Database and Middleware Automation

Ultimate Edition

Software Version: 10.50

Troubleshooting Guide

Hewlett Packard
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Common baseline errors

Most errors that occur when running the `dmaBaselineData` command can be attributed to:

- Not setting up Oracle Database as specified in the Configure the Oracle Database topic in the *Installing Guide*.

- The TNS listener is not running.

- Not specifying the correct values in the `dmaBaselineData` command.

- Not specifying the correct HPE DMA server host name in the `dmaBaselineData` command.

- Not running the `dmaBaselineData` command with the correct permissions (root user).

The following topics will help you identify and resolve baseline errors.

Oracle Database User Was Not Created

To verify that HPE DMA Oracle Database user was created:

1. Log in to Oracle Database:

   ```
   sqlplus / as sysdba
   ```

2. Run the following query:

   ```
   select username from dba_users where username like '%DMA%'
   ```

   This command lists any usernames where DMA is part of the name.

If the HPE DMA Oracle Database user name is not on the list, have your Oracle Database administrator (DBA) follow the instructions as specified in the the Configure the Oracle Database topic in the *Installing Guide* to add the HPE DMA Oracle Database user.

Oracle Listener is not running

To verify that the Oracle Listener is running:

1. On the Oracle Database system, run the following commands:

   ```
   su - oracle
   ```

   ```
   ps –ef | grep tns
   ```

2. If the Oracle Listener is running, the output of the ps command is similar to the following output:

   ```
   [oracle@oraserver ~]$ ps -ef|grep tns
   oracle    3924     1  0 10:51 ?         00:00:00
   /u01/app/oracle/product/11.2.0/db1/bin/tnslsnr DMALIST -inherit
   oracle    3921  3632  0 10:50 pts/1     00:00:00 grep tns
   ```

   If the Oracle Listener is not running , the output of the ps command is similar to the following output:

   ```
   [oracle@oraserver ~]$ ps -ef|grep tns
   oracle    3921  3632  0 10:50 pts/1     00:00:00 grep tns
   ```

If the Oracle Listener is not running, have your Oracle DBA start it.

Oracle Database is not running

To verify that Oracle Database is running:

1. On the Oracle Database system, run the following commands:

   ```
   su - oracle
   ```

   ```
   ps –ef | grep pmon
   ```

2. If Oracle Database is running, the output of the ps command is similar to the following output:

   ```
   [oracle@oraserver ~]$ ps -ef | grep pmon
   oracle    4018     1  0 10:55 ?         00:00:00 ora_pmon_dmademo
   oracle    4109  3956  0 10:55 pts/1     00:00:00 grep pmon
   ```

If Oracle Database is not running, the output of the `ps` command is similar to the following output:

```
[oracle@oraserver ~]$ ps -ef | grep pmon
oracle    3982  3956  0 10:54 pts/1     00:00:00 grep pmon
```

If Oracle Database is not running, have your Oracle DBA start it.

Error in the Oracle Server or Oracle SID Name

If you specify an incorrect host name for the Oracle database system, an incorrect Oracle SID name, or any other incorrect database connection parameters in the `dmaBaselineData` command, the command fails.

For example:

```
$ sh ./dmaBaselineData.sh --create-tables
--create-context --database-username dma --database-password dma
--jdbc-connection-string jdbc:oracle:thin:@badorcl.mycompany.com:1521:badsid
--dma-hostname dma.mycompany.com
```

This incorrect `dmaBaselineData` command produces error messages similar to the following:

```
30 Jan 2005 11:28:45,901 INFO  DMABaselineData - Saved context file:
/opt/hp/dma/server/tomcat/webapps/dma/WEB-INF/../WEB-
INF/../../../conf/Catalina/localhost/dma.xml
30 Jan 2005 11:28:45,903 INFO  DMABaselineData - Context file has been created.
30 Jan 2005 11:28:48,016 INFO  DMABaselineData - Using specified context for
settings (command line overrides ignored) file:
/opt/hp/dma/server/tomcat/webapps/dma/WEB-INF/../WEB-
INF/../../../conf/Catalina/localhost/dma.xml
30 Jan 2005 11:28:48,834 ERROR DMABaselineData - Initial SessionFactory creation
failed.
30 Jan 2005 11:28:48,834 ERROR DMABaselineData - Unable to establish connection
with database using provided connection info.
java.lang.RuntimeException: Connection cannot be null when 'hibernate.dialect'
not set
at com.hp.dma.cmdline.DMABaselineData.init(DMABaselineData.java:171)
at com.hp.dma.cmdline.DMABaselineData.main(DMABaselineData.java:848)

...
```

To solve this issue:

- Verify that the TNS listener is running.

- Specify the correct names for the `dmaBaselineData` command.

HPE DMA Client fails to contact HPE DMA Server

If the target server cannot communicate with the HPE DMA server, a workflow appears to be running when it is not. There are several possible causes of this issue:

- The HPE DMA server name is not resolvable on the target server.

- The HPE DMA server is running a different port than the one specified in the `dma.xml` configuration file.

If the HPE DMA server host name was not specified correctly when the `dmaBaselineData.sh` command was executed,

Symptoms

If this happens, the Console page looks like the following image. Note that there are no messages in the step output box when you select the first step, and its status never changes from Initiated to Running.

The HPE DMA log file on the target server shows that the target server cannot communicate with the HPE DMA server:

```
2013-03-28 17:39:01,121 - INFO: Logging initiated for execution
'ff8080813db35c1e013db35e30e60000'
2013-03-28 17:39:01,312 - ERROR: Error with HTTP POST: "Failed to reach server:
error(111, 'Connection refused')"
2013-03-28 17:40:01,328 - ERROR: Error with HTTP POST: "Failed to reach server:
error(111, 'Connection refused')"
2013-03-28 17:41:01,345 - ERROR: Error with HTTP POST: "Failed to reach server:
error(111, 'Connection refused')"
```

This log file is located at the folowing locations on the target server:

- UNIX targets: `/var/tmp/DMA/<execution-id>/<execution-id>.log`

- Windows targets: `%TMPDIR%\dma\<execution-id>\<execution-id>.log`

  Note that that `%TMPDIR%` is evaluated based on the user running the workflow. If you log in as a different user, you may not see this file in your `%TMPDIR%`.

Note: You will see Connection Refused error messages (as shown above) if the specified `dma-hostname` is a valid and resolvable host name. If it is not a resolvable host name, you see error messages like the following message:

```
2013-03-28 17:48:07,026 - ERROR: Error with HTTP POST: "Failed to reach server:
gaierror(20001, 'getaddrinfo failed')"
```

Tip: This information is also displayed on the Connector Errors tab on the History page.

Solution

You can solve this issue by modifying the `webServiceUrl` parameter in the following file:

`/opt/hp/dma/server/tomcat/conf/Catalina/localhost/dma.xml`

Perform thefollowing steps on the HPE DMA server:

1. Stop the DMA service.

   ```
   $ service dma stop
   ```

2. In the `/opt/hp/dma/server/tomcat/conf/Catalina/localhost/dma.xml` file, check the highlighted value of webServiceUrl if,

   - the host name is correct

   - the host name is not `localhost`

- the host name is fully qualified

- the host name is spelled correctly

```
<?xml version="1.0" encoding="UTF-8"?>
<Context allowLinking="true" disableURLRewriting="true"
    path="/dma" privileged="true" swallowOutput="true"
    workDir="/var/opt/hp/dma/work/dma">
 <Valve className="org.apache.catalina.valves.AccessLogValve"
    directory="/var/log/hp/dma/" pattern="%h %l %u %t '%r' %s %b
    %S" prefix="localhost_access." suffix=".log"/>
 <Parameter name="com.hp.dma.core.webServiceUrl"
    value="https://dma1.mycompany.com:8443/dma"/>
 <Parameter name="com.hp.dma.conn.trustAllCertificates"
    value="false" />
 <Resource auth="container"
    driverClassName="oracle.jdbc.OracleDriver"
    factory="com.hp.dma.util.DmaTomcatContextHandler"
    maxActive="20" maxIdle="5" maxWait="2000" name="jdbc/dma"
    password="{AES}54dd1d97a915c4c3c8d0db986a1218db62008816fb924"
    type="javax.sql.DataSource"
    url="jdbc:oracle:thin:@dma1.mycompany.com:1521:DMA"
    username="dma"/>
</Context>
```

3. Start the DMA service.

```
$ service dma start
```

> **Note:** You must also terminate the HPE DMA Client process on the target server.

Did not run the baseline command as root user

You must run the `dmaBaselineData` command as root user. If you run `dmaBaselineData` as another user, it fails.

For example:

```
$ sh ./dmaBaselineData.sh --create-tables --create-context
--database-username dma --database-password dma
--jdbc-connection-string jdbc:oracle:thin:@oraserver.mycompany.com:1521:dmademo
--dma-hostname dmaserver.mycompany.com
```

If you run the correct `dmaBaselineData` command as a user other than root, you see error messages similar to the following messages:

```
log4j:ERROR setFile(null,true) call failed.
java.io.FileNotFoundException: /var/log/hp/dma/dma.log (Permission denied)
        at java.io.FileOutputStream.openAppend(Native Method)
        at java.io.FileOutputStream.<init>(Unknown Source)
        at java.io.FileOutputStream.<init>(Unknown Source)
        at org.apache.log4j.FileAppender.setFile(FileAppender.java:294)
        at org.apache.log4j.RollingFileAppender.setFile
(RollingFileAppender.java:207)
        at org.apache.log4j.FileAppender.activateOptions(FileAppender.java:165)

...

java.io.FileNotFoundException: /opt/hp/dma/server/tomcat/webapps/dma/WEB-
INF/../WEB-INF/../../../conf/Catalina/localhost/dma.xml (Permission denied)
        at java.io.FileOutputStream.open(Native Method)
        at java.io.FileOutputStream.<init>(Unknown Source)
        at java.io.FileOutputStream.<init>(Unknown Source)
        at com.hp.dma.cmdline.DMABaselineData.saveXMLFile
(DMABaselineData.java:713)
        at com.hp.dma.cmdline.DMABaselineData.main(DMABaselineData.java:837)
30 Jan 2005 10:43:43,463 ERROR CmdlineExceptionHandler - Exception
java.lang.Throwable: java.io.FileNotFoundException:
/opt/hp/dma/server/tomcat/webapps/dma/WEB-INF/../WEB-
INF/../../../conf/Catalina/localhost/dma.xml (Permission denied

...
```

To solve this issue, run the `dmaBaselineData` command again as root user.

APX tool configuration error

You may receive an error that you do not have a valid APX file or directory when you import the HPE DMA APX.

Not pointing to correct APX tool directory

If you receive an error message similar to the following at the root command prompt, you are not pointing to the correct directory for the APX tool:

```
...

[root@dmaserver ~](4) $ apxtool import westapx.zip
Error: westapx.zip is not a valid APX file or directory.

...
```

If you get this error message, verify the location of the APX tool and rerun the `apxtool` command. See the Importing the HPE DMA APX topic in the *HPE DMA Installation Guide*.

DMA Client Files policy error

The following errors may occur when you install, attach, or remediate the DMA Client Files policy on the SA server:

- The `/DMA_Client` directory does not exist or is not writable

- The Microsoft Patch Database is out of date

The following topics will help you identify and resolve DMA Client Files policy issues.

For additional information, see the Install the DMA Client Files Policy topic in the *Installing Guide*.

DMA_Client directory does not exist or is not writable

Symptoms

If the `/DMA_Client` directory does not exist or is not writable you will receive error messages similar to the following message when you run the `dma_upload.sh`script:

```
...

# sh ./dma_upload.sh -host sa2.mycompany.com -user myusername -password
mypassword -keyFile /opt/hp/dma/server/tomcat/webapps/dma/WEB-INF/publicKey -
folderName /DMA_Client
% Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
Dload  Upload   Total   Spent    Left  Speed
100 2780k  100 2780k    0      0   120M       0 --:--:-- --:--:-- --:--:--  142M
% Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
Dload  Upload   Total   Spent    Left  Speed
100 1712k  100 1712k    0      0   127M       0 --:--:-- --:--:-- --:--:--  151M
CORBA BAD_PARAM 0 No; nested exception is:
org.omg.CORBA.BAD_PARAM:   vmcid: 0x0  minor code: 0  completed: No

...
```

Solution

Ensure that the `/DMA_Client` directory exists and you can write to it.

If the upload is successful, you will receive messages similar to the following message:

```
...

# sh ./dma_upload.sh -host sa2.mycompany.com -user myusername -password
mypassword -keyFile /opt/hp/dma/server/tomcat/webapps/dma/WEB-INF/publicKey -
folderName /DMA_Client
% Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
Dload  Upload   Total   Spent    Left  Speed
100 2780k  100 2780k    0     0   137M      0 --:--:-- --:--:-- --:--:--  150M
% Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
Dload  Upload   Total   Spent    Left  Speed
100 1712k  100 1712k    0     0   121M      0 --:--:-- --:--:-- --:--:--  139M
Policy associations for DMA completed.

...
```

Microsoft Patch Database is out of date

It is important to have the latest Windows Patch Utilities on SA Core to support Windows 2012.

Symptoms

If your Windows 2012 servers are successfully managed by SA but failed to have the DMA Client Files
Policy installed, examine the contents of the Job Status log for Overall Server Status. If they are similar
to the following, your Microsoft patch database is out of date.

```
The request to retrieve information from the Agent failed for an
unknown reason, please contact your HP Server Automation
Administrator.Execution error: Traceback (most recent call last):
File ".\base\wayfuncs.py",line 136, in evaluator
File "", line 3058, in ?

...

File ".\nt_hotfix_handler.py", line 539, in installedList
File ".\nt\nt_hotfix_handler.py", line 521, in
filterMbsa20ResultByInstalledOrRecommended
OpswareError:

...

params: {'handler':'nt_hotfix_handler','results':'AGENT_ERROR_PATCH_DATABASE_
CERTIFICATE_ERROR'}
request: UNKNOWN
tb_change: []
```

. . .

Solution

> **Tip:** The following steps must be performed by an SA administrator.
>
> You should verify that you are using the current Microsoft links and files. The ones listed here were correct as on the publication of this guide.

Perform the following steps to update the Microsoft Products and install the DMA Client Files Policy on Windows 2012 servers:

1. Using the SA Client, navigate to the **Administration** > **Patch Settings** > **Patch Products** page.

2. Update the Windows Update Redistribution Catalog (`wuredist.cab`) with one of the following methods:

   a. Update Products from Vendor:

      Click **Update Products from Vendor**, set the URL to http://update.microsoft.com/redist/wuredist.cab, and then update.

   b. Update Product List from File:

      Download the `wuredist.cab` file manually at http://update.microsoft.com/redist/wuredist.cab and then click **Update Product List from File** to update the `wuredist.cab` file that you just downloaded.

3. Update the Security Update Catalog (`wsusscn2.cab`) with one of the following methods:

   a. Update Products from Vendor:

      Click **Update Products from Vendor** to update the available products list directly from Microsoft's web site (the default URL).

   b. Update Product List from File:

      Download the `wsusscn2.cab` file manually at http://go.microsoft.com/fwlink/?LinkId=76054 and then click **Update Product List from File** to update the `wsusscn2.cab` file that you just downloaded.

   This updates the catalog of available patches.

4. Navigate to the **Administration** > **Patch Settings** > **Patch Database** page.

5. Update the Windows Update Agent standalone installers with one of the following methods:

   a. Import from Vendor:

   From the **Windows Patch Utilities** pane, auto-populated from the Security Update Catalog, select `WindowsUpdateAgent30-x86.exe`, `WindowsUpdateAgent30-x64`, and `WindowsUpdateAgent30-ia64.exe`, and then click **Import from Vendor**.

   b. Import from File:

   Download the installer files manually from:

   http://download.windowsupdate.com/windowsupdate/redist/standalone/7.4.7600.226/WindowsUpdateAgent30-x86.exe

   http://download.windowsupdate.com/windowsupdate/redist/standalone/7.4.7600.226/WindowsUpdateAgent30-x64.exe

   http://download.windowsupdate.com/windowsupdate/redist/standalone/7.4.7600.226/WindowsUpdateAgent30-ia64.exe

   Click **Import from File** to update the installer files that you just downloaded.

6. Clean up any Windows 2012 servers that indicate that the DMA Client Files Policy is installed but are actually in a corrupt state.

7. Install the DMA Client Files Policy on the Windows 2012 servers and remediate. For more information, see the Installing the DMA Client Files policy topic in the *Installing Guide*.

   Examine the contents of the Job Status log for the ✔ Succeeded status.

8. To update your repository with the same patching tools, copy the files that were downloaded in steps 3 and 5 to the Windows patching utilities directory on your SA Core (for example: `/root/wintools` or `/root/winutils`).

For more information see the *SA 9.14: SA Server Patching Update* and the *SA 9.10 User Guide: Server Patching* documents that are available on the HPE Software Support web site:

https://softwaresupport.hp.com/

Connector Errors

The HPE DMA connector enables HPE DMA and SA to communicate. Possible errors that can occur when you configure the connector are:
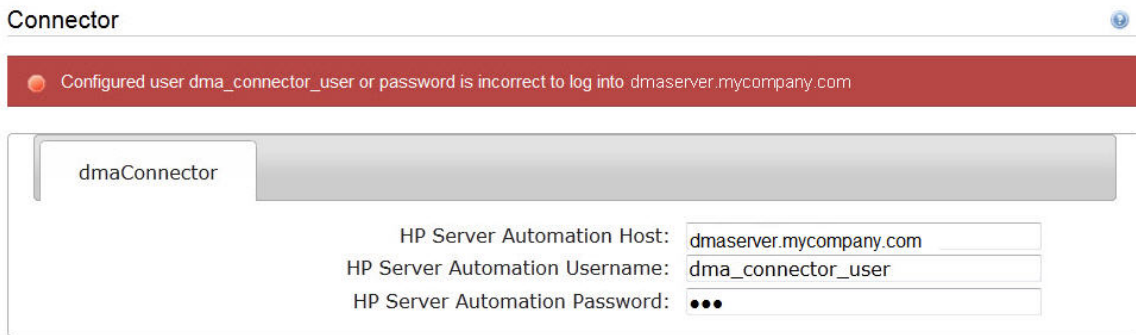
- The SA Core server is down.

- The JAR files are not at the required locations.

The following topics help you identifying and resolving connector errors.

For additional information, see the Configuring the Connector section in the *Administration Guide*.

The SA Core Server Is Down

You may see the following error when you try to add the connector:

If you get this error, verify the contents of the `/var/log/hp/dma/dma.log` file. If they are similar to the following, your SA server is down:

```
...

2013-03-14 08:46:47,720 INFO [main] SAConnector$StartExceptionHandler.handle:962
Can't connect to Host saserver.mycompany.com on port 443
2013-03-14 08:46:47,723 INFO [main]
BaseExceptionHandler.makeConnectorExceptionException:174
Can't connect to Host 'saserver.mycompany.com' on port 443. Ensure HP Server
Automation is currently running on 'saserver.mycompany.com' and firewall does
not block access to port 443.
org.omg.CORBA.COMM_FAILURE:   vmcid: SUN  minor code: 201  completed: No
at com.sun.corba.se.impl.logging.ORBUtilSystemException.connectFailure
(ORBUtilSystemException.java:2200)

...
```

If your SA server is down, have your SA administrator fix the issue.

The JAR files are not at the required locations

You may receive the following message when you try to add the connector:
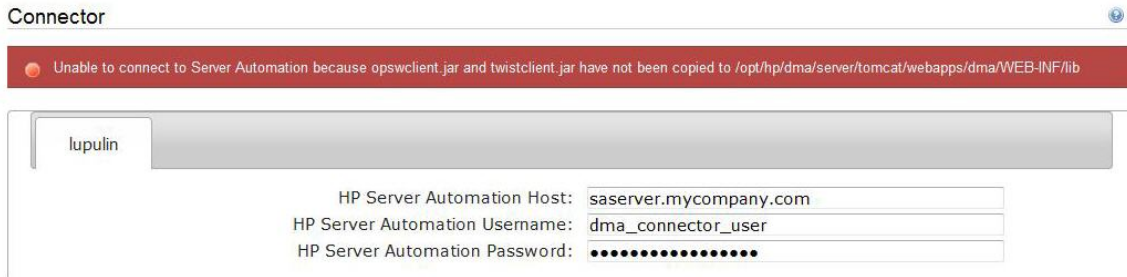
If you receive this error message, verify the contents of the /var/log/hp/dma/dma.log file. If the file contents are similar to the following, the opswclient.jar and twistclient.jar files are not at the required locations:

```
2005-01-30 16:37:54,626  INFO [main] PersistenceService:137 - Setting
oracle.net.tns.admin
2005-01-30 16:37:57,037  INFO [main] WorkflowStarter:107 - abortIfNotStarted =
true
2005-01-30 16:37:57,489 ERROR [main] StartupListener:114 - Unable to connect to
Server Automation because opswclient.jar and twistclient.jar have not been
copied to /opt/hp/dma/server/tomcat/webapps/dma/WEB-INF/lib
2005-01-30 16:37:57,489  INFO [main] StartupListener:115 - Failure:
java.lang.NoClassDefFoundError: com/opsware/client/TokenFinder

...

2005-01-30 16:37:57,491 ERROR [main] StartupListener:49 - Exception on startup
java.lang.RuntimeException: Unable to start DMA due to Connector failure
```

To fix this issue, run the script command to copy the required JAR files to the correct locations as described in the *Installation Guide*.

The host name or IP has changed

If the host name or the IP of a SA host have changed, you must update the details of the SA Connetore.

Perform the following steps to update the SA Connectore details:

1. As root, stop the HPE DMA Server using the following command:

   ```
   service dma stop
   ```

2. Run the `changeSaConnector.sh` script.

   The script looks for the current SA host details as shown in the **HPE DMA SA Connector** section of the HPE DMA dashboard and the new SA Connector host details.

3. As root, start the HPE DMA Server by using the following command:

   ```
   service dma start
   ```

Login Errors

If you are unable to log in to HPE DMA, you may receive the following messages on the login screen:

- Credentials are incorrect or do not allow login.

- Error: Failed to connect with the configured database.

  This can be caused by an invalid or locked out user, an incorrect password, or an unavailable database. Fix the issue with your database connection, restart DMA and try again.

Assuming that you have a valid username and password, the following cases may cause this problem:

- The SA server is down.

- Your role (SA group) does not have Login Access capability.

- HPE DMA started before SA was running.

- The database password changed (or expired).

- The HPE DMA database is not accessible.

- The SA core was updated.

- Your HPE DMA server has been switched to a different SA core.

- The HPE DMA login page does not work with the Internet Explorer.

Use the following information to help you identify and resolve the problem.

The SA core server is down

If your login fails, check the contents of the `/var/log/hp/dma/dma.log` file. If they are similar to the following, the SA server is probably down:

```
2005-01-30 17:25:19,182  INFO [http-8443-1] SAConnector:176 - SA Exception
transformed into
com.hp.dma.conn.ConnectorException: Error calling HP Server Automation Twister
API on dmaserver.mycompany.com. HP Server Automation may be down or core
unreachable.

...

2005-01-30 17:25:19,186  INFO [http-8443-1] LoginAction:158 - User dmausername
failed to log in
```

If your SA server is down, have your SA administrator start it.

The SA group does not have login access

If your login fails, verify the contents of the `/var/log/hp/dma/dma.log` file. If they are similar to the following, none of the user's roles (SA groups) have login access capability:

```
...

2013-03-21 15:58:48,145  INFO [http-8443-6] LoginAction:136 - User joe_user is
valid in connector ff8080813d69ac23013d69ac475a0000 but has no role allowing
login
2013-03-21 15:58:48,146  INFO [http-8443-6] LoginAction:158 - User joe_user
failed to log in

...
```

If an HPE DMA user's role (SA Group) does not have login access capability, add that user to a role (SA group) that has login access capability or register a different role, and grant that role login access capability.

For more information, see the Settting SA groups and users topic in the *HPE DMA Installation Guide*.

HPE DMA started before SA was running

If all of the following conditions are true, and you still see the "Credentials are incorrect or do not allow login" error message, it is possible that HPE DMA started running before SA was running:

- You are certain that your credentials are correct.

- You are certain that at least one of your HPE DMA roles (SA groups) has login access capability.

- SA is now running.

The solution to this problem is to simply stop and restart HPE DMA:

1. Stop the DMA service.

    ```
    $ service dma stop
    ```

2. Start the DMA service.

    ```
    $ service dma start
    ```

Oracle/PostgreSQL database password has changed

Periodically, the password for the database may change or expire. HPE DMA provides a script to change the password that is stored in the `dma.xml` file.

If your login fails, examine the contents of the `/var/log/hp/dma/dma.log` file. For example, If they are similar to the following, the Oracle database password has changed:

```
2014-03-03 12:18:14,436  INFO [localhost-startStop-1] PersistenceService:143 -
Setting oracle.net.tns.admin
2014-03-03 12:18:15,412 ERROR [localhost-startStop-1] StartupListener:63 -
Exception on startup
org.hibernate.HibernateException: Connection cannot be null when
'hibernate.dialect' not set
at
org.hibernate.service.jdbc.dialect.internal.DialectFactoryImpl.determineDialect
(DialectFactoryImpl.java:97)
at org.hibernate.service.jdbc.dialect.internal.DialectFactoryImpl.buildDialect
(DialectFactoryImpl.java:67)
at org.hibernate.engine.jdbc.internal.JdbcServicesImpl.configure
(JdbcServicesImpl.java:170)

...

at java.util.concurrent.Executors$RunnableAdapter.call(Unknown Source)
at java.util.concurrent.FutureTask.run(Unknown Source)
at java.util.concurrent.ThreadPoolExecutor.runWorker(Unknown Source)
at java.util.concurrent.ThreadPoolExecutor$Worker.run(Unknown Source)
at java.lang.Thread.run(Unknown Source)
```

If your Oracle/PostgreSQL password has changed, perform the following steps:

1. Run the following commands to execute the `changeDbPassword` script:

   ```
   $ cd /opt/hp/dma/server/tomcat/webapps/dma/WEB-INF/
   ```

   Use either the short command:
   ```
   $ sh ./changeDbPassword.sh -dbpw <dbpw>
   ```

   Or the long command:
   ```
   $ sh ./changeDbPassword.sh --database-password <dbpw>
   ```

   Here, *<dbpw>* is the new password.

2. Restart the DMA service:

   ```
   $ service dma restart
   ```

The HPE DMA Database is not accessible

If the previous troubleshooting cases do not solve your login issue, it is possible that the Oracle database/PostgreSQL is not accessible. To determine if this is the case, perform the following steps:

1. Examine the contents of the `/opt/hp/dma/server/tomcat/conf/Catalina/localhost/dma.xml` file.

2. Locate the Resource entry. For example, if it looks similar to the following:

    ```
    <Resource name="jdbc/dma" auth="container" type="javax.sql.DataSource"
    maxActive="20" maxIdle="20" maxWait="20000" username="dma" password="{AES}
    9bd10ee0695c84daccec11d5dbbaaccd2045240810732fc005ad3c57f6d6bfee"
    driverClassName="oracle.jdbc.OracleDriver"
    url="jdbc:oracle:thin:@mydma.example.com:1521:dma"
    factory="com.hp.dma.util.DmaTomcatContextHandler" />
    ```

3. Verify the following:

    - You are pointing to the correct system—this might be incorrect in `/etc/hosts` or DNS.

    - You have the correct database user.

    - You have the correct Oracle SID.

    - You have the correct port number.

    If you find any incorrect values continue with steps 4 to 6.

4. Stop the DMA service:

    ```
    $ service dma stop
    ```

5. Edit the incorrect values in the `dma.xml` file and save.

6. Restart the DMA service:

    ```
    $ service dma restart
    ```

The SA core was updated

If you cannot log in to HPE DMA or can only log in as `dma_initial_admin`, it is possible that the SA core was updated, but the JAR files were not updated. This is most likely to occur if you have different individuals administering SA and HPE DMA.

To solve this issue perform the following steps:

1. On your HPE DMA server, run the following script to copy the required JAR files from the SA server to the HPE DMA server. For example (enter as a single line):

   ```
   $ sh /opt/hp/dma/server/tomcat/webapps/dma/WEB-INF/copyJars.sh
   <SA_Server>
   ```

   > **Note:** Whenever the SA Core is upgraded you need to rerun this command.

2. Restart the DMA service:

   ```
   $ service dma restart
   ```

HPE DMA is switched to different SA core

If you switch to a different SA core, you may not be able to log in to HPE DMA.

> **Caution:** It is not recommended to switch the HPE DMA Server to an SA core that is not part of the same SA mesh. The recommended solution is to install a new HPE DMA Server. Follow the instructions in the Installing HPE DMA section of the *HPE DMA Installation Guide*. To move your workflows from the old HPE DMA Server to the new server, use the promote workflows that are described in the *Workflows for Promote Guide*.

If your login fails, check the contents of the `/var/log/hp/dma/dma.log` file. If they are similar to the following, the HPE DMA server has been switched to a different SA core:

```
2014-04-03 15:12:25,887  INFO [http-bio-8443-exec-3] LoginAction:187 - User fred
is valid in connector 90cefcae43bffe650143c00c2b140001 but has no role allowing
login
2014-04-03 15:12:25,888  INFO [http-bio-8443-exec-3] LoginAction:209 - User fred
failed to log in
```

The issue is, HPE DMA stores the SA IDs from the original SA core, which do not apply to the new SA core.

To solve this issue, perform the following steps while logged in to the HPE DMA server as the default initial HPE DMA administrator (`dma_initial_admin`):

1. Go to the **Setup** tab.

2. To update HPE DMA to recognize the new SA roles:

   a. Go to the **Roles** tab.

   b. Use the ⟨ or ⟨⟨ button to remove the all of the currently registered roles.

   c. Click **Save**.

   d. Use the ⟩ or ⟩⟩ button to replace the same SA roles (that now contain the updated SA IDs).

   e. Click **Save**.

3. To force the HPE DMA capabilities to associate with the new roles:

a. Go to the **Capabilites** tab.

b. Open the window to view assigned roles by clicking any of the Capabilities (Administrator, Login Access, Workflow Create).

c. Remove any of the capabilities and then click **Save**.

d. Add the capability that you removed and then click **Save** again.

# The HPE DMA login page does not work with Internet Explorer

If you cannot log in to HPE DMA using the Internet Explorer (IE) browser, but can log in with other browsers, you must configure Internet Explorer security settings to work with the HPE DMA Server.

To solve this issue, perform the following steps:

1. Open the Internet Explorer.

2. Go to **Tools** (⚙) > **Internet options** > **Advanced** tab.

3. Scroll down to 🔒 **Security**.

4. Enable **Use TLS 1.1** and **Use TLS 1.2**:

   ☑ Use TLS 1.1
   ☑ Use TLS 1.2

5. Click **OK**.

6. Close and reopen IE browser.

No servers available to add to HPE DMA

The following error displays if there are no servers are available while adding the target:
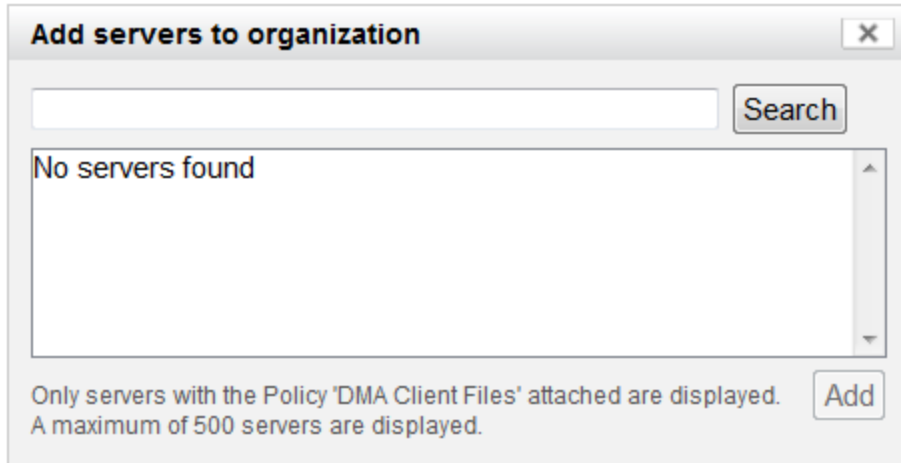
There are several situations that may cause this issue:

- The DMA connector user does not have the proper permissions.

- The DMA connector user cannot find any servers.

- The servers are already included in another DMA organization.

- The DMA user who is logged in does not have the correct permissions.

- The Client Files policy is not attached and remediated on any managed servers.

Use the following information to help you identify and resolve the issue.

The HPE DMA connector user does not have required permissions

If you experience a "No servers found" error, examine the contents of the `/var/log/hp/dma/dma.log` file. If they are similar to the following, your DMA onnector user (dma_connector_user) does not have the required permissions:

```
...

2013-03-15 14:43:43,301 ERROR [http-8080-1] DmaPolicyCacher.update:183
DMA Client Files does not exist
2013-03-15 14:43:43,301 INFO [http-8080-1] DmaPolicyCacher.findServers:94
No DMA Client Files

...
```

If you have this issue, have your SA administrator grant the dma_connector_user the following permissions:

- Manage Software Policy (Read)

- List, Read, and Execute permission on the folder containing the Client Files policy (for example: `/DMA_Client`)

For more information, see the Settting SA groups and users topic in the *HPE DMA Installation Guide*.

The HPE DMA connector user cannot find any servers

If you experience a "No servers found" error when the HPE DMA connector user (dma_connector_user) has the required permissions on the folder containing the Client Files policy (for example: `/DMA_Client`), examine the contents of the `/var/log/hp/dma/dma.log` file. If they are similar to the following, either there are no servers with the Client Files policy attached, or the HPE DMA connector user does not have Read permission for the servers:

```
...

```

```
2013-03-15 14:59:57,377 INFO [http-8080-1]
DmaPolicyCacher.getDMASoftwarePolicyRef:306
DMA Software Policy ref is DMA Client Files (SoftwarePolicyRef:1230001)

...

2013-03-15 14:59:57,634 INFO [http-8080-1] DmaPolicyCacher.findServers:107
User can't read any servers or no servers have policy DMA Client Files
```

If you face this issue, have your SA administrator check the following two possible solutions:

- Attach and remediate the Client Files policy to the servers.

- Grant the dma_connector_user Read permission for the servers.

For more information, see the Settting SA groups and users topic in the *HPE DMA Installation Guide*.

The servers are already in another HPE DMA organization

Servers can only be in one HPE DMA organization. If they are included in more than one organization, they arel not be available for you to add.

If you experience a "No servers found" error, examine the contents of the `/var/log/hp/dma/dma.log` file. If they are similar to the following, all servers that you are able to add are included in more than one organization:

```
...

2013-03-15 15:08:13,655 INFO [http-8080-1] DmaPolicyCacher.findServers:126
Returning 2

...
```

If you have this issue, contact your DMA administrator to determine which organization the servers should belong to.

The HPE DMA user does not have correct permissions

Another possible cause of a "No servers found" error is that the HPE DMA user who is currently logged in does not have the correct permissions.

To determine whether this is the case:

1. Log in to HPE DMA as a different user, preferably one with Administrator capability.

2. Have this user try to add targets (see the Adding available targets topic in the *HPE DMA Administration Guide*.

If the HPE DMA administrator can see the servers in the Add Servers to Organization dialog, have your SA administrator grant the following permissions to the SA group to which your HPE DMA user belongs:

- List, Read, and Execute permission for the `/DMA_APX` folder

- Managed Servers and Groups

- Read access to all managed servers that will be added to HPE DMA

For more information, see the "Set Up the SA Groups and Users" topic in the *HPE DMA Installation Guide*

The DMA Client Files policy is not attached and remediated

Another possible cause of a "No servers found" error is that the Client Files policy has not been attached and remediated on the servers.

To determine whether this is the case, have your SA administrator check that the Client Files policy is attached and remediated on all servers that need to be available to HPE DMA, as described in the Installing the DMA Client Files policy topic in the *HPE DMA Installation Guide*.

Runtime errors

Possible errors that may occur when you run HPE DMA workflows are the following:

- HPE DMA workflows may abort if you use an internal SSL certificate.

- HPE DMA workflows may abort after doing an HPE DMA upgrade.

- HPE DMA workflows may appear to be stuck in a perpetual running state.

- HPE DMA deployments may be skipped if another deployment of the same workflow is already running.

Use the following information to help you identify and resolve the issue.

Workflow aborts if an internal SSL certificate is used

If you obtained an internal SSL certificate from your company's internal certification authority, your DMA workflows may abort.

To verify if you are using an internal SSL certificate, perform the following steps:

1. After you log in to the HPE DMA server and see the lock icon:
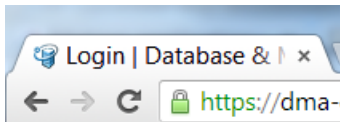
   Go to **Automation** > **History**. You see that the workflow status is `ABORTED`.

2. Select the workflow.

3. Go to the **Connector Output** tab. Verify that the HPE DMA connector output does not contain the following message:

   ```
   Warning: DMA Client is trusting all HTTPS Certificates
   ```

   If the output does not contain this message, HPE DMA is using an internal SSL certificate for the connection.

4. Go to the **Connector Errors** tab. See if the stacktrace contains messages similar to the following:

```
...

WestHttpClientException: com.hp.dma.client.WestHttpClientException: Invalid
SSL Certificate returned from https://dma-
mycompany.com:8443/dma/api/execute/workflow/90cefce442b538650142b53912b60000
/server/90cefce4429544990142954a915c000b : peer not authenticated
The West APX execution was not successful

...
```

If yes, the issue is that the target server's JRE could not authenticate the SSL certificate from your company's internal certification organization. Only certificates which are traceable back to a trusted Certification Authority (CA) can be authenticated.

Solution

The solution is to add your company's Certification Authority certificate to all target JREs.

Consult with your company's security team to determine the proper procedure for adding your company's Certification Authority to the list of trusted certificates.

Workflow aborts after an HPE DMA upgrade

After upgrading HPE DMA to version 10.22 (or later), HPE DMA may stop working. This is caused if the HPE DMA clients do not have the increased security settings specified in the upgraded `server.xml` file.

Symptoms

To verify if you have this issue do the following:

1. Go to **Automation** > **History**. You see that the workflow status is ABORTED.

2. Select the workflow.

3. Go to the **Connector Errors** tab. See if the stacktrace contains messages similar to the following:

```
*sys-package-mgr*: processing modified jar,
'/opt/hp/dma/client/lib/westhttpclient.jar'
Invalid SSL Certificate returned from
https://dmaserver.mycompany.com:8443/dma/api/execute/workflow/ff8080813cfda9
fa013cfdaa7aa9113f
2014-11-21 11:48:42 - Error occurred during WEST execution
```

```
Traceback (most recent call last):
 File "/opt/hp/dma/client/bin/west.py", line 59, in main
   encoded, headers, count = run_workflow(options, encoded, headers,
storage_dir)
 File "/opt/hp/dma/client/bin/west.py", line 126, in run_workflow
   code, response = wh.get_http_post_response(options, headers)
  File "/opt/hp/dma/client/jython/Lib/westhttp.py", line 400, in _execute_
post
    return _try_to_execute_post(options, url, headers)
  File "/opt/hp/dma/client/jython/Lib/westhttp.py", line 412, in _try_to_
execute_post
    raise rsp_exc
WestHttpClientException: com.hp.dma.client.WestHttpClientException: Invalid
SSL Certificate returned from https://dmaserver.mycompany.com

The West APX execution was not successful
```

If yes, the HPE DMA RPMs have been upgraded but the Client Files policy was not remediated, so that HPE DMA refuses to communicate with the managed servers.

Solution

You can solve this issue by reinstalling the Client Files policy on the SA core and remediating the policy on all managed servers that use that policy. Follow the instructions in the Upgrading to HPE DMA 10.40 topic in *HPE DMA Installation Guide*.

Workflows "stuck" in perpetual running state

If you have workflow deployments that seem to be "stuck" in a perpetual running state, DMA provides a script to cancel the deployments.

Symptoms

Workflow deployments may become "stuck" in a perpetual running state when deployments started at the same time that the HPE DMA Server restarted. The deployments remain in the "Initiated" state but never proceed to the "Finished" state.

Solution

You can solve this issue by running the `cancelWorkflow` script. It will cancel all workflows that are in the "Initiated" and "Running" states.

1. Stop the DMA service:

   ```
   $ service dma stop
   ```

2. Run the following commands to execute the `cancelWorkflow.sh` script:

   ```
   $ cd /opt/hp/dma/server/tomcat/webapps/dma/WEB-INF/
   ```

   ```
   $ sh ./cancelWorkflow.sh
   ```

3. After the script completes, restart the DMA service:

   ```
   $ service dma restart
   ```

Deployments are skipped if another deployment of same workflow is running

By default, HPE DMA allows a single deployment of a workflow to run at a time. This is true for either manual or scheduled deployment executions. If you desire to run multiple deployments of the same workflow at the same time, HPE DMA provides a parameter in the `dma.xml` file that allows you to do so.

Symptoms

You may observe these symptoms if HPE DMA is limited to only a single deployment of a workflow at a time:

- If multiple deployments of the same workflow are scheduled at the same time, the **History** page shows that the deployment is "skipped" and gives the message "This workflow was scheduled but did not run":

- If you attempt to manually execute such a deployment, you receive this warning:

Solution

You can solve this issue by adding the `Schedulerskipchecklevel` parameter to the `dma.xml` file:

1. Stop the DMA service:

   `$ service dma stop`

2. Open the `dma.xml` file in a text editor. For example:

   `$ vi /opt/hp/dma/server/tomcat/conf/Catalina/localhost/dma.xml`

3. Enter the following line to add the `Schedulerskipchecklevel` parameter to the file:

   `<Parameter name="com.hp.dma.core.action.Schedulerskipchecklevel" value="1" />`

   > **Note:** To revert to the default functionality (only one deployment of the same workflow can run at a time), change the value to "2".

4. Save your changes to the `dma.xml` file.

5. Restart the DMA service:

   `$ service dma restart`

Sybase 15.7 patch workflow error

In case you get the following error:

`Copy of <Sybase Source Install folder> to <Sybase backup folder> failed: cp: cannot create regular file <sybase file name> : Permission denied`, perform the steps below to resolve the error.

1. Take a copy of all the files and folders in the Sybase backup location.

   Example: `cp /opt/app/syb_backup/* <user-sybase-home>/syb_backup`

2. Delete all files and folders in the Sybase backup location.

   Example: `rm -rf /opt/app/syb_backup/*`

3. Run the Sybase 15.7 patch workflow.

Performance issues

Use the following information to help you identify and resolve performance issues that occur when running DMA.

Intermittently unable to log in and system freezes

When you run many (more than 10) DMA workflows at the same time, you may experience intermittent performance issues:

- HPE DMA becomes slow for users who are logged in

- New users are unable to log in

- HPE DMA freezes

You can resolve this by changing the HPE DMA configuration:

1. Stop HPE DMA:

   ```
   # service dma stop
   ```

2. Open the `dma.xml` file in a text editor. For example:

   ```
   # vi /opt/hp/dma/server/tomcat/conf/Catalina/localhost/dma.xml
   ```

3. Add the following lines to the file:

   ```
   <Parameter name="com.hp.dma.core.action.WorkflowStarter.poolSize" value="40" />
   <Parameter name="com.hp.dma.core.action.WorkflowStarter.maxPoolSize" value="40" />
   ```

4. Save your changes to the `dma.xml` file.

5. Start HPE DMA:

   ```
   # service dma start
   ```

Timeout issues

Use the following information to identify and cancel workflows automatically (auto-cancel workflows) that are not responding or that are not providing any updates beyond a specified no-response time or

time out period. The time out period is the time from the last update the server receives from the workflow. You must either have a role with Administrator capability, or you must have a role that has both Workflow Creator capability and permission to Write the workflow.

To set time out period for a workflow:

1. Stop HPE DMA:

   ```
   # service dma stop
   ```

2. Open the `dma.xml` file in a text editor. For example:

   ```
   # vi /opt/hp/dma/server/tomcat/conf/Catalina/localhost/dma.xml
   ```

3. Add the following lines to the file:

   ```
   <Parameter name="com.hp.dma.core.action.CancelWorkflowNoUpdate" value="true"/>

   <Parameter
   name="com.hp.dma.core.action.WorkflowExecutionTokenCleaner.CancelWorkflowNoUpda
   tePeriod" value="10800" />
   ```

4. Specifiy the value in seconds to set the required time out period. If no value is specified, a default time out period of 10800 seconds will be set.

5. Save your changes to the `dma.xml` file and exit the text editor.

6. Start HPE DMA:

   ```
   # service dma start
   ```

To auto-cancel a workflow:

1. Navigate to the folder:

   ```
   /opt/hp/dma/server/tomcat/webapps/dma/WEB-INF/
   ```

2. Run the **workflowsRunningForever.sh** script:

   The script identifies and prompts to cancel all the workflows that has not provided any updates beyond the specified no-response time or time out period. Default time out period specified is 10800 seconds. To set a custom time out period, see "To set time out period for a workflow:" above. The time out period is the time from the last update the server receives from the workflow.

3. Confirm at the prompt to cancel all the workflows that has not provided any updates beyond the specified time out period.

IPv6 configuration issues

Use the following information to help you identify IPv6 configuration issues.

- Ensure that the firewall (both for IPv4 and IPv6 traffic) is disabled or configured to allow bi-directional communication between DMA server and SA server, on port 443.

  Execute the command **service iptables stop** to disable IPv4 traffic and **service ip6tables stop** to disable IPv6 traffic.

- Ensure that the firewall (both for IPv4 and IPv6 traffic) is disabled or configured to allow incoming communication to DMA server from all the target machines on port the DMA server is configured to run on (default port is 8443).

  If the firewall is not disabled or configured to allow communication to DMA, workflow execution fails on the target servers that are directly connected to DMA server.

- Ensure that the firewall (both for IPv4 and IPv6 traffic) is disabled or configured to allow bi-directional communication between DMA targets and the SA Satellite proxy, on port 443.

  If the firewall is not disabled or configured to allow bi-directional communication, workflow execution fails on the target servers that are connected to DMA server, through SA Satellite proxy.

- Ensure that the `webServiceUrl` in the `dma.xml` file in the `/opt/hp/dma/server/tomcat/conf/Catalina/localhost` folder points to a valid hostname that can resolve into an IPv6 address.

Modifying the size of the log file

Perform the following steps to increase the size of the log file:

1. Navigate to **/opt/hp/dma/server/tomcat/webapps/dma/WEB-INF/classes**.

2. Open **log4j.properties** file and search for `log4j.appender.file.MaxFileSize`.

3. By default, the value is set to 10MB. Set the value based on your requirement.

Unicode errors

To address the Unicode errors, navigate to **/opt/hp/dma/server/tomcat/webapps/dma/WEB-INF** and run thefollowing script:`sh ./dmaUpdateDB.sh`

Send documentation feedback

If you have comments about this document, you can contact the documentation team by email. If an email client is configured on this system, click the link above and an email window opens with the following information in the subject line:

Feedback on Troubleshooting Guide (Database and Middleware Automation 10.50)

Just add your feedback to the email and click send.

If no email client is available, copy the information above to a new message in a web mail client, and send your feedback to hpe_dma_docs@hpe.com.

We appreciate your feedback!