Enabling CDC on Azure SQL DB fails with error Msg 22830 Level 16

Last updated by | Vitor Tomaz | Feb 24, 2023 at 3:26 AM PST
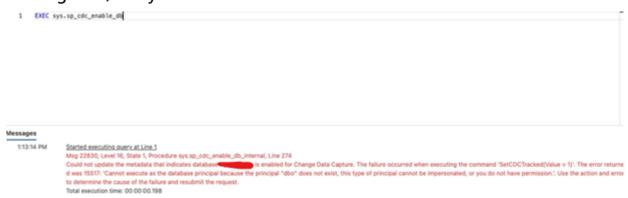
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Issue

An issue was noticed recently while enabling CDC on an azure SQL DB that is restored from a copy of another DB. The command that was executed was 'EXEC sys.sp_cdc_enable_db'. You may receive an error as shown below:

Investigation/Analysis

Here is the error text:

MESSAGE 'Msg 22830, Level 16, State 1, Line 274

Could not update the metadata that indicates database db is enabled for Change Data Capture. The failure occurred when executing the command 'SetCDCTracked(Value = 1)'.

The error returned was 15517: 'Cannot execute as the database principal because the principal ''dbo'' does not exist, this type of principal cannot be impersonated, or you do not have permission.'.

Use the action and error to determine the cause of the failure and resubmit the request.'

Mitigation

If you create an Azure SQL Database as a Microsoft Azure Active Directory (Azure AD) user and enable change data capture (CDC) on it, a SQL user (for example, even with the highest privileges) won't be able to disable/make changes to CDC artifacts.

However, another Azure AD user will be able to enable/disable CDC on the same database.

Similarly, if you create an Azure SQL Database as a SQL user, enabling/disabling change data capture as an Azure AD user won't work.

Also Enabling CDC will fail on a database, Restored from another Azure SQL DB, where CDC was not originally enabled on the Source DB.

To resolve this issue, execute this:

- Login as Azure AD admin of the server

- Run ALTER AUTHORIZATION command on the database:

- ALTER AUTHORIZATION ON DATABASE::[<db_name_on_which_failure_occurred>] to [<aad_admin_login_name>];

- exec sp_cdc_enable_db

Please note that while trying this, the person logging in with his Azure AD login can bump up his own permissions as well.

RCA Template (optional)

TBD

More Information (optional)

Detailed information/background that may be useful but isn't strictly required for troubleshooting. Often this is the "verbose" details that one usually doesn't need

Public Doc Reference (optional)

https://learn.microsoft.com/en-us/sql/relational-databases/track-changes/about-change-data-capture-sql-server?view=sql-server-ver16 ↗

Internal Reference (optional)

This may include links to architecture, training material, etc. that is helpful for understanding the steps given above.

Root Cause Classification

Change Data Capture/Error/Setup and Configuration

How good have you found this content?