

IBM Software Group

DB2 Application Analysis using OMEGAMON XE For DB2 UDB On z/OS

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Øbusiness on demand.

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OMEGAMON XE For DB2 UDB On z/OS Application Analysis Capabilities

Real Time Monitoring - Threads

✓Thread Detail (In-DB2 elapsed, CPU & wait times, locks, SQL statement counts & text, plan & package information)

✓Monitor Triggers, Procedures, & UDFs

Application Trace Facility ✓ Detailed performance tracing Choice Of Interfaces (XE Interface, 3270 interface) Object Analysis ✓I/O & getpage analysis ✓Correlate activity by object & applications Lock Conflict Analysis Near-Term Historical ✓Near-term history online





OMEGAMON DE – Dashboard Edition





OMEGAMON DB2 Classic 3270 Interface Main Menu

> > > >	ZMENU Help/News/Index PF1 Type a selection letter	VTM O2 V520./C D81G 02/22/05 6:51:28 2 Exit PF3 PF Keys PF5 r at the left end of the top line and press ENTER.
>	OMEGAMON II FOR D	B2 CLASSIC INTERFACE REALTIME MAIN MENU
	SSUMMARYEEXCEPTIONSTTHREAD ACTIVITYUTHREAD ACTIVITYLLOCKING CONFLICTSRRESOURCE MANAGERSAAPPLICATION TRACEDDISTRIBUTED DATAOOBJECT ANALYSISCMVS CONSOLEBDB2 CONSOLEMMISCELLANEOUSPPROFILEHHISTORICALIIFCID TRACE	Summary of DB2 activity Current or potential system problems Thread activity information Thread activity information by Package Locking conflict information Resource manager, other DB2 subsystem information Trace and view application activity Distributed database system information Object and Volume information MVS console to issue commands and view messages DB2 console to issue commands and view messages Address space information, OMEGAMON commands, etc. Customize OMEGAMON session and exception settings Online historical information
_	Z OTHER DB2	Redirect monitoring t Select option 1 to see rea



Thread Activity Overview

	ZALLT	VTM	02	V520./C	D81G 02/2	2/05 7	2:12:19 2
> Help PF1	Back PF3	3	Up PF7	Down PF8	Sort	PF10	Zoom PF11
> T.A							
> T	HREAD ACTIVIT	Y: Ent	er a selecti	on letter	on the t	op line) .
> *-ALL B	-TSO C-CICS	S D-IM	S E-BA	CKGROUND	F-DIST A	LLIED	G-DIST DBAC
> H-UTIL I	-INACT J-FILT	'ER K-FU	NCTIONS L-ST	ORED PROC	M-TRIGGE	IRS	N-SYSPLEX
> O-ENCLAVE	S						
		=======			==== NO ¹	te hiar	n Getpage
<				מת חיד חיד			
		ALL INK	LADS CONNECT	ED IO DEZ	COL	unts ar	nd high CF
THDA		_					
+ *							
+ Elapsed	Planname	CPU	Status	GetPg	Update	Commit	Jobname
+							
+ 02-01:29	KO25201F	00.0%	NOT-IN-DB2	0	0	0	CXEGA03
+ 02-01:29	КО2520НР	00.0%	NOT-IN-DB2	0	0	0	CXEGA03
+ 02-01:23	K025201F	00.0%	NOT-IN-DB2	0	0	0	CXEGA03
+ 02-01:23	K02520IF	00.0%	NOT-IN-DB2	0	0	0	CXEGA03
+ 01:52:49.	6 K02520IF	00.0%	NOT-IN-DB2	0	0	0	CXEGA03
+ 00:38:44.	9 TRANSPLX	00.0%	NOT-IN-DB2	1230	300	0	CCCDS18
+ 00:00:05.	7 DEMO1	00.0%	NOT-IN-DB2	4	0	0	DEMOENCL

The thread display may be sorted To view a specific thread position the cursor and press F11



Thread Detail

> Help PF1	VTM 02	V520./C D81G 02/22/	05 6:36:01 2 Back PF3
> THREAD INFORMAT	ION: Enter a sele	ection letter on the to	op line.
 *-THREAD DETAIL B-LOC F-CURRENT SQL G-SQL K-PACKAGES L-RES P-CANCEL THREAD Q-DB2 	COUNTS C-LOCK WA COUNTS H-DISTRIN LIMIT M-PARALLI CONSOLE R-DSN AC	AITS D-LOCKS OWNED BUTED I-BUFFER POOL EL TASKS N-UTILITY FIVITY S-APPL TRACE	E-GLOBAL LOCKS J-GROUP BP O-OBJECTS T-ENCLAVE
======================================	THREAD I	 DETAIL	
+ Thread: Plan=TRANSPL + Attach: CICS JOB=C + Package: CICSDB21	X Connid=CCCDS18 CCDS18 Tran=DB2 Collection=	Corrid=POOLDB210001 A 1 Task#=00127 Term=M4	Authid=MHANS 185 Type=POOL
act + Thread Activity +		User Defined Functior	ns
- + DB2 Status + MVS Status	= NOT-IN-DB2 = WAIT-MISC	TCB Time (SQL) . Wait for TCB Time	= 00:00:00.000 $= 00:00:00.000$
+ Total Elapsed Time	= 00:00:26.600	Elapsed Time	= 00:00:00.000
+ CPU Utilization	= 00.0%	Elapsed Time (SQL)	= 00:00:00.000
+ Total CPU Time + Total Parallel Tasks	= 00:00:02.186 = 0	SQL Events	= 0

Press F8 to scroll down and see more detail

Thread detail shows current thread activity, including thread elapsed, in-DB2, and CPU time



Thread Detail - continued

ZTDI	'L	VTM	02	V520./C D81G 02/22/0	5 6:36:01 25
+ Current Parallel Tas	sks=		0		
+					
+ Stored Procedures				Triggers	
+		· – – – – – - ·			
+ Total CPU	=	00:00	:00.000	TCB not in Enclave	= 00:00:00.000
+ Elapsed time	=	00:00	:00.000	Elapsed not in Enclave	= 00:00:00.000
+ Elapsed Time (SQL)	=	00:00	:00.000	TCB prior to Enclave	= 00:00:00.000
+ Wait for TCB Time	=	00:00	:00.000		
+ Wait Event Count	=		0		
+ Curr Wait TCB Time	=	00:00	:00.000		
+				Note the in-DB2	time and comp
+ SavePoints				it to the thread e	lansed time
+					
+ Savepoint Requests	=		0	shown on the pr	for screen
+ Release Savepoints	=		0		
+ Rollback Savepoints	=		0		
+ + In-DB2 Times				Total	Current
TH DDC ITHES					
+					
+ + Elapsed Time				00:00:02 131	00:00:00 000
++ + Elapsed Time + CPU Time				00:00:02.131	00:00:00.000
++ + Elapsed Time + CPU Time + Stored Procedure CPT	 I Tim			00:00:02.131 00:00:00.820 00:00:00.000	00:00:00.000 00:00:00.000 00:00:00.000

Press F8 to scroll down and see more detail



Thread Detail - continued

ZTDTL VTM O2	v 520	/C D81G 02/22/	5 6:36:01 48
+ Waits	Count	Total	Current
+			
+ Synchronous I/O Wait	20	00:00:00.125	00:00:00.000
+ Asynchronous Read I/O Wait	1	00:00:00.009	00:00:00.000
+ Asynchronous Write I/O Wait	0	00:00:00.000	00:00:00.000
+ Local Lock/Latch Wait	0	00:00:00.000	00:00:00.000
+ Page Latch Wait	0	00:00:00.000	00:00:00.000
+ Drain Lock Wait	4	00:00:00.002	00:00:00.000
+ Drain of Claims Wait	0	00:00:00.000	00:00:00.000
+ Archive Log Mode(Quiesce) Wait	0	00:00:00.000	00:00:00.000
+ Archive Read from Tape Wait	0	00:00:00.000	00:00:00.000
+ Switch to Open/Close Wait	4	00:00:00.348	00:00:00.000
+ Switch to SYSLGRNG Service Wait	1	00:00:00.032	00:00:00.000
+ Switch to DMS Waits	4	00:00:00.200	00:00:00.000
+ Other Service Waits	0	00:00:00.000	00:00:00.000
+ Force at Commit Waits	0	00:00:00.000	00:00:00.000
+ Log Write I/O Wait	0	00:00:00.000	00:00:00.000
+ Sync EX Unit Sw-com/abort/dealloc	0	00:00:00.000	00:00:00.000

Note thread wait time information. This shows the number of wait events, and the duration of the thread waits. This corresponds to the Accounting class 3 wait times.

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Thread Detail Lock Analysis

ZTLOCT VTM 02 V520./C D81G 02/22/05 6:38:01 2 Help PF1 Back PF3 THREAD INFORMATION: Enter a selection letter on the top line.	
 > A-THREAD DETAIL *-LOCK COUNTS C-LOCK WAITS > F-CURRENT SQL G-SQL COUNTS H-DISTRIBUTED > K-PACKAGES L-RES DIMIT M-PARALLEL TASKS > P-CANCEL THREAD Q-DB2 CONSOLE R-DSN ACTIVITY S-APPL TRACE T-BUFFER POOL T-BUFFER P	
<pre>> THREAD LOCK/CLAIM/DRAIN ACTIVITY PLAN + Thread: Plan=TRANSPLX Connid=CCCDS18 Corrid=POOLDB210001 Authid=MHANS + Attach: CICS JOB=CCCDS18 Tran=DB21 Task#=00127 Term=M485 Type=POOL + Package: CICSDB21 Collection= loct + Lock Requests = 65 Deadlocks Detected = 0 + Unlock Requests = 0 Suspends - Lock Only = 0 + Change Requests = 0 Suspends - Lock Only = 0 + Other IRLM Requests = 0 Suspends - Other = 0 + Maximum Page/Row Locks = 1</pre>	

 \bigcirc



Show Lock Detail

> Help PF1 ZLOCKO VI Back	IM 02 V520 k PF3)./C D81G 02/22/05 Up PF7	6:39:37 2 Down PF8						
> THREAD INFORMATION:	Enter a selection]	letter on the top 3	line.						
<pre>> A-THREAD DETAIL B-LOCK COUN > F-CURRENT SQL G-SQL COUNT > K-PACKAGES L-RES LIMIT > P-CANCEL THREAD Q-DB2 CONSC </pre>	NTS C-LOCK WAITS IS H-DISTRIBUTED I M-PARALLEL TASKS DLE R-DSN ACTIVITY	*-LOCKS OWNED E I-BUFFER POOL J S N-UTILITY O S-APPL TRACE T	-GLOBAL LOCKS -GROUP BP -OBJECTS -ENCLAVE						
<pre>> LOCKS/CLAIMS OWNED BY A THREAD PLAN + Thread: Plan=TRANSPLX Connid=CCCDS18 Corrid=POOLDB210001 Authid=MHANS + Attach: CICS JOB=CCCDS18 Tran=DB21 Task#=00127 Term=M485 Type=POOL + Package: CICSDB21 Collection=</pre>									
+ Loc	ck Ownership Informa	ation							
+ Percent NUMLKUS	= .00 Total	Locks Owned	= 5						
+ Total Catalog Locks	= 1 Pagese	et and Dataset Loci	ks = 1						
+ Catalog Pageset Locks	= 1 V Page/H	low Locks							
+ Bind ACOULTRE option	= USE Bind F	ELEASE option							
+ ISOLATION option	= Cursor Stability								

Look at number and type of locks owned



Thread Lock Detail

		ZLOCKO	VTM O)2 V.	520./C D81G	02/22/05	6:39:37	25
+	Туре	Level	Resource	•		N	lumber	
+								
+	DTBS	S	DB=DSNDG	07			1	
+	PSET	S	DB=DSNDG	07	PS=DSN4K01		1	
+		IS	DB=DSNDB	06	PS=SYSDBAS	E	1	
+		IS	DB=DSNDB	01	PS=SCT02		1	
+	SKCT	S	Plan=TRA	NSPLX			1	
+						-		
+						Total =	5	
+			Claim Info	rmation				
+	Туре	Class	Resource	•				
+								
+	IX	CS	DB=DSNDB	06	PS=DSNDCX0	1		
+	IX	CS	DB=DSNDB	06	PS=DSNDKX0	1		
+	IX	CS	DB=DSNDB	06	PS=DSNDXX0	3		
+	TS	CS	DB=DSNDB	06	PS=SYSDBAS	Е		
+	IX	CS	DB=DSNDB	01	PS=DSNSCT0	2		
+	TS	CS	DB=DSNDB	01	PS=SCT02			

Press F8 to see additional lock detail

See locks held, lock level, and on what resources



Look At Thread SQL Counts

> Help PF1	_ ZTSCNT	VTM O2	v 520	./C D	81G 02/22/0	05 6:40: Ba	49 2 ck PF3
> THREAD II	NFORMATION:	Enter a seled	ction 1	etter	on the top	p line.	
 > A-THREAD DETAIL > F-CURRENT SQL > K-PACKAGES > P-CANCEL THREAL 	L B-LOCK CO *-SQL COU L-RES LIM D Q-DB2 CON	OUNTS C-LOCK WA INTS H-DISTRIBU IIT M-PARALLEI ISOLE R-DSN ACT	ITS JTED L TASKS IVITY	D-LO I-BU N-UT S-AP	CKS OWNED FFER POOL ILITY PL TRACE	E-GLOBAL J-GROUP O-OBJECT T-ENCLAV	LOCKS BP S E
>		CURRENT SQI	L COUNT	s			
PLAN							
+ Thread: Plan=	TRANSPLX C	onnid=CCCDS18	Corrid	=POOL	DB210001 Au	thid=MHA	NS
+ Attach: CICS	JOB=CCCDS	18 Tran=DB21	Task#	=0012	7 Term=M48	35 Type=	POOL
+ Package: CICSD	321 C	collection=					
sqls							
+ Commit	= 0	Abort	=	0	Select	=	0
+ Open Cursor	= 14	Close Cursor	=	14	Fetch	=	140000
+ Insert	= 0	Delete	=	0	Update	=	0
+ Describe	= 0	Lock Table	=	0	Prepare	=	0
+ Grant	= 0	Revoke	=	0	Set Rules	=	0
+ Increm Bind	= 0	Label/Comm On	=	0	Set SQLID	=	0
+ Set Host Var	= 0	Set Connection	n =	0	Set Degree	e =	0
+ Connect Type 1	E Loo	k at SQL cou	ints to	o get	a better	underst	tanding of

the numbers. Look for potential problem indicators.



Look At SQL Counts To Understand The Application Look at Parallelism, SPs, Triggers, etc.

_		ZTSCNT	v	тм 02	V 5	20./C I	081G 02/22/05	6:40:49	36
+	Alias	=	0	Alias	=	0			
+	Function	=	0	Function	=	0	Function	=	0
+	Procedure	=	0	Procedure	e =	0	Procedure	=	0
+	Trigger	=	0	Trigger	=	0			
+	Dist Type	=	0	Dist Type	e =	0			
+	Aux Table	=	0						
+									
+	RID Pool Used		=	154	RID Pool	Use Fa	ailed-No Stora	age =	0
+					RID Pool	Use Fa	ailed-Max Limi	.t =	0
+									
+	Max Parallel Do	egree	=	0	Parallel	Groups	s Executed	=	0
+	Parallel Faile	d-Cursor	=	0	Parallel	Failed	i-No ESA Sort	=	0
+	Parallel Faile	d-Buffers	s =	0	Parallel	Failed	d-No Enclaves	=	0
+	Parallelism Dia	sabled	=	No	Parallel	Degree	e Reduced-Buff	ers =	0
+	Single DB2 (Co	ord=NO)	=	0	Parallel	Degree	e Executed	=	0
+	Single DB2 (Cu:	rsor)	=	0	Sysplex 3	Int			Î
+	Bypass DB2 (Bu:	ffers)	=	0		Lo	ck for prob	lem indi	cators
+						(fa	ilad timod	out oto)
+	Maximimum LOB	Storage	=	0		(la	neu, umeu		·/
+								-	
+	SQL Call State	ments	=	0	SQL Call	s Timeo	d Out 🔶	=	0
+	Stored Proc SQ	L Reqs	=	0	SQL Call:	s Rejeo	cted	=	0
+					Stored P	rocedui	res Abended	=	0

Press F8 to see additional SQL detail



SQL Counts - continued

ZTSCNT	VTM	02	V520./C D81G 02/22/05	6:40:49	59
+					
+ UDFs Executed	=	0	UDFs ABENDed	=	0
+ UDFs Timed Out	=	0	UDFs Rejected	=	0
+					
+ Stmt Triggers Activated	=	0	Row Triggers Activated	=	0
+ SQL Error in Trigger	=		Maximum Nested SQL	=	0
+					
+ Prepare Statistics:			Note trigger a	d UDF a	ctivity
+ Copied from Cache	=	0	Implicit - Aller Martine (120)		
+ No Match	=	0	Avoided - KEEPDYNAMIC(YES)	=	0
+ Discarded - MAXKEEPD	=	0	Purged - DROP/ALTER/REVOKE	=	0
+					
+ Direct Row Access					
+ Successful	=	0	Revert to Index	=	0
+			Revert to Tablespace Scan	=	0
	=====	=======			====

Press F8 to see additional SQL detail



View The Currently Executing SQL

> Help PF1	_ ZSQL VTM	02	V520./C I	081G 02/22/	05 6:47:38 Back	2 PF3
> THREAD IN	NFORMATION: Er	nter a sele	ection letter	on the to	p line.	
 > A-THREAD DETAIL > *-CURRENT SQL > K-PACKAGES > P-CANCEL THREAL 	L B-LOCK COUNTS G-SQL COUNTS L-RES LIMIT D Q-DB2 CONSOLE	S C-LOCK WA H-DISTRII M-PARALLI E R-DSN AC	AITS D-LC BUTED I-BU EL TASKS N-UI FIVITY S-AF	OCKS OWNED JFFER POOL TILITY PPL TRACE	E-GLOBAL LO J-GROUP BP O-OBJECTS T-ENCLAVE	скs
> PLAN + Thread: Plan= + Attach: CICS	SQI TRANSPLX Conni JOB=CCCDS18	CALL BEI d=CCCDS18 Tran=DB2	NG EXECUTED Corrid=POOI 1 Task#=0012	DB210001 A 27 Term=M4	uthid=MHANS 85 Type=POO	L
+ Package: CICSDF call + SQL call i	321 Colle is active, call	ection=	ion is as fol	lows :	Hit enter t	o watch
+ Thread Sta + Total SQL + SQL DBRM M	atus = WAIT-RE Reqs = 27491 Name = CICSDB2	EMREQ SQ LO SQ 21 SQ	QL Request Ty QL Call Type QL Statement	vpe = S = F Number = O	TATIC ETCH 0073	
+ DECLARE CU + I.NAME	JR1 CURSOR FOR , I . CLUSTERI	SELECT I ING , I . (. DBNAME , I CLUSTERRATIO	. TBCREATO , I . UNIQ	R , I . TBNA UERULE , I .	ME , FIR

Press F8 to see additional SQL text detail



Thread Buffer & I/O Analysis

ZBUF	VTM 02	V520./C D81G 02/22/05 6:48:16 2
> Help PF1 F	Back PF3	Up PF7 Down PF8
> THREAD INFORMATI	ION: Enter a s	election letter on the top line.
> A-THREAD DETAIL B-LOCH	K COUNTS C-LOCK	WAITS D-LOCKS OWNED E-GLOBAL LOCKS
> F-CURRENT SQL G-SQL	COUNTS H-DIST	RIBUTED *-BUFFER POOL J-GROUP BP
> K-PACKAGES L-RES	LIMIT M-PARA	LLEL TASKS N-UTILITY O-OBJECTS
> P-CANCEL THREAD Q-DB2	CONSOLE R-DSN	ACTIVITY S-APPL TRACE T-ENCLAVE
>	THREAD BUFFE	R POOL ACTIVITY
PLAN		
+ Thread: Plan=TRANSPL	Connid=CCCDS	18 Corrid=POOLDB210001 Authid=MHANS
+ Attach: CICS JOB=CO	CCDS18 Tran=D	B21 Task#=00127 Term=M485 Type=POOL
+ Package: CICSDB21 buf	Collection=	Look at getpage and I/O counts for
+ Buffer Pool: BP0		threads showing high I/O wait times
+		timeads showing mgm // wait times
+ Getpage Requests	= 494	Failed Getpage Requests = 0
+ Synchronous Read I/O	= 21	Getpage/Read I/O = 23.52
+ Page Updates	= 116	Seq Prefetch Requests = 29
+ List Prefetch Requests	s = 29	Dynamic Prefetch Requests = 0
+ Prefetch Pages Read	= 9	
+ Hiperpool Reads	= 0	Fa Real time views of thread getpage
		activity broken out by buffer pool



Object Information Object Analysis Option Shows Thread Getpage & I/O

> Help PF1	_ ZTOBJ	VTM 02	v520./	'C D81G 02/22,	/05 6:49: Ba	24 2 ck PF3		
> THREAD INFORMATION: Enter a selection letter on the top line.								
> A-THREAD DETAIN > F-CURRENT SQL > K-PACKAGES > P-CANCEL THREAN	L B-LOCK CO G-SQL COU L-RES LIM D Q-DB2 CON	UNTS C-LOCK NTS H-DIST IT M-PARA SOLE R-DSN	WAITS I RIBUTED J LLEL TASKS M ACTIVITY S	D-LOCKS OWNED -BUFFER POOL -UTILITY S-APPL TRACE	E-GLOBAL J-GROUP *-OBJECT T-ENCLAV	LOCKS BP S E		
OBJECTS USED BY THREAD PLAN + Thread: Plan=TRANSPLX Connid=CCCDS18 Corrid=POOI + Attach: CICS JOB=CCCDS18 Tran=DB21 Task#=0012 Information for the thread								
+ Attach: CICS	DOD-CCCD3	18 Tran=D	B21 Task#=(ine ineau		
+ Package: CICSDI tobj	321 C	18 Tran=D ollection=	B21 Task#=0					
+ Package: CICSDI tobj +	321 C	18 Tran=D ollection=	B21 Task#=0	Pi	refetch I/	o		
+ Package: CICSD + Package: CICSD tobj + + Database Space	221 C	18 Tran=D ollection= Volume Ge	b21 Task#=0 Sync Lpage Read	0012 P: Seq	refetch I/0 List	O Dynamic		
+ Package: CICSD + Package: CICSD tobj + + Database Space + + DSNDB06 DSND	221 C 201 Dsn 201 001	18 Tran=D ollection= Volume Ge 	B21 Task#=0 Sync tpage Read 	0012 P1 Seq 0 0	refetch I/c List	O Dynamic 		
+ Package: CICSD + Package: CICSD + + Database Space + + DSNDB06 DSND + DSNDB06 SYSDE	Enam Dsn 221 C 201 C 201 C 201 C 201 C 201 C 201 C 201 C 201 C	18 Tran=D ollection= Volume Ge 	B21 Task#=0 tpage Read 117 13	0012 Pr Seq 0 0 0 0	refetch I/0 List 1 0 0	O Dynamic 0 0		
<pre>+ Actach: CICS + Package: CICSDI tobj + + Database Space + + DSNDB06 DSND0 + DSNDB06 SYSDI + DSNDG07 DSN41</pre>	Enam Dsn CX01 001 BASE 001 K01 001	18 Tran=D ollection= Volume Ge 	B21 Task#=0 tpage Read 117 13 78	0012 P: Seq 0 0 0 0 0 0	refetch I/0 List 1 0 0 0	O Dynamic 0 0 0		

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I/O Analysis

ZIIO VTM > Help PF1	02 V520)./C D81G 02/22/	05 6:49:53 2 Back PF3		
> THREAD INFORMATION: Ente:	a selection l	etter on the to	p line.		
<pre>> A-THREAD DETAIL B-LOCK COUNTS C > F-CURRENT SQL G-SQL COUNTS H > K-PACKAGES L-RES LIMIT > P-CANCEL THREAD Q-DB2 CONSOLE *</pre>	-LOCK WAITS -DISTRIBUTED -DAPALLEL TASKS -DSN ACTIVITY	D-LOCKS OWNED I-BUFFER POOL N-UTILITY S-APPL TRACE	E-GLOBAL LOCKS J-GROUP BP O-OBJECTS T-ENCLAVE		
<pre>> THREAD DETAIL PLAN + Thread: Plan=TRANSPLX Connid=CCCDS18 Corrid=POOLDB210001 Authid=MHANS + Attach: CICS JOB=CCCDS18 Tran=DB21 Task#=00127 Term=M485 Type=POOL + Package: CICSDB21 Collection= > place a 'T' in front of command to view by tablespace, 'D' by database</pre>					
+ + Dataset Name +		Synch I/O Delay Count 4.5 6 11.0 8	-Asynch I/O Delay Count .0 0 .0 0		



Looking For Additional Detail Package Level Detail

> Help PF1	_ ZPKG Back PF	VTM 02 '3 Up P	V520./C D810 F7 Down	G 02/22/0 n PF8	5 6:48:46 2 Zoom PF11	
> THREAD I	NFORMATION	: Enter a sel	ection letter of	n the top	line.	
> A-THREAD DETAI > F-CURRENT SOL	L B-LOCK C G-SQL CO	OUNTS C-LOCK W DUNTS H-DISTRI	AITS D-LOCK: BUTED I-BUFFI	S OWNED	E-GLOBAL LOCKS J-GROUP BP	
> P-CANCEL THREA	D Q-DB2 CO	NSOLE R-DSN AC	TIVITY S-APPL	TRACE	T-ENCLAVE	
<pre>> THREAD PACKAGE SUMMARY PLAN + Thread: Plan=TRANSPLX Connid=CCCDS18 Corrid=POOLDB210001 Authid=MHANS + Attach: CICS JOB=CCCDS18 Tran=DB21 Task#=00127 Term=M485 Type=POOL + Package: CICSDB21 Collection= pkl Analysis may be by package</pre>						
pkg			level, a	as well a	as plan level	
+ + Package/ + DBRM	SQL Requests	In-DB2 Elapsed Time	In-DB2 CPU Time	Waits	In-DB2 Wait Time	
+ + CICSDB21 *	300060	00:00:08.039	00:00:04.900	49 	00:00:00.738	



Application Trace Facility Detailed Application Analysis

ZATRQ2 VTM 02 V520./C D81G 02/22/05 6:50:41 2 > Help PF1 Back PF3
> THREAD INFORMATION: Enter a selection letter on the top line.
<pre>> A-THREAD DETAIL B-LOCK COUNTS C-LOCK WAITS D-LOCKS OWNED E-GLOBAL LOCKS > F-CURRENT SQL G-SQL COUNTS H-DISTRIBUTED I-BUFFER POOL J-GROUP BP > K-PACKAGES L-RES LIMIT M-PARALLEL TASKS N-UTILITY O-OBJECTS > P-CANCEL THREAD Q-DB2 CONSOLE R-DSN ACTIVITY *-APPL TRACE T-ENCLAVE</pre>
> SPECIFY APPLICATION TRACE
ATRO Specify filter options to
+ selection information to limit trace output. To save t reduce trace overhead
+ for later viewing you must specify a data set name for DSN
+
: DSN= Data set name
: TIME=005 Number of mins to trace (001-060)
: PLANNAME=TRANSPLX Plan name or ALL for all active threads
: AUTHID=MHANS 🖌 DB2 authorization identifier
: TSOUSER= TSO USERID (TSO foreground app)
: JOBNAME= Jobname (200 hatakaana)
: CICSTRAN= CICS trar Uses DB2 performance traces to capture
CICSCONN= CICS conr and analyze application activity



Application Trace Facility

To see more detail position the cursor and press F11 to zoom

> Help PF1	ZATVC Back I	VTM ?F3	02 Up Pi	v520 57	./C D81G Down 1	02/22/05 PF8	5 6:55 Zooi	:10 2 m PF11
> ATVC	API	PLICATIO	ON TRACE	JNIT OF 1	WORK SUMI	MARY		
+ Planname=TRANSP +	LX Cor	nnid=CCC	DS18 (Corrid=P	OOLDB210	001 Aut	hid=MH	ANS
+ Start Time Pro	ogname	InDB2 7	'ime In	DB2 CPU	SQL S	Sorts I	locks	Rows
+ 06:51:14.954 CIC	CSDB21	00:00.2	28034	.13600	8205	2	4	114

Application trace uses DB2 performance traces

Traces may be sent to a file or to memory within Omegamon. Send trace to a file for reporting or later analysis



Application Trace Facility SQL Index

> Help PF1	ZATSI VTM Back PF3	02 Up PF7	V520./C	D81G 02/22 own PF8	2/05	6:56:06 2 Zoom PF11
> APPLI	CATION TRACE: Ent	er a selec	tion lett	er on the	top	line.
> A-PROGRAM	*-SQL INDEX C-S	QL DETAIL	D-LOCK	DETAIL	E-E	VENT DETAIL
> ATSI + Planname=TRAN	APPLICATIO ISPLX Connid=CCCD	N TRACE SÇ S18 Cor	OL INDEX	B210001	Auth	id=MHANS
+ + Call Type +	Stm# Program	Count InD)B2 Time	MRet Rws	Pc R	ws DM Rws RD
+ OPEN CURSOR	70 CICSDB21	1 00:	00.00084	0	24	
+ FETCH + CLOSE CURSOR	73 CICSDB21 75 CICSDB21	3806 00: 1 00:	00.13718	0100	0	
+ OPEN CURSOR + FETCH	70 CICSDB21 73 CICSDB21	1 00: 4396 00:	00.00082 00.14140	/ 0 / 100	24 33 /	12 12 22 22
			===========		====/=	=======

Note statement #, count of times executed, In-DB2 time

Maximum return code, rows processed by data manager, rows processed by RDS



Application Trace Facility Event Detail

> Help PF1	ZATD3 VTM O2 Back PF3	V520./C D81G 02/22/05 7:02:02 2 Up PF7 Down PF8			
> APPLICA	TION TRACE: Enter a s	selection letter on the top line.			
> A-PROGRAM B-	SQL INDEX C-SQL DET	FAIL D-LOCK DETAIL *-EVENT DETAIL			
> APPLICATION TRACE EVENT DETAIL					
+ Planname=TRANSP +	LX Connid=CCCDS18	Corrid=POOLDB2 Note individual event			
: Control=NEXT + Current=000001	(FIRST/LAST/NEXT/PREV Total Number of SQL C	^{7/+nnnn/-nnnn/Sr} detail. Start/Stop trace ^{Calls=008207} records, with elapsed tim			
+ + Event Time TN	I Event Type	Event Resource Information			
+ + 06:51:14.954 + 06:51:14.954	START OPEN CURSOR	PGM=CICSDB21 STMT=00070			
+ 06:51:14.955 + 06:51:14.955	START INDEX SCAN LOCK ACQUIRE	DB=DSNDB06 PS=DSNDXX03 DB=DSNDB06 PS=SYSDBASE DPAG S D=MNL			
+ + 06:51:14.955	- START INDEX SCAN	PAGE=0000FD DB=DSNDB06 PS=DSNDKX01			
+ 06:51:14.955 +	END OF INDEX SCAN	DB=DSNDB06 PS=DSNDKX01 ROWS=0000022 PAGES=0000000			

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Looking At Enclave Thread Activity

		ZALLT	VTM	02	V520./C	D81G 02/	22/05 7	/:12:19 2
	> Help PF1	Back PF3		Up PF7	Down PF8	Sort	PF10	Zoom PF11
	> T.A							
	> THREA	AD ACTIVITY	(: Ent	er a select	ion letter	on the	top line	2.
	> *-ALL B-TSC	D C-CICS	D-IM	S E-E	BACKGROUND	F-DIST	ALLIED	G-DIST DBAC
	> H-UTIL I-INZ	ACT J-FILTH	ER K-FU	NCTIONS L-S	TORED PROC	M-TRIGG	ERS	N-SYSPLEX
	> O-ENCLAVES							
	>	1	ALL THR	EADS CONNEC	TED TO DB2			
	THDA							
	+ *							
	+ Elapsed	Planname	CPU	Status	GetPg	Update	Commit	Jobname
	+							
	+ 02-01:29	KO25201F	00.0%	NOT-IN-DB2	0	0	0	CXEGA03
	+ 02-01:29	ко2520нр	00.0%	NOT-IN-DB2	. 0	0	0	CXEGA03
	+ 02-01:23	K025201F	00.0%	NOT-IN-DB2	. 0	0	0	CXEGA03
	+ 02-01:23	K025201F	00.0%	NOT-IN-DB2	. 0	0	0	CXEGA03
	+ 01:52:49.6	K025201F	00.0%	NOT-IN-DB2	. 0	0	0	CXEGA03
	+ 00:38:44.9	TRANSPLX	00.0%	NOT-IN-DB2	1230	300	0	CCCDS18
	+ 00:00:05.7	DEMO1	00.0%	NOT-IN-DB2	4	0	0	DEMOENCL
			======	Or	tion O fo	roncla	wae m	av ha usad
L				Q		GIICIG		ay be used
				to	display e	nclave	thread	ds



Enclave Thread Overview

	ZENCL V	O MTM	2 V520	./C D81G 02/2	22/05 7	:13:01 2
> Help PF1 E	Back PF3	Up PF	7 Down	PF8 Sort	PF10	Zoom PF11
> т.о						
> THREAD	ACTIVITY:	Enter a	selection le	tter on the t	op line	2.
> A-ALL B-TSO	C-CICS I)-IMS	E-BACKGRC	UND F-DIST A	ALLIED	G-DIST DBAC
> H-UTIL I-INACT	C J-FILTER K	-FUNCTIO	NS L-STORED	PROC M-TRIGGE	ERS	N-SYSPLEX
> *-ENCLAVES						
>	EN	ICLAVE TH	READ SUMMARY			
THDE						
THDE + *						
THDE + * + Elapsed Pl	lan Jobn	name Aut	hID CPU	P/I SvcClas	ss Pd# S	status
THDE + * + Elapsed Pl +	lan Jobn	name Aut	hID CPU	P/I SvcClas	ss Pd# S	status
THDE + * + Elapsed Pl + + 00:00:48.8 DE	lan Jobn EMO1 DEMC	name Aut DENCL CXE	hID CPU 12AUR 00.0%	P/I SvcClas .20 BATCH	ss Pd# S 1 N	Status IOT-IN-DB2

F11 zoom to see more thread detail

11 20



Thread Enclave Detail

> Help PF1 ZENCLD	VTM O2	V520./C D81G 02/	22/05 7:13:42 2 Back PF3			
> THREAD INFORMATI	ON: Enter a sel	ection letter on the	top line.			
> A-THREAD DETAIL B-LOCK	COUNTS C-LOCK W	AITS D-LOCKS OWN	ED E-GLOBAL LOCKS			
> F-CURRENT SQL G-SQL	COUNTS H-DISTRI	BUTED I-BUFFER PO	OL J-GROUP BP			
> K-PACKAGES L-RES	LIMIT M-PARALI	EL TASKS N-UTILITY	O-OBJECTS			
> P-CANCEL THREAD Q-DB2	CONSOLE R-DSN AC	TIVITY S-APPL TRAC	E *-ENCLAVE			
> ENCLAVE DETAIL INFORMATION						
PLAN						
+ Thread: Plan=DEMO1	Connid=DB2CALL	Corrid=DEMOENCL	Authid=CXE12AUR			
+ Attach: BATCH	JOB Name=DEMOE	INCL	JOB Asid= 49			
+ Package: DEMO1	Collection=					
enc						
+ ENCLAVE TOKEN: 200	000001	Enclave Type:	Dependent			
+ Owning System: SP1	2	Owning Job:	DEMOENCL			
+ WLM Mode: Goa	1	Enclave CPU Time	00:00:00.000			
+						
+ SERVICE PERIOD INFORMA	TION					
+ Period(s) for Service	Class BATCH:	2				
+ Current Period for Thi	s Thread:	¹ Note enclave	type, owning job, WLM			
+ Performance Index This	Period:	service class	, and enclave CPU			



Enclave Detail

	ZENCLD VTM	O2 V520./C D81G 02/22/05 7:13:42 25
+		
+	+	- Period Number
+	+	- Importance
+	+	- Duration in Service Units
+	+	· Percentile
+	+	- Response Time Goal or Velocity
+	+	- Response Time Unit
+		Goal Description
+	+ + +	
+	1 3 700 .10	Velocity Goal
+	2 4 .10	Velocity Goal
+		
+	SERVICE CLASS INFORMATION	
+	CPU Critical: No	Storage Protection: No
+		
+	Name	Description
+		
+	Service Class: BATCH	Batch Jobs
+	Workload: BATCH	Batch Jobs
+	Resource Group:	
+	Report Class: REPORTA	a report class
+		
+	WLM APPLICATION ENVIRONMENT	Additional enclave WLW
		service class detail

. ...



View Thread History Near Term Historical

> Help PF1 >	_ ZHATACT Back Pi	VTM F3	02 Up PF7	V520./0	C D81G Down 1	02/22/0 PF8)57:	38:0 Zoom	00 3 N PF11	
>	Enter a selection letter on the top line.									
> > *-SUMMARY > O-OPTIONS	B-BUFF	B-BUFFER POOL C-DB2 TIME D-LOCK/SCAN/SORT)RT ======	
>		THREAD	D HISTORY	SUMMAR	Y					
HATH + Report Interval: 15 mins Start: 02/22 07:15:00.0000 + Report Filtered: NO End: 02/22 07:29:59.9999 act							00000 99999			
+ + + End Time	Plan	Authid	Elapsed Time	CPU Time	SQL	Commit	Abrt	Pkg	Term Status	
+ 07:25:52.899 + 07:22:14.571	TRANSPLX DEMO1	MHANS CXE12AUR	3138.42 600.90	44.758	1000K 11	1 1	0 0	 1 1	EOT/AB	
	$\overline{)}$	Om	legamo	n allov	vs thr	ead hi	story	v to	be ca	ptured
F11 to see moreanddetail on a threadHis			d review tory is o	ved fro captur	m wit ed in	thin the VSAM	e rea files	nl tir 5.	ne mo	nitor.

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Near Term Thread History

> Help PF1	VTM O2 Back PF3	V520./C D81G 02/22/05 Up PF7	7:38:30 2 Down PF8					
> THREAD HISTORY	: Enter a sele	ction letter on the top li	ine.					
<pre>> *-THREAD DETAIL B-LOO > F-DYNAMIC SQL G-SQI > K-PACKAGE SUMMARY L-RES</pre>	CK COUNTS C-LOC COUNTS H-DIS LIMIT M-PAR	K WAITS D-GLOBAL LOCKS TRIBUTED I-BUFFER POOL ALLEL TASKS	S E-SORT/SCAN J-GROUP BP					
> THREAD HISTORY DETAIL								
HPLN								
+ Thread: Plan=TRANSPLX	Connid=CCCDS18	Corrid=POOLDB210001 Auth	nid=MHANS					
+ Attach: CICS	DB2=D81G	MVS=SP12						
+ Time : Start=02/22/20	05 06:33:34.474	738 End=02/22/2005 07:	25:52.899388					
act								
+ Termination Status =	= DEALLO	C Commits	= 1					
+ Total Elapsed Time =	= 00:52:18.42	5 Aborts	= 0					
+ Total CPU Time =	= 00:00:44.75	8 Parallel Tasks	= 0					
+ Total Stored Proc CPU =	= 00:00:00.00	0						
+ Stored Proc Wait =	= 00:00:00.00	0 Stored Proc Wait Cnt	= 0					
+								
+ In-DB2 Times		Total						
+			- (
+ Elapsed Time		Thread analysis d	ata comparable					
		to real time thread	dienlave					

OMEGAMON XE For DB2 Choice Of Interfaces

OMEGAMON XE GUI Interface

- Accessible via Java client or web browser
- Real time and historical
- Automation & alerts

• OMEGAMON II for DB2

- 3270 Interface
- CUA Interface & Classic Interface
- Real Time & Historical

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0	516 SP12 D02			L PARADO	LEPI2M/EEVE	EMELAN	0.0		Reset	Syspex_Works	ads_Perfidx_Cr	8	-
0	61A-SP22:082			(PARAD)	LOOID MUDDVD	COMPONE	0.0	- 1 4	Haised	Shebuer Millage	ads_Pertor_Cr	-	-
0	61C.5P22.002			LEARAD	LEPIZM/ROVE	WI M	0.4		Reset	Syspeex_Worklo	ads_Perfids_Cr	8	-
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	610897591201	NO DECEMBER OF		1 PARADO	10P12M/08VB	046-5	0.1		Pased	Distort Dep	Dev Continua	man	-
	#10HP-SP2204	UCD204004		LEAD AD	LESP12 MUSSVS	IEFOCHAR	0.0		Preset	System_Works	ads_Period_Cr	0	-
	010-01-02-010-			LEADAD	USP12 MUSSVE	JE DOCE	0.0		POPUL	bysper_DASD	Dev Contrada	rivarn	- 3
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Thread Type	Plan Name	EXPRON	EXCOLLID	Correlation Identifier	Time	Type	Name	ECPK0	Dystem ID	CICE Region Name	Class Name	Class	Ti at
Thread Type Alied	Plan Name K02520HP	EXPRON	EXCOLLID	Correlation Identifier CMODI003	Time 02/13/02 11 19 5	Type 4 Alled	Plan Name DSNACU	D6NCUC	IDystem ID SP12	CICB Region Name	Class Name DFHCOMCL	Class Limit	n at
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Thread Type Alled	Ptan Name K02520HP	EXPRON	EXCOLLE	Correlation Identifier CMODI003	Time 02/13/02 11 19 5 02/13/02 11 19 5 02/13/02 11 19 5	4 Alled 4 Alled 4 Alled	Plan Name DSNACU YRRSAF YRRSAF	D6NCUC	BP12 8P12 SP12	CICE Region Name CCCD518 CCCD518 CCCD518	Class Name DFHCOMCL DFHEDFTC DFHEDFTC	Class Limit 10 10	n M
Thread Type Alled	Plan Name K02520HP	EXPRON	EXCOLLID	Constation Identifier CMODISO3	Time 02/13/02 11 19 5 02/13/02 11 19 5 02/13/02 11 19 5 02/13/02 11 19 5	4 Alled 4 Alled 4 Alled 4 Alled 4 Alled	Plan Name DSNACU VRRSAF VRRSAF VRRSAF	D6NCUC	0/000000000000000000000000000000000000	CICE Region Name CCCD518 CCCD518 CCCD518 CCCD518	Class Name DFHCOMCL DFHEDFTC DFHEDFTC DFHTCL01	Class Limit 10 10	The second secon
Thread Type Alled	Plan Name K02520HP	EXPRON	EXCOLLID	Constation Identifier CMODS03	Time 02/13/02/11/19/5 02/13/02/11/19/5 02/13/02/11/19/5 02/13/02/11/19/5	4 Alled 4 Alled 4 Alled 4 Alled 4 Alled	Plan Name DSNACU YRRSAF YRRSAF YRRSAF	DENCLIC .	0/000000000000000000000000000000000000	CICD Region Name CCCD518 CCCD518 CCCD518 CCCD518 CCCD518 CCCD518	Class Name DFHCOMCL DFHEDFTC DFHTCND DFHTCL01 DFHTCL02	Class Umit 10 10 10	
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Thread Type Alled	Ptan Name K02520HP	EXPKON D71G	EXCOLLID	Constation Identifier CMODS03	Time 02/13/02 11 19 5 02/13/02 11 19 5 02/13/02 11 19 5 02/13/02 11 19 5	Alled Alled Alled Alled Alled D71	Pran Name DBNACU YRRIGAF YRRIGAF		Bystem 10 9P12 8P12 8P12 8P12 8P12 8P12 8P12 8P12 8	CICD Region Name CCCD518 CCCD518 CCCD518 CCCD518 CCCD518 CCCD518 CCCD518 CCCD518 CCCD518	Class Name DFHCOMCL DFHEDFTC DFHTCU01 DFHTCU01 DFHTCU02 DFHTCU03 DFHTCU04 DFHTCU05	Class Limit 10 10 10 10 10 10 10 11 1 1 1 1 1	14 14
Thread Type Alled	Ptan Name K02520HP	D71G	EXCOLLID	Constation Identifier CMODS03	Time 02/13/02 11 19 5 02/13/02 11 19 5 02/13/02 11 19 5 02/13/02 11 19 5 •	Aned Aned Aned Aned Aned Aned Aned D71	Tian Name DBNACU TRRGAF TRRSAF	DSNCUC DSNCUC	Byshm 10 5P12 5P12 5P12 5P12 5P12 5P12 5P12 5P12	CCCD818 CCCD818 CCCD818 CCCD818 CCCD818 CCCD818 CCCD818 CCCD818 CCCD818 CCCD818 CCCD818 CCCD818	Class Name DFHCOMCL DFHEDFTC DFHTCL01 DFHTCL01 DFHTCL02 DFHTCL03 DFHTCL04 DFHTCL04 DFHTCL04	Class Limit 10 10 10 10 10 11 11 1 1 1 1 1	TR 10
Thread Type Alled	Plan Name K02520HP	D71G	EXCOLLID	Constation Identifier CMODS03	Time 02/13/02 11 10 5 02/13/02 11 10 5 02/13/02 11 10 5 02/13/02 11 10 5	A Atted A Atted A Atted A Atted A Atted D71	Pran Name DSNACU TRRSAF TRRSAF	DSNCUC DSNCUC 2000	Byshm 10 5P12 5	CCCD818 CCCD818 CCCD818 CCCD818 CCCD818 CCCD818 CCCD818 CCCD818 CCCD818 CCCD818 CCCD818 CCCD818 CCCD818	Class Name DFHCOMCL DFHCOMCL DFHCOMCL DFHTCL01 DFHTCL01 DFHTCL03 DFHTCL03 DFHTCL05 DFHTCL05 DFHTCL06 DFHTCL07	Class Limt 10 10 10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	та и
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Thread Type Alled	Plan Name K025204P	D71G	EXCOLLID	Convertation identifier CMODS03	Terre 02/13/02 11 19 6 02/13/02 11 19 6 02/13/02 11 19 6 02/13/02 11 19 6 x1	A Alled A Alled A Alled A Alled A Alled A Alled D71	Pain Name DBNACU PRRSAF TRRSAF TRRSAF TRRSAF		Drubern D UP12 SP12 SP12 SP12 SP12 SP12 SP12 SP12 S	CCCD818 CCCD818 CCCD818 CCCD818 CCCD818 CCCD818 CCCD818 CCCD818 CCCD818 CCCD818 CCCD818 CCCD818 CCCD818 CCCD818 CCCD818 CCCD818	Class Name DFHCOMCL DFHEDFTC DFHTCUD DFHTCUD DFHTCUD DFHTCUD DFHTCUD DFHTCUD DFHTCUD DFHTCUD DFHTCUD DFHTCUD DFHTCUD DFHTCUD	Class Limit 10 10 10 10 10 10 10 10 10 10 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
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> Help PF1 ZT		V540./C D81X 05/03/	04 15:02:06 2 Back PF3
> THREAD INFOR	MATION: Enter a selec	tion letter on the to	p line.
> A-THREAD DETAIL B- > F-CURRENT SQL G- > K-PACKAGES L- > P-CANCEL THREAD Q- > U-LONG NAMES	LOCK COUNTS C-LOCK WAT SQL COUNTS *-DISTRIBU Res limit M-Parallel DB2 console R-DSN Acti'	TS D-LOCKS OWNED TED I-BUFFER POOL TASKS N-UTILITY VITY S-APPL TRACE	E-GLOBAL LOCKS J-GROUP BP O-OBJECTS T-ENCLAVE
> PLAN + Thread: Plan=UKID + Attach: RRSAF + Package: UKID rsum +	DISTRIBUTED THREA Connid=RRSAF JOB Name=PKENN Collection= Distributed PRSAE) DETAIL Corrid=HYCORRID A ↓ J Data	uthid=PKENN D8 Asid= 53K
+Location IP	Addr Port Ctbuser Si	rvclsnam Prod ID Wo	rkstation
+N/A N/I + +Transaction name: M	A N/A PKENNEY I Yappl.exe	1/A N/A	YY_VORKSTATION_NAM



OMEGAMON DE - Dashboard Edition'





OMEGAMON XE For DB2 – XE





OMEGAMON XE For DB2 Global View Of DB2 Thread Activity



	DB2ID	Name	Identifier	Status	Type	Identifier	Identifier	Type	Time	Time	Time	Proc Name	S			
æ	D71G	KO2520HP	CMGDS03	Not_In_DB2	Allied	CMGDS03	DB2CALL	DB2_CAF	00-05:51:39	00:00:00.249	00:00:00.000		SF			
œ	D71C	KO2520HP	VD02H@@L	Not_In_DB2	Allied	VD02H@@L	DB2CALL	DB2_CAF	01-12:05:33	00:00:00.785	00:00:01.184		SF			
œ	D71C	KO2520HP	VD02H@@L	Not_In_DB2	Allied	VDO2H@										
œ	D71C	DSNACLI	BBOLDAP	Swapped_Out	Allied	BBOLDA	See thread details across all DB2 members									
œ	D71C	?RRSAF	CB390	Not_In_DB2	Allied	CBDMNC	<u>к</u> т	broad eta	tue alane	ad time. In	DP2 time	Mait time				
æ	D71C	?RRSAF	CB390	Not_In_DB2	Allied	CBSYMC	• Thread Status, elapsed time, in-DB2 time, wait time,									
æ	D71C	?RRSAF	СВ390	Not_In_DB2	Allied	CBSYMC	Getpage counts, and more									

Number of threads, and from which members



OMEGAMON DB2 Thread Analysis Summary

- Look at thread elapsed times and In-DB2 times
 - Determine if the problem is 'In-DB2' or not
- Look at wait times
 - What is the thread waiting on locks, I/O or other DB2 events
- Look at SQL activity
 - SQL call text
 - SQL counts analyze the application activity



Thread Analysis - continued

- Use object analysis and buffer data to analyze I/O and getpage activity
- Use application trace facility to do more detailed thread analysis
- Use near term history to analyze past invocations of thread activity and compare to current application processing
- Use Omegamon XE for graphic overview, analysis, alerts, and automated actions