



**Welcome to
Perth Microsoft Data,
Analytics, AI and Power
Platform**

Thanks to our Sponsor



Acknowledgment of Country

We wish to acknowledge the traditional custodians of the land we are meeting on, the Whadjuk (Perth region) people. We wish to acknowledge and respect their continuing culture and the contribution they make to the life of this city and this region.

CHANGE TRACKING

Simple yet Powerful



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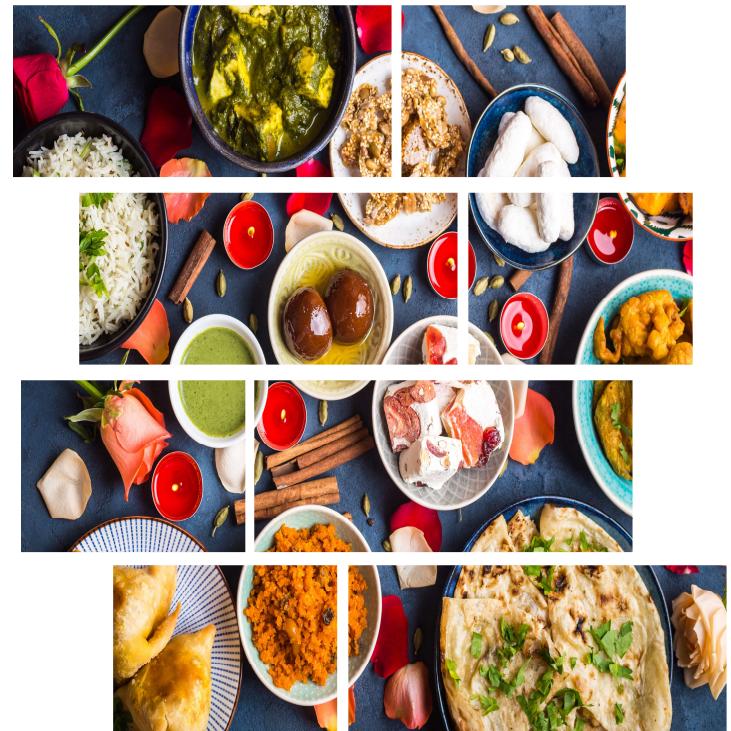
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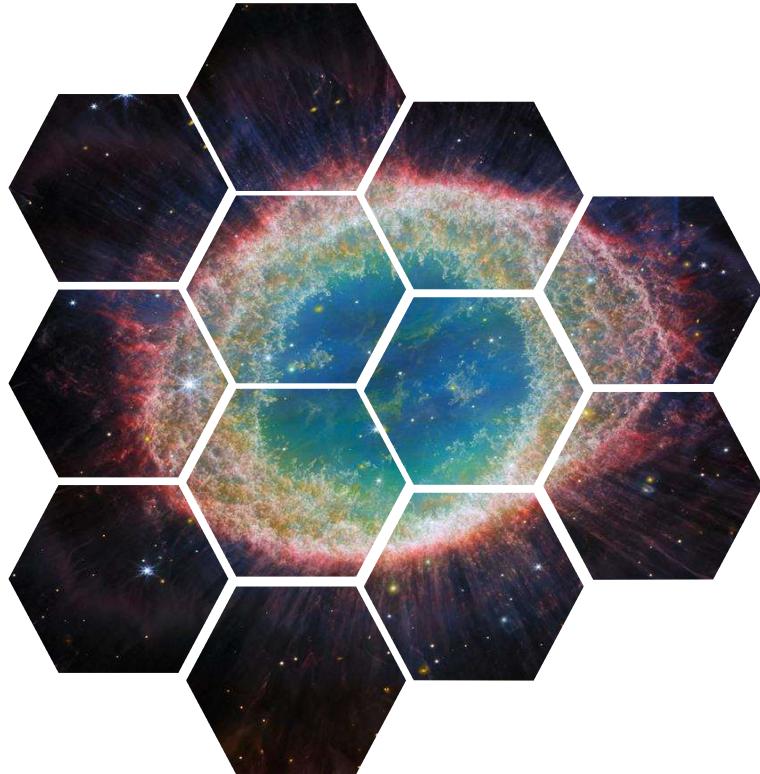
CHANGE TRACKING



Change Tracking

- ❖ Change tracking is a lightweight feature in SQL Server that enables to monitor and track changes made to the data in your database
- ❖ No table definition to be changed nor triggers created
- ❖ Change tracking is based on committed transactions. The order of the changes is based on transaction commit time
- ❖ The values of the primary key column are the only information from the tracked table that is recorded with the change information.





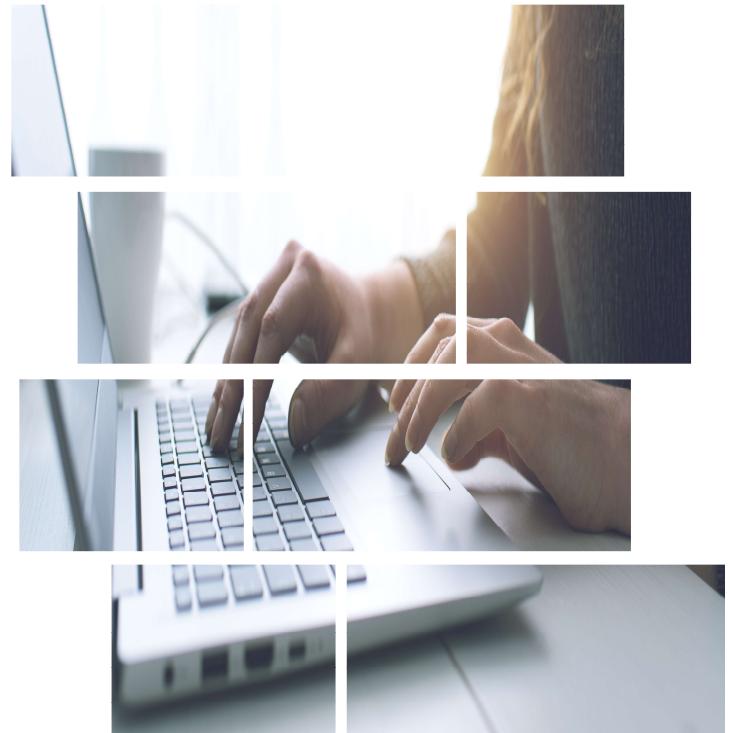
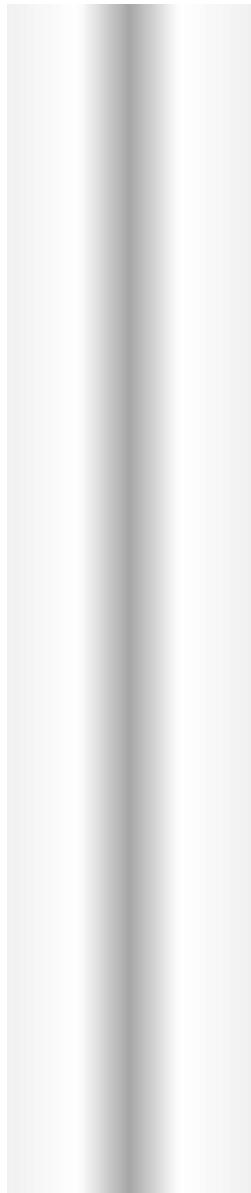
Key Concepts

- ❖ Change tracking is at database and then table level
- ❖ Retention Period and Change versioning
- ❖ System-generated columns
- ❖ Change tracking common functions
 - ❖ CHANGE_TRACKING_CURRENT_VERSION
 - ❖ CHANGETABLE()
 - ❖ CHANGE_TRACKING_IS_COLUMN_IN_MASK()
- ❖ Info is first stored in in-memory rowstore and gets flushed to disk at every checkpoint
- ❖ Auto Cleanup scans for all user DB's with CT enabled and purges the on-disk table based on their retention period. Manual clean up can be invoked when needed



See it in action

- ❖ Enable and disable CT
- ❖ Find the changes in a table
- ❖ Track changes on IUD
- ❖ Check how to clean up manually





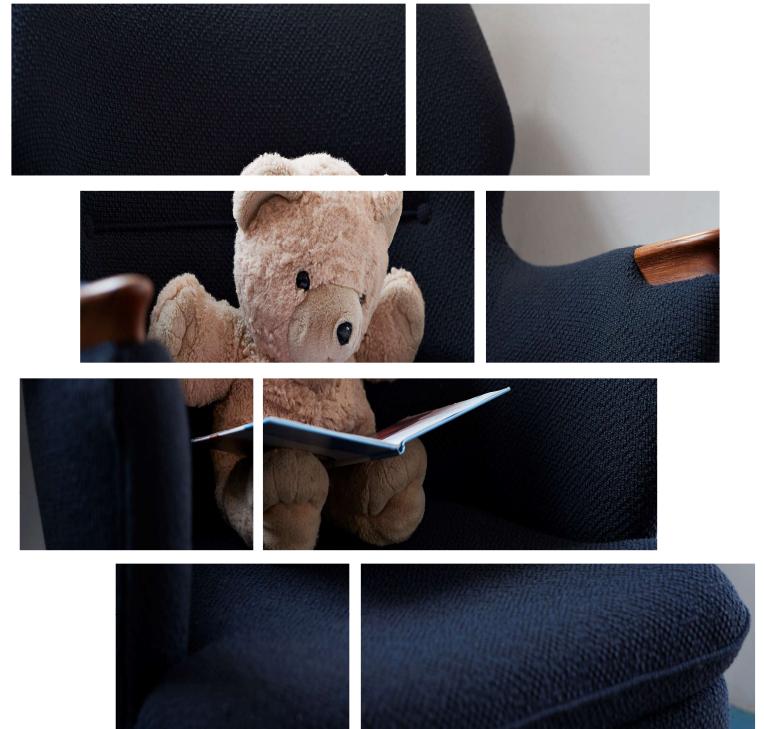
Change Data Capture

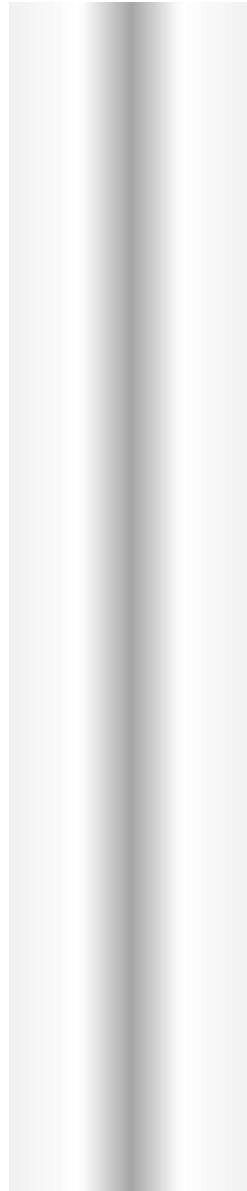
- ❖ Change data capture records insert, update, and delete activity applied to SQL Server tables, supplying the details of the changes in an easily consumed relational format.
- ❖ Change tables are created in same location in the database schema
- ❖ For real-time data pipelines out of SQL Server, use CDC but for queries to track changes periodically CT is best
- ❖ While change data capture records all changes to a table, change tracking only compares the difference between the current state and a given time in the past. Intermediate changes aren't retained.



Gotchas

- ❖ While change tracking is a powerful feature, it can have an impact on your SQL Server's performance, so always keep an eye
- ❖ Reasonable retention period to ensure the information is removed promptly
- ❖ Use proper indexing on tables to optimize performance
- ❖ Optimize cleanup tasks aka regular clean up
- ❖ Monitor the CT table sizes





Question hour



THANK YOU