

DB2 Automation Tool for z/OS

DB2 Automation Tool for z/OS Version 3.1 How to Automate DB2 Utility Jobs

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Agenda

- DB2 Automation Tool Overview
- What are Profiles?
- Exception Profiles: The Key to Automation
- Scenario: Automating Image Copies



DB2 Automation Tool for z/OS - Overview

- Automatically coordinates the execution of DB2 utilities against specified objects
- Provides automatic rules-based execution
 - Utilities can be processed on sets of included and excluded objects
- ISPF interface used for creating profiles and generating JCL
 - Object Profiles
 - Utility Profiles
 - Exception Profiles
 - Job Profiles
- Supports DB2 V8 and 9



DB2 Automation Tool for z/OS – Overview (cont.)

- Execution Reports track Job Profiles and their execution results
 - See what errors occurred
 - Optionally regenerate the JCL to re-run the job
- Data Page Display allows advanced DBAs to edit data pages directly to correct invalid data
- New DB2 Command Processor allows you to issue DB2 commands without having to leave the interface
- Dataset Manager is a powerful, flexible tool that enables you to view, evaluate, and relocate DB2 data sets

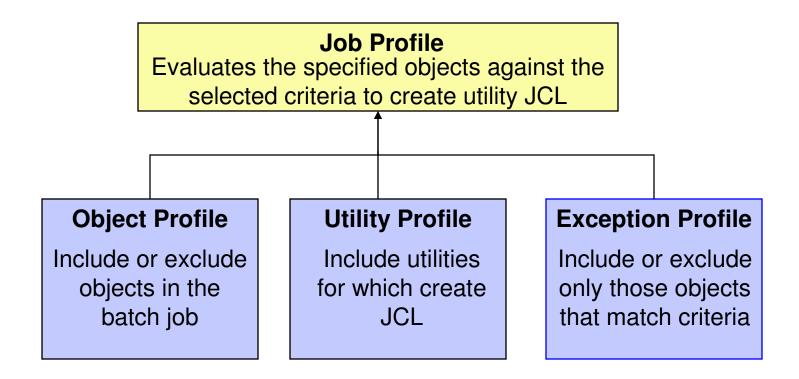


DB2 Automation Tool for z/OS – Overview (cont.)

- Disaster Recovery feature allows you to restore a subsystem at a remote site
 - Easily build disaster recovery profiles without having to know the names of logs, BSDS, or catalog data sets
- Build JCL for stand-alone utilities, like BACKUP SYSTEM and RESTORE SYSTEM



DB2 Automation Tool for z/OS Concept





Object Profiles

Re-usable lists of Objects

Include objects on which to run a utility, or optionally exclude objects

- Entire databases
- Entire tablespaces
- Select partitions of a tablespace
- Entire indexes
- Select partitions of an index
- Objects on a specific volume
- Wildcards can be used to include objects whose name match the wildcard pattern



Utility Profiles

- Re-usable lists of utilities
- Specify the following DB2 utilities:
 - COPY or COPYTOCOPY
 - RUNSTATS
 - Tablespace and index REORG
 - QUIESCE
 - MODIFY
 - REBIND
 - RECOVER
 - REPAIR
- All utility options can be edited
- Specify the Automation Tool utilities
 - Data page verification reporting or Space reallocation



Exception Profiles

- Re-usable lists of triggers called Exceptions
- Determine when a utility should be generated for an object
- Prevents unnecessary maintenance from being run
 - Saves on CPU and IO costs
 - Automates routine maintenance tasks
- Access the statistics reporting and maintenance facility from the Exception Profile Display panel



Job Profiles

- Combine multiple Utility Profiles, Object Profiles and Exception Profiles to generate JCL
 - Exception Profiles will cause JCL to be generated conditionally for the objects within the Job Profile
 - No Exception Profile will cause JCL to be generated unconditionally for all objects within the Job Profile
- Define job generation options
 - Number of objects per job or per step
 - Balance jobs based on DASD consumption
- Re-use Job Profiles to generate JCL on-demand or add generated JCL to a job scheduler



Exception Profiles: The Key to Automation

- Routine maintenance should be automated
 - Full image copies / incremental image copies
 - REORGS

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- RUNSTATS
- Select the objects to evaluate
- Define the exception criteria
- Select the utility to generate
- Generate utility JCL for only objects that need it
 - 'Build' batch jobs online or in batch
 - Submit to a job scheduler



Exception Profiles: The Key to Automation

Benefits to Automating Utilities

- Routine maintenance uses less personnel
- New DBAs become productive
- Sr. DBAs can complete maintenance in less time
- Smaller staff can be more productive
- Over 100 Exceptions to choose from
- Evaluate exceptions in batch or online
 - Ensures only those DB2 objects that need REORGs, RUNSTATS or Image Copies are run.



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Step 1 Create an Object Profile

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Attention PA1 PA2 PA3 Reset PF01 PF02 PF03 PF04 PF05 PF06 PF07 PF08 **PF12** System Request AUTOTOOL V3R1 ----- Objects Profile Display ----- 2009/01/16 11:26:20 Option ===> Scroll ===> CSR Commands: END - Cancel and exit. ENTER Process new values. Line Commands: C - Create D - Delete E - Export I - Import Q - Quick J - Jobs R - Rename V - View U - Update —— Enter New Objects Profile Data —— Profile Commands: End - Return to the previous screen Creator Enter - Process _____ Creator . . . CSJENN Cmd Name Profile Name . Full IC Profile C HENR Description . . Objects to take Full IC on. IX R Update Option . U (U - Update, V - View only, N - No access) IX S JEND JEND JEN2 JSND SECT 192.168.55.22 S22T0137 10:32:49 1/16/2009 NUM 00:43:53 17,060 S2 Ready (1) © 2009 IBM Corporation 14



Attention PA1 PA2 PA3 Reset PF01 PF02 PF03 PF04 PF05 PF06 PF07 PF08 PF12 System Request	i i
AUTOTOOL V3R1 Objects Profile Display 2009/01/16 11:2 Option ===> Commands: END - Cancel and exit. ENTER - Process new values. Line Commands: C - Create D - Delete E - Export I - Import Q - Quick J - Jobs R - Rename V - View U - Update	
Add Objects to the Object Profile ————	
ProfileLiAdd TablespacesY(Y - Yes, N - No)ystem:CreatorLiAdd TablespacesY(Y - Yes, N - No)of 16	
Add Indexes <u>N</u> (Y - Yes, N - No)	
Cmd Name Add Volumes N (Y - Yes, N - No) C HENRY	
IX REOR Press ENTER to process or PF3 to Cancel IX SALE JENDB01 JENDB01	
JEN2 CSJENN U	
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SECTION 12-6 CSJENNA U	
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S2 Ready (1) 192.168.55.22 S22T0137 10:33:38 1/16/2009 NUM 00:44:42	13, 042
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Attention PA1 PA2 PA3 Reset PF01 PF02 PF03 PF04 PF05 PF06 PF07 PF08 **PF12** System Request AUTOTOOL V3R1 ----- Objects Profile Display ----- 2009/01/16 11:35:17 Option ===> Scroll ===> CSR Commands: END - Cancel and exit. ENTER Process new values. Line Commands: C - Create D - Delete E - Export I - Import Q - Quick J - Jobs R - Rename V - View U - Update — Enter Tablespaces Like to Display — Profi Commands: ENTER - Continue Creat END - Cancel Database Like . . . * Wildcard . y (Y - Yes, N - No) Tablespace Like . . * Exclude. . I (E - Exclude, I - Include) Cmd Creator Like. . . . CSKUMA > С Process Dependent Indexes No) Process Referentially Dependent Tablespaces . N (Y - Yes, N - No) SECTION 12-6 CSJENNA U 192.168.55.22 S22T0137 10:35:47 1/16/2009 NUM 00:46:50 14,052 S2 Ready (1) © 2009 IBM Corporation 16



Attention PA1 PA2 PA3	Reset PF01 PF02	2 PF03 PF04 PF05 PF06 P	F07 PF08 PF12 System Req	uest	
AUTOTOOL V3R1 Option ===>	Up	date Object Pro	ile Display		11:37:40 ===> CSR
	End - mands: A	lode - View all - Return to the Add D - Delete Update R - Rep	e previous scree e E - Explode	n.	
Creator: CSJEN	NN Pr	ofile: FULL IC F	PROFILE	User:	CSJENN
Share Option:	U (U - Up V - Vi N - No	ew,	iption: <u>OBJECTS</u>		
				Row 1	ot 1 >
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DB2 Automation Tool for z/OS

Step 2 Create a Utility Profile

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Attention PA1 PA2 PA3 Reset PF01 PF02 PF03 PF04 PF05 PF06 PF07 PF08 PF12 System Request
AUTOTOOL V3R1 Utilities Profile Display 2009/01/16 11:42:50 Option ===> Scroll ===> CSR Commands: END - Cancel and exit. ENTER - Process new values.
PF7/PF8 - Scroll for additional options. Line Commands: C - Create D - Delete E - Export I - Import Q - Quick J - Jobs R - Rename U - Update V - View
Enter New Utilities Profile Data —————
Profile Creator Creator CSJENN
Profile Name Full IC Profile
Cmd Name Description The Full IC Utility C CAL DE
HAA349 Update Option U (U - Update, V - View only, N - No access) HENRY
IX REO Press ENTER to process or PF3 to Cancel IX REO JENDB0 REORG
S2 Ready (1) 192.168.55.22 S22T0137 10:43:08 1/16/2009 NUM 00:54:12 15, 052
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Attention PA1 PA2 PA3 Reset PF01 PF0	2 PF03 PF04 PF05	PF06 PF07 PF08 PF12 System Rev	quest
AUTOTOOL V3R1 Option ===>	Utility Pro	File Options	2009/01/16 11:44:57
Commands: END - Return Creator: CSJENN Pr Share Option ==> U U - V -	ofile: FULL	IC PROFILE	User: CSJENN L IC UTILITY
<pre>N - Data Page Verification R Reallocation Recover Image Copy Copy to Copy Runstats TS Reorg IX Reorg Quiesce Modify Repair Rebind</pre>	Reporting => => => => => => => => => =>	<pre>N (Y - Yes, N - No) N (Y - Yes, N - No) N (Y - Yes, N - No) Y (Y - Yes, N - No) N (Y - Yes, N - No)</pre>	=> N (Y - Yes, N - No) => N (Y - Yes, N - No) => Y (Y - Yes, N - No) => Y (Y - Yes, N - No) => N (Y - Yes, N - No)
S2 Ready (1) 192.168.55.22	S22T0137	10:45:08 1/16/2009	NUM 00:56:12 14,038
20			© 2009 IBM Corporation



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Attention PA1 PA2 PA3 Reset PF01 PF02 PF03 PF04 PF05 PF06 PF07 PF08 PF12 System Request AUTOTOOL V3R1 ----- Image Copy options ----- Top of data Scroll ===> CSR Option ===> Commands: END - Return to the previous screen. Press <PF7/PF8> to scroll for additional options. Name: FULL IC PROFILE Creator: CSJENN User: CSJENN More: Image Copy Utility mode ==> D (D - DB2, S - Symmetrix, E - Ess) Alter EMC Symm/IBM ESS Optns ==> N (Y - Yes, N - No) Alter Image Copy DSN specs => Y (Y - Yes, N - No) Utility ID ==> (16 characters) Parallel ==> N (Y - Yes, N - No) Number of objects $\dots = > (0 - 99)$ Number of tape units ==> _ (0 - 99) Filter DDname ==> (8 character DD name) Sharelevel ==> R (R - Reference, C - Change) Full Image Copy ==> Y (Y - Yes, N - No) Check Page => N (Y - Yes, N - No)Concurrent => N (Y - Yes, N - No)Change Limit First Percent ==> (% value) 192.168.55.22 S22T0137 11:08:08 1/16/2009 NUM 01:19:12 17,040 S2 Ready (1) © 2009 IBM Corporation



Attention PA1 PA2 PA3 Reset PF01 PF02 PF03 PF04 PF05 PF06 PF07 PF08 PF12 System Request	
AUTOTOOL V3R1 Image Copy Options 2009/01/16 12 Option ===> Commands: END - Return to the previous screen.	
Creator: CSJENN Name: FULL IC PROFILE User: CSJENN	N
Enter the Image Copy options to associate with this utility profile	
Take Image Copy View/Update Options	
Local Primary ==> y (Y - Yes, ==> y (Y - Yes, N - No) N - No)	
Local Backup ==> N (Y - Yes, ==> N (Y - Yes, N - No) N - No)	
Recovery Site Primary => y (Y - Yes, => y (Y - Yes, N - No) N - No)	
Recovery Site Backup ==> N (Y - Yes, ==> N (Y - Yes, N - No) N - No)	
	•••
S2 Ready (1) 192.168.55.22 S22T0137 11:08:29 1/16/2009 NUM 01:19:32	17.038
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AUTOTOOL V3R1 Image Copy Options 2009/01/16 12:08:57 Option ===> Creator: CSJENN Name: FULL IC PROFILE User: CSJENN	
Commands: END - Return to the previous screen. Press <pf7 pf8=""> to scroll for additional options.</pf7>	
More: +	
Image Copy options for IMAGE COPY LOCAL PRIMARY	
Use Threshold Unit if allocated space exceeds x Meg/Trks/Cyls Optional	
=> Quantity M T C	
Std Unit Threshold Unit	
Update DSN create spec . => <u>N</u> => <u>N</u> (Y - Yes, N - No)	
Unit Type => <u>SYSDA</u> => (CART - DISK - etc.)	
Catalog Options	
DISP=Status $\longrightarrow M$ => M (M - MOD, N - NEW,	
0 - 0LD, S - SHR)	
Normal Termination $\Rightarrow C$ $\Rightarrow C$ (C - CATLG, D - DEL,	
K - KEEP, U - UNCATLG)	
Abnormal Termination => \underline{C} => \underline{C} (C - CATLG, D - DEL,	
K - KEEP, U - UNCATLG)	
Data Class	
Storage Class=> TS0 => (8 character class)	
Management Class => => (8 character class)	
••••••••••••••••••••••••••••••••••••••	
S2 Ready (1) 192.168.55.22 S22T0137 11:09:48 1/16/2009 NUM 01:20:52 02, 01	6
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Attention PA1 PA2 PA3 Reset PF01 PF02 PF03 F	F04 PF05 PF06 PF07 PF08 PF12 System Request
AUTOTOOL V3R1 LP Imag Option ===>	e Copy DSN Generation 2009/01/16 12:10:18
Commands: END - Return to t	
Creator: CSJENN Name: F IMAGE COPY LOCAL PRIMARY NO	JLL IC PROFILE User: CSJENN
Qualifier code $=>$ <u>11</u> Fre	
GDG Limit ==> (1-	
Current dataset name genera	
&VCATNAME&DB&SN&LOCREM.	
Valid dataset name generation	
	orted in IC dynamic dataset generation.) L1. Date (YYYYDDD) 21. Unique
	12. Year (YYYY) * 22. GDG (+1)(+n)
	13. Month (MM) 23. ICBACKUP (#24.#25)
	14. Day (DD) 24. Local/Recovery (L/R)
	15. Julian Day (DDD) 25. Primary/Backup (P/B)
	L6. Hours (HH) 26. ICTYPE (Full/Incr/Cond)
	17. Minutes (MM) 27. Utility Name
	18. Seconds (SS)28. Job Name
* 9. User ID *	19. Timestamp 29. Step Name 29. Dender Number 20. Substains Outlifier
10. Time (HHMMSS) *	20. Random Number 30. Substring Qualifier 31. Use freeform literal
S2 Ready (1) 192.168.55.22 S22T013	11:10:31 1/16/2009 NUM 01:21:35 06.051
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DB2 Automation Tool for z/OS

Step 3 Create an Exception Profile

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Create an Exception Profile - 1

Attention PA1 PA2 PA3	Reset PF01 PF02 PF03 PF04 PF05	PF06 PF07 PF08 PF12	System Request	
AUTOTOOL V3R1 Option ===>	Exceptions	Profile Display		16 12:12:12 011 ===> CSR
Commands:	END - Cancel a ENTER - Process PF7/PF8 - Scroll f	new values.	options.	
Line Commands:	C - Create D - Dele V - View J - Jobs	te E - Export R - Rename		Update
Profile	Creator CSJE	<u>NN</u>		
Creator	Profile Name <u>Exce</u>	ption Full IC H	Profile	
Display St	Description Exce	ptions for ful	<u>l image copy</u>	
	Update Option U	U - Update, V ·	- View only, N -	No access)
Cmd Name C EXCEPT EXCEPT HENRY	Press ENTER to pro	cess or PF3 to	Cancel	

S2 Ready (1) 192.168	.55.22 S22T0137	11:13:21 1/16/200	09 NUM	01:24:25 15, 064
26				© 2009 IBM Corporation



Create an Exception Profile - 2

Connections: SRS22	• 🔞 🐓 %	Attention PA1 PA	2 PA3 Reset	PF01 PF02 PF03	PF04 PF05 PF06	PF07 PF08	PF12
AUTOTOOL V3R1 Option> Commands: END - Line Commands: A - A CONDitions: LT <	nd 0 - 0r	cit. S - Select	D - Des	elect R - "*" indica	Scroll == Repeat tes DAT st	=≻ CSR at	
Creator: CSJENN	Profile: EX	CEPTION FUL	L IC PRO		ow 76 of 1 User: CS		
	Update, View, No)			<u>PTIONS FOR</u> Column Help		E COPY	
Use Stats From: 🧲 (R S	- Repositor - Shadow, H			Runstats,			
Update Runstats Opti Combine IX/TS Except	N -	No)			N	- No)	
S Statistics Type MVS CATALOG	*Column *DSNUM *EXTENTS *PERCENT_US *ALLOCATED_ *PQTY *SQTY ICTYPE DAYS *CHGD_SINCE	ED TRACKS	E	Except	ion Value-		
_ DB2 DISPLAY STATUS	TRIGGER_IF STATUS_ARE						
S3 Ready (1) 192.168.55.22	S22T0166	11:22:3	1 1/16/2009		00:03:53	27.050	
27					© 200	9 IBM Corporat	ion

		<u> </u>	
-		_	
	-		

Exception Categories

S Statistics Type	*Column Cond	Exception Value
DAY OF WEEK	MONDAY	
	TUESDAY	S Statistics Type *Column CondException Value
	WEDNESDAY	
	THURSDAY	DB2 DISPLAY STATUS TRIGGER_IF_1_MATCH
	FRIDAY	STATUS_ARBDP
	SATURDAY	
	SUNDAY	
DAY OF MONTH	NTH_MONDAY	STATUS_AREST
	NTH_TUESDAY	STATUS_AUXW
	NTH_WEDNESDAY	STATUS_CHKP
	NTH_THURSDAY	STATUS_COPY
	NTH_FRIDAY	STATUS_GRECP
	NTH_SATURDAY	STATUS_ICOPY
	NTH_SUNDAY	STATUS_LPL
	NTH_DAY	STATUS_LSTOP
	LAST_DAY	STATUS_PSRBD
TIME OF DAY	DAY_MONTH	S Statistics Type *Column CondException Value
TIME OF DAT	TIME_FROM	CLUSTERED and CLUSTERRATIO F IX Exceptions Trigger the associated TableSpace
—	TIME_TO	SYSINDEXES ONLY_NONPART_OBJ
00000	ever upplant v	CLUSTERED
OBJECT	EXCLUDE	CLUSTERRATIO
	LOB	CLUSTERRATIOF
	PGSIZE_32K	NLEAF
S Statistics Type	Column cond	FIRSTKEYCARDF
INDEXSPACESTATS	NLEVELS	FULLKEYCARDF
	NACTIVE	SPACEF
	SPACE	PGSIZE
	EXTENTS	
REALTIME ICOPY	REAL TIME STAT	SYSINDEXSTATS Exception Conditions ONLY apply to partitioned Indexes
	REORG_OR_LOAD	CLUSTERATIO F IX Exceptions Trigger the associated TableSpace
	DAYS_SINCE_LAST	SYSINDEXSTATS CLUSTERRATIO
	UPDATED_PAGES	
	UPDATED_PAGES_PCT	CLUSTERRATIOF
	COPY_CHANGES	
	COPY_CHANGES_PCT	
REALTIME REORG TS	REAL TIME STAT	FIRSTKEYCARDF
REALIZING REDIGITS	DAYS_SINCE_LAST	FULLKEYCARDF
	INS_UPD_DEL	
	INS_UPD_DEL_PCT	SYSINDEXPART CARDF
	UNCLUST_INS	PQTY
	UNCLUST_INS_PCT	SQTY
	DISORGED_LOBS	SECQTYI
	DISORGED_LOBS_PCT	DSNUM
	RELOCATED_ROWS	LEAFDIST
	RELOCATED_ROWS_PCT	LEAFNEAR
	MASS_DELETES	LEAFFAR
REALTIME REORG IX	REAL TIME STAT	PSEUDO_DEL_ENTRIES
	DAYS_SINCE_LAST	xxxxOFFPOS Exceptions Trigger the associated TableSpace
	INS_DEL	NEAROFFPOSF
		FAROFFPOSF



DB2 Automation Tool for z/OS

Step 4 Create a Job Profile and Build the Utility JCL

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Create a Job Profile

Connections: ST RS22	2	1 🚯 💇 У 📔	Attention PA1	PA2 PA3	Reset	PF01 PF02	PF03 PF	04 PF05	PF06 PF07	PF08 PF
AUTOTOOL Option Line Com		Update Job D - Delet					2009/0 Sc	01/16 croll	12:24	:25 SR
Creator:	CSJENN	Profile: EX	CEPTION	JOB PR	OFILE		,	Jser:	CSJENN	
Share Op	otion: U (U - V -	View,	Descrip	tion:	CREAT	<u>E FULL</u>	IC			
Update J	N - ob Generation		(Y - Ye	s, N -	No)		Ro	ow 1 c	of 3	>
<u>Cmd</u> Typ – EXC – OBJ – UTI	Image: Product of the sector with the sector	PTION FULL IC PROFILE IC PROFILE ****** Bot			CS CS	eator JENN JENN JENN			*****	××××
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30								C	2009 IBM (Corporation



Connections: 🖙 RS22 💽 😥 🐓 У 🛛 Attention PA1 PA2 PA3 Reset PF01 PF02 PF03 PF04 PF05 PF06 PF07 PF08	PF12
AUTOTOOL V3R1 Jobs Profile Display 2009/01/16 12:25:41 Option ===> Commands: END - Cancel and exit. Build Job for CSJENN.EXCEPTION JOB PROFILE L AUTOTOOL V3R1 Commands: ENTER - Continue - END - Return to ISPF -	
Build Online or Batch Q (0 - Online, B - Batch) Edit Generated Job Y (Y - Yes, N - No) Build job in Dataset <u>CSJENN.HAA310.PDS.JCL</u> Member <u>FULLIC</u> Job Cards: =>> //FULLIC JOB CSJENN.CLASS=A.NOTIFY=&SYSUID.MSGLEVEL=(1,1) =>> //* =>> //* CREATE A FULL IC FOR ONLY THOSE OBJECTS THAT NEED IT_ =>> //*	
REORG USER EXIT REORG USER EXIT2 TEST FOR JANE ************************************	
3 Ready (1) 192.168.55.22 S22T0166 11:27:00 1/16/2009 NUM 00:08:22 19,066	
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Connections: SZ RS22	0	Attention PA1 PA2 PA	3 Reset F	PF01 PF02 P	PF03 PF04 PF0	5 PF06 PF07	PF08 PF12
Line Commands: B - Buil	- Cancel - Process Id C - Cres	and exit. s new values.	ete E -	Export	Scroll	5 12:25 1 ===> C	
Profile Like * Creator Like	Bui	lding Job Onl	ine —	[DB2 Subsy ow 1		3A >
Cmd Name CONTROL CAR CONTROL CAR	Your Job	is being buil Please Wait	t onlin	e.			
DUET IC B EXCEPTION JOB PROF EXCEPTION PROCESSI HAA2873 HENRY IC TABLE1 REORG USER EXIT REORG USER EXIT2 TEST FOR JANE	ING	CSJENN CSJENN CSJENN CSJENN CSJENN CSJENN CSJENN CSJENN		*****	****	***	te de se se
	BOL	com or Data					
S3 X Wait 😒 192.168.55.22	S22T0166	11:27:43 1/16	/2009	NUM	00:09:0	05 14.0	55
32	do c					© 2009 IBM C	orporation



Connections: SRS22		• 🔞 🔗 %	Attention	PA1 PA2 PA3	Reset	PF01 PF02	PF03 PF04 P	F05 PF06 PF07 P	F08 PF12
AUTOTOOL V Option Commands: E	=>		exit		olay -			16 12:30:4 11> <u>CS</u>	
DB2 Subsyst	tem ID: D84		ent SQI	LID:	LS Eri		r: CSJENN Row 27 c sages	N of 2190 -	+>
	EXCP F OBJS F UTIL F	Profile C Profile C Profile C	SJENN. SJENN.	EXCEPTION EXCEPTION FULL IC PF FULL IC PF		IC PRO	FILE	th	at
Msg ID TS	S DSNDB04 S DB1021A S DB1021A	TableSpcPaCSKUMAT1OTS1021AATS1021AA	0000 Uı ALL Uı ALL Uı	essage nderlying nderlying nderlying nderlying	file file	has be has be	en Migrat en Migrat	ted; Space ted; Space	eq eq
HAABO85W TS HAABO85W TS HAABO85W TS HAABO85W TS HAABO85W TS HAABO85W TS	5 DB1021A 5 DB1021A 5 DB1021A 5 DB1021A 5 DB1021A	TS1021A TS1021A TS1021A TS1021A TS1021A	ALL Un ALL Un ALL Un ALL Un	nderlying nderlying nderlying nderlying nderlying nderlying	file file file file	has bee has bee has bee has bee	en Migrat en Migrat en Migrat en Migrat	ted; Space ted; Space ted; Space ted; Space	eq eq eq
HAABO85W TS HAABO85W TS HAABO85W TS HAABO85W TS	5 DB1021A 5 DB1021A 5 DB1021A	TS1021A TS1021A TS1021A	ALL UI ALL UI ALL UI	nderlying nderlying nderlying nderlying	file file file	has be has be has be	en Migrat en Migrat en Migrat	ted; Space ted; Space ted; Space	e q e q
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33								© 2009 IBM Co	rporation



Connections: RS22		🔞 💙 🌱	Attention	PA1 PA2 PA3	Reset PF01	PF02 PF03	PF04 PF05 PF0	6 PF07 PF08	PF12
<u>F</u> ile	<u>E</u> dit E <u>d</u> it_Sett	ings <u>M</u> en	u <u>U</u> ti	lities <u>C</u>	ompilers	s <u>T</u> est	<u>H</u> elp		
EDIT Command = 000115 // 000116 //	/* Desc:	LO.PDS.JCL					lumns 0000 Scroll == ity		*
000120 /	/* /IMCOO1O2 EXEC / PARM		* * * TILB,R	* * * * * * EGION=000		* * * * * =(4,LT)	** ** ** ** ** *	r 347 347 347 3 3	e e
000121 // 000122 // 000123 // 000124 //	/STEPLIB DD DS / DD DS / DD DS	SN=RSQA.HA SN=RSQA.HA SN=DDS2.SD	A310.I SNEXIT	BMTAPE.SF ,DISP=SHR	ECLOAD,				
000128 /	/ DD DS /SYSPRINT DD SY /SYSOUT DD SY	/SOUT=*							
000129 // 000130 // 000131 // 000132	/*	/SOUT=* 20001							
000133 000134 000135 000136 000137	UNIT DSN SPAC MAXE UNCE	CE TRK PRIME 0006	'DD	S2.&DB&	SNL.D&	&JDATE.			
000138 000139 000140 000141	DAT	ACLAS TSOM RCLAS TSO		,CATLG)					
000142	LISTDEF CPYO	01U1							
S3 Ready (1)	192.168.55.22	S22T0166		11:32:51 1/16/20	09	NUM	00:14:14	05, 015	
34							© 20	09 IBM Corpora	ation



Connections: RS22	•	8 99	Attention	PA1 PA2 PA	3 Reset	PF01 PF0	2 PF03 F	PF04 PF05	PF06 PF07 PF0	3 PF12
<u> </u>	t E <u>d</u> it_Sett	tings <u>M</u> en	u <u>U</u> t	ilities	<u>C</u> ompil	ers]	[est	<u>Н</u> е]р		
	CSJENN.HAA31	LO.PDS.JCL	(FULL	IC) - 01.	00				001 00072	
Command === 000142 L	> ISTDEF CPYOO	1111						croii	===> <u>CSR</u>	-
000143		DE TABLESP	ACE DE	3CA184A.T	SCA18A	в				
000144		DE TABLESP								
000145		DE TABLESP								
000146	INCLU	DE TABLESP	ACE DE	3CA184B.T	SCA18B	×				
000147	INCLU	DE TABLESP	ACE DE	BCA211.TS	SCA211					
							_ine(s) not	Displayed	1
000179		DE TABLESP								
000180		DE TABLESP								
000181		DE TABLESP								
000182		DE TABLESP DE TABLESP								
000183 000184		DE TABLESP				~				
000185		DE TABLESP								
000186		DE TABLESP								
000187		DE TABLESP				A				
000188		DE TABLESP								
000189		DE TABLESP								
000190		DE TABLESP								
000191	INCLU	DE TABLESP	ACE DE	381601.TS	81601B	;				
000192										
	OPY LIST CPY									
000194	FULL	YE								
000195	COPYE		1LP00(
000196	SHRLEVEL	_ RE	FEREN	CE						
000197										
000198 /*										
000199 //*										
S3 Ready (1) 192	2.168.55.22	S22T0166		11:34:04 1/16	/2009		M	00:15:28	05, 015	
35								©	2009 IBM Corpo	oration



Connections: S2 Attention PA1 PA2 PA3 Reset PF01 PF03 PF04 PF07 PF08 PF08	F12
AUTOTOOL V3R1 Jobs Profile Display 2009/01/16 13:41:25 Option ===> Scroll ===> CSR Commands: END - Cancel and exit. L AUTOTOOL V3R1	
- END - Return to ISPF -	
Build Online or Batch b (O - Online, B - Batch)	
Edit Generated Job Y (Y - Yes, N - No) Build job in Dataset <u>CSJENN.HAA310.PDS.JCL</u>	
C Member . <u>BATCHIC</u>	
Job Cards: => //BATCHIC JOB CSJENN,CLASS=A,NOTIFY=&SYSUID,MSGLEVEL=(1,1) => //* => //* THIS JOB WILL EVALUATE EACH OBJECT, AND GENERATE IC JCL => //* FOR ONLY THOSE OBJECTS THAT MATCH THE CRITERIA.	
REORG USER EXIT CSJENN U REORG USER EXIT2 CSJENNA U TEST FOR JANE CSJENN U	

S3 Ready (1) 192.168.55.22 S22T0166 12:42:03 1/16/2009 NUM 01:23:27 11, 031	
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Connect	tions: RS22		1 🚯 🐓 🌱	Attention	PA1 PA2 PA3	Reset	PF01 PF02 PF	03 PF04 PF0	5 PF06 PF07	PF08 PF12
	You h batch CSJEM Pleas JCL h Build Jobca ==> 4 ==> 4	ands: END Build Build Build Build Build Build Build Build Built by the ba Built by the ba Built by the ba Built by the ba Built by the ba Build	CL will be JCL(BATCHI the datase atch modul et. <u>CSJE</u> used on t <u>CSJENN,CL</u>	CSJENN CSJENN CSJENN Store C C T and e to k NN.HAA ICB the ger ASS=A.	exit. N.EXCEPTIO Duilt in a ed in data member be pe placed. Allo.PDS.J NOTIFY=&S	N JOB batch set low wh CL b: YSUID ERATEI	PROFILE mode. here you	Scroli The want th	1> CS	
\$3	Ready (1)	192.168.55.22	S22T0166		12:43:08 1/16/20	09	NUM	01:24:	32 19.0	*
	37	Moltoc	X)						© 2009 IBM C	orporation



Connections: SS22	🖸 🔞 🐓 🏏 🛛 At	tention PA1 PA2 PA3	Reset PF01 PF02	PF03 PF04 PF05 PF0	6 PF07 PF08 PF12
<u> </u>	ttings <u>M</u> enu	<u>U</u> tilities <u>C</u> o	mpilers <u>T</u>	est <u>H</u> elp	
Command ===>	*****	ATCHIC) - 01.0 ** Top of Data S=A,NOTIFY=&SY	******		==> <u>CSR</u>
000002 //* 000003 //* THIS JOB W 000004 //* FOR ONLY T 000005 //*				E IC JCL	
000006 //** * * * * * 000007 //* 000008 //* Job Gener 000009 //* 000010 //* DB2 SSID:		B2 Automation	Tool V3R1.	01	* * * * * *
000010 //* DB2 351D: 000011 //* SQLID: 000012 //* Profile: 000013 //* Desc: 000014 //* User:	CSJENN. EXCEP	TION JOB PROFI IC	LE		*
000015 //* Date: 000016 //* Time: 000017 //* 000018 //** * * * * *	Friday Janua 13:43:18.50	ry 16, 2009	* * * * * *	* * * * * * *	* * *
000019 //* 000020 //** * * * * * * 000021 //* 000022 //* Step:	* * * * * * * HAA@BULD	* * * * * * *	* * * * *	* * * * * *	* * * * * * *
000023 //* 000024 //* Desc: 000025 //* 000026 //* 000027 //*	CSJENN.EXCEP The generate	l generate the TION JOB PROFI d job will be O.PDS.JCL(FULL	LE in a ba	tch mode.	*
S3 Ready (1) 192.168.55.22	S22T0166	12:43:32 1/16/200	9 NUM	01:24:56	04.015
38	oğ d			© 200	09 IBM Corporation



Connections: RS22	🛛 🔞 🐓 У 🛛 Attentio	n PA1 PA2 PA3 Reset	PF01 PF02 PF03	PF04 PF05 PF06	PF07 PF08 PF12
<u>F</u> ile <u>E</u> dit E <u>d</u> it_Set	tings Menu II	tilities <u>C</u> ompi	lers Test	Help	
	<u>Hend</u>	criticies <u>c</u> omp	Test	Петр	
EDIT CSJENN.HAA3	10.PDS.JCL(BAT	CHIC) - 01.00	Co	lumns 00001	L 00072
Command ===>				Scroll ===	=> <u>CSR</u>
	* * * * * * *		e ste ste ste ste ste	* * * * *	the the the the
000061 //* Run DB2 Aut	omation Tool B	uild			*
000062 //** * * * * *				* * * * *	жжжж
000063 //HAA@BULD EXEC	PGM=IKJEFIIA,	REGION=0008M			
000064 //*					
			- 36 Line	(s) not Dis	splayed
000101 // D 000102 //SYSTSIN DD *	CB=(RECFM=FB,L	RECE=133, BERS12	E=1330)		
	EFIX				
000104 ISPSTART PGM(
000105 //*	IIAA@B0ED)				
000106 //HAA#DATA DD *					
000107 GENERATE_UTIL					
000108 DB2_SUBSYST					
000109 USER_INDICA					
000110 PROFILE_NAM		ION JOB PROFILE			
000111 PROFILE_CRE					
000112 PROFILE_DES	CRIPTION 'CREA	TE FULL IC'			
000113 EXECUTION_L	IB_2 RSQA.H	AA310.IBMTAPE.S	SHAALOAD		
000114 EXECUTION_L		AA310.IBMTAPE.S			
000115 GEN_TO_DATA		.HAA310.PDS.JCL			
000116 DEBUG_MODE	OFF				
000117 GEN_TO_MEMB					
000118 JOB_CARD_1_		ICB JOB CSJENN	I, CLASS=A, NO	DTIFY=&SY'	
000119 JOB_CARD_1_					
000120 JOB_CARD_2_					
000121 JOB_CARD_3_		IS IS IMAGE COP		WAS GENE'	
000122 JOB_CARD_3_	Z RATED	BY RUNNING THE			
02 Deads (1) 100 100 55 00	00070100	10.44.11 1/10/0000	[bullet	01.05.05	05.015
S3 Ready (1) 192.168.55.22	S22T0166	12:44:11 1/16/2009	NUM	01:25:35	05, 015
39				© 2009	BM Corporation



Connections: ST RS22	🖃 🚱 💅 🏏 🛛 At	tention PA1 PA2 PA3	Reset PF01 PF02 P	F03 PF04 PF05 PF0	6 PF07 PF08 PF12
<u>D</u> isplay <u>F</u> ilter <u>V</u>	iew <u>P</u> rint <u>O</u> p	tions <u>H</u> elp			
SDSF OUTPUT DISPLAY COMMAND INPUT ===> 13.45.40 J0663488				COLS 02- SCROLL ==	
13.45.40 J0663488 IR 13.45.40 J0663488 IC 13.45.40 J0663488 \$H 13.45.40 J0663488 IE	RO1OI UŠERID H70001I CSJENN ASP373 BATCHIC F403I BATCHIC	CSJENN IS A LAST ACCES STARTED - I	SSIGNED TO TH S AT 12:18:38 NIT 11 - CL	ON FRIDAY,	
13.45.40 J0663488 RK 13.45.40 J0663488 RK 13.46.12 J0663488 +H 13.46.21 J0663488 +G	TSWO1I BATCH AA\$BULD - Gen PRO - 3 000000	on error = "Y 00_00000598 0	1 and Errors 0000000_00080	00 00: or Warnings A60 000000	00:00.06 found 0_000634
13.46.21 J0663488 +G 13.46.21 J0663488 +G	PR4 - 7 000000 PR8 -11 000000 PR12-15 000000 TSW01I F404I BATCHIC	00_256060E0 0 00_256791A8 0 HAA@BULD	0000000_25617 0000000_25678 2	000 0000000 00000000000000000000000000	0_256140
13.46.22 J0663488 RK 13.46.22 J0663488 \$H JES2 JOB STATI 16 JAN 2009 JOB EXE	ASP395 BATCHIC STICS CUTION DATE	IC JOB TOTAL ENDED	S:	00:	00:02.18
573 SYSOUT	PRINT RECORDS PUNCH RECORDS SPOOL KBYTES	_			
1 //BATCHIC //*	EXECUTION TIM JOB CSJENN,CL B WILL EVALUAT	ASS=A,NOTIFY=			
S3 Ready (1) 192.168.55.22	S22T0166	12:47:49 1/16/20	09] JNUM	01:29:13	05.021
40				© 200	09 IBM Corporation



Connections: 🖙 RS22 💽 👔 🏈	Attention	PA1 PA2 PA3	Reset PF01 PF02	PF03 PF04 PF05 PF	06 PF07 PF08 PF12
<u>D</u> isplay <u>F</u> ilter <u>V</u> iew <u>P</u> ri	nt <u>O</u> ptions	s <u>H</u> elp			
SDSF OUTPUT DISPLAY BATCHIC	J0663488	DSID 10	3 LINE 29	COLUMNS	02- 81
COMMAND INPUT ===> _	30003100	0010 10		SCROLL =	
HAAB049I Using JOBS Profile	CSJENN.EXC	CERTION 10			that i
HAAB050I EXCP Profile			LL IC PROFI	LE	LIIAL I
HAAB050I OBJS Profile	CSJENN.FUL				
HAAB050I UTIL Profile	CSJENN.FUL				
IX Database IndexSpc					
Msg ID TS Database TableSpc				c	
				found; Obj	
HAABO85W TS DB1021A TS1021A			le has been		Space qu
HAABO85W TS DB1021A TS1021A HAAB085W TS DB1021A TS1021A			le has been		Space qu
HAAB085W TS DB1021A TS1021A HAAB085W TS DB1021A TS1021A			le has been le has been		Space qu Space qu
HAABO85W TS DB1021A TS1021A HAAB085W TS DB1021A TS1021A			le has been		Space qu
HAAB085W TS DB1021A TS1021A HAAB085W TS DB1021A TS1021A			le has been		Space qu
HAAB085W TS DB1021A TS1021A HAAB085W TS DB1021A TS1021A			le has been		Space qu
HAAB085W TS DB1021A TS1021A			le has been		Space qu
HAABO85W TS DB1021A TS1021A			le has been		Space qu
HAABO85W TS DB1021A TS1021A			le has been		Space qu
HAAB085W TS DB1021A TS1021A			le has been		Space qu
HAAB085W TS DB1021A TS1021A			le has been		Space qu
HAAB085W TS DB1021A TS1021A			le has been		Space qu
HAAB085W TS DB1021A TS1021A			le has been		Space qu
HAABO85W TS DB1021A TS1021A			le has been		Space qu
HAAB085W TS DB1021A TS1021A	ALL Unde	erlying fi	le has been	Migrated;	Space qu
HAAB085W TS DB1021A TS1021A			le has been		Space qu
HAAB085W TS DB1021A TS1021A	ALL Unde	erlying fi	le has been	Migrated;	Space qu
S3 Ready (1) 192.168.55.22 S22T0166		12:51:30 1/16/2009	9 NUM	01:32:54	04, 021
				© 2(009 IBM Corporation



Connections: 🗲 RS22	2	• 📀 📀	Attention	PA1 PA2	PA3	Reset	PF01	PF02	PF03	PF04	PF05	PF06	PF07 PF0	8 PF1
 <u>M</u> enu	 <u>F</u> unctions	 <u>C</u> onfirm <u>U</u> t	 ilities	 <u>Н</u> е]р				-		-	-			
BROWSE		CSJENN.HAA31	0.PDS.JC	Ľ									00059	
Command											011		> <u>CSR</u>	_
	Name	Prompt	Size	Crea			2000		ang			~	ID	
	BACKUP		43	2008/			2008,						CSJENN	
	_ BATCHIC		126	2009/			2009,						CSJENN	
	BKUPDATA	`	114	2008/			2008,						CSJENN	
	DEMO		93	2008/			2008,						CSJENN	
	DLCBKUP DLCLOAD		101 65	2008/ 2008/	10/0	22	2008, 2008,						CSJENN	
	DRDEMO		43	2008/			2008, 2008,						CSJEN	
	DRPROFJ		131	2008/			2008,						CSJEN	
	DRTEST		131	2008/			2008,						CSJEN	
	D8A#JCL		394	2008/			2008						CSJENN	
	D8A#STF		47	2008/			2008						CSJENN	
	D8AEXCEF	>		2000/	0.57		2000,	, 0, 5,	10				CODEN	
			155	2008/	10/0	าร	2008	/10/	08	16-	45-2	9	CSJENN	J
	EXCEPJ		29	2008/			2008						CSJENN	
	FULLIC		199	2009/			2009						CSJENN	
V	FULLICB		197	2009/			2009						CSJENN	
	HAA2873		175	2008/			2008						CSJENN	
	HAA2873B		153	2008/			2008						CSJENN	
	HAA3714		155	2008/	04/0	57	2008						CSJENN	
	HAA3958		101	2008/			2008						CSJENN	
	HAA3958R	2												
	HENRY		29	2008/	11/2	2.5	2008	/11/	25	10:	47:2	6	CSJENN	J
	JENBSJCL		38	2008/	09/2	23	2008	/09/	23	14:	35:3	8	CSJENN	A I
	LEAFFAR		99	2008/	06/2	24	2008	/06/	24	10:	41:1		CSJENN	
	PROF1GEN	1	29	2008/			2008	/04/	′O3	11:	03:5	1	CSJENN	A I
	PROF1G2		144	2008/	04/0	03	2008,	/04/	′07	10:	59:0	5	CSJENN	4
3 Ready (1)	192.168.55.22	S22T0166		12:52:38 1	1/16/200)9		NUM		0	1:34:02		22,005	
42	MX) do n o									C	2009	IBM Corpo	oration



Connections: ST RS22	• • • • • • • • • • • • • • • • • • •	Attention PA1 PA2 PA3 Reset	PF01 PF02 PF03 PF	F04 PF05 PF06 PF0	07 PF08 PF12				
<u> </u>									
Command>	ENN.HAA310.PDS.JCL		5	mns 00001 0 croll ===>					
<pre>000001 //FULLICB JOB CSJENN,CLASS=A,NOTIFY=&SYSUID 000002 //* 000003 //* THIS IS IMAGE COPY JCL THAT WAS GENERATED BY RUNNING THE 000004 //* JOB IN 'CSJENN.HAA310.PDS.JCL(BATCHIC)'. 000005 //* 000006 //** * * * * * * * * * * * * * * * * *</pre>									
000117 //* 000118 //IMC00102 EXEC PGM=DSNUTILB,REGION=0008M,COND=(4,LT), 000119 // PARM=(D8A)									
000120 //*000121 //STEPLIBDDDSN=RSQA.HAA310.IBMTAPE.SHAALOAD,DISP=SHR000122 //DDDSN=RSQA.HAA310.IBMTAPE.SFECLOAD,DISP=SHR000123 //DDDSN=DDS2.SDSNEXIT,DISP=SHR000124 //DDDSN=DSN.V810.SDSNLOAD,DISP=SHR000125 //DDDSN=DSN.V810.RUNLIB.LOAD,DISP=SHR000126 //SYSPRINTDDSYSOUT=*000128 //UTPRINTDDSYSOUT=*000129 //*000129 //*									
000130 //SYSIN DD * 000131 TEMPLATE C1LP0001									
S3 Ready (1) 192.168.55	5.22 S22T0166	12:53:15 1/16/2009	NUM	01:34:39	6, 015				
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Connections: ST RS22	• 😵 🐓 🏏	Attention PA1 PA2 PA3 Reset	PF01 PF02 PF03	PF04 PF05 PF06	PF07 PF08 PF12				
<u> </u>	E <u>d</u> it_Settings <u>M</u> enu	u <u>U</u> tilities <u>C</u> ompi	lers <u>T</u> est	<u>Н</u> е]р					
Command ===>	JENN.HAA310.PDS.JCL			umns 0000 Scroll ==					
000118 //IMCO0102 EXEC PGM=DSNUTILB,REGION=0008M,COND=(4,LT), 000119 // PARM=(D8A)									
000120 //*									
000121 //STEP		A310.IBMTAPE.SHAALO							
000122 //DD DSN=RSQA.HAA310.IBMTAPE.SFECLOAD,DISP=SHR000123 //DD DSN=DDS2.SDSNEXIT,DISP=SHR									
000124 // DD DSN=DDS2.SDSNEX11,DISF=SHR									
000125 // DD DSN=DSN.V810.RUNLIB.LOAD,DISP=SHR									
	PRINT DD SYSOUT=*								
000127 //SYS0									
000128 //UTPR 000129 //*	CINT DD STSOUT=								
000130 //SYSI	N DD *								
000131 TEMPLATE C1LP0001									
000132	UNIT SYSDA								
000133	DSN	'DDS2.&DB&SN	L.D&JDATE.						
000134 SPACE TRK									
000135 MAXPRIME 00066666 000136 UNCNT 5									
000137	DATACLAS TSOM	C							
000138									
000139	DISP (MOD,	,CATLG,CATLG)							
000140									
000141 LIS 000142	TDEF CPY001U1	ACE DBCA184A.TSCA18	AR						
000143		ACE DBCA184A.TSCA18							
000144		ACE DBCA184B.TSCA18							
S3 Ready (1) 192.16	8.55.22 S22T0166	12:53:42 1/16/2009	NUM	01:35:06	06.015				
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				© 200	9 IBM Corporation				
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DB2 Automation Tool for z/OS

Questions?

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