

Always Encrypted - Kusto telemetry

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Always Encrypted

Always Encrypted telemetry is exposed in the

[dbo].[vw_FEATURE_SQLDB_AlwaysEncrypted] view.

Each row in this view represents a customer database on a given date. The Always Encrypted metrics captured in the view are described in the below table.

Column Name	Data Type	Description	
TotalCMK	Int	The number of column master keys for Always Encrypted in the database	
TotalCEK	Int	The number of column encryption keys for Always Encrypted in the database.	
RandomizedCells	bigint	The number of cells encrypted with randomized encryption	
DeterministicCells	bigint	The number of cells encrypted with deterministic encryption	
TotalQueries	bigint	The number of queries against encrypted columns	
IsAlwaysEncrypted	Int	Indicates if Always Encrypted is used in the database. • 1 if TotalCMK > 0. • 0 – otherwise.	
IsEncryptedData	Int	Indicates if the database contains encrypted data. • 1 if RandomizedCells + DeterministicCells > 0. • 0 – otherwise.	
IsQueriedData	Int	Indicates if any queries against encrypted columns have been run on the database. • 1 if TotalQueries > 0. • 0 – otherwise.	

Sample queries

Get the current number of customers and databases who started configuring Always Encrypted with secure enclaves by creating at least one enclave-enabled column master key.

```
[SELECT
count(distinct c.[MSCustomerGUID]) as CustomerCount
, count(distinct r.[SQLDatabaseGUID]) as DatabaseCount
FROM [dbo].[vw_SQLResources] r JOIN
[vw_FEATURE_SQLDB_AlwaysEncrypted] ae
ON r.Date = ae.Date AND r.[SQLDatabaseGUID] = ae.[SQLDatabaseGUID]
JOIN [dbo].[vw_CustomerInformation] c
ON r.[SubscriptionGUID] = c.[SubscriptionGUID]
AND r.[Date] = c.[Date]
WHERE
r.Date = CONVERT(Date, getdate()-5)
AND ae.[EnclaveCMK] > [0]())()
```

Get the list of customers who have any data stored in enclave-enabled columns, sorted by the number of cells in enclave-enabled columns.

```
SELECT * FROM
(
SELECT
c.[MSCustomerGUID]
, c.[MSCustomer_OrganizationName]
, count (DISTINCT r.[SQLDatabaseGUID]) as DatabaseCount
, sum(ae.[RandomizedCells] + ae.[DeterministicCells]) as EnclaveEncryptedCells
FROM [dbo].[vw_SQLResources] r JOIN
[vw_FEATURE_SQLDB_AlwaysEncrypted] ae
ON r.Date = ae.Date AND r.[SQLDatabaseGUID] = ae.[SQLDatabaseGUID]
JOIN [dbo].[vw_CustomerInformation] c
ON r.[SubscriptionGUID] = c.[SubscriptionGUID] and r.date = c.date
WHERE
r.Date = CONVERT(Date, getdate()-5)
AND ae.[EnclaveRandomizedCells] + ae.[EnclaveDeterministicCells] > 0
GROUP BY
c.[MSCustomerGUID]
, c.[MSCustomer_OrganizationName]
) as t
ORDER BY EnclaveEncryptedCells DESC
```

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