pack	PTF can be removed from recommended status at any time by marking it PE			



FIXCAT exploitation

— FIXCAT

- Special type of HOLD to identify PTFs needed for:
 - New hardware levels (e.g. zEC12, z196)
 - New software levels (e.g. z/OS 1.13, DB2 V10)
 - New functionality (e.g. zIIP exploitation, IPv6)
 - Etc...



- Category names define the support provided
 - Category assigned as SOURCEID to "fixing" PTF when FIXCAT HOLD is RECEIVED



FIXCAT exploitation

- CA Technologies use of FIXCAT
 - CA began issuing FIXCAT HOLDs for CA products in July 2011
 - FIXCAT type ++HOLDs are included with ERROR ++HOLDs
 - Another reason to download holddata files frequently!
 - Eliminates manual product-by-product research checking
 UPGRAD solutions and other "upgrade lists" on CSO
 - CA MSM 5.0 and higher includes a FIXCAT wizard to install fixes for desired categories



FIXCAT categories provided by CA

CA.Device.Server.z10-BC-2098	CA.TargetSystem-RequiredService.CICS.V4R1
CA.Device.Server.z10-EC-2097	CA.TargetSystem-RequiredService.CICS.V4R2
CA.Device.Server.z114-2818	CA.TargetSystem-RequiredService.DB2.V9
CA.Device.Server.z196-2817	CA.TargetSystem-RequiredService.DB2.V10
CA.Device.Server.zEC12-2827	CA.TargetSystem-RequiredService.IMS.V10
CA.Function.EAV	CA.TargetSystem-RequiredService.IMS.V11
CA.Function.HealthChecker	CA.TargetSystem-RequiredService.z/OS.V1R11
CA.Function.IPv6	CA.TargetSystem-RequiredService.z/OS.V1R12
CA.Function.zIIP	CA.TargetSystem-RequiredService.z/OS.V1R13

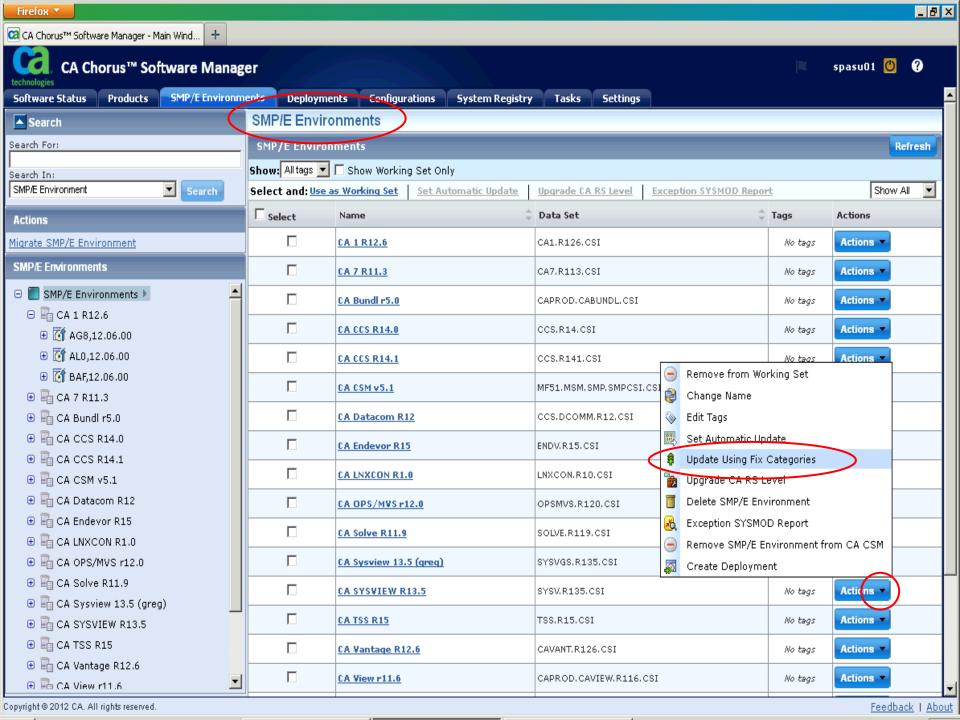
Partial list - see the *FIXCAT page* on CSO for complete (and current) list. https://support.ca.com/irj/portal/anonymous/phpsupcontent?contentID={1426C7AF-3D50-49C1-ACE7-FCC325DCC1B0}

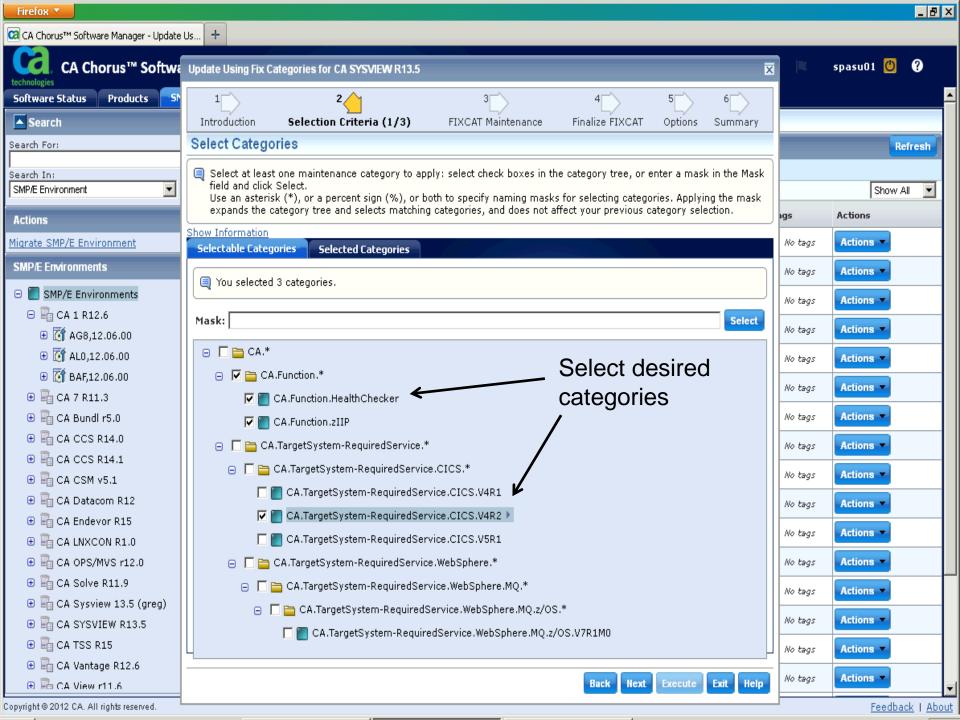


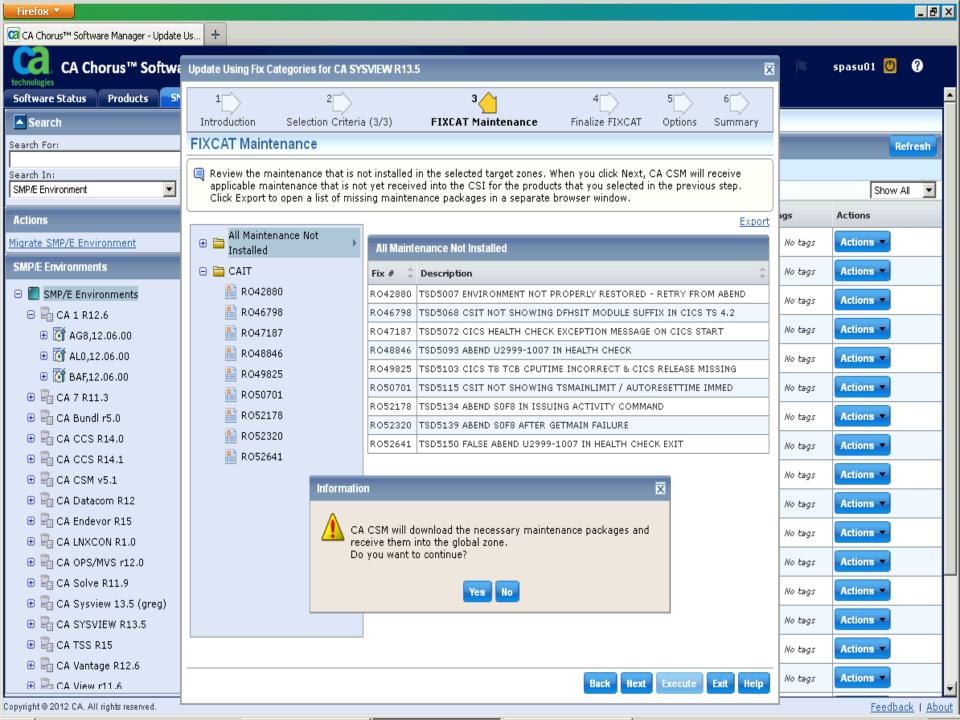
Installing FIXCAT PTFs with CA CSM/MSM

- Click the SMP/E Environments tab
- Click the Actions drop down for the desired CSI
- Click the Update Using Fix Categories action
- This will launch the FIXCAT wizard
- You can select one or more categories from the available list, presented in a tree structure
- The wizard will install any missing PTFs associated with those categories
 - As with CA RS, PTFs (or prerequisites) will be automatically downloaded, if needed









Installing FIXCAT PTFs without CA CSM/MSM

Tip: Use CA CSM instead

- 1. Download and RECEIVE all available PTFs
 - More on this later
- 2. Download and RECEIVE the latest HOLDDATA file
- 3. APPLY using the desired FIXCAT categories as the SOURCEIDs Example:

```
//SMPCNTL DD *
SET BDY(target-zone).
APPLY SOURCEID(
CA.Function.*,
CA.TargetSystem-RequiredService.CICS.V4R2
)
GROUPEXTEND BYPASS(HOLDSYS).
```



FIXCAT exploitation and new product releases

- By design, FIXCAT holds can only be issued against product releases (FMIDs) currently installed
- In some cases (e.g. z/OS upgrades), it may be necessary to install a new product release
- Be sure to review the CSO Compatibilities pages to ensure product release compatibility with your planned change
 - For example, the z/OS Release Compatibility page is at http://www.ca.com/us/Support/mainframe-compatibility.aspx
 Compatibility.aspx
- Then install PTFs on any supported release for that FIXCAT category



FIXCAT exploitation and new product releases

Example: Getting CA-Common Services (CCS) ready for z/OS 1.13

1. Review z/OS Release Compatibility:

CA-Common Services								
* Please see the Solution # fo	r the most current ir	nformation and re	quirements.					
Product Name	z/OS Release	Product Level	zSeries 64-Bit Mode	Solution #				
CA-Common Services	1.11 1.12 1.12 1.12 1.13 1.13	r11 r11 r12 r14 r11 r12 r14	Yes Yes Yes Yes Yes Yes Yes Yes Yes	RI11222 RI22120 RI22120 RI22120 RI35646 RI35646 RI35646				

- CCS r11, r12, or r14 can run on z/OS 1.13
- 2. Install PTFs for FIXCAT CA.TargetSystem-RequiredService.z/OS.V1R13 on any of these CCS releases for z/OS 1.13 support



Getting the latest maintenance for your product

Tip: Use CA CSM instead

- If you are NOT using CA CSM/MSM you will need to order the latest PTFs from CSO prior to installing CA RS or FIXCAT
 - Download Center → Published Solutions
 - Enter date of most recent PTF received as "Confirmed Since" date, click Go
 - Check Add All to Cart check box (may need to repeat on multiple pages)
 - Click <u>View Download Cart</u> then <u>Checkout</u>
 - At checkout select Create a Zip File for Download Method
 - CSO will create a zip file that contains all selected maintenance
 - Click on the "Alternate FTP" link for download information
 - You can use the CAUNZIP utility to create an SMP/E-installable package from z/OS



CAUNZIP



Tip: Use CA CSM instead

- CAUNZIP is a new utility designed to help process maintenance package zip files created by CSO
 - Currently in beta. Will be made GA via CA Common Services PTFs.
 - Unzips package and creates a Network Temporary Store (NTS) formatted set of z/OS UNIX files that can be used via SMP/E RECEIVE FROMNTS
 - Requires any supported 31 or 64 bit Java runtime environment at Version 5 or higher
 - No third-party software or "alternate platform" (e.g. a PC) is required!
 - Always remember to download and RECEIVE the latest CA RS and HOLDDATA files (as described earlier) prior to installing any PTFs contained in the package!



Summary

- CA's Next-Generation Mainframe Management initiative has implemented changes that improve quality and offer greater maintenance installation options for CA Mainframe Stack products
 - Integrated System Test (IST) provides an additional level of testing in varied environments that include different releases of z/OS, DB2, CICS, etc.
 - CA Recommended Service provides highly-tested preventive maintenance at predictable intervals
 - FIXCAT simplifies the research and effort to upgrade CA products to support new hardware, software releases, functionality, etc.
- CA CSM, in conjunction with the above enhancements, can dramatically simplify the installation and maintenance of CA Mainframe Stack products!



What's YOUR Preventive Maintenance Philosophy? We can do that!

- CA no longer "pushes" service packs on inconsistent and unpredictable schedules
- CA's service model now allows you to install maintenance on YOUR schedule...
 - With IBM software (or not)
 - With other ISV software (or not)
 - Monthly, quarterly, semi-annually, annually (or other)
 - When upgrading z/OS, CICS, etc. or when installing new hardware
- CA CSM automates the acquisition and simplifies the installation of preventive maintenance for your CA z/OS-based products!



Questions ???

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