



Troubleshooting Error 926

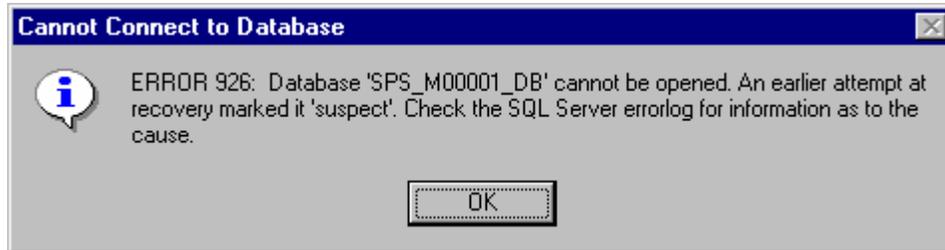
March 15, 2000

Table of Contents

1.	Problem	1
2.	Verification	2
3.	Solution	3
3.1	Step 1: Troubleshooting the Cause	3
3.2	Step 2: Resetting the Suspect Status	4

1. Problem

A user logs into PD² and receives the following error message.



The database the user is trying to connect to is marked suspect. A database is marked as suspect when the server is started and the system attempted to bring the database online and failed. There are various circumstances that can cause a database to be marked suspect. This paper outlines the most common cause, which is missing database devices.

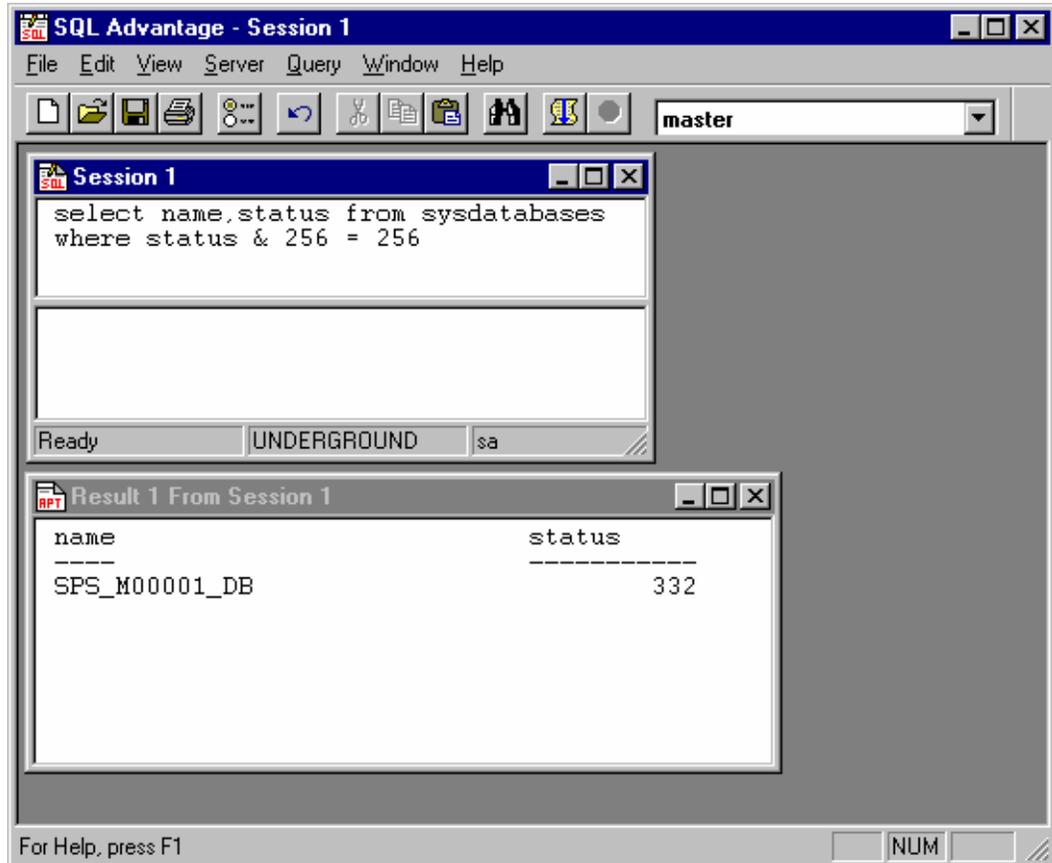
Note: In all cases of Error 926. Please obtain a complete and current copy of the Sybase error log. If the following resolution does not fix the problem then you will have to refer to the error log for further analysis.

2. Verification

Open SQL Advantage and connect to the server using your 'sa' id and password. Run the following select statement.

```
select name, status from sysdatabases
where status & 256 = 256
```

The results will look as follows.



The select statement returns the name of the database that is suspect. When a database is marked suspect the suspect status flag is turned on. This flag is equal to 256. Therefore, any database that is marked suspect will have a status equal to some value plus 256.

3. Solution

3.1 Step 1: Troubleshooting the Cause

Note: The following solution uses the example of missing devices. Follow this solution if Error 840 precedes the Error 926 in the error log. If not, adjust this solution based on the error that was encountered then proceed with Step 2.

Obtain a copy of the site's error log. It can be found in the c:\sybase\install directory on a Windows NT server or in the \$\$SYBASE/install directory on Unix servers.

Search for the first instance of Error 926.

```
00:2000/03/15 15:07:39.56 server Error: 926, Severity:
14, State: 1

00:2000/03/15 15:07:39.56 server Database
'SPS_M00001_DB' cannot be opened. An earlier attempt
at recovery marked it 'suspect'. Check the SQL Server
error log for information as to the cause.

00:2000/03/15 15:07:39.57 server Unable to proceed with
the recovery of dbid <5> because of previous errors.
Continuing with the next database.
```

In this example the database was marked suspect when the server was restarted at 3:07PM on March 15th. Search backward from this date to locate one of following:

1. The suspect database name or
2. The previous server reboot

Either of these may help you track down the error that caused the database to be marked as suspect. In this example the following error appeared at 2:27PM on March 15th.

```
00:2000/03/15 14:27:36.21 server Error: 840,
Severity: 17, State: 1

00:2000/03/15 14:27:36.21 server Device
'SPS_M00001_DB' (with physical name
'c:\sybase\data\SPS_M00001_DB.dat', and virtual
device number 13) has not been correctly activated at
startup time. Please contact a user with System
Administrator (SA) role.

00:2000/03/15 14:27:36.21 server Unable to proceed
with the recovery of dbid <5> because of previous
errors. Continuing with the next database.
```

The Error 840 indicates that the device could not be initialized because the associated file is missing. In this case the user needs to verify that the device's filename is correct and that the device is in the location specified. If the file is missing or if it has been renamed then the Error 840 will occur. If necessary, have the user move the file back to its default location and/or rename it back to the original file name.

3.2 Step 2: Resetting the Suspect Status

Once the user has fixed the problem that caused the database to be marked suspect, the status needs to be reset and the server needs to be rebooted before the users can log back into PD². Log into SQL Advantage and run the following commands, as listed, from the master database.

--Allow the user to update the system tables to reset the status.

```
sp_configure "allow updates", 1
go
```

--Switch the user to the master database.

```
use master
go
```

--Reset the status of the database by updating the status column in the sysdatabases table.

--Replace <database_name> with the name of the suspect database.

```
update sysdatabases
set status = status - 256
where status & 256 = 256 AND
name="<database_name>"
go
```

--Prevent the user from making future updates to the system tables

```
sp_configure "allow updates", 0
go
```

--Checkpoint the master database to make recovery faster.

```
checkpoint
go
```

--List the name and status of suspect databases on the server.

```
select name, status from sysdatabases
where status & 256 = 256
go
```

Verify that the database no longer appears on the list of suspect databases. If the database is no longer on the list of suspect databases then reboot the server. The database will not come online until the server is rebooted.

After rebooting the server execute the following command in SQL Advantage to verify the status of the database.

```
sp_helpdb  
go
```

When the results appear make sure the status of the suspect database now reads “select into/bulkcopy, trunc log on chkpt”.

Note: There may be additional options set for the database. But make sure phrases like “offline” and “not recovered” do not appear in the status column.

Once the status has been checked, have the users log back into PD² and continue working.