Error 10928: The request limit for the database has been reached

Last updated by | Peter Hewitt | Sep 29, 2022 at 5:03 AM PDT

Contents

Common solution

This is the common solution article related to "Error 10928 request limit being reached for the database" that's displayed to customers in the Azure portal when creating a support ticket.

Resolve "request limit reached" errors in Azure SQL Database

Azure SQL Database has specific resource limits per service tier for single databases and elastic pools. The error message "Error 10928: Resource ID : 1. The request limit for the database is %d and has been reached" occurs when the maximum number of concurrent workers, for example, the worker threads that are actively processing queries in the SQL database or elastic pool, has been reached.

Use the following diagnostics insights and guidance to resolve these errors.

Request limit reached diagnostics

We're running checks to identify the causes of a request limit being reached on your SQL database. The diagnosis takes approximately a couple of minutes to complete.
<Diagnostics results displayed to customer>

Troubleshooting

Review the recommendations below based on the category.

Category	Solution
Add resources	The *immediate solution* is to scale the database or elastic pool to a higher service tier to acquire more allocated resources to handle the workload. Adding resources enables you to react quickly when the database reaches resource limits. The database can be scaled down following performance improvements, or it can remain at the higher service tier if increased application usage can't be fixed using optimization methods.
Query optimization	Identify and optimize long-running or resource-intensive queries to reduce the query resource utilization. Use Query Performance Insight, which provides performance tuning recommendations, including *Create indexes*, *Drop indexes*, *Parameterize queries (preview)*, and *Fix schema issues (preview)*. Review and apply the recommendations manually, or enable automatic tuning to automatically apply them. **[Query Performance Insight]** (button for QPI) **[Enable Automatic Tuning]** (button to configure Automatic Tuning) Refer to Query tuning and hinting for additional query optimization guidance.
Reduce the max degree of parallelism (MAXDOP)	The degree of parallelism sets the number of processors employed to run a single statement, for each parallel plan execution. Parallel executions use more workers. Reduce the `MAXDOP` of the database, setting the value between 1 and 8. The following Transact-SQL (T-SQL) command sets the `MAXDOP` to `4`: `ALTER DATABASE SCOPED CONFIGURATION SET MAXDOP = 4;` Altering `MAXDOP` is an online operation, which doesn't require a service restart. For more information, see Changing default MAXDOP in Azure SQL Database.
Blocking issues	Query-blocking ties up a worker for the duration of the blocking. Optimize query workload to reduce blocking duration and frequency. Refer to the article Understand and resolve Azure SQL Database blocking problems.
Fragmented indexes / Statistics outdated	Rebuild indexes and update statistics to improve performance. See How to maintain Azure SQL Indexes and Statistics.

Category	Solution
	Azure Automation can be used to configure a runbook to perform scheduled index and statistics maintenance.

Resources

- Troubleshoot Error 10928
- Resource Management: Sessions, Workers, and Requests
- Detectable types of query performance bottlenecks in Azure SQL Database
- Resource limits for single databases using the vCore purchasing model
- Resource limits for single databases using the DTU purchasing model
- Resource limits for elastic pools using the vCore purchasing model
- Resource limits for elastic pools using the DTU purchasing model
- sys.dm_db_resource_stats
  A dynamic management view (DMV) that can be run to show the session and worker usage, `max_worker_percent` and `max_session_percent`, relative to the database limit.

How good have you found this content?