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SQL Database Repair 6 minute read

How to Recover MS SQL Database from Suspect Mode?

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Approved By Kuljeet Singh
Updated on September 14th, 2023

Summary: Read this post to find solutions to recover MS SQL database marked as suspect. It describes step-wise instructions to fix the 'SQL server suspect database' issue by running Transact-SQL (T-SQL) commands in SQL Server Management Studio (SSMS). Also, it provides an alternative solution to restore the database using a SQL Recovery tool.

When SQL database goes into suspect mode, it becomes inaccessible. In such a situation, you will neither be able to connect to the database nor recover it during server startup.

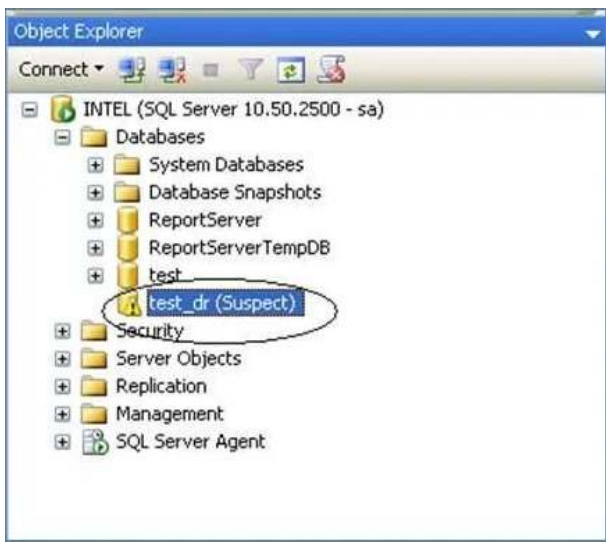

Figure 1: Database in Suspect Mode

Check out the Infographic below for quick solutions to recover database from suspect mode in SQL Server 2008, and higher versions.

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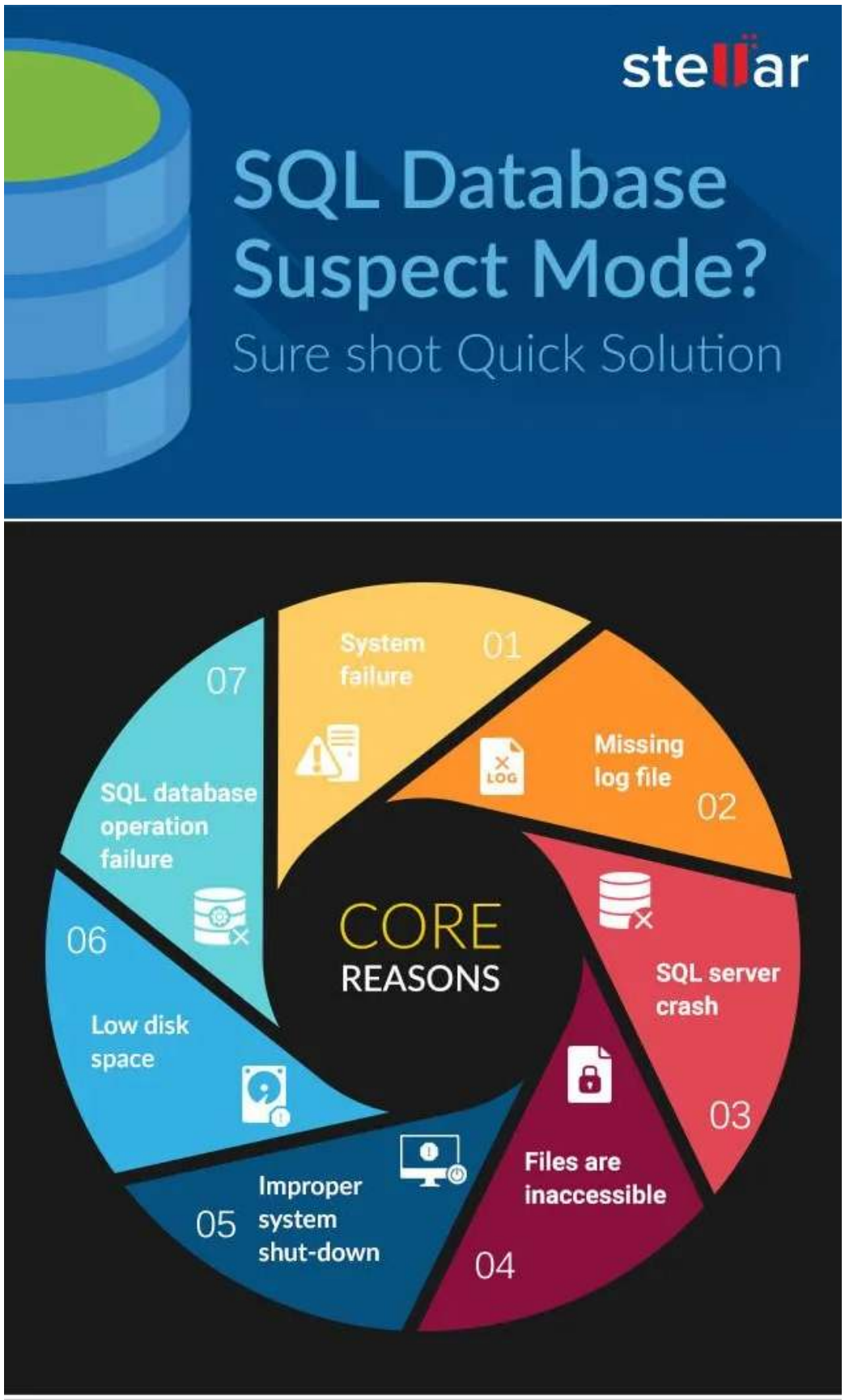

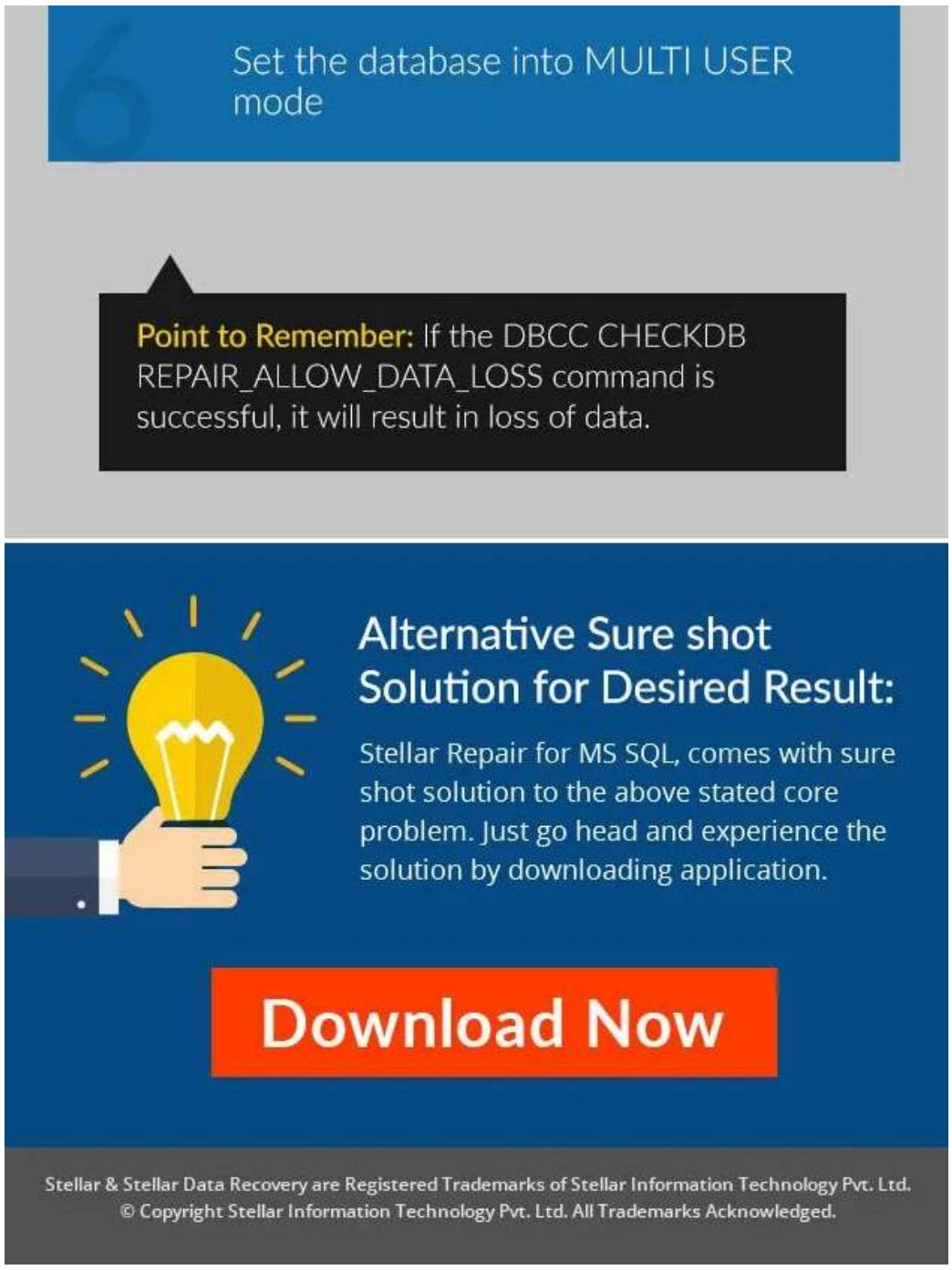

When does SQL database goes to suspect mode?

When *SQL server suspects the primary filegroup of the database to be damaged* or *if the database file is missing,* the database status is set to 'Suspect'.

Also, there are a wide range of errors that could result in **SQL database in suspect mode**. Some of them are listed as below:

- System fails to open the device where the data or log file of SQL server resides.
- SQL server crashes or restarts in the middle of a transaction, resulting in a corrupt or inaccessible transactions log file.
- SQL Server tries to open a database, and the file belonging to that database is already open by anti-virus software installed on your system.
- The database is terminated abnormally.
- Lack of disk space.
- SQL cannot complete a rollback or roll forward operation.
- Database files are being held by the operating system, third-party backup software, etc.

How to get SQL database out of

NOTE: You can try restoring the database in suspect mode from a good known backup. If the backup is not available, proceed with the following steps.

Follow the steps in sequence given below to **recover MS SQL database from suspect mode**:

Step 1: Open **SSMS** and connect to the database.

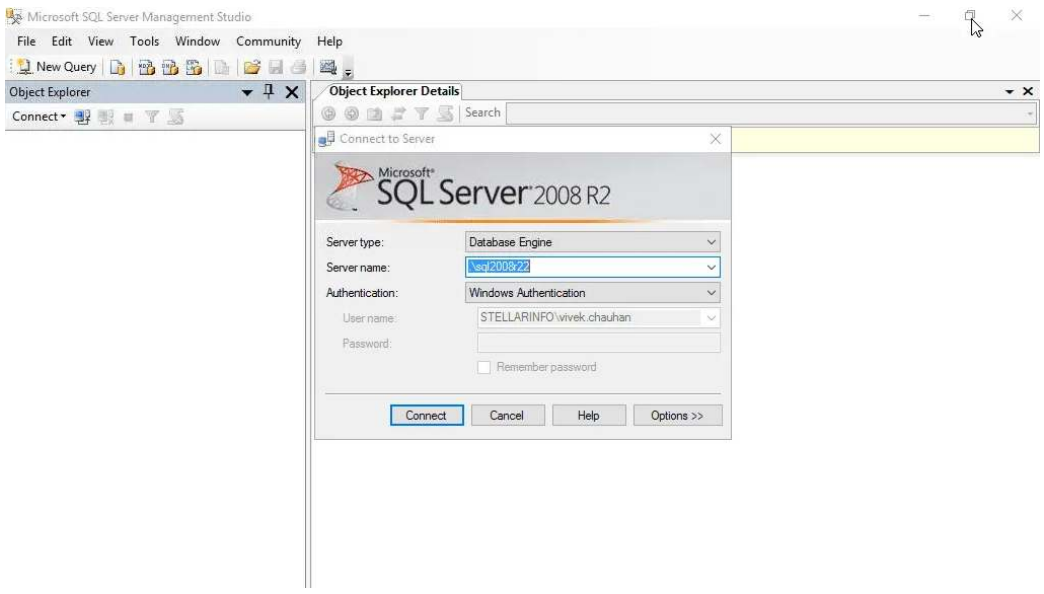

Figure 2: Connect to Database

Step 2: Select the **New Query** option.

Figure 3: Select New Query

Step 3: In the Query editor window, enter the following code to turn off the suspect flag on the database and set it to **EMERGENCY:**

```
EXEC sp_resetstatus ‘db_name’;
ALTER DATABASE db_name SET EMERGENCY
```

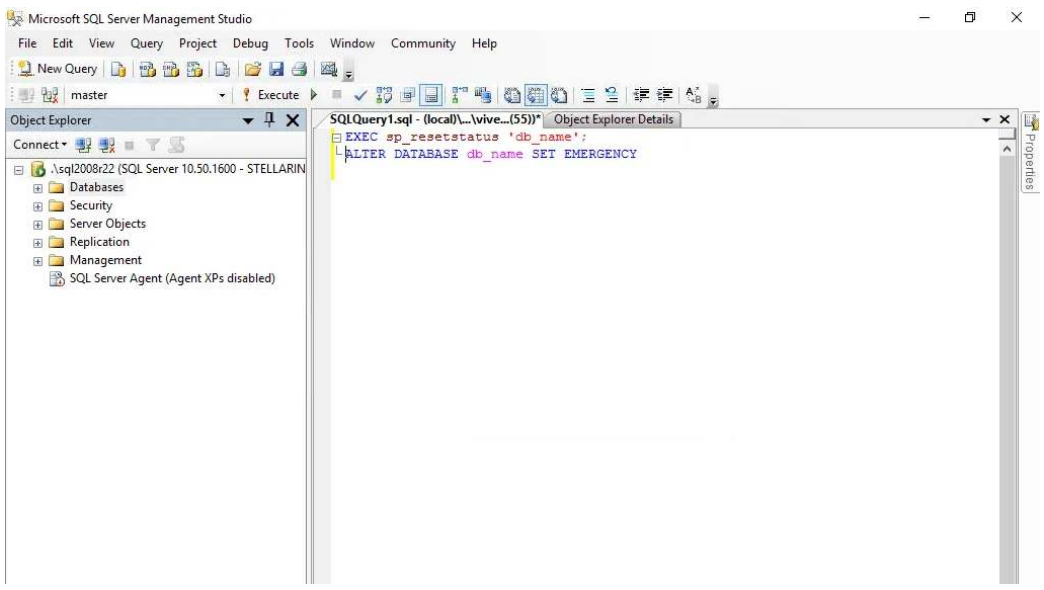

Figure 4: Set Database in Emergency Mode

NOTE: If you cannot set the database in emergency mode, skip to the next solution.

Step 4: A suspect database might not be corrupted. You can determine if the database is corrupted or not by running the following DBCC CHECKDB command.

```
DBCC CHECKDB ('database_name')
```

This statement will report any consistency errors (if found) in the database and will recommend running the minimum level of repair option to fix corruption.

Before initiating the repair process, you must first set the database into 'Single User Mode.' Doing so will prevent other users from making any changes to the database during the repair process.

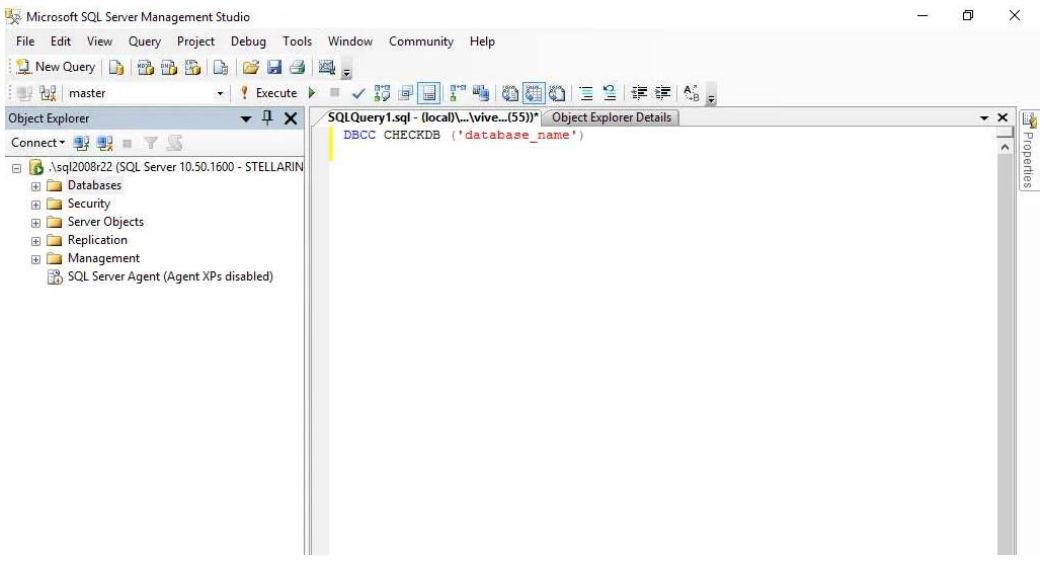

Figure 5: Check Database Consistency

Step 5: Now, let's bring the database into the Single User mode and roll back the previous transactions by executing the below command:

```
ALTER DATABASE database_name SET SINGLE_USER WITH
ROLLBACK IMMEDIATE
```

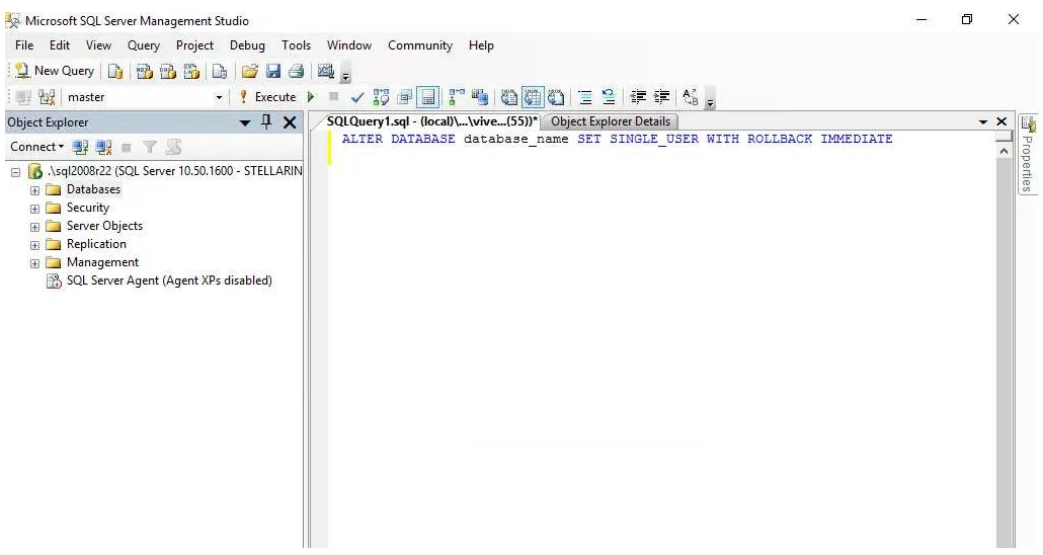

Figure 6: Set Database to Single_User Mode

Step 6: Take a **complete backup** of the corrupted files to avoid chances of data loss.

Step 7: After putting the db in SINGLE USER mode, try to fix the consistency errors using the REPAIR_REBUILD option of DBCC CHECKDB. This option can quickly repair missing rows in nonclustered indexes. In addition, you can use it for more time-consuming repair operation, such as rebuilding an index.

DBCC CHECKDB ('database_name', REPAIR_REBUILD)

suggested repair option. The syntax is as follows:

```
DBCC CHECKDB (‘database_name’, REPAIR_ALLOW_DATA_LOSS)
```

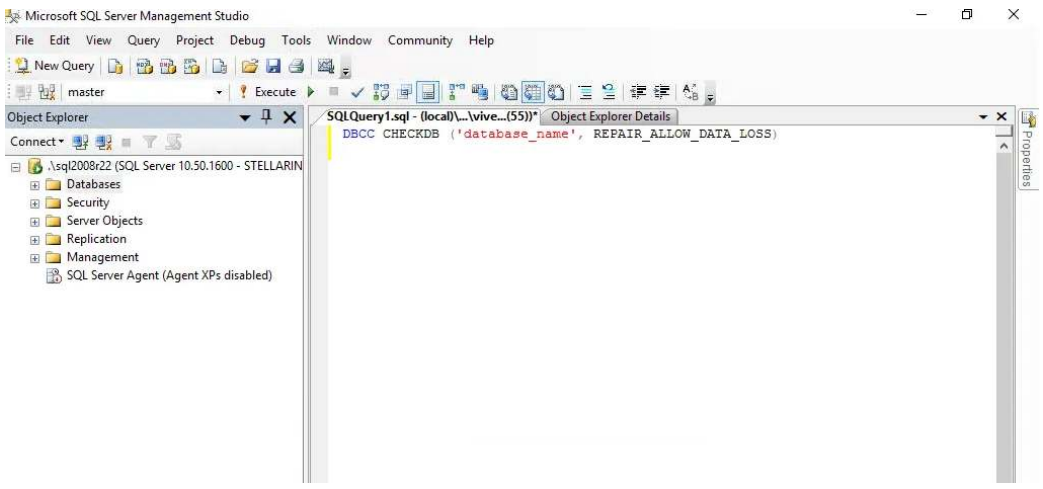

Figure 7: Repair Database with DBCC CHECKDB

Step 8: Bring the database into the **Multi-User mode:**

```
ALTER DATABASE database_name SET MULTI_USER
```

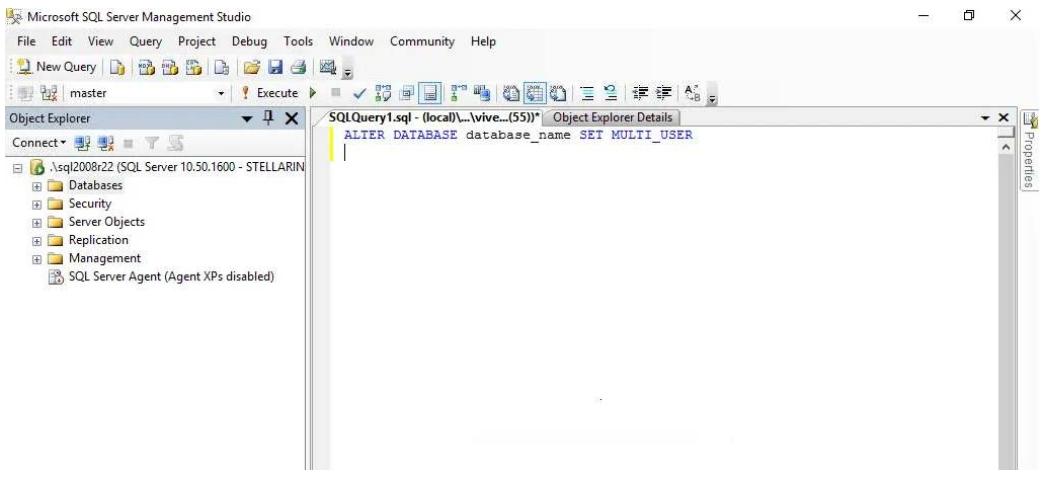

Figure 8: Set Database to Multi-User Mode

```
ALTER DATABASE database_name SET MULTI_USER
```

Step 9: Refresh the database server.

After completing these steps, you should be able to connect to the database. In case of any data loss, you’ll have the db backup to restore from (Step 6).

What if this solution doesn’t work?

If your server database file has turned severely corrupt, the above-mentioned steps may fail to revive the database. At this point, try restoring the database by using Stellar Repair for MS SQL.

The software can fix common SQL database corruption errors that occur due to reasons such as the **database in suspect mode** and several others. The software uses advanced algorithms to repair and restore SQL db from suspect mode to normal state (online).

How to Recover SQL Database from Suspect Mode with the Stellar SQL Recovery Tool?

NOTE: Make sure to close the server instance before running Stellar Repair for MS SQL software.

Step 1: Download, install, and run **Stellar Repair for MS SQL** software.

Step 2: From the **Select Database** window, choose **Browse** or **Search** to select the SQL database file (.mdf) of the suspect database.

Figure 9: Select Database File

Step 3: Once the file is selected, hit **Repair**.

Figure 10- Repair Selected File

NOTE: Make sure to uncheck the 'Include Deleted Records' checkbox if you don't want the deleted records to be recovered.

Step 4: Preview the repaired MDF file for recoverable SQL server database objects.

Figure 11: Preview window

Step 5: Click **Save** on **File** menu to save the repaired file.

Figure 12: File menu

Step 6: From **Save Database** window, perform the following:

- Select **MDF** under **Save As**.
- Save the repaired file in **New database** or **Live database.**
- Fill in the details under **Connect To Server**.

Figure 13: Save Database window

Step 7: Click **Save**.

Open SSMS and attach the db (containing the repaired MDF file).
You will be able to access the database.

Additional features of the software

- Repairs corrupt MDF and NDF files.
- Recovers tables, triggers, keys, indexes, stored procedures,

lower versions.

- Provides multiple saving options to save the repaired database including MS SQL (MDF), CSV, HTML, and XLS.

The software is trusted by Microsoft MVPs

Conclusion

This post discussed methods on '**How to recover MS SQL database from suspect mode'**. The best approach is to restore the database from a healthy backup. If you don't have backup, use the EMERGENCY mode to access the database and repair it. However, you may fail to rollback the transactions that were active when database went into suspect mode. Also, using the REPAIR_ALLOW_DATA_LOSS option as the minimum repair level can lead to data loss. A better alternative is to use a specialized SQL database repair software that helps repair and restore the database from suspect to a normal state.

About The Author

Charanjeet Kaur

Charanjeet is a Technical Content Writer at **Stellar®**who specializes in writing about databases, e-mail recovery, and e-mail migration solutions. She loves researching and developing content that helps database administrators, organizations and novices to fix multiple problems related to MS SQL and MySQL databases and Microsoft Exchange.

33 comments

Ammar Barya says:
February 11, 2022 at 5:30 pm

hi . i am facing this issue at my DR site . PR is showing the DB is in Synchronized but DR is showing initializing/suspect . please guide me how to do it?

Reply

i have this issue at my DR site . i restored the DB at DR and when i add that DB in high availability group it should that command executed successfully but then at DR status of that DB changed to initializing/suspect. can any one help me in this? i am quite new at SQL server

Reply

Ammar Barya says:
February 11, 2022 at 5:26 pm

i have this issue at my DR site . i restored the DB at DR and when i add that DB in high availability group it should that command executed successfully but then at DR status of that DB changed to initializing/suspend. can any one help me in this? i am quite new at SQL server

Reply

Ashley Copestick says:
December 21, 2020 at 1:43 pm

Hi. My SQL Express database was in the Suspect mode. I followed the 9 'Steps to Fix the SQL Server Database Suspect Mode Error' and my problem is fixed.

So many thanks for that solution!

Reply

Eric Simson says:
December 28, 2020 at 8:55 am

Hi Ashley! thank you so much for sharing your feedback.

Reply

Elan says:
March 9, 2020 at 4:53 am

it's very useful, thank you

Reply

amzadsyed says:
December 17, 2019 at 1:16 pm

Thank You, sir, this info is so useful it helped me in retrieving the client DB from suspect mode, Shukran.

Reply

imran says:
December 11, 2019 at 11:06 am

alter database command is not working .then what we need to do?

Reply

Eric Simson says:
December 11, 2019 at 11:46 am

You can try Stellar Repair for MS SQL.

Reply

Aravinda says:
November 25, 2019 at 6:54 am

Thanks, it helped me

Reply

Eric Simson says:
November 27, 2019 at 4:05 am

Hi Aravinda, Thanks for sharing your feedback.

Reply

aviram says:
June 4, 2019 at 5:53 am

Great Articel!!

Thanks ths fix Saved me.

Reply

Abdul Hayee says:
May 8, 2019 at 11:11 pm

If process deadlock occurs, use this command below to prioritize the process.

SET DEADLOCK_PRIORITY HIGH ALTER DATABASE dbname SET MULTI_USER;

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