Datasource and Configuration Issues

Alex Clemons - 2023-03-02 - Comments (0) - Autoform DM General Information

Autoform DM

If there is an issue with the database connection configuration in DM or a problem connecting to the configured database, then Autoform DM will fail on startup with an exception ending in the line:

Caused by: org.hibernate.HibernateException: Access to DialectResolutionInfo cannot be null when 'hibernate.dialect' not set.

The database configuration itself can be found in **standalone.xml** and looks like this:

Standalone.xml

```
<datasource jndi-name="java:/PDM" pool-name="PDM" enabled="true" use-java-context="true" use-ccm="true">
    <connection-url>jdbc:jtds:sqlserver://localhost:1433/MYDB</connection-url>
    <driver>jtds</driver>
    <pool>
      <min-pool-size>10</min-pool-size>
      <max-pool-size>20</max-pool-size>
      <prefill>false</prefill>
      <use-strict-min>false</use-strict-min>
      <flush-strategy>FailingConnectionOnly</flush-strategy>
    </pool>
    <security>
      <user-name>pdm</user-name>
      <password>pdm</password>
    </security>
    <validation>
      <check-valid-connection-sql>SELECT 1</check-valid-connection-sql>
```

```
      <validate-on-match>true</validate-on-match>
    </validation>
  </datasource>
```

The **connection-url** and **security** sections are the important lines as they hold the database location and authentication.

This article documents the failure behaviour in order to help diagnose the actual underlying problem.

General Symptoms
A database configuration error will cause DM to fail to deploy correctly at startup and cause large amounts of error logging. Look for the following symptoms:

- DM fails to deploy on startup - navigating to the web frontend results in a **404 - Not Found** error message.
- Checking the server logs shows a large number of log lines such as the following:

Server logs

```
service
jboss.deployment.subunit."pdm_app_module.ear"."applicationservice-8.0
.0-
SNAPSHOT.jar".component.ClientApplicationServiceEJB.VIEW."com.efstech
.pdm.applicationservice.ejb.se
ssion.ClientApplicationService".LOCAL (missing) dependents: [service
jboss.deployment.subunit."pdm_app_module.ear"."applicationservice-8.0
.0-SNAPSHOT.jar".component.ClientApplicationSer
viceEJB.START]
```

- Just before the deployment failure errors (as above) there is a stackstrace ending with the line:

```
Caused by: org.hibernate.HibernateException: Access to
DialectResolutionInfo cannot be null when 'hibernate.dialect' not set
```

Identifying the root cause
Should the above symptoms be apparent, then first search for a log line containing the text:

IJ000604: Throwable while attempting to get a new connection: null:

javax.resource.ResourceException: IJ031084: Unable to create connection

SQL Server

If the following error logs are displayed, there is usually a cause and a way to fix the error, as follows

Error logs

```
...
Caused by: java.sql.SQLException: Unknown server host name
'<hostname>'
...
Caused by: java.net.UnknownHostException: <hostname>
```

Cause:

Unable to resolve the hostname of the database server -

Fix:

Check the hostname is correct and verify that you can ping it and resolve its DNS entry without issue. Depending on the network setup you may need the **FQDN** (fully qualified domain name), i.e. `databasehost.some.domain.com` rather than just `databasehost`.

Error logs

```
...
Caused by: java.sql.SQLException: Network error IOException:
Connection refused
...
Caused by: java.net.ConnectException: Connection refused
```

Cause:

Unable to connect to database server - most likely an issue with the port.

Fix:

Verify the Database server is running and available on the configured port.

Error logs

```
...
Caused by: java.sql.SQLException: Cannot open database "AFPDM8DPP"
requested by the login. The login failed.
```

Cause:

The connection to the database server was successful and the login credentials were valid, but the user was not able to access the configured database.

Fix:

Check the database name is correct and that the user has the correct permissions to be able to access and read the tables.

Error logs

```
...
Caused by: java.sql.SQLException: Login failed for user 'pdm'.
```

Cause:

The specified credentials for connecting to the database server are invalid.

Fix:

Verify the username and password are correct and the user has the correct permissions to be able to connect to the database server and read the configured database.

Oracle

Error logs

```
...
Caused by: java.sql.SQLRecoverableException: IO Error: Unknown host
specified
...
Caused by: oracle.net.ns.NetException: Unknown host specified
```

Cause:

Unable to resolve the hostname of the database server.

Fix:

Check the hostname is correct and verify that you can ping it and resolve its DNS entry without issue. Depending on the network setup you may need the **FQDN** (fully qualified domain name), i.e. `databasehost.some.domain.com` rather than just `databasehost`.

Error logs

```
...
Caused by: java.sql.SQLRecoverableException: IO Error: The Network
Adapter could not establish the connection
...
Caused by: oracle.net.ns.NetException: The Network Adapter could not
establish the connection
...
Caused by: java.net.ConnectException: Connection refused
```

Cause:

Unable to connect to database server - most likely an issue with the port.

Fix:

Verify the Database server is running and available on the configured port.

Error logs:

```
...
Caused by: java.sql.SQLException: Listener refused the connection
with the following error:
ORA-12514, TNS:listener does not currently know of service requested
in connect descriptor
...
Caused by: oracle.net.ns.NetException: Listener refused the
connection with the following error:
ORA-12514, TNS:listener does not currently know of service requested
```

```
in connect descriptor
```

Cause:

Unable to locate Oracle database service - the connection to the Oracle database server has been established but the specified Oracle database service is not valid.

Fix:

Check the service name specified and verify that you are able to use another tool such as SQL Developer to connect.

Error logs

```
...
Caused by: java.sql.SQLException: ORA-01017: invalid
username/password; logon denied
```

Cause:

The specified credentials for connecting to the database are invalid.

Fix:

Verify the username and password are correct and the user has the correct permissions to be able to read and use the database service.

Error logs

```
...
WARN
[org.jboss.jca.adapters.jdbc.local.LocalManagedConnectionFactory]
(ServerService Thread Pool -- 65) IJ030027: Destroying connection
that is not valid, due to the following exception:
oracle.jdbc.driver.T4CConnection@351298af:
java.sql.SQLSyntaxErrorException: ORA-00923: FROM keyword not found
where expected
   at oracle.jdbc.driver.T4CTTIoer.processError(T4CTTIoer.java:447)
   at oracle.jdbc.driver.T4CTTIoer.processError(T4CTTIoer.java:396)
   at oracle.jdbc.driver.T4C8Oall.processError(T4C8Oall.java:951)
```

. . .

Cause:

The SQL statement used to validate the connections in the connection pool is invalid, this will be because DM has been installed with a database type other than **Oracle** so the wrong SQL has been configured.

Fix:

1. Edit the Wildfly configuration file (**standalone.xml** or **domain.xml**) or edit the database 'datasource' connection via the *management console*.

2. Find the **check-valid-connection-sql** property and ensure it is:

```
SELECT 1 FROM DUAL
```

For example:

```
<datasources>
   <datasource jndi-name="java:/PDM" pool-name="PDM" enabled="true" use-java-context="true" use-ccm="true" statistics-enabled="true">
      ...
      <validation>
        <check-valid-connection-sql>SELECT 1 FROM DUAL</check-valid-connection-sql>
        <validate-on-match>true</validate-on-match>
      </validation>
   </datasource>
 </datasources>
```