Login failed for user '' Error 18456 state 147

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Issue

SQL user is unable to connect to SQL MI and hits following error.

Note:- State 147 is specific to SQL Logins.

TITLE: Connect to Server

Cannot connect to XXXXXXX.public.XXXXXXX.database.windows.net ,3342.

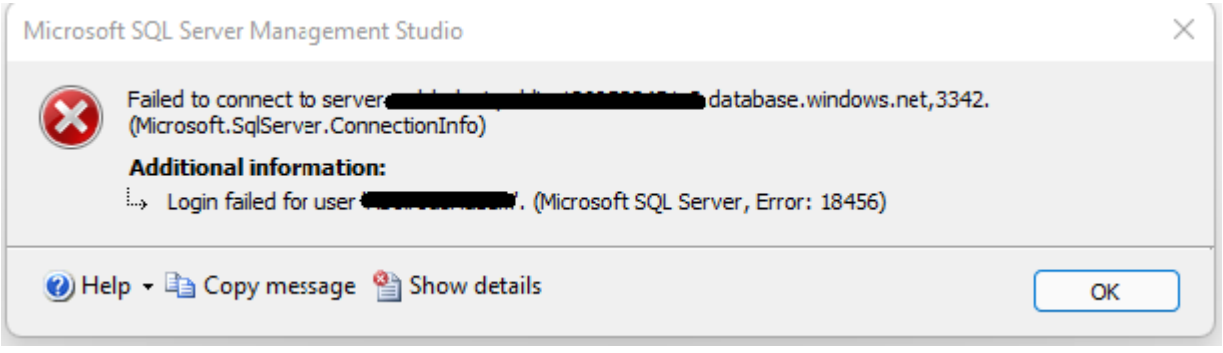
ADDITIONAL INFORMATION:

Login failed for user 'XXXXXXXX'. (Microsoft SQL Server, Error: 18456)

For help, click: http://go.microsoft.com/fwlink?ProdName=Microsoft SQL Server&EvtSrc=MSSQLServer&EvtID=18456&LinkId=20476

BUTTONS:

OK

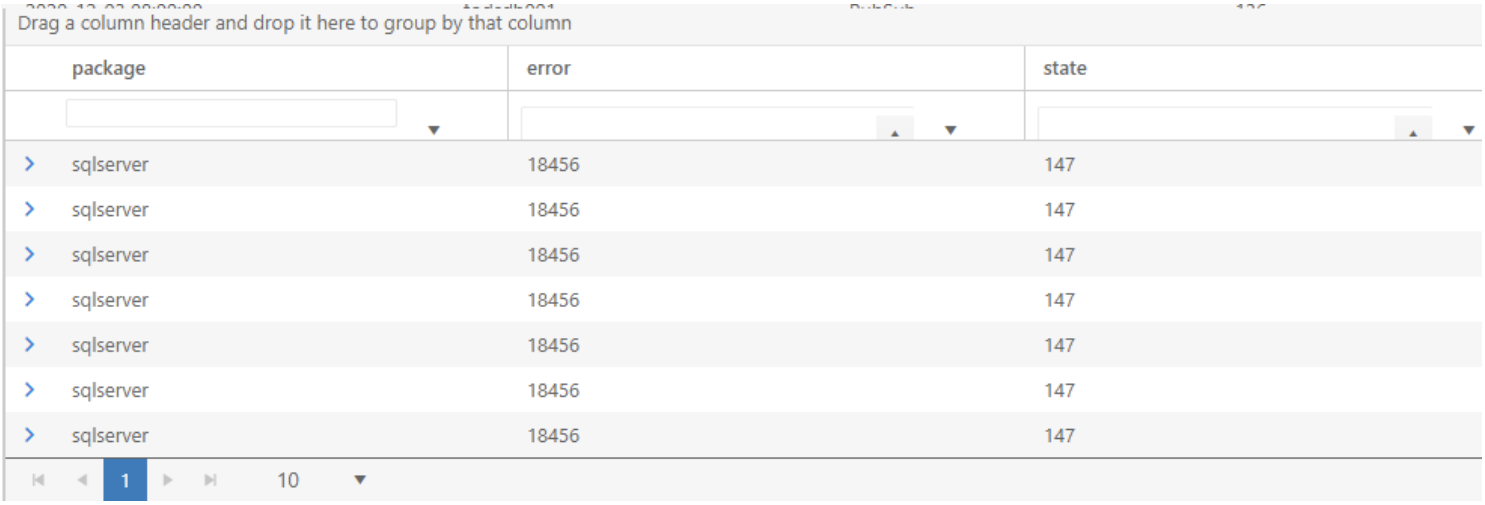


Troubleshoot

You could use ASC or Kusto to get the error state as the error message from SSMS/user side would just show error code 18456 without any state.

Using Azure Support Center

Using ASC you may be able to navigate to the following table and get the error state



Drag a column header and drop it here to group by that column

package	error	state
sqlserver	18456	147
sqlserver	18456	147
sqlserver	18456	147
sqlserver	18456	147
sqlserver	18456	147
sqlserver	18456	147
sqlserver	18456	147

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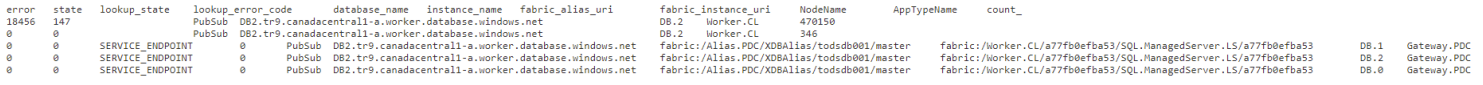
Manual investigation using Kusto

You may also use Kusto and query monlogin table to get the error state for affected user/server.

```
MonLogin
| wherelogical_server_name == "servername" or LogicalServerName == "servername"
| whereoriginalEventTimestampbetween (datetime(2020-12-03 18:00 ) .. datetime(2020-12-03 19:00))
| whereevent == 'process_login_finish'//| where AppTypeName == 'Gateway.PDC'
| wheredatabase_name == 'DBNAME'
| summarizecount() byerror, state, lookup_state, lookup_error_code, database_name, instance_name, fabric_alias
```



error	state	lookup_state	lookup_error_code	database_name	instance_name	fabric_alias_uri	fabric_instance_uri	NodeName	AppTypeName	count_
18456	147		PubSub	DB2.tr9.canadacentral1-a.worker.database.windows.net			DB.2	Worker.CL	470150	
0	0		PubSub	DB2.tr9.canadacentral1-a.worker.database.windows.net			DB.2	Worker.CL	346	
0	0	SERVICE_ENDPOINT	0	PubSub	DB2.tr9.canadacentral1-a.worker.database.windows.net	fabric:/Alias.PDC/XDBAlias/todsdb001/master	fabric:/Worker.CL/a77fb0efba53/SQL.ManagedServer.LS/a77fb0efba53	DB.1	Gateway.PDC	
0	0	SERVICE_ENDPOINT	0	PubSub	DB2.tr9.canadacentral1-a.worker.database.windows.net	fabric:/Alias.PDC/XDBAlias/todsdb001/master	fabric:/Worker.CL/a77fb0efba53/SQL.ManagedServer.LS/a77fb0efba53	DB.2	Gateway.PDC	
0	0	SERVICE_ENDPOINT	0	PubSub	DB2.tr9.canadacentral1-a.worker.database.windows.net	fabric:/Alias.PDC/XDBAlias/todsdb001/master	fabric:/Worker.CL/a77fb0efba53/SQL.ManagedServer.LS/a77fb0efba53	DB.0	Gateway.PDC	

Mitigation

The error 18456 with state 147 is caused due to:-

Login-based server access validation failed with an infrastructure error. Login lacks Connect SQL permission. SecFCheckSrvAccessNoConnectSQLPermissionSQLAuth.

Since the user is missing connect sql permission, we will need to grant the user required permission. You may use following t-sql and grant the 'connect sql' permission to affected SQL user.

```
grant connect sql to <username>;
```

Classification

Cases resolved by this TSG should be coded to the following root cause:
Root Cause: Azure SQL v3/Connectivity/Login Errors/Other

How good have you found this content?