
Honeywell

PlantScape Controller Implementation

Lesson 4

PlantScape DbAdmin Familiarization

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Notes

Introduction

The purpose of this lesson is to give you the knowledge to be able to use the DbAdmin tool to help facilitate maintenance of the Engineering Repository database (erdb.mdb) used by the PlantScape system.

Objectives

In practice a power failure or software problem might cause Control Builder to close with a database locks left in place. Normally these database locks occur only on those CM's or SCM's that might be open at the time of the abnormal shut down of Control Builder. In this lab we will cause an abnormal shutdown of Control builder so that we may practice **clearing locks**.

Additionally, DbAdmin can be used to **compact** the erdb for optimum performance, and to **repair** an erdb left in an inconsistent state.

We will practice these operations as well.



PlantScape DBAdmin Familiarization

Creating erdb locks

- Start Control Builder. If Control Builder is already running, save your database at this time
- Select project view of your database in one of the tree windows.
- Double click and open CM#_FIC101
 - Select anyone of the CM#_FIC101 Function Blocks and move it slightly
 - Leave CM#_FIC101 open
- Double click and open CM#_TIC101
 - Slightly move anyone of CM#_TIC101 Function Blocks
 - Leave both CM#_FIC101 and CM#_TIC101 open.

-Do not save your database at this time.

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Notes

Erdb Locks

Control Builder allows up to four concurrent configuration sessions. In order to prevent two users from configuring the same CM or SCM, Control Builder “locks” a CM or SCM when it is opened by the first user. All other attempts to open that same object will see a message that it is already opened by *Hostname\user id* . It can still be opened but in read-only form.

Here we open two CMs and edit them slightly to create the locks.



PlantScape DBAdmin Familiarization

Abnormal Shutdown of Control Builder

- Press Ctrl + Alt + Delete buttons, all three buttons at one time
 - A Windows control panel should appear
- Select the Task Manager button
- Select the Applications tab.
- Select “Control Builder – Project” from the list of applications
- Making sure that “Control Builder – Project” is now highlighted in blue, select the End Task button.
 - Do not respond to any Control Builder save the database message.
 - Wait a few seconds for a message from Windows indicating that Windows cannot respond to the End Task request.
- Select End Task again when this Windows message appears.

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Notes

Normal Clearing of Locks

Normal editing of CMs and SCMs requires saving of any changes. This is done either by saving the edit specifically, or by closing the edit and answering yes to the “Save changes?” prompt. Either way, when the object is closed normally, the edit lock on the object is cleared.

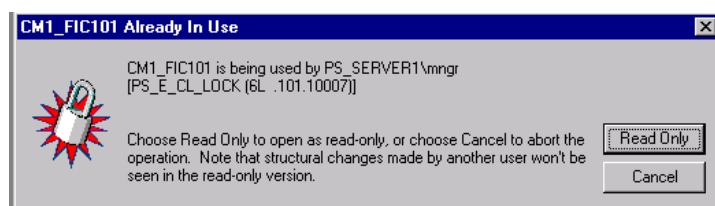
If Control Builder is closed abnormally, the edit session on any locked objects is not terminated. As far as Control Builder is concerned, the object is still locked and can’t be opened except in read-only mode. (See the next page.)

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PlantScape DBAdmin Familiarization

View Locks

- Restart Control Builder and attempt to open CM#_FIC101 and CM#_TIC101.
 - You should see an “Already In Use” warning similar to the one below
 - All the other CM’s should open normally



- Close Control Builder

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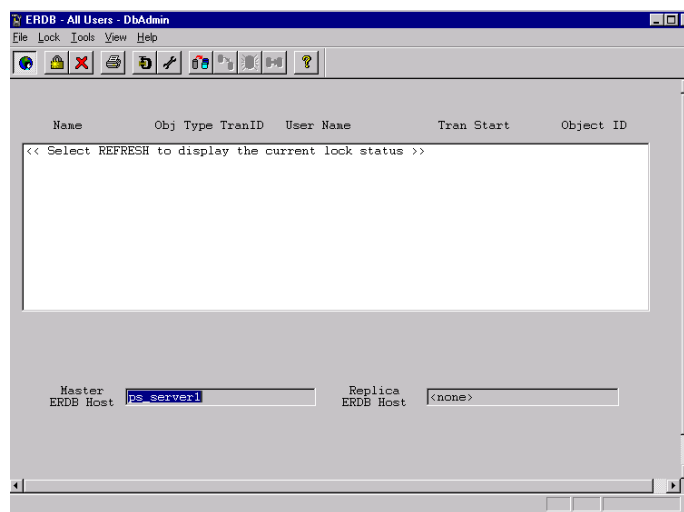
Notes

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PlantScape DBAdmin Familiarization

Open DbAdmin: Working at the Server

- Click
 - Start
 - Programs
 - PlantScape Engineering Tools
 - DBADMIN



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Notes

DbAdmin

DbAdmin is a tool created to maintain the erdb database. When opened as shown, it looks for a host erdb to connect to. If you are working at the server, DBAdmin assumes localhost and connection is automatic.

After a few seconds, the connection is made and the administration session can begin. (Pg. 4-53)

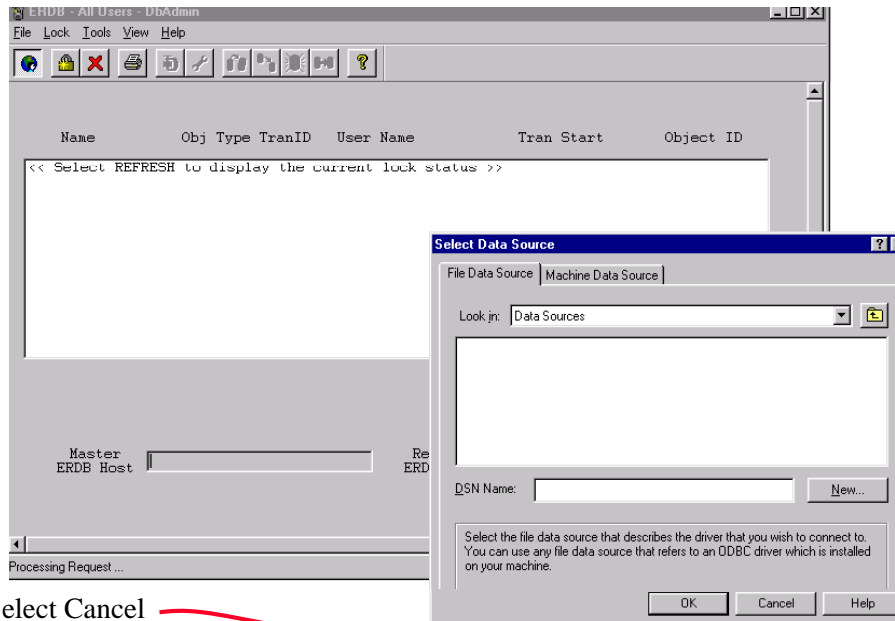
If you are working remotely, you must login to the Server in DBAdmin. See the next few pages for details (Pg. 4-48 through 4-52)

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PlantScape DBAdmin Familiarization

Open DBAdmin: Working at a Remote PC

- Click **Start** → **Programs** → **PlantScape Engineering Tools** → **DBADMIN**
After **several** seconds, the following screen appears



- Select Cancel

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Notes

DbAdmin

DbAdmin uses ODBC to connect to the Server. It is possible to configure a DSN (Data Source Name) in the ODBC setup in NT Control Panel to point to the server's erdb. You would use that DSN here.

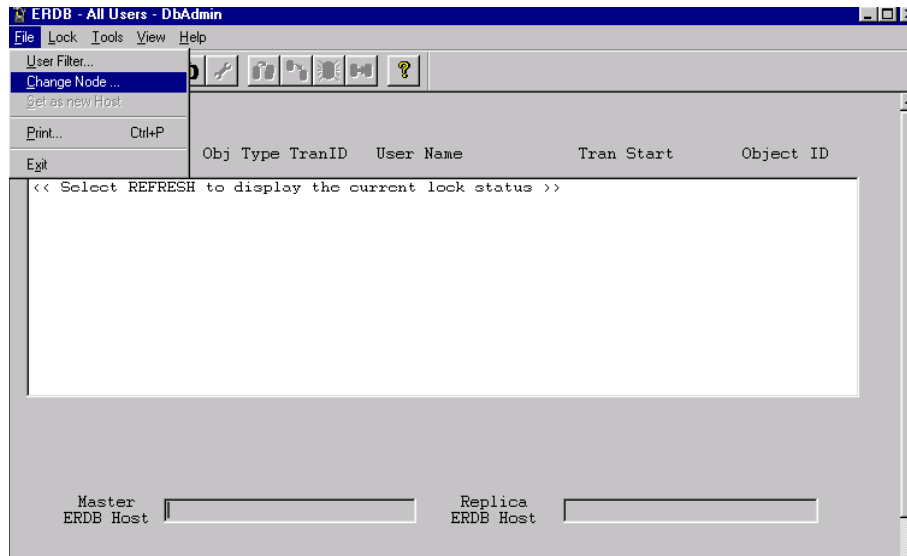
We will use a different method to connect.

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PlantScape DBAdmin Familiarization

Open DBAdmin: Working at a Remote PC (*Continued*)

- Click **File** → **Change Node**



- This calls up a Browser shown on the next page

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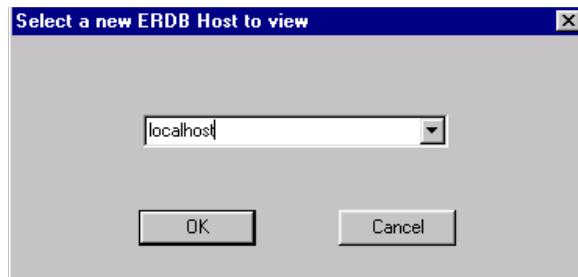
Notes

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PlantScape DBAdmin Familiarization

Open DBAdmin: Working at a Remote PC *(Continued)*

- Using the pull down, browse to your server



- Click OK

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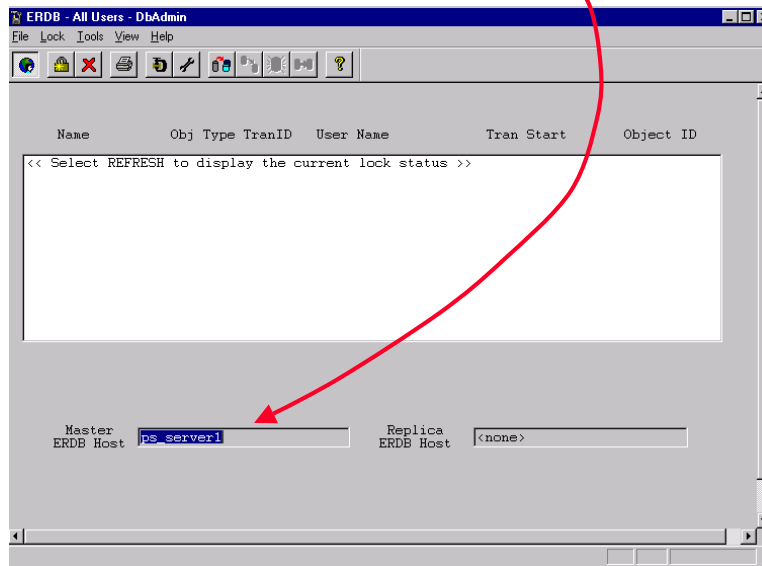
Notes

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PlantScape DBAdmin Familiarization

Open DBAdmin: Working at a Remote PC (Continued)

- You should now be connected to your chosen Server




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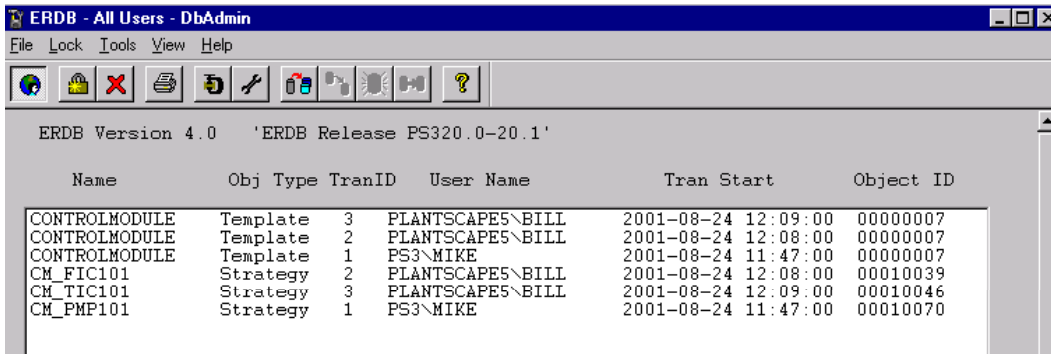
Notes



PlantScape DBAdmin Familiarization

View Locks

- Select the Refresh icon on the tool bar. 
 - In a few seconds the transaction window will indicate what CMs are currently locked.
 - CM#_TIC101 and CM#_FIC101 should be in the list



ERDB Version 4.0 'ERDB Release PS320.0-20.1'

Name	Obj Type	TranID	User Name	Tran Start	Object ID
CONTROLMODULE	Template	3	PLANTSCAPE5\BILL	2001-08-24 12:09:00	00000007
CONTROLMODULE	Template	2	PLANTSCAPE5\BILL	2001-08-24 12:08:00	00000007
CONTROLMODULE	Template	1	PS3\MIKE	2001-08-24 11:47:00	00000007
CM_FIC101	Strategy	2	PLANTSCAPE5\BILL	2001-08-24 12:08:00	00010039
CM_TIC101	Strategy	3	PLANTSCAPE5\BILL	2001-08-24 12:09:00	00010046
CM_PMP101	Strategy	1	PS3\MIKE	2001-08-24 11:47:00	00010070

- Note that all other users' locks are also displayed. If we do not filter this view, our actions will affect all users. We therefore must filter DBAdmin to show only our locks. The next steps will accomplish this.

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Notes

Refresh

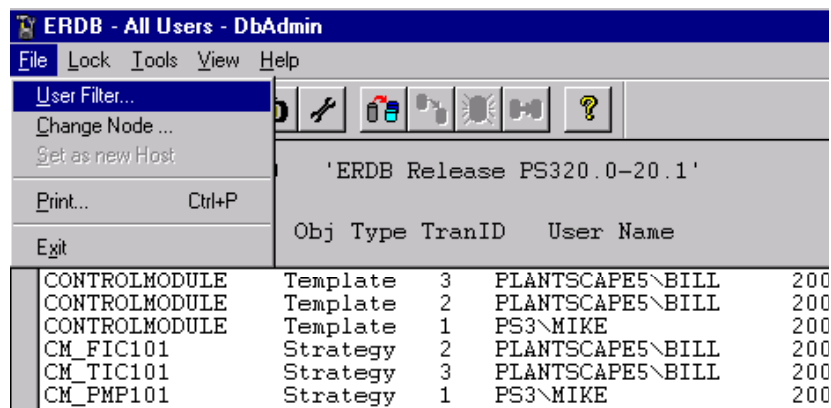
Once the connection to the host erdb is made, the window to view the locks in the database must be refreshed. This can be done from the tool bar icon as shown or from the **Lock** pull-down menu item.



PlantScape DBAdmin Familiarization

Filter Displayed Locks

- Click **File** → **User Filter...**



- This calls up a dialog box in which you can set the ID of the user whose locks you wish to view (see next slide)

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Notes

Filtering

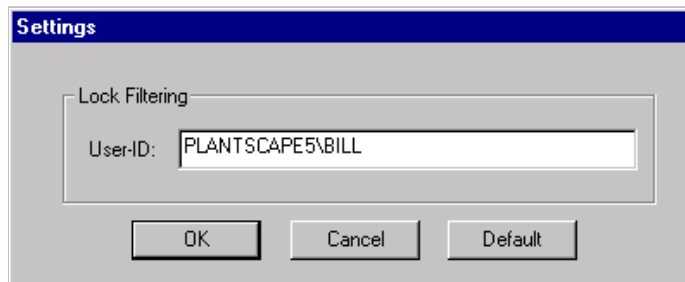
We must first establish the filter we wish to use, and then apply it.

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PlantScape DBAdmin Familiarization

Filter Displayed Locks (*Continued*)

- In the port, type the ID of the user whose locks you wish to view
(In our example, we wish to view the locks BILL is using on PlantScape5. You will use your own ID and PC name.)



- Click OK

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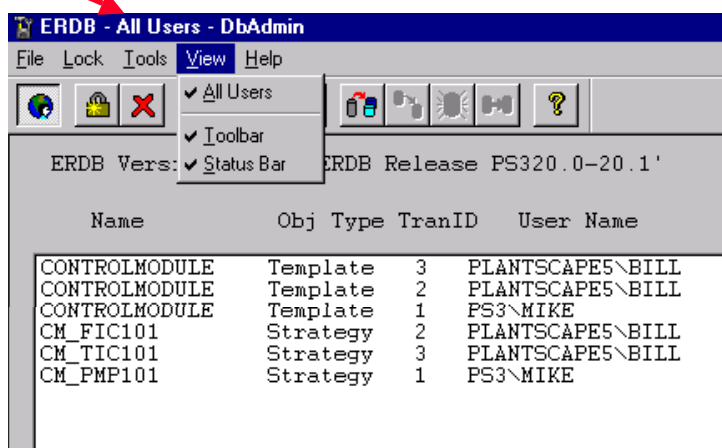
Notes



PlantScape DBAdmin Familiarization

Filter Displayed Locks (Continued)

- Next we will apply the filter
 - Click **View** → **All Users** to toggle between the All Users view and the Filtered view



- Since the default view was All Users, the above action applies the filter we set up previously

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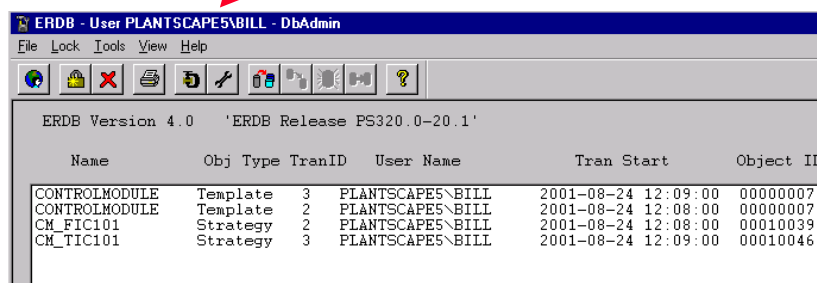
Notes



PlantScape DBAdmin Familiarization

Filter Displayed Locks (Continued)

- DBAdmin should now display only those locks used by BILL on PlantScape5
(You should see only your own locks.)



ERDB Version 4.0 'ERDB Release PS320.0-20.1'

Name	Obj Type	TranID	User Name	Tran Start	Object ID
CONTROLMODULE	Template	3	PLANTSCAPE5\BILL	2001-08-24 12:09:00	00000007
CONTROLMODULE	Template	2	PLANTSCAPE5\BILL	2001-08-24 12:08:00	00000007
CM_FIC101	Strategy	2	PLANTSCAPE5\BILL	2001-08-24 12:08:00	00010039
CM_TIC101	Strategy	3	PLANTSCAPE5\BILL	2001-08-24 12:09:00	00010046

- We can now clear the locks for BILL (you) without affecting the other users


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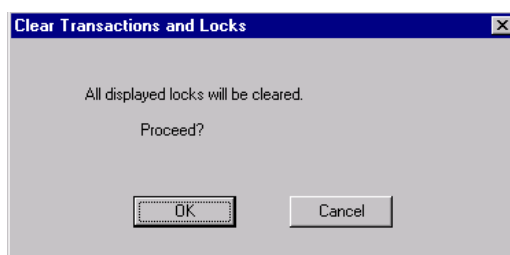
Notes

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PlantScape DBAdmin Familiarization

Clear Displayed Locks

- Select the **Clear Locks** icon from the tool bar. 
 - A message will indicate that all *displayed* locks will be cleared (Only BILL's (yours) are currently displayed)



- Select OK
 - The transaction window should now be cleared of BILL's (your) locks
- Start Control Builder and check to see that you can now open CM#_FIC101 and CM#_TIC101 normally.

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Notes

Clearing Locks

The **Clear Locks** function clears only the locks displayed in the window. It is possible to filter the window by user so that only specific locks are cleared, as we have done.

If the view is not filtered, **Clear Locks** clears **all** locks.



PlantScape DBAdmin Familiarization

The next two Labs must be Coordinated with all users of the same Server. See your course manager before proceeding

Compacting your erdb

- Save any open project items in Control Builder as necessary then close Control Builder
- Open Windows Explorer
 - Browse to **Honeywell\Tps50\System\Er**
 - Double click **Er** and note the file **erdb.mdb**
 - Click the **View** pull-down menu item and select **Details** if not already selected
- Record the file size of **erdb.mdb**. _____
- Minimize Explorer

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Notes

Compact the ERBD database


Erdb.mdb should be compacted on a regular basis because it reorganizes the database with the data and tables in contiguous and sorted order. It also refreshes the statistics in the database and causes all stored queries to recompile. This reduces the size of the database and can significantly increase performance.

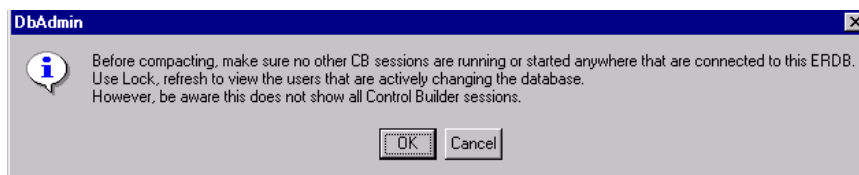
If the erdb is replicated (redundant servers), both copies should be compacted. Note that with server redundancy, synchronization causes erdb to grow. Compaction on a regular schedule is necessary.



PlantScape DBAdmin Familiarization

Compacting your erdb (continued)

- Start DbAdmin if not already running
 - Click **Start → Programs → PlantScape Engineering Tools → DBADMIN**
 - Log into your Server if working remotely
 - Select the compact icon from the tool bar. 
 - A message indicating that any open Control Builder sessions should be closed will appear. This is where coordination is required. All sessions must be stopped.



- Select the OK button.
 - After a few seconds a message will appear indicating the database compacted successfully. Select the OK button.

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Notes

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PlantScape DBAdmin Familiarization

Record Compacted erdb Size

Restore Windows Explorer

- Browse to **Honeywell\Tps50\System\Er**
- Double click **Er** and note the file **erdb.mdb**
- Click the **View** pull-down menu item and select **Details** if not already selected

- Record the compacted file size of **erdb.mdb**. _____
- How does the compacted size compare to the non-compacted size?
- Close Explorer


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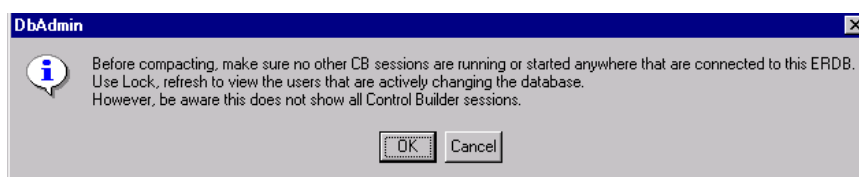
Notes



PlantScape DBAdmin Familiarization

Repair erddb

- Save any open projects in Control Builder as necessary then close Control Builder
- Start DbAdmin if not already running
 - Click
 - Start
 - Programs
 - PlantScape Engineering Tools
 - DBADMIN
- Select the Repair icon from the tool menu 
 - A message indicating that **any open Control Builder sessions should be closed** will appear.



- Select the OK button.
 - After a few seconds a “Database repaired successfully” message will appear.
 - Select the OK button.

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Notes

Repair Database

Database repair is used to recover a database that is left in an inconsistent state such as caused by a failure during the commit phase of a database transaction.

Repairing a replicated database is not recommended. Rather the replicated database should be deleted, the repair done, and the database replicated after.

See *Knowledge Builder, Trouble Shooting and Maintenance Guide, Tools and Utilities, Using DBADMIN* for more information.

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This completes....

PlantScape Controller Implementation

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Notes
