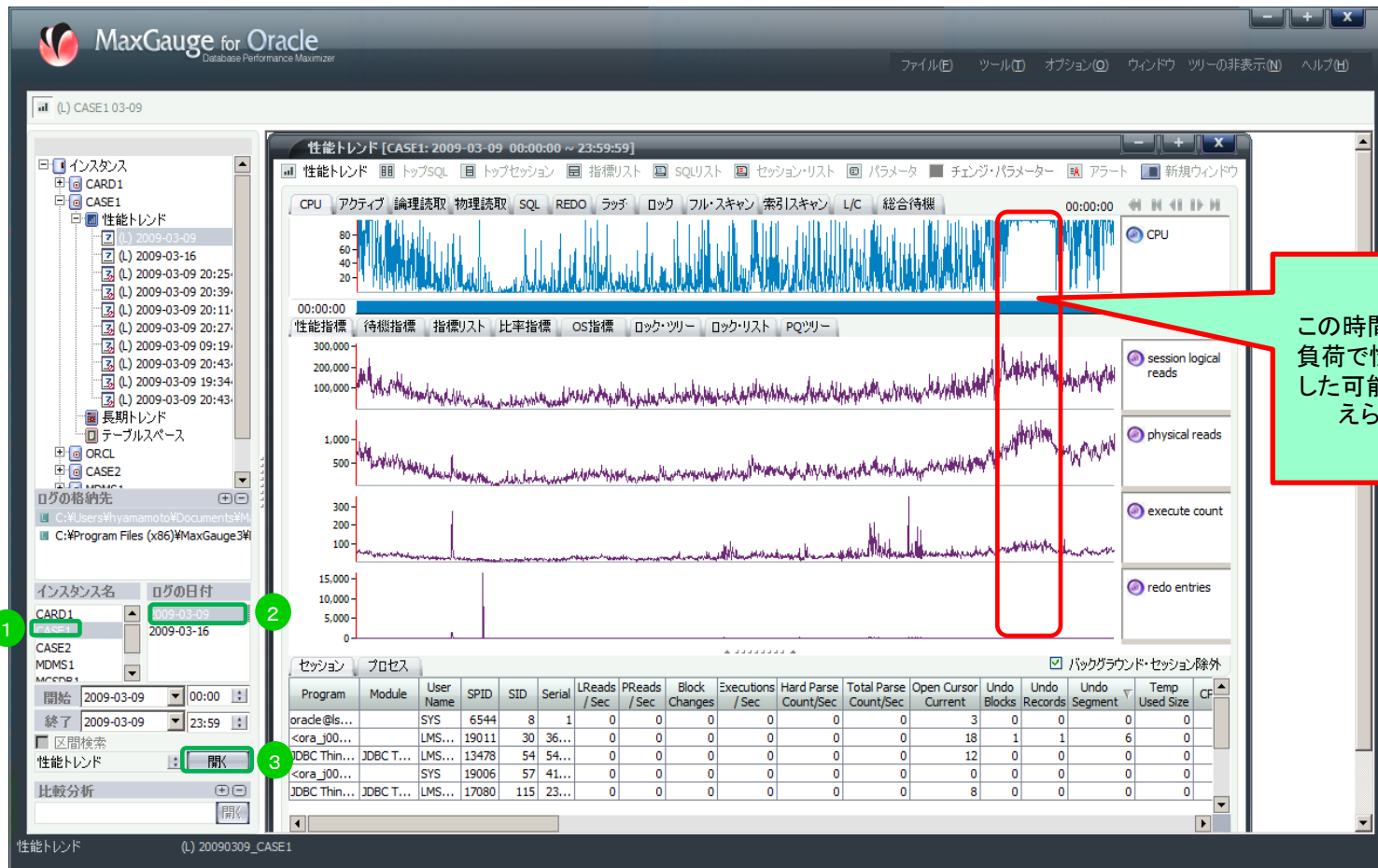


本TIPsは、以下の場面で活用します。

- ✓ 運用担当から昨日のアプリケーション応答遅延の調査依頼がきた
- ✓ 夜間バッチ処理に普段より時間がかかった

活用TIPs:突然の性能低下現象(過去)の調査(1/6)


Performance Analyzerから、分析対象の「インスタンス名」と「日付」を選択し、「開く」ボタンをクリックし、一日全体の傾向を確認します。発生時間帯が特定されている場合は、その周辺の稼働状況を確認します。



この時間帯は高負荷で性能低下した可能性が考えられる

活用TIPs:突然の性能低下現象(過去)の調査(2/6)

「総合待機」→「待機指標」タブを選択し、待機時間の多い時間帯を探します。
特に待機時間が長い時間帯を「Shift + ドラッグ」で選択します。
「表示画面のオプション」で「指標リスト」を選択し「OK」をクリックします。

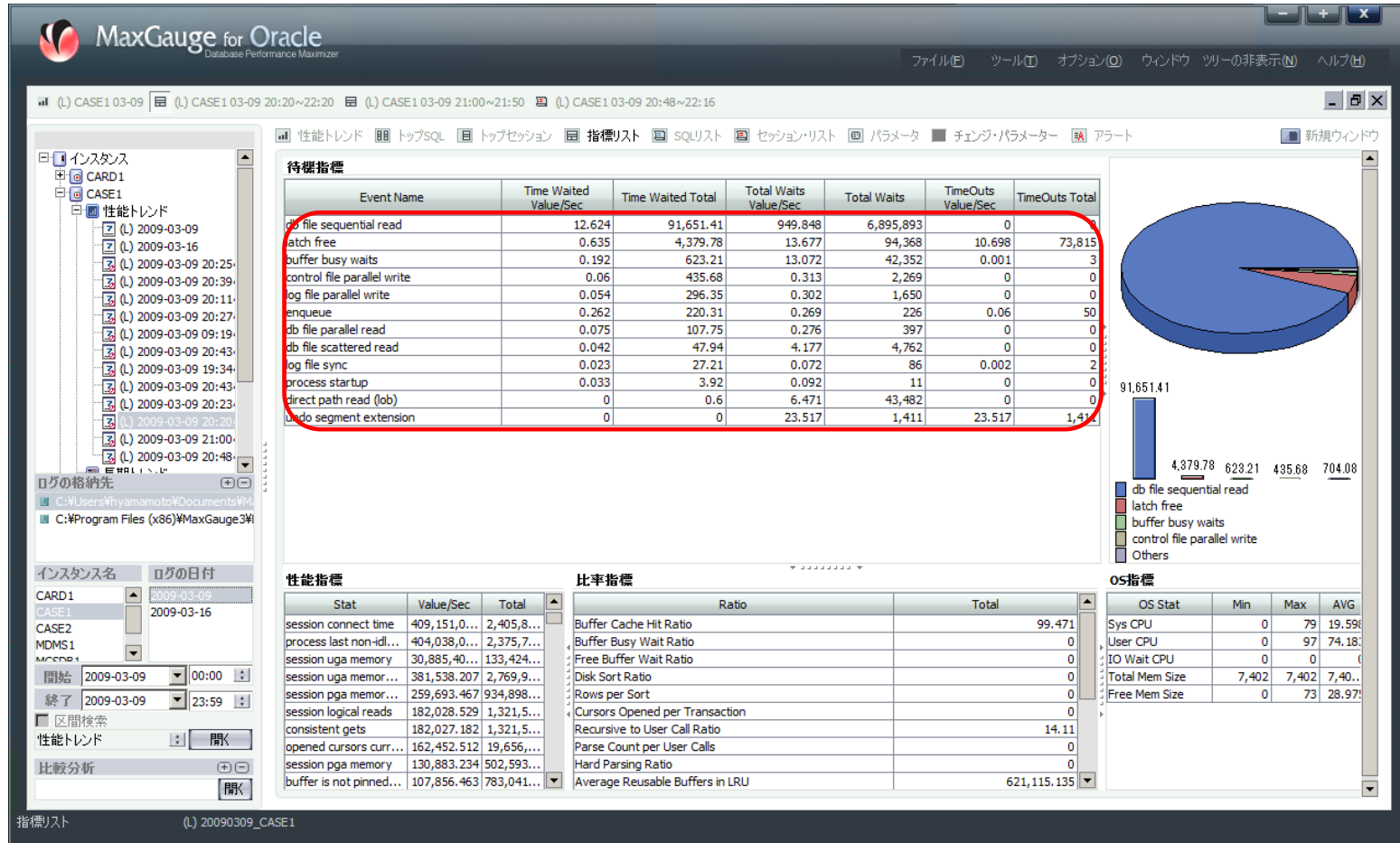


The screenshot shows the MaxGauge for Oracle interface. The main window displays performance trends for 'CASE1: 2009-03-09 00:00:00 ~ 23:59:59'. The '総合待機' (Total Wait) tab is selected, showing a line graph with a significant spike. A green box labeled '1' highlights the '総合待機' tab, and another green box labeled '3' highlights the spike in the graph. A dialog box titled '表示画面のオプション' (Display Options) is open, showing the '指標リスト' (Indicator List) option selected. A green box labeled '4' highlights the '指標リスト' option, and another green box labeled '5' highlights the 'OK' button. The dialog box also shows the selected time range as '20:20 ~ 22:20'. Below the graph, a table shows session details.

セッション	プロセス	Program	Module	User Name	SPID	SID	Serial	LReads /Sec	PReads /Sec	Block Changes	Executions /Sec	Hard Parse Count/Sec	Total Parse Count/Sec	Open Cursor Current	Undo Blocks	Undo Records	Undo Segment	Temp Used Size	CF
oracle@ls...		SYS	6544	8	1	0	0	0	0	0	0	0	0	3	0	0	0	0	0
<ora_j00...		LMS...	19011	30	36...	0	0	0	0	0	0	0	0	18	1	1	6	0	0
JDBC Thin...		JDBC T...	LMS...	13478	54	54...	0	0	0	0	0	0	0	12	0	0	0	0	0
<ora_j00...		SYS	19006	57	41...	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JDBC Thin...		JDBC T...	LMS...	17080	115	23...	0	0	0	0	0	0	0	8	0	0	0	0	0

活用TIPs:突然の性能低下現象(過去)の調査(3/6)

上位待機指標の待機時間と、全体に対する比率を確認します。



活用TIPs:突然の性能低下現象(過去)の調査(4/6)

「SQLリスト」を選択し、「検索」で一覧表示後に「Elapsed(SUM)」順にソートし、長いSQLを確認します。

The screenshot shows the MaxGauge for Oracle interface. The 'SQLリスト' (SQL List) tab is selected. The search criteria are set to 'From: 20:20' and 'To: 22:20'. The search button is labeled '検索'. The table below shows a list of SQL queries with various performance metrics. The 'Elapsed(SUM)' column is highlighted, and a red circle is drawn around the first few rows of the table.

From Time	SQL Text	Elapsed (AVG)	LReads	PReads	Block Scan	Row Fetch	Sort Rows	Elapsed (SUM)	Waiting (SUM)	CPU (SUM)	Executions	CPU (AVG)	Waiting (AVG)	Program	Module	Maxgauge SQL ID
20:30:00	begin sy...	132.933	1	0	0	0	0	398.8	398.4	0.4	3	0.133	132.8	JDBC Thin...	JDBC ...	2ABC97683688AA2509...
21:30:00	SELECT S...	8.076	3,065,174	23,974	13,2...	336,...	0	395.7	364.55	31.15	49	0.636	7.44	JDBC Thin...	JDBC ...	2FE041544310A709390CC
21:50:00	SELECT P...	1.622	2,588,068	14,905	13,0...	490,...	0	390.95	350.05	40.9	241	0.17	1.452	JDBC Thin...	JDBC ...	17B28D565B54D3E643036
21:00:00	SELECT S...	9.741	2,768,773	39,217	7,04...	324,...	0	389.65	367.25	22.4	40	0.56	9.181	JDBC Thin...	JDBC ...	2FE041544310A709390CC
22:00:00	SELECT ...	0.571	8,218,405	30,603	3,99...	1,75...	0	384	324.1	59.9	673	0.089	0.482	JDBC Thin...	JDBC ...	2590338A3D2FD0160C56F
21:00:00	SELECT ...	1.209	811,270	11,047	9,83...	95,612	0	373.5	352.8	20.7	309	0.067	1.142	JDBC Thin...	JDBC ...	2A61CE0A6CC2C2CB22D34E
21:20:00	SELECT ...	1.052	2,023,811	13,291	12,5...	247,...	0	369.1	338.75	30.35	351	0.086	0.965	JDBC Thin...	JDBC ...	2A61CE0A6CC2C2CB22D34E
20:40:00	begin sy...	91.95	3	2	0	0	0	367.8	367.35	0.45	4	0.113	91.838	JDBC Thin...	JDBC ...	2ABC97683688AA2509D54
21:20:00	SELECT P...	1.408	2,677,265	16,108	8,28...	520,...	0	366.15	338.05	28.1	260	0.108	1.3	JDBC Thin...	JDBC ...	17B28D565B54D3E643036
21:30:00	SELECT S...	7.661	2,430,986	20,125	9,59...	270,...	0	360.05	336.95	23.1	47	0.491	7.169	JDBC Thin...	JDBC ...	2FE041543E13BF78390CC
21:10:00	SELECT ...	7.184	2,188,533	20,056	10,0...	232,...	0	359.2	343.75	15.45	50	0.309	6.875	JDBC Thin...	JDBC ...	2FE041543E13BF78390CC
21:50:00	SELECT S...	5.676	1,821,020	26,889	12,1...	198,...	0	357.6	340.75	16.85	63	0.267	5.409	JDBC Thin...	JDBC ...	6D4CAC264975D3873EC1F
21:50:00	SELECT S...	1.71	384,600	16,261	0	370,...	0	357.3	338.6	18.7	209	0.089	1.62	JDBC Thin...	JDBC ...	1912FB865163FE4A1BEA2
21:00:00	SELECT P...	1.299	2,138,729	14,692	15,6...	416,...	0	355.95	318.55	37.4	274	0.136	1.163	JDBC Thin...	JDBC ...	17B28D565B54D3E643036
21:20:00	SELECT ...	2.022	401,737	24,505	0	378,...	0	355.9	342.55	13.35	176	0.076	1.946	JDBC Thin...	JDBC ...	1912FB86209196E924DC7
21:10:00	SELECT ...	0.974	1,967,933	13,645	8,18...	253,...	0	352.5	328.75	23.75	362	0.066	0.908	JDBC Thin...	JDBC ...	2A61CE0A6CC2C2CB22D34E
21:00:00	SELECT S...	1.349	323,023	16,652	0	313,...	0	348.15	334.4	13.75	258	0.053	1.296	JDBC Thin...	JDBC ...	1912FB865163FE4A1BEA2
21:40:00	SELECT P...	1.687	2,056,320	14,884	5,60...	403,...	0	347.45	320.3	27.15	206	0.132	1.555	JDBC Thin...	JDBC ...	17B28D565B54D3E643036

活用TIPs:突然の性能低下現象(過去)の調査(5/6)

「性能トレンド」→「総合待機」→「待機指標」タブを選択します。
グラフが上昇している箇所の上でダブルクリックします。
この例では21:48:00時点で作業中のセッション詳細を確認します。

The screenshot shows the MaxGauge for Oracle interface. The '性能トレンド' (Performance Trend) tab is selected, and the '総合待機' (Total Wait) graph is displayed. A red box highlights the time 21:48:00 on the graph. A red arrow points to a peak in the graph with the text 'ここでダブルクリックします。' (Double-click here). Below the graph, the 'セッション' (Session) table is visible, with a red box highlighting the session details for the time 21:48:00.

Program	Module	User Name	SPID	SID	Serial	LReads /Sec	PReads /Sec	Block Changes	Executions /Sec	Hard Parse Count/Sec	Total Parse Count/Sec	Open Cursor Current	Undo Blocks	Undo Records	Undo Segment	Temp Used Size	CPU	PGA Mem(MB)	Process Mem(MB)
oracle@ts...		SYS	6544	8	1	0	0	0	0	0	0	3	0	0	0	0	0	0.2	531.9
JDBC Thin...	JDBC T...	LMS...	24655	25	9363	1,034	102	0	0	0	0	7	0	0	0	0	3	0.8	634.9
JDBC Thin...	JDBC T...	LMS...	24673	36	35...	1,827	91	0	0	0	0	6	0	0	0	0	0	1	635.2
JDBC Thin...	JDBC T...	LMS...	25136	53	36...	283	21	0	2	0	2	6	0	0	0	0	0	0.8	627
JDBC Thin...	JDBC T...	LMS...	25142	87	46...	809	29	0	0	0	0	6	0	0	0	0	0	1.9	619.1

活用TIPs:突然の性能低下現象(過去)の調査(6/6)

「Elapsed Time」順にソートし、上位の各セッションの「Event」、「SQL Text」を確認します。
また、DB全体の稼働状況を把握するため、前後時間帯のセッション情報の確認を繰り返します。

The screenshot displays the MaxGauge for Oracle interface. On the left, a tree view shows the instance hierarchy. The main area features several performance trend graphs for CPU, active sessions, logical reads, physical reads, SQL, redo, latches, locks, full scans, index scans, L/C, and total wait time. Below the graphs is a session list table. A red box highlights a specific session in the table, and a green box highlights the 'Elapsed Time' column header. A callout box on the right points to the session list with the text '分単位で前後します' (Change by minute). Another callout box at the bottom points to the time selection controls with the text '秒単位で指定します' (Specify by second). A third callout box at the bottom points to the time selection controls with the text '秒単位で前後します' (Change by second).

Program	Module	User Name	SPID	SID	Serial	LReads /Sec	PReads /Sec	Elapsed Time	Event	P1	P2	P3	CPU	SQL Text	Block Changes	Executions /Sec
ade@is...		SYS	6544	8	1	0	0	1,424,601	rbms ipc message	timeout(500)	(0)	(0)	0		0	0
JDBC Thin...	JDBC T...	LMS...	25516	65	6794	1,096	40	31	db file sequential read	file#(10)	block#(44180)	blocks(1)	0	SELECT ...	0	0
JDBC Thin...	JDBC T...	LMS...	25254	141	235	603	49	31	db file sequential read	file#(10)	block#(24412)	blocks(1)	0	SELECT ...	0	0
JDBC Thin...	JDBC T...	LMS...	25252	81	58992	1,876	55	31	db file sequential read	file#(13)	block#(45335)	blocks(1)	0	SELECT ...	0	0
JDBC Thin...	JDBC T...	LMS...	25371	9	16816	5,641	45	26	db file sequential read	file#(12)	block#(33710)	blocks(1)	1	SELECT ...	0	0
JDBC Thin...	JDBC T...	LMS...	25525	151	1	1,132	49	22	buffer busy waits	file#(10)	block#(56214)	id(130)	0	SELECT ...	0	0
JDBC Thin...	JDBC T...	LMS...	25321	82	32490	218	54	22	db file sequential read	file#(4)	block#(3063)	blocks(1)	0	SELECT ...	0	0
JDBC Thin...	JDBC T...	LMS...	25474	27	45083	527	58	19	db file sequential read	file#(28)	block#(474171)	blocks(1)	0	SELECT ...	0	0
JDBC Thin...	JDBC T...	LMS...	25450	110	5765	87	18	15	db file sequential read	file#(13)	block#(43825)	blocks(1)	0	SELECT ...	0	0
JDBC Thin...	JDBC T...	LMS...	25142	87	46844	809	29	15	db file sequential read	file#(12)	block#(373596)	blocks(1)	0	SELECT ...	0	0
JDBC Thin...	JDBC T...	LMS...	25490	86	49601	1,132	10	10	db file sequential read	file#(10)	block#(56214)	blocks(1)	0	SELECT ...	0	0
JDBC Thin...	JDBC T...	LMS...	25468	32	2385	11,350	62	10	db file sequential read	file#(12)	block#(26958)	blocks(1)	1	SELECT ...	0	0



今回のTIPからは、以下の事を確認しました。

- ✓ DB全体の負荷状況
- ✓ DB全体の待機状況
- ✓ 待機詳細
- ✓ 長時間実行されたSQL
- ✓ セッション詳細



MaxGauge TIPsはこちら

http://www.ex-em.co.jp/exem_lab0/exemlabo_maxgauge_tips_index.html

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