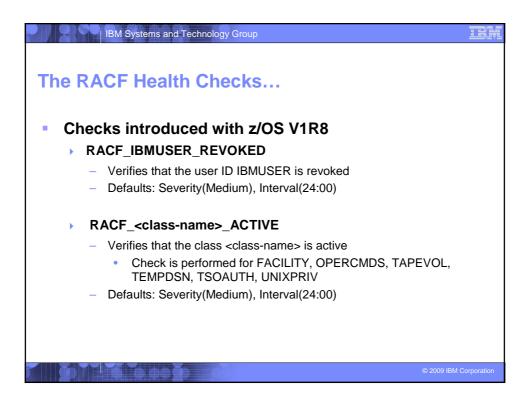


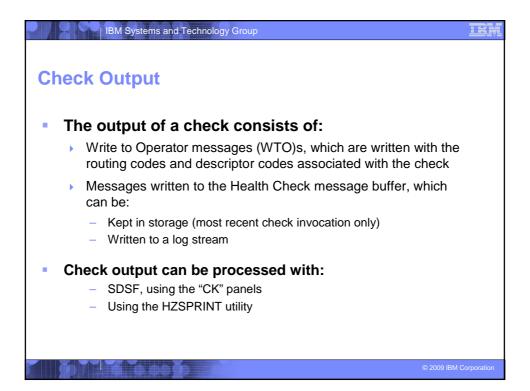
IBM Systems and Technology Group
Health Checks
 The IBM Health Checker for z/OS is dynamic. That is, health checks:
Are separately packaged and shipped
Do not have to be predefined
 Check writers must merely register with the HZSADDCHECK MVS dynamic exit point
Can be added after the startup of the Health Checker "backbone"
 Can have their characteristics changed by either MVS command or PARMLIB
Do not execute if the IBM Health Checker for z/OS is not active
IBM is adding new checks in new releases and in the service stream
 To get the most recent checks, use the Enhanced Preventative Service Planning (PLP) tool
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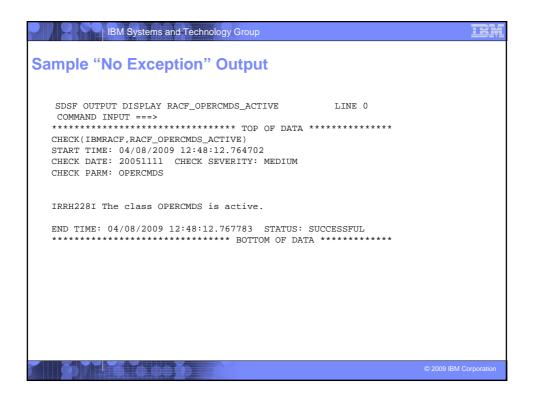
IBM Systems and Technology Group
The RACF Health Checks
RACF ships these Health Checks:
RACF_GRS_RNL
 Checks to see if any of the RACF ENQ names are on a GRS resource name exclusion list which changes the scope of the RACF ENQ Defaults: Severity(High) Interval(08:00)
RACF_SENSITIVE_RESOURCES
 Looks at the current APF data sets, PARMLIB, the System REXX data sets, LINKLIST, and the RACF database data sets and flags those that are improperly protected
 Are not found on the indicated volume Are improperly protected
 Examines key system general resources
 Severity(High) Interval(08:00)
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IBM Systems and Technology Group	
The RACF Health Checks	
Checks introduced with z/OS V1R10:	
ICHAUTAB checks:	
 For over 20 years, IBM has recommended not using the F Authorized Caller Table (ICHAUTAB) 	RACF
 RACF introduces a new check to verify that ICHAUTAB is being used 	not
 RACF_ICHAUTAB_NONLPA raises a SEV(MED) ex a non-LPA resident ICHAUTAB is found 	ception if
 Severity(Medium), Interval(24:00) 	
 The existing RACF_SENSITIVE_RESOURCES raises a SEV(HIGH) exception if an LPA-resident ICHAUTAB is for 	und
The "installation-defined resource" check whic allows you to define the resources that you wa check	
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IBM Systems and Technology Group	<u>IRM</u>
Check "Philosophy"	
 Checks which are not applicable to the current environment place themselves in a "not applicable" status and will not run unless triggered. 	
 Health Checks raise exceptions and make recommendations, <u>but they do not automatically take</u> <u>any actions</u> You must review the recommendation and ensure that it is appropriate for your environment 	
 When an exception is found, Health Checks present the entire message information, including the "explanation", "systems programmer response", etc., along with pointers to relevant documentation. 	
 Checks which find no exception clearly state that no exception was found. 	
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	SCROLL =

ted in a GRS=	NONE
EM ENVIRONMEN	т
211 2111 2110111211	
. ,	
*********	*****
	ted in a GRS= EM ENVIRONMEN NV N/A

	IBM Systems and	Technology Gr	oup			
Sample	Check Exc	ception	Outp	ut:		
START TIME: OWNER DATE:	11/10/2004 10:13 20040703	3:10.341622	IBMRACF	, RACF_GRS_	RNL	
	RA	ACF_GRS_RNL R	eport			
S Major	Minor	Type Q	Name	Rname	Туре	
E SYSZRACF E SYSZRAC2	SETROPTS IRRCRV05	SERNL S SERNL S	YSZRACF YSZRAC2	SETROPTS IRRCRV05	SPEC SPEC	
IRRH202E (List. Explanatid The RACL is cover (RNL). 1	rity Exception * One or more RACF on: F RACF_GRS_RNL ch red by an entry : RACF resource nar on RNL (SIRNL) or	heck has dete in the specif mes should no	cted thaied GRS t be in	at a RACF r resource r either the	resource Name list 2 system	
 IBMRACF Rea	tion: ck continues proc ason: None of the ameters: N/A				*	
END TIME: 0	1/08/2005 20:47:5	54.819710	ST.	ATUS: EXCEP	PTION-HIGH	
	Mabo					© 2009 IBM Corporation

pd	ated SDSF Prin	nary Op	tion F	Pane	I		
Disp	lay Filter View Prim	nt Options	Help				
HQX7	720	SDSF PRIMAF	RY OPTIO	N MENU			
DA	Active users		INIT	Initi	ators		
I	Input queue		PR	Print	ers		
0	Output queue		PUN	Punch	es		
Н	Held output queue		RDR	Reade	rs		
ST	Status of jobs		LINE	Lines			
	-		NODE	Nodes			
LOG	System log		SO	Spool	offload		
SR	System requests		SP	Spool	volumes		
MAS	Members in the MAS						
JC	Job classes		RM	Resou	rce monitor	<u>.</u>	
SE	Scheduling environmen	nts	CK	Healt	h checker		
RES	WLM resources						
Lice	nsed Materials - Prope	rty of IBM					
US G	-A01 (C) Copyright IBM overnment Users Restric AND INPUT ===> ck	-			0	ved. SCROLL ===> PAGE	
F1=1	HELP F2=SPLIT	F3=END	F4=RE	TURN	F5=IFIND	F6=BOOK	
F7=1	UP F8=DOWN	F9=SWAP	F10=LE	FT	F11=RIGHT	F12=RETRIEVE	

D	SF Ch	eck Sele	ction Pa	inel			
Di	splay F	ilter View 1	Print Optio	ons Help			
~ - ~ -	F HEALTH	CHECKER DISP	LAY RACFR1		LINE 11-	27 (50)	
NP	NAME			CheckOwner	State		Status
		SK_TABLE		IBMCNZ	ACTIVE (EN		
	_	F_EXISTS		IBMCSV	ACTIVE (EN	,	
		KLST_NEWEXTEN	rs	IBMCSV	ACTIVE (EN		
		KLST_SPACE		IBMCSV	ACTIVE (EN	,	
	_	NVERT_RESERVE:		IBMGRS	ACTIVE (DI		
	GRS_EX	IT_PERFORMANC	2	IBMGRS	ACTIVE (EN	,	
	GRS_MO			IBMGRS	ACTIVE(DI	- ,	
	GRS_SY	NCHRES		IBMGRS	ACTIVE (EN	ABLED)	SUCCES
	RACF_G	RS_RNL		IBMRACF	ACTIVE(DI	SABLED)	ENV N/
S	RACF_S	ENSITIVE_RESO	JRCES	IBMRACF	ACTIVE (EN	ABLED)	EXCEPT
	RSM_AF	Q		IBMRSM	ACTIVE (EN	ABLED)	SUCCES
	RSM_HV	SHARE		IBMRSM	ACTIVE (EN	ABLED)	SUCCES
	RSM_MA	XCADS		IBMRSM	ACTIVE (EN	ABLED)	SUCCES
	RSM_ME	MLIMIT		IBMRSM	ACTIVE (EN	ABLED)	EXCEPT
	RSM_RE	AL		IBMRSM	ACTIVE (EN	ABLED)	EXCEPT
	RSM_RS	U		IBMRSM	ACTIVE (EN	ABLED)	SUCCES
	SDUMP_	AUTO_ALLOCATI	ON	IBMSDUMP	ACTIVE (EN	ABLED)	EXCEPT
COM	MAND INP	UT ===>			S	CROLL ==:	=> PAGE
F1:	=HELP	F2=SPLIT	F3=END	F4=RETURN	F5=IFIND	F6=BO0	ЭK
F7:	=UP	F8=DOWN	F9=SWAP	F10=LEFT	F11=RIGHT	F12=RE	TRIEVE

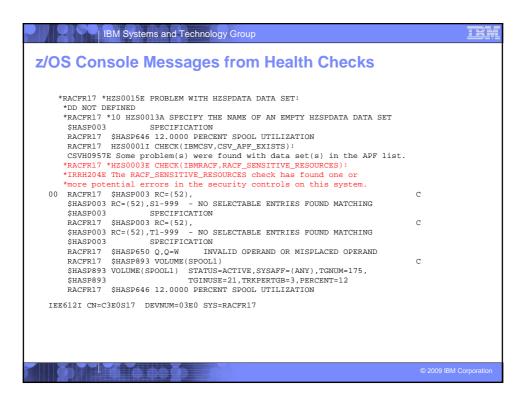
	BM Systems an	d Technology	Group					IBM
SDSF B	rowse Ch	neck Out	put Pan	el				
Display F	ilter View	Print Optio	ons Help					
COMMAND INPU	T ===>						COLUMNS 02- 81 SCROLL ===> PAGE	
START TIME:	F,RACF_SENSI 10/05/2005 14 20040703 CHE	1:49:19.60948	33					
		APF Datase	Report					
Data Set Na	me		Vol	UACC	Warn	ID*	User	
ASM.SASMMOD ATC.V2R1M4.	-		ZDR17B DRVPSL	Read	No	****		
CBC.SCBCCMP CBC.SCCNCMP CBC.SCLBDLL			ZDR17B ZDR17B ZDR17B			****		
CBC.SCLBDLL CEE.SCEERUN	2		ZDR17B ZDR17B ZDR17B	None	No			
CEE.SCEERUN CRAIGJ.VTAM	LIB		ZDR17B D94RF2	Read	No	* * * *		
FI=HELP F7=UP	F2=SPLIT F8=DOWN						F6=BOOK F12=RETRIEVE	
		ŏ o					© 2009 IBM	Corporation

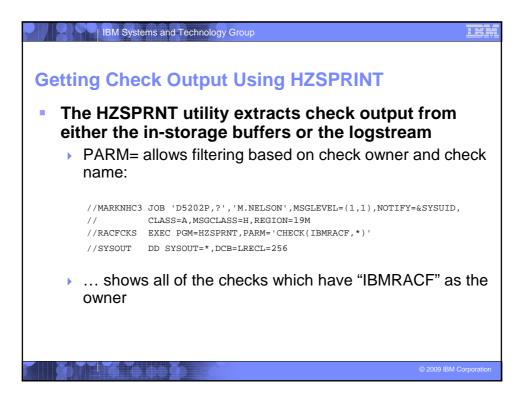
IBM Systems and Te			
DSF Browse Check	1 - C	el	
SDSF OUTPUT DISPLAY RACF_SE COMMAND INPUT ===> RA	NSITIVE_RESOURCES	LINE 87	COLUMNS 02- 81 SCROLL ===> PAGE
5 Data Set Name	Vol	UACC Warn ID	* User
RACFDRVR.RACF317	RDB31	.7 None No **	**
* High Severity Exception *			
IRRH204E The RACF_SENSITIVE_ more potential errors in the			
Explanation: The RACF sec more potential errors wi			
System Action: The check the system.	continues processin	ng. There is no	effect on
Operator Response: Report the and the system auditor.	this problem to th	ae system secur	ity administrator and
			© 2009 IBM Corp

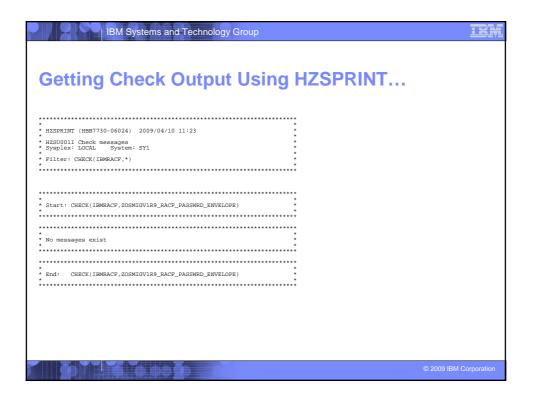
IBM Systems and Technology Group	TBM
SDSF Browse Check Output Panel	
SDSF OUTPUT DISPLAY RACF_SENSITIVE_RESOURCES LINE 105 COLUMNS 02- COMMAND INPUT ===> SCROLL ===> F	
System Programmer Response: Examine the report that was produced by the RACF check. Any data set which has an "E" in the "S" (Status) column has excessive authority allowed to the data set. That authority may come from a universal access (UACC) or ID(*) access list entry which is too permissive, or if the profile is in WARNING mode. If there is no profile, then PROTECTALL(FAIL) is not in effect. Any data set which has a "V" in the "S" (Status) field is not on the indicated volume. Remove these data sets from the list or allocate the data sets on the volume. Any data set which has an "M" in the "S" (Status) field has been migrated.	
The APF_LIBS check provides additional analysis of the non-RACF aspects of your APF list.	
If the "S" field contains an "E" or is blank, then blanks in the UACC, WARN, and ID(*) columns indicate that there is no RACF F1=HELP F2=SPLIT F3=END F4=RETURN F5=IFIND F6=BOOK	
F7=UP F8=DOWN F9=SWAP F10=LEFT F11=RIGHT F12=RETRIE	SVE
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	3M Systems and	Technology G	roup			IBM			
SDSF Bro	owse Che	ck Outp	ut Panel						
Display Fi	lter View P	rint Option	ns Help						
SDSF OUTPUT COMMAND INPU		SENSITIVE_R	ESOURCES	LINE 120	COLUMNS 02- 81 SCROLL ===> PAGE				
UACC, WAR profile p profile a	If the "S" field contains an "E" or is blank, then blanks in the UACC, WARN, and ID(*) columns indicate that there is no RACF profile protecting the data set. Data sets which do not have a RACF profile are flagged as exceptions, unless SETROPTS PROTECTALL(FAIL) is in effect for the system.								
user's au excessive column. F APF-autho	thority to the authority to for example, i prized data se	e data set i the data se f the user l t, the USER	as a parameter is checked. If et, that is in has ALTER auth column contai han READ autho	the user ha dicated in t ority to an ns ">Read" t	as an the USER				
	Auditor's Gui		F System Progr rmation on the						
F1=HELP	F2=SPLIT	F3=END	F4=RETURN	F5=IFIND	F6=BOOK				
F7=UP	F8=DOWN	F9=SWAP	F10=LEFT	F11=RIGHT	F12=RETRIEVE				
	6 0 00				© 2009 IBM	Corporation			

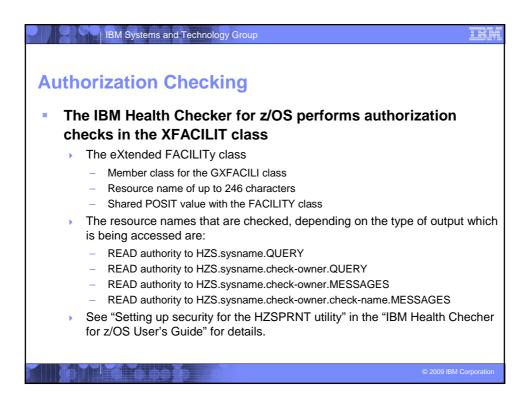
	BM Systems and	l Technology G	roup			IBM			
SDSF Browse Check Output Panel									
Display F	ilter View H	Print Option	ns Help						
SDSF OUTPUT COMMAND INP Source: RACF Sys	DISPLAY RACF	SENSITIVE_RE		LINE 138	COLUMNS 02- 81 SCROLL ===> PAGE				
RACF Sys	Documentation tem Programmen itor's Guide								
Automation	: None.								
Check Reas	on: Sensitive	e resources s	should be prot	ected.					
	END TIME: 10/05/2005 14:49:49.545336 STATUS: EXCEPTION-HIGH ***********************************								
F1=HELP F7=UP	F2=SPLIT F8=DOWN		F4=RETURN F10=LEFT						
		6			© 2009 IBM	Corporation			

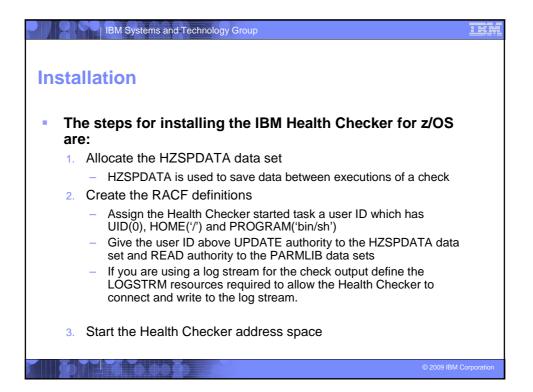


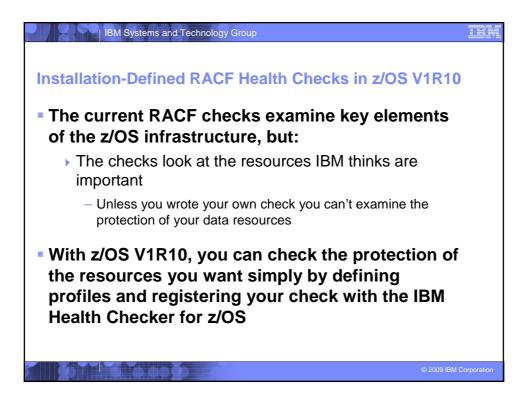


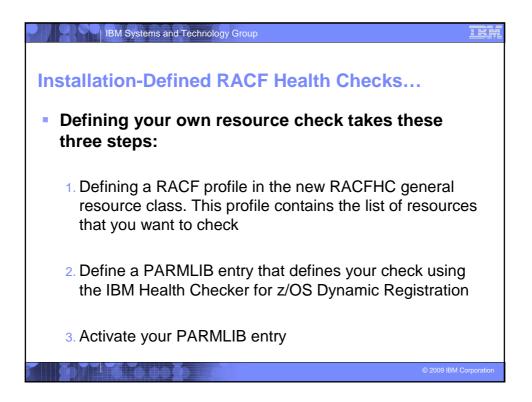


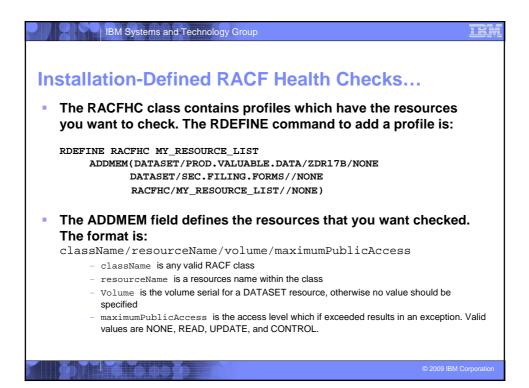
IBM Systems and Technology Group	TRM
Getting Check Output Using HZSPRINT	
Start: CHECK (IBMPACF, RACF_UNIXFRIV_ACTIVE) CHECK (IBMPACF, RACF_UNIXFRIV_ACTIVE) START TIME (94/10/2009) 11:20:34,566129 CHECK DATE: 20051111 CHECK SEVERITY: MEDIUM CHECK DATE: UNIXFRIV	
 Medium Severity Exception * IRRH229E The class UNIXERV is not active. Explanation: The class is not active. The recommends that the source that the source of t	
RACF Skytem Programmer's Guide RACF Multion's Guide Reference Documentation: RACF Skytem Programmer's Guide RACF Multion's Guide Automation: None. Check Reason: IBM recommends activating this class END TIME: 04/10/2009 11:20:34.930525 STATUS: EXCEPTION-MED	
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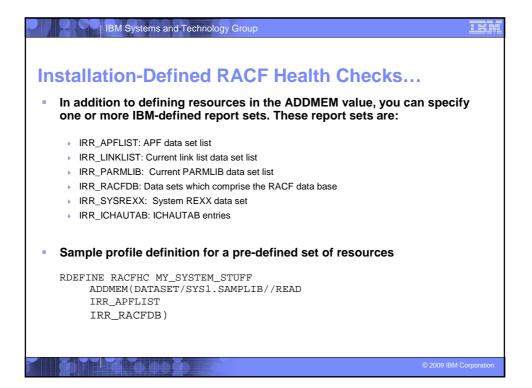


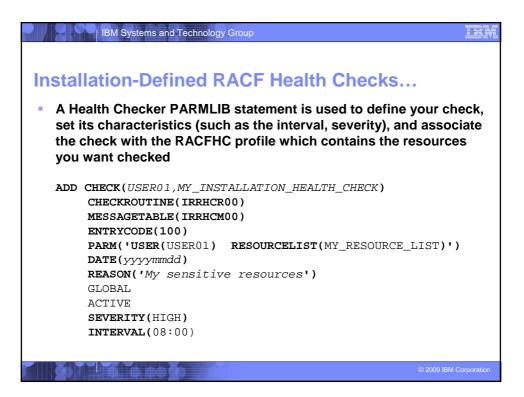




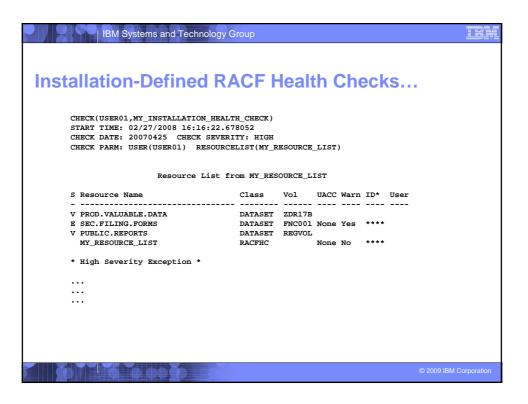








	IBM Systems and Technology C	Group					
Insta	Ilation-Defined R	ACF Heal	th Checks.				
 The final step is to activate your check. After adding it to a member (HZSPRMMN in this example) activate the PARMLIB entry using the MVS modify command for the Health Checker address space: 							
 F HC, ADD, PARMLIB=MN Your check is now registered with the IBM Health Checker for z/OS! Display Filter View Print Options Help 							
SDSF NP	F HEALTH CHECKER DISPLAY RACFRI NAME MY_INSTALLATION_HEALTH_CHECK PDSE_SMSPDSE1 RACF_FACILITY_ACTIVE RACF_GRS_RNL	B CheckOwner USERO1 IBMPDSE IBMRACF IBMRACF	LINE 38-53 (92) State ACTIVE(ENABLED) ACTIVE(ENABLED) ACTIVE(ENABLED) ACTIVE(DISABLED)	Status EXCEPT EXCEPT SUCCES ENV N/			
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IBM Systems and Technology Group	
References	
 IBM Health Checker for z/OS User's Guide (SA22-7994) http://www.ibm.com/servers/eserver/zseris/zos/hchecker/ 	
 IBM Education Assistant http://www-01.ibm.com/software/info/education/assistant/ 	
 The IBM Health Checker for z/OS web site http://www.ibm.com/systems/z/os/zos/hchecker/ 	
 A list of all of the IBM-supplied checks can be foun at: http://wwwibm.com/systems/z/os/zos/hchecker/check_table.html 	
 "An apple a day keeps the PMRs away! An overview of the IBM Health Cl z/OS" 	hecker for
 z/OS Hot Topics, Issue 13, August 2005, available at http://www.ibm.com/servers/eserver/zseries/zos/bkserv/hot_topics.html 	
 "RACF and the IBM Health Checker for z/OS" ibid 	
 "Personalize your RACF Checking with the IBM Health Checker for z/OS" z/OS Hot Topics, Issue 19, August 2008, available at http://www.ibm.com/servers/eserver/zseries/zos/bkserv/hot_topics.html 	
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