

## Why is Your CICS Engine Running out of Gas?

Use CICS Performance Analyzer to help maximize every MIPS





### Preface

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## Does any of this apply to you?

- Workload is growing, but now is a bad time for a processor upgrade.
- It would be good to identify any trends in the CICS environment that may impact the ability to meet future SLAs.
- Every time there's a performance problem, you need a specialist to create adhoc reports.
- It's difficult and very time consuming researching the root cause of performance issues.
- You know that your CICS environment can benefit from threadsafe, but you're not sure where to start

## lf so....

CICS Performance Analyzer can help you!





## **CICS** Performance Analyzer

### What is it?

> A Historical Analysis Tool for solving CICS performance issues

### What does it do?

- Comprehensive Batch Reporting and Analysis from SMF data
- User friendly interface to build, maintain and submit reports
- Extensive Tabular Reports and Extracts (over 150)
- Create Historical Databases that include trend and capacity information
- Online Statistics Reporting Capability

### Benefits

- Improves tuning and capacity planning analysis
- Improve transaction response time
- Provides detailed performance bottleneck analysis
- Uncovers trends leading to poor CICS performance or even outages
- Helps plan capacity for optimal performance



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### **CICS PA Overview**





### **CICS PA significantly improves CICS tuning activities**

#### Problem

- What areas of my CICS environment need tuning?
- Need an easy way to measure the impact of tuning changes.

### Solution

- Exception Reports, Wait Analysis Reports, and Resource Usage Reports help zero-in on the areas with most to gain
- CICS Statistics data is presented in a well organized manner allowing you to view multiple regions from one interface.
- Profiling reports measure the impact of changes to the environment.

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8	V1R2M0						CIC	5 Perform	ance Analy	zer					
l								Perform	ance List						
8															
B	LIST0001 Prin	nted at 1	5:17:27	3/21/200	6 Dat	ta from	11:10	29 2/04	/2006			APPLID	IYK221V1	Page	1
ŝ															
l	Tran SC Ten	n Userid	RSID 1	Program	TaskNo	Stop		Response	Dispatch	User CPU	Suspend	DispNait	FC Wait	FCAMEq	IR Wait
8						Time		Time	Time	Tine	Time	Time	Tine		Tine
ß	CSSY U	CEAKER	1	DFHADATT	16	11:10:2	29.803	.0139	.0007	.0006	.0133	.0000	.0000	0	.0000
l	CSSY U	CEAKER	1	DFHAPATT	17	11:10:3	29.809	.0185	.0010	.0014	.0175	.0001	.0000	0	.0000
8	CSSY U	CEAKER	1	DFHADATT	18	11:10:3	29.861	.0674	.0196	.0027	.0479	.0269	.0000	0	.0000
8	CGRP U	CBAKER	1	DFHECGRP	12	11:10:3	30.194	. 4123	.0420	.0074	.3702	. 3223	.0000	0	.0000
l	CSSY U	CEAKER	1	DFHAPATT	15	11:10:3	30.207	. 4204	.0568	.0100	.3636	.1744	.0000	0	.0000
l	CSSY U	CEAKER		DFHAPATT	13	11:10:	30.456	. 6743	.0728	.0134	.6015	. 4000	.0000	0	.0000
8	CSSY U	CEAKER	1	DFHAPATT	10	11:10:3	30.531	.7498	.1910	.0228	.5588	.1997	.0000	0	.0000
l	CSSY U	CEAKER		DFHADATT	14	11:10:	31.121	1.3344	.3202	.0378	1.0142	.2626	.0000	1	.0000
l	CSSY U	CEAKER		DFHADATT	11	11:10:	31.211	1.4292	.1497	.0313	1.2794	.3461	.0000	0	.0000
ų	CPLT U	CBAKER		DFHSIPLT	7	11:10:4	15.642	15.9915	.3383	. 0369	15.6532	.0155	.0000	0	.0000
1	CSSY U	CEAKER		DEHADATT	III	11:10:	15.856	16.0761	9.3488	2.3435	6.7273	1.1645	.9522	2059	.0000
ŝ	CNBG S	CHAKER		DFHWBGB	24	11:10:4	6.196	.0262	.0248	.0041	.0013	.0012	.0000	0	.0000
8	CRSQ S	CEAKER		DEHCHO	20	11:10:	16.856	.0818	.0449	.0040	.0369	.0367	.0000		.0000
8	CARE S	CHAKER		DEHZXER	27	11:10:4	7.134	. 2255	.0243	.0049	.2011	. 2009	.0000	0	.0000
l	CLK2 TO RIT	CBARER		DEHLOP	29	11:10:4	10.474	.0263	.0030	.0020	.0232	.0000	.0000		.0232
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I										< 936976					

#### Value

- CICS PA easily helps reduce the amount of labour and time need to tune your CICS environment.
- Reduce the risk of performance related slowdowns and outages.



## Performance Summary Report ...

V1R3M0						CICS Per Perf	formance formance S	Analyzer Summary						
SUMM0001	Printed a	t 12:46:4	18 3/23/2	2006 1	Data from	11:10:29	2/04/200	06 to 08:1	0:06 2/1	6/2006			Page	1
		Avg	Max	Avg	Avg	Avg	Max	Avg	Avg	Avg	Avg	Avg	Avg	
Tran	#Tasks	Response	Response	Dispatch	User CPU	Suspend	Suspend	DispWait	FC Wait	FCAMRq	IR Wait	SC24UHWM	SC31UHWM	
		Time	Time	Time	Time	Time	Time	Time	Time		Time			
AADD	18	.0115	.0945	.0099	.0020	.0016	.0114	.0008	.0003	1	.0000	949	0	
ABRW	1033	.0789	36.6088	.0027	.0015	.0762	36.6061	.0000	.0000	6	.0007	1008	0	
ADDD	1	.0482	.0482	.0350	.0049	.0132	.0132	.0125	.0000	0	.0000	0	0	
AINQ	11	.0021	.0040	.0017	.0014	.0004	.0021	.0000	.0000	1	.0001	928	0	
AMNU	15	.0245	.1724	.0223	.0027	.0022	.0194	.0010	.0000	0	.0000	422	177	
AUPD	17	.0183	.0665	.0118	.0032	.0065	.0505	.0010	.0017	0	.0007	968	0	
В	2	.0028	.0031	.0027	.0015	.0001	.0001	.0000	.0000	0	.0000	0	0	
BING	1	.0024	.0024	.0023	.0016	.0001	.0001	.0000	.0000	0	.0000	0	0	
BINQ	1	.0027	.0027	.0027	.0015	.0001	.0001	.0000	.0000	0	.0000	0	0	
CALL	25	2.3633	8.2455	.0074	.0021	2.3559	8.2300	.0013	.0000	0	.0000	0	1056	
CATA	17	.0285	.0882	.0119	.0055	.0167	.0828	.0002	.0000	0	.0000	0	0	
CATD	6	.0372	.0590	.0159	.0056	.0213	.0306	.0024	.0000	0	.0000	0	0	
CATR	2	.0290	.0296	.0283	.0047	.0006	.0009	.0006	.0000	0	.0000	0	0	
CBAM	11	11.2041	51.3803	.0147	.0054	11.1894	51.3196	.0016	.0000	3	.0000	0	1865	
CBTR	2	.0179	.0334	.0176	.0029	.0003	.0006	.0003	.0000	0	.0000	0	0	
CEBR	1	5/5.916	5/5.916	.0061	.0046	575.910	5/5.910	.0003	.0000	0	.0000	0	0	
CECI	61	1.7234	/2.89/1	.0194	.0043	1.7039	/2.8839	.0004	.0000	0	.0000	3	21295	
CEDA	98	1.9304	51.4018	.0602	.0218	1.8702	50.2257	.0008	.0086	53	.0000	0	0	
CEMT	137	19.1960	592.514	.0154	.0062	19.1806	592.359	.0043	.0000	0	.0000	0	0	
CESD	12	.1128	1.2902	.0211	.0021	.0917	1.0858	.0916	.0000	0	.0000	0	0	
CESF	6	.0180	.0468	.01/5	.0042	.0004	.0009	.0004	.0000	0	.0000	0	0	
CESN	36	.0242	.2046	.0233	.0081	.0008	.0060	.0006	.0000	0	.0000	0	0	
CETR	1	.8982	.8982	.1132	.0132	. 7850	. 7850	.0068	. 0000	0	.0000	0	0	
CGRP	2	.5862	. /601	.0571	.0076	.5291	. 6880	.4134	.0000	0	.0000	0	0	
CITS	5	.0111	.0153	.0058	.0035	.0053	.0091	.0001	. 0000	0	.0000	0	0	
CLQ2	2	2.0731	3.8259	.0628	.0068	2.0103	3./441	.0820	.0000	0	1.9054	0	0	
CLR2	2	.0604	.0946	.0030	.0020	.0574	.0915	.0000	.0000	0	.0135	0		

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## Performance Summary Report – Distributions

V2R1M0	1MO CICS Performance Analyzer Performance Summary													
SUMM0003 Transact	SUMM0003 Printed at 15:14:26 2/14/2007 Data from 08:27:42 1/30/2007 to 09:19:35 1/30/2007 Pa Transaction Response Time Distribution Summary (Percentage) by Time-of-Day													
			<0.1	0.1-0.25	0.25-0.5	0.5-0.75	0.75-1.0	1.0-1.5	1.5-2.0	2.0-10.0	>=10.0	Max	Avg	
Stop	Tran	#Tasks	Response											
Interval			Time											
09:16:00	WMSC	24	100.00	.00	.00	.00	.00	.00	.00	.00	.00	.0004	.0004	
09:16:00		29	89.66	6.90	3.45	.00	.00	.00	.00	.00	.00	.2788	.0212	
09:17:00	CEDF	9	11.11	.00	.00	22.22	11.11	22.22	22.22	11.11	. 00	2.1832	1.1744	
09:17:00	CEMT	1	.00	.00	.00	.00	.00	.00	.00	.00	100.00	14.9315	14.9315	
09:17:00	WMSC	24	100.00	.00	.00	.00	.00	.00	.00	.00	.00	.0004	.0004	
09:17:00		34	73.53	. 00	.00	5.88	2.94	5.88	5.88	2.94	2.94	14.9315	.7503	
09:18:00	CATA	1	100.00	. 00	.00	.00	.00	.00	.00	.00	.00	.0332	.0332	
09:18:00	CEDF	3	.00	. 00	.00	.00	.00	33.33	.00	33.33	33.33	32.6115	13.0935	
09:18:00	CEJR	2	50.00	.00	50.00	.00	.00	.00	.00	.00	.00	.3164	.1583	
09:18:00	CEMT	3	100.00	.00	.00	.00	.00	.00	.00	.00	.00	.0588	.0216	
09:18:00	CESN	1	.00	100.00	.00	.00	.00	.00	.00	.00	.00	.2283	.2283	
09:18:00	CGRP	1	.00	100.00	.00	.00	.00	.00	.00	.00	.00	.1779	.1779	
09:18:00	CISC	1	.00	100.00	.00	.00	.00	.00	.00	.00	.00	.1499	.1499	
09:18:00	CPIR	7	57.14	28.57	14.29	.00	.00	.00	.00	.00	.00	.3686	.0875	
09:18:00	CPLT	1	.00	.00	.00	.00	.00	.00	.00	100.00	.00	6.2207	6.2207	
09:18:00	CORY	1	.00	100.00	.00	.00	.00	.00	.00	.00	.00	.1021	.1021	
09:18:00	CRSO	1	100.00	.00	.00	.00	.00	.00	.00	.00	.00	.0998	.0998	
09:18:00	CSSY	9	33.33	44.44	11.11	.00	.00	.00	.00	11.11	.00	6.3256	.8250	
09:18:00	CWBG	1	100.00	.00	.00	.00	.00	.00	.00	.00	.00	.0420	.0420	
09:18:00	CXRE	1	100.00	.00	.00	.00	.00	.00	.00	.00	.00	.0552	.0552	
09:18:00	DPL3	1	.00	.00	.00	.00	.00	.00	.00	.00	100.00	50.0251	50.0251	
09:18:00	WMSC	19	100.00	.00	.00	.00	.00	.00	.00	.00	.00	.0005	.0004	
09:18:00		53	64.15	18.87	5.66	.00	.00	1.89	.00	5.66	3.77	50.0251	1.9781	
Total		1317	75.40	4.56	2.96	4.86	2.51	3.19	1.75	3.04	1.75	1887.437	6 3369	

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## Transaction Profiling ...

V2R1M0						CICS Tran	Performanc saction Pi	ce Analyzer rofiling						
PROF0001	Printed at	13:54:4	4 8/02/2	2007	Report Baseline	Data from Data from	15:24:42 16:17:32	7/31/2008 7/23/2008	to 16:29: to 16:44:	59 7/3 59 7/3	31/2008 23/2008		Page	1
Tran		#Tasks	Avg Response Time	Avg Dispatch Time	Avo User CPU Time	g Avg J Suspend Time	Avg DispWait Time	Avg FC Wait Time	Avg FCAMRq II Count	Avg R Wait Time	Avg SC24UHWM Count	Avg SC31UHWM Count		
АААА	Report	1308	.1097	.0532	.0032	.0564	.0009	. 0000	0	.0550	2572	159457		
АААА	Baseline	3628	.0888	.0433	.0023	.0455	.0008	.0000	0	.0442	2205	155273		
	Delta	-2320	+.0208	+.0099	+.0008	8 +.0109	+.0000	.0000	0 -	⊦.0108	+367	+4184		
	Change%	-63.95	+23.52	+23.04	+37.80	+24.00	+10.27	.00	.00 -	+24.40	+16.64	+2.69		
BBBB BBBB	Report Baseline Delta Change%	12 44 -32 -72.73	.0175 .0893 0717 -80.33	.0082 .0425 0343 -80.69	.0017 .0038 0020 -53.63	.0093 .0467 .0374 .0374 .00.03	.0005 .0015 0009 -64.50	.0000 .0000 .0000 .00	0 0 0 -	.0086 .0444 0358 -80.65	5008 2588 +2419 +93.48	142952 233438 -90486 -38.76		
cccc	Report	18	.0463	.0221	.0033	.0241	.0008	.0000	0	.0230	2432	271272		
CCCC	Baseline	20	.0509	. 0239	.0038	.0269	.0011	.0000	0	.0252	2188	257806		
	Delta	-2	0046	0017	0005	.0028	0003	.0000	0 -	0022	+243	+13465		
	Change%	-10.00	-9.04	-7.33	-13.73	-10.55	-26.20	.00	.00	-8.91	+11.11	+5.22		
סססס	Report	6	.0556	.0275	.0043	.0280	.0003	.0000	0	.0275	2432	301853		
EEEE	Report	4	.2208	.1091	.0063	.1117	.0004	.0000	0	.1102	2504	96276		
EEEE	Baseline	4	.1482	.0741	.0192	. 0740	.0002	. 0000	0	.0737	2528	96276		
	Delta	0	+.0726	+.0349	0129	+.0376	+.0002	.0000	0 -	.0364	-24	0		
	Change%	.00	+48.99	+47.11	-66.94	+50.90	+102.00	.00	.00 -	49.39	95	.00		

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## **Requesting Reports and Extracts**

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<u>F</u> ile <u>S</u> ystems <u>C</u> onfirm <u>O</u> ptions <u>H</u> elp	
EDIT Report Set - TEST Command ===>	Row 1 of 22 Scroll ===> <u>PAGE</u>
Description <u>CICS PA Test Report Set</u>	
Enter "/" to select action.	Select one or more reports
** Reports **	and extracts that you wish
+ Options	
+ Selection Criteria	torun
Performance Reports	Yes
LISt	No
LIST Extended	NO Yes
Summary	No
Wait Analusis	Yes
Transaction Profiling	No
Cross-System Work	Yes
Transaction Group	No
BTS	No
Workload Activity	No
+ Exception Reports	No
<ul> <li>Transaction Resource Usage Reports</li> </ul>	No
– Subsystem Reports	Yes
DB2	<u>No</u>
WebSphere MQ	<u>No</u>
OMEGAMON	Yes
+ System Reports	<u>No</u>
+ Performance Graphs	No
+ Extracts	No
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## Easy to Customize Sample Reports

<u></u>	ile <u>E</u> dit	<u>C</u>	onfirm	<u>U</u> pgrade	e <u>O</u> ptions <u>H</u> elp								
Com	mand ===>	_	E	DIT SUMMA	ARY Report Form - DISPSUM Row 1 of 16 More: >Scroll ===> <u>CSR</u>								
Des	Description <u>Transaction Dispatch/CPU Usage</u> Version (VRM): 620												
Sel	ection Cri	ite	ria:										
_	Performar	nce			Page width <u>132</u>								
/	Field Name +	So K	rt O Tupe	e Fn	Description								
	TRAN	к	A		Transaction identifier								
	TASKCNT				Total Task count Pick the columns you want								
	RESPONSE			AVE	Transaction responsion included in your report								
	<u>DISPATCH</u>		<u>_ TIM</u>	<u>AVE</u>	Dispatch time included in your report.								
	CPU		<u>_ TIME</u>	<u> AVE</u>	CPU + ·								
	SUSPEND		<u>_ TIM</u>		Suspend time								
	<u>QRDISPT</u>		<u> </u>	AVE	CICS QR TCB dispatch time								
	QRCPU		_ <u>TIM</u>	<u>AVE</u>	CICS QR TCB CPU time								
	MSDISPT		<u>_ TIME</u>	<u>AVE</u>	CICS TCBs dispatch time								
	MSCPU		<u>_ TIM</u>	<u>AVE</u>	CICS TCBs CPU time								
	<u>KY8DISPT</u>		<u>_ TIM</u>	<u>AVE</u>	CICS Key 8 TCB dispatch time								
	KY8CPU		_ <u>TIM</u>	<u>AVE</u>	CICS Key 8 TCB CPU time								



### **CICS PA identifies performance trends**

ORDR transaction: Wednesday, September 27, 2006

### Problem

- Need to know if there are changes in workload that may adversely affect Service Level Agreements (SLAs)
- Missed SLAs are costly both from a financial perspective as well as visibility

### Solution

- System and Subsystem reports along with summary and detail reports identify potentially problem areas in CICS.
- CICS PA's Historical Database feature can capture data over time and generate reports for trending analysis.



- Allow for proactive analysis to reduce the risk of missing a SLA.
- Understand the capacity of the CICS environment for future growth.



## z/OS Workload Activity (WLM) Reports ...

V1R3M0			W	CI orkload Mana	CS Performan ger Activity	ce Analyzer Summary by S	Service Class		
WKLD0001	Printed at	16:43:42	6/18/2003 Data	from 14:18:5	7 11/05/2002	to 15:04:59	11/05/2002	Page	1920
Service					Respon	se Time			
Class	APPLID	Phase	#Tasks	Average	Std Dev	90% Peak	Maximum		
CICSDFLT	SCSCPAA1	BTE	51	.0377	.1073	.1753	.5600		
	SCSCPAA1	EXE	1533	.0316	.0781	.1316	1.1133		
	SCSCPAA4	BTE	17	111.043	457.767	697.900	1887.44		
	SCSCPAA4	EXE	8239	.0204	.0569	.0934	1.2754		
	SCSCPJA7	EXE	810	.0035	.0043	.0090	.0297		
	SCSCPLA1	BTE	8816	.3441	20.0989	26.1108	1887.18		
	SCSCPLA2	BTE	6954	.4033	22.6318	29.4172	1887.33		
	SCSCPTA1	BTE	6624	.0356	.0792	.1371	1.2963		
	SCSCPTA2	BTE	4680	.0412	.0891	.1555	1.1289		
CICSDFLT	*Total*	BTE	27142	.3005	19.8410	25.7367	1887.44		
	*Total*	EXE	10582	.0207	.0587	.0960	1.2754		
CICSWORK	SCSCPJA7	BTE	32	58.9871	333.661	486.741	1887.47		
* Grand	Total *	BTE	27174	.3696	22.8968	29.7233	1887.47		
* Grand	Total *	EXE	10582	.0207	.0587	.0960	1.2754		

- by z/OS WLM Service Class and Report Class
  - Applid, WLM Completion phase, number of tasks, …
  - Response time …
    - Average, Std Deviation, Peak Percentile, Maximum, …

	IBM	Software	Group
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## **Top 20 Worst Reports Forms**

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	File <u>C</u> on	firm <u>S</u> an	mples <u>O</u> ptions <u>H</u> elp		
Со	mmand ===)	>	Report Forms	Row 3 to 26 of 167 Scroll ===> <u>CSR</u>	
Rej	port Forms	s Data Se	et : DNET409.CICSPA.FORM		
	Name	Type	Description	Changed ID	
_	ACCTSUM	SUMMARY	Accounting Summary HDB Extract	2005/03/25 00:00 CICSPA	
	BADCPU	LISTX	Top 20 Worst CPU Times	2007/02/22 00:00 CICSPA	
	BADDB2RQ	LISTX	Top 20 Worst DB2 Requests	2005/03/25 00:00 CICSPA	
	BADFCRQ	LISTX	Top 20 Worst File Requests	2005/03/25 00:00 CICSPA	
_	BADRESP	LISTX	Top 20 Worst Response Times	2005/03/25 00:00 CICSPA	
_	BADRMI	LISTX	Top 20 Worst CICS RMI Times	2005/03/25 00:00 CICSPA	
_	BADRMIRQ	LISTX	Top 20 Worst CICS RMI Requests	2005/03/25 00:00 CICSPA	
_	BADSUSP	LISTX	Top 20 Worst Suspend Times	2005/03/25 00:00 CICSPA	
_	BADTDRQ	LISTX	Top 20 Worst Tdqueue Requests	2007/02/22 00:00 CICSPA	
_	BADTSRQ	LISTX	Top 20 Worst Tsqueue Requests	2005/03/25 00:00 CICSPA	
_	BADWBRQ	LISTX	Top 20 Worst CICS Web Requests	2005/03/25 00:00 CICSPA	
_	BADWMQRQ	LISTX	Top 20 Worst WMQ Requests	2007/02/22 00:00 CICSPA	
_	BTSACLST	LIST	CICS BTS Activity - Overview	2005/03/25 00:00 CICSPA	
_	BTSRQLST	LIST	CICS BTS Request Activity	2005/03/25 00:00 CICSPA	
_	BTSRQSUM	SUMMARY	CICS BTS Request Activity	2005/03/25 00:00 CICSPA	
_	CCLST	LIST	Channel Container Activity	2005/03/25 00:00 CICSPA	
	CCSUM	SUMMARY	Channel Container Activity	2005/03/25 00:00 CICSPA	



## CICS PA Historical Database (HDB) – Define

B MVS2CTS0 - [32 × 80]	
<u>F</u> ile <u>S</u> ystems <u>O</u> ptions <u>H</u> elp	
New HDB Definition	
Specify new HDB definition options then press EXIT to save.	
Name APPLID + Image Description	
HDB Format:       Selection Criteria:         Template       +      Performance	
Data Retention Period: Years Months Weeks Days Hours	
Data Set Allocation Settings:         DSN Prefix	

е

08/019



#### ORDR transaction: Wednesday, September 27, 2006





### **CICS PA speeds root cause analysis of performance problems**

#### Problem

- Need to identify the root cause of a performance issue that occurred last week.
- Because this problem is old, the CICS monitor no longer has the relevant data.

#### Solution

- Use CICS PA's high level and summary reports to find the source of the issue.
- Then use detail reports to drill down to the root cause.
- Customizable report forms allow for limitless ad-hoc reporting

VIR3M0 CICS P. Wa:	erformance Anal it Analysis Rep	yzer ort				
WAIT0001 Printed at 14:01:01 7/24/2003 Data from 19:26:39	7/14/2003 to	19:38:16	7/14/2003		Page	1
Tran=CBM1						
Summary Data	Time		Cou	nt	Ratio	
# Tasks	Total	Average	Total 3962	Average		
Response Time	39174.1585	9.8875				
Dispatch Time	4860.6282	1.2268	347472	87.7	12.4% of Res	ponse
CPU Time	179.7728	0.0454	347472	87.7	3.7% of Dis	patch
Suspend Wait Time	34313.4642	8.6606	347472	87.7	87.6% of Res	ponse
Dispatch Wait Time	26770.4022	6.7568	343510	86.7	78.0% of Sus	pend
Resource Manager Interface (RMI) elapsed time	4302.4135	1.0859	191768	48.4	11.0% of Res	ponse
Resource Manager Interface (RMI) suspend time	2641.0973	0.6666	19211	4.8	7.7% of Sus	pend
Suspend Detail		Sus	end Time		Coun	t
	Total	Average	8age Graph		Total	Average
N/A Other Wait Time	21836.2138	5.5114	63.6%  *****	******	332847	84.0
MAXOTDLY MAXOPENTCBS wait time	4094.5942	1.0335	11.9%  **		639	0.2
LU62WTT LU6.2 wait time	3035.7758	0.7662	8.8%  *		5238	1.3
DSPDELAY First dispatch wait time	2398.0299	0.6053	7.0%  *		3962	1.0
MXTDELAY > First dispatch MXT wait time	374.7682	0.0946	1.1%		87	0.0
LMDELAY Lock Manager (LM) wait time	2206.6980	0.5570	6.4%  *		2621	0.7
GVUPWAIT Give up control wait time	437.0868	0.1103	1.3%		277	0.1
JCIOWTT Journal I/O wait time	305.0656	0.0770	0.9%		1888	0.5
Tran=CBPB						
Summary Data	Time		Cour	nt	Ratio	
	Total	Average	Total	Average		
# Tasks			13			
					D	

#### Value

- Faster time for problem resolution.
- CICS PA provides an easy mechanism to find the source of performance issues.



	N 1
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## **CICS Statistics and CICS Server Statistics Support**

₽L MVS2CTSO - [32 × 80]	
<u> </u>	
REPORT Dispatcher Overview Command ===>	Line 00000001 Scroll ===> <u>PAGE</u>
System: IYK2Z1V3/MV2C Type: INT Interval:	2007/02/15 09:59:00 Thursday
Global Statistics Length :	128
CICS TCB MODEs	18
CICS TCB POOLs	4
Current ICV Time	5,000
Current ICVR Time :	6,000
Current ICVTSD Time	500
Current PRTYAGE Time :	500
Concurrent Subtask TCBs :	1
Current MRO (QR) Batching :	1
Current Tasks	25
Peak lasks	46
Dispatcher Start Lime GMT : 2007-02-15	0-09.55.49
Dispatcher Start Time Local : 2007-02-15	01 011050
Address Space CPU Time	
	00.005702
Excess ICD Scalls	0
Excess TCB scans No TCB Detached . :	0
Excess robs betached	0

е



## File Usage Summary Report

V1R4M	V1R4M0 CICS Performance Analyzer Transaction File Usage Summary													
FILE0	FILE0001 Printed at 11:23:00 11/02/2005 Data from 15:05:40 10/24/2005 to 15:52:01 10/24/2005 APPLID IYK2ZFV1 Page 1													
					******	******	**** FC C	alls ****	*******	*******	******	I/O Waits	******	AccMeth
Tran		#Tasks			Get	Put	Browse	Add	Delete	Total	File	RLS	CFDT	Requests
LOCK		0												
	File	#The alk a			*******	********	**** FC C	alls ****	**************************************	*******	*******	I/O Waits	******	AccMeth
	F.IT6	#Tasks			Get	Put	Browse	Add	Derete	TOTAL	F.1T6	RLS	CFDT	Requests
	TESTKSDS	12	Elapse	Avg	16.0119	.0003	.0000	.0000	.0000	16.0122	.0000	15.9835	.0000	
			Gaunt	Max	32.3834	.0034	.0000	.0000	.0000	32.3834	.0000	32.3817	.0000	2
			Count	Avg Max	2	1	0	0	0	4	0	2	0	2 4
V1R4 FILE0	V1R4M0 CICS Performance Analyzer Transaction File Usage Summary FILE0001 Printed at 11:23:00 11/02/2005 Data from 15:05:40 10/24/2005 to 15:52:01 10/24/2005 APPLID IYK2ZFV2 Page 2													
Tran	**************************************													
LOCK	TESTKSDS	7	Elapse	Ava	22,9281	. 0000	.0000	.0000	.0000	22.9281	.0000	22.9016	. 0000	
				Max	32.4540	.0000	.0000	.0000	.0000	32.4540	.0000	32.4533	.0000	
			Count	Avg		0	0	0	0	1	0	1	0	2
				Max	1	0	0	0	0	2	0	1	Å	2
			ALL	-6							©IBM C	orporation 2	800	19



## Performance Wait Analysis Reports

V1R3M0 CICS Pe Wai	erformance Ana t Analysis Re	alyzer eport				
WAIT0001 Printed at 14:01:01 7/24/2003 Data from 19:26:39	7/14/2003 to	o 19:38:16	7/14/2003		Page	1
Tran=CBM1						
Summary Data	Time	e	Cou	unt	Ratio	>
# Tasks	Total	Average	Total 3962	Average		
Response Time	39174.1585	9.8875				
Dispatch Time	4860.6282	1.2268	347472	87.7	12.4% of Re	esponse
CPU Time	179.7728	0.0454	347472	87.7	3.7% of Di	ispatch
Suspend Wait Time	34313.4642	8.6606	347472	87.7	87.6% of Re	esponse
Dispatch Wait Time	26770.4022	6.7568	343510	86.7	78.0% of Su	ispend
Resource Manager Interface (RMI) elapsed time	4302.4135	1.0859	191768	48.4	11.0% of Re	esponse
Resource Manager Interface (RMI) suspend time	2641.0973	0.6666	19211	4.8	7.7% of Si	ispend
Suspend Detail		Sus	pend Time		Col	int
	Total	Average	%age Graph	h	Total	Average
N/A Other Wait Time	21836.2138	5.5114	63.6%  *****	****	332847	84.0
MAXOTDLY MAXOPENTCBS wait time	4094.5942	1.0335	11.9%  **		639	0.2
LU62WTT LU6.2 wait time	3035.7758	0.7662	8.8%  *		5238	1.3
DSPDELAY First dispatch wait time	2398.0299	0.6053	7.0%  *		3962	1.0
MXTDELAY > First dispatch MXT wait time	374.7682	0.0946	1.1%		87	0.0
LMDELAY Lock Manager (LM) wait time	2206.6980	0.5570	6.4%  *		2621	0.7
GVUPWAIT Give up control wait time	437.0868	0.1103	1.3%		277	0.1
JCIOWTT Journal I/O wait time	305.0656	0.0770	0.9%		1888	0.5
Tran=CBPB						
Summary Data	Time	e	Cou	unt	Ratio	>
# Tacks	Total	Average	Total 13	Average		
Π 100.0			15			



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-	
-	

## Cross-System Work Report – Default ...

V1R2M0 CICS Performance Analyzer Cross-System Work															
CROS0001 Printed at 12:09:28 1/24/2002 Data from 11:10:51 2/04/1999 to 08:10:28 2/16/1999 Page 3															
Tran Userio	d SC TranType	e Term	LUName	Request Type	Program	Fcty T/Name	Conn Name	NETName	UOW Seq	APPLID	Task	R T Stop	o Time	Response Time	A B
ABRW BRENNI	ER TP U	S23D	IGCS23D	AP :	DFHúABRW	T/S23D		GBIBMIYA.IGCS23D	1	IYK2Z1V1	61	T 11:13	20.275	.0080	
CSMI CBAKE	R TO UM	R11	IYK2Z1V1	FS:F	DFHMIRS	T/R11	CJB1	GBIBMIYA.IGCS23D	1	IYK2Z1V3	57	T 11:13	20.274	.0044	
ABRW BRENNI	ER TP U	S23D	IGCS23D	AP:	DFHúABRW	T/S23D		GBIBMIYA.IGCS23D	1	IYK2Z1V1	62	T 11:13	21.332	.0064	
CSMI CBAKEI	R TO UM	R11	IYK2Z1V1	FS:F	DFHMIRS	T/R11	CJB1	GBIBMIYA.IGCS23D	1	IYK2Z1V3	58	T 11:13	21.331	.0039	
	דו הידי פי	C23D	TCCG22D	AD .		m/c22D		CRIPMINA TCCC22D	2	TVV271V1	72	m 11.16	20 201	1 1025	
CEDA BRENNI		6230		AF.	DEHEDAP	T/323D		CRIMINA ICCS23D	1	TVE271V1	72	-11.10	20.204	2 0046	
CEDA BRENNI		S23D		AF. AD·	DEHEDAP	т/S23D		GBIBMITA IGCS23D	1	TYK271V1	72	C 11.10	27.101	2 2127	
CEDA BRENNI	ER TOU	S23D	TGCS23D	AP ·	DEHEDAP	T/S23D		GBIBMIYA IGCS23D	1	TYK271V1	72	$C 11 \cdot 16$	21 964	46 5125	
CEDA BRENNI	ER TO U	S23D	IGCS23D	AP:	DFHEDAP	T/S23D		GBIBMIYA. IGCS23D	1	IYK2Z1V1	72	C 11:15	35.451	.6794	
				•		-,			_		. –				
CEMT BRENN	ER TO U	S23D	IGCS23D	AP:	DFHEMTP	T/S23D		GBIBMIYA.IGCS23D	1	IYK2Z1V1	140	T 11:21	24.062	51.3442	
CEMT BRENNI	ER TO U	S23D	IGCS23D	AP:	DFHEMTP	T/S23D		GBIBMIYA.IGCS23D	1	IYK2Z1V1	140	C 11:20	32.718	8.3481	
CEMT BRENNI	ER TO U	S23D	IGCS23D	AP:	DFHEMTP	T/S23D		GBIBMIYA.IGCS23D	1	IYK2Z1V1	140	C 11:20	24.370	.0042	
CEMT BRENNI	ER TO U	S23D	IGCS23D	AP:	DFHEMTP	T/S23D		GBIBMIYA.IGCS23D	1	IYK2Z1V1	174	T 11:21	28.662	1.1930	
CEMT BRENNI	ER TO U	S23D	IGCS23D	AP:	DFHEMTP	T/S23D		GBIBMIYA.IGCS23D	1	IYK2Z1V1	174	C 11:21	27.469	.0041	
		a0.25				m / a a a a			-	T.V.W.O. 7.1.1.1	170		20 447	40,0010	
RMST BRENNI		SZ3D	IGCSZ3D	TR:CJB3		T/SZ3D	0.701	GBIBMIYA. IGCS23D	1	IIKZZIVI TVKOR1VO	1/8	T 11:22 m 11.00	38.447	48.9210	
STAT CBAKE		RII	TCCCCCC	AP:	DFHUSTAT	5/5230	COBI	GBIBMIIA. IGCS23D	1	TIKZZIVS	170	r 11:22	40 506	10 0524	
RMST BRENN		5230		TR:CJB3		T/5Z3D		CRIBMINA ICCS23D	1	TIKZZIVI	170	C 11:21	20 472	10.0524	
DMCT BRENN		9230		TR.CJB3		T/323D		CETEMINA TOCON	1	TVK271V1	179	C 11.21	39.473	0110	
AMSI BRENNI	SK 10 0	523D	IGC523D	IK:CUB3		1/5230		GDIDMIIA.IGC523D	T	11424141	1/8			.0110	
STAT BRENN	ER TO U	S23D	IGCS23D	AP:	DFH0STAT	T/S23D		GBIBMIYA. IGCS23D	1	IYK2Z1V1	195	T 11:22	52.663	2,0203	
STAT BRENN	ER TO U	S23D	IGCS23D	AP:	DFHOSTAT	T/S23D		GBIBMIYA. IGCS23D	1	IYK2Z1V1	195	C 11:22	50.642	8.9745	



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	_	_	
the second se			_
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## DB2 Reports – List

V1R2M0 CICS Performance Analyzer DB2 - List									
DB2R0001 Printed at 10:14:46 2/13/2002 Data from 13:31:17 1/24/2002 to 13:32:08 1/24/2002 Page 1									
Tran/ Userid/ Program/ SSID Authid Planname APPLID Task	UOW RDB Seq T Term LUName Con	2 Wait Time DB2 nect Thread ReqCnt	User CPU Time Start Time	Response A Stop Time Time B					
WROS RAIMAN CRWWPPOS STM4IRA1 34695	1 T <adq .<="" stm4irt1="" td=""><td>0000 .0000 18</td><td>.3112 13:31:23.053</td><td>3 13:31:34.349 11.2956</td></adq>	0000 .0000 18	.3112 13:31:23.053	3 13:31:34.349 11.2956					
CH1G STM4IRA1 CRWWPPOS STM4IRA1 34695	Thread Identification	ID=ENTRWROS0037 NETNa Begin Time: 13:31:23.0	ame=USIBMSY.LE000081 056 1/24/02 End Time:	UOWID=16372A6C7E14 : 13:31:35.378 1/24/02					
CMF	Class1: Thread Time Class2: In-DB2 Time	Elapsed= 12.3218 CPU= Elapsed= 11.2359 CPU=	= .310480 = .309914						
performánce 🖌	Class3: Suspend Time Buffer Manager Summary	Total = 6.5988 I/O= GtPgRq = 8120 SyPgI	= 2.3726 Lock/Latch= Up= 8	4.2262 Other= .0000					
data	Locking Summary SQL DML Query/Update	Suspnd= 11 Dead Sel= 2 Ins=	Lk= 0 TmeOut= 0 Upd= 0 De	0 MxPgLk= 1 1= 0 0 0					
WRNO RAIMAN CRWWPPNO STM4IRA1 34869	1 T <acy .<="" stm4irt1="" td=""><td>0000 .0000 67</td><td>.0114 13:31:38.853</td><td>3 13:31:45.875 7.0220</td></acy>	0000 .0000 67	.0114 13:31:38.853	3 13:31:45.875 7.0220					
CH1G STM4IRA1 CRWWPPNO STM4JRA1 34869	Thread Identification	ID=ENTRWRNO0051 NETN	ame=USIBMSY.LE000081 854 1/24/02 End Time:	UOWID=1637397E8927					
	Class1: Thread Time Class2: In-DB2 Time	Elapsed= 6.9534 CPU= Elapsed= 6.8909 CPU=	= .010208 = .008283	19.91.19.000 1/21/02					
Associated	Class3: Suspend Time Buffer Manager Summary	Total = 6.3783 I/O= GtPgRq = 173 SyPgT	= .0000 Lock/Latch= Up= 36	6.3783 Other= .0000					
DB2 Accounting data	Locking Summary SQL DML Query/Update	Suspnd= 2 Dead Sel= 1 Ins=	Lk= 0 TmeOut= 12 Upd= 11 De	0 MxPgLk= 15 ≥l= 0					
DD2 Accounting data	SQL DML 'Other'	Des= 0 Pre=	0 Ope= 12 Fe	et= 21 Clo= 10					





1000

800

### **CICS PA finds candidates for threadsafe optimization**

#### Problem

 Identifying the best candidates for threadsafe optimization and knowing when to stop - you've achieved your goals

V1R4M0					CICS Performance Analyzer Performance Summary							
SUMM0001 Pr	at 14:58:3 TCB CPU A	28 8/15/2 malysis -	2005 I Summary	Data from 10:45:23 2/20/2005 to 11:18:07 2/20/2005					0/2005	Page 1		
Tran	<b>∳</b> Tasks	Avg Response Tine	Max Response Tine	Avg Dispatch Time	Avg User CPU Time	Avg Suspend Tine	Avg DispWait Tine	Avg QR CFU Time	Avg MS CPU Time	Avg RO CPU Time	Avg KY8 CPU Time	Avg KY9 CFU Time
ABRW	7	.0506	.2705	.0456	.0050	.0050	.0008	.0013	.0037	.0014	.0000	.0000
ADT1	4	1.2787	5.0652	1.2782	.2160	.0005	.0005	.0007	.0005	.0005	.0000	.2147
CALL	4	2,1675	2,2519	.0061	.0014	2,1614	.0003	.0007	.0006	.0006	.0001	.0000
CATA	2	.0241	.0420	.0190	.0033	.0051	.0001	.0019	.0013	.0013	.0000	.0000
CATR	1	.0109	.0109	.0108	.0027	.0001	.0000	.0005	.0022	.0022	.0000	.0000
CBAM	1	4.3257	4.3257	.0106	.0033	4.3152	.0001	.0010	.0023	.0023	.0000	.0000
CEBR	2	7.4248	11.1982	.0498	.0044	7.3749	.0001	.0013	.0031	.0031	.0000	.0000
CECI	2	31.7902	33.4010	.0523	.0078	31.7378	.0003	.0036	.0042	.0042	.0000	.0000
CEDA	4	10.5878	17.3655	.4513	.1893	10.1366	.0013	.1653	.0235	.0047	.0005	.0000
CEJR	3	.0337	.0622	.0209	.0030	.0128	.0121	.0006	.0006	.0006	.0018	.0000
CEMT	12	17.7283	116.4639	.0691	.0093	17.6592	.0038	.0060	.0033	.0016	.0000	.0000

### Solution

 Performance summary, list, and list extended reports plus metrics like TCB use by transaction, dispatch and CPU time, number of TCB switches and change mode delay time and Getmain usage help zeroin on the programs with most to gain response times, CPU times, and TCB mode switches

Average response time Average CPU time Average TCB mode switches

**CICS** performance:

## 

#### Value

15

ime (secords)

 CICS PA easily helps improve CICS threadsafe performance, validate savings and track service levels





### CICS-DB2 Transactions in CICS TS 2.2 and higher



	1 A A
_	

## **TCB CPU Analysis Report**

V1R4M0					CICS Performance Analyzer Performance Summary							
SUMM0001 Printed at 14:58:28 8/15/2005 Data from 10:45:23 2/20/2005 to 11:18:07 2/20/2005 Page Transaction CICS TCB CPU Analysis - Summary											age l	
		Avg	Max	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg
Iran	#Tasks	Response	Response	Dispatch	User CPU	Suspend	DispWait	QR CPU	MS CPU	RO CPU	KX8 CDD	KY9 CPU
		Time	Time	Time	Time	Time	Time	Time	Time	Time	Time	Time
ABRW	7	.0506	.2705	.0456	.0050	.0050	.0008	.0013	.0037	.0014	.0000	.0000
ADT1	4	1.2787	5.0652	1.2782	.2160	.0005	.0005	.0007	.0005	.0005	.0000	.2147
CALL	4	2.1675	2.2519	.0061	.0014	2.1614	.0003	.0007	.0006	.0006	.0001	.0000
CATA	2	.0241	.0420	.0190	.0033	.0051	.0001	.0019	.0013	.0013	.0000	.0000
CATR	1	.0109	.0109	.0108	.0027	.0001	.0000	.0005	.0022	.0022	.0000	.0000
CBAM	1	4.3257	4.3257	.0106	.0033	4.3152	.0001	.0010	.0023	.0023	.0000	.0000
CEBR	2	7.4248	11.1982	.0498	.0044	7.3749	.0001	.0013	.0031	.0031	.0000	.0000
CECI	2	31.7902	33.4010	.0523	.0078	31.7378	.0003	.0036	.0042	.0042	.0000	.0000
CEDA	4	10.5878	17.3655	.4513	.1893	10.1366	.0013	.1653	.0235	.0047	.0005	.0000
CEJR	3	.0337	.0622	.0209	.0030	.0128	.0121	.0006	.0006	.0006	.0018	.0000
CEMT	12	17.7283	116.4639	.0691	.0093	17.6592	.0038	.0060	.0033	.0016	.0000	.0000
CFQR	1	1955.858	1955.858	.0002	.0003	1955.858	.0003	.0003	.0000	.0000	.0000	.0000
CFQS	1	1955.858	1955.858	.0077	.0023	1955.851	.0025	.0005	.0018	.0018	.0000	.0000
CGRP	1	.0944	.0944	.0196	.0025	.0748	.0138	.0007	.0017	.0017	.0000	.0000
CMAC	13	.0628	.7314	.0602	.0054	.0026	.0002	.0010	.0044	.0005	.0000	.0000
CPIR	9	.2211	.6758	.1688	.0030	.0523	.0021	.0011	.0004	.0004	.0016	.0000
												~
CXRE	1	.0808	.0808	.0238	.0021	.0570	.0569	.0004	.0018	.0018	.0000	.0000
ENAB	1	.0776	.0776	.0775	.0054	.0001	.0001	.0005	.0048	.0048	.0000	0000
STAT	5	137.5680	335.4007	.8607	.6560	136.7072	.0025	.6503	.0057	.0057	.0000	.0000
Total	106	154.0982	1955.858	.2038	.0647	153.8944	.0130	.0513	.0051	.0031	.0002	.0081
			-								on 2009	25



## Graphical TCB, CPU, Response Time Report





## CICS Performance Analyzer for z/OS (CICS PA)

### Key features

- Comprehensive Performance Reporting and Analysis for CICS
- Including DB2, WebSphere MQ, and MVS System Logger
- Extensive Tabular Reports and Extract Data Sets
- Historical Database (HDB)
- Trending and Capacity Planning
- ISPF Dialog to build, maintain, and submit reports and extracts
- Comprehensive reporting of CICS Statistics data
- Threadsafe metrics like TCB use by transaction, dispatch and CPU time, number of TCB switches etc

### **CICS Support**

CICS TS V2,V3, and V1.3

### New in CICS PA V2.1

### •CICS TS V3.2 support including:

- Compressed SMF type 110 records
- Higher precision (12-byte) clock
- New and updated statistics data

# •Extended integration with OMEGAMON XE for CICS

- Report on 3<sup>rd</sup> party systems monitored by OMEGAMON (Adabas, CA-IDMS, CA-Datacom, Supra)
- Report on Resource Limit Warnings

#### New and updated sample reports

- Transaction Profiling reports
- Distribution reports

## •Historical Reporting using SupportPac CP12



### IBM CICS Explorer - The New Face of CICS

#### Key features

• Common, intuitive, Eclipse-based environment for architects, developers, administrators, system programmers, and operators

Task-oriented views provide integrated access to broad range of data and control capabilities

Powerful, context-sensitive resource editors

Also packaged with Rational Developer for System z

▶ Integration point for CICS TS, CICS Tools, CICS TG, PD Tools, and Rational Tools

Extensible by ISVs, SIs, and customers

#### CICS support

CICS Transaction Server for z/OS V3.1, V3.2
 CICSPlex SM WUI server required for CICS resource views

#### Availability

- Join beta program now for information, contact <u>CICSEP@uk.ibm.com</u>
- SupportPac to be available 4Q2008.
- Full function with next release of CICS TS in 2009
- More information at <a href="https://www.ibm.com/cics/explorer">ibm.com/cics/explorer</a>

#### Statement of Direction dated 5 Aug 2008

http://www.ibm.com/common/ssi/rep\_ca/4/897/ENUS208-248

### Register for Webcast to be held 5 Nov 2008

http://www.ibm.com/software/systemz/webcast/5nov



### **Coming soon in CICS Explorer**

- Real-time CICS resource status
- Resource dependency views
- •Manage and Control resource definitions
- Performance data drill-down
- CICS TG gateway status
- Sub-set packaged with RDz

Please note: This slide represents IBM's current intent, but plans are subject to change.



### TBM

#### **IBM Software Group**

### **CICS** Explorer helps to reduce development and admin skills

### Problem

- Losing vital System z professionals to retirement?
- Need to transfer knowledge, skills, and best practice to the next generation of technical staff?
- Must maintain productivity and protect service-levels?



### Solution

 Intuitive navigation and revolutionary integration simplifies access to CICS development, administrative, and operations tools

### Value

 Enable shorter development cycles, faster time to market, and reduced cost of ownership for key CICS applications

### Examples of feedback . . .

- "1000 times better than the previous UI." Customer
- "I believe it will be greatly received in our environment. Two of our development groups are keen to try it as soon as it becomes available." - Independent Software Vendor
- "Much, much more intuitive", "A lot more room to grow", "If you are not using it, or you're not trying it, well, you should!" Gary Barnett, The Bathwick Group



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#### **CICS PA - Rich workspace** See extracts of the file in 🗟 Performance Analyser raw data form ... E 🔄 T Complex.csv+BUOIPNF+14-20-00.000+Fri Jun 22 00-00-00 BST 2007 💥 G-PA Explorer C:\cbpa\eclipse\workspace\My Analysis\complex.csv+BUQIPNF+14-20-00.000+Fri Jun 22 00-00-00 BST 2007 E S complex.csv E- Fri Jun 22 00:00 BST 2007 Start Time APPLID Tran #TTasks Response T... Response T. Dispatch User CPU Ti... Suspend Ti.. Suspend C... DispWait Ti... DispWait C... DSCHMDLY ... DSCHMDLY ... TCBA Start Date · 13:20:00 Fri Jun 22 0... 14:20:00.000 BUQIPN DFNU 0.0034 0.0045 0.0034 0.0020 2.0 0.0 0.0 1.0 0.0 14:20:00.000 0.0046 0.0046 0.0046 1.0 Fri Jun 22 0... BUQIPN DTBD 4.0E-4 0.0 2.0 0.0 0.0 · 13:25:00.00 Fri Jun 22 0... 14:20:00.000 BUOIPN DTHN 0.0014 0.0015 8.0E-4 6.0E-4 5.0E-4 4.0 0.0 3.0 0.0 Fri Jun 22 0... 14:20:00.000 BUOIPN DTLQ 0.0149 0.0194 0.0067 0.0031 0.0082 4.0 4.0E-4 3.0 0.0 0.0 É- 📄 13:50:00.000 7.0E-4 7.0E-4 Fri Jun 22 0... 14:20:00.000 BUQIPN DTN3 0.0014 0.0325 6.0E-4 7.0E-4 1.0 0.0 0.0 0.0 0.0 ±- 14:05:00.000 Fri Jun 22 0... 14:20:00.000 BUOIPN DTN2 8.0E-4 0.0021 5.0E-4 0.0 1.0 0.0 0.0 0.0 0.0 14:20:00.000 DTTG 1.271 1.264 6.0 5.0 0.0 0.0 Fri 1un 22 0. BUOIPN 1.271 0.0070 0.0036 1.0E-4 🖻 📄 14:10:00.000 0.0154 0.0154 0.0018 0.0015 0.0136 19.0 18.0 0.0 BUQIPN FD80 9.0 0.0 0.0 🗄 🚮 B01DJDT BUQIPN FD81 0.014 0.014 0.0024 22.0 0.0018 0.0116 22.0 0.0 21.0 0.0 0.0 Ability to "Drill 🗄 🚮 BUQBQQM BUOIPN HEQY 0.0473 0.2864 0.0422 30.0 0.0139 0.0055 30.0 7.0E-4 29.0 9.0E-4 27 0.0 E BUQBUT BUQIPNE **KK81** 0.1675 0.1675 0.0159 207.0 0.0134 0.1516 207.0 8.0E-4 206.0 0.0 0.0 🗄 🚮 BUQCBOD into" data files BUOIPNE **KYPO** 0.2174 0.3684 0.1281 103.0 0.0115 0.0893 103.0 0.0021 102.0 0.0024 83 0.0 SFCB 0.0 BUOIPNE 0.5685 0.0084 0.006 9.0E-4 E BUQECJT 153 0.0349 0.028 198.0 198.0 197. 0.001 BUQIPN SODC 20 0.0276 0.0497 0.0017 19.0 0.0013 0.0259 19.0 3.0E-4 18.0 0.0 0.0 🗄 🚮 BUQEJS SOK7 0.0026 0.0026 0.0017 9.0E-4 0.0 BUQIPN 3.0 9.0E-4 3.0 0.0 2.0 0.0 E BUQFTUF BUOIPN SONE 0.0279 0.0361 0.0013 12.0 0.0010 0.0266 12.0 5.0E-4 11.0 27.0 0.0 0.0 i Jun 22 0 14.20.00.000 E BUQIQ10 Fri Jun 22 0... 14:20:00.000 BUOIPNE SONK 0.0992 0.2698 0.0021 28.0 0.0019 0.097 28.0 1.0E-4 0.0 0.0 33.0 37.0 🗄 🔜 BUQIQ20 Fri Jun 22 0... 14:20:00.000 BLIOTPNE SONS 0.1359 0.2146 0.0029 34.0 0.0025 0.1331 34.0 3.0E-4 0.0 0.0 0.0 Fri Jun 22 0... 14:20:00.000 BUOIPN SONV 0.1335 0.2093 0.0025 38.0 0.0022 38.0 4.0E-4 E BUQOBUV 0.131 0.0020 26.0 0.0572 26.0 25.0 0.0 0.0 Fri Jun 22 0... 14:20:00.000 BUQIPNE SONV 0.0592 0.1931 0.0015 3.0E-4 14 🗄 🚮 BUQPQFS 14:20:00.000 0.0185 0.0013 12.0 12.0 1.0E-4 11.0 0.0 0.0 Fri Jun 22 0... BUQIPNF SONZ 0.0261 0.0012 0.0173 🗄 🚮 BUQQSU1 Fri Jun 22 0... 14:20:00.000 BUQIPN SOTE 6.0E-4 0.0022 6.0E-4 1.0 5.0E-4 1.0 0.0 0.0 0.0 0.0 0.0 🗄 🔜 BUQTJTP Fri Jun 22 0... 14:20:00.000 BLIOTPM SOUB 42 0.0104 0.0843 0.0011 6.0 9.0F-4 0.0093 6.0 0.0 5.0 0.0 0.0 0.0 0.0172 7.0 6.0 0.0 14:20:00.000 BLIOTPNE SOLIC 42 0.0062 9.0E-4 7.0 0.0053 🗄 🚮 BUQWBSJ Fri lun 22 0.... 9.0E-4 0.0 0.0 Fri Jun 22 0... 14:20:00.000 BUQIPN SOUY 0.0186 0.0264 0.0029 25.0 0.0014 0.0157 25.0 1.0E-4 24.0 0.0 🗄 🔜 BUQXUD1 14:20:00.000 7.0 0.0 0.0 Fri Jun 22 0... BUOIPN SOVJ 0.005 0.0059 0.0034 8.0 0.0012 0.0026 8.0 0.0 🗄 🚮 DSCSHF01 Fri Jun 22 0... 14:20:00.000 BUQIPNE SOXB 20 0.1359 0.3738 0.0020 23.0 0.0016 0.1339 23.0 4.0E-4 22.0 0.0 0.0 Ē- **1**4:15:00.000 Fri Jun 22 0... 14:20:00.000 BUQIPNP 5000 0.0086 0.0149 0.0016 8.0 0.0010 0.0070 8.0 0.0 7.0 0.0 0.0 ⊟- 14:20:00.000 Fri Jun 22 0... 14:20:00.000 BUOIPNE 5005 42 0.0012 0.0041 6.0E-4 2.0 6.0E-4 6.0E-4 2.0 0.0 1.0 0.0 0.0 TITT Fri Jun 22 0... 14:20:00.000 BUOIPNF 0.0185 0.0226 0.0056 0.0025 1.0E-4 🗄 🚮 B01DJDT 9.0 0.013 9.0 0.0 8.0 🗄 🚮 BUQBQQM 🗄 🚮 BUQBUT h complex.csv+14-20-00.000+Fri Jun 22 00-00-00 BST ... h complex.csv+BUQIPNF+14-20-00.000+Fri Jun 22 00-... 🕄 🗖 🗔 complex.csv+BUQIPNF+14-20-00.000+Fri Jun 22 00-00-BST 200-00 BST 200-SFCB 🕺 🗄 🔜 BUQCBOD C:\cbpa\eclipse\workspace\My Analysis\complex.csv+BUQIPNF+14-20-00.000+Fri Jun 22 00-00-00 BST 2007 C:\cbpa\eclipse\workspace\My Analysis\complex.csv+BUQIPNF+14-20-00.000+Fri Jun 22 00-00-00 BST 2007 🗄 🔜 BUQECJT 🗄 🔜 BUQEJS rformance: response times, CPU times and TCB mode switches : CIC Average CPU time per TCB : SFCB 🗄 🔜 BUQFTUF E BUQIPNE Average Response Time 📕 Average CPU time Average TCB mo 🗄 🚮 BUQIQ10 E BUQIQ20 🗄 🔜 BUQMJTP E BUQOBUV 🗄 🚮 BUQPQFS 🗄 🔜 BUQQSU1 L8 CPU Time Avg E- BUQTJDV 🗄 🚮 BUQTJTP ...or follow "Analysis 🗄 🔜 BUQWBSJ 🗄 🔜 BUQXUD1 Scenarios" to 🗄 🔜 DSCSHF01 H- 14:25:00.000 ±- 14:30:00.000 highlight issues E 14:40:00.000 · ±- ■ 14:45:00.000 QR CPU Time Avg · 14:50:00.000 · 14:55:00.000 ⊡- 15:00:00.000 🗄 🚮 B01DJDT SOK7 SONK SONV SFCB 🗄 🔜 BUQBQQM KYPO SODQ SONB SONS SONW 🗄 🔜 BUQBUT E- BUQCBOD Fri Jun 22 00:00:00 BST 2007 transactions: average 0.0084 TCB mode switches, 171 seconds CPU time per transaction

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## Want to know more?

- CICS Tools Web site: <u>http://www.ibm.com/software/htp/cics/tools</u>
- Manuals:
  - CICS Performance Analyzer for z/OS V2.1 User's Guide SC34-6799
  - CICS Performance Analyzer for z/OS V2.1 Report Reference SC34-6800
- Redbooks:
  - CICS Performance Analyzer Release 3, SG24-6063
  - Threadsafe Considerations for CICS, SG24-6351-02
- Redpapers:
  - Performance Considerations and Measurements for CICS and System Logger, REDP-3768
  - SOAP Message Size Performance Considerations, REDP-4344
- Support Pac:
  - CP12: CICS PA Historical Database & Graphical Reporting www.ibm.com/support/docview.wss?uid=swg24011321
- Contact your Local IBM Representative

