

Knowledge Base Article #INS686 Avoiding an Oracle Error When Upgrading the ETM® Database

1. Synopsis

In certain ETM Database configurations, a database upgrade may fail with an Oracle error stating that Oracle is not able to allocate additional segments to the **UNDO** tablespace, such as the following error:

```
ORA-30036: Unable to extend segment by 4 in undo tablespace  
'UNDOTBS1'
```

This error may occur when the structure of the call-related tables has been altered in the new software version if the existing call related tables contain a large number of rows and **AUTOEXTEND** is disabled on the **UNDO** tablespace.

When this error occurs, the upgrade will be incomplete, without the call records being reimported, requiring manual intervention to complete the upgrade.

To avoid this error, use the procedures below before beginning the upgrade to determine whether **AUTOEXTEND** is enabled and if not and it cannot be, to prepare the database for successful upgrade.

2. Determining Whether **AUTOEXTEND** is Enabled

To determine whether **AUTOEXTEND** is enabled, log into the database as a user with SYSDBA privileges and execute the following command:

```
SQL> select file_name,tablespace_name,bytes/1024,AUTOEXTENSIBLE,status  
2 from dba_data_files order by tablespace_name;
```

The **AUTOEXTENSIBLE** value returned for the **UNDO** tablespace will be either **YES** or **NO**. If the value returned is **NO**, either enable **AUTOEXTEND** before beginning the upgrade, or use one of the procedures below to avoid the error.

3. Description of Solution

This procedure describes two methods which can be used to avoid the issue. While other methods are available, only two are described here.

The first method can be used in environments where disk space is not an issue. Simply increase the size of the existing **UNDO** tablespace to a value large enough to accommodate the upgrade. The drawback to this method is that during normal ETM System operation, this space will be largely unused.

The second method involves creating a new **UNDO** tablespace (**UNDOTBS2**) of sufficient size to facilitate the database upgrade (a chart and formula for determining the necessary space are provided at the end of this document). You then alter the database to use this new **UNDO** tablespace, perform the database upgrade, alter the database to use the original **UNDO** tablespace (**UNDOTBS1**), and then continue with normal ETM System operation. The new **UNDO** tablespace can then either be dropped or can be retained for use during future upgrades.

4. Procedure - Method 1 – Increase size of the Existing UNDO Tablespace

- a. Stop the ETM Management Server and Report Server services.
- b. Log into the database as a user with **SYSDBA** privilege.
- c. Increase the **UNDO** tablespace datafile size by executing the following command:

```
SQL> ALTER DATABASE DATAFILE '<fully_qualified_file_name>'
      2      resize <xxx>G
SQL>
```

where:

<fully_qualified_file_name> represents the name of the **UNDO** tablespace datafile, for example:

```
'C:\oracle\PRODUCT\11.1.0\DB_1\ORADATA\ORA11G\UNDOTBS01.DBF'
```

and

<xxx>G represents the total size of the undo tablespace datafile and 'G' indicates gigabytes

- d. Perform the ETM Database upgrade.
- e. Start the ETM Management Server and Report Server services.

5. Procedure - Method 2 – Create an Alternate UNDO Tablespace

- a. Stop the ETM Management Server and Report Server services.
- b. Log into the database as a user with **SYSDBA** privilege.
- c. Create a new **UNDO** tablespace by executing the following commands:

```
SQL> create undo tablespace UNDOTBS2 datafile
'<fully_qualified_file_name>' size <xxx>G autoextend on;
```

where

< fully_qualified_file_name >' is the path and name of the **UNDO** tablespace file such as

```
'C:\oracle\PRODUCT\11.1.0\DB_1\ORADATA\ORA11G\UNDOTBS01.DBF'
```

and

<xxx>G is the size of the new file in GB – a formula for calculating the total size required for upgrade is provided in Section 6.

and

AUTOEXTEND is either **ON** or **OFF** (consult with your DBA)

d. Change to the new **UNDO** tablespace by executing the following command:

```
SQL> alter system set undo_tablespace=UNDOTBS2;
```

e. Perform the ETM Database upgrade.

f. Change to the original **UNDO** tablespace by executing the following command:

```
SQL> alter system set undo_tablespace=UNDOTBS1;
```

g. Start the ETM Management Server and Report Server services.

h. If the new **UNDO** tablespace is to be dropped, execute the following command:

```
SQL> DROP TABLESPACE undotbs2 INCLUDING CONTENTS AND DATAFILES;
```

6. **UNDO** Tablespace Size Requirements

The ETM Database upgrade process requires approximately 3GB of available space for each 5 million rows in the **CALL** table. A general formula for calculating required free space is

$$((\text{rows_in_call_table} / (5 \times 1024 \times 1024)) + 1) \times (3 \times 1024 \times 1024 \times 1024)$$

Last Updated: 11/13/2012

SecureLogix Corporation

13750 San Pedro, Suite 820 • San Antonio, Texas 78232 • (210) 402-9669 • www.securelogix.com

Support (877) SLC-4HELP • EMAIL support@securelogix.com • <http://support.securelogix.com>

ETM, TeleWatch Secure, TWSA, We See Your Voice, SecureLogix, SecureLogix Corporation, the ETM Emblem, the SecureLogix Emblem and the SecureLogix Diamond Emblem are trademarks and/or service marks or registered trademarks and/or service marks of SecureLogix Corporation in the U.S.A. and other countries. All other trademarks mentioned herein are believed to be trademarks of their respective owners.

© Copyright 2012 SecureLogix Corporation. This product is protected by one or more of the following patents:
US 6,249,575 B1, US 6,320,948 B1, US 6,687,353 B1, US 6,718,024 B1, US 6,760,420 B2, US 6,760,421 B2,
US 6,879,671 B1, US 7,133,511 B2, US 7,231,027 B2, US 7,440,558 B2, US 8,150,013 B2, CA 2,354,149, DE 1,415,459 B1,
FR 1,415,459 B1, and GB 1,415,459 B1.

The ETM System includes: Data Encryption Standard software developed by Eric Young (eay@mincom.oz.au),
© Copyright 1995 Eric Young. All Rights Reserved.