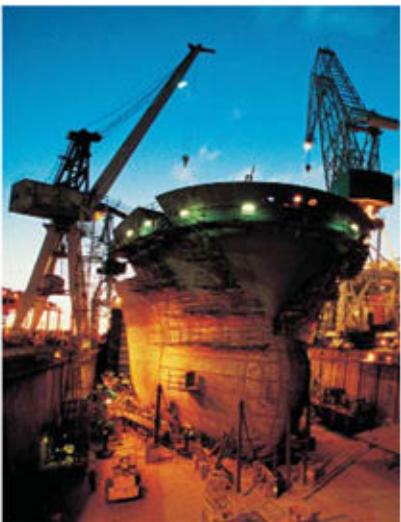
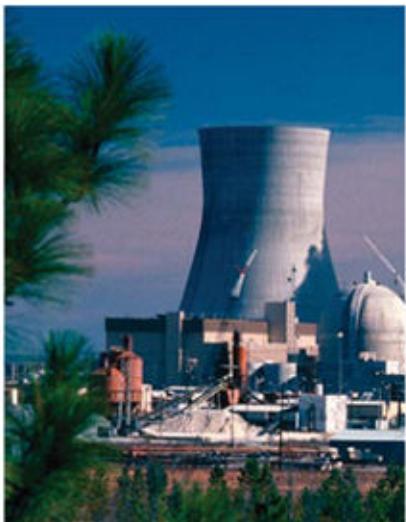


SmartPlant 3D

Oracle Global Workshare Course Guide

Process, Power & Marine



INTERGRAPH

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Referenced Documents

SmartPlant 3D Help Documentation:

Help documentation can typically be found in the following directory:

“<SP3D Product Installation Directory>\Common\Help\”

- SmartPlant 3D Administrator’s Guide
- Global Workshare Guide

Training Presentations:

Microsoft Power Points will generally be presented during the course of the instruction. These will be utilized by the course instructor and made available to the training participants.

Training Labs:

Labs are generally created in Microsoft Word Format and provided by the instructor in hardcopy form to the students participating in the training.

- 9 Labs accompany this training.

Labs

Lab 1. Creation of Oracle Instances

The Oracle Instances required for the SP3D Global Workshare have additional requirements which must be considered prior to creation. As a result, before we begin configuring the SP3D Oracle GWC we must ensure that the proper instances are created.

For reference: The Oracle "Streams Performance Recommendations" is available in Metalink search for Doc ID 335516.1 (updated February 10, 2009).

Note: This document assumes one (1) Oracle instance on a single physical server.

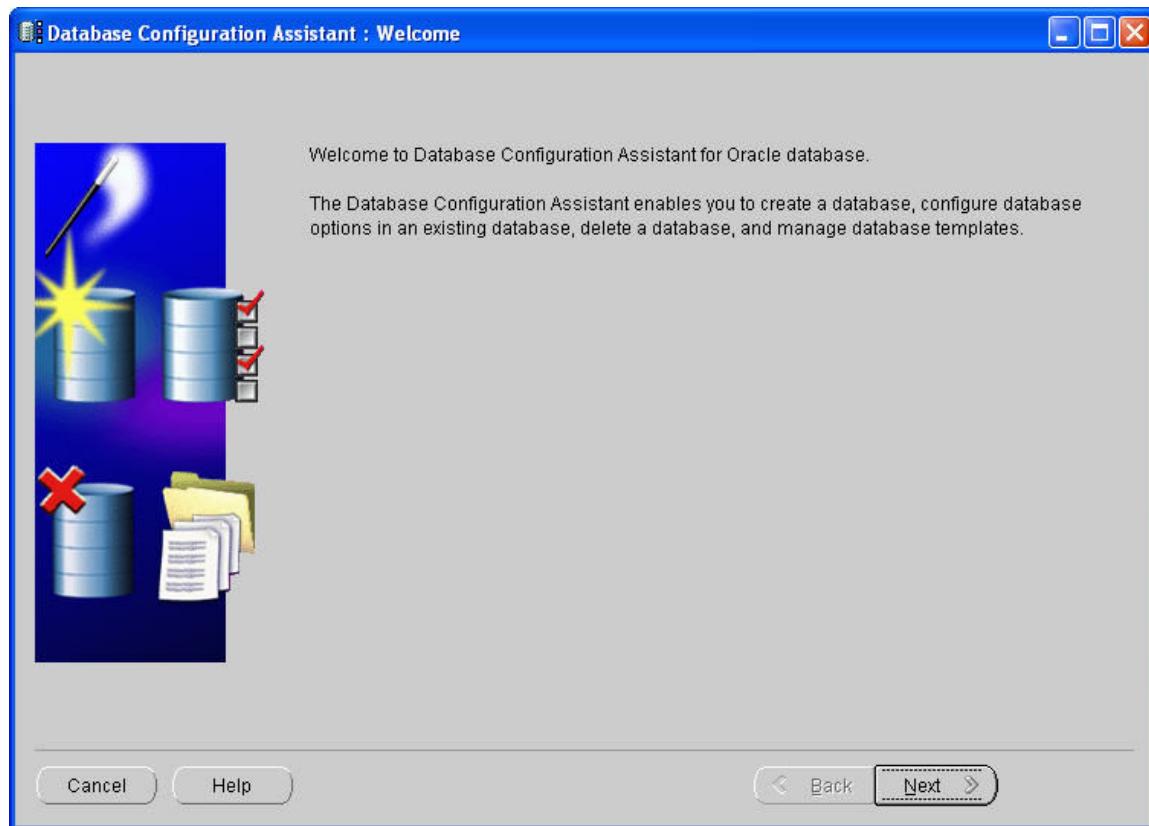


Figure 1. Database Configuration Assistant: Welcome

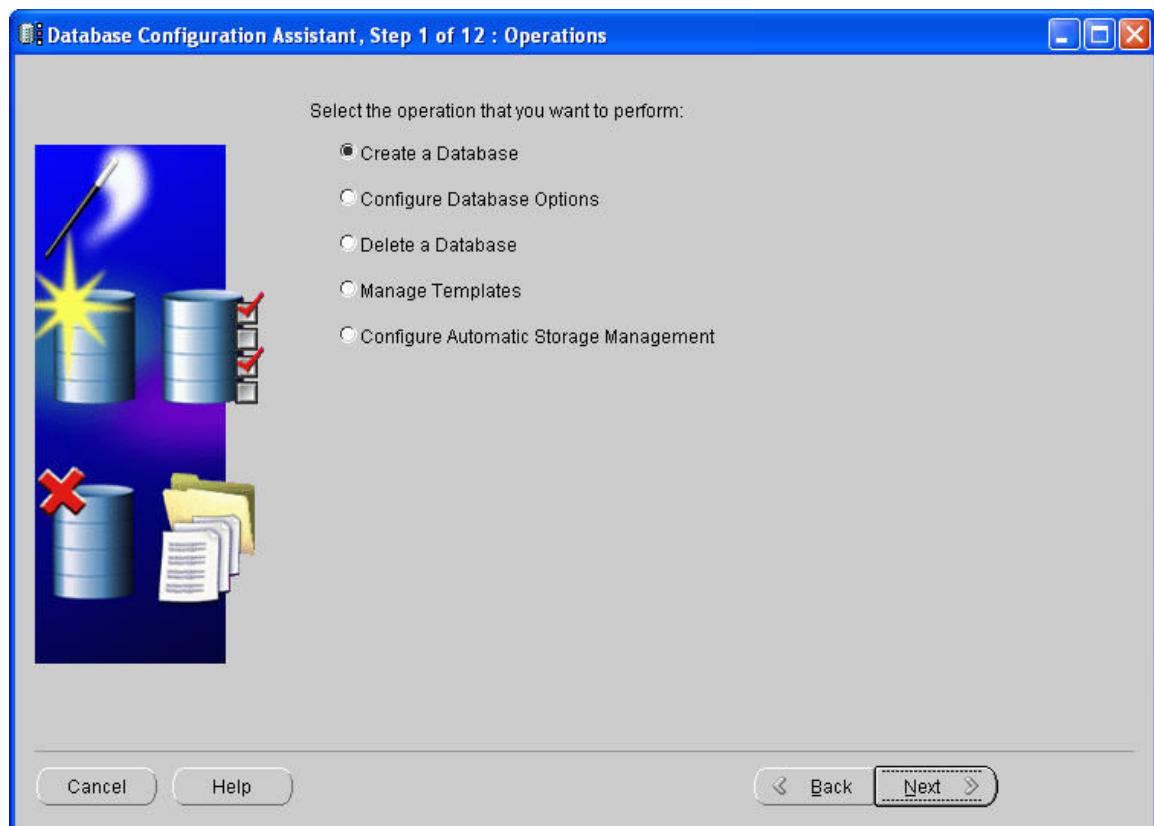


Figure 2. Database Configuration Assistant, Step 1 of 12

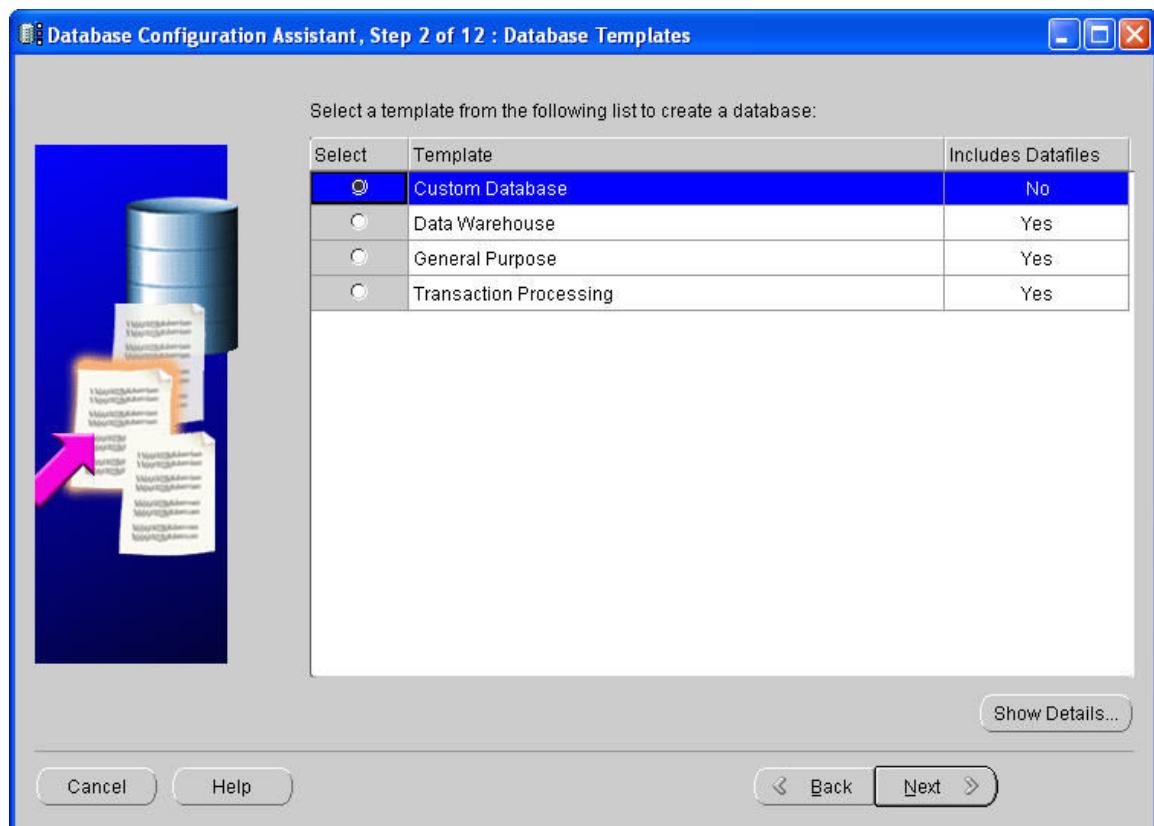


Figure 3. Database Configuration Assistant, Step 2 of 12

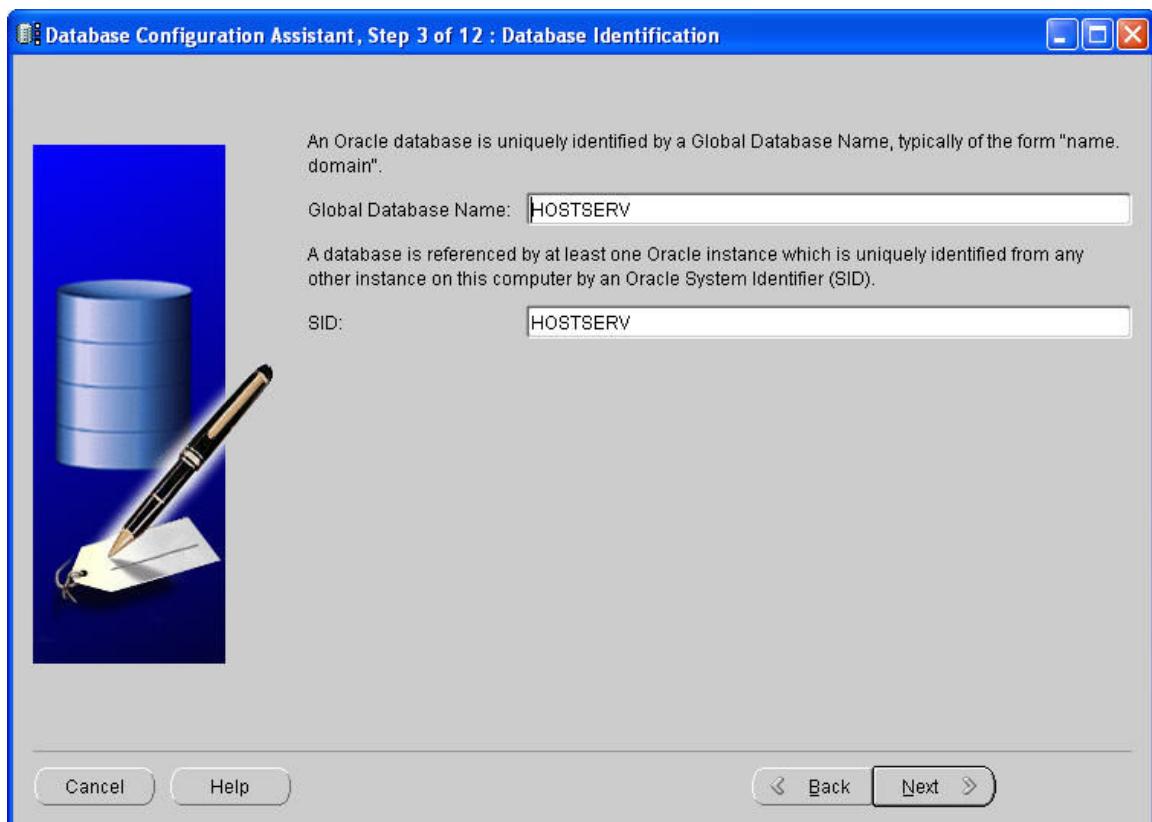


Figure 4. Database Configuration Assistant, Step 3 of 12

Note: The Global Database Name/SID cannot be longer than 8 characters

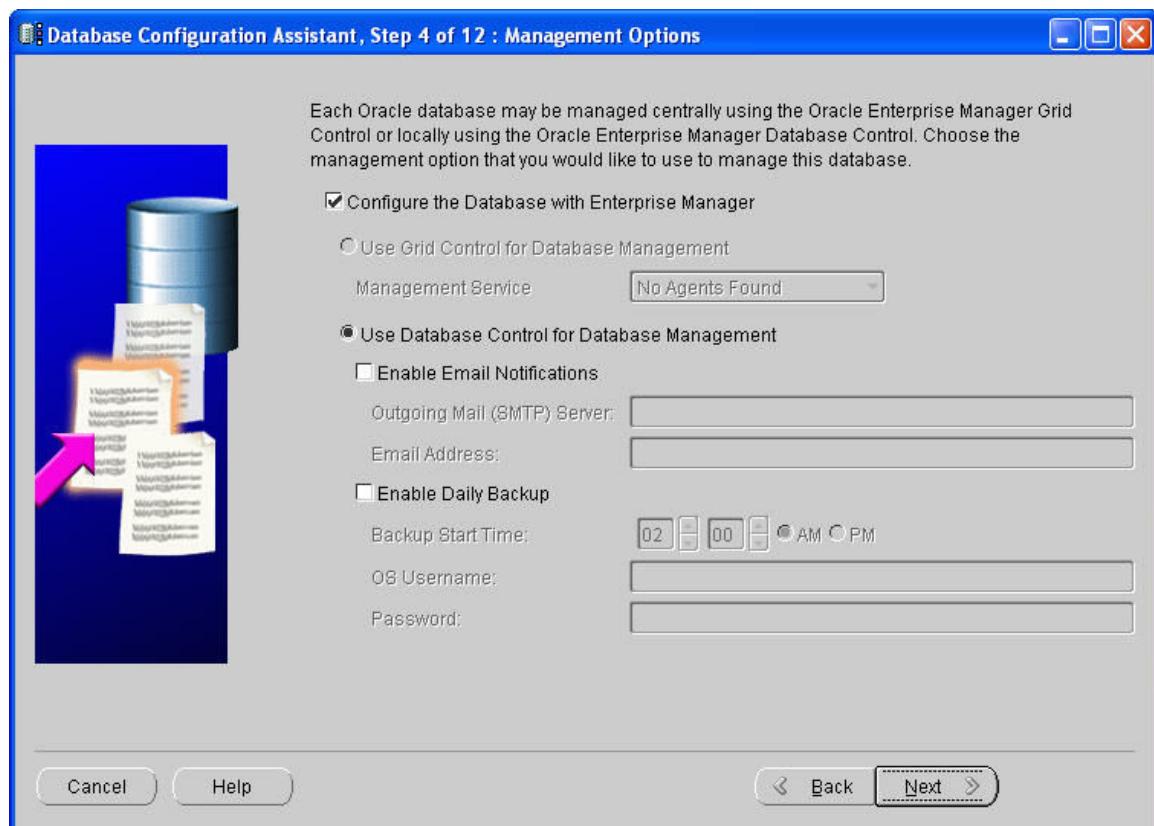


Figure 5. Database Configuration Assistant, Step 4 of 12

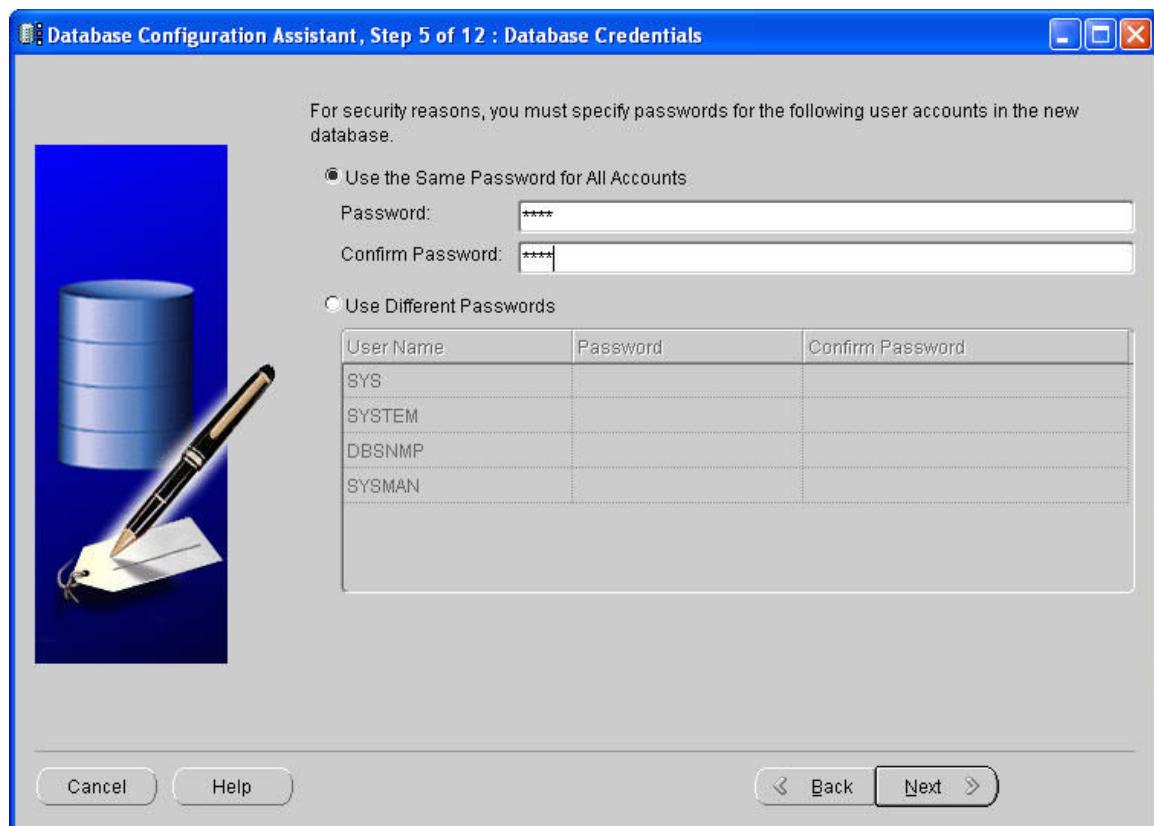


Figure 6. Database Configuration Assistant, Step 5 of 12

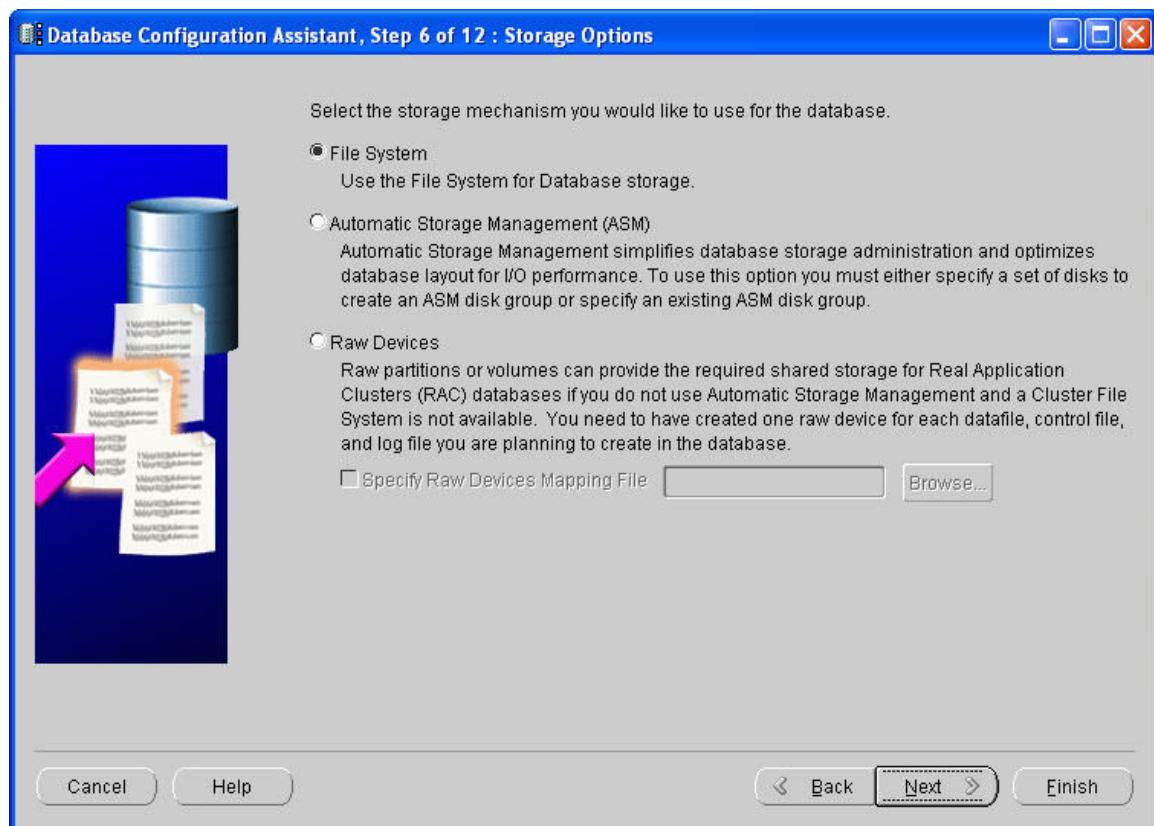


Figure 7. Database Configuration Assistant, Step 6 of 12

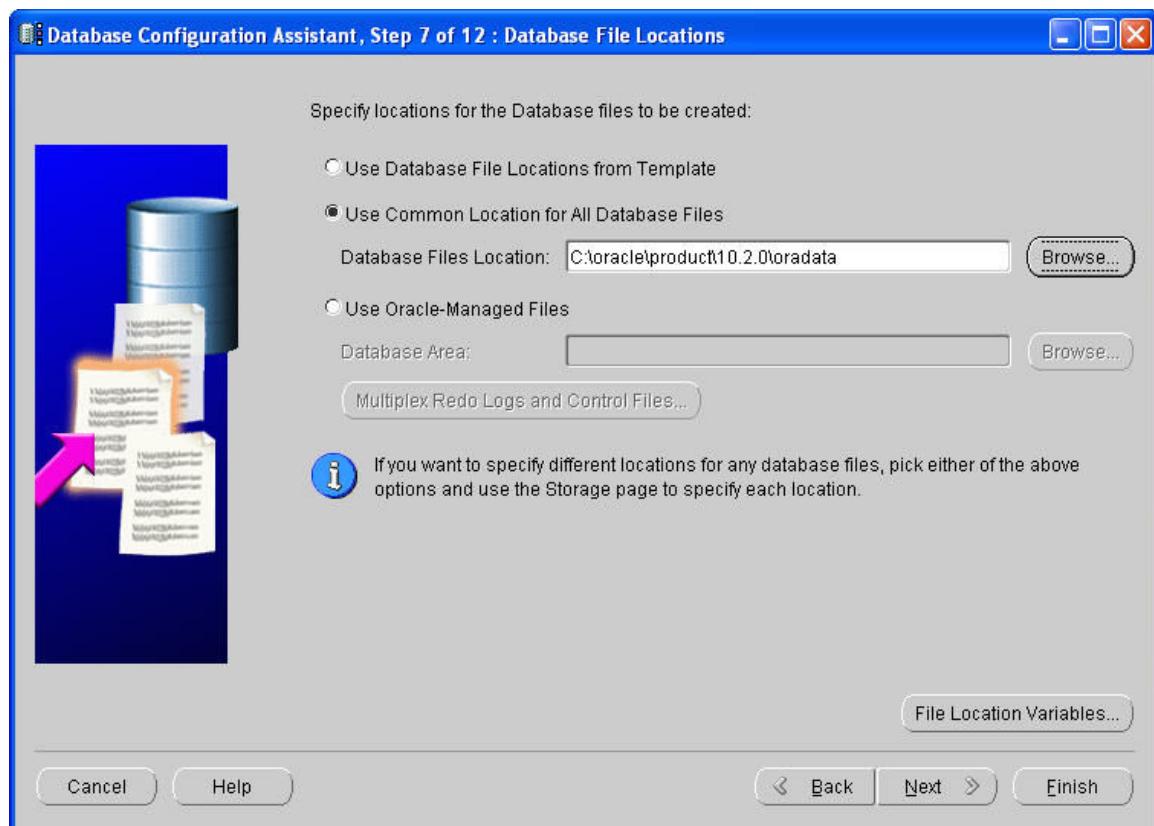


Figure 8. Database Configuration Assistant, Step 7 of 12

Note: This database file location should have plenty of space for project growth.

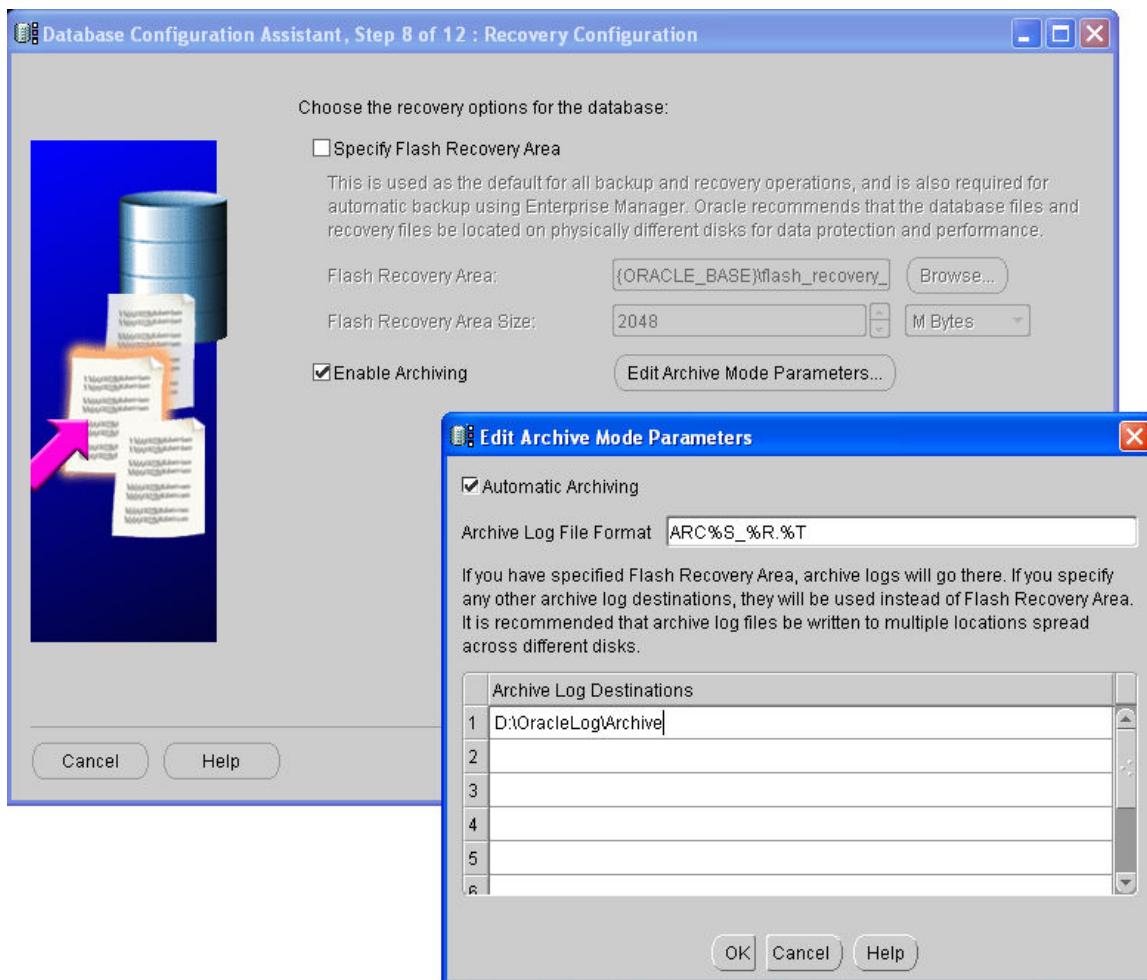


Figure 9. Database Configuration Assistant, Step 8 of 12

Note: When entering the Archive Log Destination, you must realize that this folder will grow continually. It will use all available space on the disk where this location resides. To avoid this filling up, you should schedule Oracle level backups frequently (nightly, weekly, etc) depending on how much work is being done on the workshare. Keeping in mind that as the amount of work increases (modeling, catalog changes) the amount of archived information will increase.

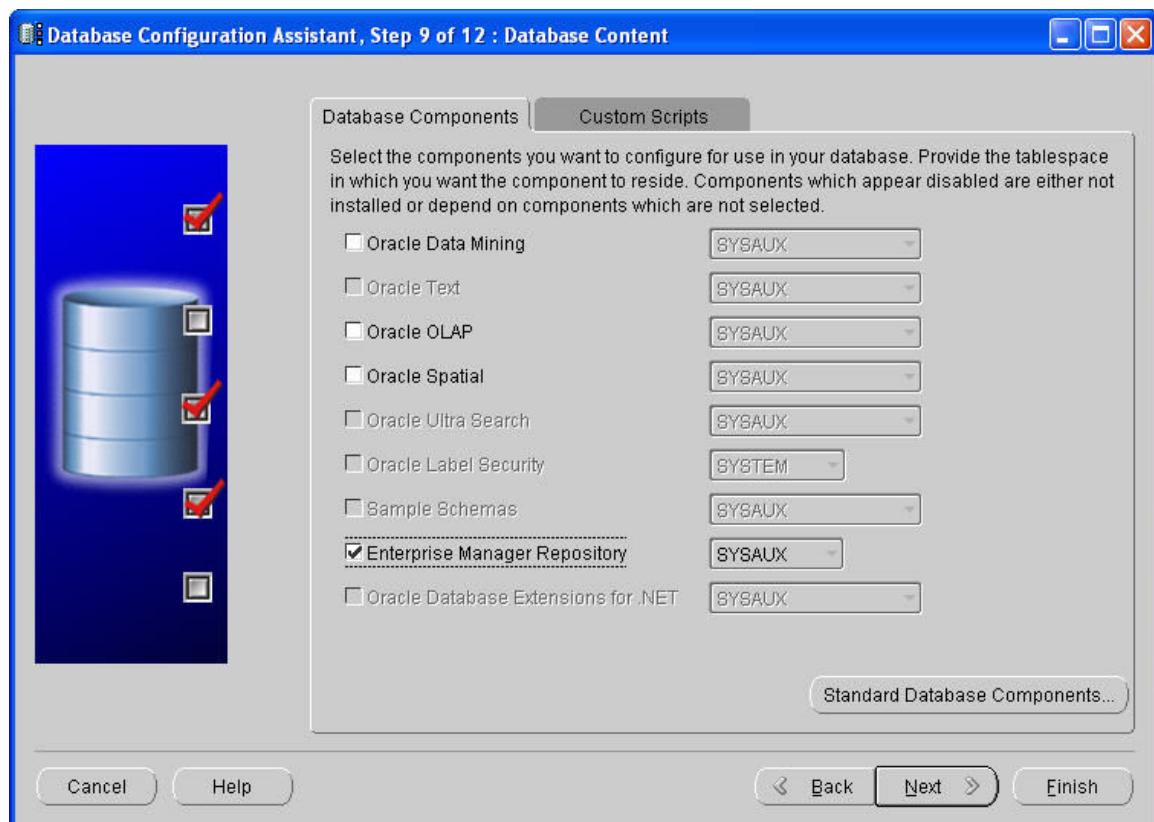


Figure 10. Database Configuration Assistant, Step 9 of 12

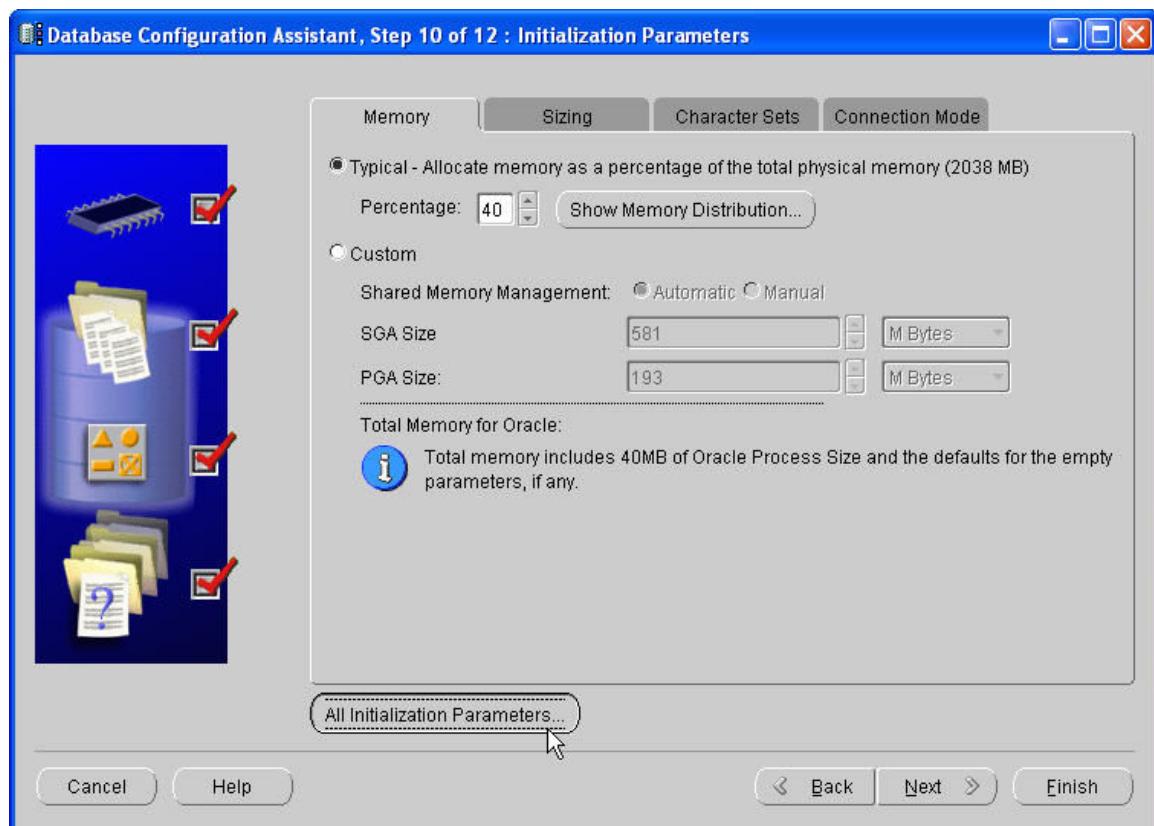


Figure 11. Database Configuration Assistant, Step 10 of 12

All Initialization Parameters

Name	Value	Override Def...	Basic	Category
07_DICTIONARY_A...	FALSE			Security and Auditing
active_instance_count				Cluster Database
aq_tm_processes	0			Miscellaneous
archive_lag_target	0			Standby Database
asm_diskgroups				Automatic Storage Ma
asm_diskstring				Automatic Storage Ma
asm_power_limit	1			Automatic Storage Ma
audit_file_dest	{ORACLE_BAS...	✓		Security and Auditing
audit_sys_operations	FALSE			Miscellaneous
audit_trail	NONE			Security and Auditing
background_core_d...	partial	✓		Diagnostics and Stati
background_dump_...	{ORACLE_BAS...	✓		Diagnostics and Stati
backup_tape_io_sla...	FALSE			Backup and Restore
bitmap_merge_area...	1048576			Sort, Hash Joins, Bitm
blank_trimming	FALSE			ANSI Compliance
buffer_pool_keep				Cache and I/O
buffer_pool_recycle				Cache and I/O
circuits				Shared Server
cluster_database	FALSE		✓	Cluster Database
cluster_database_in...	1			Cluster Database
cluster_interconnects				Cluster Database
commit_point_stren...	1			Distributed, Replicatio
compatible	10.2.0.2.0	✓	✓	Miscellaneous
control_file_record_k...	7			Redo Log and Recover
control_files	(C:\oracle\prod...	✓	✓	File Configuration
core_dump_dest	{ORACLE_BAS...	✓		Diagnostics and Stati
cpu_count	1			Processes and Sessi
create_bitmap_area...	8388608			Sort, Hash Joins, Bitm
create_stored_outlin...				Miscellaneous
cursor_sharing	EXACT			Cursors and Library C
cursor_space_for_ti...	FALSE			Cursors and Library C

Figure 12. Initialization Parameters

All Initialization Parameters

This screenshot shows the 'All Initialization Parameters' window from Oracle Database Configuration Assistant. It lists various initialization parameters with their current values, override definitions, basic status, and categories. Parameters like db_block_size, db_files, and db_domain are highlighted in blue, indicating they are being edited. The 'Basic' column contains checkmarks for most parameters.

Name	Value	Override Def...	Basic	Category
db_16k_cache_size	0			Cache and I/O
db_2k_cache_size	0			Cache and I/O
db_32k_cache_size	0			Cache and I/O
db_4k_cache_size	0			Cache and I/O
db_8k_cache_size	0			Cache and I/O
db_block_buffers	0			Cache and I/O
db_block_checking	FALSE			Diagnostics and Stat.
db_block_checksum	TRUE			Diagnostics and Stat.
db_block_size	8192	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Cache and I/O
db_cache_advice	ON			Cache and I/O
db_cache_size	50331648			Cache and I/O
db_create_file_dest			<input checked="" type="checkbox"/>	File Configuration
db_create_online_lo...			<input checked="" type="checkbox"/>	File Configuration
db_create_online_lo...			<input checked="" type="checkbox"/>	File Configuration
db_create_online_lo...				File Configuration
db_create_online_lo...				File Configuration
db_create_online_lo...				File Configuration
db_domain		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Database Identification
db_file_multiblock_r...	16	<input checked="" type="checkbox"/>		Cache and I/O
db_file_name_convert				Standby Database
db_files	1000	<input checked="" type="checkbox"/>		File Configuration
db_flashback_reten...	1440			Miscellaneous
db_keep_cache_size	0			Cache and I/O
db_name	HOSTSERV	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Database Identification
db_recovery_file_dest	{ORACLE_BAS...	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	File Configuration
db_recovery_file_de...	42949672960	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	File Configuration
db_recycle_cache_si...	0			Cache and I/O
db_unique_name				Miscellaneous
db_writer_processes	1			Cache and I/O
dbwr_io_slaves	0			Cache and I/O
ddl_wait_for_locks	FALSE			Miscellaneous

Figure 13. Initialization Parameters (cont'd)

All Initialization Parameters

Name	Value	Override Def...	Basic	Category
dg_broker_config_file1	?DATABASEID...			Miscellaneous
dg_broker_config_file2	?DATABASEID...			Miscellaneous
dg_broker_start	FALSE			Miscellaneous
disk_asynch_io	TRUE			Cache and I/O
dispatchers	(PROTOCOL=T...)	<input checked="" type="checkbox"/>		Shared Server
distributed_lock_tim...	60			Distributed, Replicati.
dml_locks	164			Transactions
drs_start	FALSE			Standby Database
enqueue_resources	384			Transactions
event				Diagnostics and Stat.
fal_client				Standby Database
fal_server				Standby Database
fast_start_io_target	0			Redo Log and Recov.
fast_start_mttr_target	0			Redo Log and Recov.
fast_start_parallel_r...	LOW			Transactions
file_mapping	FALSE			Miscellaneous
fileio_network_adapt...				Miscellaneous
filesystemio_options				Miscellaneous
fixed_date				Miscellaneous
gc_files_to_locks				Cluster Database
gcs_server_process...	0			Miscellaneous
global_context_pool...				SGA Memory
global_names	TRUE	<input checked="" type="checkbox"/>		Distributed, Replicati.
hash_area_size	131072			Sort, Hash Joins, Bit..
hi_shared_memory_...	0			SGA Memory
hs_autoregister	TRUE			Distributed, Replicati.
ifile				Miscellaneous
instance_groups				Cluster Database
instance_name	HOSTSERV			Instance Identification
instance_number	0		<input checked="" type="checkbox"/>	Cluster Database
instance_type	RDBMS			Miscellaneous

Figure 14. Initialization Parameters (cont'd)

All Initialization Parameters

Name	Value	Override Def...	Basic	Category
java_max_sessions...	0			Processes and Sess...
java_pool_size	25165824			Pools
java_soft_sessionsp...	0			Processes and Sess...
job_queue_processes	10	✓	✓	Job Queues
large_pool_size	0			Pools
ldap_directory_access	NONE			Miscellaneous
license_max_sessio...	0			License Limits
license_max_users	0			License Limits
license_sessions_w...	0			License Limits
local_listener				Network Registration
lock_name_space				Cluster Database
lock_sga	FALSE			SGA Memory
log_archive_config	SEND	✓		Miscellaneous
log_archive_dest			✓	Archive
log_archive_dest_1	'LOCATION=E:...	✓	✓	Archive
log_archive_dest_10				Archive
log_archive_dest_2			✓	Archive
log_archive_dest_3				Archive
log_archive_dest_4				Archive
log_archive_dest_5				Archive
log_archive_dest_6				Archive
log_archive_dest_7				Archive
log_archive_dest_8				Archive
log_archive_dest_9				Archive
log_archive_dest_st...	enable		✓	Archive
log_archive_dest_st...	enable			Archive
log_archive_dest_st...	enable		✓	Archive
log_archive_dest_st...	enable			Archive
log_archive_dest_st...	enable			Archive
log_archive_dest_st...	enable			Archive
log_archive_dest_st...	enable			Archive

Figure 15. Initialization Parameters (cont'd)

All Initialization Parameters

Name	Value	Override Def...	Basic	Category
log_archive_duplex...				Archive
log_archive_format	ARC%S_%R.%T	<input checked="" type="checkbox"/>		Archive
log_archive_local_first	TRUE			Miscellaneous
log_archive_max_pr...	2			Archive
log_archive_min_su...	1			Archive
log_archive_start	FALSE			Archive
log_archive_trace	0			Archive
log_buffer	262144			Redo Log and Recov.
log_checkpoint_inter...	0			Redo Log and Recov.
log_checkpoint_time...	1800			Redo Log and Recov.
log_checkpoints_to_...	FALSE			Redo Log and Recov.
log_file_name_convert				Standby Database
logmnr_maxPersist...	1			Miscellaneous
max_commit_propaga...	700			Cluster Database
max_dispatchers				Shared Server
max_dump_file_size	UNLIMITED			Diagnostics and Stat.
max_enabled_roles	150			Security and Auditing
max_shared_servers				Shared Server
nls_calendar				NLS
nls_comp				NLS
nls_currency				NLS
nls_date_format				NLS
nls_date_language				NLS
nls_dual_currency				NLS
nls_iso_currency				NLS
nls_language	AMERICAN	<input checked="" type="checkbox"/>		NLS
nls_length_semantics	BYTE			NLS
nls_nchar_conv_excp	FALSE			NLS
nls_numeric_charact...				NLS
nls_sort				NLS
nls_territory	AMERICA	<input checked="" type="checkbox"/>		NLS

Figure 16. Initialization Parameters (cont'd)

All Initialization Parameters

Name	Value	Override Def...	Basic	Category
nls_time_format				NLS
nls_time_tz_format				NLS
nls_timestamp_format				NLS
nls_timestamp_tz_fo...				NLS
object_cache_max_...	10			Objects and LOBs
object_cache_optim...	102400			Objects and LOBs
olap_page_pool_size	0			Miscellaneous
open_cursors	3000	✓	✓	Cursors and Library ..
open_links	10	✓		Distributed, Replicati..
open_links_per_inst..	10	✓		Distributed, Replicati..
optimizer_dynamic_...	2			Miscellaneous
optimizer_features_e...	10.1.0			Optimizer
optimizer_index_cac...	0			Optimizer
optimizer_index_cost..	100			Optimizer
optimizer_mode	ALL_ROWS			Optimizer
os_authent_prefix	""	✓		Security and Auditing
os_roles	FALSE			Security and Auditing
parallel_adaptive_m...	TRUE			Parallel Executions
parallel_automatic_t...	FALSE			Parallel Executions
parallel_execution_...	2148			Parallel Executions
parallel_instance_gr...				Cluster Database
parallel_max_servers	10			Parallel Executions
parallel_min_percent	0			Parallel Executions
parallel_min_servers	0			Parallel Executions
parallel_server	FALSE			Cluster Database
parallel_server_insta...	1			Cluster Database
parallel_threads_per...	2			Parallel Executions
pga_aggregate_target	202375168	✓	✓	Sort, Hash Joins, Bit..
plsql_code_type	INTERPRETED			Miscellaneous
plsql_compiler_flags	INTERPRETED...			PL/SQL
plsql_debug	FALSE			Miscellaneous

Figure 17. Initialization Parameters (cont'd)

All Initialization Parameters

Name	Value	Override Def...	Basic	Category
plsql_native_library...				PL/SQL
plsql_native_library...	0			PL/SQL
plsql_optimize_level	2			Miscellaneous
plsql_v2_compatibility	FALSE			PL/SQL
plsql_warnings	DISABLE:ALL			Miscellaneous
pre_page_sga	FALSE			SGA Memory
processes	200	✓	✓	Processes and Sess.
query_rewrite_enabled	TRUE			Optimizer
query_rewrite_integrity	enforced			Optimizer
rdbms_server_dn				Security and Auditing
read_only_open_del...	FALSE			Cache and I/O
recovery_parallelism	0			Redo Log and Recov.
remote_archive_ena...				Standby Database
remote_dependenci...	TIMESTAMP			PL/SQL
remote_listener			✓	Network Registration
remote_login_pass...	EXCLUSIVE	✓	✓	Security and Auditing
remote_os_authent	FALSE			Security and Auditing
remote_os_roles	FALSE			Security and Auditing
replication_depende...	TRUE			Distributed, Replicati.
resource_limit	FALSE			Resource Manager
resource_manager_...				Resource Manager
resumable_timeout	0			Miscellaneous
rollback_segments			✓	System Managed Un.
serial_reuse	DISABLE			Cursors and Library ..
service_names				Network Registration
session_cached_cur...	0			Cursors and Library ..
session_max_open...	10			Objects and LOBs
sessions	38		✓	Processes and Sess.
sga_max_size	113246208			SGA Memory
sga_target	609222656	✓	✓	SGA Memory
shadow_core_dump	partial			Diagnostics and Stat.

Figure 18. Initialization Parameters (cont'd)

All Initialization Parameters

Name	Value	Override Def...	Basic	Category
shared_memory_ad...	0			SGA Memory
shared_pool_reserv...	1677721			Pools
shared_pool_size	33554432			Pools
shared_server_sess...				Shared Server
shared_servers	0		<input checked="" type="checkbox"/>	Shared Server
skip_unusable_inde...	TRUE			Miscellaneous
smtp_out_server				Miscellaneous
sort_area_retained_...	0			Sort, Hash Joins, Bit..
sort_area_size	65536			Sort, Hash Joins, Bit..
sp_name				Miscellaneous
spfile				Miscellaneous
sql92_security	FALSE			Security and Auditing
sql_trace	FALSE			Diagnostics and Stat.
sql_version	NATIVE			Miscellaneous
sqltune_category	DEFAULT			Miscellaneous
standby_archive_dest	%ORACLE_HO...			Standby Database
standby_file_manag...	MANUAL			Standby Database
star_transformation_...	FALSE		<input checked="" type="checkbox"/>	Optimizer
statistics_level	TYPICAL			Miscellaneous
streams_pool_size	0			Miscellaneous
tape_asynch_io	TRUE			Backup and Restore
thread	0			Cluster Database
timed_os_statistics	0			Diagnostics and Stat.
timed_statistics	TRUE			Diagnostics and Stat.
trace_enabled	TRUE			Diagnostics and Stat.
tracefile_identifier				Diagnostics and Stat.
transactions	41			Transactions
transactions_per_rol...	5			System Managed Un.
undo_management	AUTO	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	System Managed Un.
undo_retention	3600	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	System Managed Un.
undo_tablespace	UNDOTBS1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	System Managed Un.

Figure 19. Initialization Parameters (cont'd)

use_indirect_data_b...	FALSE		Cache and I/O
user_dump_dest	{ORACLE_BAS...	✓	Diagnostics and Stat...
utl_file_dir			PL/SQL
workarea_size_policy	AUTO		Sort, Hash Joins, Bit...

Hide Advanced Parameters Close Show Description Help

Figure 20. Initialization Parameters (cont'd)

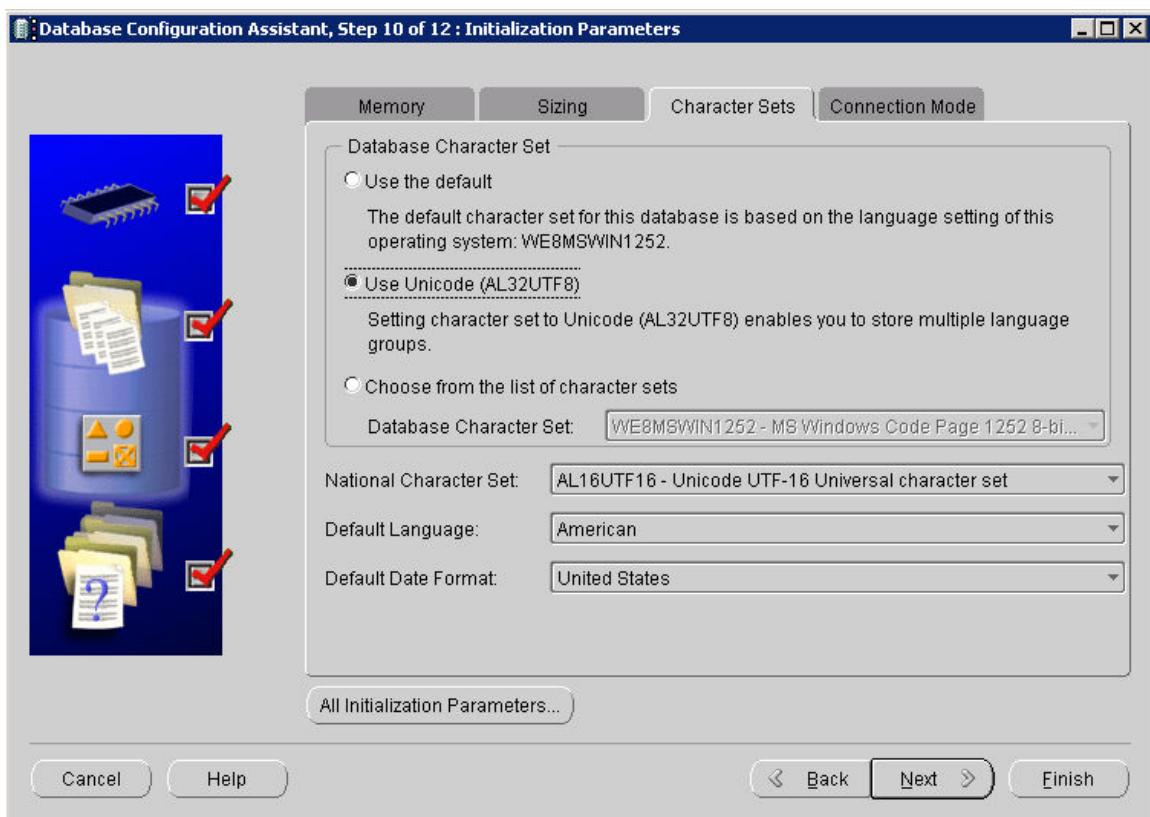


Figure 21. Database Configuration Assistant, Step 10 of 12 (Character Sets Tab)

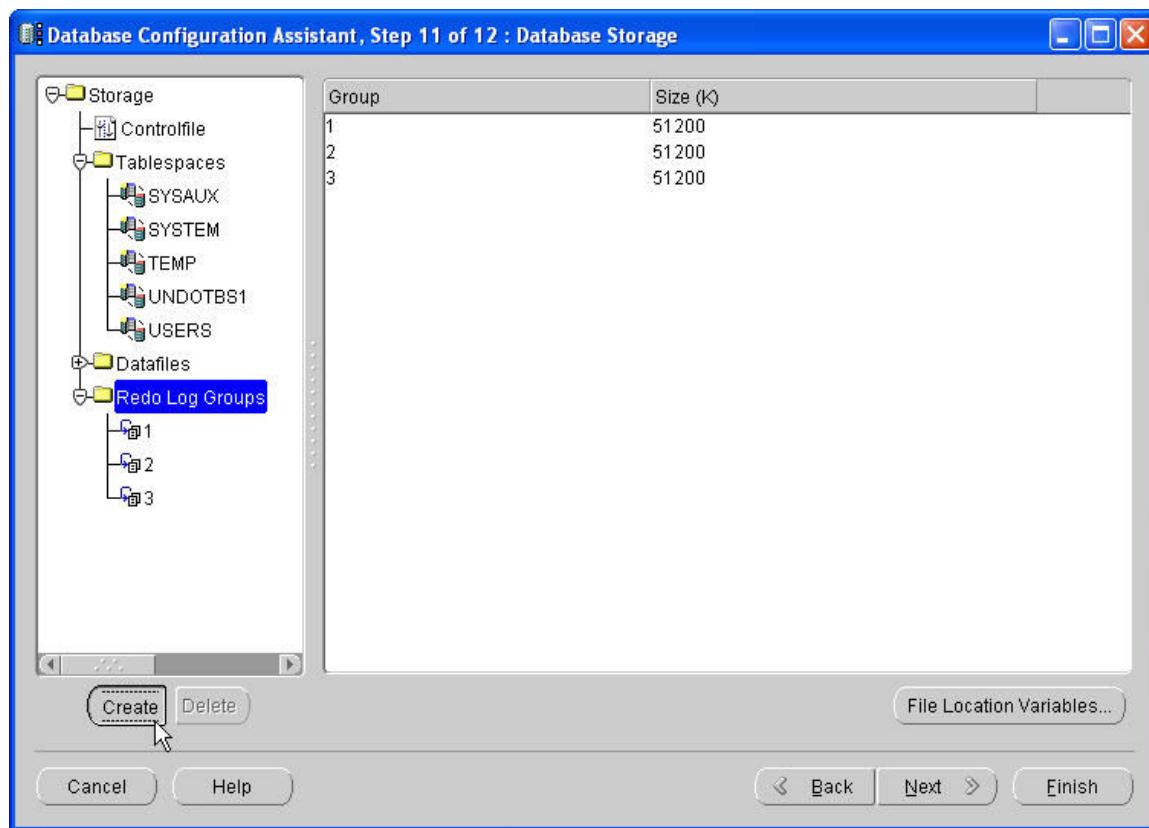


Figure 22. Database Configuration Assistant, Step 11 of 12

Note: Here we will create an Additional Redo Log File, and size them all to 500MB each.

Then we will put the three control files on three physically different hard drives. Each control file has the ability to start the database. If a hard drive crash occurs, and all control files are on the same drive then you will lose the ability to start the database.

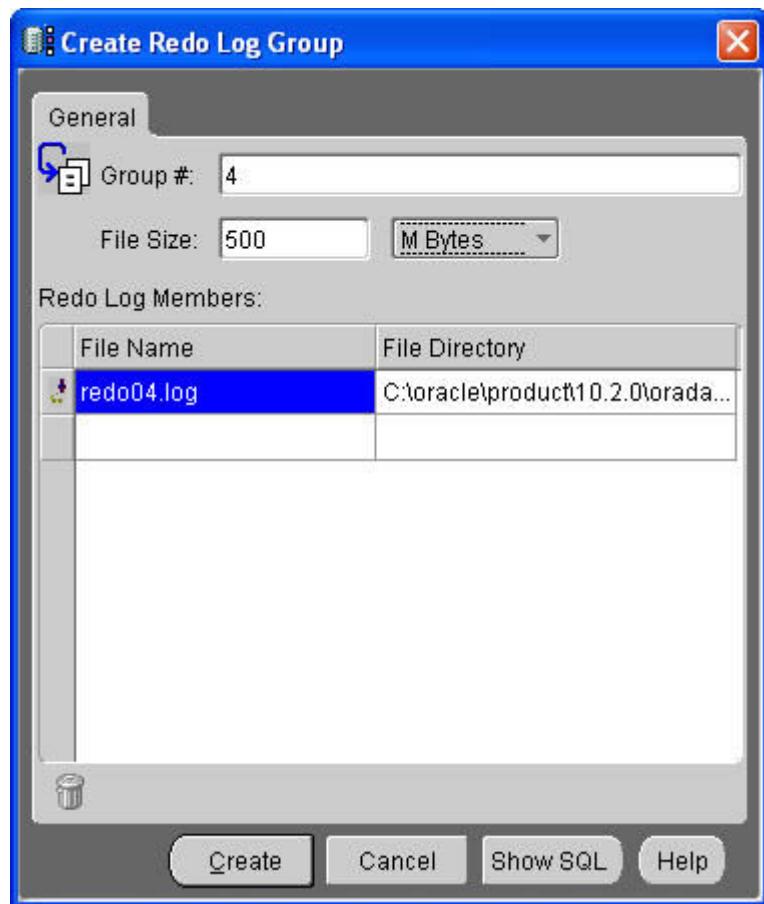


Figure 23. Create Redo Log Group

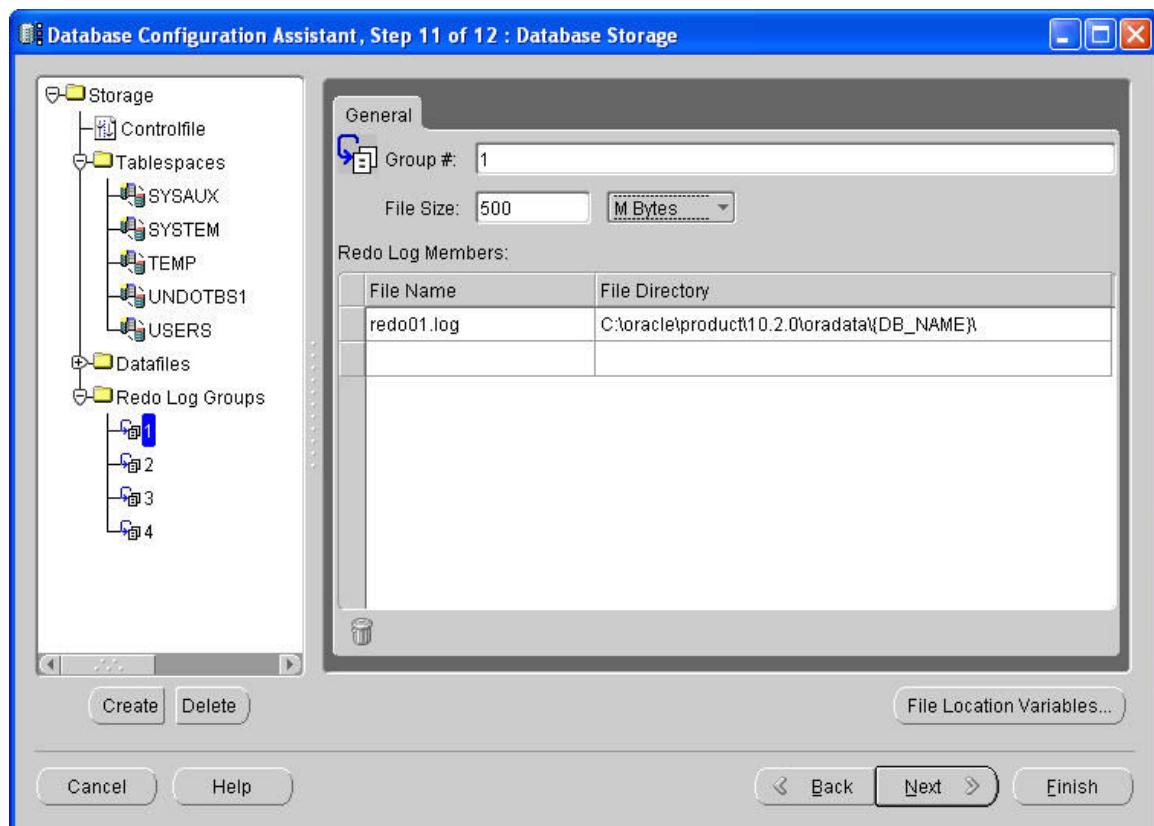


Figure 24. Database Configuration Assistant, Step 11 of 12 (Sizing Redo Logs)

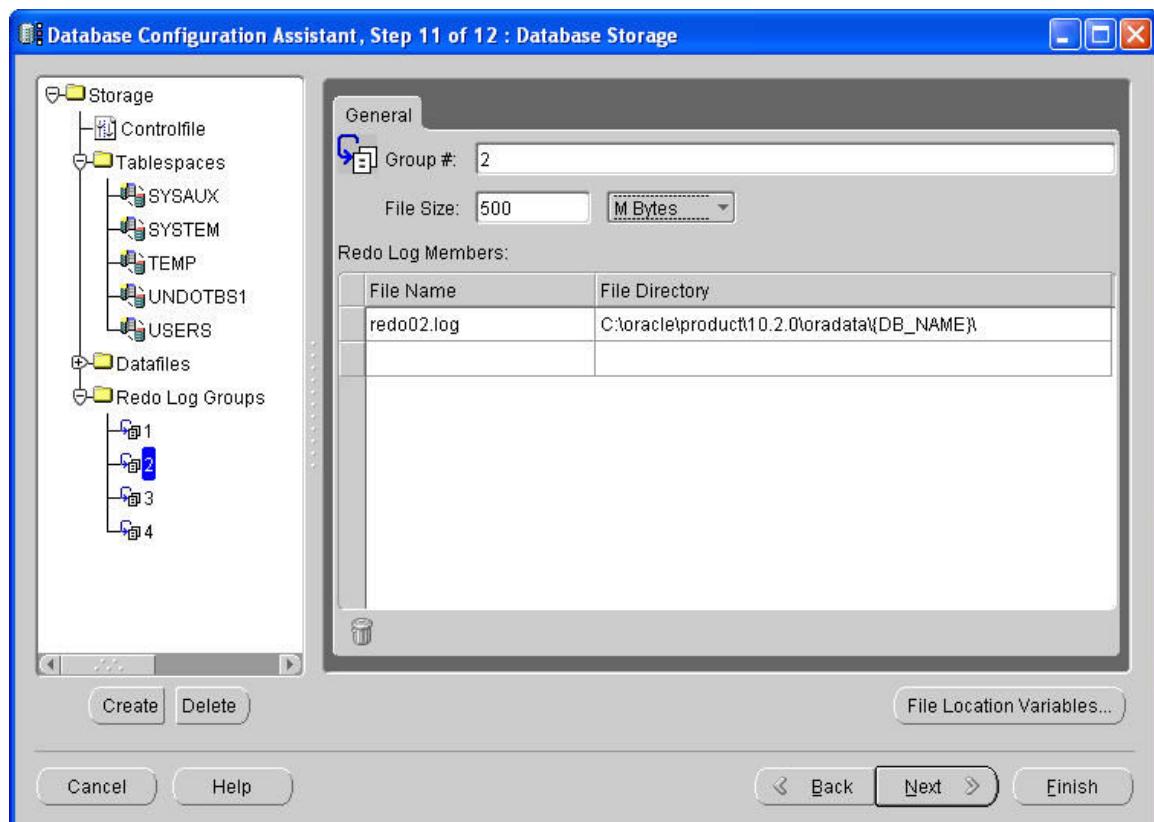


Figure 25. Database Configuration Assistant, Step 11 of 12 (Redo Log Groups)

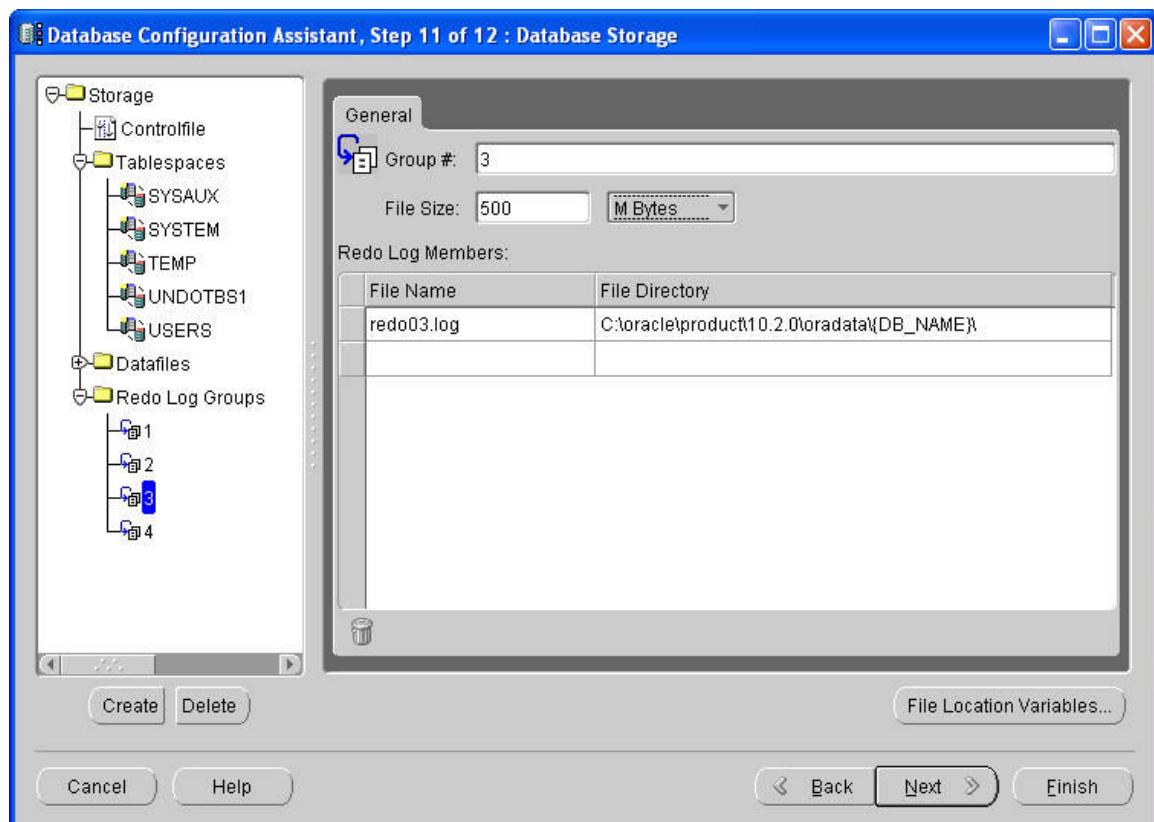


Figure 26. Database Configuration Assistant, Step 11 of 12 (Redo Log Groups)

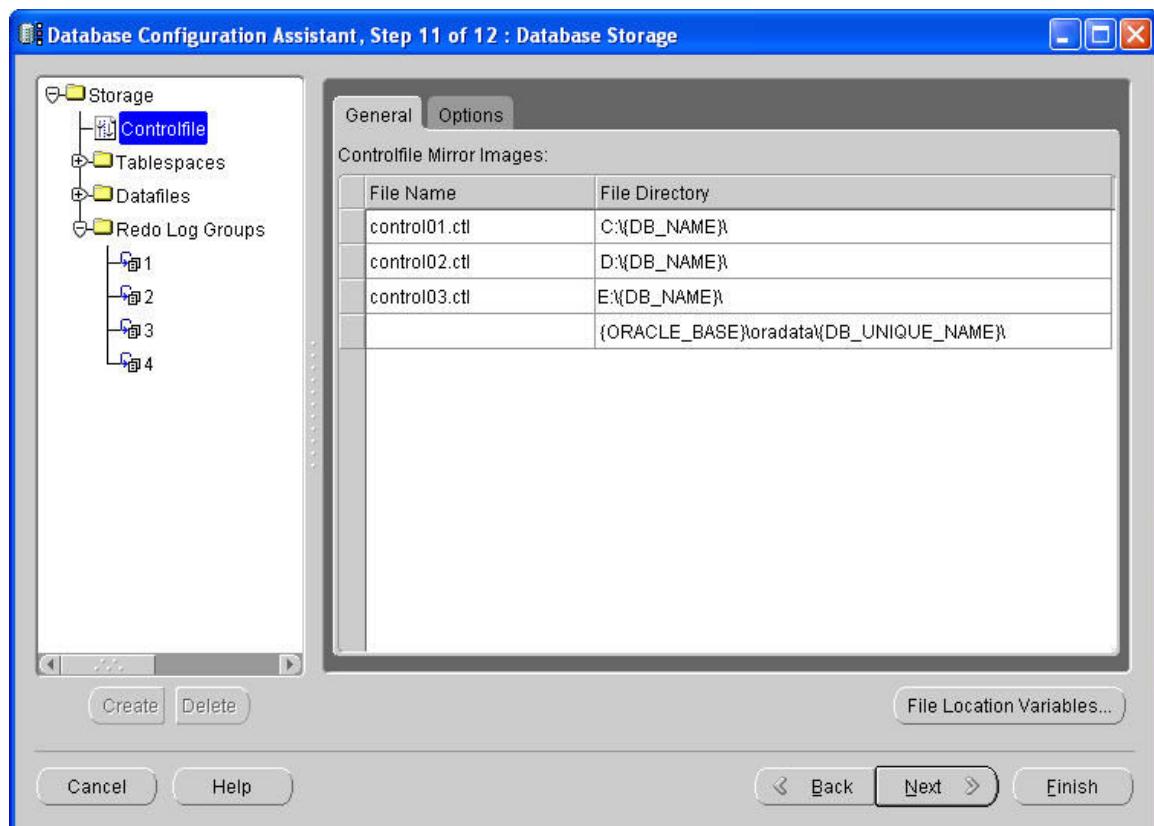


Figure 27. Database Configuration Assistant, Step 11 of 12 (Control Files)

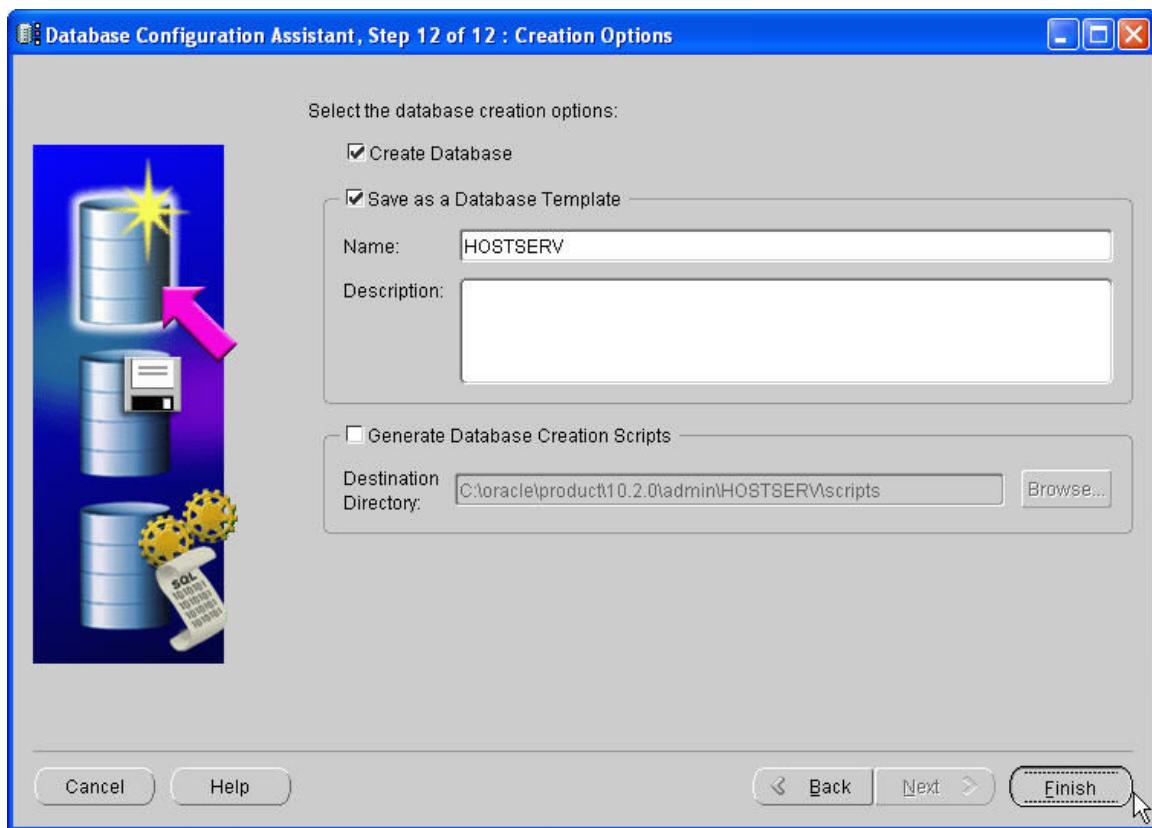


Figure 28. Database Configuration Assistant, Step 12 of 12

Note: Save the template so you can use it in the future. Also, once you click finish an HTML file will appear. Save that for future reference, it will contain configuration information.

Verification that Automatic Shared Memory Management is configured

Automatic Shared Memory Management (ASMM) is a feature of Oracle that automatically handles the sizing of components which make up the database's SGA. We suggest that this be enabled.

ASMM should have been automatically enabled with the instance creations. However, you need to verify that ASMM was actually enabled. There are two utilities that will allow for the verification of this setting: using the Web-based Enterprise Manager Database Control, or the java-based Enterprise Manager Console. This next section will review the location of the settings in both places.

Web-based Enterprise Manager Database Control

First, log in as a database administrator: sys, system, etc. Click on the "Administration" link at the top of the page. Then, under *Database Configuration* click on "Memory Parameters." Under *Current Allocation* notice the area that says: Automatic Shared Memory Management: **ENABLED**.

The screenshot shows the Oracle Enterprise Manager Database Control interface for the database instance SMP1GWC. The top navigation bar includes links for Home, Performance, Administration (which is highlighted), and Maintenance. The main content area has two tabs: General and Host CPU.

General Tab:

- Status: Up
- Up Since: Feb 29, 2008 8:57:59 AM CST
- Instance Name: smp1gwc
- Version: 10.2.0.3.0
- Host: SP3DSMP1.ingrnet.com
- Listener: LISTENER_SP3DSMP1.ingrnet.com

[View All Properties](#)

Host CPU Tab:

No data is currently available.

Load: 0.00 Paging: 59.42

ORACLE Enterprise Manager 10g Database Control

Database Instance: SMP1GWC

[Home](#) [Performance](#) [Administration](#) [Maintenance](#)

The Administration tab displays links that allow you to administer database objects and initiate database operations inside or outside Oracle databases.

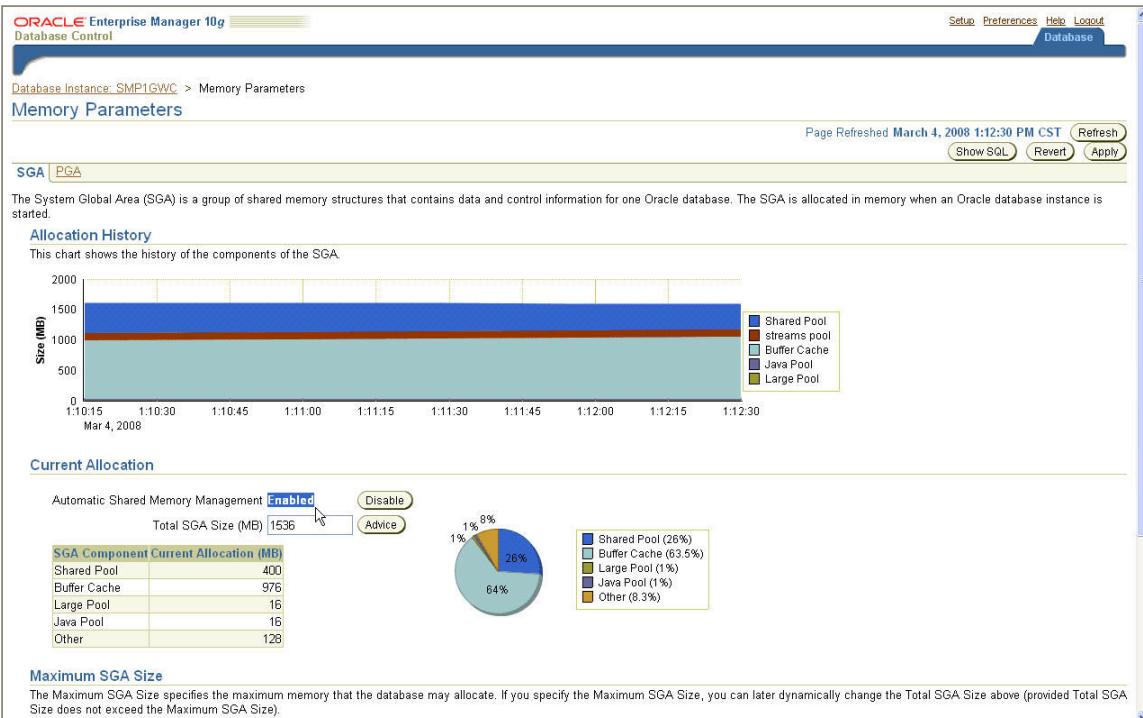
Database Administration

Storage

[Control Files](#)
[Tablespaces](#)
[Temporary Tablespace Groups](#)
[Datafiles](#)
[Rollback Segments](#)

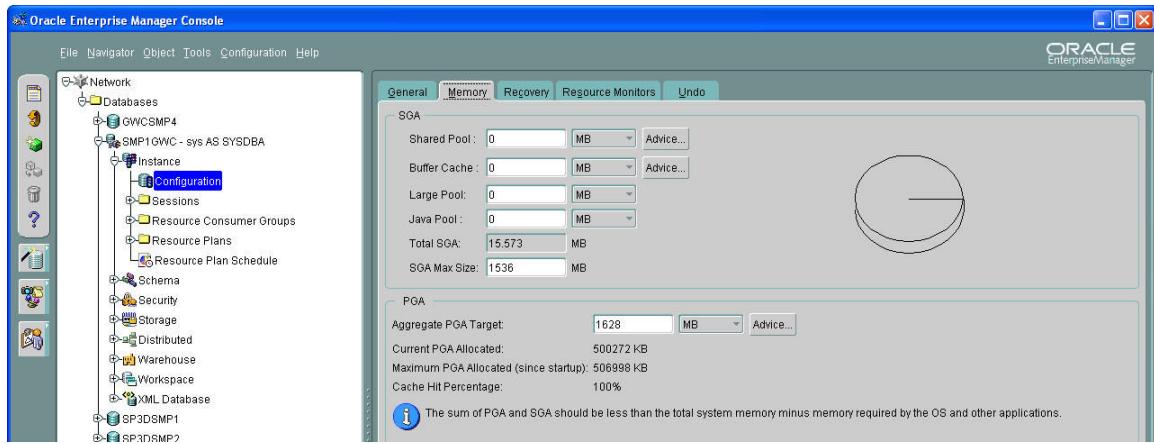
Database Configuration

[Memory Parameters](#)
[Undo Management](#)
[All Initialization Parameters](#)
[Database Feature Usage](#)



Java-based Oracle Enterprise Manager Console

Add your database server to the tree. Log in as a system administrator: sys, system, etc. Expand out the *Instance* tree, and highlight *Configuration*. Then on the right-hand pane, you will see a listing of variables that are zero (0): shared pool, buffer cache, large pool, java pool. These values being set to zero indicates that ASMM is enabled for this server.



Lab 2. Initializing Oracle Instance

In configuring an Oracle GWC environment, certain steps must be performed prior to work in SP3D can begin. The work is broken down into two primary sections: Configure Oracle Servers and Connect to Oracle Servers. The following labs describe how to perform these actions, in the order necessary, to allow Oracle and SP3D to successfully communicate.

Connect to Oracle Servers

With a user that has Database Admin role on both/all Oracle Servers, you should login to an Oracle Client machine with SP3D Project Management installed. A connection must be established between each client and each server. To do this there must be an entry in the tnsnames.ora file for each server. Use the Oracle Net Configuration Assistant (which is a GUI) to create these entries.

1. Start Oracle Net Configuration Assistant

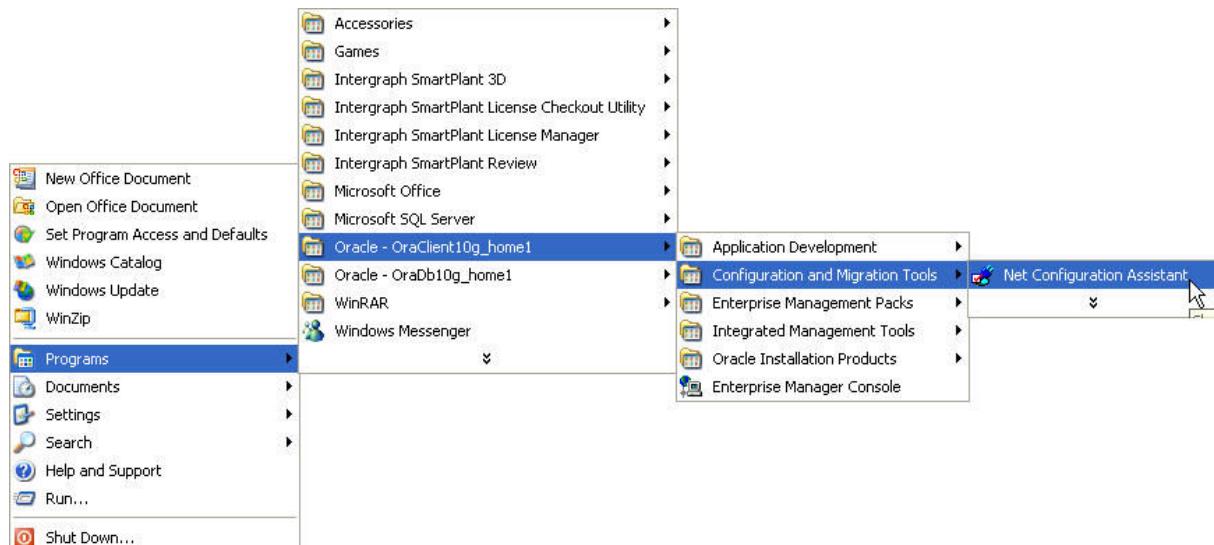


Figure 29. Path to Oracle Client Net Configuration Assistant

2. Click "Next" on the Welcome Screen



Figure 30. Oracle Net Configuration Assistant – Screen 1

3. Click "Add" and then "Next" on the Net Service Name Configuration Screen



Figure 31. Oracle Net Configuration Assistant – Screen 2

4. Insert the database instance name (or Service Name) to which you wish to connect, and click "Next"
 • This information will be given by the Instructor

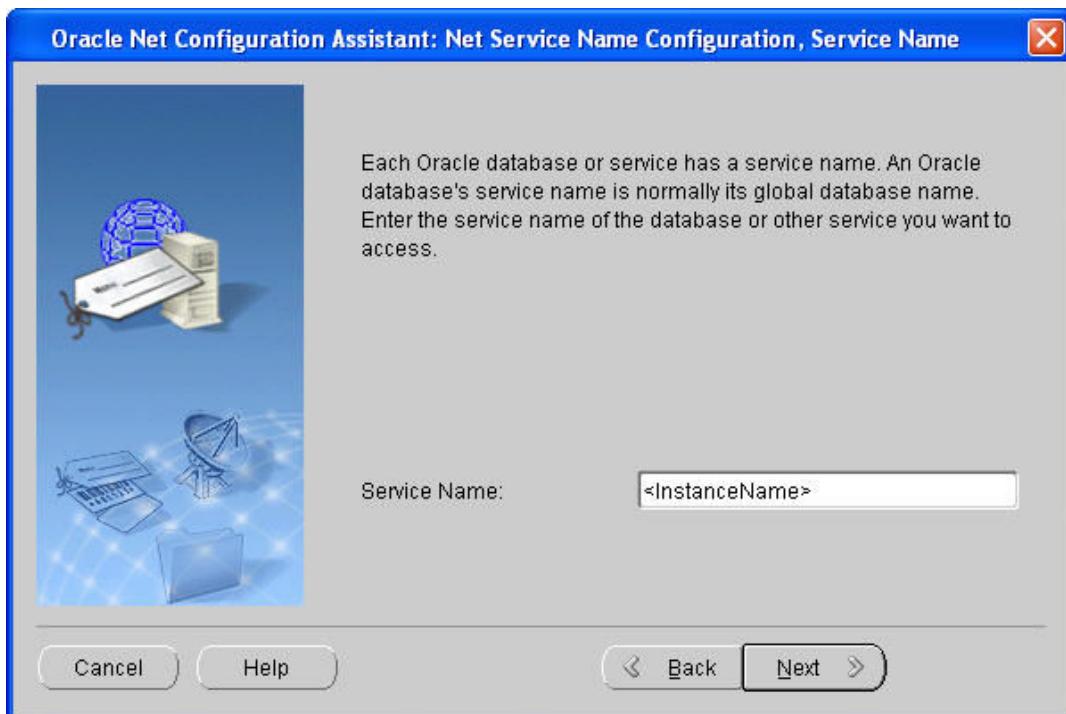


Figure 32. Oracle Net Configuration Assistant – Screen 3

5. Select "TCP" as the connection protocol and click "Next"

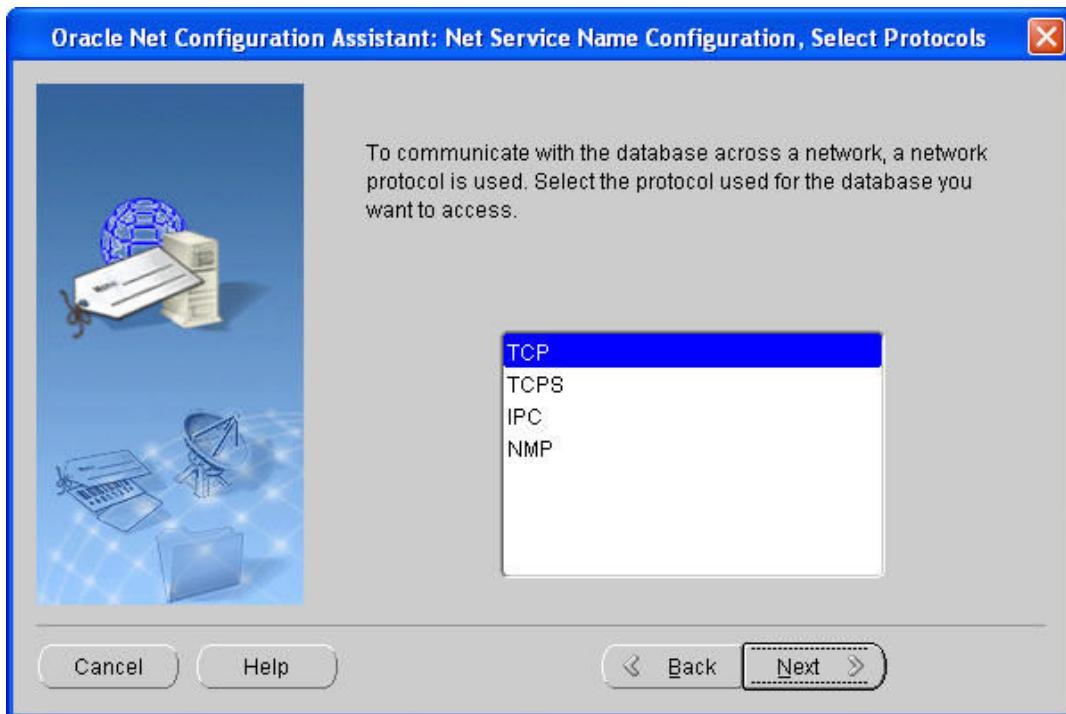


Figure 33. Oracle Net Configuration Assistant – Screen 4

6. Type in the fully qualified computer name, leave the port number as default and click "Next"

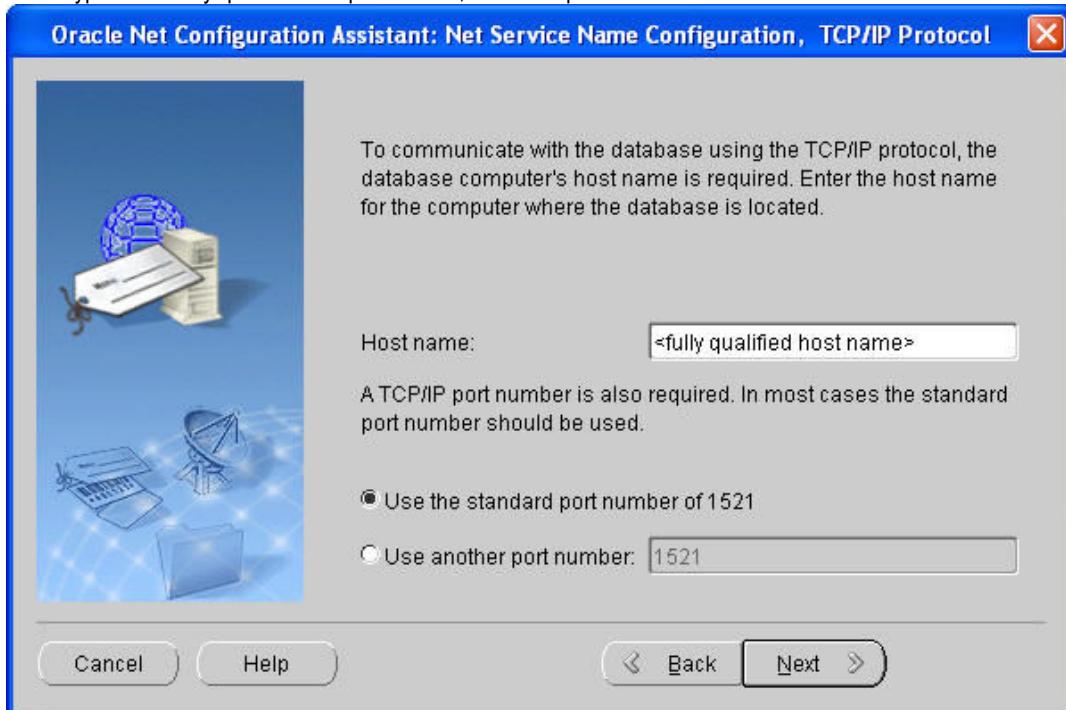


Figure 34. Oracle Net Configuration Assistant – Screen 5

7. Select "Yes, perform a test" and Select "Next"

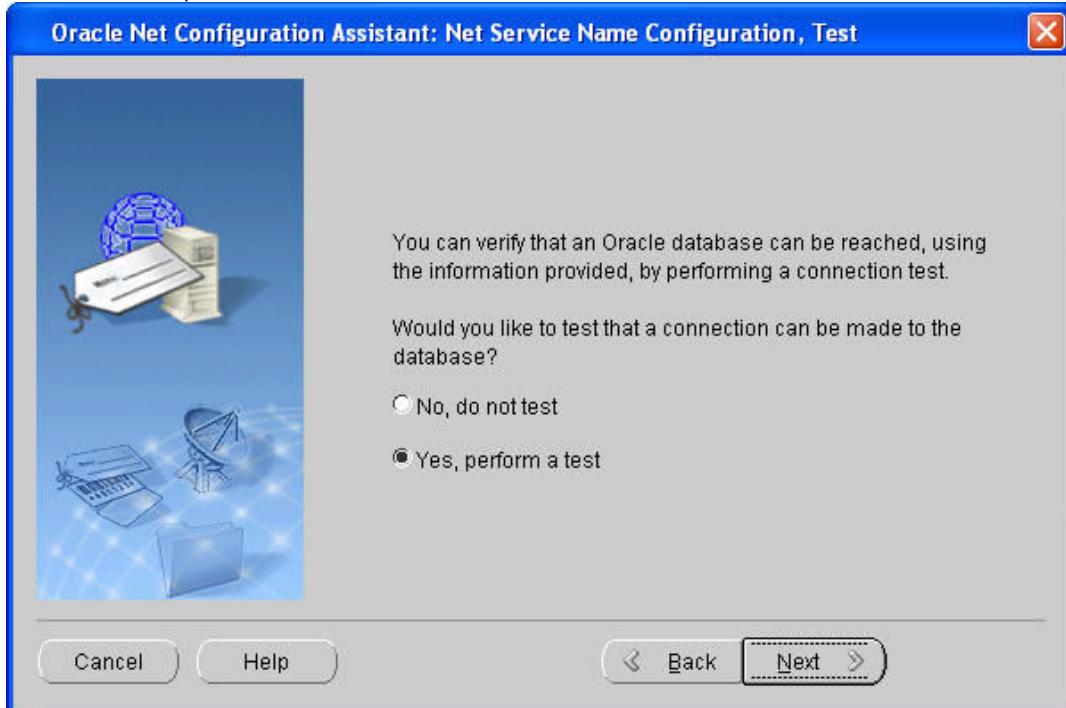


Figure 35. Oracle Net Configuration Assistant – Screen 6

8. Click Change Login and Type the following and click "OK"

- a. Login: system
- b. Password: sp3d

9. Upon receiving the following screen click "Next"
⊕ If you do not receive this message (as seen below) please request assistance from the instructor.

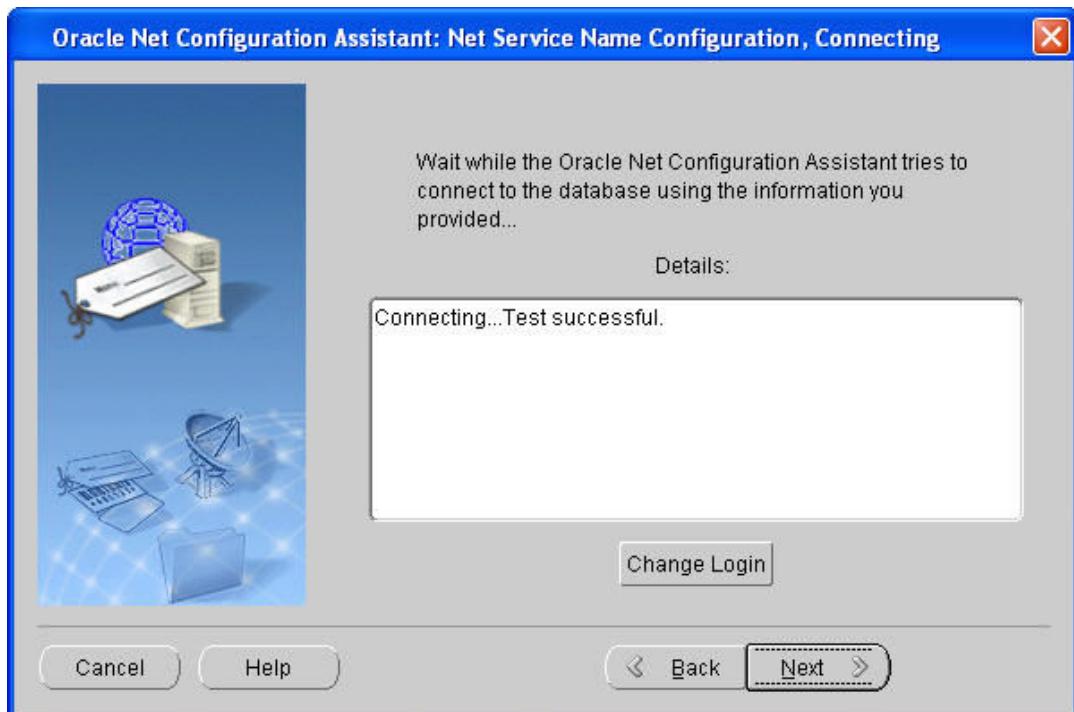


Figure 36. Oracle Net Configuration Assistant – Screen 7

10. Leave this screen as default and select "Next"

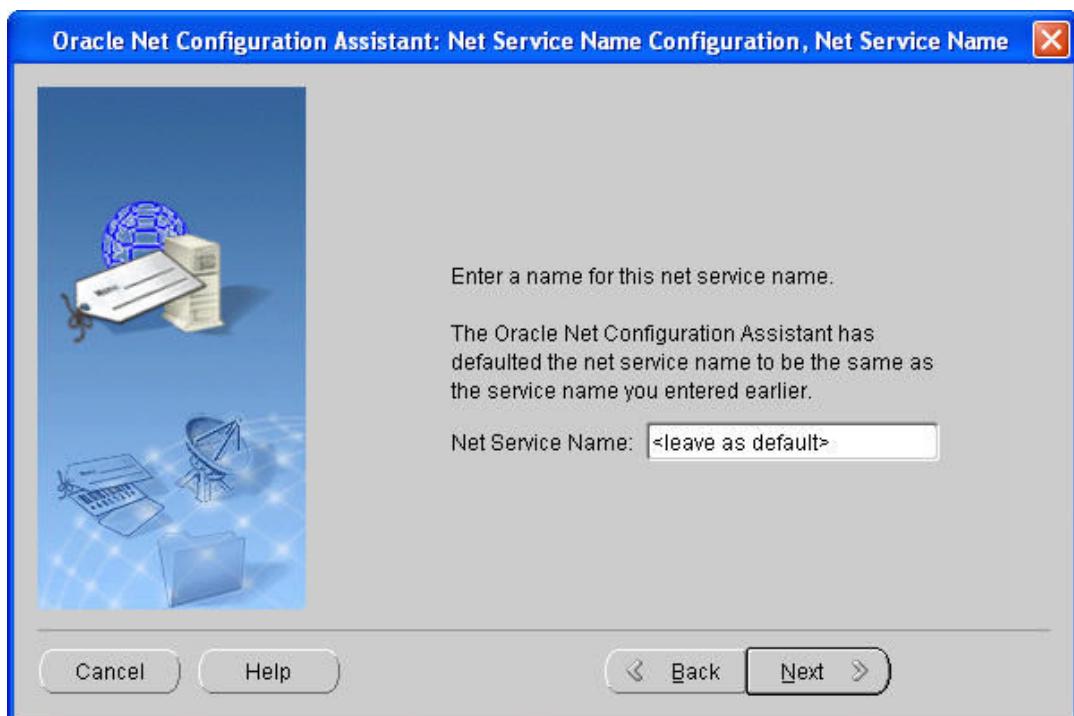


Figure 37. Oracle Net Configuration Assistant – Screen 8

11. Select "Yes" to configure more services, and click "Next"
a. Choosing YES allows you to create other connections without exiting the GUI.
b. Choosing NO allows you to finish the current connection and exit the GUI.

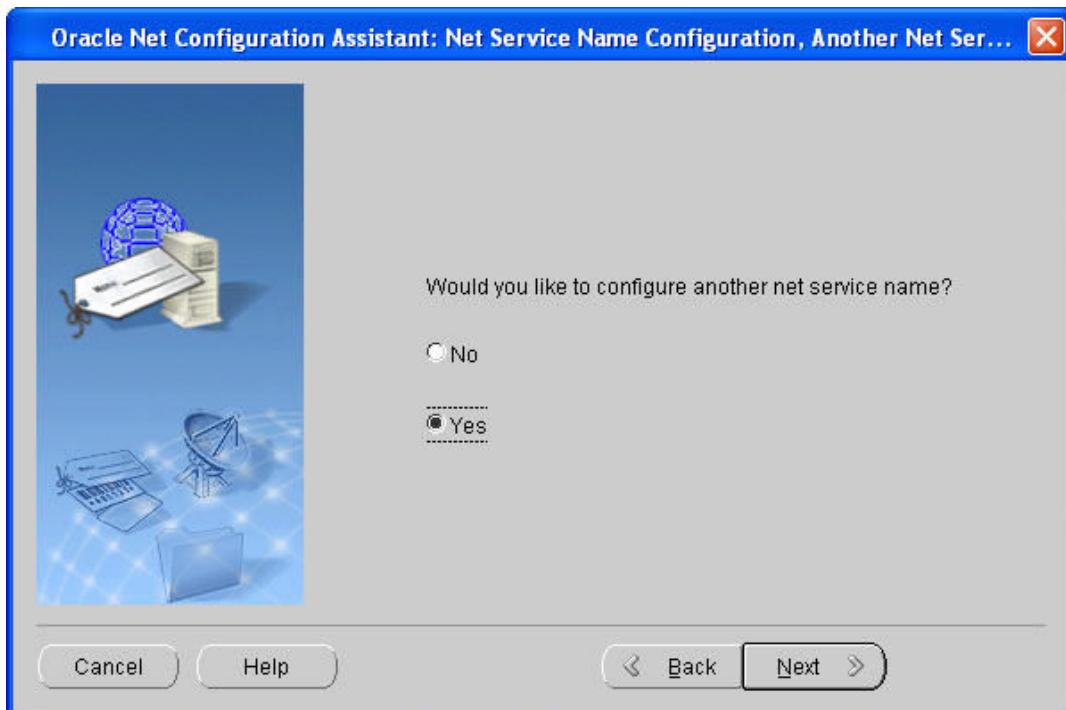


Figure 38. Oracle Net Configuration Assistant – Screen 9

12. Click "Next"

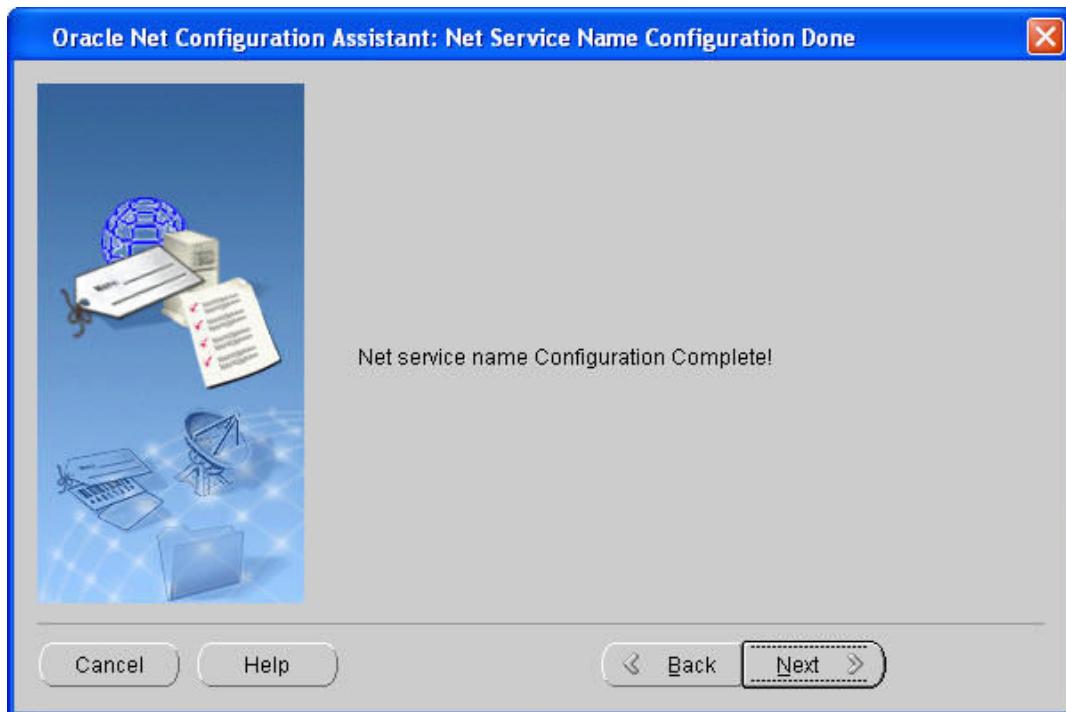


Figure 39. Oracle Net Configuration Assistant – Screen 10

13. Repeat these Steps (1-12) for each connection that you wish to establish. When you have all of the connections established select "No" when the prompt asks you if you would like to create more.
14. Click "Finish"



Figure 40. Oracle Net Configuration Assistant – Screen 11

Up to this point, we have successfully connected our client to the Oracle GWC Servers. Now, on top of the connectivity test done in the Net Configuration Assistant, we can also test for connectivity in the Enterprise Manager Console.

Enterprise Manager Console is a powerful tool. It is a Java-based version of the web-based Database Console. It has the following capabilities:

- Active sessions can be monitored
- Users can be created and deleted
- Oracle Streams can be monitored

All of this considered, the Enterprise Manager Console is being phased out in favor of the web-based Database Console.

(OPTIONAL)

1. Start Enterprise Manager Console

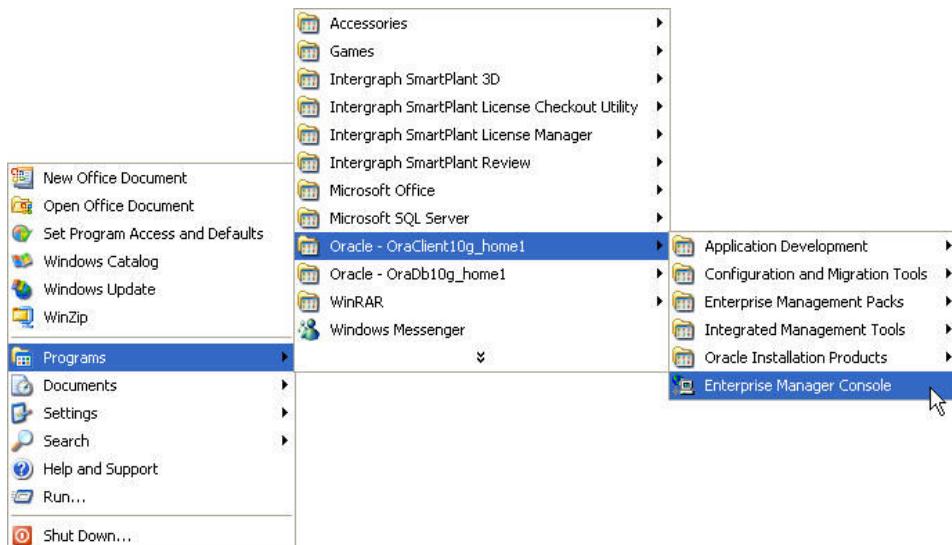


Figure 41. Path to Open Enterprise Manager Console

2. "Add Database to Tree" will appear first. In the figure above (Figure20), notice the grayed out servers listed in the bottom window. These are the servers that are in our tnsnames.ora file that were created with the Oracle Net Configuration Assistant.
 - a. Click "Add selected databases from..." and select all servers in this list.
 - b. Click "OK" – This will create an active connection from the client to the server.

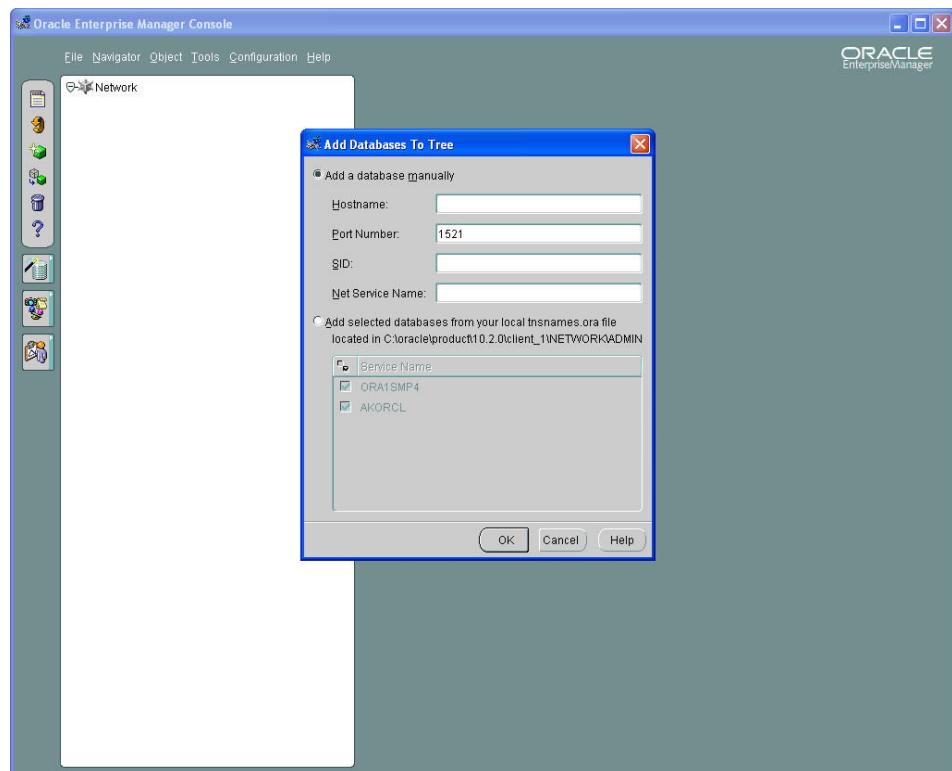


Figure 42. Add Database to Network Tree

3. You can now browse the information available through this interface. One area that will be useful later, after Oracle GWC has been started is shown in the screen shot below.
 - a. Navigate to: Databases > *Instance Name* > Distributed > Streams > Click on “Administration”
 - b. Before streams are created and configured, nothing exists in this area. However, later you will see a graphical representation of the connections present in the GWC.

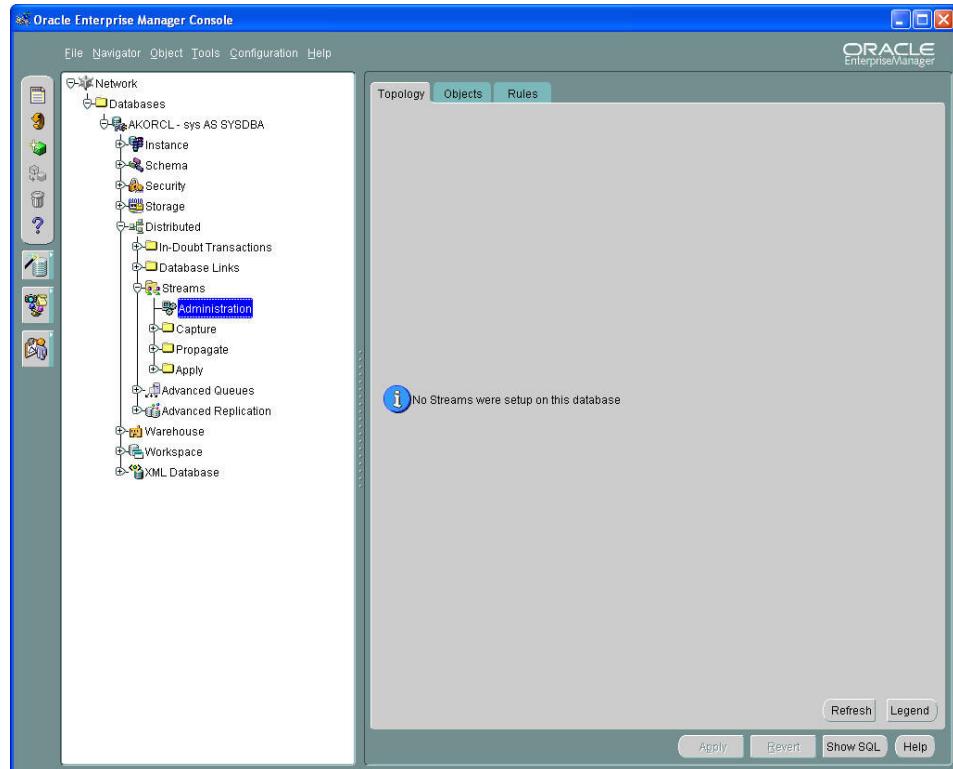


Figure 43. Oracle Streams Monitoring Site (Pre-Streams Setup)

Configure Oracle Servers

Next, the Oracle Database server must be configured with the proper users and tablespaces necessary for the SP3D software to communicate properly.

There are four SQL scripts that **must** be run on each of the Oracle Servers (Host and all satellites) that will participate in the Oracle GWC. They **must** be run in the following order:

- SP3DRoles.SQL
- SP3DProjectAdministrator.SQL
- SP3DUser.SQL
- StrmUserTblSpcCfg.SQL

The first three of these four files can be found in the following directory:
 <Product Folder>\Tools\Scripts\ToInitOracleDB

To execute these scripts perform the following steps:

1. Login to the Oracle DB server computer with the local administrative account.
2. Open **SQL Plus**. The **Log On** dialog box appears.
3. In the **User Name** field, type **SYS**.
4. In the **Password** field, type the password for the SYS account.
5. In the **Host String** field, type **<Oracle database name> as SYSDBA**.
6. Click **OK**. The **Oracle SQL *Plus** window displays.
7. At the SQL prompt, type **@<File Location>\SP3DRoles.sql** and press **Enter**.
 - ◆ For example, if you placed a copy of the script file in the root folder on the C drive, you type **@C:\SP3DRoles.sql**.
8. Execute **SP3DProjectAdministrator.sql** and **SP3DUser.sql**
9. After the script finishes, click **File > Exit**.

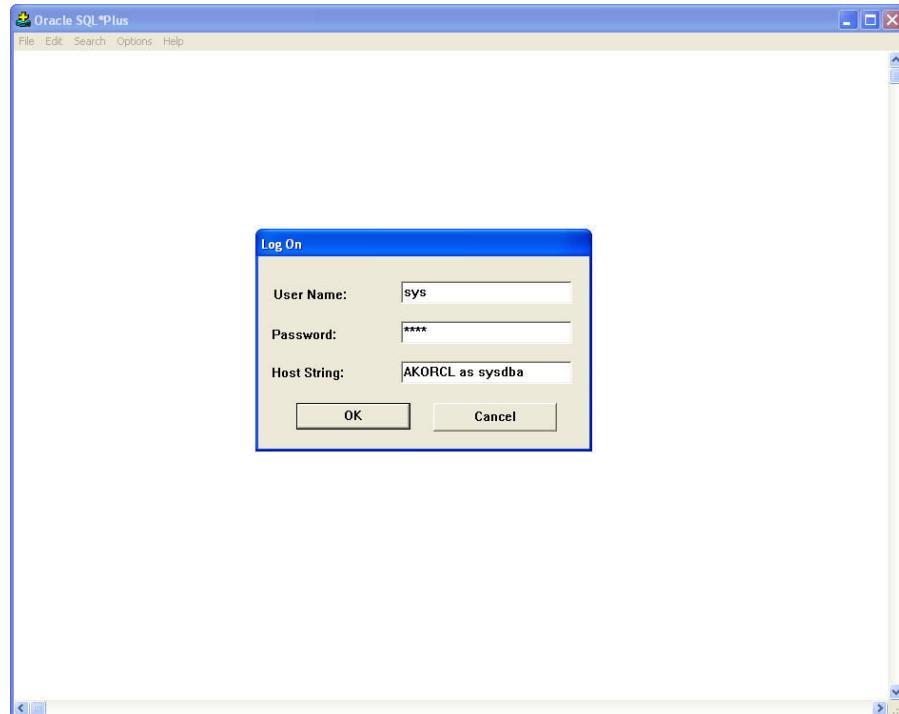


Figure 44. Login to Oracle Server with DBA privileges

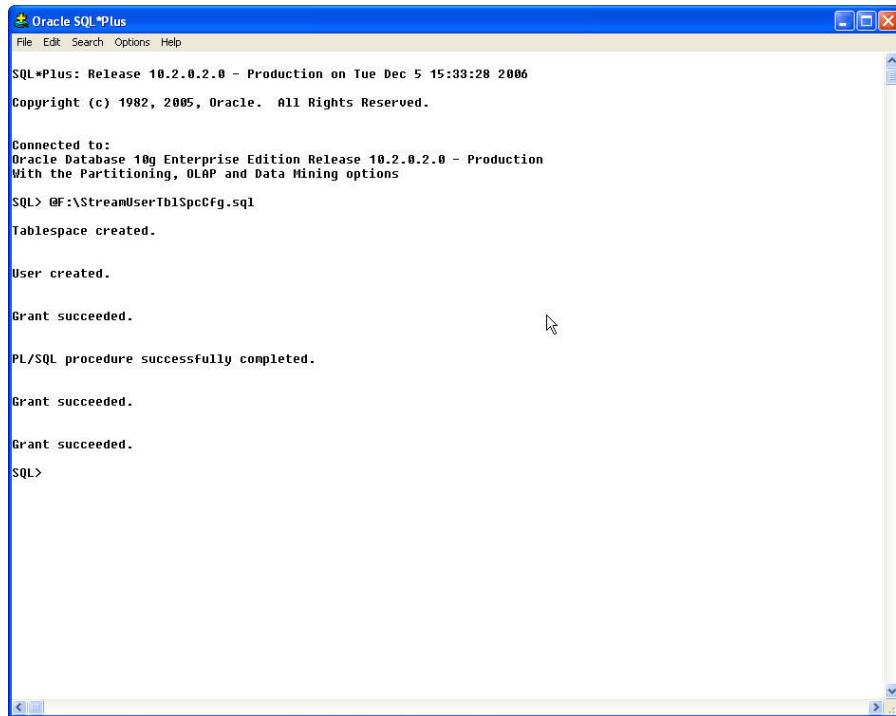


Figure 45. Example of Script Execution Command

The fourth file: **StrmUserTblSpcCfg.sql** is created from the information provided in the following PDF file:

<Product Directory>\Program Files\Common Files\Intergraph\SmartPlant\Help\
in ProjectManagementUsersGuide.pdf.

This script has been generated for you. Ensure that the path where the tablespace datafile will be created is correct, then run the script in using Steps 1-7 above.



The screenshot shows a Windows application window titled "Oracle SQL*Plus". The window title bar includes standard icons for minimize, maximize, and close. The main area displays the output of an SQL script:

```
SQL*Plus: Release 10.2.0.2.0 - Production on Tue Dec 5 15:33:28 2006
Copyright (c) 1982, 2005, Oracle. All Rights Reserved.

Connected to:
Oracle Database 10g Enterprise Edition Release 10.2.0.2.0 - Production
With the Partitioning, OLAP and Data Mining options

SQL> @F:\$Stream\UserTblSpcCfg.sql
Tablespace created.

User created.

Grant succeeded.

PL/SQL procedure successfully completed.

Grant succeeded.

Grant succeeded.

SQL>
```

Figure 46. Execute Script to Create STRMADMIN Account and Tablespace

- ⊕ Ensure all four scripts have been executed on all participating servers (Both Host and Satellite)

SP3DTools

SP3DTools is an application that is available for customers which is helpful in the script generation process. SP3DProjectAdministrator.sql and SP3DUser.sql both have to be maintained as users are added and deleted from the SP3D work environment. SP3DTools was written to allow an Administrator, with a few clicks, to add users from a domain. This product will take these selected users and add them to either the SP3DUsers.sql or SP3DProjectAdministrator.sql script. If you are interested in this tool please speak with the Instructor.

- ⊕ Oracle does not accept Domain Groups to be added to the database. Every user has to be added/removed individually from the database and given permissions on an individual basis.

Lab 3. Preparing SP3D For GWC

At this point there are two ways to proceed. Either 1) you wish to start from a blank plant or 2) you have a plant backup that you wish to use as your GWC starting point. The first section in this lab assumes that you wish to start from a blank plant.

Create Initial SP3D Databases

If a set of SP3D databases does not exist, then perform the following steps to create a set for the replication process. This section must occur on the GWC Host.

1. Start the “Database Wizard.”

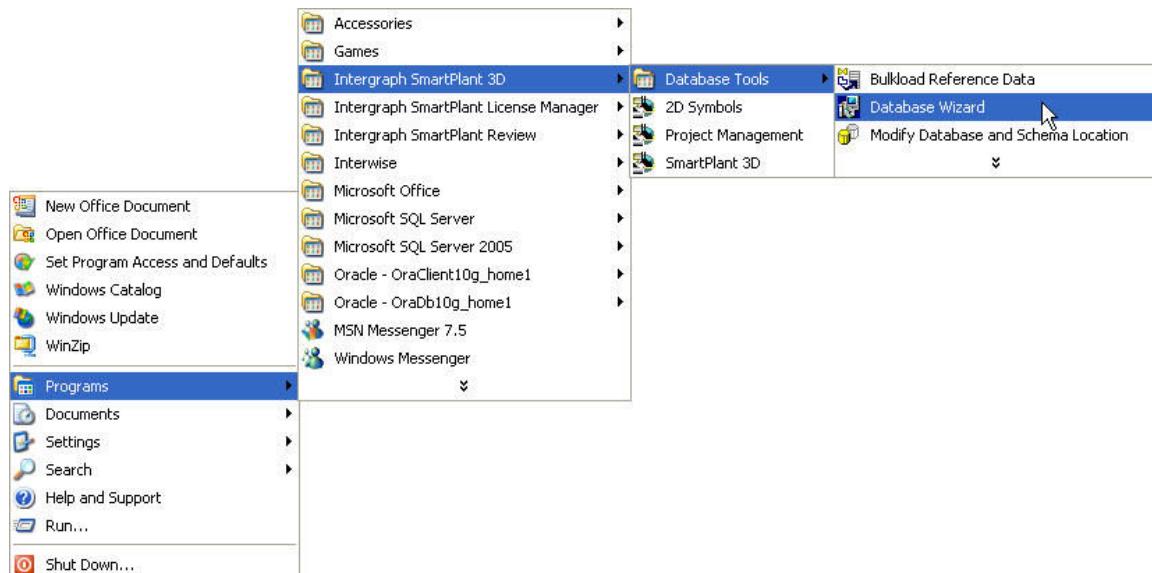


Figure 47. Path to Database Wizard

2. Select “Create a new site” on the form.
3. Select “Next >”
4. Provide information in the form as you normally would to create a site.
5. Special attention should be given to the “Site database workshare location” string, the “Site database server” selected, and the “Name Rule ID”.
6. The server selected plus the “Site database workshare location:” plus the “Name rule ID” will comprise the three standard inputs for the Location Object.

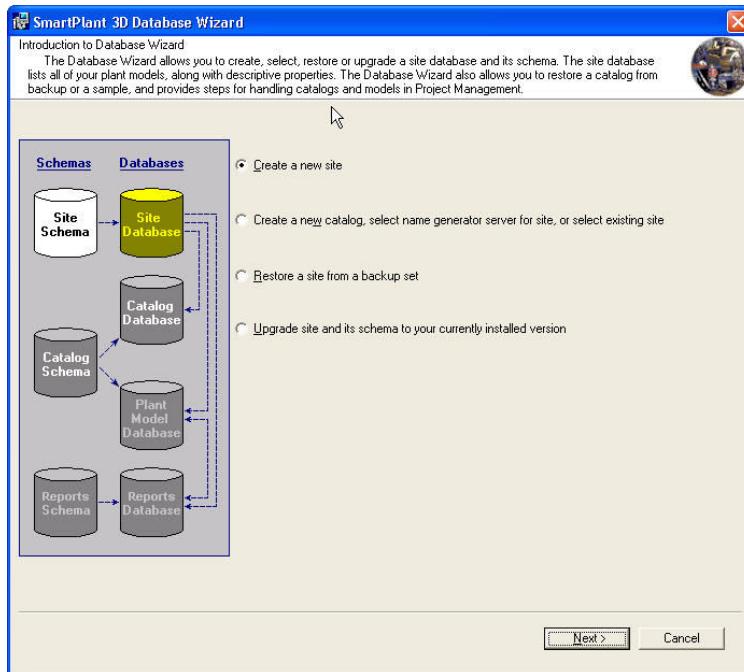


Figure 48. Database Wizard - Step 1

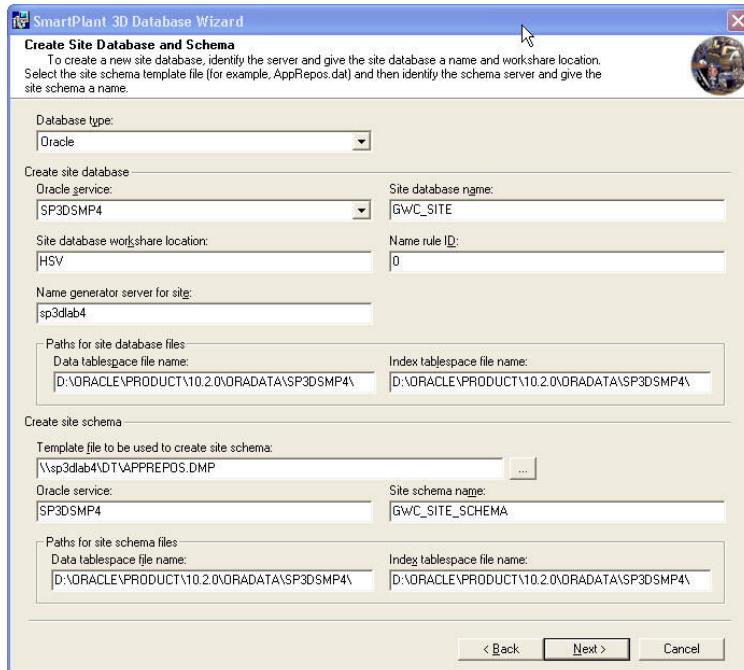


Figure 49. Database Wizard - Step 2

7. Complete the Catalog Form as you normally would to create a catalog/alternatively, utilize bulkload to create your custom catalog from Excel sheets.
8. Click "Next>" the click "Create DB".

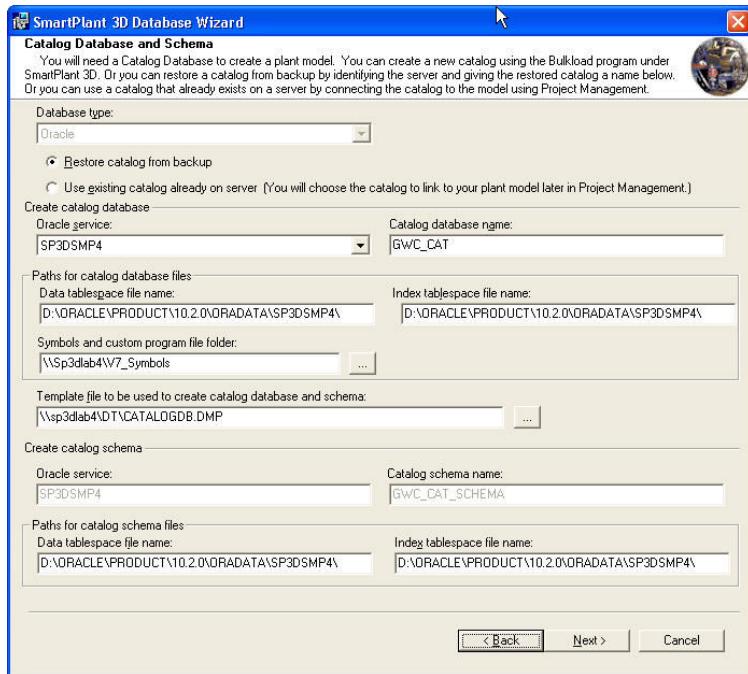


Figure 50. Database Wizard - Step 3

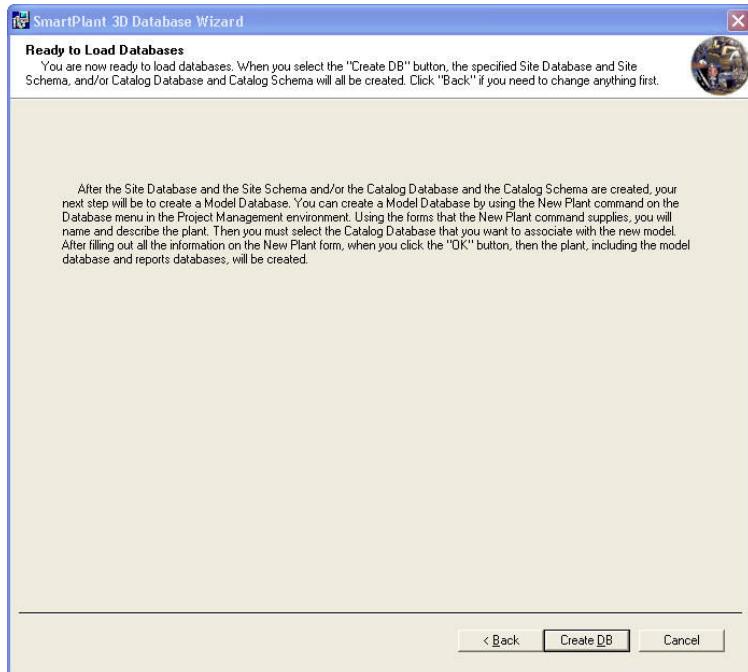


Figure 51. Database Wizard - Step 4

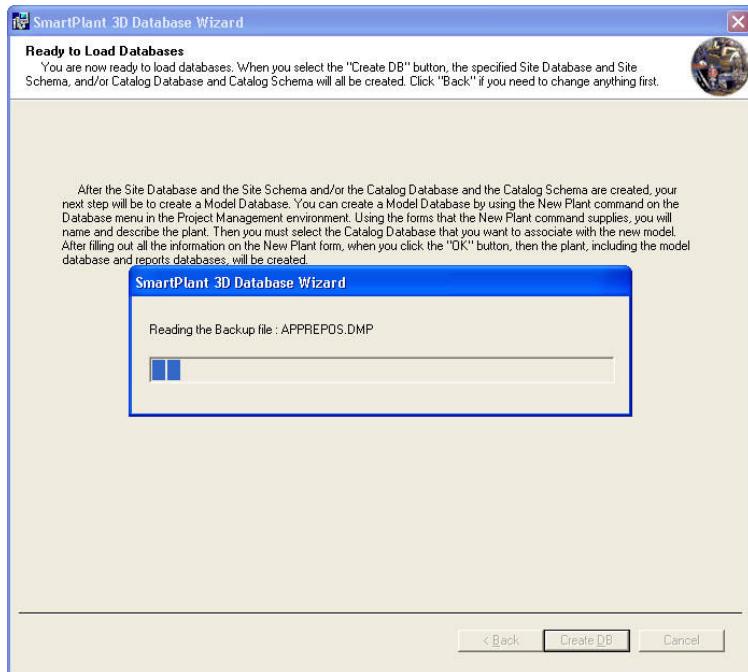


Figure 52. Database Wizard In Progress

- Once the Database Wizard is complete, Click "Finish"

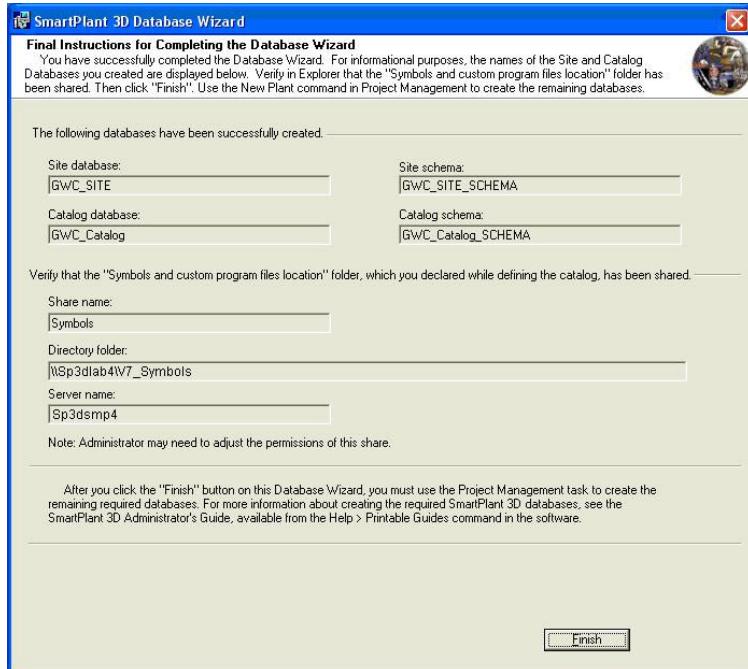


Figure 53. Database Wizard Complete

10. Start Project Management.

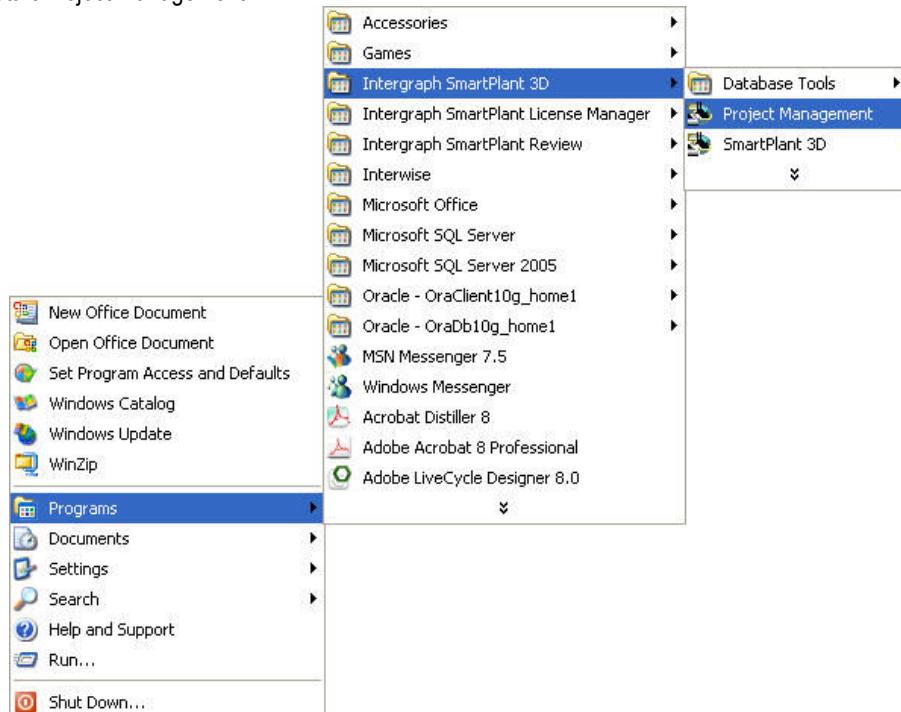


Figure 54. Path to Project Management

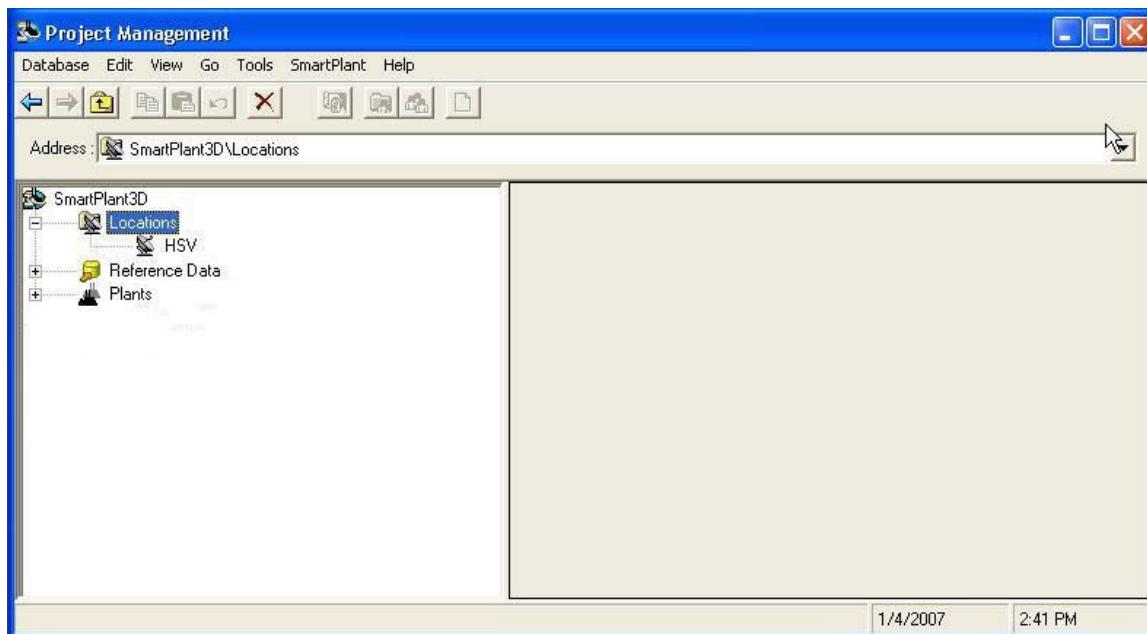


Figure 55. Project Management Window (without a plant)

11. Create the Plant by completing the two tabs on the New Plant dialog:

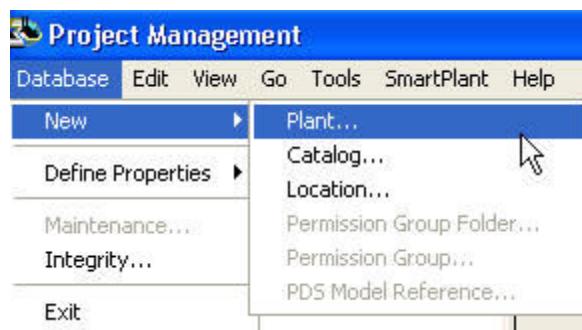


Figure 56. Path to Create a New Plant

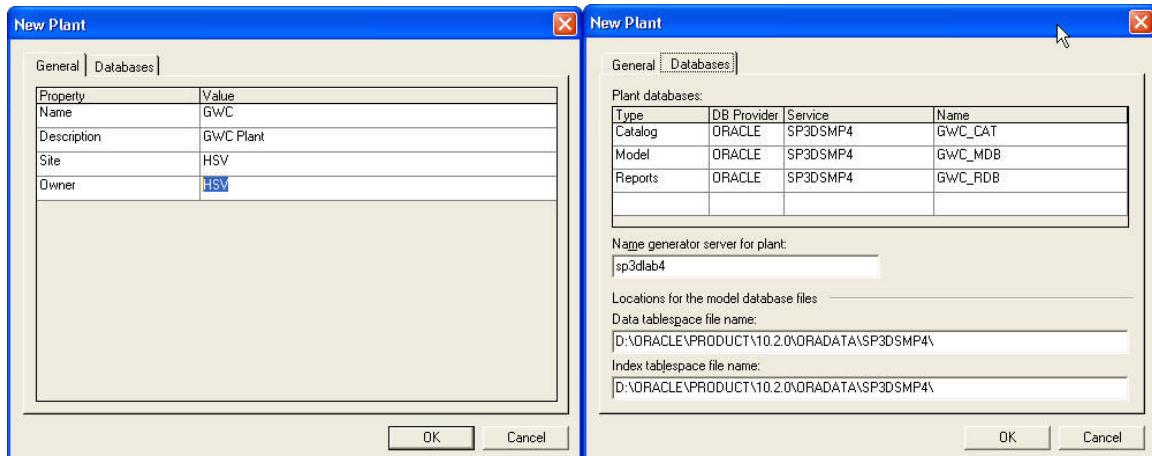


Figure 57. New Plant Dialog Box

12. Click "OK" and review the information on the completion dialog

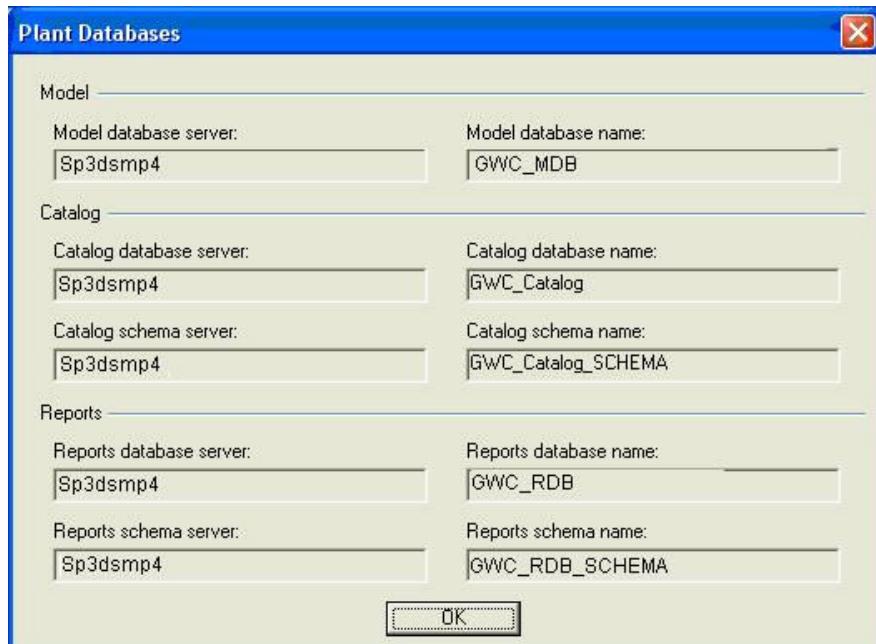


Figure 58. Completion Dialog

13. Click "OK" on the completion dialog. Project Management should be expandable into the catalog and plant.

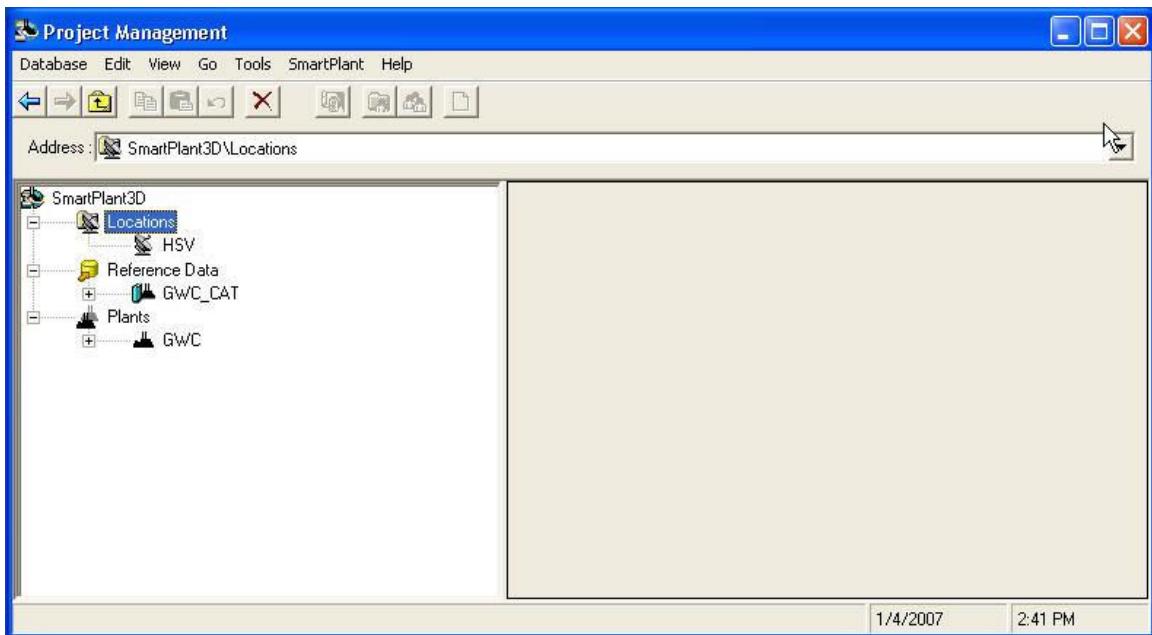


Figure 59. Project Management after creating a new plant

Backup unmodified SP3D Databases

The GWC modifies the SP3D databases when it is executed. As such, taking a backup before proceeding allows for a restore should you need to fall back to an unmodified database set. This step is a fail-safe.

1. Take a backup of the Databases

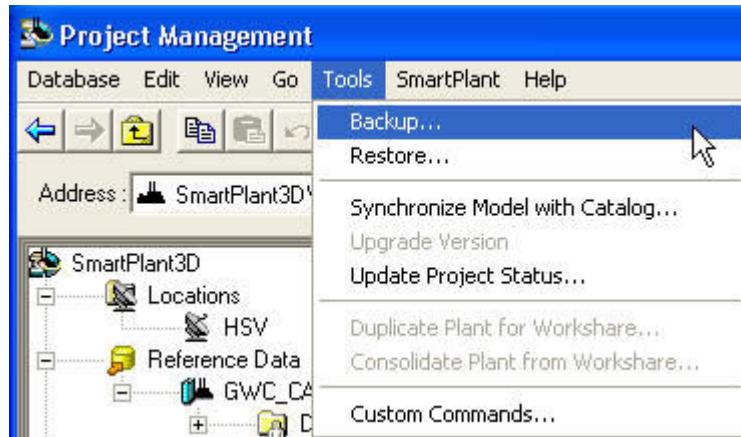


Figure 60. Path to take a Plant Backup

2. Complete the form with the proper information

A screenshot of the "Backup" dialog box. The title bar says "Backup".
Section: "Select plants to back up:"
Table:

Name	Size	Description
GWC	469568 KB	GWC Plant

Section: "Select folder and name for backup configuration file"
Text input field: "\\\\"sp3dlab4\\V7_PreDup_Backup\\GWC.bcf" (with "...")
Text below: "(This folder will also be used for the backup log file.)"
Section: "Select service and folder for the site, catalog, and model database backup files:"
Table:

Service	Save Database Backup Files in	Browse...
SP3DSMP4	\\\\"sp3dlab4\\V7_PreDup_Backup	

Buttons: "OK" and "Cancel".
Text at the bottom: "Total database size for selected plant(s): 469568 KB"

Figure 61. Plant Backup Form

3. After this backup is made, preserve it in a secure location.

Restore of Training Plant

This section assumes that you wish to start your GWC from a plant backup.

1. Open the Database Wizard and Select “Restore a site from a backup set.” Click “Next”

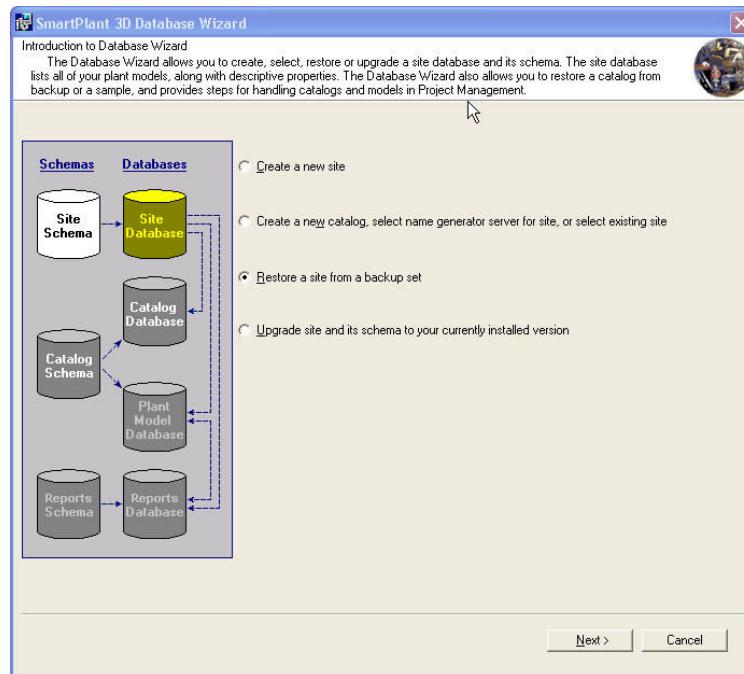


Figure 62. Restoration of SP3D Training Plant – Database Wizard

2. Fill in all of the appropriate information regarding the location of the backups. Click “Next”

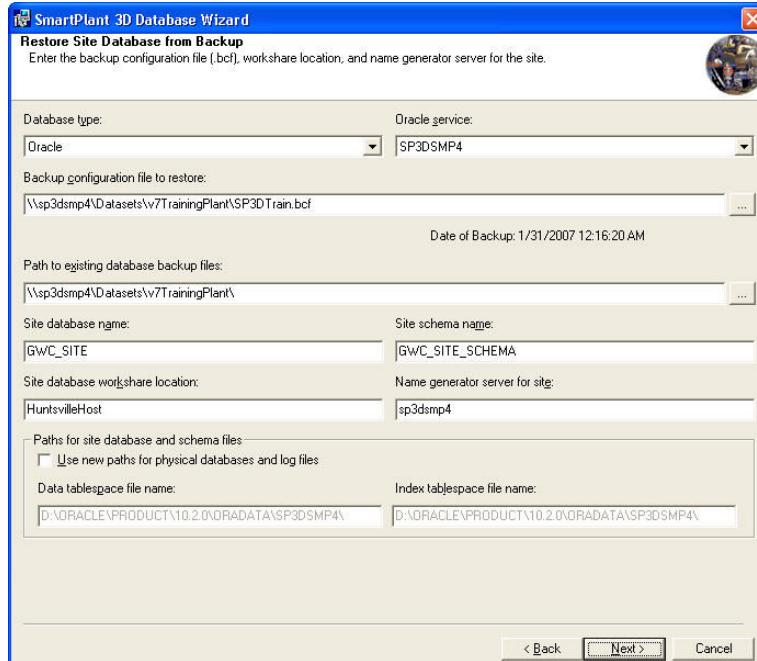


Figure 63. Restoration of SP3D Training Plant – Database Wizard

3. Click “Finish”

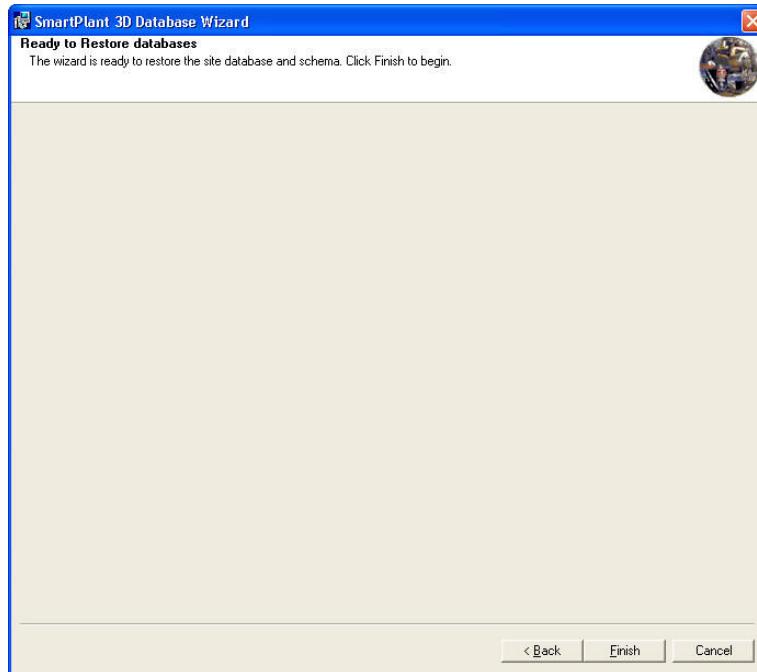


Figure 64. Restoration of SP3D Training Plant – Database Wizard

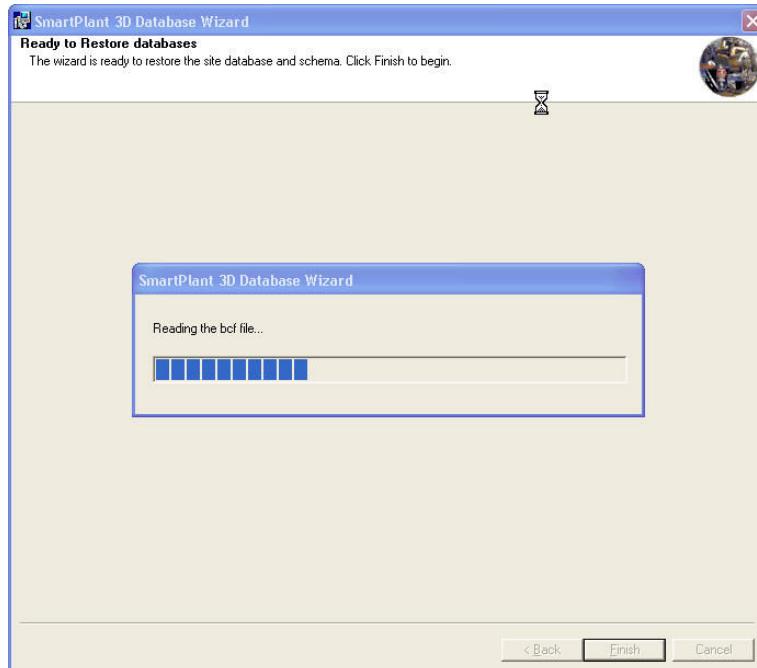


Figure 65. Restoration of SP3D Training Plant – Restore Working

4. Click "OK"

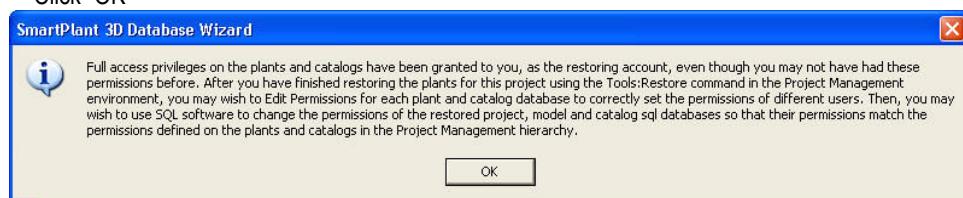


Figure 66. Restoration of SP3D Training Plant – Restore Complete

5. Click "Close"

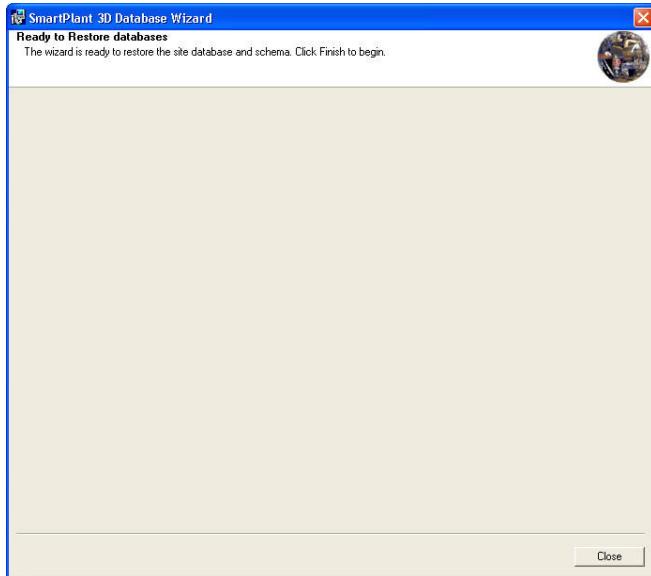


Figure 67. Restoration of SP3D Training Plant – Restore Complete (2)

6. Open Project Management. Click "Tools" then "Restore."

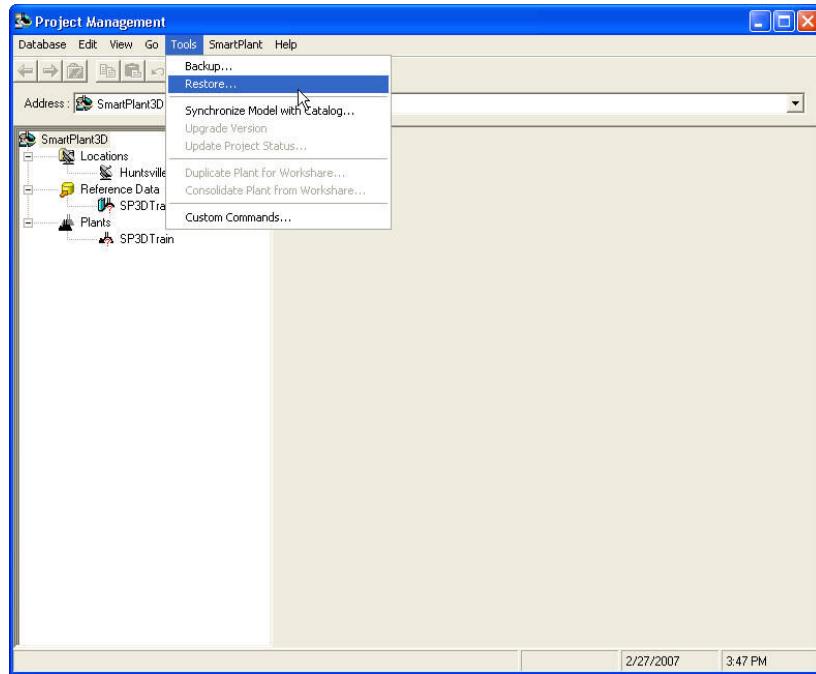


Figure 68. Project Management – Tools > Restore

7. Click "Next"

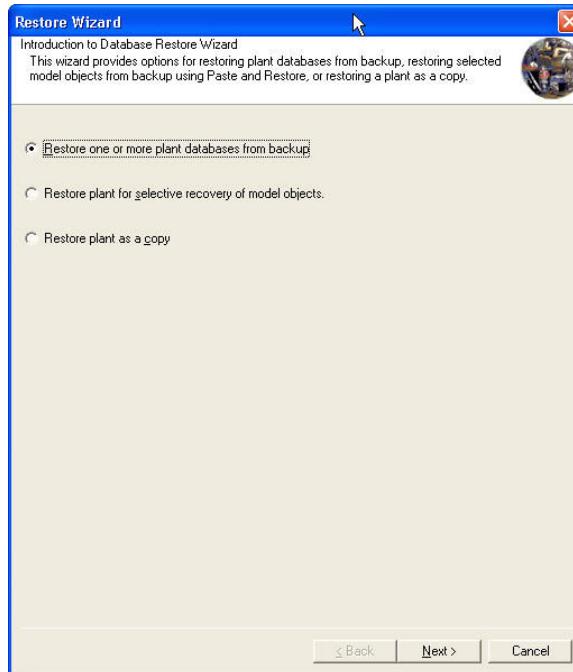


Figure 69. Restore Wizard

8. Fill in the appropriate backup file locations & server information and click "Finish."

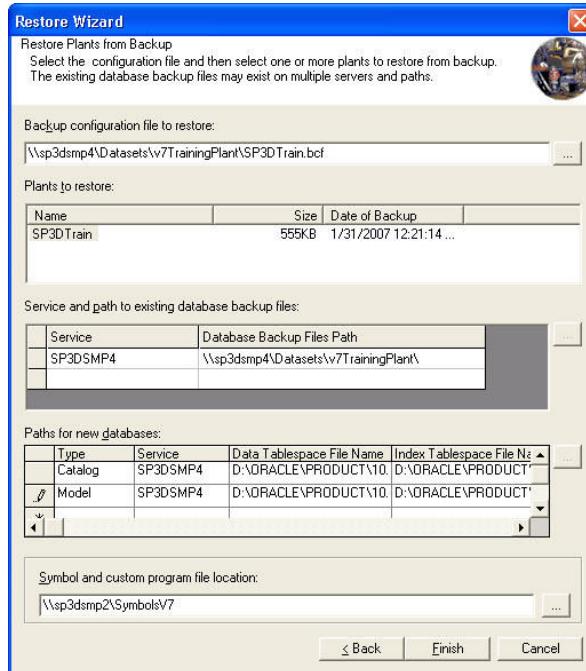


Figure 70. Restore Wizard (2)

Lab 4. Duplicate Plant For Workshare

Add Satellite Location to Project

- Now that the initial site/location has been built and configured, we can add another location object to the hierarchy. Highlight “Locations” in the tree and then select “Databases” > “New” > “Location...”

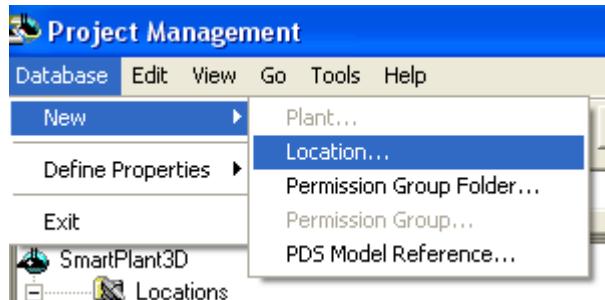


Figure 71. Path to Add New Location

- Complete the form then click “OK”, ensuring that each location have a unique Name and Name rule ID.

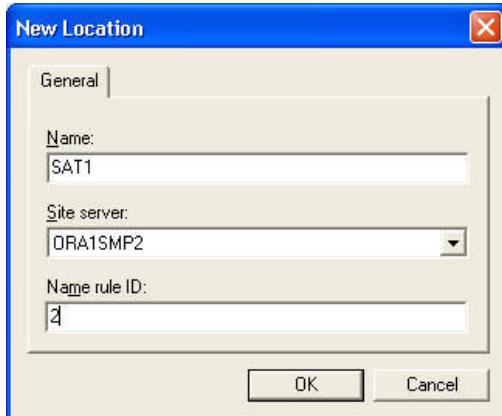


Figure 72. New Location Form

- At this point, a location should be created for each Satellite in the GWC.
 - You do not need to create one for the Host – this was done when the DB Wizard was utilized to create the Site.

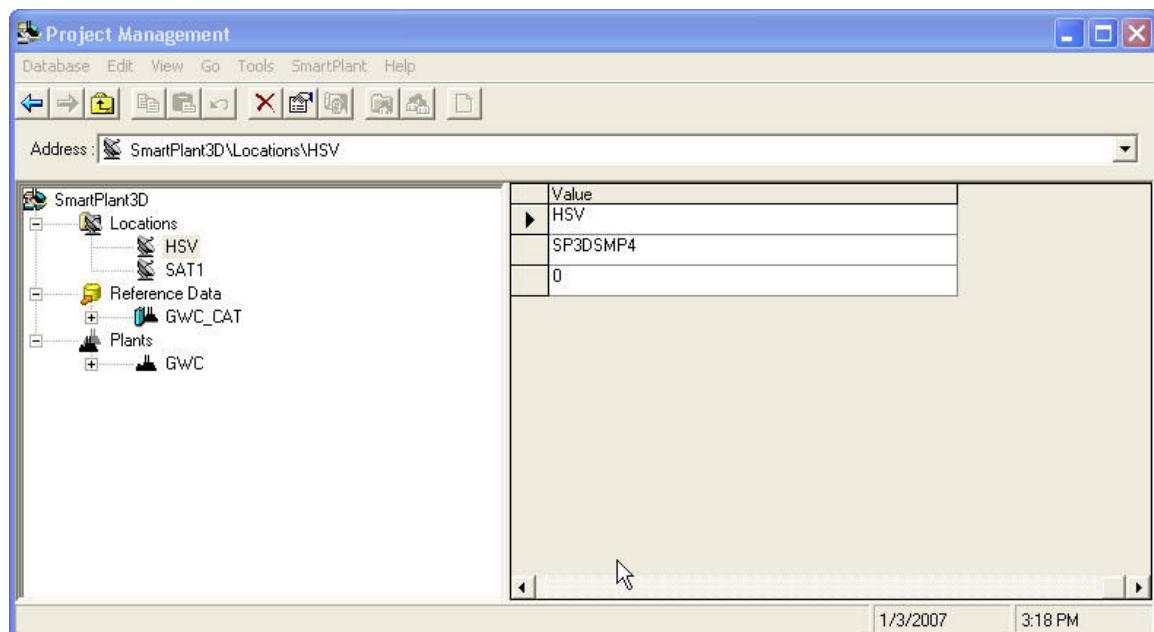


Figure 73. Project Management with New Location (SAT1)

Execute the Duplicate Plant for Workshare Command

1. Select the Plant in the Hierarchy tree
2. Click "Tools" > "Duplicate Plant for Workshare"

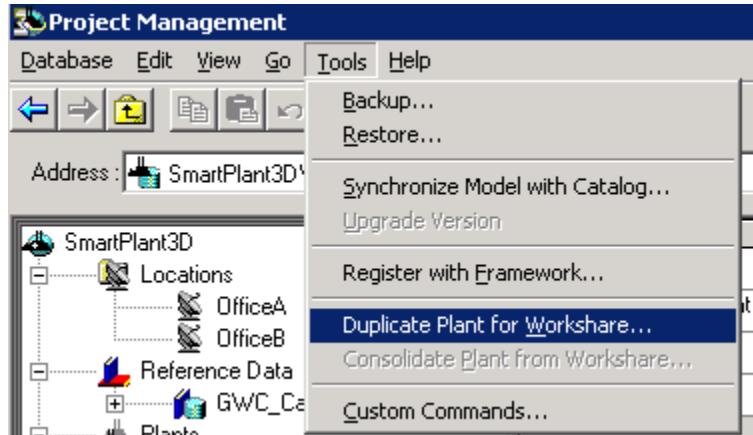


Figure 74. Path to Duplication Command

3. Add the locations desired as Satellites into the right hand pane. Type in the Stream Administrator Password and select the hub. (Default Password: STRMADMIN)

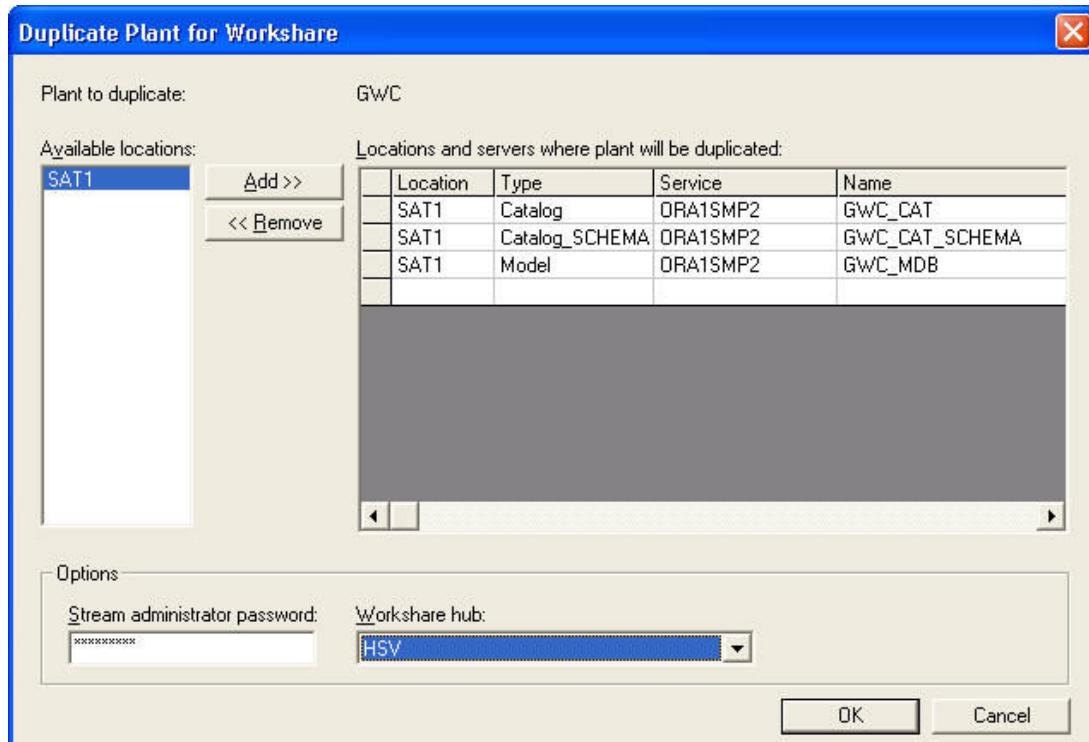


Figure 75. Completed “Duplicate Plant for Workshare” Form

4. Click "OK". This process will take a very short time to complete the creation of the scripts.
5. Once the process is complete a dialog will appear calling for another backup. Click "OK".

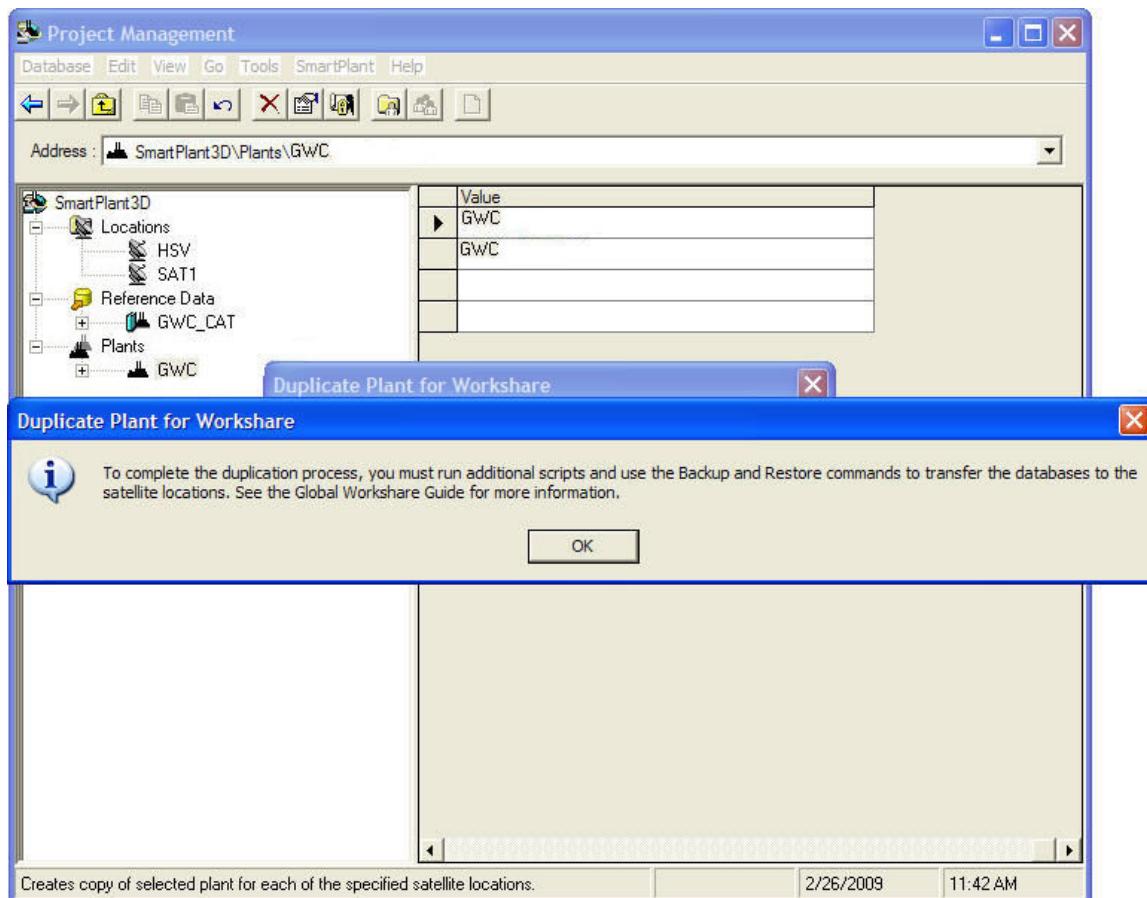


Figure 76. Duplicate Success

6. The “Duplicate Plant for Workshare” command creates a folder in the user’s temp directory (Start>Run>Type “cmd”>Type “%temp%”>Click “OK”). It will be named “*ReplicationPlantName*”

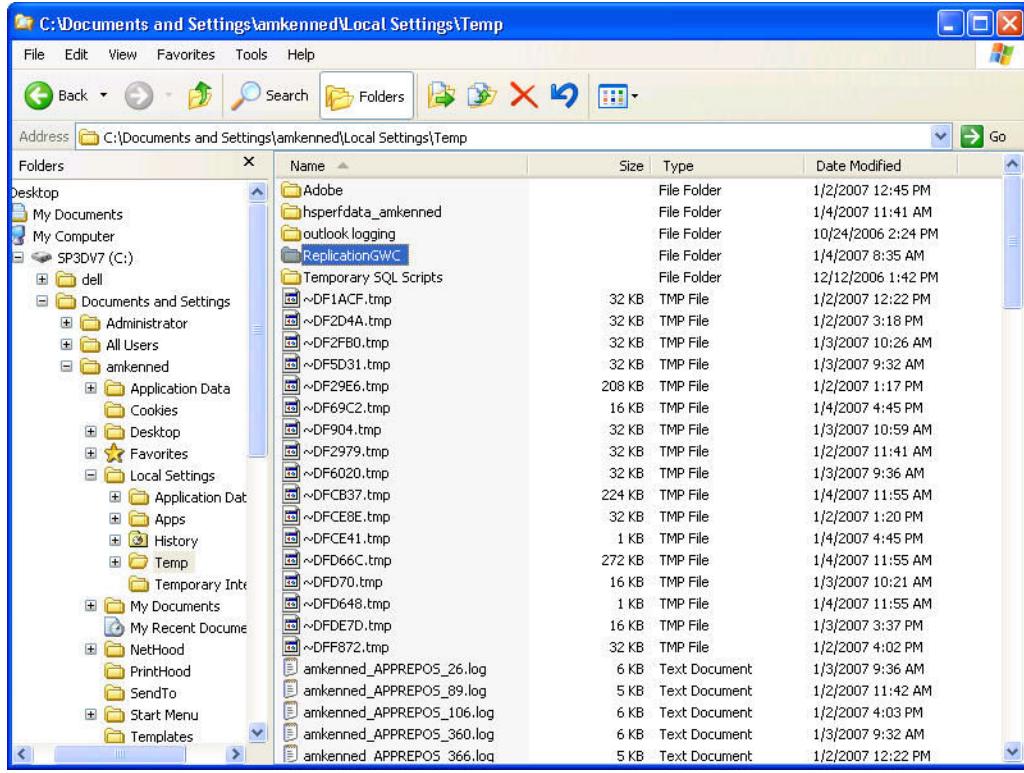


Figure 77. User's Temp Directory After Duplication Command is Executed

Verify Oracle Database Connectivity

We must verify connectivity from the Host to each Satellite and back again, immediately prior to executing the scripts. We do this to

1. Open SQL*Plus
2. Connect to the Host Computer as STRMADMIN
3. Connect from the Host to all Satellites using the following command

```
connect strmadmin/strmadmin@satellite1;
```
4. If each connect stream returns "Connected", then connectivity is validated. If it fails, then we must investigate the cause and sort it out prior to execution of the scripts.

Run the “ToRunPreBackup.bat” file

1. Close Project Management.
2. Open Windows Explorer (Start > Run > Type “Explorer” > Click “OK”)
3. In the Address Bar type “%temp%” and press Enter. This will navigate you to the temp directory where the duplication scripts were created, under the subfolder name ReplicationTHEPLANTNAME.

- These scripts will only be found on the machine where the Duplicate Plant for Workshare was executed.

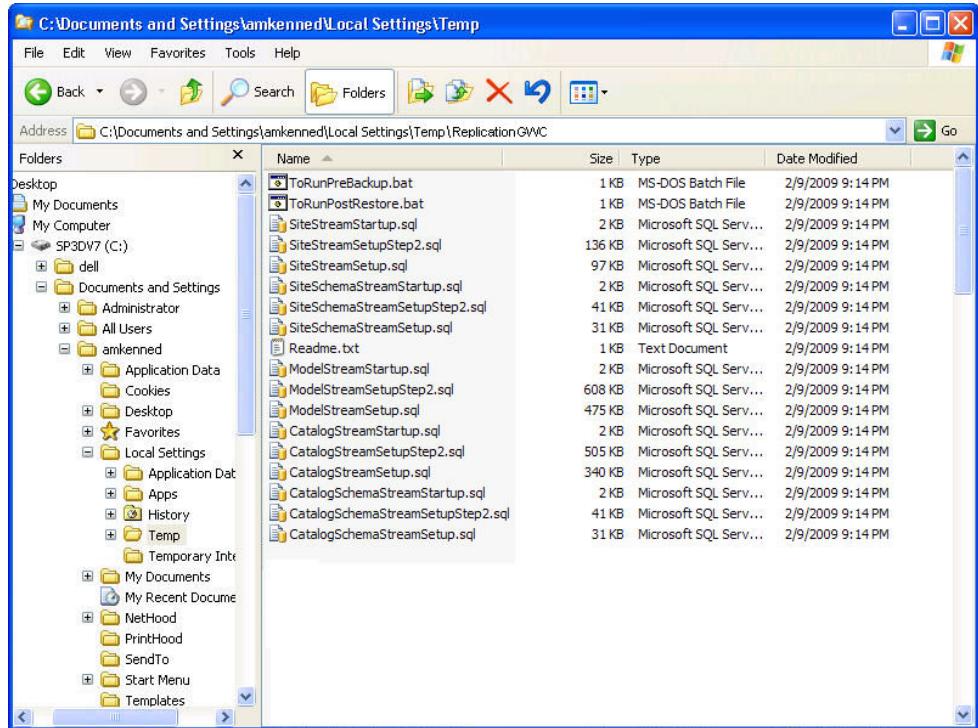


Figure 78. Replication Folder with Scripts and Batch Files Present

- Verify that the contents of the directory contain a series of scripts and bat files including the files:
ToRunPreBackup.bat
ToRunPostRestore.bat
- The ToRunPreBackup.bat file should be executed through a command line and the output of the script execution should be preserved in a log file for future reference. The Command window can be launched from the Start Menu (Start > Run > Type "cmd" > Click "OK").
- Use the CD command to change to the directory where the ToRunPreBackup.bat file is located: "cd %temp%\Replication<PlantName>"
- Execute the ToRunPreBackup.bat using the following syntax "ToRunPreBackup.bat >> ToRunPreBackup.log"
- This syntax will store the output buffer of the script execution in the file named ToRunPreBackup.log.

```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

C:\Documents and Settings\amjordan>cd %temp%
C:\DOCUME~1\amjordan\LOCALS~1\Temp>cd ReplicationGWC
C:\DOCUME~1\amjordan\LOCALS~1\Temp\ReplicationGWC>ToRunPreBackup.bat > ToRunPreBackup.log
```

Figure 79. Execution of ToRunPreBackup.bat File

9. Examine the ToRunPreBackup.log for network errors or duplicate keys or anything unusual.
 - ❖ Note: Normally, if there are any errors they will be Oracle specific errors that can be sought out by searching for "Ora-" in the text file.

Backup and Restore Modified Database

1. Take another backup of the plant. (Now that the database has been altered for GWC)

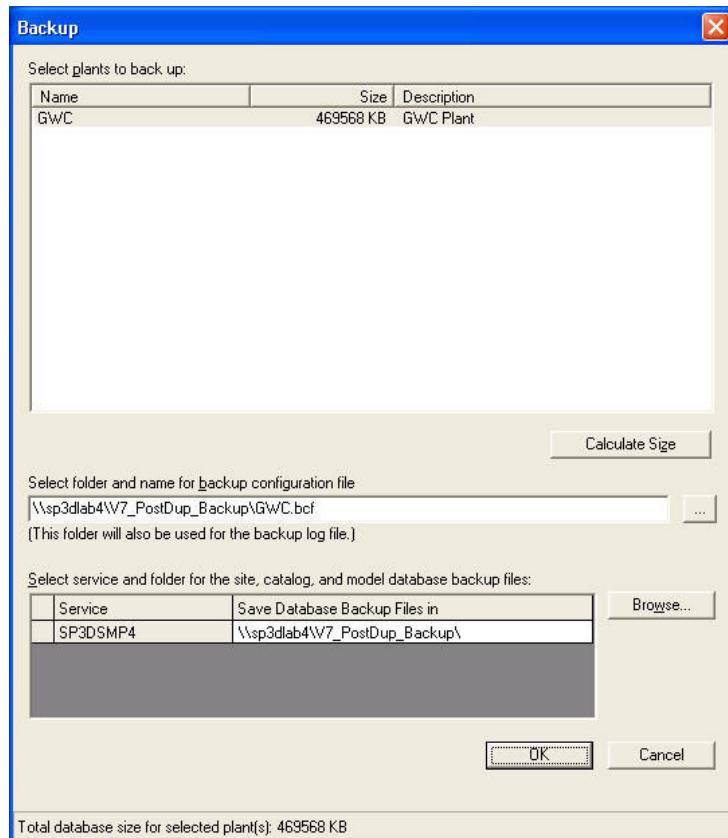


Figure 80. Post Duplication Backup Form

2. Click "OK" and let the process complete.
3. After the backup has been taken transfer the backup files to the Satellite Server.
 - ✿ If this done across a WAN connection, it may be appropriate for you to compress the files. This can be done with any type of compression program (eg WinRAR, WinZIP, the built-in Compressed Folder functionality of Windows, etc).

Once the transfer of the files to the Satellite Server(s) is complete you must restore the Backup onto the Satellite Server(s).

4. Start the Database Wizard from a Project Management machine 'near' the Satellite server.
 - ✿ 'Near' in this context means a machine located on the same physical LAN as the Satellite server.
5. Select the "Restore a site database from a backup set:" then Click "Next"

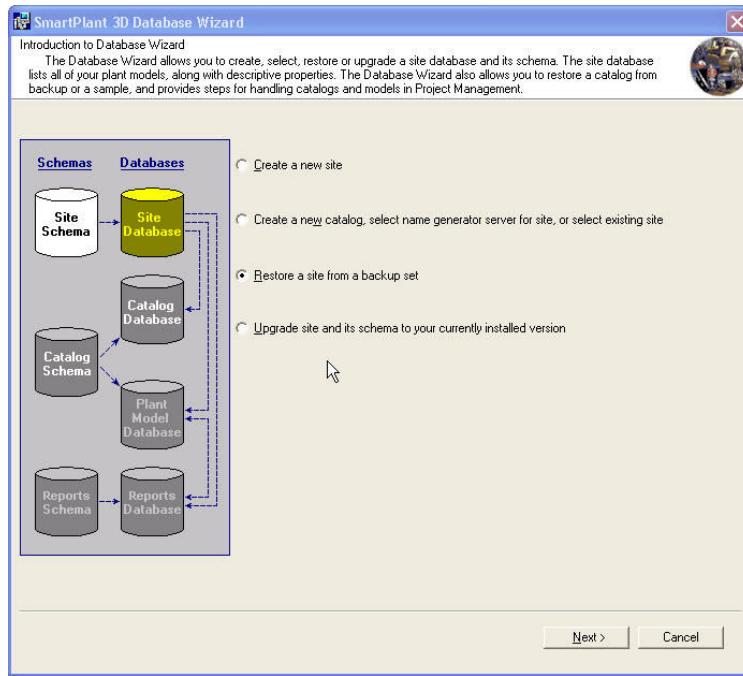


Figure 81. Post Duplication Backup Being Restored onto Satellite Server

- Fill in the appropriate information for the Satellite.

❖ In the “Site database workshare location:” dialog box ensure that the location name is the same name as the Satellite which was created previously in Lab 3.

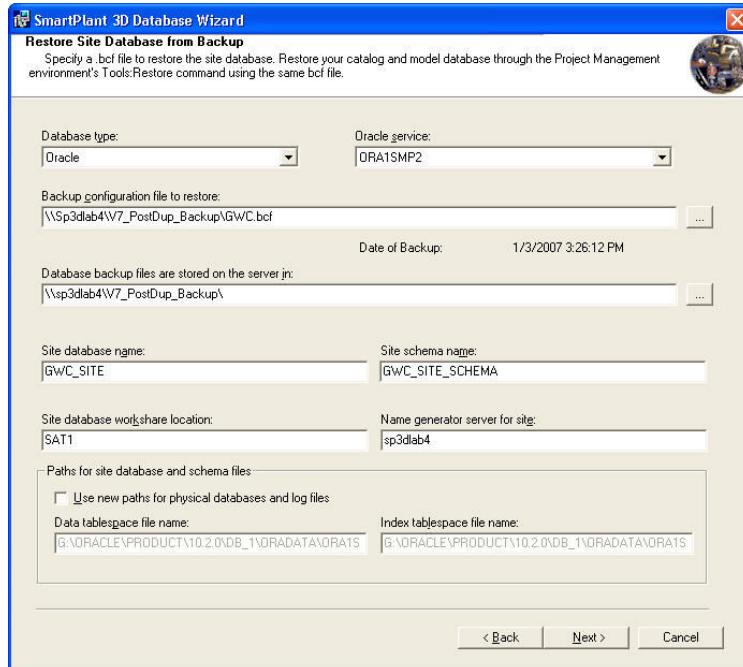


Figure 82. Post Duplication Backup Being Restored onto Satellite Server

- Select “Next” then “Finish”. This will complete the restore of the Site and Site_Schema on the Satellite Server.

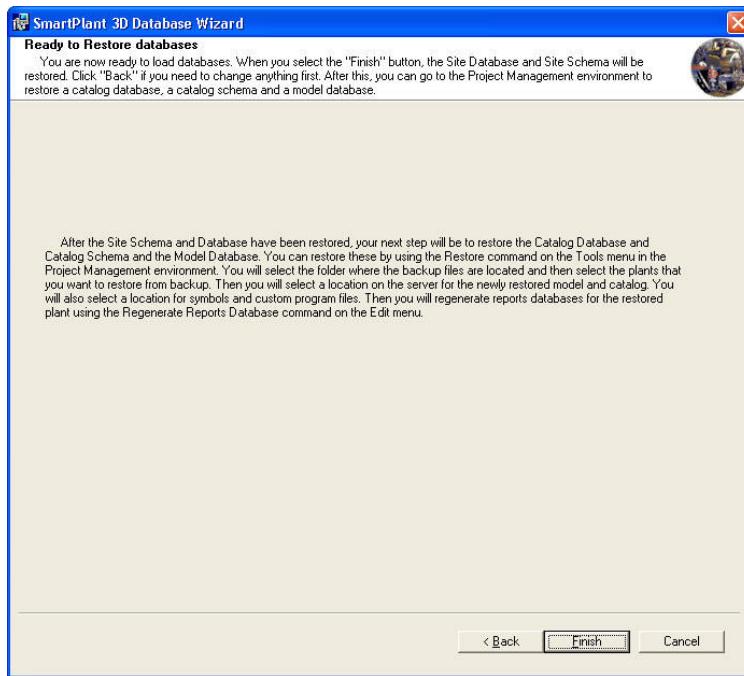


Figure 83. Finish the Restore

8. Start Project Management
9. Click "Tools" > "Restore" command. This will restore the Catalog and Model databases onto the Satellite Server.
 - ❖ After the restore is complete there is no need to regenerate the Report Database at this time; that will be handled later in the workflow.

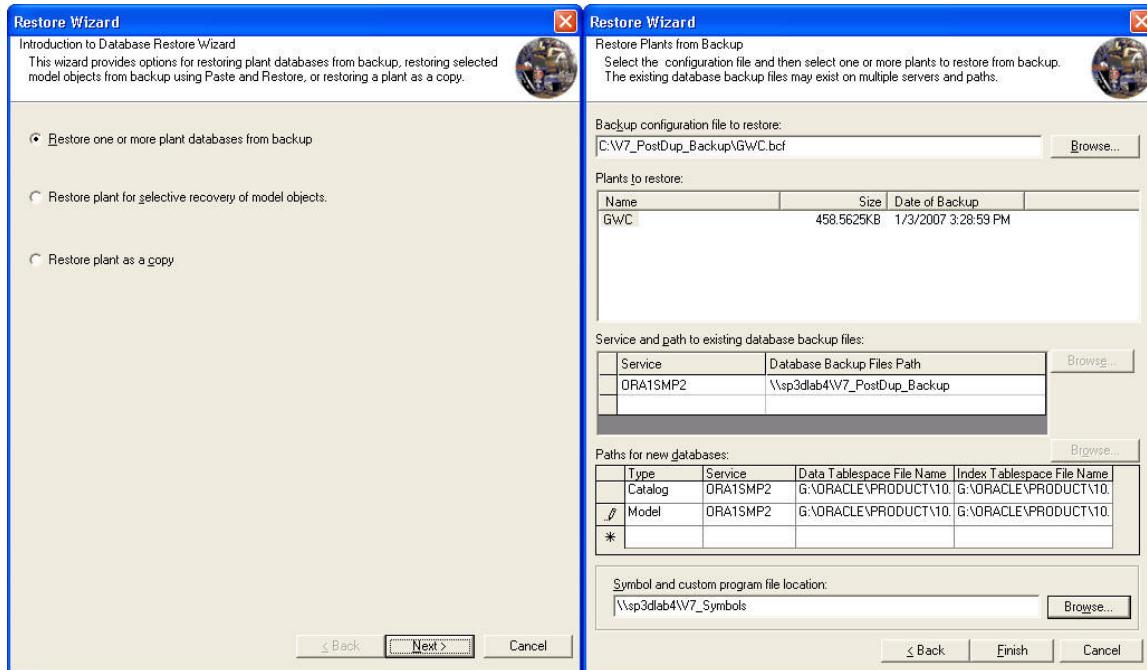


Figure 84. Post Duplication Restore (onto Satellite) Process

10. Right-Mouse Click on the Plant in the Project Management Hierarchy and Select "Properties".

- Click on the “Databases” Tab and set the local Name Generator Service machine on the Property Page. Click “OK”

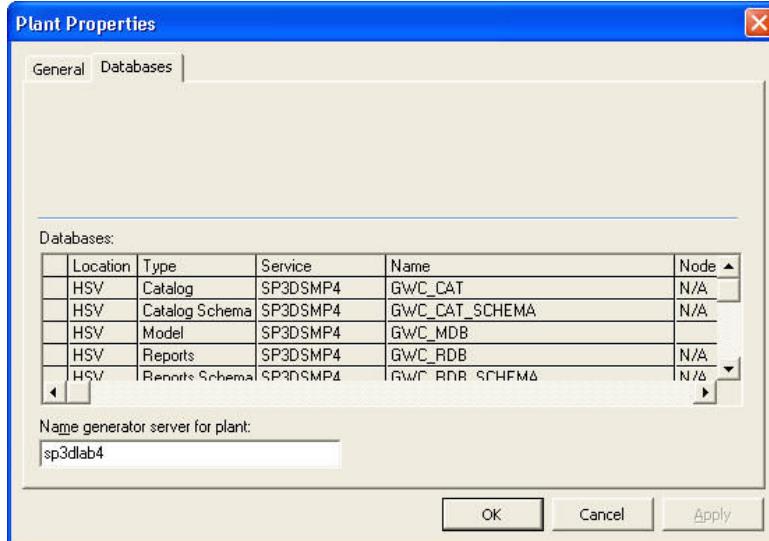


Figure 85. Set Name Generator for Satellite Server

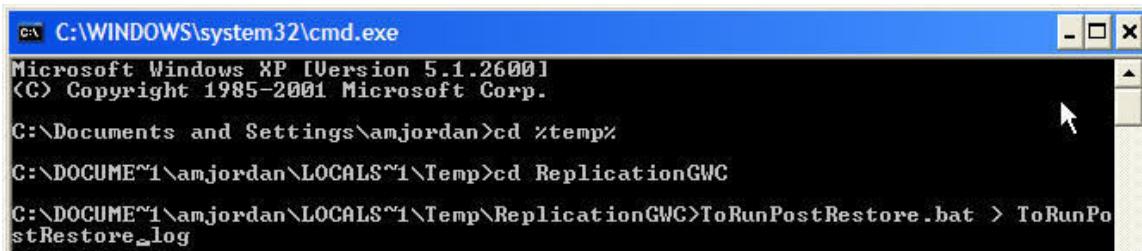
Verify Oracle Database Connectivity

We must verify connectivity from the Host to each Satellite and back again, immediately prior to executing the scripts. We do this to

- Open SQL*Plus
- Connect to the Host Computer as STRMADMIN
- Connect from the Host to all Satellites using the following command
`connect strmadmin/strmadmin@satellite1;`
- If each connect stream returns “Connected”, then connectivity is validated. If it fails, then we must investigate the cause and sort it out prior to execution of the scripts.

Executing the “ToRunPostRestore.bat” file

1. Close Project Management.
2. Open Windows Explorer (Start > Run > Type “Explorer” > Click “OK”)
3. In the Address Bar type “%temp%” and press Enter. This will navigate you to the temp directory where the duplication scripts were created, under the subfolder name ReplicationTHEPLANTNAME.
 - ⊕ These scripts will only be found on the machine where the Duplicate Plant for Workshare was executed.
4. The ToRunPostRestore.bat file should be executed through a command line and the output of the script execution should be preserved in a log file for future reference. The Command window can be launched from the Start Menu (Start > Run > Type “cmd” > Click “OK”).
5. Use the CD command to change to the directory where the ToRunPostRestore.bat file is located: “cd %temp%\Replication<PlantName>
6. Execute the ToRunPostRestore.bat using the following syntax “ToRunPostRestore.bat >> ToRunPostRestore.log”
7. This syntax will store the output buffer of the script execution in the file named ToRunPostRestore.log.



```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

C:\Documents and Settings\amjordan>cd %temp%
C:\DOCUMENTS\amjordan\LOCALS\Temp>cd ReplicationGWC
C:\DOCUMENTS\amjordan\LOCALS\Temp\ReplicationGWC>ToRunPostRestore.bat > ToRunPostRestore.log
```

Figure 86. Execution of ToRunPostRestore.bat File

8. Examine the ToRunPostRestore.log for network errors or duplicate keys or anything unusual.
 - ⊕ Note: Normally, if there are any errors they will be Oracle specific errors that can be sought out by searching for “Ora-“ in the text file.

Regenerate Report Databases

The Reports Database must be regenerated at all servers (Host and Satellite(s)).

1. Open Project Management
2. Right Click on the Plant and then Select “Regenerate Reports Database...”
3. Select the appropriate Server and fill in the appropriate Reports Database name
4. Click “OK”

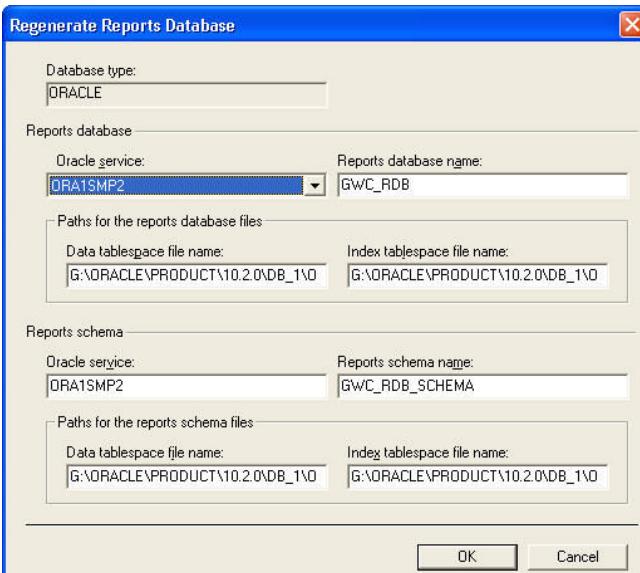


Figure 87. Regenerate Reports Database

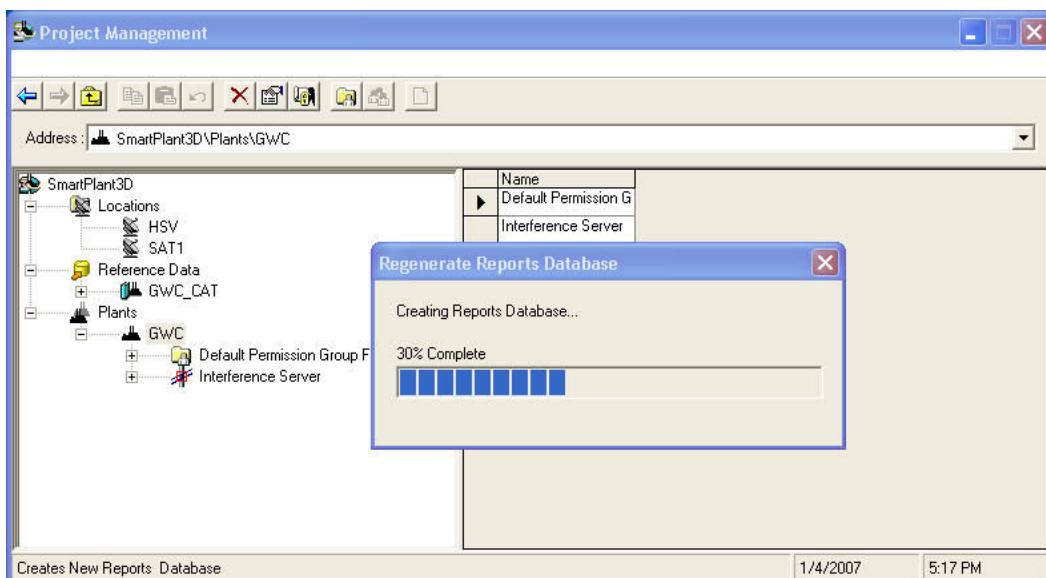


Figure 88. Reports Regeneration in Progress

5. When this finishes Click “OK”.
6. Repeat this process at all Satellite Servers; identifying the respective Server for each Report Database.

Duplication Synchronization Service (DuSS)

1. Identify a Project Management machine (either an Administrator or a Workstation with Project Mgmt) near (in terms of network bandwidth and latency) the Host Server.
2. Login to the machine using an Administrative user.
3. Right mouse on the My Computer icon and select Properties.
4. On the Advanced Tab select "Environmental Variable"

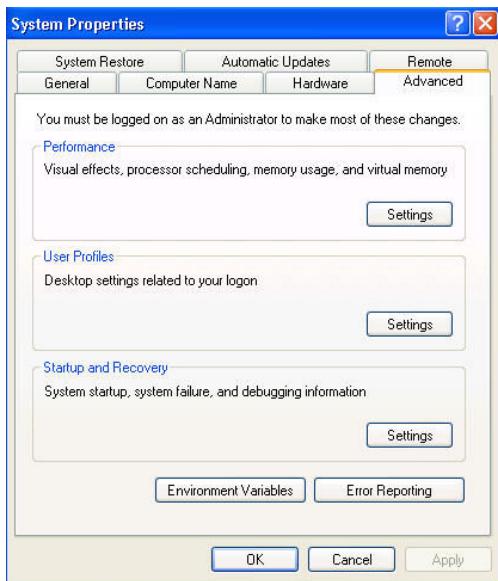


Figure 89. Advanced Tab of System Properties

5. In the "System variables" frame, scroll down until Path is shown.

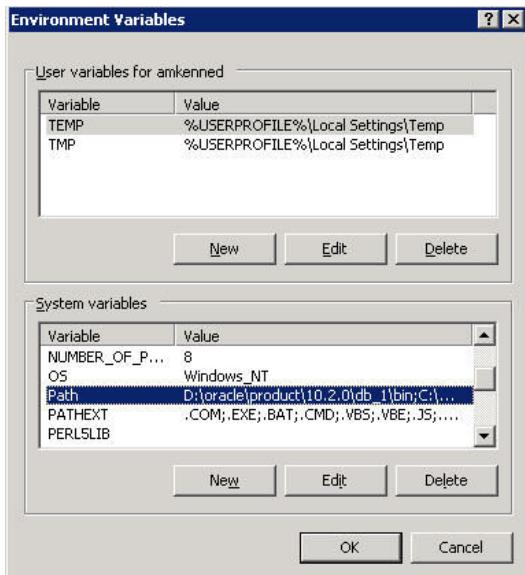


Figure 90. Environment Variables

6. Highlight "Path" and click "Edit"

7. Add the following path to the “Variable Value” field
 - <SP3D Installation Folder>\Core\Runtime. Example, if the product is installed to the default location this added value would be “C:\Program Files\3D\Core\Runtime”
8. Click “OK”, “OK”, “OK” to exit the System Properties Form.

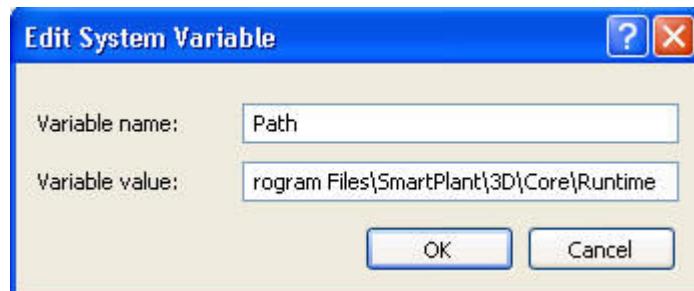


Figure 91. Edit “Path” Variable

9. Open a command prompt (Start > Run > Type “CMD” > Click “OK”)
10. Switch the directory to <SP3D Installation Directory>\ProjectMgmt\Middle\bin
11. Execute the command “DuplicationSyncService.exe – i”
 - Note: This will install the DuSS.

```
C:\WINDOWS\system32\cmd.exe
(C) Copyright 1985-2001 Microsoft Corp.

C:\Documents and Settings\amkenned>cd \
C:\>cd "Program Files"
C:\Program Files>cd SmartPlant
C:\Program Files\SmartPlant>cd 3D
C:\Program Files\SmartPlant\3D>cd ProjectMgmt
C:\Program Files\SmartPlant\3D\ProjectMgmt>cd Middle
C:\Program Files\SmartPlant\3D\ProjectMgmt\Middle>cd bin
C:\Program Files\SmartPlant\3D\ProjectMgmt\Middle\bin>DuplicationSyncService.exe
-i
SP3D Duplication Synchronization Service installed
C:\Program Files\SmartPlant\3D\ProjectMgmt\Middle\bin>_
```

Figure 92. Installing the DuSS

12. Close the command window.
13. Right mouse on the “My Computer” icon and select “Manage” from the menu.
14. Locate “Service and Applications” in the tree and expand the “Services” branch
15. Locate the SP3D Duplication Synchronization Service.

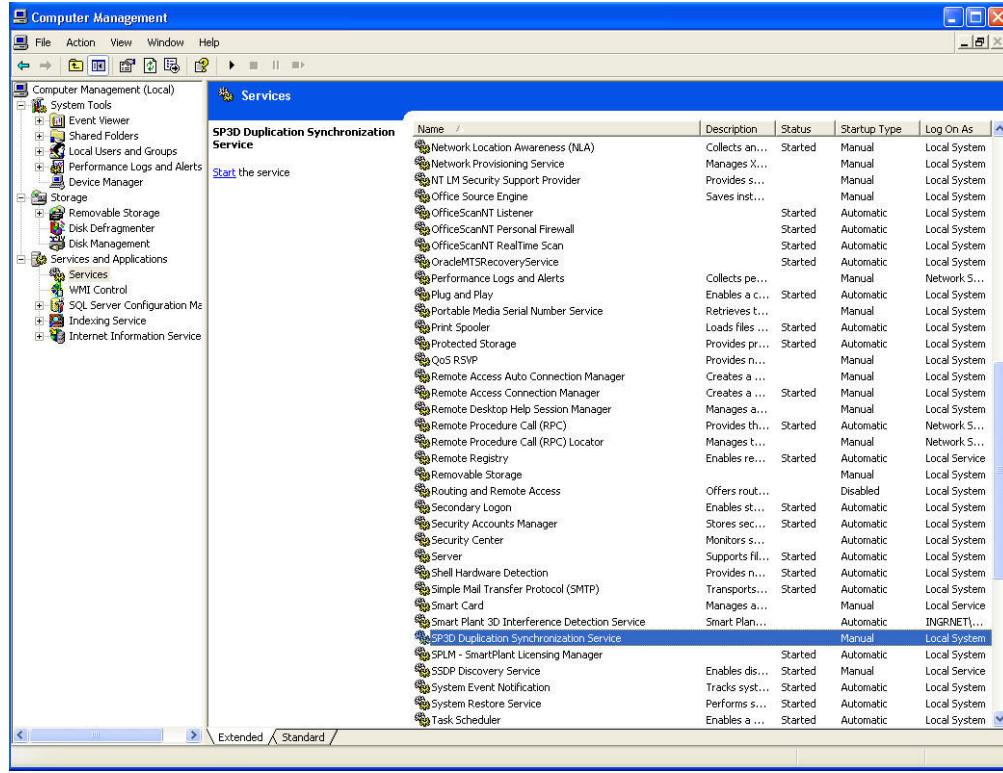


Figure 93. DuSS Service Identified in Computer Management

16. Right-click on the "SP3D Duplication Synchronization Service" and click "Properties"
17. Set "Startup Type" to Manual

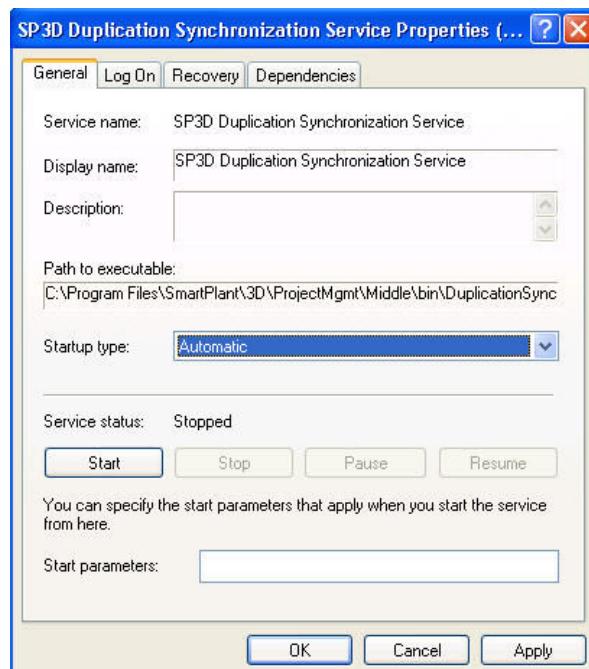


Figure 94. DuSS Properties – General Tab

18. Select the “Log On” tab. Input an Administrative User for the local machine (that also has access to the Oracle Database) and their password.

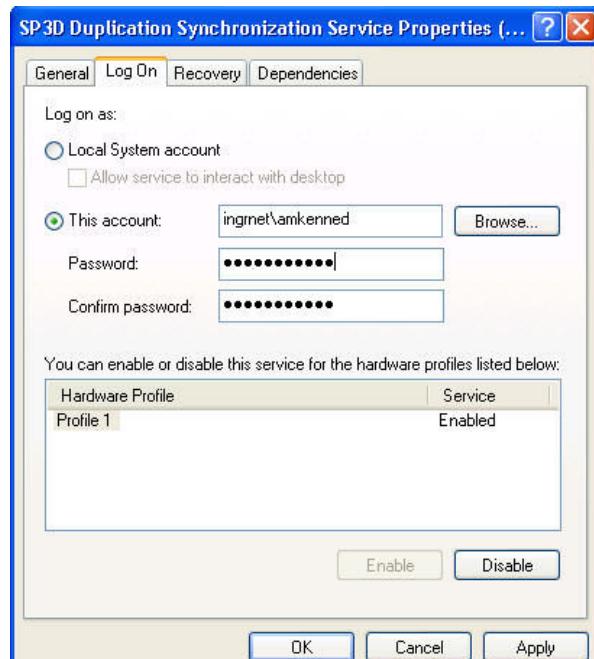


Figure 95. DuSS Properties – Log On Tab

19. Click “OK”
20. Close out of “Computer Management”
21. Repeat the DuSS setup process on a machine “near” the Satellite Server.
22. Open Project Management from a machine pointing to the Host Server and databases.
23. Right mouse on the Plant participating in GWC and select properties from the right mouse menu.

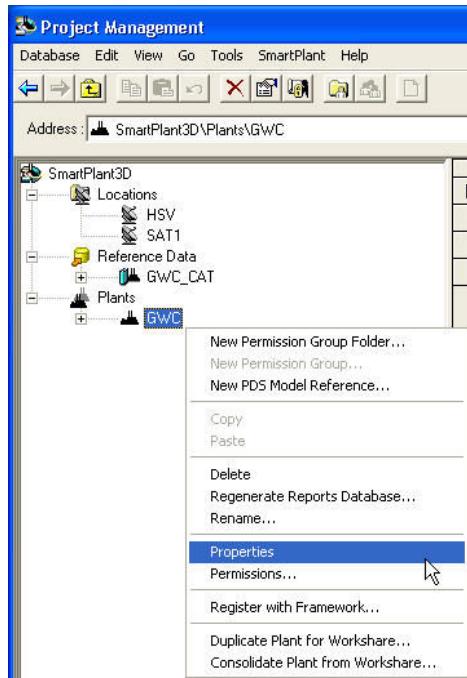


Figure 96. Plant Properties

24. On the Database tab, define the Node for DuSS for each MODEL.

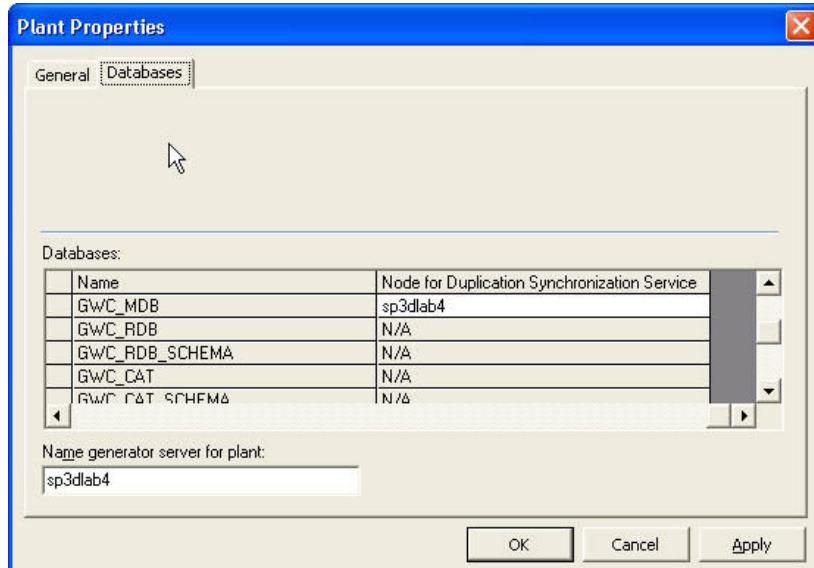


Figure 97. Configuration of DuSS Server to SP3D Databases

25. Click "OK"
26. Close Project Management

Lab 5. Adding a Satellite to the GWC

1. Following the procedure listed in Lab 5, add another Location to the GWC Project on the Host Machine.

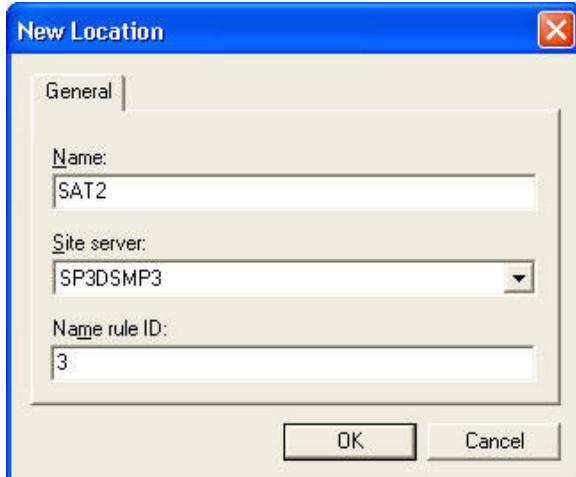


Figure 98. Adding Satellite to GWC

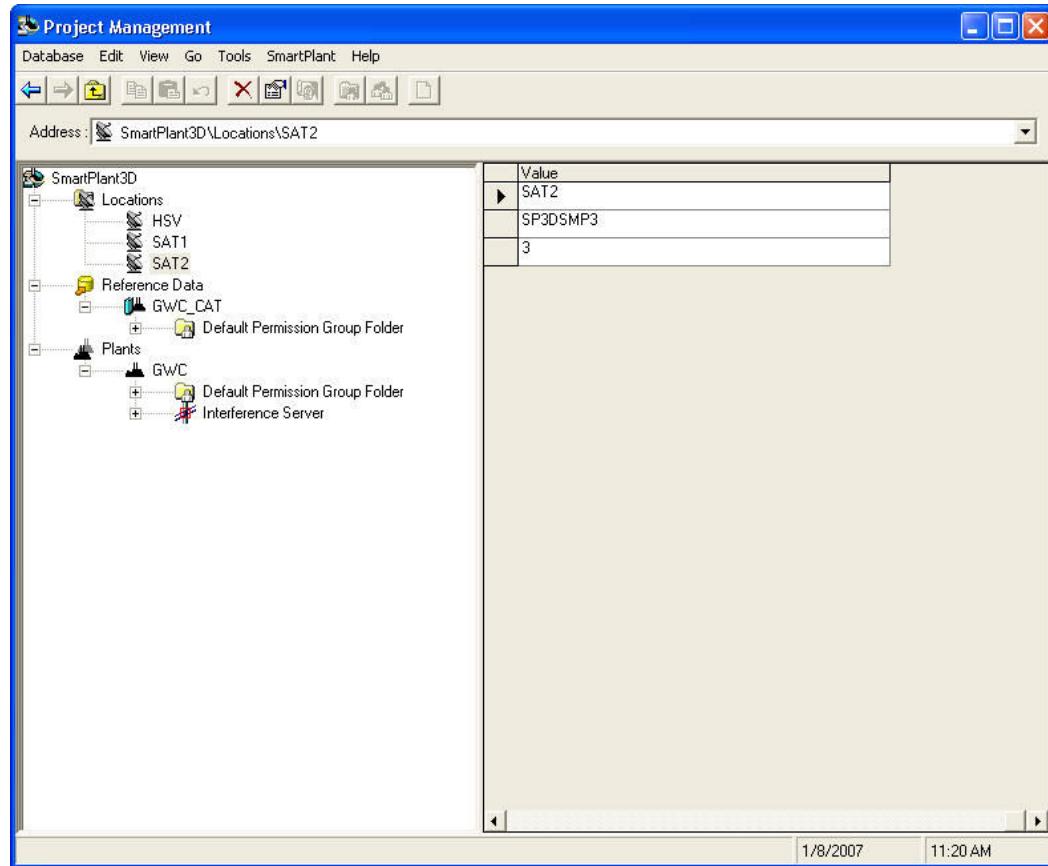


Figure 99. Project Management after Second Satellite is Added

2. Then, following the procedure listed in Lab 4, run the "Duplicate Plant for Workshare" command again.

- This time, add the second location to the GWC, type the Streams Administrator Password, and click "OK"

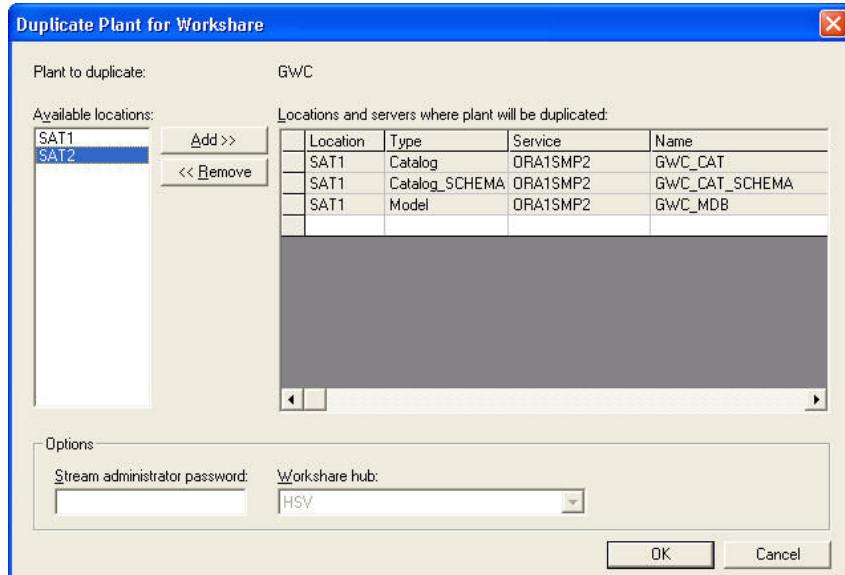


Figure 100. Duplicate Plant for Workshare - Form

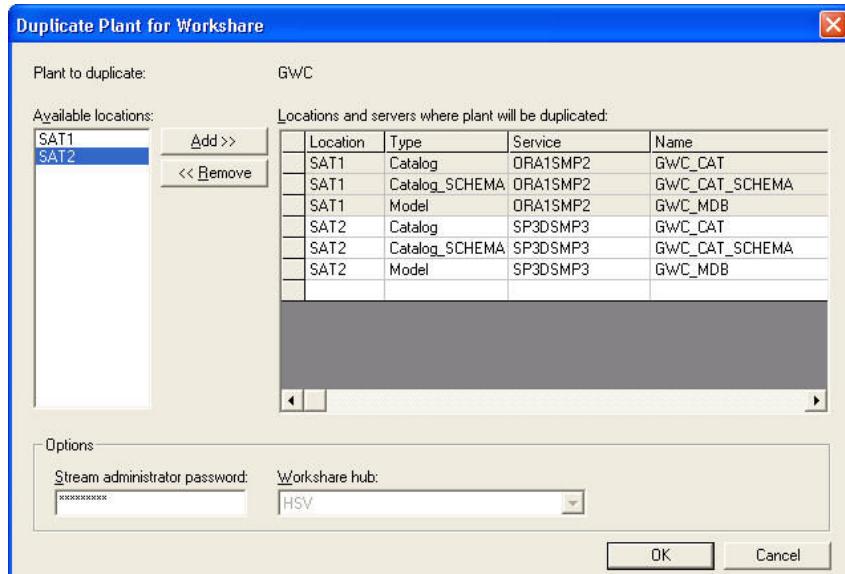


Figure 101. Duplicate Plant for Workshare – Completed Form

- Another folder will then be generated in the %temp% directory on the Project Management machine.

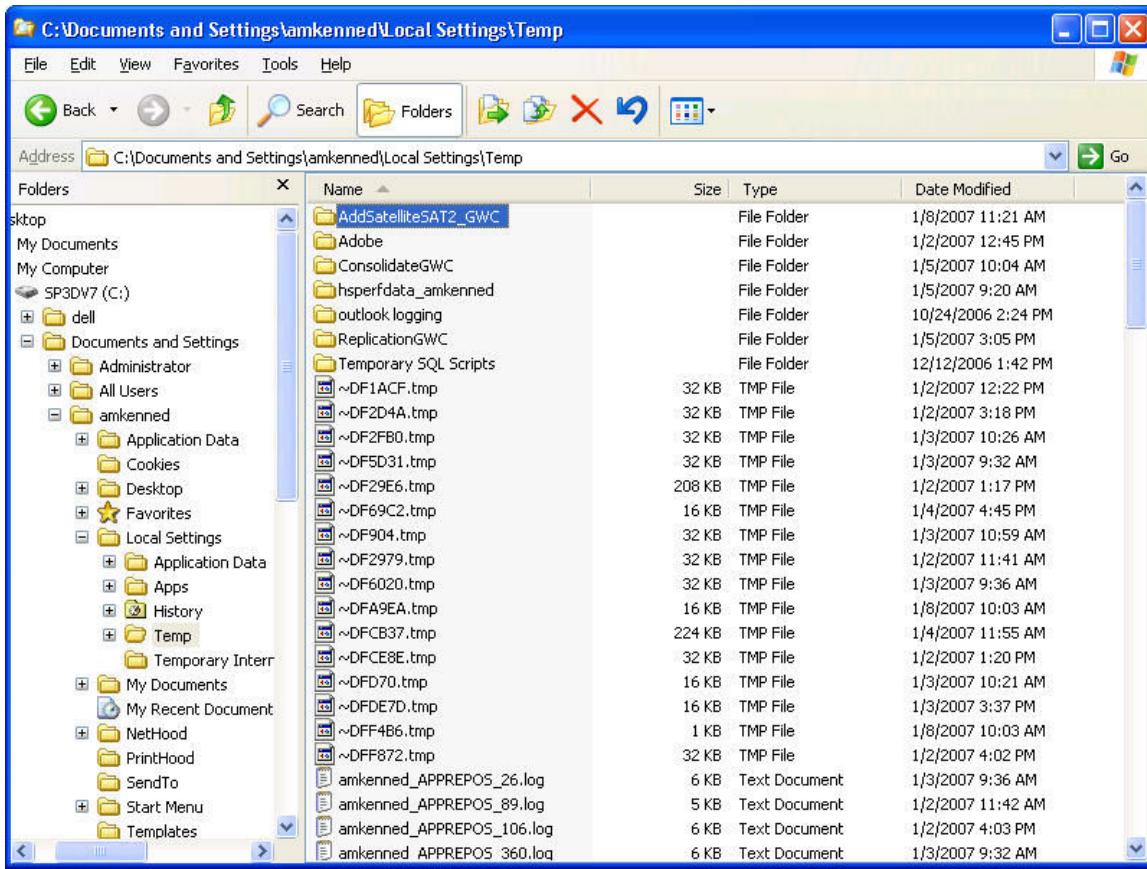


Figure 102. Folder Generated for Additional Satellites

5. Run the batch file that was generated inside of this folder by opening a command prompt (Start > Run > Type “cmd” > Click “OK”) and navigating to the %temp% directory on the client and finding the AddSatLocation_PlantName directory then run the batch file using the following command.

“ToRunPreBackupSERVER.bat >> ToRunPreBackupSERVER.log”

- Note this is the first step of a two step process.
6. Take a backup of the model from inside Project Management on the Host
 7. Restore the backup onto the new Satellite server
 8. Run the second batch file that was generated inside of this folder by opening a command prompt (Start > Run > Type “cmd” > Click “OK”) and navigating to the %temp% directory and finding the AddSatLocation_PlantName directory then run the batch file using the following command.

“ToRunPostRestoreSERVER.bat >> ToRunPostRestoreSERVER.log”

- Note this is the second step of the two step process.

Important: ToRunPreBackupSERVER.bat **MUST** be executed **BEFORE** ToRunPostRestoreSERVER.bat is executed.

Lab 6. Removal of One Satellite from Existing GWC

1. Open Project Management at the Host.
2. Select the replicated plant from which you want to remove the satellite.
3. Click “Tools” > Click “Consolidate Plant from Workshare”
4. Highlight the Satellite location to be removed and enter the STRMADMIN password.
 - ⊕ You might have to click & hold to highlight the desired Satellite in this dialog box.

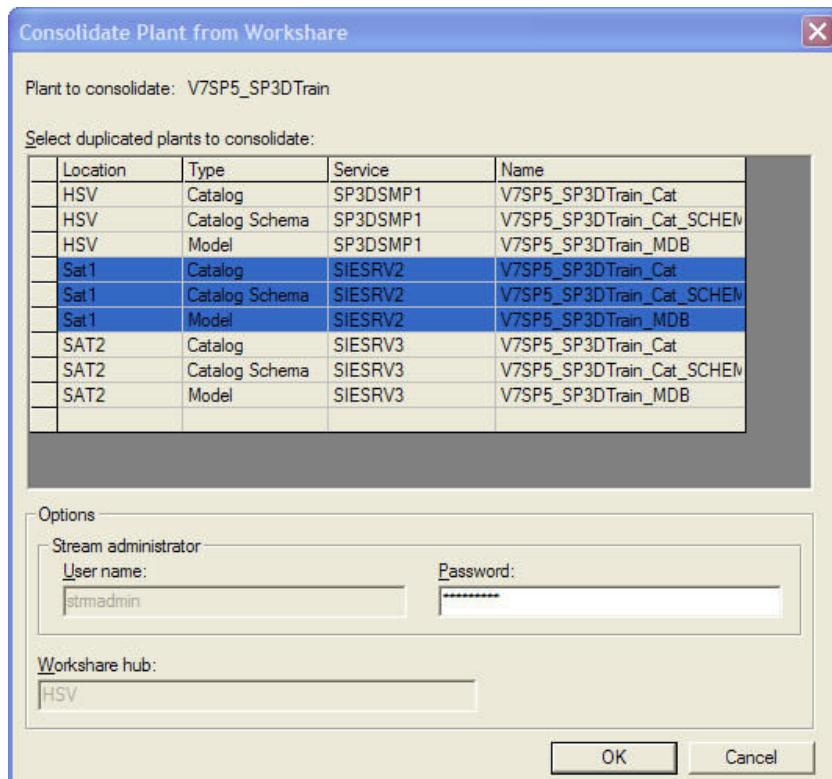


Figure 103. Consolidate a Single Satellite from Workshare

5. Click “OK”
6. A script will be generated in the %temp% folder of the user running the Consolidate Plant from Workshare command in a folder called *RemoveSatelliteLOCATION_PLANT*.
7. Run the script from the command line dumping the output to a log file. The name of the script file is SERVERRemoveStreams.bat.
8. You must regenerate the reports database at this point.

Lab 7. Consolidate All Databases

1. Open Project Management at the Host
2. In the Plant Hierarchy in the left-hand pane, select the replicated plant you wish to consolidate
3. Click “Tools”, then “Consolidate Plant from Workshare”

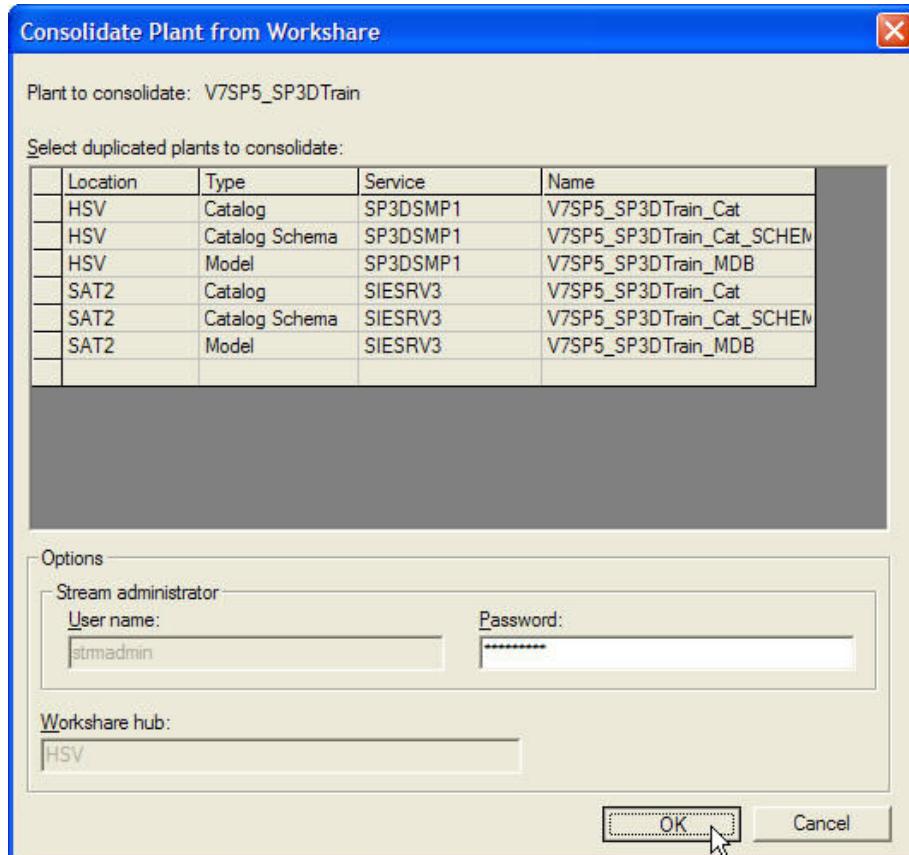


Figure 104. Consolidate all Satellites from Workshare

4. Enter the STRMADMIN password, then click “OK”
5. Open a command prompt and Navigate to the %temp% directory and locate the folder “Consolidate<PlantName>”
6. Run the RemoveStreams.bat file dumping the output to a log file
RemoveStreams.bat > RemoveStreams.log
7. You must regenerate the reports database at this point.
 - Note: It is not mandatory, but recommended that “View Generator” is now run on the plant (Model Database).
 - “View Generator” is located in
{Product Directory}\Administrator\Core\Tools\Administrator\Bin\ViewGenerator.exe

Do not delete the databases at Satellite locations before you execute the RemoveStreams.bat file

Lab 8. Cleaning up after Consolidation

The scripts that are generated within the SP3D “Consolidate Plant from Workshare” command does not totally sever the link between Host & Satellite. In order to totally clean a server that was previously workshared, perform the following workflow.

1. Open the Web-based Database Control
2. Log in as SYS
3. Click on the “Administration” link
4. Click on the “Users” link under “Schema” and “Users & Privileges”
5. Select the STRMADMIN user and click “Go” next to the Action “Create Like”
6. Name it STRMADMIN2, give it a password, and click “OK”
7. Delete the STRMADMIN user
8. Select the STRMADMIN2 user and click “Go” next to the Action “Create Like”
9. Name it STRMADMIN, give it a good password, and click “OK”
10. This action has dropped all of the objects that the original STRMADMIN user owned. This fully cleans up any dangling items that are left over from the workshare on the server this workflow is executed upon.

Lab 9. GWC when Hub is not Host

In the SP3D Oracle Global Workshare environment, there is an option available to force a different Oracle Database Server to be the communication Hub for the workshare. What this means, is that the Host will be separated from the communication Hub. The Host will communicate with the Satellite Servers through the Hub Server, and the Satellite Servers will communicate with the Host Server through the Hub Server. The steps below show how to set up the scenario where the Host and Hub are separated. This workflow must be accomplished prior to adding any Satellite servers into this specialized scenario.

1. Ensure that “Lab 3. Preparing SP3D For GWC” has been performed on the Host Server.
2. Add a location object specifically for the Hub Server inside Project Management (as seen in Section: Add Satellite Location to Project on 54)
3. Execute the “Duplicate Plant for Workshare” command and ensure the STRMADMIN user password is correct. (as seen in Section: Execute the Duplicate Plant for Workshare Command on page 56)
Note: Select the “Workshare Hub” from the drop-down list. For the “Host is not Hub” scenario, you will need to choose another location object other than the Host.
4. Run the “ToRunPreBackup.bat” file
5. Create a backup of the databases on the Host server
6. Restore the backup on the Hub server, ensuring that the “Site Database Workshare Location” is specified as the Hub server location during Site database restore.

7. Run the “ToRunPostRestore.bat” file.
8. Assign the location of the permission groups to the new location, if applicable, from any client or server

Add Satellite Locations for the Dedicated Hub Configuration

1. Add a new location for the Satellite Server location
2. Run the “Duplicate Plant for Workshare” command on the Host server to add the new Satellite individually and ensure the Strmadmin password is correct

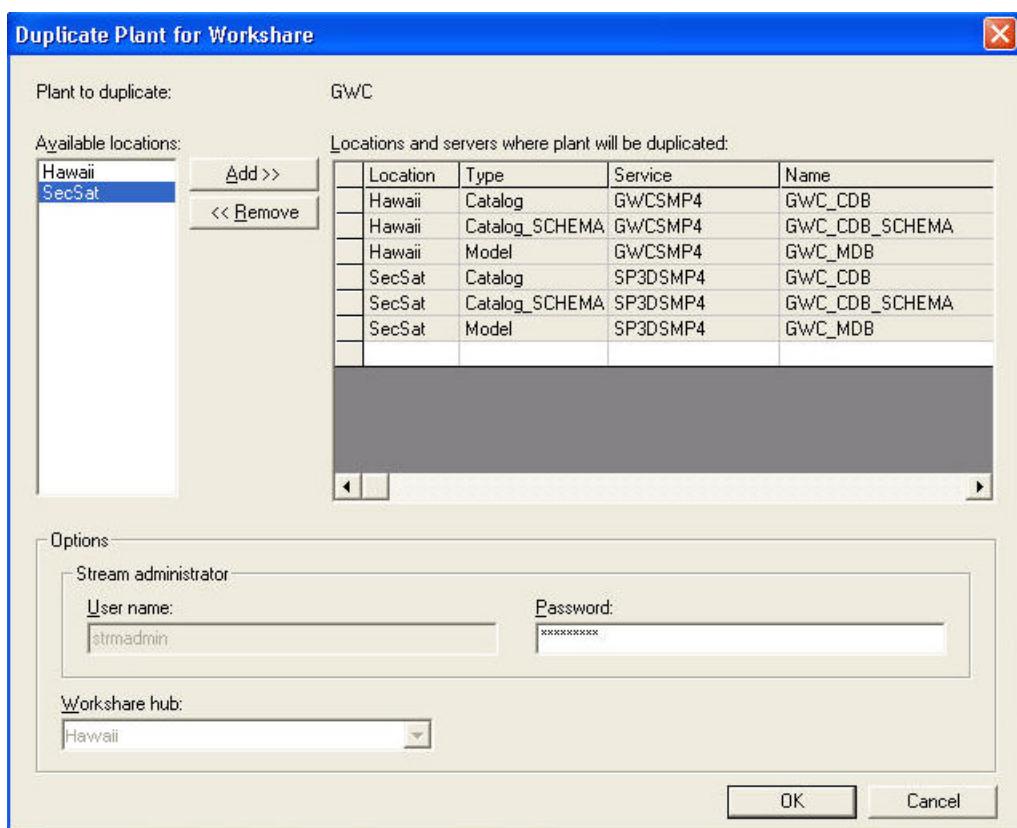


Figure 105. Duplicate Plant For Workshare form when Adding a Satellite to an Existing Workshare



Figure 106. Prompt Displayed when the Duplicate Plant For Workshare command has completed

3. Go to the user's temp directory, and look for a folder called “AddSatellite<SatName>_<PlantName>”

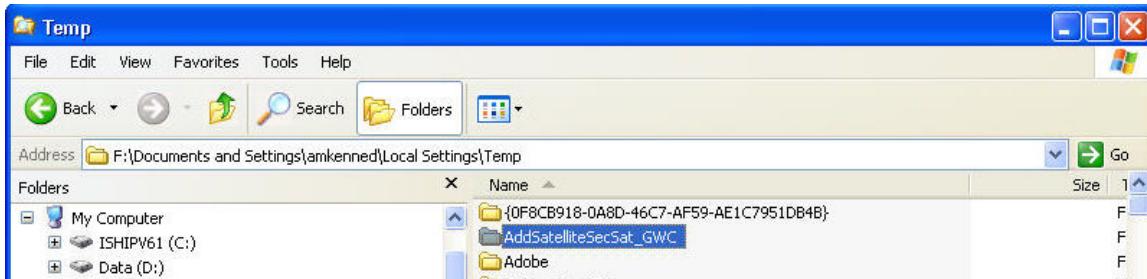


Figure 107. User's %Temp% Directory with AddSatellite Folder Present

4. From a computer which has connectivity between the Host and new Satellite servers, run the "ToRunPreBackup.bat" file

Figure 108. Running the "ToRunPreBackup.bat" file

5. Create a backup of the databases on the Hub server
6. Restore the backup of the databases on the Hub server and on the Satellite server
7. Run <LocationName>Step2SetupStreams.bat
8. Repeat Steps 1through 6 to add the remaining satellite locations

Note:

- The first backup that is used to replicate the plant to the dedicated Hub server is made on the Host server and then restored to the Hub server.
- The following backup(s) that are used to replicate the plant to the Satellite locations are made on the Hub server and restored to the Satellite servers.