AAD - Error States, Enumerations, and Possible Cause for 18456

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Quick Reference :

Debugging using Kusto telemetry

information: Query the MonLogin table in Kusto for the impacted DB and get the following information:

```
MonLogin
| where (event == "process_login_finish" or event == "report_login_failure") and database_name == "database_name"
| project TIMESTAMP, database_name, is_user_error, event, error,['state']
```

If is_user_error is false, look at the error and state code. – Also check for any outages or availability drops from SQL Azure or AAD service side for the impacted region. If everything looks good, create a case with the Product Group.

Common State codes and their meanings (CSS Only):

State Code	Enum	Possible issue
1	x_elfDefault = 1,	Could be anything
15	x_elfLoginSwitchDb,	Trying to connect to wrong DB
38	x_elfLoginSessDb_UseDbExplicit,	Did not specify DB name in the connection string
46	x_elfRedoLoginSessDb_UseDbExplicit,	Did not specify DB name in the connection string
82	x_elfFirewallBlockedAddress,	Fix up firewall permissions
102	x_elfFedAuthAADCertOpenStore,	Potentially server issue. Escalate
103	x_elfFedAuthAADCertFindInStore,	Potentially server issue. Escalate
104	x_elfFedAuthAADInitializeErrorForProxy,	Potentially server issue. Escalate
105	x_elfFedAuthAADCreateServiceProxy,	Potentially server issue. Escalate
106	x_elfFedAuthAADOpenServiceProxy,	Potentially server issue. Escalate
107	x_elfFedAuthAADCreateHeapForGroupLookup,	Potentially server issue. Escalate
108	x_elfFedAuthAADInitializeErrorForGroupLookup,	Potentially server issue. Escalate
109	x_elfFedAuthAADGroupLookup,	Potentially server issue. Escalate
110	x_elfFedAuthAADValidateFederatedContext,	Should not fire. Escalate
111	x_elfFedAuthAADUnknown,	Unknown issue. Escalate
112	x_elfDosGuardFailure,	Customer needs to fix up failing logins. Can bring down access to entire server.
113	x_elfDosGuardRejectedConnection,	Customer needs to fix up failing logins. Can bring down access to entire server.
117	x_elfFedAuthNonSDSNonMicrosoftConnection,	Should not fire. Escalate
119	x_elfFedAuthUnSupportedTicketType,	Validate the access token.

120	x_elfFedAuthFeatureSwitchOff,	Should not fire. Escalate
122	x_elfCloudEmptyUserName,	Should not fire for AAD. If it does, something is wrong with the client. (Maybe incorrect driver version)
123	x_elfCloudEmptyPassword,	Should not fire for AAD. If it does, something is wrong with the client. (Maybe incorrect driver version)
127	x_elfLoginSessDb_DbUnavailable,	Availability issue. Check for potential SQL Azure outages.
132	x_elfFedAuthAADLoginJWTUserError,	Something wrong with the token. Follow TSG and token validation guidelines
133	x_elfFedAuthAADLoginJWTSystemError,	Potentially server issue. Escalate

If is_user_error is true, look at the error and state code. Query **MonFedAuthTicketService** for authentication issue.

Kusto query: **Please replace highlighted name with the correct logical_server_name and database_name**

MonFedAuthTicketService

| where LogicalServerName == "{logical_server_name}" and database_name contains "{logical_database_name}"

Interesting fields are sql_connection_id , event , error_code , error_state , error_message, ExtraFields, but the other fields contain more details about the token received.

For a given sql_connection_id, you can look for the **"fedauth_ticket_service_failure"** event and **"fedauth_webtoken"** event. The "fedauth_webtoken" event contains the information on the parsed token which had caused the failure.

How good have you found this content?