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1.

Computed Column Specification

Property	Value
(Formula)	(datediff(year,[Data_urodzenia],getdate()))
Is Persisted	No

Query 1: Query cost (relative to the batch): 100%

```
select * from zbd
```

Execution Plan:

- Table Scan [ZBD] Cost: 100 %
- Compute Scalar Cost: 0 %
- SELECT Cost: 0 %

Results:

	Id	Data_urodzenia	Wiek
1	1	1993-09-01	30

Indeksu nie udało się założyć na kolumnę Computed Column ze względu na błąd.

Messages

Msg 2729, Level 16, State 1, Line 1
Column 'Wiek' in table 'ZBD' cannot be used in an index or statistics or as a partition key because it is non-deterministic.

2.

Views

- System Views
- dbo.vZBD2
 - Columns
 - Triggers
 - Indexes
 - vZBD2_idx (Clustered)
 - vZBD2_idx2 (Non-Unique, Non-Clustered)
 - Statistics

Query 1: Query cost (relative to the batch): 100%

```
SELECT * FROM dbo.vZBD2 WHERE Zawartosc = 6090
```

Execution Plan:

- Table Scan [ZBD2] Cost: 100 %
- SELECT Cost: 0 %

Do założenia indeksu konieczne było stworzenie perspektywy z SCHEMABINDING = true. Indeks przy zapytaniu SELECT nie został wykorzystany.

3. Dla zapytania SELECT

EventClass	TextData	ApplicationName	NTUserName	LoginName	CPU	Reads	Writes	Duration	ClientProcessID	SPID	StartTime	EndTime	BinaryData
SQLBatchStarting	SELECT @SPID;	Microsoft SQL...	mateu	DESKTO...						2364	62	2023-01-26 22:31:48...	
SQLBatchCompleted	SELECT @SPID;	Microsoft SQL...	mateu	DESKTO...	0	0	0	0		2364	62	2023-01-26 22:31:48...	
SQLBatchStarting	SELECT * FROM dbo.vZBD2 WHERE Zawartosc = 6090;	Microsoft SQL...	mateu	DESKTO...						2364	62	2023-01-26 22:31:48...	
SQLBatchCompleted	SELECT * FROM dbo.vZBD2 WHERE Zawartosc = 6090;	Microsoft SQL...	mateu	DESKTO...	16	243	0	9		2364	62	2023-01-26 22:31:48...	
Trace Stop												2023-01-26 22:31:52...	

16 CPU – użycie procesora w milisekundach

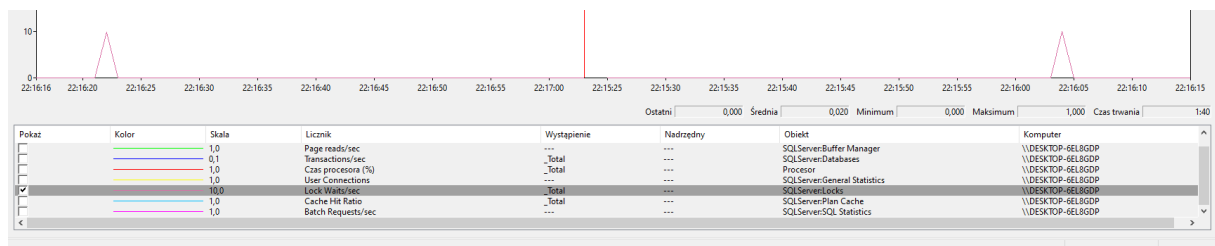
243 Reads – ilość odczytów danych ze strony

0 Writes – ilość zapisów danych na stronie

9 Duration – czas trwania zapytania w milisekundach

4.



















Udało mi się doprowadzić do zmiany wszystkich.

5.

SQL Server

This report provides an overview of the disk space used for all databases on the server and growth trends for the data file and the log file for each database for the last 2 collection points between 27.01.2023 22:40:12 and 27.01.2023 22:44:56.

Database Name	Database				Log			
	Start Size (MB)	Trend	Current Size (MB)	Average Growth (MB/Day)	Start Size (MB)	Trend	Current Size (MB)	Average Growth (MB/Day)
master	14,25		14,25	0	51,19		51,19	0
model	8,00		8,00	0	8,00		8,00	0
msdb	17,88		17,88	0	5,06		5,06	0
Northwind	6,75		6,75	0	3,75		3,75	0
tempdb	64,00		64,00	0	8,00		8,00	0
Test	100,00		100,00	0	10,00		10,00	0
ZBD	136,00		136,00	0	456,00		456,00	0

SQL Server

on DESKTOP-6EL8GDP at 27.01.2023 22:48:10

This report provides overview of the utilization of disk space within the Database.

Total Space Usage:	592,00 MB
Data Files Space Usage:	136,00 MB
Transaction Log Space Usage:	456,00 MB



 Data/Log Files Autogrow/Autoshrink Events

Event	Logical File Name	Start Time	Duration (ms)	Change In Size (MB)
Log File Auto Growth	ZBD_log	13.01.2023 22:40:54	686	64,00
Log File Auto Growth	ZBD_log	13.01.2023 22:18:56	143	64,00
Log File Auto Growth	ZBD_log	13.01.2023 22:08:32	297	64,00
Log File Auto Growth	ZBD_log	12.01.2023 21:13:55	276	64,00
Log File Auto Growth	ZBD_log	12.01.2023 19:53:40	144	64,00
Data File Auto Growth	ZBD	12.01.2023 19:53:40	10	64,00
Log File Auto Growth	ZBD_log	12.01.2023 19:47:50	147	64,00
Data File Auto Growth	ZBD	12.01.2023 19:47:48	4	64,00
Log File Auto Growth	ZBD_log	12.01.2023 19:47:35	144	64,00

Disk Space Used by Data Files

Filegroup Name	Logical File Name	Physical File Name	Space Reserved	Space Used
PRIMARY	ZBD	C:\Program Files\Microsoft SQL Server\MSSQL15.MSSQLSERVER\MSSQL\DATA\ZBD.mdf	136,00 MB	19,44 MB

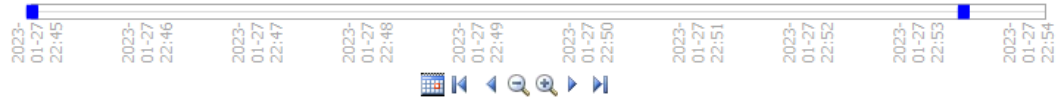
Query Statistics History

on DESKTOP-6EL8GDP at 27.01.2023 22:54:08

SQL Server

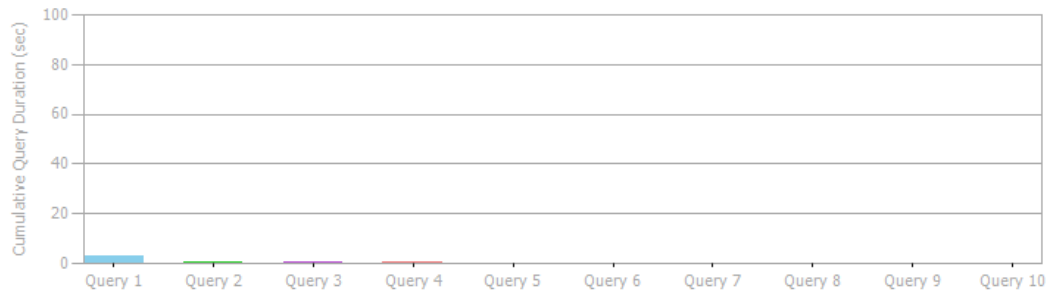
This report provides an overview of query execution statistics for the SQL Server instance.

Navigate through the historical snapshots of data using the time line below.



Selected time range: 27.01.2023 18:53:35 to 27.01.2023 22:53:35

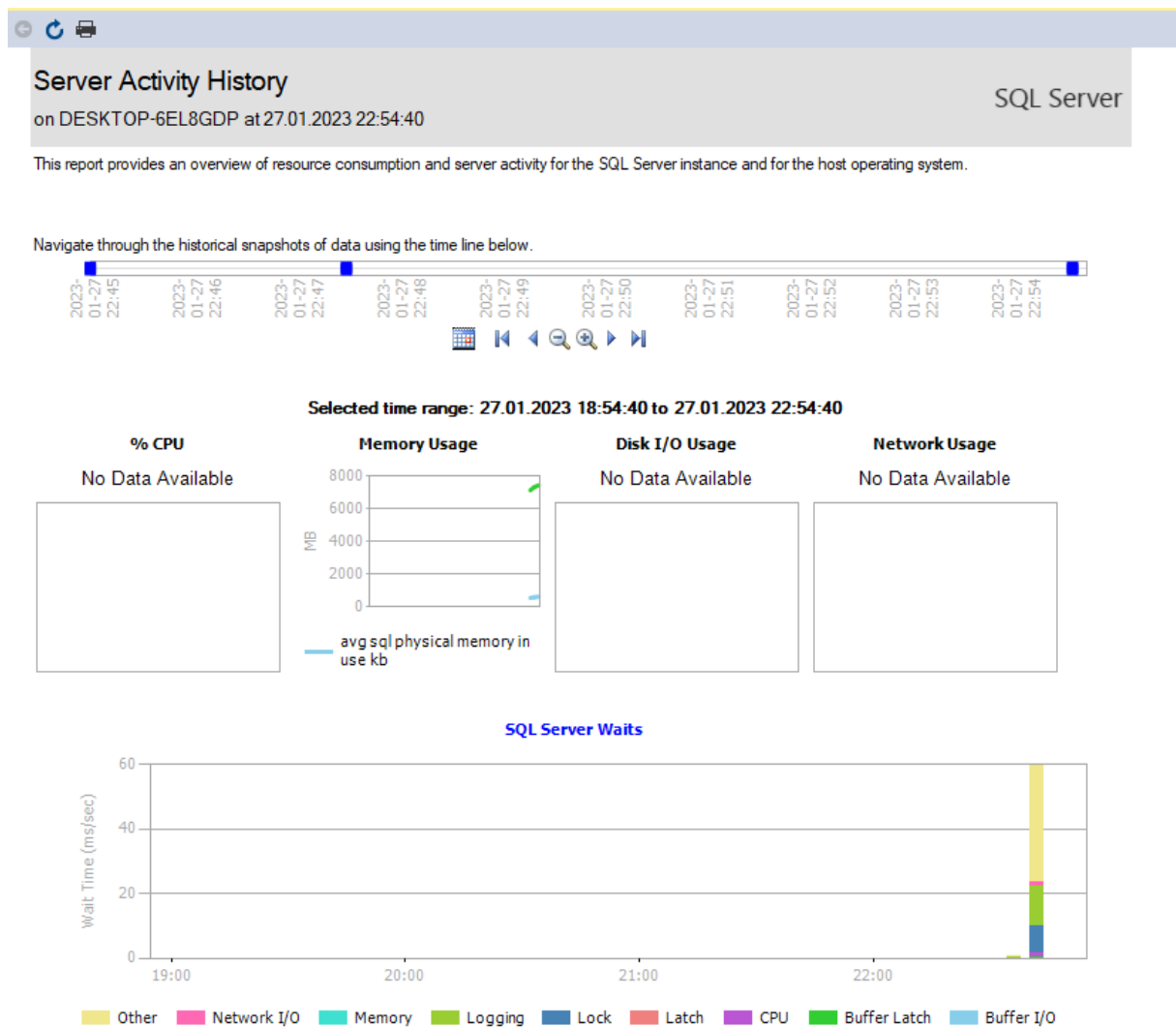
Top Queries by Total Duration



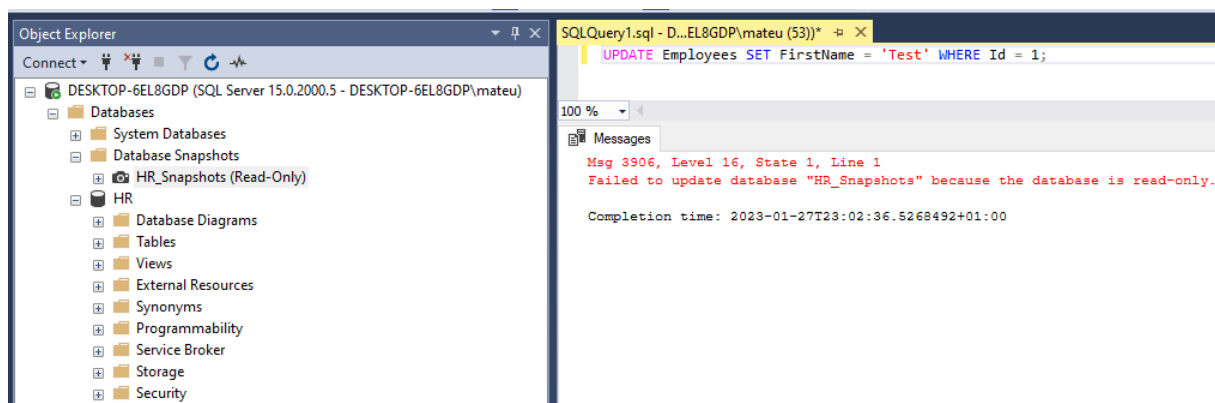
Rank Queries By:

[CPU](#) [Duration](#) [Total I/O](#) [Physical Reads](#) [Logical Writes](#)

Query #	Query	Executions / min	CPU ms / sec	Total Duration (sec)	Physical Reads / sec	Logical Writes / sec
1	SELECT siv.job_id, siv.name COLLATE SQL_Lati...	0	0	3	0	0
2	SELECT CONVERT(INT, ROW_NUMBER() OVER (ORDER	0	0	1	0	0
3	SELECT target_data FROM sys.dm_xe_session ta...	0	0	0	0	0
4	SELECT SCHEMA_NAME(sp.schema_id) AS [Schema]...	0	0	0	0	0
5	SELECT SCHEMA_NAME(udf.schema_id) AS [Schema]...	0	0	0	0	0
6	SELECT packagedata FROM sysssispackages WHERE...	0	0	0	0	0



6.



Nie można modyfikować danych, ponieważ migawka jest read-only.

7.

SQLQuery1.sql - D...EL8GDP\mateu (51))* X DESKTOP-6EL8GDP....dbo.GeometryTable

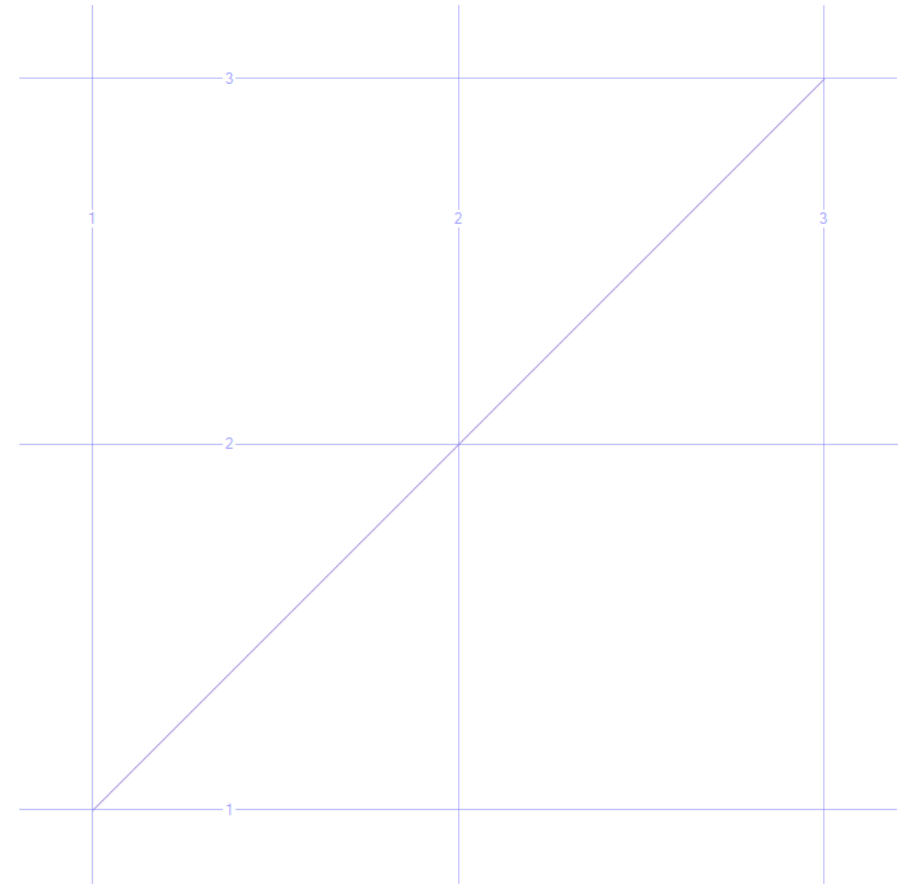
```

INSERT INTO GeometryTable VALUES (1, 'LINESTRING (1 1, 3 3)')
SELECT * FROM GeometryTable

```

100 %

Results Spatial results Messages



Select spatial column:
Geometry

Select label column:
(None)

Zoom:

☒ Show grid lines

Query executed successfully. DESKTOP-6EL8GDP (15.0 RTM) DESKTOP-6EL8GDP\mateu ... ZBD 00:00:00 1 rows

SQLQuery2.sql - D...EL8GDP\mateu (53))* X SQLQuery1.sql - D...EL8GDP\mateu (51))* DESKTOP-6EL8GDP....dbo.GeometryTable

```

CREATE SPATIAL INDEX GeometryTable_Geometry_idx ON GeometryTable(Geometry) WITH (BOUNDING_BOX= (xmin=-10, ymin=-10, xmax=10, ymax=10));

```

100 %

Messages

Commands completed successfully.

Completion time: 2023-01-28T09:32:37.1679317+01:00

8.

SQLQuery5.sql - D...EL8GDP\mateu (72))* X

```

CREATE TABLE ImageTable(id int, img Image)
INSERT INTO ImageTable values (1, (SELECT * FROM OPENROWSET(BULK N'C:\img\1.jpg', SINGLE_BLOB) as T1))
SELECT * FROM ImageTable

```

100 %

Results Messages

id	img
1	0xFFD8FFE000104A46494600010100000100010000FFDB00...

Niestety nie udało mi się zmienić fizycznej lokalizacji kolumny z typem Image.

9.

```
SQLQuery6.sql - D...EL8GDP\mateu (66))* X SQLQuery5.sql - D...EL8GDP\mateu (72))*
CREATE TABLE XMLTable(Id int, XMLData XML)

INSERT INTO XMLTable VALUES (1, '<test>Test</test>')

SELECT * FROM XMLTable
```

100 %

Results Messages

	Id	XMLData
1	1	<test>Test</test>

```
SQLQuery6.sql - D...EL8GDP\mateu (66))* X SQLQuery5.sql - D...EL8GDP\mateu (72))*
INSERT INTO XMLTable VALUES (2, '<test>Test</testa>')
```

100 %

Messages

Msg 9436, Level 16, State 1, Line 1
XML parsing: line 1, character 18, end tag does not match start tag

Completion time: 2023-01-28T21:33:22.6018057+01:00

```
SQLQuery6.sql - D...EL8GDP\mateu (66))* X SQLQuery5.sql - D...EL8GDP\mateu (72))*
CREATE PRIMARY XML INDEX xmldata_idx ON XMLTable(XMLData)
```

100 %

Messages

Commands completed successfully.

Completion time: 2023-01-28T21:38:17.5908165+01:00

10.

```
SQLQuery8.sql - D...EL8GDP\mateu (69))* X SQLQuery6.sql - D...EL8GDP\mateu (66))* SQLQuery5.sql - D...EL8GDP\mateu (72))*
CREATE TABLE BigTextTable(Id int, Text Varchar(Max), PRIMARY KEY (Id))
```

100 %

Messages

Commands completed successfully.

Completion time: 2023-01-28T21:41:22.9430811+01:00

```
Fulltext.sql - DES...6EL8GDP\mateu (58))* X
CREATE FULLTEXT CATALOG fulltextCatalog AS DEFAULT
CREATE FULLTEXT INDEX ON BigTextTable2(Text)
KEY INDEX PK__BigTextT2
```

100 %

Messages

Commands completed successfully.

Completion time: 2023-01-28T22:52:25.6863493+01:00

Fulltext.sql - DES...6EL8GDP\mateu (58))*

```
--CREATE FULLTEXT CATALOG fulltextCatalog AS DEFAULT  
  
--CREATE FULLTEXT INDEX ON BigTextTable(Text)  
--KEY INDEX PK__BigTextT  
  
SELECT * FROM BigTextTable WHERE CONTAINS(Text, 'Lorem')  
  
SELECT * FROM BigTextTable WHERE FREETEXT(Text, 'Aliquam')
```

100 %

Results Messages

	Id	Text
1	1	Lorem ipsum dolor sit amet, consectetur adi...

	Id	Text
1	1	Lorem ipsum dolor sit amet, consectetur adi...