

# ORA-14694: database must be in UPGRADE mode to begin MAX\_STRING\_SIZE migration

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## Background

Oracle increased the size of the VARCHAR2 and NVARCHAR2 parameters to a new limit (32767 bytes) in Oracle version 12.2.

The parameter introduced to enable the new limit is: `max_string_size`, which can be set to one of two values:

- **STANDARD**, meaning that the length limits for Oracle Database releases prior to Oracle Database 12c apply (for example, 4000 bytes for VARCHAR2 and NVARCHAR2, and 2000 bytes for RAW).
- **EXTENDED**, meaning that the 32767 byte limit introduced in Oracle Database 12c applies.

When importing data from 11G/12C database into 10c we had to set the parameter to extended in our Oracle 19c database, to overcome the ORA-14694 error.

## Solution

To resolve the ORA-14694 error when setting the `max_string_size` parameter, the steps below were followed:

```
SQL> show parameter max_string;

NAME                                 TYPE        VALUE
-----
max_string_size                      string      STANDARD

SQL> alter system set cluster_database=false scope=spfile sid='*';

System altered.

SQL> shutdown immediate
SQL> startup upgrade
SQL> alter system set max_string_size=extended;
SQL> $ORACLE_HOME/rdbms/admin/utl32k.sql

shutdown and restart

SQL> shutdown immediate
SQL> startup mount
SQL> alter system set cluster_database=true scope=spfile sid='*';
SQL> shutdown immediate

srvctl start database -d testdb

SQL> show parameter max_string;
```





NAME	TYPE	VALUE
max_string_size	string	<b>EXTENDED</b>

## References

- ✓ [MAX\\_STRING\\_SIZE \(oracle.com\)](#)
- ✓ All About the Initialization Parameter MAX\_STRING\_SIZE and Related Issues (Doc ID 2673210.1)
- ✓ After recovery ORA-14693 / ORA-14694 (Doc ID 2011194.1)

**Disclaimer:** It is always recommended to log a support request with Oracle Support for any Oracle error you may encounter in your environment.

