



Windows: Connections Fail with ORA-12640 or ORA-21561 (Doc ID 744125.1)

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APPLIES TO:

Oracle Net Services - Version 10.2.0.1 and later
Oracle Database - Enterprise Edition - Version 11.2.0.1 and later
Generic Windows

SYMPTOMS

Connections to database fail, reporting the error code ORA-12640 Authentication adapter initialization failed. SQLNET.AUTHENTICATION_SERVICES is set to NTS in the SQLNET.ORA file. Changing SQLNET.AUTHENTICATION_SERVICES=NONE and connections then fail with the error code ORA-21561 OID generation failed.

Seen for connections using third party applications and oracle tools such as recovery manager (RMAN).

A typical Oracle Net level 16 client trace of RMAN failure shows following:

```
[21-JAN-2010 10:14:55:097] nsc2addr: (DESCRIPTION=(ADDRESS=(PROTOCOL=BEQ) (PROGRAM=oracle)
(ARGV0=oracle<instance_name>) (ARGS=' (DESCRIPTION=(LOCAL=YES) (ADDRESS=(PROTOCOL=beq))) '))
(CONNECT_DATA=(SID=<instance_name>) (CID=(PROGRAM=<ORACLE_HOME>\bin\rman.exe) (HOST=<hostname>)
(USER=<username>))))

o Connect packet :

[21-JAN-2010 10:14:55:097] nscon: sending NSPTCN packet

o Accept packet :

[21-JAN-2010 10:14:55:097] nscon: got NSPTAC packet

o shortly after the accept packet and client authentication :

[21-JAN-2010 10:14:55:129] nau_gse: failed with error 12640
[21-JAN-2010 10:14:55:129] nau_gse: exit
[21-JAN-2010 10:14:55:129] nau_cgga: failed with error 12640
[21-JAN-2010 10:14:55:129] nau_cgga: exit
[21-JAN-2010 10:14:55:129] nau_ccn: failed with error 12640
[21-JAN-2010 10:14:55:129] nacomsd: entry
[21-JAN-2010 10:14:55:129] nacomfsd: entry
[21-JAN-2010 10:14:55:129] nacomfsd: exit
[21-JAN-2010 10:14:55:129] nacomsd: exit
[21-JAN-2010 10:14:55:129] nau_ccn: exit
[21-JAN-2010 10:14:55:129] na_csrd: failed with error 12640
[21-JAN-2010 10:14:55:129] na_csrd: exit
[21-JAN-2010 10:14:55:129] nacomer: error 12640 received from authentication service
```

CHANGES

CAUSE

This is usually caused by a Microsoft Windows Desktop heap sizing issue.

SOLUTION

Desktop heap size is required to be increased in the registry for the database server. It can be found in the following location.

```
\HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Session Manager\SubSystems\
```

Edit the Windows value of Type REG_EXPAND_SZ. It will look similar to:

```
%SystemRoot%\system32\csrss.exe ObjectDirectory=\Windows SharedSection=1024,3072,512 Windows=On  
SubSystemType=Windows ServerDll=basesrv,1 ServerDll=winsrv:UserServerDllInitialization,3  
ServerDll=winsrv:ConServerDllInitialization,2 ProfileControl=Off MaxRequestThreads=16
```

At this location the following set of values can be seen for "SharedSection", 1024,3072,512. The third value (512) is the size of the desktop heap for each desktop that is associated with a "noninteractive" window station.

Increase of the third value to 1024, so the values are now listed as 1024, 3072, 1024 may resolve the problem. If not, then check with the Microsoft Admin as to what the maximum for this can be.

If this value is not present, the size of the desktop heap for noninteractive window stations will be same as the size specified for interactive window stations (the second SharedSection value).

CAUTION: Changing registry values is critical and and backup of the registry should be taken prior to amending these values.Oracle also recommends any such changes should be checked with Windows System administrator before attempting this change.
IMPORTANT NOTE: This change will require a reboot or restart of the Windows server in order for this change to take effect.

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