

# Unloading and Loading Database Content using Oracle Data Pump


## Purpose

This module describes how you can unload and load data and metadata.

## Topics

This module will discuss the following topics:

- ☐ [Overview](#)
- ☐ [Prerequisites](#)
- ☐ [Determining Table Dependencies](#)
- ☐ [Unloading Data](#)
- ☐ [Loading Data](#)

 **Move your mouse over this icon to show all screenshots. You can also move your mouse over each individual icon to see only the screenshot associated with it.**

## Overview

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Oracle Database 10 *g* offers a variety of methods for unloading and loading data. In this module, you will use the Oracle Data Pump Export utility to unload data then use the Oracle Data Pump Import utility to load data. You will also watch a demonstration of an alternative method of quickly loading large amounts of data with cross-platform transportable tablespaces.

## What is Oracle Data Pump?

Oracle Data Pump is a new feature of Oracle Database 10 *g* that provides high speed, parallel, bulk data and metadata movement of Oracle database contents. A new public interface PL/SQL package, DBMS\_DATAPUMP, provides a server-side infrastructure for fast data and metadata movement. In Oracle Database 10 *g*, new Export (expdp) and Import (impdp) clients that use this interface have been provided. The new Data Pump Export and Import tools have vastly improved performance and greatly enhanced functionality, such as restartability, flexible object selection, and better monitoring and control of export and import jobs. Because of these valuable improvements, Oracle recommends that you use these new Data Pump Export and Import clients rather than the original Export (exp) and Import (imp) clients.

## Lesson Overview

MyCompany is evaluating its product portfolio to determine which products are most profitable to its bottom line. To accomplish this, MyCompany is using Data Pump Export and Import to unload and load various database objects that they will later analyze. The Sales History (SH) schema has several tables which need to be unloaded then loaded into a different schema for analysis.

## Prerequisites

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Data Pump is server-based, rather than client-based. Dump files, log files, and SQL files are accessed relative to server-based directory paths, so that appropriate file security can be enforced. Data Pump requires you to specify directory paths as directory objects. A directory object maps a name to a directory name on the file system.

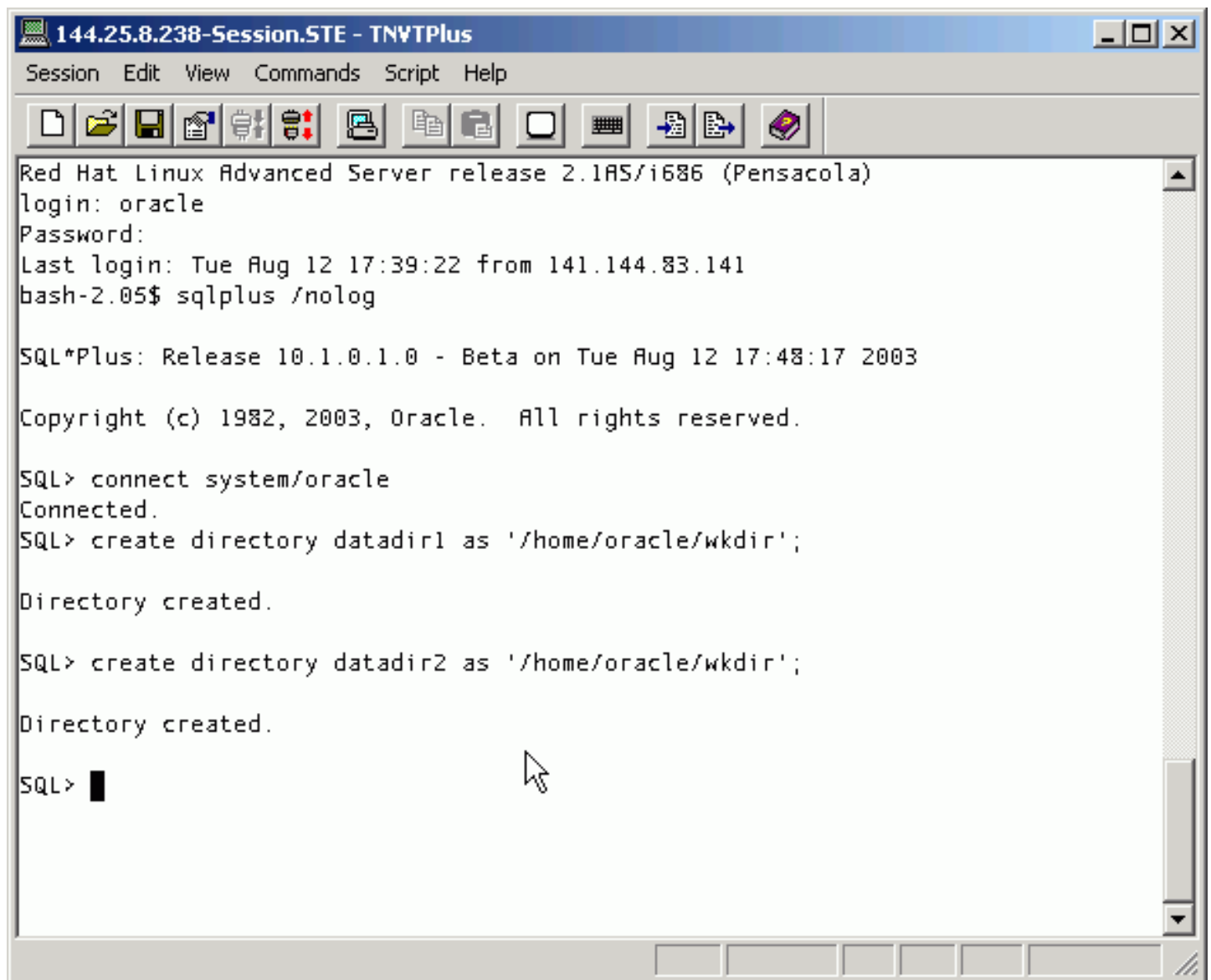
Before you can run Data Pump Export or Data Pump Import, a directory object must be created by a DBA or by any user with CREATE ANY DIRECTORY privilege. Then, when you are using Export or Import, you specify the directory object with the DIRECTORY parameter.

## Creating Directory Objects

To create directory objects, perform the following:

1. Login to **SQL\*Plus** as **system** and enter the following SQL commands to create two directories. Note the directory path that you specify will depend on your system. This is only an example. You will need to determine what directories on your system will be used to locate the files created by the Data Pump.

```
CREATE DIRECTORY datadir1 AS '/home/oracle/wkdir';  
CREATE DIRECTORY datadir2 AS '/home/oracle/wkdir';
```



The screenshot shows a terminal window titled "144.25.8.238-Session.STE - TNVTPlus". The window has a menu bar with "Session", "Edit", "View", "Commands", "Script", and "Help". Below the menu bar is a toolbar with various icons for file operations and terminal functions. The terminal content shows a login sequence for the 'oracle' user on a Red Hat Linux Advanced Server release 2.1AS/i686 (Pensacola). The user enters the password and is prompted for the last login time. The prompt changes from 'bash-2.05\$' to 'SQL\*Plus: Release 10.1.0.1.0 - Beta on Tue Aug 12 17:48:17 2003'. The user enters 'connect system/oracle' and is prompted for a password. The prompt changes to 'SQL>'. The user enters 'create directory datadir1 as '/home/oracle/wkdir';' and the response is 'Directory created.'. The user enters 'create directory datadir2 as '/home/oracle/wkdir';' and the response is 'Directory created.'. The prompt is 'SQL>' with a cursor. A mouse cursor is visible over the terminal area.

```
Red Hat Linux Advanced Server release 2.1AS/i686 (Pensacola)
login: oracle
Password:
Last login: Tue Aug 12 17:39:22 from 141.144.83.141
bash-2.05$ sqlplus /nolog

SQL*Plus: Release 10.1.0.1.0 - Beta on Tue Aug 12 17:48:17 2003

Copyright (c) 1982, 2003, Oracle. All rights reserved.

SQL> connect system/oracle
Connected.
SQL> create directory datadir1 as '/home/oracle/wkdir';

Directory created.

SQL> create directory datadir2 as '/home/oracle/wkdir';

Directory created.

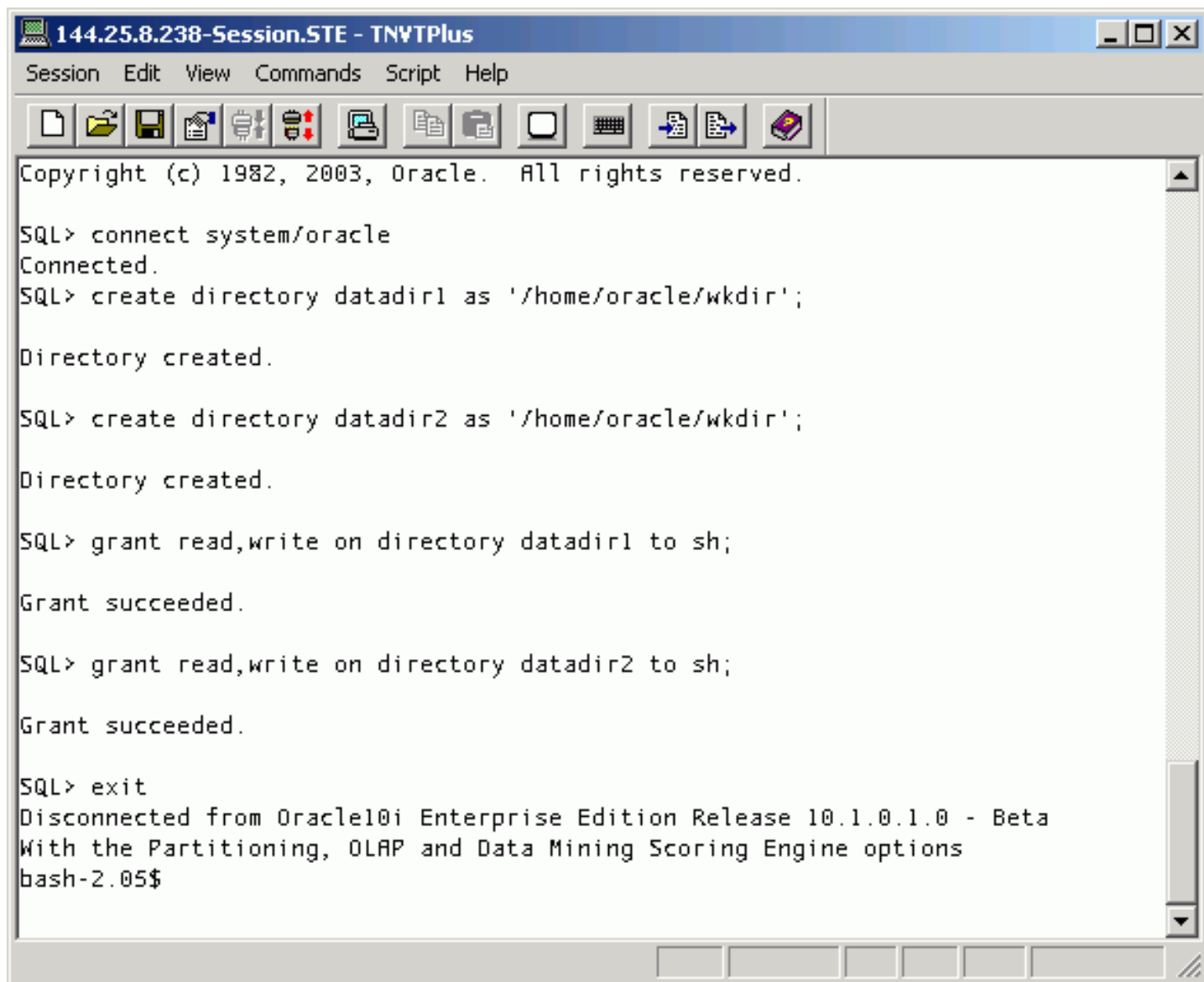
SQL> █
```

2. After a directory is created, the user creating the directory object needs to grant READ and WRITE permission on the directory to other users. To allow the Oracle database to read and to write to files on behalf of user SH in the directories named by datadir1 and datadir2, execute the following command:

```
GRANT READ,WRITE ON DIRECTORY datadir1 TO sh;
```

```
GRANT READ,WRITE ON DIRECTORY datadir2 TO sh;
```

```
exit
```



The screenshot shows a terminal window titled "144.25.8.238-Session.STE - TNVTPPlus". The window has a menu bar with "Session", "Edit", "View", "Commands", "Script", and "Help". Below the menu bar is a toolbar with various icons for file operations and database actions. The main text area contains the following SQL commands and their outputs:

```
Copyright (c) 1982, 2003, Oracle. All rights reserved.

SQL> connect system/oracle
Connected.
SQL> create directory datadir1 as '/home/oracle/wkdir';

Directory created.

SQL> create directory datadir2 as '/home/oracle/wkdir';

Directory created.

SQL> grant read,write on directory datadir1 to sh;

Grant succeeded.

SQL> grant read,write on directory datadir2 to sh;

Grant succeeded.

SQL> exit
Disconnected from Oracle10i Enterprise Edition Release 10.1.0.1.0 - Beta
With the Partitioning, OLAP and Data Mining Scoring Engine options
bash-2.05$
```

## Determining Table Dependencies

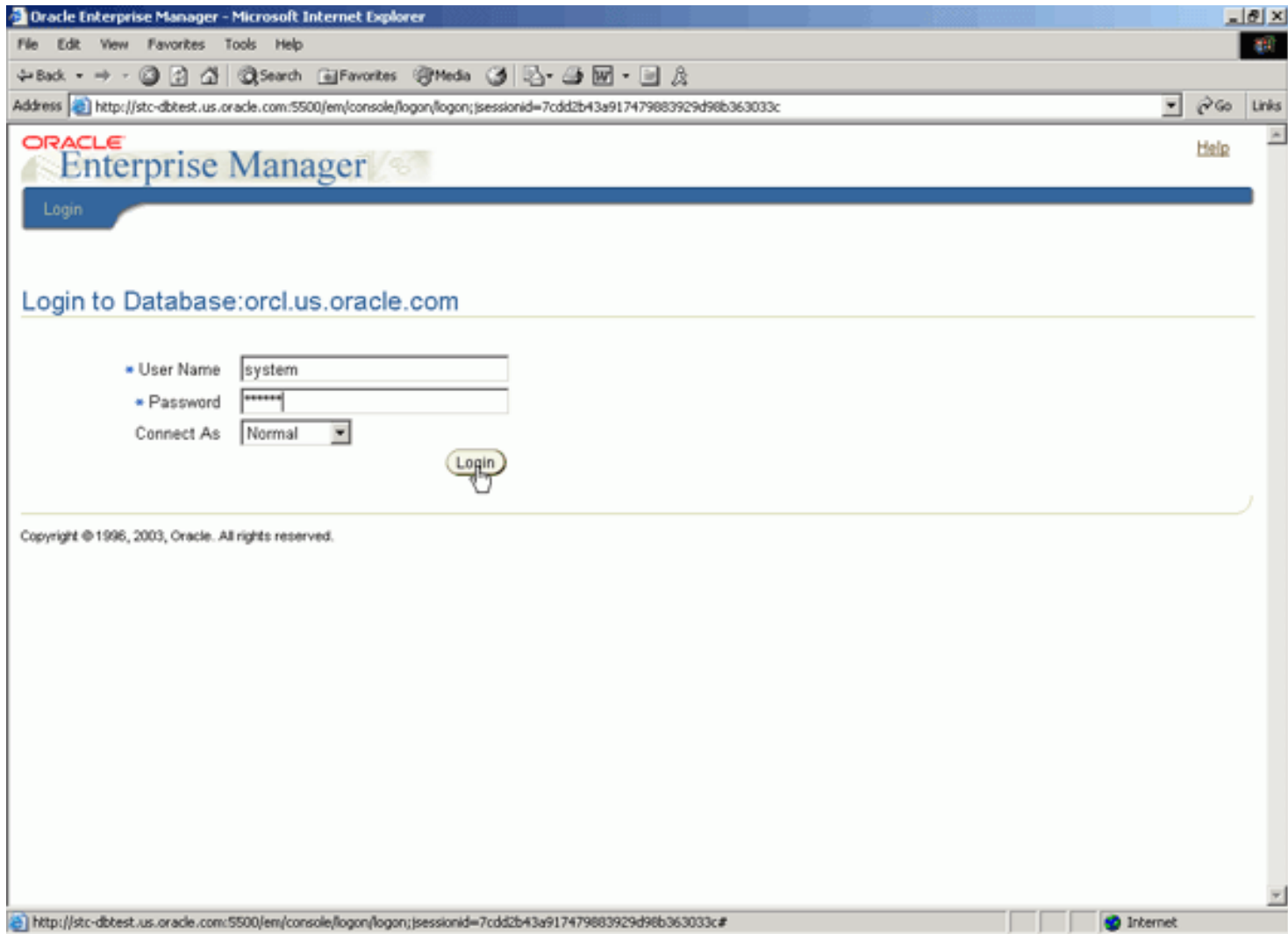
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You need to unload the SALES, PRODUCTS, and COSTS tables. To determine if these tables have any dependencies on other tables (which you may also want to unload), perform the following:

1. Open a browser and enter the following URL:

`http://<hostname>:5500/em`

Login as **system**/**<password>** then click **Login** .



2. Click on the **Administration** tab.

The screenshot shows the Oracle Enterprise Manager (SYS) console interface. The browser address bar indicates the URL: `http://144.25.8.219:5500/em/console/database/instance/sitemap?event=doLoad&target=orcl.us.oracle.com&type=oracle_database&pageNum=1`. The page title is "Oracle Enterprise Manager (SYS) - Database: orcl.us.oracle.com - Microsoft Internet Explorer".

The main navigation bar includes links for **Home**, **Performance**, **Administration** (selected), and **Maintenance**. The status bar indicates "Logged in As SYS" and "Latest Data Collected From Target Aug 23, 2003 4:49:21 PM".

The **Administration** tab displays several sections:

- General:**
  - Status: **Up** (Shutdown button)
  - Up Since: **Aug 22, 2003 10:32:38 PM**
  - Time Zone: **PDT**
  - Availability (%): **78.95** (Last 24 hours)
  - Instance Name: **orcl**
  - Version: **10.1.0.1.0**
  - Host: **EDCDR19P1**
  - Listener: **LISTENER\_EDCDR19P1**
  - Oracle Home: **/oracle/ora10g**
  - Alert Log: **No ORA- errors**
- Host CPU:**
  - Run Queue: **Unavailable**
  - Paging (pages per second): **Unavailable**
- Active Sessions:**
  - Active Sessions: **0**
  - SQL Response Time (%): **77.95** (compared to baseline)
- Space Usage:**
  - Problem: **0**
  - Tablespaces: **Not Configured**
  - Dump Area Used (%): **Unavailable**
- Advice:**
  - ADDM Findings: **1**
  - Policy Violations: **23**
- High Availability:**
  - Instance Recovery Time (seconds): **12**
  - Last Backup: **n/a**
  - Archiving: **Disabled**
  - Archive Area Used (%): **n/a**
  - Flashback Logging: **Disabled**
- Job Activity:**
  - Scheduled Executions: **0**
  - Running Executions: **0**
  - Suspended Executions: **0**
  - Problem Executions: **0** (Last 7 days)

The **Alerts** section is visible at the bottom of the page.

3. Click on the **Tables** link.



4. Enter **SH** in the Schema field then click **Go** .

Tables - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address [http://144.25.8.219:5500/em/console/database/databaseObjectsSearch?event=search&otype=schema&objectType=TABLE&target=ord.us.oracle.com&type=oracle\\_c](http://144.25.8.219:5500/em/console/database/databaseObjectsSearch?event=search&otype=schema&objectType=TABLE&target=ord.us.oracle.com&type=oracle_c) Go Links

ORACLE Enterprise Manager Database

Database: [ord.us.oracle.com](#) > Tables Logged in As SYS

### Tables

**Search**

Select an object type and optionally enter a schema name and an object name to filter the data that is displayed in your results set.

Object Type:  Schema:  Object Name:

Example: Entering Test will return all items beginning with upper case TEST, i.e. TEST\_A, except for Java Source and Java Class which are case sensitive searches. Use double quotes to preserve case and embed wildcards(%).

**Results**

Previous 1-25 of 1038 Next 25

Select	Schema	Table Name	Tablespace	Partition Type	Partitions	Subpartitions	IOT	Clustered
<input checked="" type="radio"/>	SYS	ACCESS\$	SYSTEM		0	0		NO
<input type="radio"/>	SYS	ALERT_QT	SYS_AUX		0	0		NO
<input type="radio"/>	SYS	APPLY\$_CONF_HDLR_COLUMNS	SYSTEM		0	0		NO
<input type="radio"/>	SYS	APPLY\$ _CONSTRAINT_COLUMNS	SYSTEM		0	0		NO
<input type="radio"/>	SYS	APPLY\$ _DEST_OBJ	SYSTEM		0	0		NO
<input type="radio"/>	SYS	APPLY\$ _DEST_OBJ_CMAP	SYSTEM		0	0		NO
<input type="radio"/>	SYS	APPLY\$ _DEST_OBJ_OPS	SYSTEM		0	0		NO
<input type="radio"/>	SYS	APPLY\$ _ERROR	SYS_AUX		0	0		NO
<input type="radio"/>	SYS	APPLY\$ _ERROR_HANDLER	SYSTEM		0	0		NO
<input type="radio"/>	SYS	APPLY\$ _SOURCE_OBJ	SYSTEM		0	0		NO
<input type="radio"/>	SYS	APPLY\$ _SOURCE_SCHEMA	SYSTEM		0	0		NO

<http://144.25.8.219:5500/em/console/database/databaseObjectsSearch?event=search&otype=schema&objectType=TABLE&target=ord.us.or> Internet

5. Select **Costs** then select **Show Dependencies** from the drop-down list. Click **Go**.



**Tables** - Microsoft Internet Explorer

Address: [http://144.25.8.219:5500/em/console/database/databaseObjectsSearch?target=orcl.us.oracle.com&type=oracle\\_database](http://144.25.8.219:5500/em/console/database/databaseObjectsSearch?target=orcl.us.oracle.com&type=oracle_database)

**ORACLE Enterprise Manager**

Database: [orcl.us.oracle.com](#) > Tables

Logged in As SYS

**Search**

Select an object type and optionally enter a schema name and an object name to filter the data that is displayed in your results set.

Object Type: **Table** Schema: **SH** Object Name:  **Go**

Example: Entering Test will return all items beginning with upper case TEST, i.e. TEST\_A, except for Java Source and Java Class which use case sensitive searches. Use double quotes to preserve case and embed wildcards(%).

**Results**

Select	Schema	Table Name	Tablespace	Partition Type	Partitions	Actions
<input type="radio"/>	SH	<a href="#">CAL_MONTH_SALES_MV</a>	EXAMPLE			<b>Show Dependencies</b> Create Like Create Index Create Synonym Create Trigger Gather Statistics Generate DDL Grant Privileges Reorganize Segment Advisor Shrink Segment <b>Show Dependencies</b> View Data Flashback Table Flashback Row History Flashback Transaction History
<input type="radio"/>	SH	<a href="#">CHANNELS</a>	EXAMPLE			
<input checked="" type="radio"/>	SH	<a href="#">COSTS</a>		RANGE		
<input type="radio"/>	SH	<a href="#">COUNTRIES</a>	EXAMPLE			
<input type="radio"/>	SH	<a href="#">CUSTOMERS</a>	EXAMPLE			
<input type="radio"/>	SH	<a href="#">DR\$SUP_TEXT_IDX\$I</a>	EXAMPLE			
<input type="radio"/>	SH	<a href="#">DR\$SUP_TEXT_IDX\$K</a>	EXAMPLE			
<input type="radio"/>	SH	<a href="#">DR\$SUP_TEXT_IDX\$N</a>	EXAMPLE			
<input type="radio"/>	SH	<a href="#">DR\$SUP_TEXT_IDX\$R</a>	EXAMPLE			
<input type="radio"/>	SH	<a href="#">FWEEK_PSCAT_SALES_MV</a>	EXAMPLE			
<input type="radio"/>	SH	<a href="#">MVIEW\$EXCEPTIONS</a>	EXAMPLE			
<input type="radio"/>	SH	<a href="#">PRODUCTS</a>	EXAMPLE			

6. Notice that the Costs table is dependent on four other tables: Channels, Products, Promotions, and Times. Other than Products, none of the other tables are needed for the analysis. Click **OK**.

The screenshot shows the Oracle Enterprise Manager interface in a Microsoft Internet Explorer browser window. The address bar displays the URL: `http://144.25.8.219:5500/em/console/database/showdep/showdep?sname=SH&type=oracle_database&pageName=/database/showdep/showDependencies&target=or`. The page title is "Oracle Enterprise Manager - Show Dependencies: SH.COSTS". The breadcrumb navigation shows "Database: orcl.us.oracle.com > Tables > Show Dependencies: SH.COSTS". The main heading is "Show Dependencies: SH.COSTS". Below this, there are two tabs: "Dependencies" (selected) and "Dependents". The text states: "The following objects are dependencies of SH.COSTS:". A table lists the dependencies:

Object Name	Object Type
<a href="#">SH.CHANNELS</a>	TABLE
<a href="#">SH.PRODUCTS</a>	TABLE
<a href="#">SH.PROMOTIONS</a>	TABLE
<a href="#">SH.TIMES</a>	TABLE
<a href="#">EXAMPLE</a>	TABLESPACE
<a href="#">SH</a>	USER
<a href="#">/oracle/oradata/orcl/example01.dbf</a>	DATAFILE
<a href="#">DEFAULT</a>	PROFILE
<a href="#">TEMP</a>	TABLESPACE
<a href="#">/oracle/oradata/orcl/temp01.dbf</a>	DATAFILE

At the bottom of the page, there is a footer with copyright information: "Copyright © 1996, 2003, Oracle. All rights reserved. About Oracle Enterprise Manager Database Console". The browser status bar at the bottom shows "Done" and "Internet".

7. Select **Products** then select **Show Dependencies** from the drop-down list. Click **Go**.

Tables - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address [http://144.25.8.219:5500/em/console/database/databaseObjectsSearch?event=redisplay&target=ord.us.oracle.com&type=oracle\\_database](http://144.25.8.219:5500/em/console/database/databaseObjectsSearch?event=redisplay&target=ord.us.oracle.com&type=oracle_database) Go Links

Select an object type and optionally enter a schema name and an object name to filter the data that is displayed in your results set.

Object Type: **Table** Schema: **SH** Object Name:  Go

Example: Entering Test will return all items beginning with upper case TEST, i.e. TEST\_A, except for Java Source and Java Class which use case sensitive searches. Use double quotes to preserve case and embed wildcards(%).

### Results

Create Edit View Delete Actions Show Dependencies Go

Select	Schema	Table Name	Tablespace	Partition Type	Partitions	Subpartitions	IOT	Clustered
<input type="radio"/>	SH	<a href="#">CAL_MONTH_SALES_MV</a>	EXAMPLE		0	0		NO
<input type="radio"/>	SH	<a href="#">CHANNELS</a>	EXAMPLE		0	0		NO
<input type="radio"/>	SH	<a href="#">COSTS</a>		RANGE	28	0		NO
<input type="radio"/>	SH	<a href="#">COUNTRIES</a>	EXAMPLE		0	0		NO
<input type="radio"/>	SH	<a href="#">CUSTOMERS</a>	EXAMPLE		0	0		NO
<input type="radio"/>	SH	<a href="#">DR\$SUP_TEXT_IDX\$I</a>	EXAMPLE		0	0		NO
<input type="radio"/>	SH	<a href="#">DR\$SUP_TEXT_IDX\$K</a>	EXAMPLE		0	0	IOT	NO
<input type="radio"/>	SH	<a href="#">DR\$SUP_TEXT_IDX\$N</a>	EXAMPLE		0	0	IOT	NO
<input type="radio"/>	SH	<a href="#">DR\$SUP_TEXT_IDX\$R</a>	EXAMPLE		0	0		NO
<input type="radio"/>	SH	<a href="#">FWEEK_PSCAT_SALES_MV</a>	EXAMPLE		0	0		NO
<input type="radio"/>	SH	<a href="#">MVIEW\$EXCEPTIONS</a>	EXAMPLE		0	0		NO
<input checked="" type="radio"/>	SH	<a href="#">PRODUCTS</a>	EXAMPLE		0	0		NO
<input type="radio"/>	SH	<a href="#">PROMOTIONS</a>	EXAMPLE		0	0		NO
<input type="radio"/>	SH	<a href="#">SALES</a>		RANGE	28	0		NO
<input type="radio"/>	SH	<a href="#">SALES_TRANSACTIONS_EXT</a>	SYSTEM		0	0		NO
<input type="radio"/>	SH	<a href="#">SUPPLEMENTARY_DEMOGRAPHICS</a>	EXAMPLE		0	0		NO
<input type="radio"/>	SH	<a href="#">TIMES</a>	EXAMPLE		0	0		NO

Edit View Delete Actions Show Dependencies Go

[http://144.25.8.219:5500/em/console/database/databaseObjectsSearch?event=redisplay&target=ord.us.oracle.com&type=oracle\\_database](http://144.25.8.219:5500/em/console/database/databaseObjectsSearch?event=redisplay&target=ord.us.oracle.com&type=oracle_database) Internet

8. The Products table is not dependent on any other table. Click **OK**.

The screenshot shows the Oracle Enterprise Manager web interface in Microsoft Internet Explorer. The browser title is "Oracle Enterprise Manager - Show Dependencies: SH.PRODUCTS - Microsoft Internet Explorer". The address bar shows the URL: [http://144.25.8.219:5500/em/console/database/showdep/showdep?sname=SH&type=oracle\\_database&pageName=/database/showdep/showDependencies&target=or](http://144.25.8.219:5500/em/console/database/showdep/showdep?sname=SH&type=oracle_database&pageName=/database/showdep/showDependencies&target=or). The page header includes the Oracle logo and "Enterprise Manager" text. The breadcrumb trail is "Database: orcl.us.oracle.com > Tables > Show Dependencies: SH.PRODUCTS". The main heading is "Show Dependencies: SH.PRODUCTS". There are two tabs: "Dependencies" (selected) and "Dependents". Below the tabs, it says "The following objects are dependencies of SH.PRODUCTS:". A table lists the dependencies:

Object Name	Object Type
EXAMPLE	TABLESPACE
SH	USER
/oracle/oradata/orcl/example01.dbf	DATAFILE
DEFAULT	PROFILE
TEMP	TABLESPACE
/oracle/oradata/orcl/temp01.dbf	DATAFILE

At the bottom of the table, there are links for "Dependencies" and "Dependents". The footer includes "Copyright © 1996, 2003, Oracle. All rights reserved. About Oracle Enterprise Manager Database Console" and navigation links: "Database | Setup | Preferences | Help | Logout". The browser status bar shows the same URL and "Internet" icon.

9. Select **Sales** then select **Show Dependencies** from the drop-down list. Click **Go** .

Tables - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address [http://144.25.8.219:5500/em/console/database/databaseObjectsSearch?event=redisplay&target=orcl.us.oracle.com&type=oracle\\_database](http://144.25.8.219:5500/em/console/database/databaseObjectsSearch?event=redisplay&target=orcl.us.oracle.com&type=oracle_database) Go Links

Results

Create

Edit View Delete Actions Show Dependencies Go

Select	Schema	Table Name	Tablespace	Partition Type	Partitions	Subpartitions	IOT	Clustered
<input type="radio"/>	SH	<a href="#">CAL_MONTH_SALES_MV</a>	EXAMPLE		0	0		NO
<input type="radio"/>	SH	<a href="#">CHANNELS</a>	EXAMPLE		0	0		NO
<input type="radio"/>	SH	<a href="#">COSTS</a>		RANGE	28	0		NO
<input type="radio"/>	SH	<a href="#">COUNTRIES</a>	EXAMPLE		0	0		NO
<input type="radio"/>	SH	<a href="#">CUSTOMERS</a>	EXAMPLE		0	0		NO
<input type="radio"/>	SH	<a href="#">DR\$SUP_TEXT_IDX\$I</a>	EXAMPLE		0	0		NO
<input type="radio"/>	SH	<a href="#">DR\$SUP_TEXT_IDX\$K</a>	EXAMPLE		0	0	IOT	NO
<input type="radio"/>	SH	<a href="#">DR\$SUP_TEXT_IDX\$N</a>	EXAMPLE		0	0	IOT	NO
<input type="radio"/>	SH	<a href="#">DR\$SUP_TEXT_IDX\$R</a>	EXAMPLE		0	0		NO
<input type="radio"/>	SH	<a href="#">FWEEK_PSCAT_SALES_MV</a>	EXAMPLE		0	0		NO
<input type="radio"/>	SH	<a href="#">MVIEW\$EXCEPTIONS</a>	EXAMPLE		0	0		NO
<input type="radio"/>	SH	<a href="#">PRODUCTS</a>	EXAMPLE		0	0		NO
<input type="radio"/>	SH	<a href="#">PROMOTIONS</a>	EXAMPLE		0	0		NO
<input checked="" type="radio"/>	SH	<a href="#">SALES</a>		RANGE	28	0		NO
<input type="radio"/>	SH	<a href="#">SALES_TRANSACTIONS_EXT</a>	SYSTEM		0	0		NO
<input type="radio"/>	SH	<a href="#">SUPPLEMENTARY_DEMOGRAPHICS</a>	EXAMPLE		0	0		NO
<input type="radio"/>	SH	<a href="#">TIMES</a>	EXAMPLE		0	0		NO

Edit View Delete Actions Show Dependencies Go

Recycle Bin

Database | [Setup](#) | [Preferences](#) | [Help](#) | [Logout](#)

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[About Oracle Enterprise Manager Database Console](#)

[http://144.25.8.219:5500/em/console/database/databaseObjectsSearch?event=redisplay&target=orcl.us.oracle.com&type=oracle\\_database](http://144.25.8.219:5500/em/console/database/databaseObjectsSearch?event=redisplay&target=orcl.us.oracle.com&type=oracle_database) Internet

10. The Sales table is dependent on several other tables: Channels, Countries, Customers, Products, Promotions, and Times. Other than Products, none of the other tables are needed for the analysis. Click **OK**.

The screenshot shows the Oracle Enterprise Manager interface in a Microsoft Internet Explorer browser. The address bar displays the URL: [http://144.25.8.219:5500/em/console/database/showdep/showdep?target=orcl.us.oracle.com&type=oracle\\_database&cancelURL=/em/console/database/databaseObj](http://144.25.8.219:5500/em/console/database/showdep/showdep?target=orcl.us.oracle.com&type=oracle_database&cancelURL=/em/console/database/databaseObj). The page title is "Oracle Enterprise Manager - Show Dependencies: SH.SALES". The breadcrumb navigation shows "Database: orcl.us.oracle.com > Tables > Show Dependencies: SH.SALES". The main heading is "Show Dependencies: SH.SALES". Below this, there are two tabs: "Dependencies" (selected) and "Dependents". The text states: "The following objects are dependencies of SH.SALES:". A table lists the dependencies:

Object Name	Object Type
<a href="#">/oracle/oradata/orcl/example01.dbf</a>	DATAFILE
<a href="#">/oracle/oradata/orcl/temp01.dbf</a>	DATAFILE
DEFAULT	PROFILE
SH.CHANNELS	TABLE
SH.CUSTOMERS	TABLE
SH.PRODUCTS	TABLE
SH.PROMOTIONS	TABLE
SH.TIMES	TABLE
SH.COUNTRIES	TABLE
EXAMPLE	TABLESPACE
TEMP	TABLESPACE
SH	USER

At the bottom of the page, there is a copyright notice: "Copyright © 1996, 2003, Oracle. All rights reserved. About Oracle Enterprise Manager Database Console". The browser status bar shows "Done" and "Internet".

## Unloading Data

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Data Pump Export is a utility for unloading data and metadata into a set of operating system files called a dump file set. The dump file set can be copied to another system and loaded by the Data Pump Import utility. The dump file set is made up of one or more disk files that contain table data, database object metadata, and control information. The files are written in a proprietary, binary format. During an import operation, the Data Pump Import utility uses these files to locate each database object in the dump file set. Data Pump Export allows you to specify that a job should move a subset of the data and metadata, as determined by the export mode. This is done using data filters and metadata filters, which are implemented through Export parameters.

Oracle Data Pump Export can be accessed through Enterprise Manager. To unload your company's sales data, perform the following:



1. Click on the **Maintenance** link.

The screenshot shows the Oracle Enterprise Manager web interface in a Microsoft Internet Explorer browser window. The address bar displays the URL: `http://stc-dttest.us.oracle.com:5500/em/console/database/instance/sitemap?event=doLoad&target=orcl.us.oracle.com&type=oracle_database`. The page title is "Oracle Enterprise Manager - Database: orcl.us.oracle.com". The top navigation bar includes links for "Home", "Performance", "Administration", and "Maintenance", with "Maintenance" being the active link. The main content area displays various database metrics and status information, including a "General" section with a "Shutdown" button, "Host CPU" usage, "Active Sessions", "Space Usage", "Advice", "High Availability", and "Job Activity".

**General**

Status: **Up** (Shutdown button)  
 Up Since: **Aug 4, 2003 8:49:42 AM**  
 Time Zone: **PDT**  
 Availability (%): **96.8** (Last 24 hours)  
 Instance Name: **orcl**  
 Version: **10.1.0.1.0**  
 Host: **stc-dttest.us.oracle.com**  
 Listener: **LISTENER\_stc-**  
 Listener: **dttest.us.oracle.com**  
 Oracle Home: **/home/oracle/101R1\_Beta2\_Rel4a**  
 Alert Log: **Aug 4, 2003 7:26:06 AM**

**Host CPU**

Run Queue: **0.09**  
 Paging (pages per second): **0.033**

**Active Sessions**

100%  
 No data is currently available.  
 Active Sessions: **1**  
 SQL Response Time (%): **76.25** (compared to baseline)

**Space Usage**

Problem: **0**  
 Tablespaces: **Not Configured**  
 Fragmentation: **Not Configured**  
 Issues: **Not Configured**  
 Dump Area Used (%): **54**

**Advice**

ADDM Findings: **1**  
 Violations: **23**

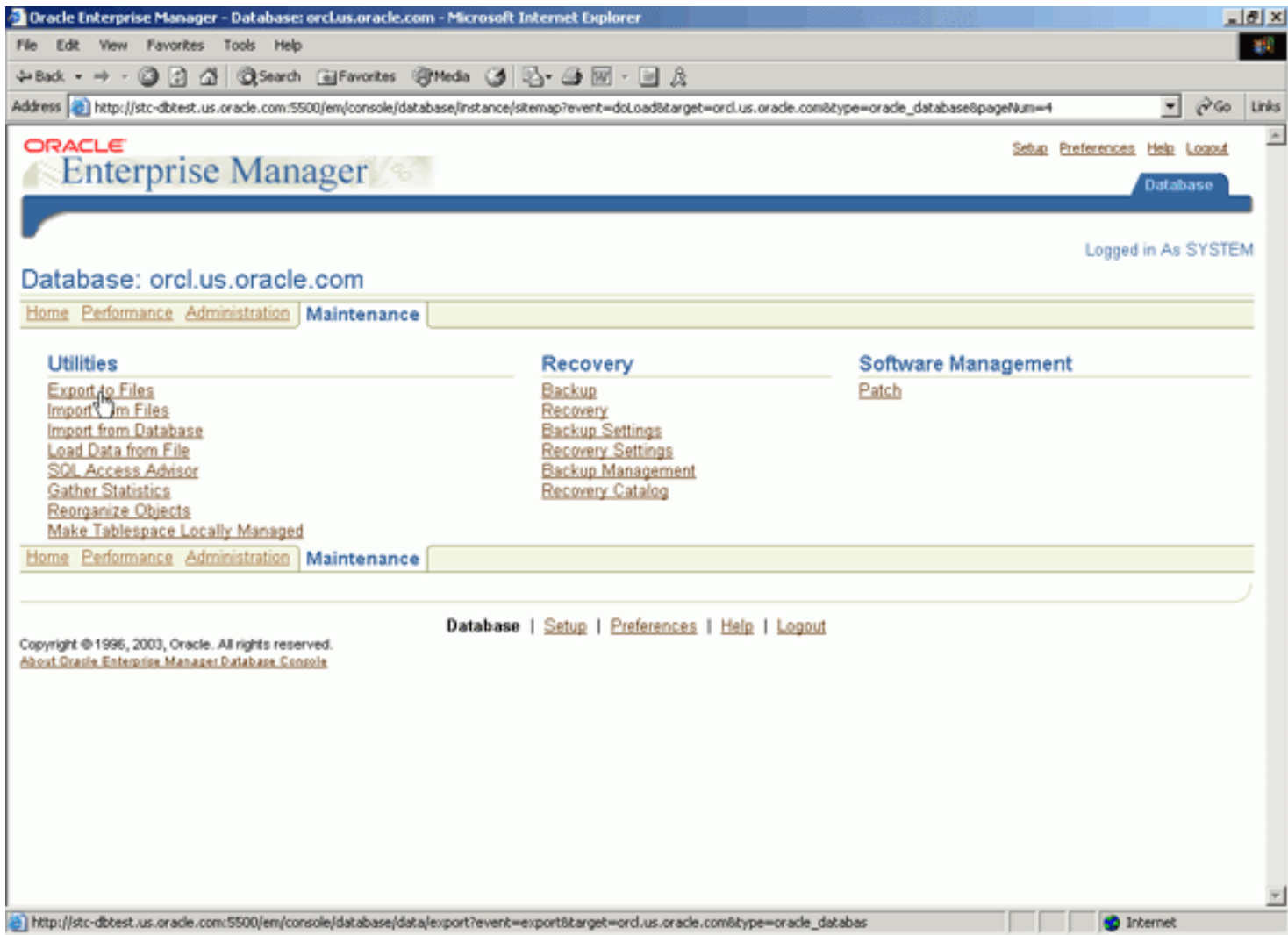
**High Availability**

Instance Recovery Time (seconds): **18**  
 Last Backup: **Aug 5, 2003 2:03:28 AM**  
 Archiving: **Disabled**  
 Archive Area Used (%): **n/a**

**Job Activity**

Scheduled Executions: **1**  
 Running Executions: **0**  
 Suspended Executions: **0**  
 Problem Executions: **3** (Last 7 days)

2. Click on **Export to Files** link.



3. To export tables, select the **Tables** button and enter your OS username and password then click on **Continue** button.



Oracle Enterprise Manager - Export: Export Type - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address [http://144.25.8.219:5500/em/console/database/data/export?event=export&target=orcl.us.oracle.com&type=oracle\\_database](http://144.25.8.219:5500/em/console/database/data/export?event=export&target=orcl.us.oracle.com&type=oracle_database) Go Links

ORACLE Enterprise Manager Database

Database: orcl.us.oracle.com

Export: Export Type

Database orcl.us.oracle.com Cancel Continue

☐ Database  
Exports the entire database.

☐ Schemas  
Allows you to choose one or more schemas and to export the objects in those schemas.

☒ Tables  
Allows you to choose one or more tables to export from a selected schema.

Host Credentials

Username oracle

Password \*\*\*\*\*

Cancel Continue

Database | Setup | Preferences | Help | Logout

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[About Oracle Enterprise Manager Database Console](#)

[http://144.25.8.219:5500/em/console/database/data/export?event=export&target=orcl.us.oracle.com&type=oracle\\_database#](http://144.25.8.219:5500/em/console/database/data/export?event=export&target=orcl.us.oracle.com&type=oracle_database#) Internet

4. Select the **Add** button to see the tables available for export.



5. Enter **SH** in the Schema field and click **Go** .



6. Select the checkboxes for the **Costs**, **Products**, and **Sales** tables and click **Select** .

Oracle Enterprise Manager - Export: Add Tables - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address <http://144.25.8.219:5500/em/console/database/data/export> Go Links

### Export: Add Tables

Database **orcl.us.oracle.com** Cancel Select

Tables and/or partitions must all belong to the same schema.

#### Search

Enter the full name of the schema or select a schema from which to display schema tables in the Search Results table. Enter search criteria in the Table field to filter the list of tables from the schema.


Schema    
Only tables from the selected schema will be found.

Table   
All tables names containing this string will be found.

Search for ☒ Tables ☐ Partitions

Go

#### Search Results

[Select All](#) | [Select None](#) Previous 1-10 of 17 Next 7

Select	Schema	Tables
<input type="checkbox"/>	SH	CAL_MONTH_SALES_MV
<input type="checkbox"/>	SH	CHANNELS
<input checked="" type="checkbox"/>	SH	COSTS
<input type="checkbox"/>	SH	COUNTRIES
<input type="checkbox"/>	SH	CUSTOMERS
<input type="checkbox"/>	SH	DR\$SUP_TEXT_IDX\$I
<input type="checkbox"/>	SH	DR\$SUP_TEXT_IDX\$K
<input type="checkbox"/>	SH	DR\$SUP_TEXT_IDX\$N
<input type="checkbox"/>	SH	DR\$SUP_TEXT_IDX\$R
<input type="checkbox"/>	SH	FWEEK_PSCAT_SALES_MV

Previous 1-10 of 17 Next 7

Cancel Select

<http://144.25.8.219:5500/em/console/database/data/export#> Internet

Oracle Enterprise Manager - Export: Add Tables - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address <http://144.25.8.219:5500/em/console/database/data/export> Go Links

ORACLE Enterprise Manager Setup Preferences Help Logout Database

Tables Options Files Schedule Review

### Export: Add Tables

Database **orcl.us.oracle.com** Cancel Select

Tables and/or partitions must all belong to the same schema.

#### Search

Enter the full name of the schema or select a schema from which to display schema tables in the Search Results table. Enter search criteria in the Table field to filter the list of tables from the schema.

Schema  Only tables from the selected schema will be found.

Table

All tables names containing this string will be found.

Search for ☒ Tables ☐ Partitions

Go

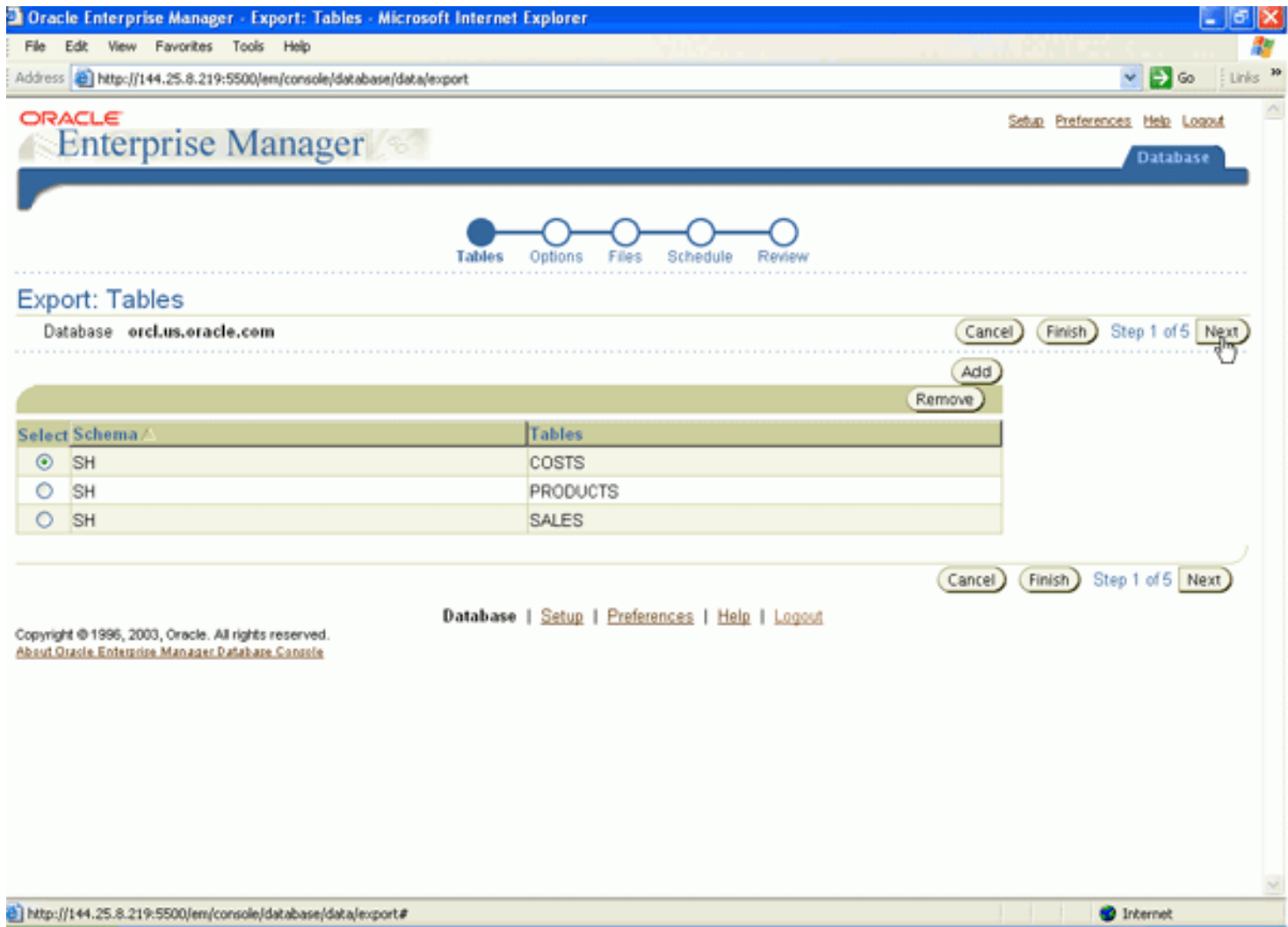
#### Search Results

Select All | Select None Previous 10 11-17 of 17 Next

Select	Schema	Tables
<input type="checkbox"/>	SH	MVIEWS_EXCEPTIONS
<input checked="" type="checkbox"/>	SH	PRODUCTS
<input type="checkbox"/>	SH	PROMOTIONS
<input checked="" type="checkbox"/>	SH	SALES
<input type="checkbox"/>	SH	SALES_TRANSACTIONS_EXT
<input type="checkbox"/>	SH	SUPPLEMENTARY_DEMOGRAPHICS
<input type="checkbox"/>	SH	TABLES

<http://144.25.8.219:5500/em/console/database/data/export#> Internet

7. Click **Next** .



8. Enter **4** for the Maximum Number of Threads in Export Job and select **DATADIR1** for the Directory Object. Change the name of the export log file to **EXPORT\_<today's date in mmddyy format>.log** and click **Next**.

Oracle Enterprise Manager - Export: Options - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address <http://144.25.8.219:5500/em/console/database/data/export> Go Links

ORACLE Enterprise Manager Database

Tables Options Files Schedule Review

Export: Options

Database **orcl.us.oracle.com** Cancel Finish Back Step 2 of 5 Next

Maximum Number of Threads in Export Job  This option allows you to make tradeoffs between resource consumption and elapsed time.

☐ Keep the master table after export is complete

**Estimate Disk Space**

Calculates an estimate of how much disk space the export job will consume (in bytes). The estimate is for table row data only and does not include metadata.

☒ Blocks Estimate will be calculated by multiplying the number of database blocks used by the target objects times the appropriate block sizes. This method will provide the quickest rough estimate.

☐ Statistics Estimate will be calculated using per-table statistics. This method will provide the most accuracy if all target tables have been recently analyzed.

☐ Sampling Estimate will be made sampling a fixed number of rows per table and extrapolating.

**Estimate Disk Space Now** Calculate the estimate of space that will be consumed without actually performing the export operation. This may take a few minutes.

**Optional Files**

☒ Generate Log File

Directory Object  Create Directory Object

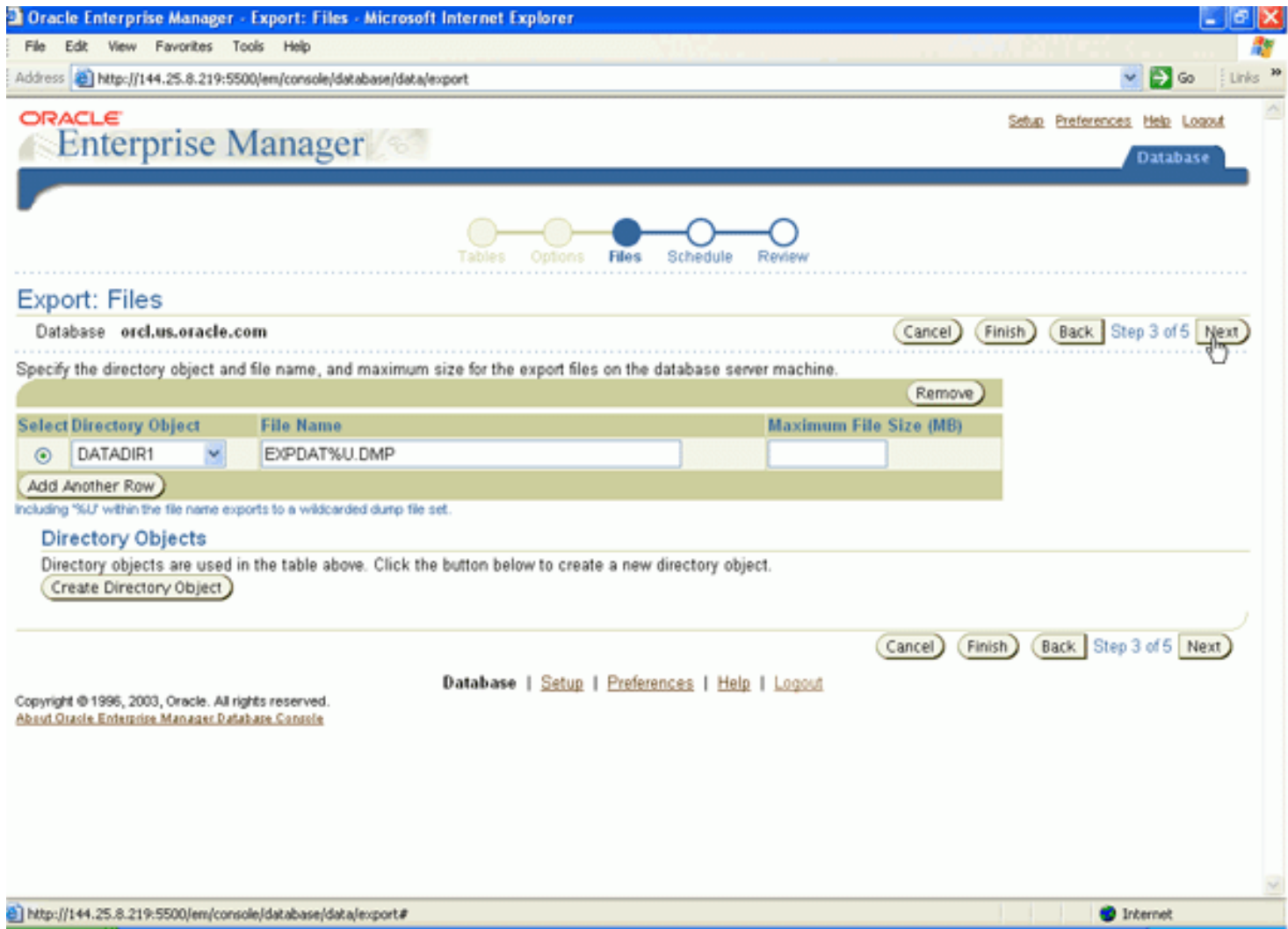
Log File

Show Advanced Options

Cancel Finish Back Step 2 of 5 Next

<http://144.25.8.219:5500/em/console/database/data/export#> Internet

9. Click **Next** .



Oracle Enterprise Manager - Export: Files - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address <http://144.25.8.219:5500/em/console/database/data/export> Go Links

ORACLE Enterprise Manager Database

Tables Options **Files** Schedule Review

### Export: Files

Database **orcl.us.oracle.com** Cancel Finish Back Step 3 of 5 Next

Specify the directory object and file name, and maximum size for the export files on the database server machine. Remove

Select Directory Object	File Name	Maximum File Size (MB)
<input type="radio"/> DATADIR1	EXPDAT%U.DMP	

Add Another Row

Including %U within the file name exports to a wildcarded dump file set.

#### Directory Objects

Directory objects are used in the table above. Click the button below to create a new directory object.

Create Directory Object

Cancel Finish Back Step 3 of 5 Next

Database | [Setup](#) | [Preferences](#) | [Help](#) | [Logout](#)

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[About Oracle Enterprise Manager Database Console](#)

<http://144.25.8.219:5500/em/console/database/data/export#> Internet

Enter a job name of **EXPORT<Today's Date>** and make sure Start is set to **Immediate** and click **Next** .

10.



Oracle Enterprise Manager - Export: Schedule - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address <http://144.25.8.226:5500/em/console/database/data/export> Go Links

ORACLE Enterprise Manager Database

Schemas Options Files **Schedule** Review

Export: Schedule

Database **orcl.us.oracle.com** Cancel Back Step 4 of 5 **Next**

Specify a name and description for the export job. Specify a date to start the job.

**Job Parameters**

Job Name

Description

**Job Schedule**

**Start**

☒ Immediately

☐ Later

Date

(example: Dec-12-2002)

Time   ☒ AM ☐ PM

Cancel Back Step 4 of 5 **Next**

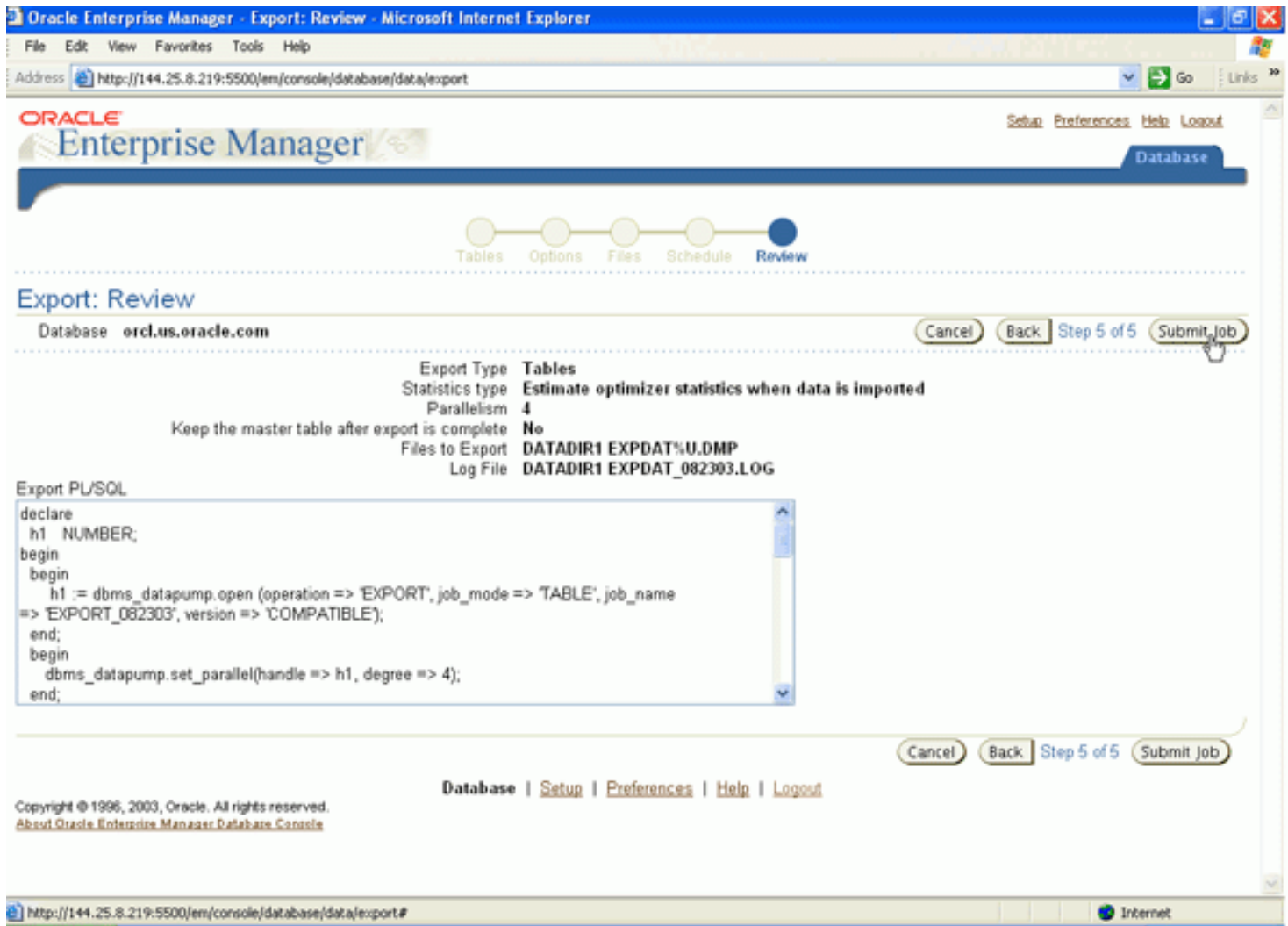
Database | [Setup](#) | [Preferences](#) | [Help](#) | [Logout](#)

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<http://144.25.8.226:5500/em/console/database/data/export#> Internet

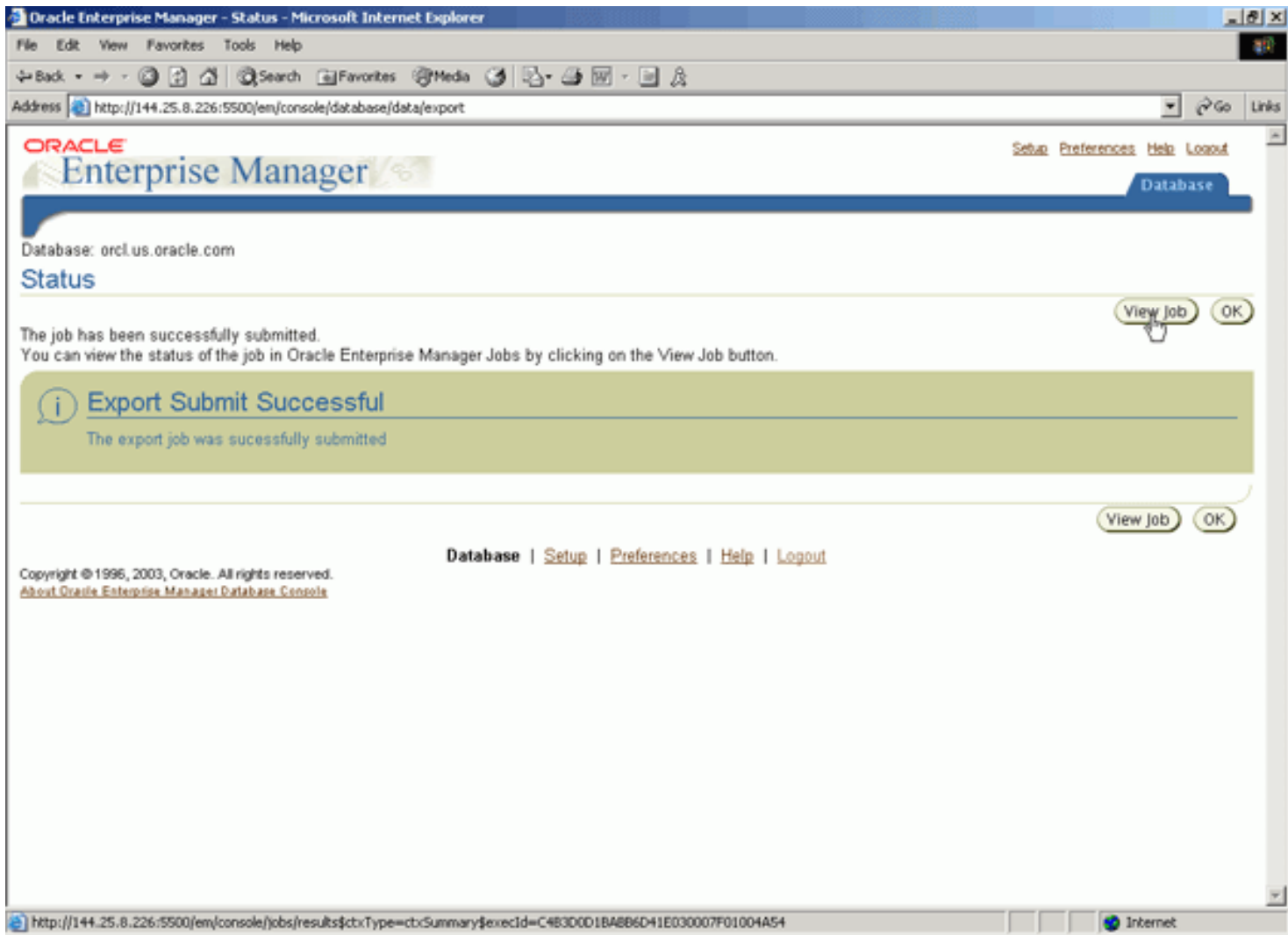
Select the **Submit Job** button to submit the export job.

11.



Your export job was successfully submitted. Click **View Job**.

12.



Select the **Export** link to see the Export log status.

13.

Oracle Enterprise Manager (SYS) - Job: EXPORT\_082303 - Microsoft Internet Explorer

Address: <http://144.25.8.219:5500/em/console/jobs/results?ctxType=ctxSummary&execId=C59159F7A598D03FE030007F01000EC6>

Oracle Enterprise Manager

Job: EXPORT\_082303

Page Refreshed August 23, 2003 3:57:09 PM PDT [Delete] [View Definition]

**Summary**

The Stop and Suspend operations will wait for the current step to complete. A suspended job can be resumed later, at the next step. [Stop] [Suspend]

Status	Running	Type	Export
Scheduled	23-AUG-2003 15:56:24 -07:00	Owner	SYS
Started	23-AUG-2003 15:56:28 -07:00	Description	
Running Time	40 seconds	db_10_or_higher	true
		db_password	*****
		db_role_suffix	sysdba
		db_username	SYS
		export_script	\$oracle_home = "/oracle/ora10g"; \$oracle_sid = "orcl";
		host_password	*****
		host_username	oracle
		is_rac	false
		job_name	EXPORT_082303

[Monitor Data Pump job]

**Logs**

Name	Targets	Status	Started	Ended	Running (sec)
Export	orcl.us.oracle.com	Running	23-AUG-2003 15:56:30 -07:00		39

[Delete] [View Definition]

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Address: [http://144.25.8.219:5500/em/console/jobs/stepLog?stepName=Export&stepID=12&jobName=EXPORT\\*\\_082303&execId=C59159F7A598D03FE03000](http://144.25.8.219:5500/em/console/jobs/stepLog?stepName=Export&stepID=12&jobName=EXPORT*_082303&execId=C59159F7A598D03FE03000)

The job is still running. Click **Show more** to see more of the log. If Show more does not appear, click Reload in your browser window.

14.

Oracle Enterprise Manager (SYS) - Step: Export - Microsoft Internet Explorer

Address: [http://144.25.8.219:5500/em/console/jobs/stepLog?stepName=Export&stepID=12&jobName=EXPORT\\*\\_082303&execId=C59159F7A598D03FE030007F01000EC6](http://144.25.8.219:5500/em/console/jobs/stepLog?stepName=Export&stepID=12&jobName=EXPORT*_082303&execId=C59159F7A598D03FE030007F01000EC6)

Setup Preferences Help Logout

Database

Job: EXPORT\_082303 > Step: Export

Step: Export

Page Refreshed Aug 23, 2003 3:57:57 PM

Status: **Succeeded**  
 Targets: **orcl.us.oracle.com**

Started: 23-AUG-2003 15:56:30 -07:00  
 Ended: 23-AUG-2003 15:57:55 -07:00  
 Running Time: 1:25 minutes

**Output Log**

Job EXPORT\_082303 has been reopened at Saturday, 23 August, 2003 15:56  
 Restarting "SYS"."EXPORT\_082303":  
 Estimate in progress using BLOCKS method...

Processing object type TABLE\_EXPORT/TBL\_TABLE\_DATA/TABLE/TABLE\_DATA

estimated "SH"."SALES": "SALES_Q4_2001"	2 MB
estimated "SH"."SALES": "SALES_Q1_1999"	1024 KB
estimated "SH"."SALES": "SALES_Q3_2001"	1024 KB
estimated "SH"."SALES": "SALES_Q3_1999"	960 KB
estimated "SH"."SALES": "SALES_Q1_2000"	960 KB
estimated "SH"."SALES": "SALES_Q2_2001"	960 KB

[Show more](#)

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Database | Setup | Preferences | Help | Logout

<http://144.25.8.219:5500/em/console/jobs/stepLog?listSize=-1&stepName=Export&stepID=12&execId=C59159F7A598D03FE030007F01000EC6>

The job has finished. Scroll down to the bottom to see all the messages in the log.

15.

Oracle Enterprise Manager (SYS) - Step: Export - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address [http://144.25.8.219:5500/em/console/jobs/stepLog?listSize=-1&stepName=Export&stepID=12&execId=C59159F7A596D03FE030007F01000EC6&jobName=EXPORT\\*\\_j](http://144.25.8.219:5500/em/console/jobs/stepLog?listSize=-1&stepName=Export&stepID=12&execId=C59159F7A596D03FE030007F01000EC6&jobName=EXPORT*_j) Go Links

ORACLE Enterprise Manager

Setup Preferences Help Logout Database

Job: EXPORT\_082303 > Step: Export

Step: Export

Status Succeeded Targets orcl.us.oracle.com

Started 23-AUG-2003 15:56:30 -07:00 Ended 23-AUG-2003 15:57:55 -07:00 Running Time 1:25 minutes

Page Refreshed Aug 23, 2003 3:58:57 PM

Output Log

Job EXPORT\_082303 has been reopened at Saturday, 23 August, 2003 15:56

Restarting "SYS"."EXPORT\_082303":

Estimate in progress using BLOCKS method...

Processing object type TABLE\_EXPORT/TBL\_TABLE\_DATA/TABLE/TABLE\_DATA

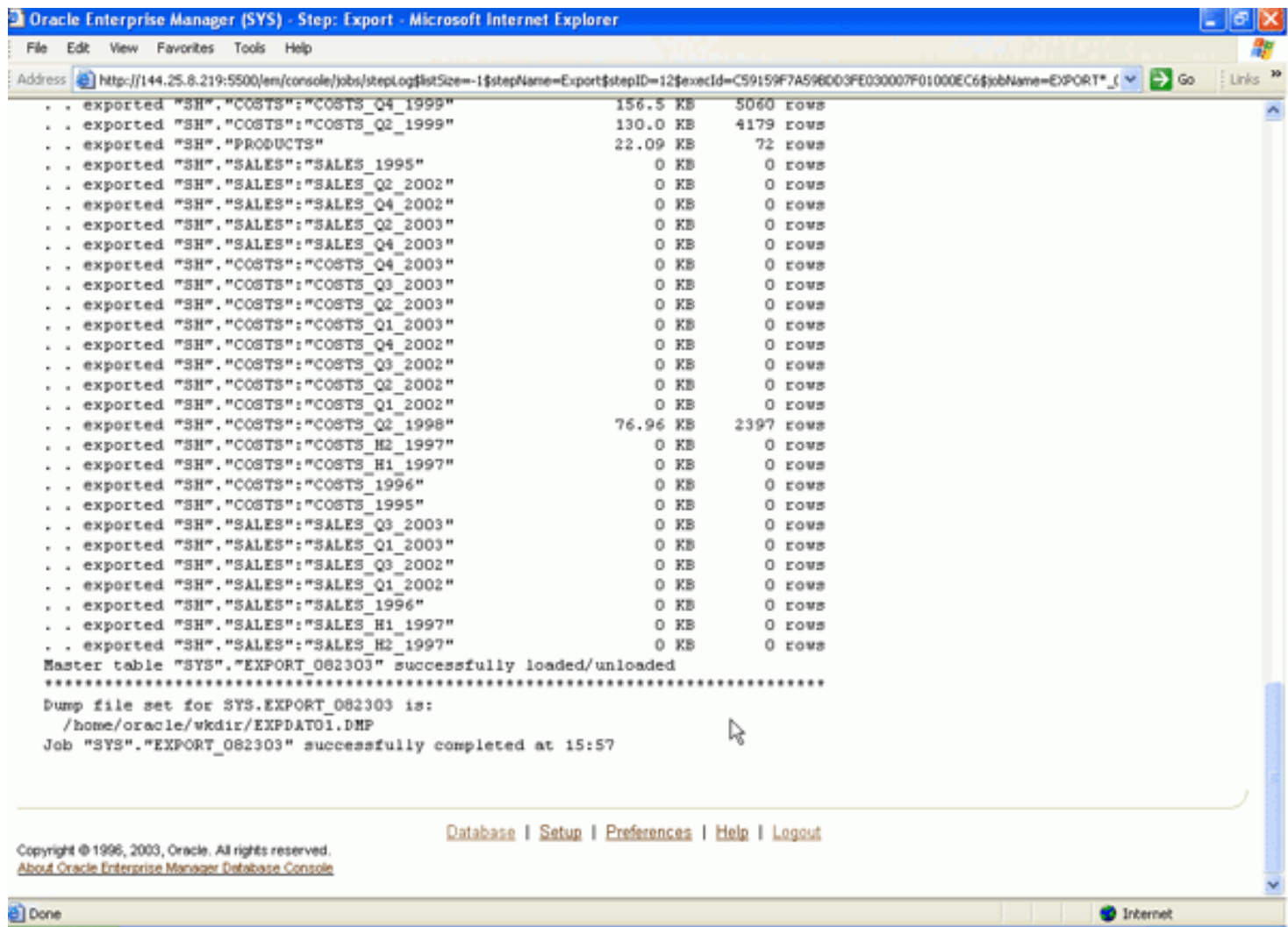
estimated "SH"."SALES": "SALES_Q4_2001"	2 MB
estimated "SH"."SALES": "SALES_Q1_1999"	1024 KB
estimated "SH"."SALES": "SALES_Q3_2001"	1024 KB
estimated "SH"."SALES": "SALES_Q3_1999"	960 KB
estimated "SH"."SALES": "SALES_Q1_2000"	960 KB
estimated "SH"."SALES": "SALES_Q2_2001"	960 KB
estimated "SH"."SALES": "SALES_Q1_2001"	960 KB
estimated "SH"."SALES": "SALES_Q4_1999"	960 KB
estimated "SH"."SALES": "SALES_Q4_1998"	896 KB
estimated "SH"."SALES": "SALES_Q4_2000"	896 KB
estimated "SH"."SALES": "SALES_Q2_2000"	896 KB
estimated "SH"."SALES": "SALES_Q3_2000"	896 KB
estimated "SH"."SALES": "SALES_Q2_1999"	832 KB
estimated "SH"."SALES": "SALES_Q1_1998"	768 KB
estimated "SH"."SALES": "SALES_Q3_1998"	768 KB
estimated "SH"."SALES": "SALES_Q2_1998"	640 KB
estimated "SH"."COSTS": "COSTS_Q3_2001"	192 KB
estimated "SH"."COSTS": "COSTS_Q4_2001"	192 KB
estimated "SH"."COSTS": "COSTS_Q1_1998"	128 KB
estimated "SH"."COSTS": "COSTS_Q3_1998"	128 KB
estimated "SH"."COSTS": "COSTS_Q4_1998"	128 KB

Done Internet

Your export has completed successfully. Note the name of the dump file for use later in the lesson.

16.





You will perform the following examples of using Data Pump Export command line interface:

- ☒ [Performing a Table Mode Export](#)
- ☒ [Estimating how much disk space will be consumed in a schema mode export](#)
- ☒ [Performing a schema mode export](#)
- ☒ [Performing a full database export using four parallel processes](#)
- ☒ [Attaching to and stopping an existing job](#)
- ☒ [Attaching to an restarting a stopped job](#)

## Performing a Table Mode Export

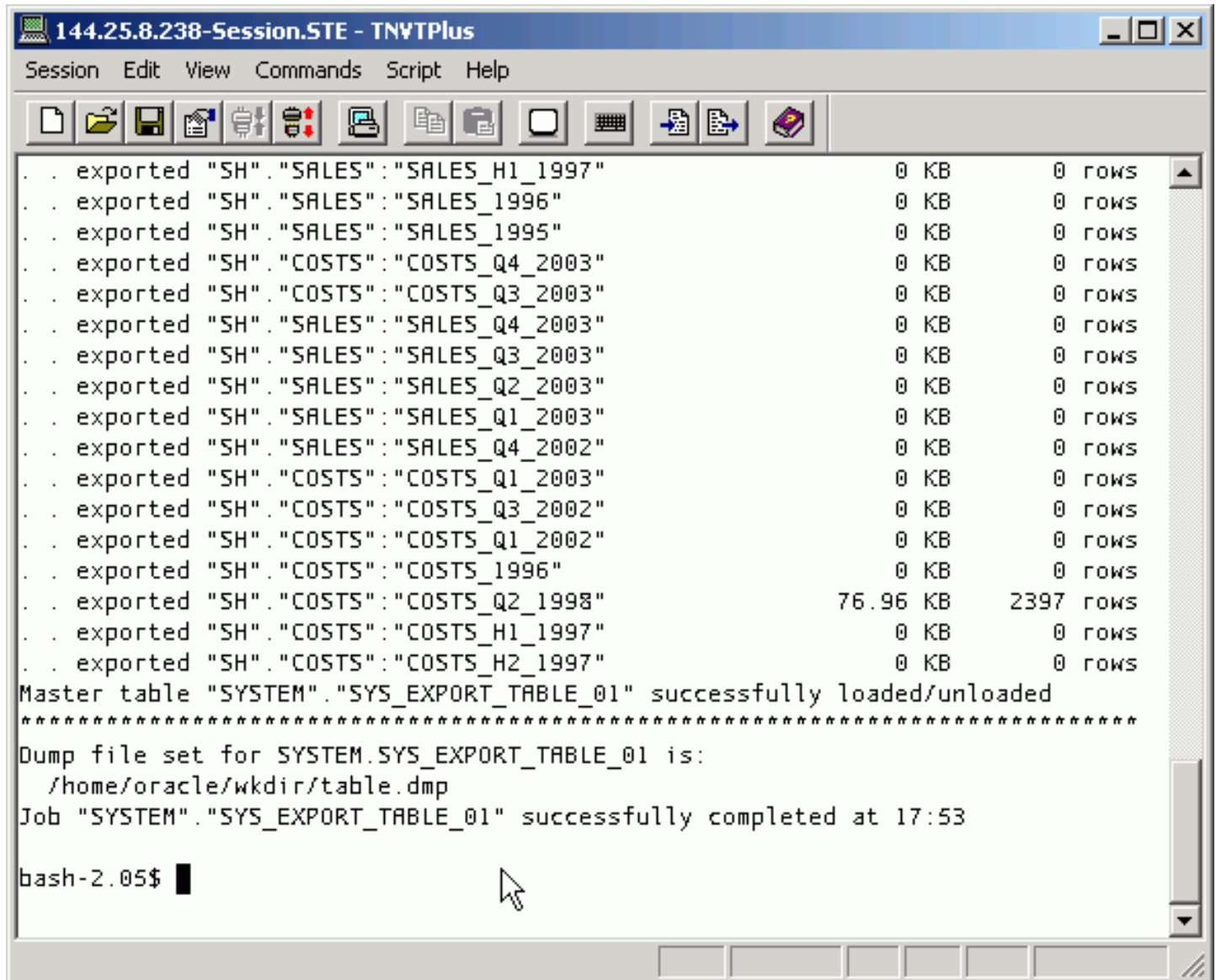
[Back to List](#)

A table export is specified using the TABLES parameter. In the following example, the NOLOGFILE parameter indicates that an Export logfile of the operation will not be generated.

Issue the following export command to perform a table export of table Costs and table Sales:

1. Open a terminal window and execute the following:

```
expdp system/<password> \
TABLES=sh.costs,sh.sales \
DUMPFILE=datadir2:table.dmp \
NOLOGFILE=y
```



```
144.25.8.238-Session.STE - TNVTPPlus
Session Edit View Commands Script Help

. . exported "SH"."SALES":"SALES_H1_1997"          0 KB          0 rows
. . exported "SH"."SALES":"SALES_1996"            0 KB          0 rows
. . exported "SH"."SALES":"SALES_1995"            0 KB          0 rows
. . exported "SH"."COSTS":"COSTS_Q4_2003"          0 KB          0 rows
. . exported "SH"."COSTS":"COSTS_Q3_2003"          0 KB          0 rows
. . exported "SH"."SALES":"SALES_Q4_2003"          0 KB          0 rows
. . exported "SH"."SALES":"SALES_Q3_2003"          0 KB          0 rows
. . exported "SH"."SALES":"SALES_Q2_2003"          0 KB          0 rows
. . exported "SH"."SALES":"SALES_Q1_2003"          0 KB          0 rows
. . exported "SH"."SALES":"SALES_Q4_2002"          0 KB          0 rows
. . exported "SH"."COSTS":"COSTS_Q1_2003"          0 KB          0 rows
. . exported "SH"."COSTS":"COSTS_Q3_2002"          0 KB          0 rows
. . exported "SH"."COSTS":"COSTS_Q1_2002"          0 KB          0 rows
. . exported "SH"."COSTS":"COSTS_1996"             0 KB          0 rows
. . exported "SH"."COSTS":"COSTS_Q2_1998"         76.96 KB      2397 rows
. . exported "SH"."COSTS":"COSTS_H1_1997"          0 KB          0 rows
. . exported "SH"."COSTS":"COSTS_H2_1997"          0 KB          0 rows
Master table "SYSTEM"."SYS_EXPORT_TABLE_01" successfully loaded/unloaded
*****
Dump file set for SYSTEM.SYS_EXPORT_TABLE_01 is:
  /home/oracle/wkdir/table.dmp
Job "SYSTEM"."SYS_EXPORT_TABLE_01" successfully completed at 17:53

bash-2.05$
```

Estimating How Much Disk Space Will Be Consumed in a Schema Mode Export

[Back to List](#)



The `ESTIMATE_ONLY` parameter estimates the space that would be consumed in a schema export, but stops without actually performing the export operation. The estimate is printed in the log file and displayed on the client's standard output device. The estimate is for table row data only; it does not include metadata.

The `INCLUDE` parameter allows you to filter the metadata that is exported by specifying objects and object types for the current export mode. The specified objects and all their dependent objects are exported. Grants on these objects are also exported.

Perform the following:

1. From your terminal window, issue the following command to estimate the amount of blocks required to export the data in the three tables: Sales, Products and Costs, from the Sales History (SH) schema. Use a backslash (\) as an escape character before a special character, such as a parenthesis, so that the character is not treated as a special character by the operating system.

```
expdp sh/sh \  
INCLUDE=table:"IN \( \'SALES\','\'PRODUCTS\','\'COSTS\'\' ) \" \  
DIRECTORY=datadir2 \  
ESTIMATE_ONLY=y
```

```

. estimated "SH"."SALES":"SALES_Q2_2003"          64 KB
. estimated "SH"."SALES":"SALES_Q2_2002"          64 KB
. estimated "SH"."SALES":"SALES_Q1_2003"          64 KB
. estimated "SH"."SALES":"SALES_Q1_2002"          64 KB
. estimated "SH"."SALES":"SALES_H2_1997"          64 KB
. estimated "SH"."SALES":"SALES_H1_1997"          64 KB
. estimated "SH"."SALES":"SALES_1996"             64 KB
. estimated "SH"."SALES":"SALES_1995"             64 KB
. estimated "SH"."COSTS":"COSTS_Q4_2003"          64 KB
. estimated "SH"."COSTS":"COSTS_Q4_2002"          64 KB
. estimated "SH"."COSTS":"COSTS_Q3_2003"          64 KB
. estimated "SH"."COSTS":"COSTS_Q3_2002"          64 KB
. estimated "SH"."COSTS":"COSTS_Q2_2003"          64 KB
. estimated "SH"."COSTS":"COSTS_Q1_2002"          64 KB
. estimated "SH"."COSTS":"COSTS_Q2_1998"          64 KB
. estimated "SH"."COSTS":"COSTS_Q1_2003"          64 KB
. estimated "SH"."COSTS":"COSTS_1995"             64 KB
. estimated "SH"."COSTS":"COSTS_1996"             64 KB
. estimated "SH"."COSTS":"COSTS_H1_1997"          64 KB
. estimated "SH"."COSTS":"COSTS_H2_1997"          64 KB
Total estimation using BLOCKS method: 18.75 MB
Job "SH"."SYS_EXPORT_SCHEMA_01" successfully completed at 17:58

bash-2.05$ █

```

## Performing a Schema Mode Export

[Back to List](#)

A schema export is specified using the SCHEMAS parameter. In a schema export, only objects belonging to the corresponding schemas are unloaded. This is the default mode. If you have the EXP\_FULL\_DATABASE role, then a list of schemas can be specified, and the schema definitions themselves are included, as well as system privilege grants to those schemas. In the following example, the file names contain a substitution variable (%U), which implies that multiple files may be generated by export.

Perform the following:

1. From your terminal window, issue the following export command to perform a schema export:

```
expdp system/<password> \
```

```
SCHEMAS=sh \
```

```
DUMPFILE=datadir1:schema1%U.dmp,datadir2:schema2%U.dmp \
```

```
LOGFILE=datadir1:expschema.log
```

```

. . exported "SH"."COSTS":"COSTS_Q4_2003"          0 KB          0 rows
. . exported "SH"."COSTS":"COSTS_Q4_2002"          0 KB          0 rows
. . exported "SH"."COSTS":"COSTS_Q3_2003"          0 KB          0 rows
. . exported "SH"."COSTS":"COSTS_Q3_2002"          0 KB          0 rows
. . exported "SH"."COSTS":"COSTS_Q2_2003"          0 KB          0 rows
. . exported "SH"."COSTS":"COSTS_Q2_2002"          0 KB          0 rows
. . exported "SH"."COSTS":"COSTS_Q2_1998"        76.96 KB      2397 rows
. . exported "SH"."COSTS":"COSTS_Q1_2003"          0 KB          0 rows
. . exported "SH"."COSTS":"COSTS_Q1_2002"          0 KB          0 rows
. . exported "SH"."COSTS":"COSTS_H2_1997"          0 KB          0 rows
. . exported "SH"."COSTS":"COSTS_H1_1997"          0 KB          0 rows
. . exported "SH"."COSTS":"COSTS_1995"            0 KB          0 rows
. . exported "SH"."MVIEW$_EXCEPTIONS"             0 KB          0 rows
. . exported "SH"."PRODUCTS"                    22.09 KB       72 rows
. . exported "SH"."CHANNELS"                     4.687 KB        5 rows
. . exported "SH"."COUNTRIES"                    7.265 KB       23 rows
Master table "SYSTEM"."SYS_EXPORT_SCHEMA_01" successfully loaded/unloaded
*****
Dump file set for SYSTEM.SYS_EXPORT_SCHEMA_01 is:
  /home/oracle/wkdir/schema101.dmp
  /home/oracle/wkdir/schema201.dmp
Job "SYSTEM"."SYS_EXPORT_SCHEMA_01" successfully completed at 18:01

bash-2.05$ █

```

## Performing a Parallel Full Database Export

The **FULL** parameter indicates that the export is a full database mode export. All data and metadata in the database are exported.

The **PARALLEL** parameter specifies the maximum number of threads of active execution operating on behalf of the export job. This parameter allows you to make trade-offs between resource consumption and elapsed time. For best performance, the value specified for **PARALLEL** should be at least as large as the number of output files specified with the **DUMPFILE** parameter. Each Data Pump execution thread writes exclusively to one file at a time.

The **PARALLEL** parameter is only valid in the Enterprise Edition of the Oracle database. To increase or decrease the value of **PARALLEL** during job execution, use interactive-command mode that is described in the example below.

The **FILESIZE** parameter will limit the maximum size of each dump file to 2 Gigabytes.

Perform the following:

1. From your terminal window, issue the following command to perform a full export using the **PARALLEL** parameter:

```
expdp system/<password> \  
FULL=y \  
  
DUMPFILE=datadir1:full1%U.dmp,datadir2:full2%U.dmp \  
  
FILESIZE=2g \  
  
PARALLEL=4 \  
  
LOGFILE=datadir1:expfull.log \  
  
JOB_NAME=expfull
```

```

144.25.8.238-Session.STE - TNVPlus
Session Edit View Commands Script Help

Processing object type DATABASE_EXPORT/SCHEMA/JAVA_RESOURCE/GRANT/OBJECT_GRANT
Processing object type DATABASE_EXPORT/SCHEMA/TABLE/INDEX/DE_S_TBL_IDX_FBM_INDEX
Processing object type DATABASE_EXPORT/SCHEMA/TABLE/INDEX/STATISTICS/DE_S_TBL_FS
Processing object type DATABASE_EXPORT/SCHEMA/TABLE/INDEX/DE_S_TBL_IDX_DOMIDX_IX
Processing object type DATABASE_EXPORT/SCHEMA/TABLE/POST_TABLE_ACTION
Processing object type DATABASE_EXPORT/SCHEMA/TABLE/TRIGGER
Processing object type DATABASE_EXPORT/SCHEMA/VIEW/TRIGGER
Processing object type DATABASE_EXPORT/SCHEMA/MATERIALIZED_VIEW
Processing object type DATABASE_EXPORT/SCHEMA/JOB
Processing object type DATABASE_EXPORT/SCHEMA/DIMENSION
Processing object type DATABASE_EXPORT/SCHEMA/TABLE/DE_TABLE_POSTINST_ACTOBSJS/PE
Processing object type DATABASE_EXPORT/SCHEMA/TABLE/DE_TABLE_POSTINST_ACTOBSJS/PJ
Processing object type DATABASE_EXPORT/SCHEMA/DE_POST_SCHEMA_PROCOBJECT/PROCOBJ
Processing object type DATABASE_EXPORT/SCHEMA/DE_POST_SCHEMA_PROCOBJECT/PROCACTA
Master table "SYSTEM"."EXPFULL" successfully loaded/unloaded
*****
Dump file set for SYSTEM.EXPFULL is:
  /home/oracle/wkdir/full101.dmp
  /home/oracle/wkdir/full201.dmp
  /home/oracle/wkdir/full102.dmp
  /home/oracle/wkdir/full202.dmp
Job "SYSTEM"."EXPFULL" completed with 1 error(s) at 18:09

bash-2.05$

```

Note: The export may complete with an expected error due to not supporting a certain type of table.

2. Dump files full101.dmp, full201.dmp, full102.dmp, full202.dmp, and so on will be created in a round-robin fashion in the directories pointed to by datadir1 and datadir2. For best performance, these directories should be on separate I/O channels. Each dump file will be limited to 2 gigabytes in size. The job name will be expfull. The export log file will be written to expfull.log in the directory datadir1.

The screenshot shows a window titled "144.25.8.238-Session.STE - TNVTPPlus". The window has a menu bar with "Session", "Edit", "View", "Commands", "Script", and "Help". Below the menu bar is a toolbar with various icons. The main text area displays the following output:

```

Processing object type DATABASE_EXPORT/SCHEMA/TABLE/POST_TABLE_ACTION
Processing object type DATABASE_EXPORT/SCHEMA/TABLE/TRIGGER
Processing object type DATABASE_EXPORT/SCHEMA/VIEW/TRIGGER
Processing object type DATABASE_EXPORT/SCHEMA/MATERIALIZED_VIEW
Processing object type DATABASE_EXPORT/SCHEMA/JOB
Processing object type DATABASE_EXPORT/SCHEMA/DIMENSION
Processing object type DATABASE_EXPORT/SCHEMA/TABLE/DE_TABLE_POSTINST_ACTOBS/PE
Processing object type DATABASE_EXPORT/SCHEMA/TABLE/DE_TABLE_POSTINST_ACTOBS/PJ
Processing object type DATABASE_EXPORT/SCHEMA/DE_POST_SCHEMA_PROCOBJECT/PROCOBJ
Processing object type DATABASE_EXPORT/SCHEMA/DE_POST_SCHEMA_PROCOBJECT/PROCACTA
Master table "SYSTEM"."EXPFULL" successfully loaded/unloaded
*****
Dump file set for SYSTEM.EXPFULL is:
  /home/oracle/wkdir/full101.dmp
  /home/oracle/wkdir/full201.dmp
  /home/oracle/wkdir/full102.dmp
  /home/oracle/wkdir/full202.dmp
Job "SYSTEM"."EXPFULL" completed with 1 error(s) at 18:09

bash-2.05$ cd wkdir
bash-2.05$ ls
expfull.log  expschema.log  full102.dmp  full202.dmp  schema201.dmp
export.log   full101.dmp    full201.dmp  schema101.dmp  table.dmp
bash-2.05$

```

## Attaching to and Stopping an Existing Job

[Back to List](#)

The ATTACH command attaches the client session to an existing export job and automatically places you in the interactive-command interface. Export displays a description of the job to which you are attached and also displays the export prompt. A job name does not have to be specified if there is only one export job that is associated with your schema. The job you attach to can be either currently executing or stopped.

In the following example, interactive mode will be run on the same terminal on which the export job is running. A user could also use interactive mode from a terminal other than the one on which the job is run; in this case, the expdp system/ <password> ATTACH is required.

Perform the following:

1. Run the Full Export again. While the export is running, press **Ctrl+C** , to connect to the interactive-command interface, which is required for the next example. The interactive-command interface stops logging to the terminal and displays the Export prompt, from which you can enter various commands, some of which are specific to interactive mode.

```
expdp system/<password> \  
FULL=y \  
  
DUMPFILE=datadir1:full3%U.dmp,datadir2:full4%U.dmp \  
  
FILESIZE=2g \  
  
PARALLEL=4 \  
  
LOGFILE=datadir1:expfull2.log \  
  
JOB_NAME=expfull2
```

Note: Due to the worker processes running in parallel, the display of metadata objects processed during the export may not be sequential.

2. From a terminal window, issue the following command to stop the job:

```
Export> STOP_JOB=immediate  
  
Are you sure you wish to stop this job (y/n): y
```

```

144.25.8.238-Session.STE - TNVTPPlus
Session Edit View Commands Script Help

. . exported "SH"."CUSTOMERS"                9.848 MB    55500 rows
. . exported "OE"."PRODUCT_DESCRIPTIONS"      2.377 MB     8640 rows
. . exported "SYSMAN"."MGMT_SYSTEM_ERROR_LOG"  1.524 MB    17332 rows
. . exported "SH"."SALES"."SALES_Q4_2001"     2.255 MB   69749 rows
. . exported "SYSMAN"."MGMT_METRICS_RAW"       2.234 MB   37265 rows
. . exported "SH"."SALES"."SALES_Q3_2001"     2.127 MB   65769 rows
. . exported "SH"."SALES"."SALES_Q1_1999"     2.068 MB   64186 rows
. . exported "SYSMAN"."MGMT_METRICS_1HOUR"     1.622 MB   21328 rows
. . exported "SH"."SALES"."SALES_Q3_1999"     2.164 MB   67138 rows
. . exported "SH"."SALES"."SALES_Q3_2000"     1.907 MB   58950 rows
. . exported "SH"."SALES"."SALES_Q4_1999"     2.012 MB   62388 rows
. . exported "PM"."ONLINE_MEDIA"              142.8 KB        9 rows
. . exported "SH"."SALES"."SALES_Q2_2001"     2.048 MB   63292 rows
. . exported "SH"."SALES"."SALES_Q2_1999"     1.751 MB   54233 rows
. . exported "SH"."SALES"."SALES_Q1_2001"     1.962 MB   60608 rows
. . exported "SH"."SALES"."SALES_Q1_1998"     1.410 MB   43687 rows
. . exported "SH"."SALES"."SALES_Q1_2000"     2.009 MB   62197 rows
. . exported "SH"."SALES"."SALES_Q3_1998"     1.631 MB   50515 rows
. . exported "SH"."SALES"."SALES_Q2_2000"     1.799 MB   55515 rows

Export> stop_job=immediate
Are you sure you wish to stop this job ([y]/n): y

bash-2.05$

```

## Attaching to and Restarting a Stopped Job

[Back to List](#)

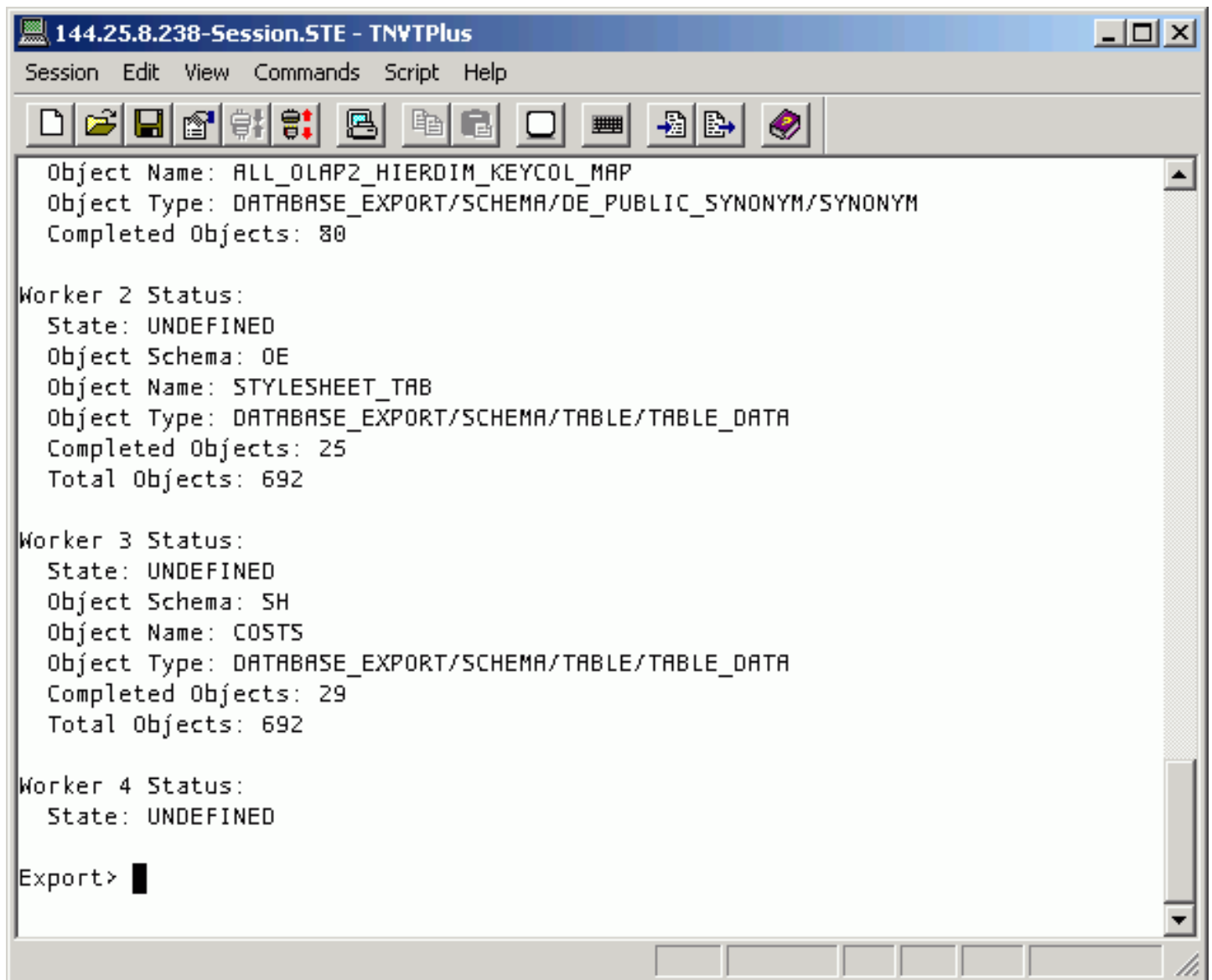
The system manager restarts the job (perhaps during off hours) with a higher degree of parallelism. Note that a job name must be supplied in this case because the job was previously stopped. The job name is required in order to find the master table for the job. The system manager would also like a cumulative status of the job to be displayed, along with a description of the current operation. The system manager specifies how frequently, in seconds, this status should be displayed. This status information is written only to the standard output device, not to the log file.

Perform the following:



1. From your terminal window, issue the following command:

```
expdp system/<password> ATTACH=expfull2
```



The screenshot shows a terminal window titled "144.25.8.238-Session.STE - TNVTPlus". The window has a menu bar with "Session", "Edit", "View", "Commands", "Script", and "Help". Below the menu bar is a toolbar with various icons. The main text area displays the output of the expdp command:

```
Object Name: ALL_OLAP2_HIERDIM_KEYCOL_MAP
Object Type: DATABASE_EXPORT/SCHEMA/DE_PUBLIC_SYNONYM/SYNONYM
Completed Objects: 80

Worker 2 Status:
  State: UNDEFINED
  Object Schema: OE
  Object Name: STYLESHEET_TAB
  Object Type: DATABASE_EXPORT/SCHEMA/TABLE/TABLE_DATA
  Completed Objects: 25
  Total Objects: 692

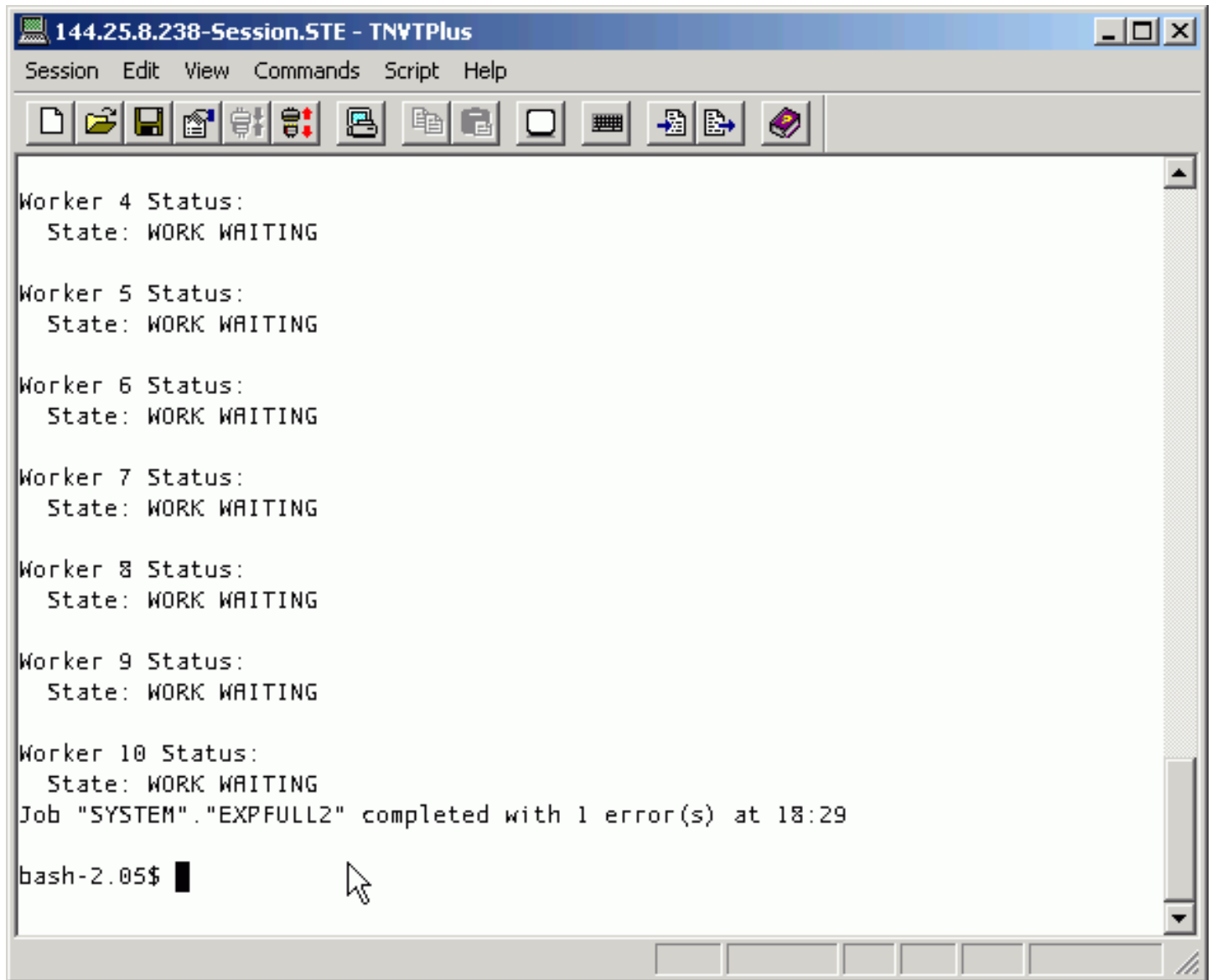
Worker 3 Status:
  State: UNDEFINED
  Object Schema: SH
  Object Name: COSTS
  Object Type: DATABASE_EXPORT/SCHEMA/TABLE/TABLE_DATA
  Completed Objects: 29
  Total Objects: 692

Worker 4 Status:
  State: UNDEFINED

Export> █
```

2. After all the job statuses are displayed, issue the following interactive mode commands:

```
Export> PARALLEL=10  
Export> START_JOB  
Export> STATUS=600  
Export> CONTINUE_CLIENT
```

A screenshot of a TNVTPlus terminal window. The title bar reads "144.25.8.238-Session.STE - TNVTPlus". The menu bar includes "Session", "Edit", "View", "Commands", "Script", and "Help". The toolbar contains various icons for file operations and terminal functions. The terminal text shows the status of workers 4 through 10, all in "WORK WAITING" state. It then reports "Job 'SYSTEM'. 'EXPFULL2' completed with 1 error(s) at 18:29". The prompt "bash-2.05\$" is visible at the bottom with a cursor.

```
Worker 4 Status:  
  State: WORK WAITING  
  
Worker 5 Status:  
  State: WORK WAITING  
  
Worker 6 Status:  
  State: WORK WAITING  
  
Worker 7 Status:  
  State: WORK WAITING  
  
Worker 8 Status:  
  State: WORK WAITING  
  
Worker 9 Status:  
  State: WORK WAITING  
  
Worker 10 Status:  
  State: WORK WAITING  
Job "SYSTEM"."EXPFULL2" completed with 1 error(s) at 18:29  
  
bash-2.05$
```

Logging mode is entered, in which job status is continually output to the terminal every 10 minutes.

Note: The export may complete with an expected error due to stopping the job.

## Loading Data

Data Pump Import is a utility for loading an export dump file set into a target system. The dump file set is made up of one or more disk files that contain table data, database object metadata, and control information. The files are written by the Data Pump Export utility in a proprietary, binary format. During an import operation, the Data Pump Import utility uses these files to locate each database object in the dump file set.

Import can also be used to load a target database directly from a source database with no intervening files, which allows export and import operations to run concurrently. This avoids the creation of dump files on the file system, and may also minimize the total elapsed time for the entire export and import operation. This is known as network import.

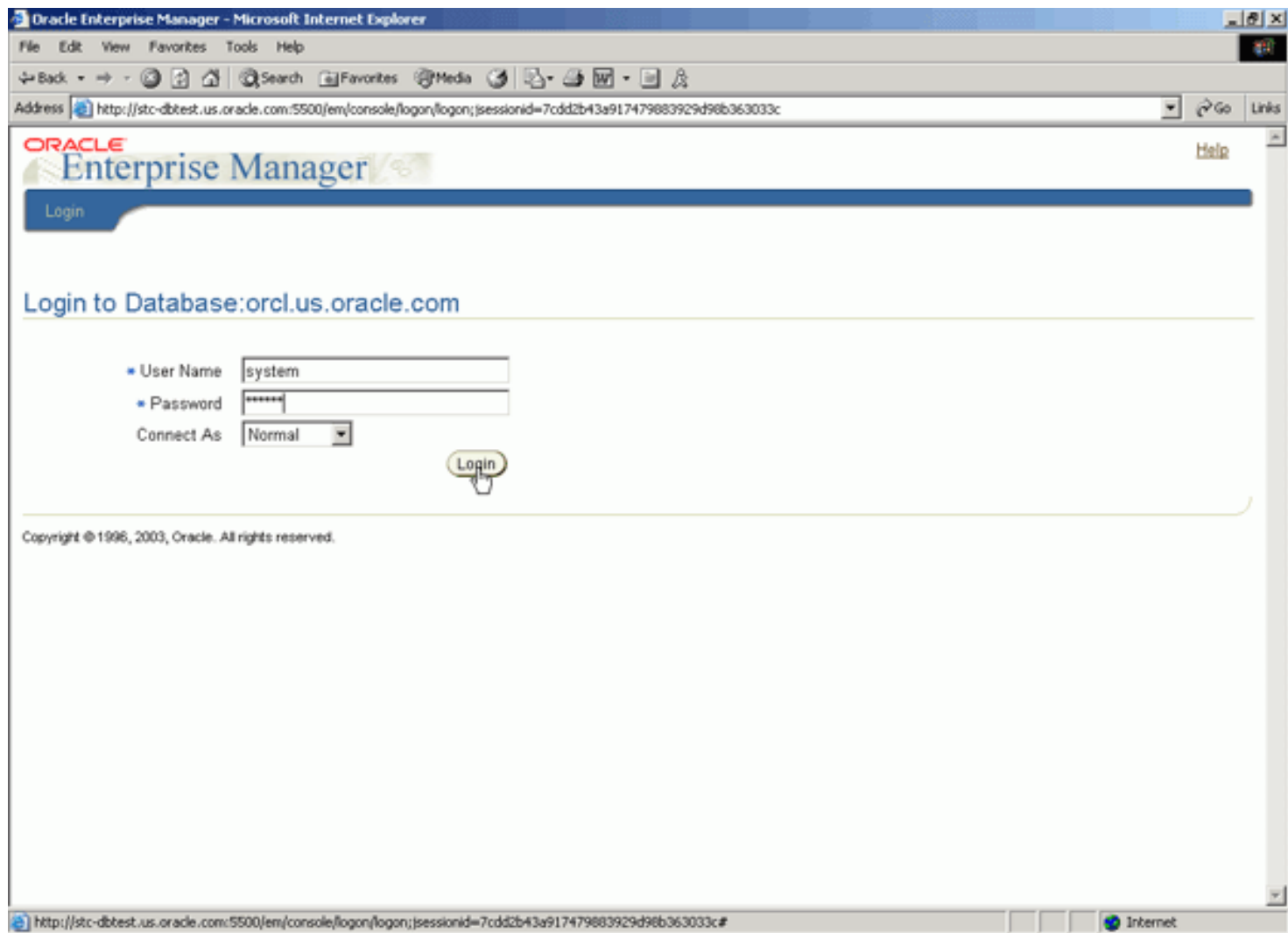
Data Pump Import allows you to specify whether a job should move a subset of the data and metadata, as determined by the import mode. This is done using data filters and metadata filters, which are implemented through Import parameters.

Oracle Data Pump Import can be accessed through Enterprise Manager. To import a schema through Enterprise Manager, perform the following:

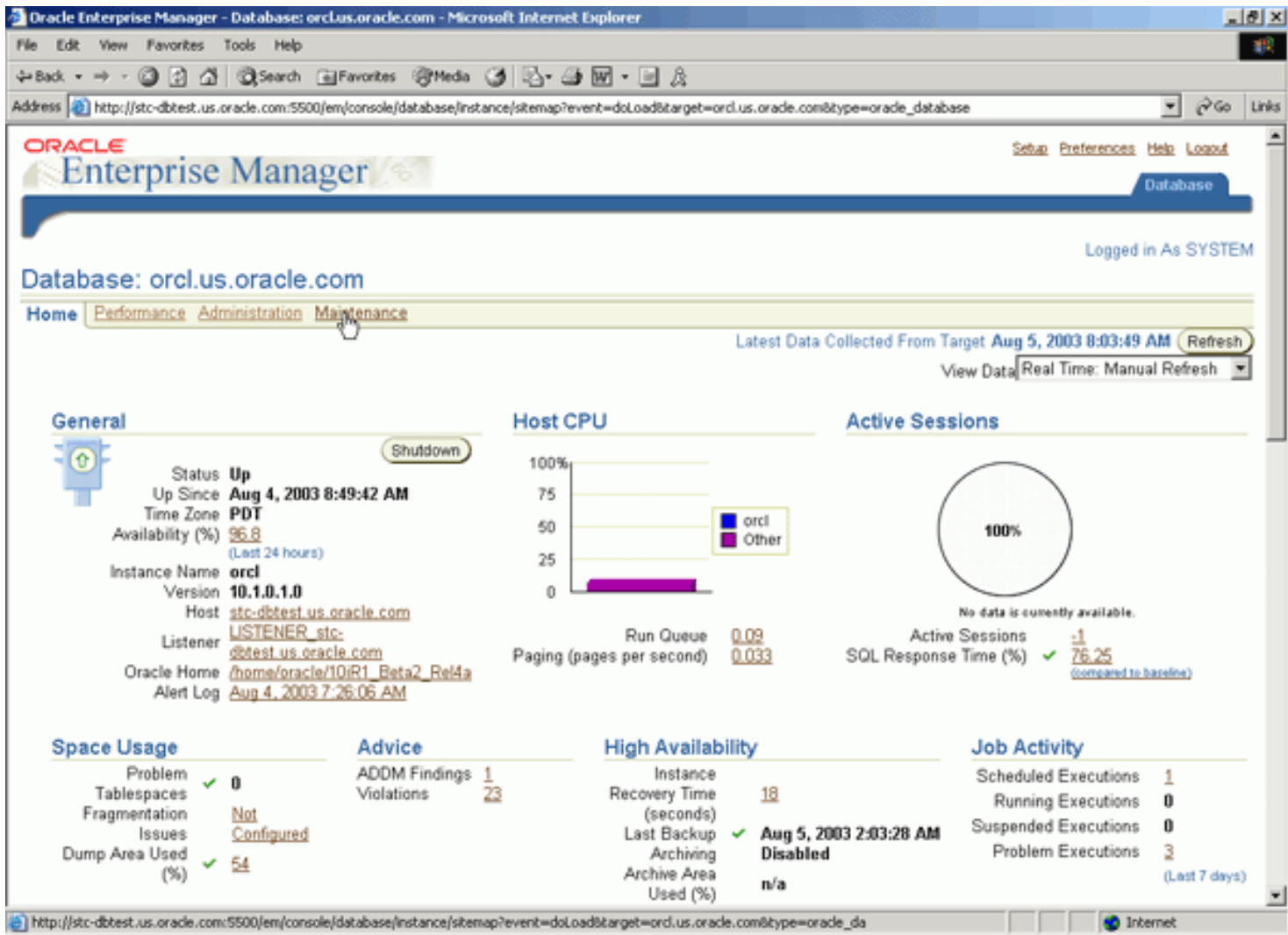
1. Open a browser and enter the following URL:

`http://<hostname>:5500/em`

Login as **system/<password>** then click **Login** .



2. Click on the **Maintenance** link.



- Click on **Import from Files** link.



4. Set the **Import Type** to **Tables** and enter the Host username and password, then click **Continue** .

Oracle Enterprise Manager - Import: Files - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address [http://144.25.8.219:5500/em/console/database/data/import?event=import&target=orcl.us.oracle.com&type=oracle\\_database](http://144.25.8.219:5500/em/console/database/data/import?event=import&target=orcl.us.oracle.com&type=oracle_database) Go Links

Database: orcl.us.oracle.com

## Import: Files

Database **orcl.us.oracle.com** Cancel Continue

Database Version of Files to Import **10i or later** Go  
Changing the version affects attributes below.

### Files

Specify the directory name and file name of the import files on the database server machine.

Select Directory Object	File Name
<b>DATADIR1</b>	EXPDAT%U.DMP

Add Another Row Remove

Including "%U" within the file name imports from a wildcarded dump file set.

### Directory Objects

Directory objects are used in the table above. Click the button below to create a new directory object.

Create Directory Object

### Import Type

☐ Entire files  
☐ Schemas  
Allows you to choose one or more schemas and to import the objects in those schemas.  
☒ Tables  
Allows you to choose one or more tables to import from a selected schema.

### Host Credentials

• Username   
 • Password

Cancel Continue

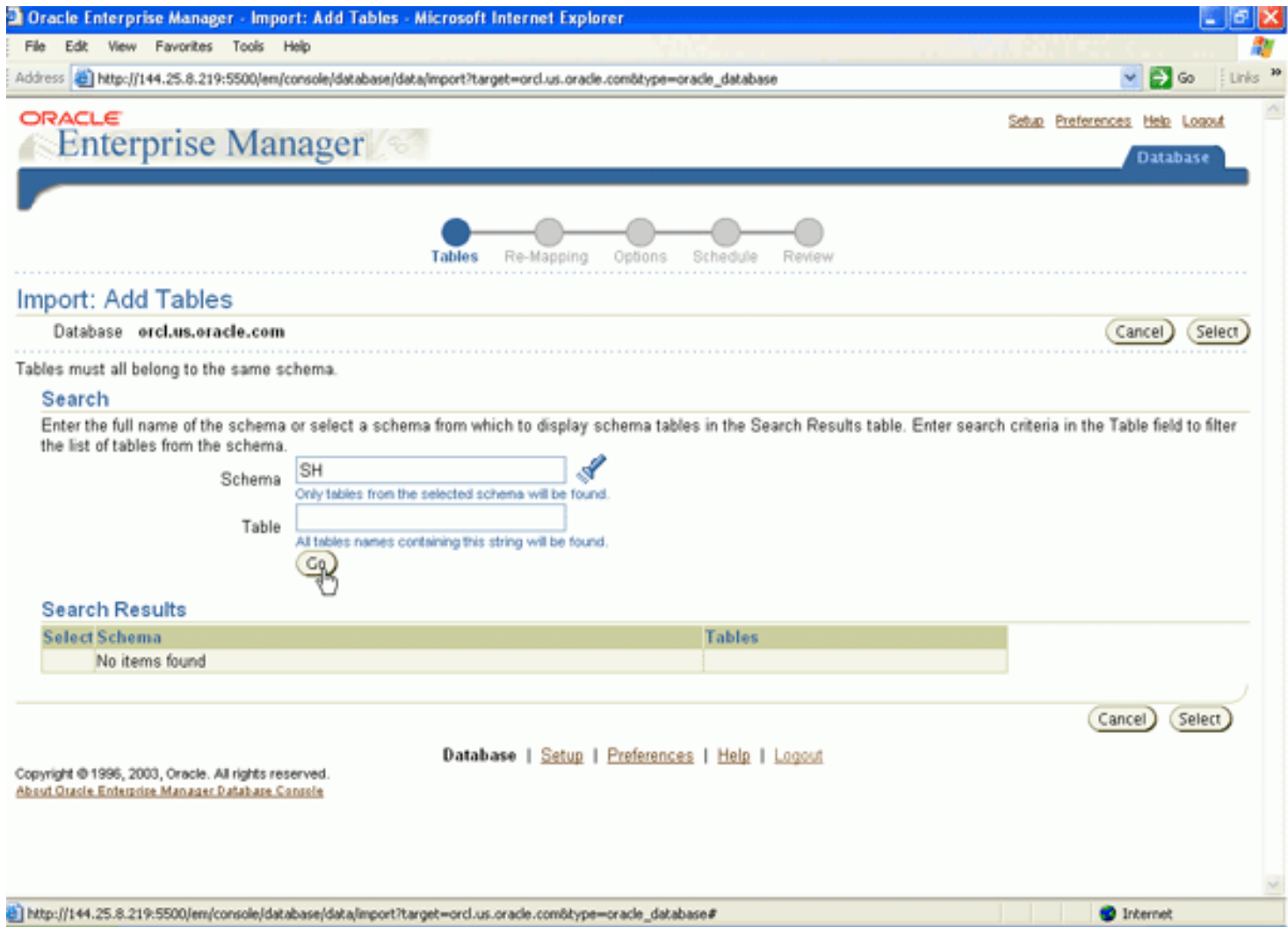
[http://144.25.8.219:5500/em/console/database/data/import?event=import&target=orcl.us.oracle.com&type=oracle\\_database#](http://144.25.8.219:5500/em/console/database/data/import?event=import&target=orcl.us.oracle.com&type=oracle_database#) Internet

5. Select the **Add** button to see the tables available for import.

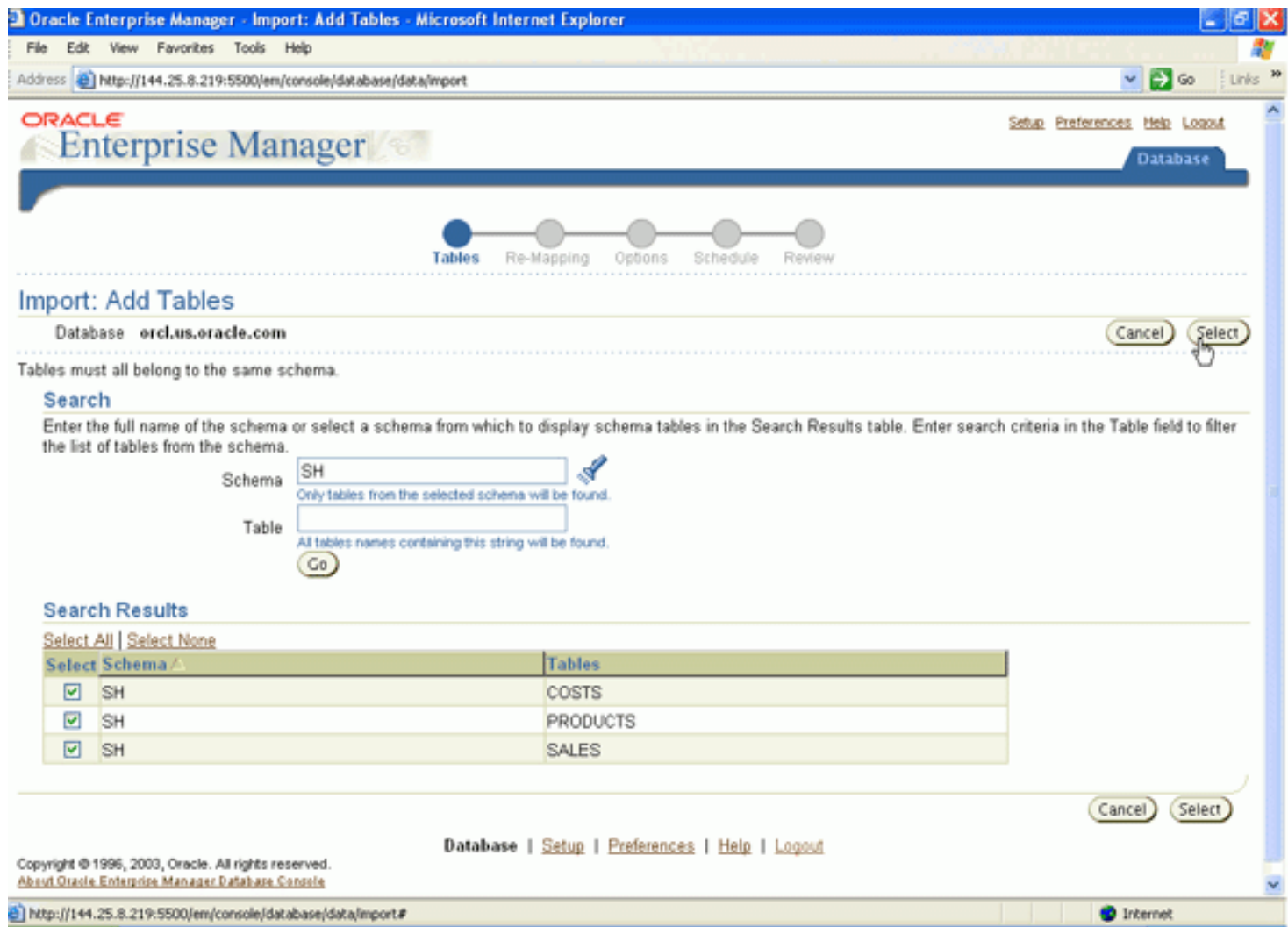


6. Enter **SH** in the Schema field and click **Go** .

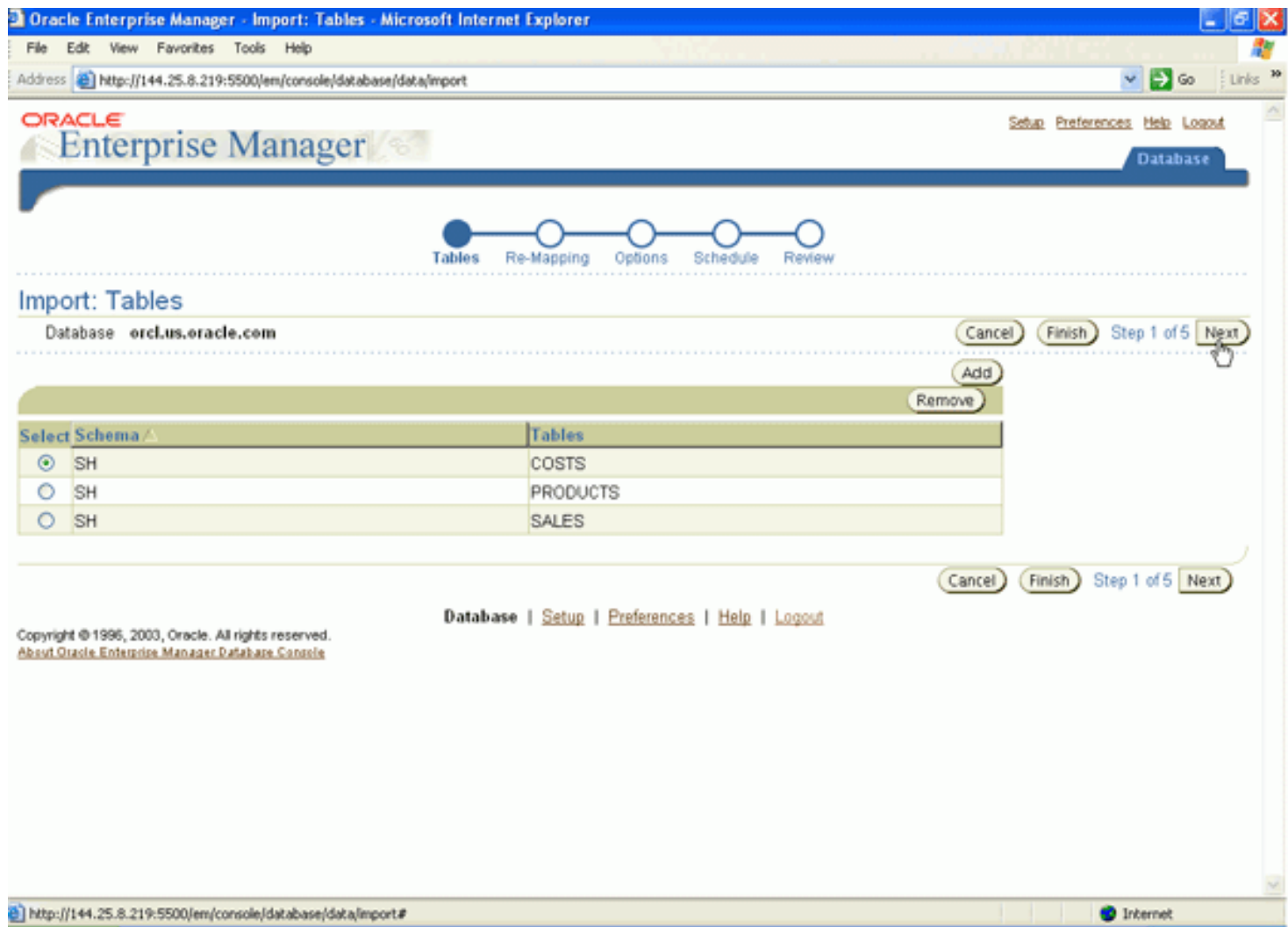




7. Select the checkboxes for **Costs**, **Products**, and **Sales** then click **Select** .



8. Click **Next** .

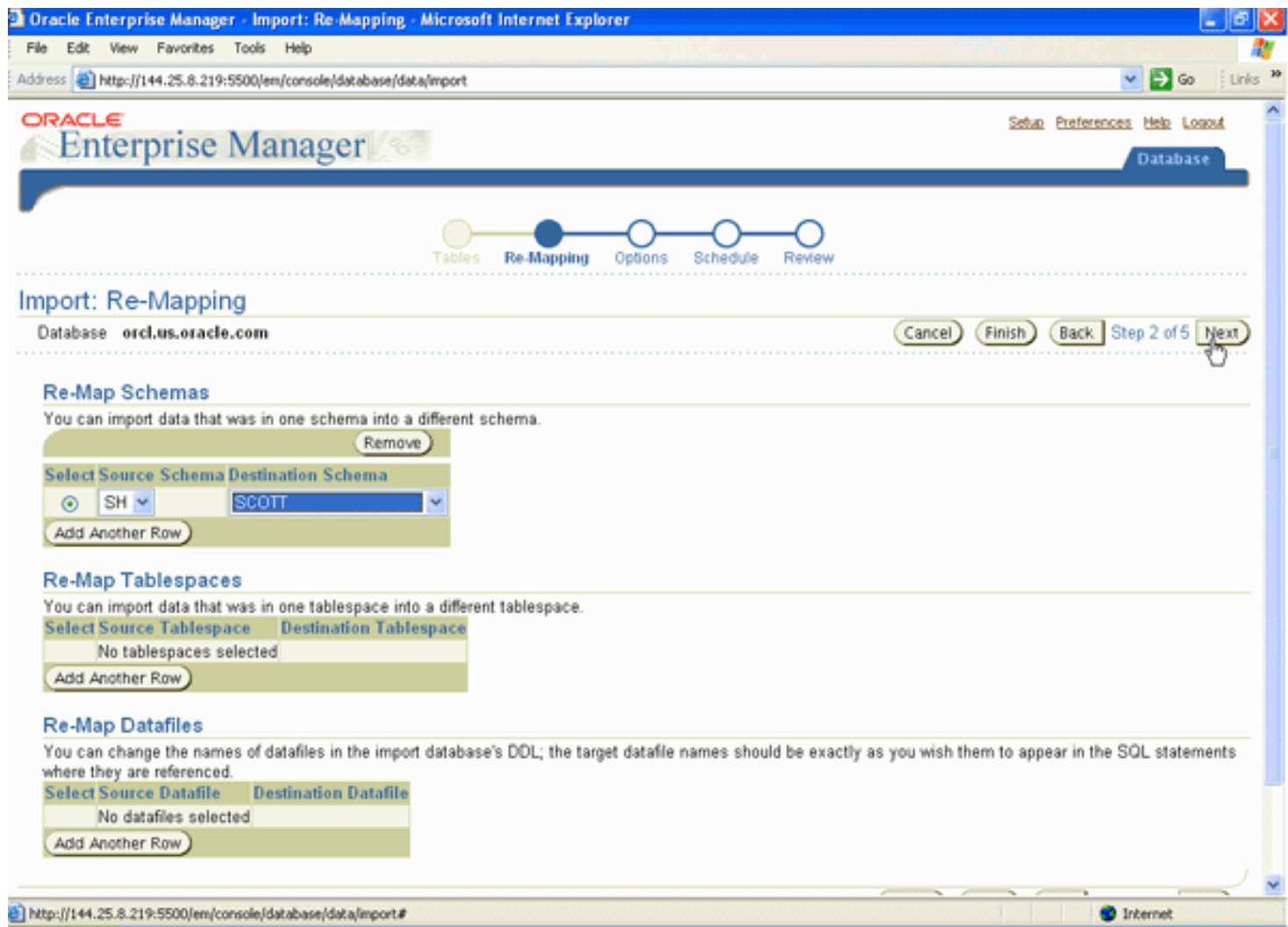


9. Click the **Add Another Row** button under the **Re-Map Schemas** section.



Under the Destination Schema column, select **SCOTT** then click **Next** .

10.



Click **Next** .

11.

Oracle Enterprise Manager - Import: Options - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address <http://144.25.8.219:5500/em/console/database/data/import> Go Links

ORACLE Enterprise Manager Database

Tables Re-Mapping **Options** Schedule Review

Import: Options

Database **orcl.us.oracle.com** Cancel Finish Back **Step 3 of 5** Next

Maximum Number of Threads in Import Job  This option allows you to make tradeoffs between resource consumption and elapsed time.

☐ Keep the master table after import is complete

**Optional Files**

☒ Generate Log File

Directory Object **DATA DIR1** Create Directory Object

Log File

☐ Generate SQL File

A SQL file with the necessary commands will be created, nothing will be loaded into the database.

Directory Object **DATA DIR1** Create Directory Object

SQL File

Show Advanced Options

Cancel Finish Back **Step 3 of 5** Next

Database | Setup | Preferences | Help | Logout

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About Oracle Enterprise Manager Database Console

<http://144.25.8.219:5500/em/console/database/data/import#> Internet

Enter **IMPORT\_<Today's Date>** in the Job field then click **Next** .

12.

Oracle Enterprise Manager - Import: Schedule - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address <http://144.25.8.219:5500/em/console/database/data/import> Go Links

ORACLE Enterprise Manager Database

Setup Preferences Help Logout

Tables Re-Mapping Options **Schedule** Review

### Import: Schedule

Database **orcl.us.oracle.com** Cancel Back Step 4 of 5 Next

Specify a name and description for the import job. Specify a date to start the job.

#### Job Parameters

Job Name


Description

#### Job Schedule

##### Start

☒ Immediately

☐ Later

Date  

(example: Dec-12-2002)

Time   ☐ AM ☒ PM

Cancel Back Step 4 of 5 Next

Database | Setup | Preferences | Help | Logout

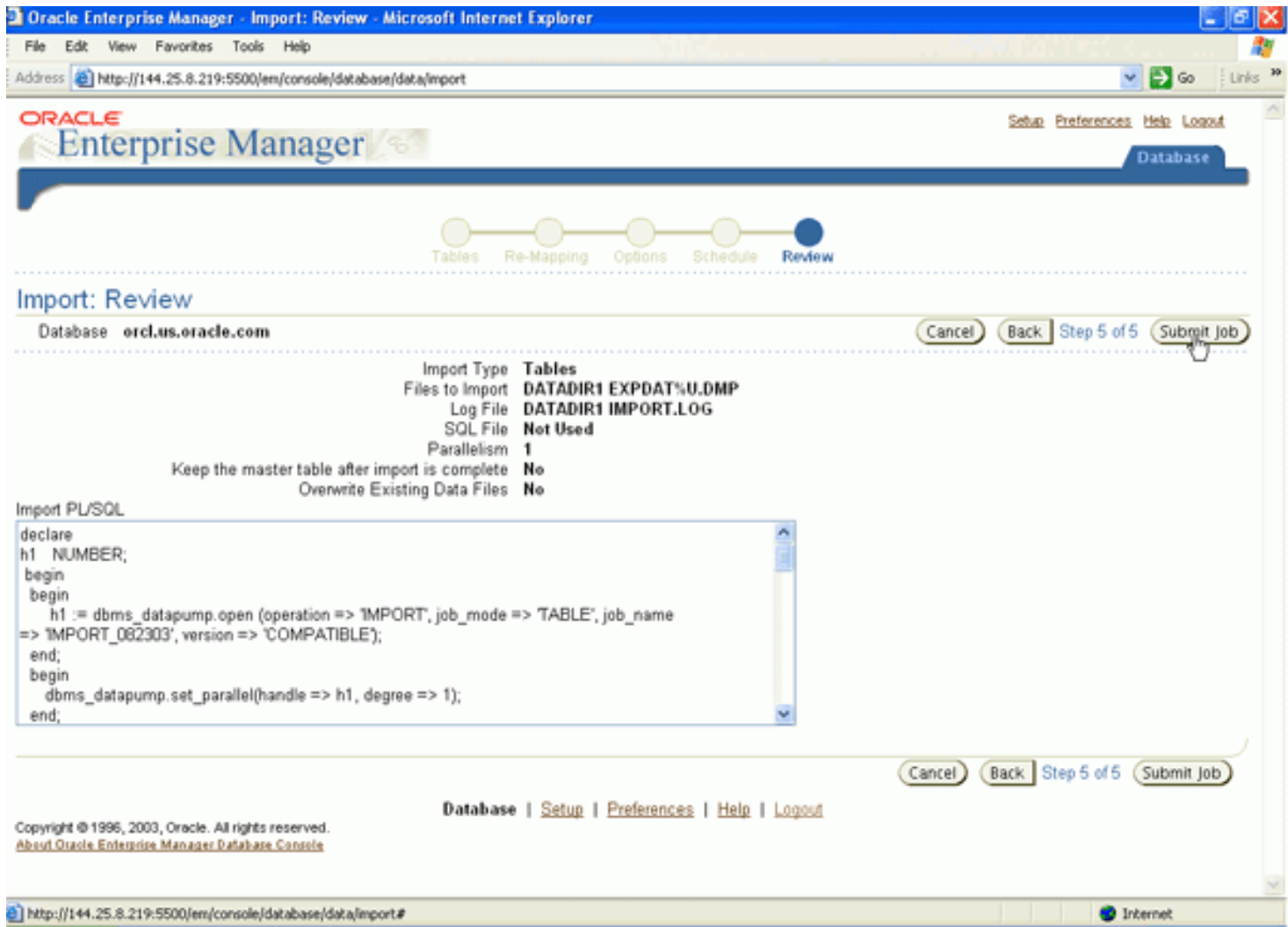
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About Oracle Enterprise Manager Database Console

<http://144.25.8.219:5500/em/console/database/data/import#> Internet

Click **Submit Job**.

13.





Click **View Job** .

14.



Select the **Import** link to see the Import log status.

15.

Cannot find server - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address <http://144.25.8.219:5500/em/console/jobs/results?ctxType=ctxSummary&execId=C59159F7A59ED03FE030007F01000EC6> Go Links

ORACLE Enterprise Manager Database

Job: IMPORT\_082303

Page Refreshed August 23, 2003 4:13:33 PM PDT [Delete](#) [View Definition](#)

**Summary**

The Stop and Suspend operations will wait for the current step to complete. A suspended job can be resumed later, at the next step. [Stop](#) [Suspend](#)

Status	Running	Type	Import
Scheduled	23-AUG-2003 16:13:04 -07:00	Owner	SYS
Started	23-AUG-2003 16:13:08 -07:00	Description	
Running Time	25 seconds	db_10_or_higher	true
		db_password	*****
		db_role_suffix	sysdba
		db_username	SYS
		host_password	*****
		host_username	oracle
		import_script	\$oracle_home = "/oracle/ora10g"; \$oracle_sid = "orcl";
		is_rac	false
		job_name	IMPORT_082303

[Monitor Data Pump job](#)

**Logs**

Name	Targets	Status	Started	Ended	Running (sec)
<a href="#">Import</a>	orcl.us.oracle.com	Running	23-AUG-2003 16:13:09 -07:00		24

[Delete](#) [View Definition](#)

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[Database](#) | [Setup](#) | [Preferences](#) | [Help](#) | [Logout](#)

[http://144.25.8.219:5500/em/console/jobs/stepLog?stepName=Import&stepID=16&jobName=IMPORT\\*\\_082303&execId=C59159F7A59ED03FE03000](http://144.25.8.219:5500/em/console/jobs/stepLog?stepName=Import&stepID=16&jobName=IMPORT*_082303&execId=C59159F7A59ED03FE03000) Internet

The job is still running. Click **Show more** to see more of the log. If Show more does not appear, click Reload in your browser window.

16.

Oracle Enterprise Manager (SYS) - Step: Import - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address [http://144.25.8.219:5500/em/console/jobs/stepLog?stepName=import&stepID=16&jobName=IMPORT\\*\\_082303&execId=C59159F7A59EDD3FE030007F01000EC6](http://144.25.8.219:5500/em/console/jobs/stepLog?stepName=import&stepID=16&jobName=IMPORT*_082303&execId=C59159F7A59EDD3FE030007F01000EC6) Go Links

ORACLE Enterprise Manager

Setup Preferences Help Logout

Database

Job: IMPORT\_082303 > Step: Import

Step: Import

Page Refreshed Aug 23, 2003 4:14:05 PM

Status **Running** Started 23-AUG-2003 16:13:09 -07:00  
Targets **orcl.us.oracle.com** Running Time 56 seconds

**Output Log**

Job IMPORT\_082303 has been reopened at Saturday, 23 August, 2003 16:13  
Restarting "SYS"."IMPORT\_082303":  
Processing object type TABLE\_EXPORT/TABLE  
Processing object type TABLE\_EXPORT/TBL\_TABLE\_DATA/TABLE/TABLE\_DATA

. . imported "SCOTT"."SALES": "SALES_Q4_2001"	2.255 MB	69749 rows
. . imported "SCOTT"."SALES": "SALES_Q1_1999"	2.068 MB	64186 rows
. . imported "SCOTT"."SALES": "SALES_Q3_2001"	2.127 MB	65769 rows
. . imported "SCOTT"."SALES": "SALES_Q3_1999"	2.164 MB	67138 rows
. . imported "SCOTT"."SALES": "SALES_Q1_2000"	2.009 MB	62197 rows
. . imported "SCOTT"."SALES": "SALES_Q2_2001"	2.048 MB	63292 rows

[Show more](#)

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[About Oracle Enterprise Manager Database Console](#)

[Database](#) | [Setup](#) | [Preferences](#) | [Help](#) | [Logout](#)

<http://144.25.8.219:5500/em/console/jobs/stepLog?listSize=-1&stepName=import&stepID=16&execId=C59159F7A59EDD3FE030007F01000EC6> Internet

The job has finished. Scroll down to the bottom to see all the messages in the log.

17.

Oracle Enterprise Manager (SYS) - Step: Import - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address [http://144.25.8.219:5500/em/console/jobs/stepLog?listSize=-1&stepName=Import&stepID=16&execId=C59159F7A59ED03FE030007F01000EC6&jobName=IMPORT\\*\\_j](http://144.25.8.219:5500/em/console/jobs/stepLog?listSize=-1&stepName=Import&stepID=16&execId=C59159F7A59ED03FE030007F01000EC6&jobName=IMPORT*_j) Go Links

ORACLE Enterprise Manager

Setup Preferences Help Logout Database

Job: [IMPORT\\_082303](#) > Step: Import

Step: Import

Page Refreshed Aug 23, 2003 4:14:22 PM

Status **Running** Started 23-AUG-2003 16:13:09 -07:00  
Targets [ord.us.oracle.com](#) Running Time 1:12 minutes

**Output Log**

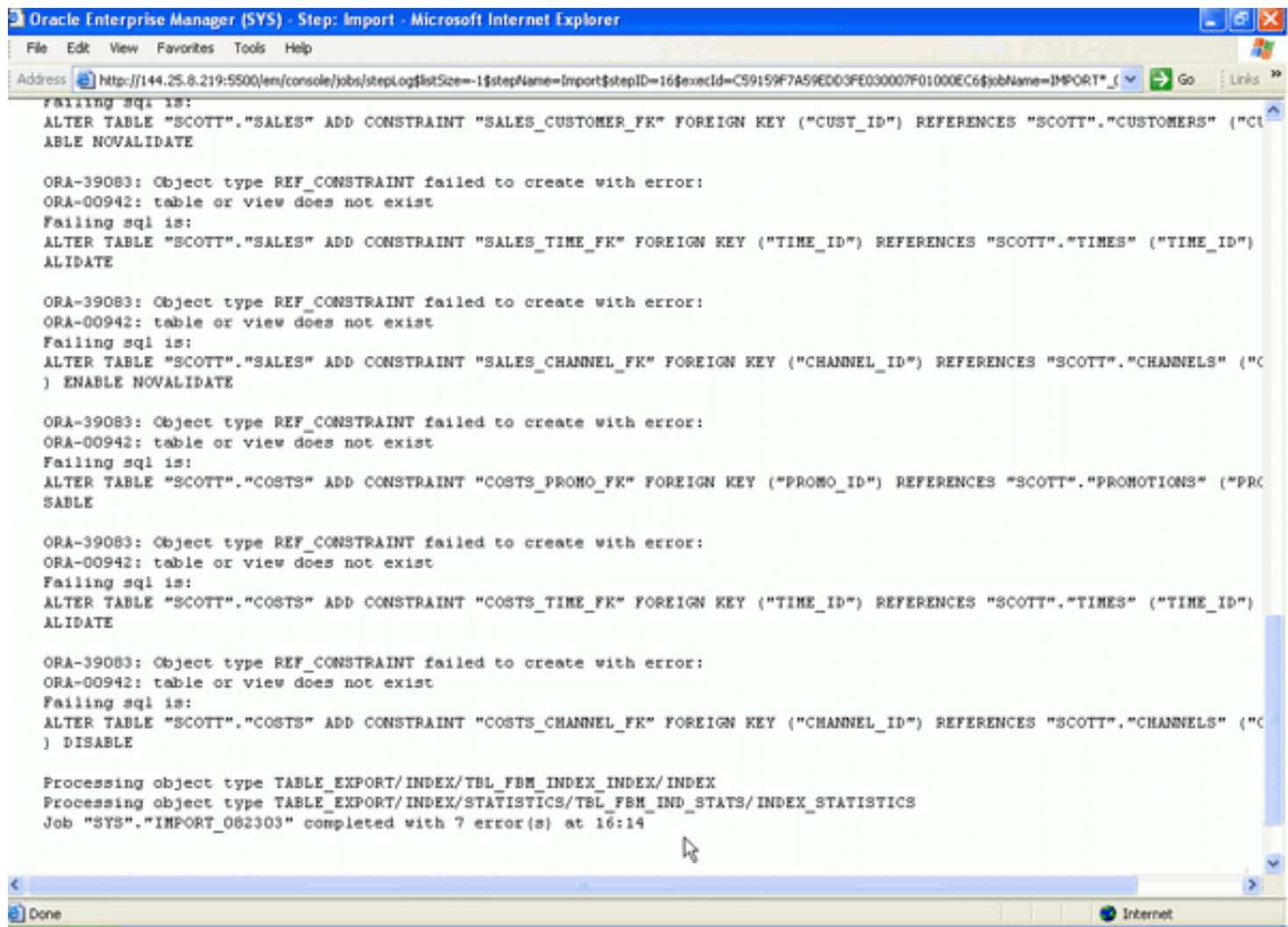
Job IMPORT\_082303 has been reopened at Saturday, 23 August, 2003 16:13  
Restarting "SYS"."IMPORT\_082303":  
Processing object type TABLE\_EXPORT/TABLE  
Processing object type TABLE\_EXPORT/TBL\_TABLE\_DATA/TABLE/TABLE\_DATA

. . imported	"SCOTT"."SALES":	"SALES_Q4_2001"	2.255 MB	69749 rows
. . imported	"SCOTT"."SALES":	"SALES_Q1_1999"	2.068 MB	64186 rows
. . imported	"SCOTT"."SALES":	"SALES_Q3_2001"	2.127 MB	65769 rows
. . imported	"SCOTT"."SALES":	"SALES_Q3_1999"	2.164 MB	67138 rows
. . imported	"SCOTT"."SALES":	"SALES_Q1_2000"	2.009 MB	62197 rows
. . imported	"SCOTT"."SALES":	"SALES_Q2_2001"	2.048 MB	63292 rows
. . imported	"SCOTT"."SALES":	"SALES_Q1_2001"	1.962 MB	60608 rows
. . imported	"SCOTT"."SALES":	"SALES_Q4_1999"	2.012 MB	62388 rows
. . imported	"SCOTT"."SALES":	"SALES_Q4_1998"	1.579 MB	48874 rows
. . imported	"SCOTT"."SALES":	"SALES_Q4_2000"	1.811 MB	55984 rows
. . imported	"SCOTT"."SALES":	"SALES_Q2_2000"	1.799 MB	55515 rows
. . imported	"SCOTT"."SALES":	"SALES_Q3_2000"	1.907 MB	58950 rows
. . imported	"SCOTT"."SALES":	"SALES_Q2_1999"	1.751 MB	54233 rows
. . imported	"SCOTT"."SALES":	"SALES_Q1_1998"	1.410 MB	43687 rows
. . imported	"SCOTT"."SALES":	"SALES_Q3_1998"	1.631 MB	50515 rows
. . imported	"SCOTT"."SALES":	"SALES_Q2_1998"	1.157 MB	35758 rows
. . imported	"SCOTT"."COSTS":	"COSTS_Q3_2001"	231.9 KB	7545 rows
. . imported	"SCOTT"."COSTS":	"COSTS_Q4_2001"	275.8 KB	9011 rows
. . imported	"SCOTT"."COSTS":	"COSTS_Q1_1998"	136.9 KB	4411 rows
. . imported	"SCOTT"."COSTS":	"COSTS_Q3_1998"	128.5 KB	4129 rows
. . imported	"SCOTT"."COSTS":	"COSTS_Q4_1998"	142.1 KB	4577 rows

Done Internet

18. Your import has completed successfully even though the log file displayed some errors. These errors were generated because the **Sales** and **Costs** tables are dependent on several tables which were not included in the export and thus were not imported. In this case, the omission was intentional and you can ignore the errors in the log file.





You will go through the following examples of using Data Pump Import command line interface:

- ☒ [Performing a data only table mode import](#)
- ☒ [Performing a schema mode import](#)

## Performing a Data Only Table Mode Import

[Back to List](#)

The CONTENT parameter allows you to filter the data and metadata that Import loads. The DATA\_ONLY value loads only table row data; no database object definitions (metadata) are recreated.

Perform the following:

1. From a terminal window, issue the following IMPORT command to perform a table data only import of table Costs using the dump file created previously in the Export section of this lesson.

```
impdp system/<password> \
```

```
TABLES=sh.costs \
```

```
CONTENT=data_only \
```

```
DUMPFILE=datadir2:table.dmp \
```

```
NOLOGFILE=y
```

```

144.25.8.238-Session.STE - TNVTPlus
Session Edit View Commands Script Help

. . imported "SH"."COSTS":"COSTS_Q1_1999"          181.0 KB      5884 rows
. . imported "SH"."COSTS":"COSTS_Q4_1999"          156.5 KB      5060 rows
. . imported "SH"."COSTS":"COSTS_Q2_2000"          116.4 KB      3715 rows
. . imported "SH"."COSTS":"COSTS_Q4_2000"          157.7 KB      5088 rows
. . imported "SH"."COSTS":"COSTS_Q2_2001"          182.0 KB      5882 rows
. . imported "SH"."COSTS":"COSTS_Q1_2001"          225.3 KB      7328 rows
. . imported "SH"."COSTS":"COSTS_Q3_2000"          148.9 KB      4798 rows
. . imported "SH"."COSTS":"COSTS_Q1_2000"          118.0 KB      3772 rows
. . imported "SH"."COSTS":"COSTS_1995"              0 KB          0 rows
. . imported "SH"."COSTS":"COSTS_Q2_2002"           0 KB          0 rows
. . imported "SH"."COSTS":"COSTS_Q4_2002"           0 KB          0 rows
. . imported "SH"."COSTS":"COSTS_Q2_2003"           0 KB          0 rows
. . imported "SH"."COSTS":"COSTS_Q4_2003"           0 KB          0 rows
. . imported "SH"."COSTS":"COSTS_Q3_2003"           0 KB          0 rows
. . imported "SH"."COSTS":"COSTS_Q1_2003"           0 KB          0 rows
. . imported "SH"."COSTS":"COSTS_Q3_2002"           0 KB          0 rows
. . imported "SH"."COSTS":"COSTS_Q1_2002"           0 KB          0 rows
. . imported "SH"."COSTS":"COSTS_1996"              0 KB          0 rows
. . imported "SH"."COSTS":"COSTS_Q2_1998"          76.96 KB      2397 rows
. . imported "SH"."COSTS":"COSTS_H1_1997"           0 KB          0 rows
. . imported "SH"."COSTS":"COSTS_H2_1997"           0 KB          0 rows
Job "SYSTEM".SYS_IMPORT_TABLE_01 successfully completed at 18:31

bash-2.05$

```



## Performing a Schema Mode Import

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The EXCLUDE parameter allows you to filter the metadata that is imported by specifying database objects that you want to exclude from the import job. For the given mode of import, all the objects contained within the source, and all their dependent objects, are included except those specified in an EXCLUDE statement. If an object is excluded, all of its dependent objects are also excluded.

TABLE\_EXISTS\_ACTION instructs import on what to do if the table it is trying to create already exists. When TABLE\_EXISTS\_ACTION=REPLACE is specified, the import drops the existing table and then recreates and loads it using the source database contents.

Perform the following:

1. From your terminal window, issue the following import command to perform a schema import that excludes constraints, referential constraints, indexes and materialized views using the dump file set created by the schema mode export in the Export section.

```
impdp system/<password> \
SCHEMAS=sh \
REMAP_SCHEMA=sh:sh2 \
DUMPFILE=datadir1:schema1%U.dmp,datadir2:schema2%U.dmp \

EXCLUDE=constraint, ref_constraint, index,materialized_view \
TABLE_EXISTS_ACTION=replace \

logfile=datadir1:impschema.log
```

```

144.25.8.266-Session.STE - TNVTPPlus
Session Edit View Commands Script Help

. . imported "SH"."COSTS"."COSTS_H2_1997"          0 KB          0 rows
. . imported "SH"."MVIEW$_EXCEPTIONS"             0 KB          0 rows
. . imported "SH"."COSTS"."COSTS_1995"             0 KB          0 rows
. . imported "SH"."COSTS"."COSTS_1996"             0 KB          0 rows
. . imported "SH"."COSTS"."COSTS_H1_1997"          0 KB          0 rows
. . imported "SH"."CHANNELS"                       4.679 KB       5 rows
. . imported "SH"."COUNTRIES"                      7.015 KB      19 rows
Processing object type SCHEMA_EXPORT/TABLE/GRANT/OBJECT_GRANT
Processing object type SCHEMA_EXPORT/TABLE/STATISTICS/TABLE_STATISTICS
Processing object type SCHEMA_EXPORT/TABLE/COMMENT
Processing object type SCHEMA_EXPORT/MATERIALIZED_VIEW
ORA-31685: Object type MATERIALIZED_VIEW:"SH"."CAL_MONTH_SALES_MV" failed due t:
CREATE MATERIALIZED VIEW "SH"."CAL_MONTH_SALES_MV" USING ("CAL_MONTH_SALES_MV",
ORA-31685: Object type MATERIALIZED_VIEW:"SH"."FWEEK_PSCAT_SALES_MV" failed due:
CREATE MATERIALIZED VIEW "SH"."FWEEK_PSCAT_SALES_MV" USING ("FWEEK_PSCAT_SALES_0
Processing object type SCHEMA_EXPORT/DIMENSION
ORA-31684: Object type DIMENSION:"SH"."CHANNELS_DIM" already exists
ORA-31684: Object type DIMENSION:"SH"."CUSTOMERS_DIM" already exists
ORA-31684: Object type DIMENSION:"SH"."PRODUCTS_DIM" already exists
ORA-31684: Object type DIMENSION:"SH"."PROMOTIONS_DIM" already exists
ORA-31684: Object type DIMENSION:"SH"."TIMES_DIM" already exists
Job "SYSTEM"."SYS_IMPORT_SCHEMA_01" completed with 10 error(s) at 09:39

bash-2.05$ █

```

 **Move your mouse over this icon to hide all screenshot**