Diagnosing and Resolving Performance Problems Using ADDM

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Purpose

This module describes how you can use ADDM to diagnose and resolve performance problems..

Topics

This chapter discusses the following:

- Overview
- Prerequisites
- Creating a Performance Finding
- Resolving the Performance Finding using ADDM

Overview

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At times database performance problems arise that require your diagnosis and correction. Sometimes problems are brought to your attention by users who complain about slow performance. Other times you might notice performance spikes in the Host CPU chart on the home page.

In all cases, these problems are flagged by the Automatic Database Diagnostics Monitor (ADDM), which does a top-down system analysis every half hour by default and reports its findings on the Oracle Enterprise Manager Home page. ADDM runs automatically every 30 minutes to coincide with the snapshots taken by the Automatic Workload Repository (AWR). Its output consists of a description of each problem it has identified, and a recommended action.

Prerequisites

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Before starting this module, you should have:

☐ **1.** Completed the Configuring Linux for the Installation of Oracle Database 10g lesson

☐ **2.** Completed the Installing the Oracle Database 10g on Linux lesson

Creating a Performance Finding

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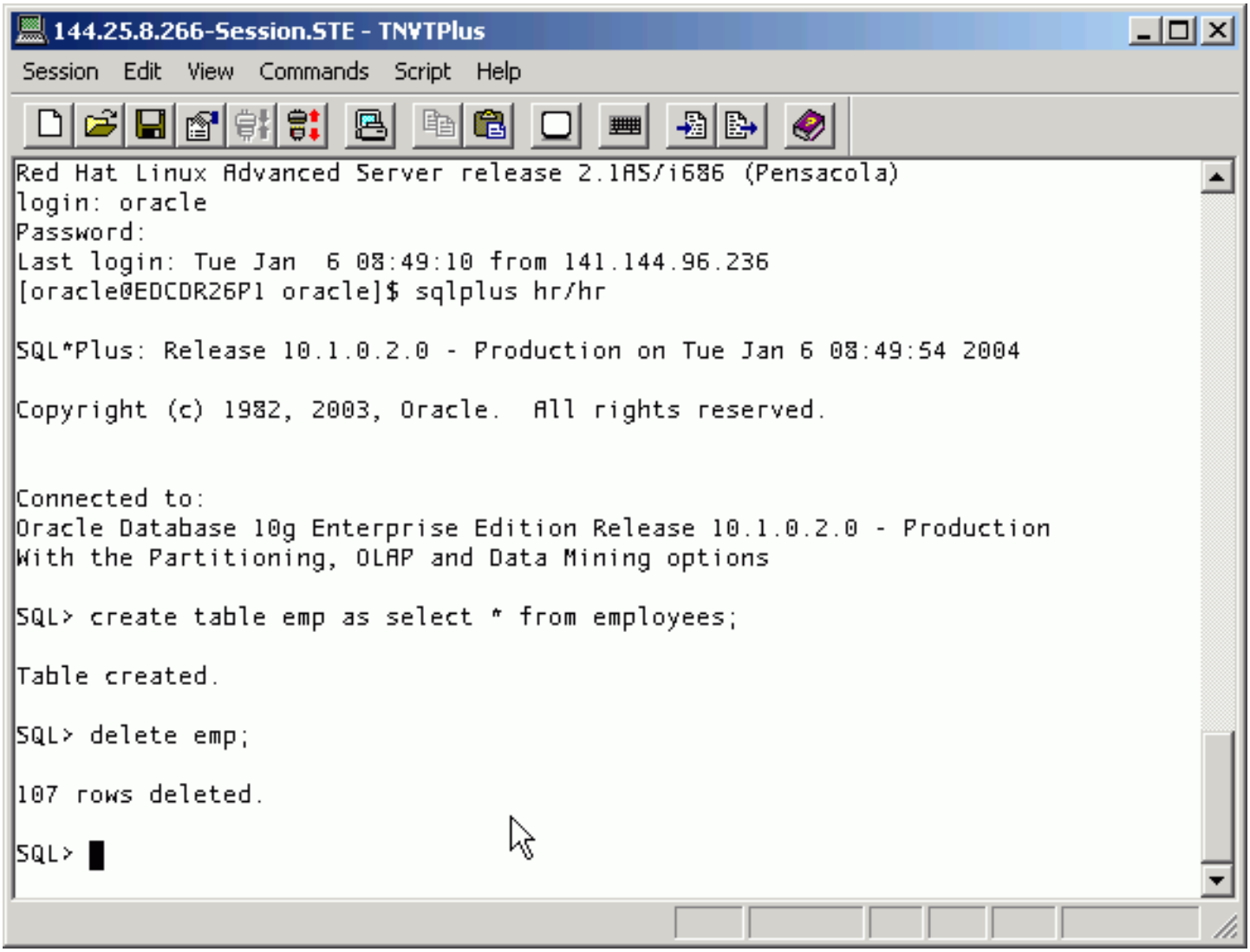
To show how ADDM works, you need to create a performance finding. In this case, you will create a session waiting on a row lock. Perform the following:

☐ **1.** Open a terminal window and execute the following commands:

```
sqlplus hr/hr
```

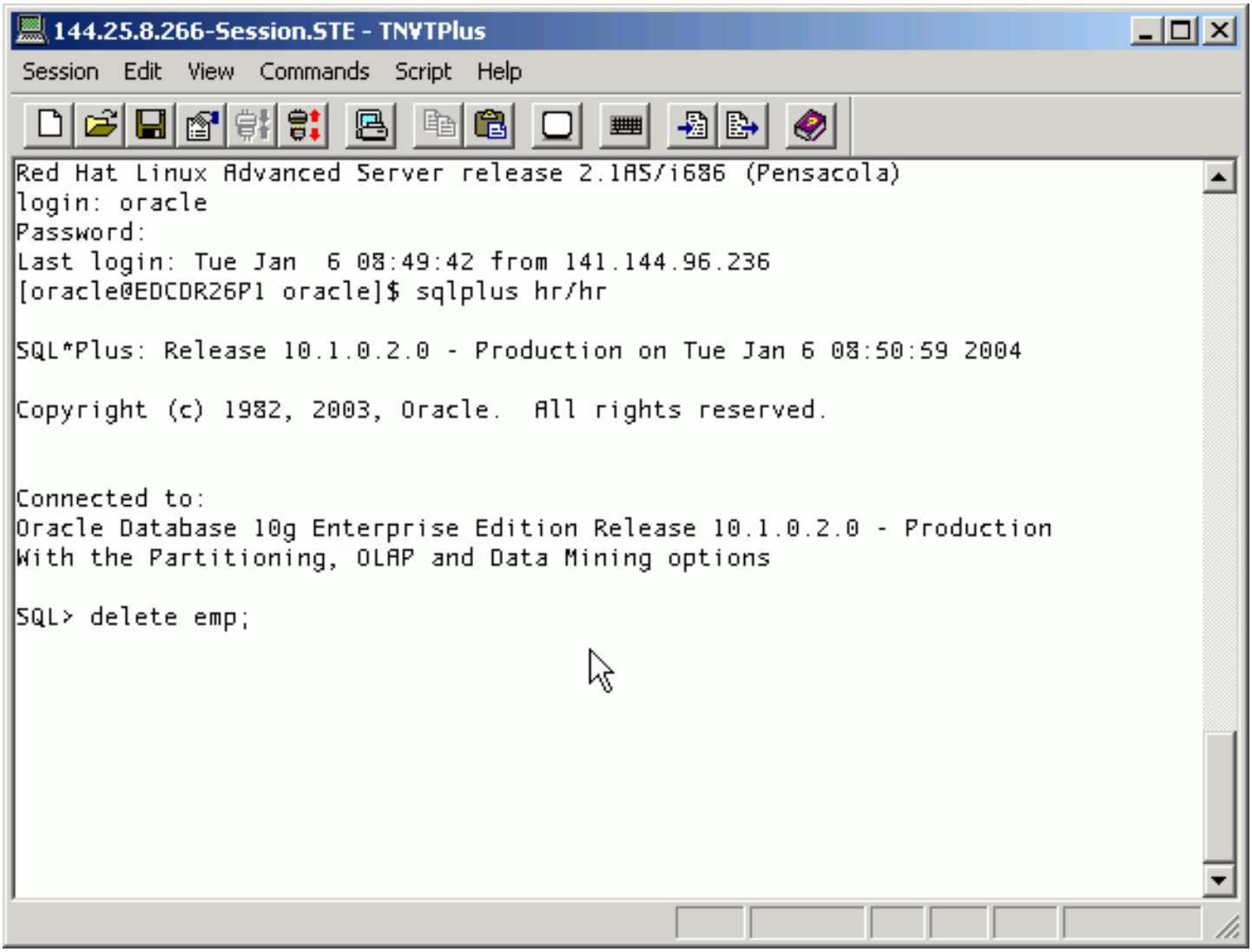
```
create table emp as select * from employees;
delete emp;
```



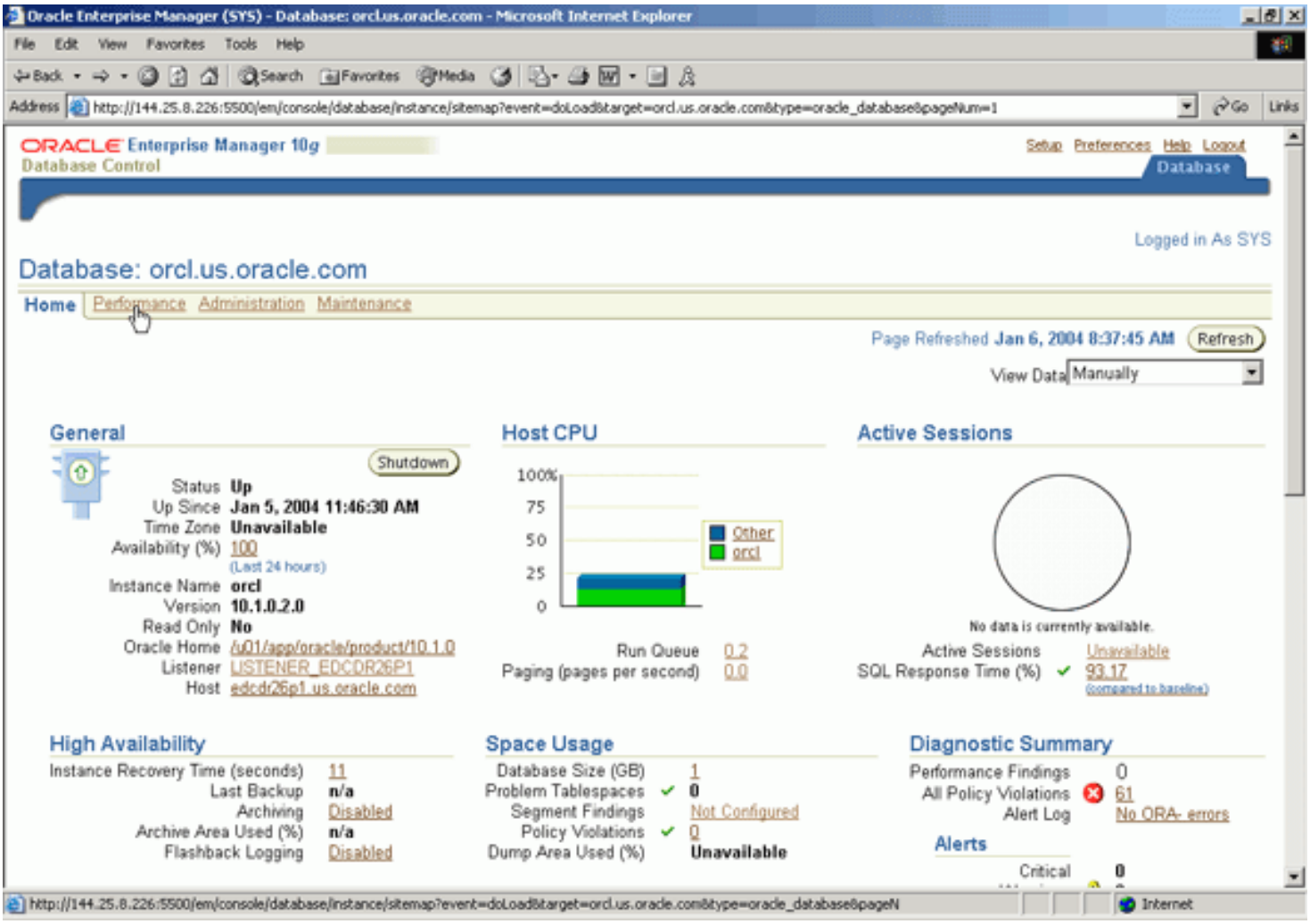
☐ **2.** Open another terminal window and execute the following commands to create a row locking conflict:

```
sqlplus hr/hr
```

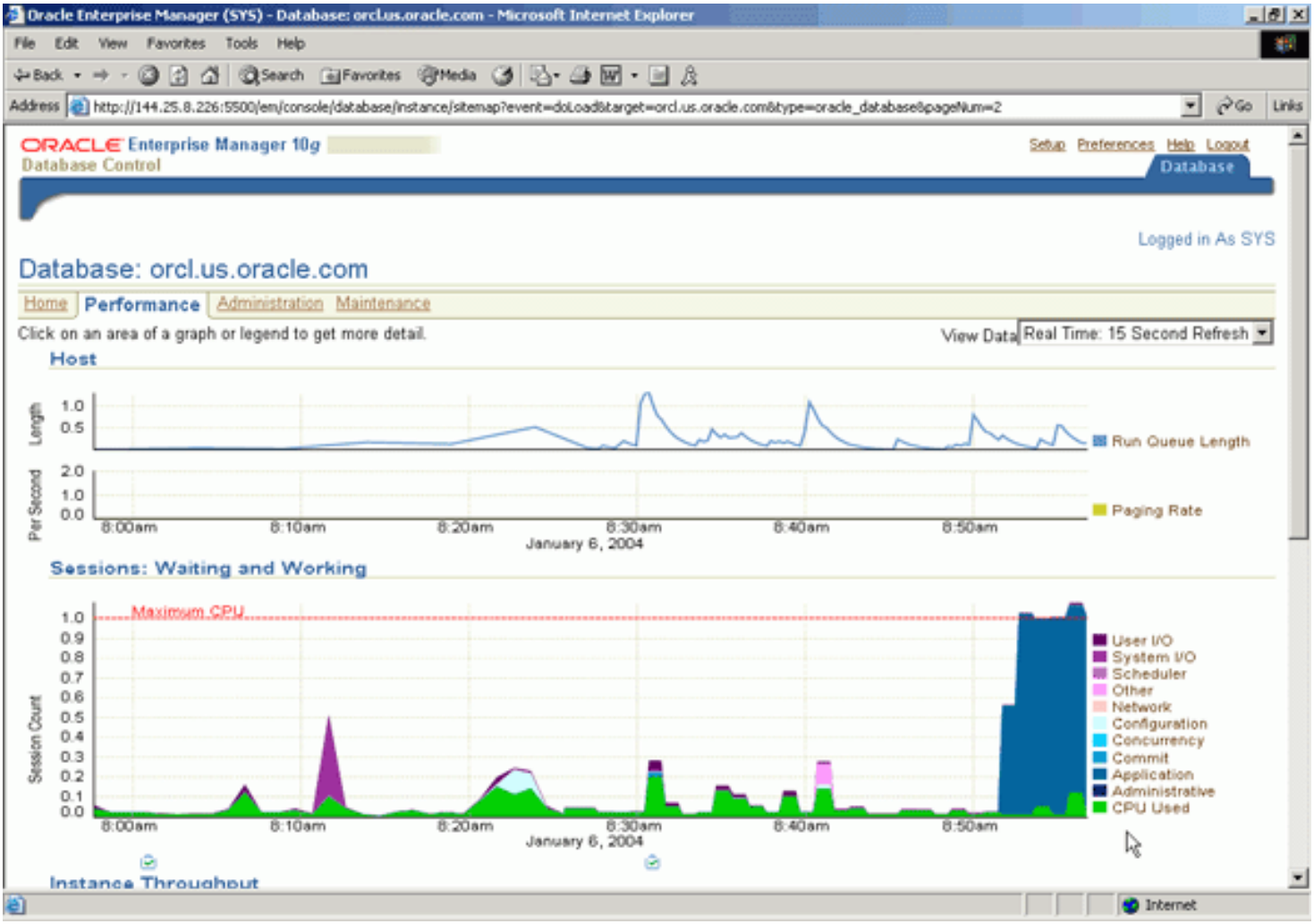
```
delete emp;
```



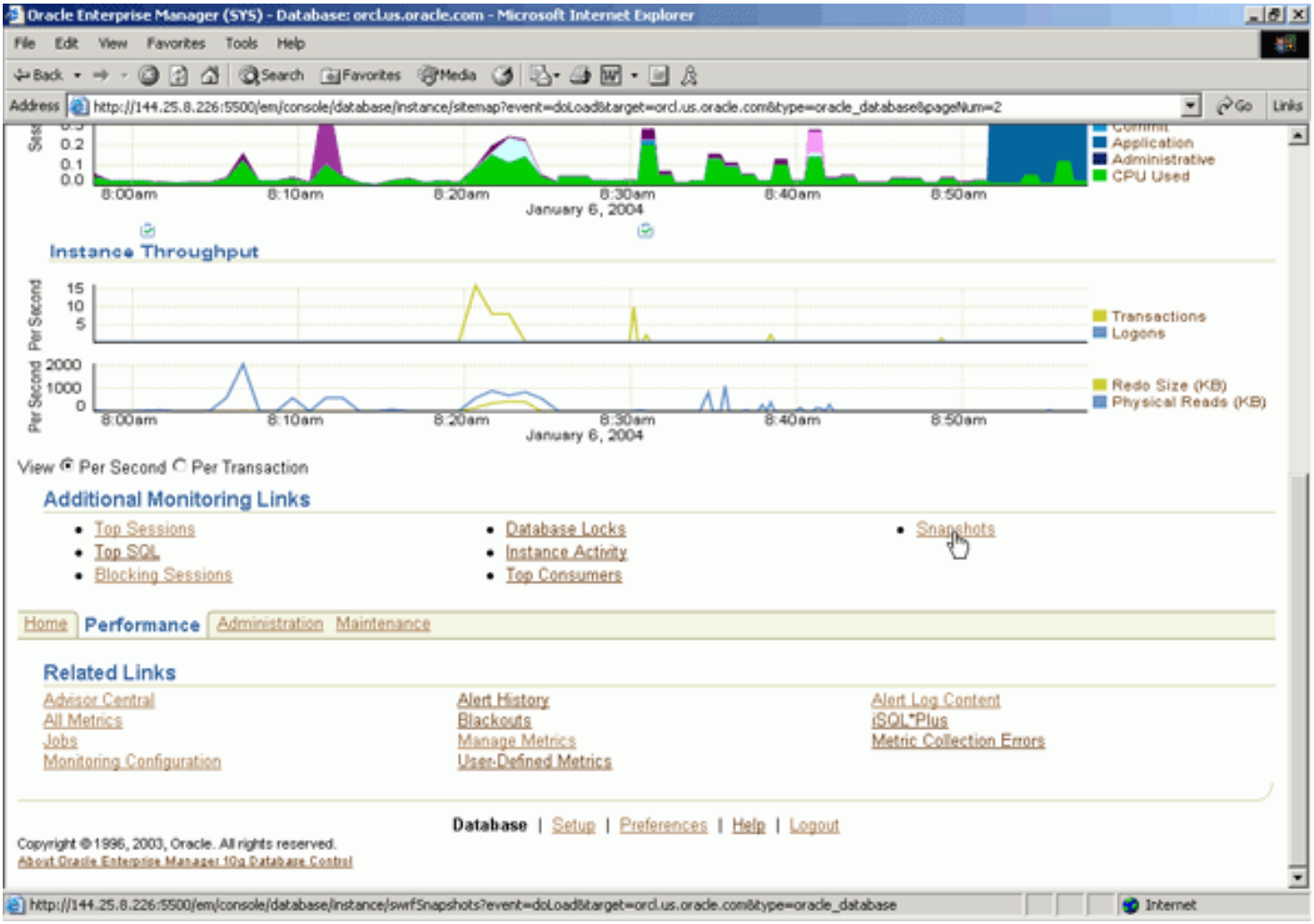
☐ **3.** From your Enterprise Manager browser window, click on the **Performance** tab.



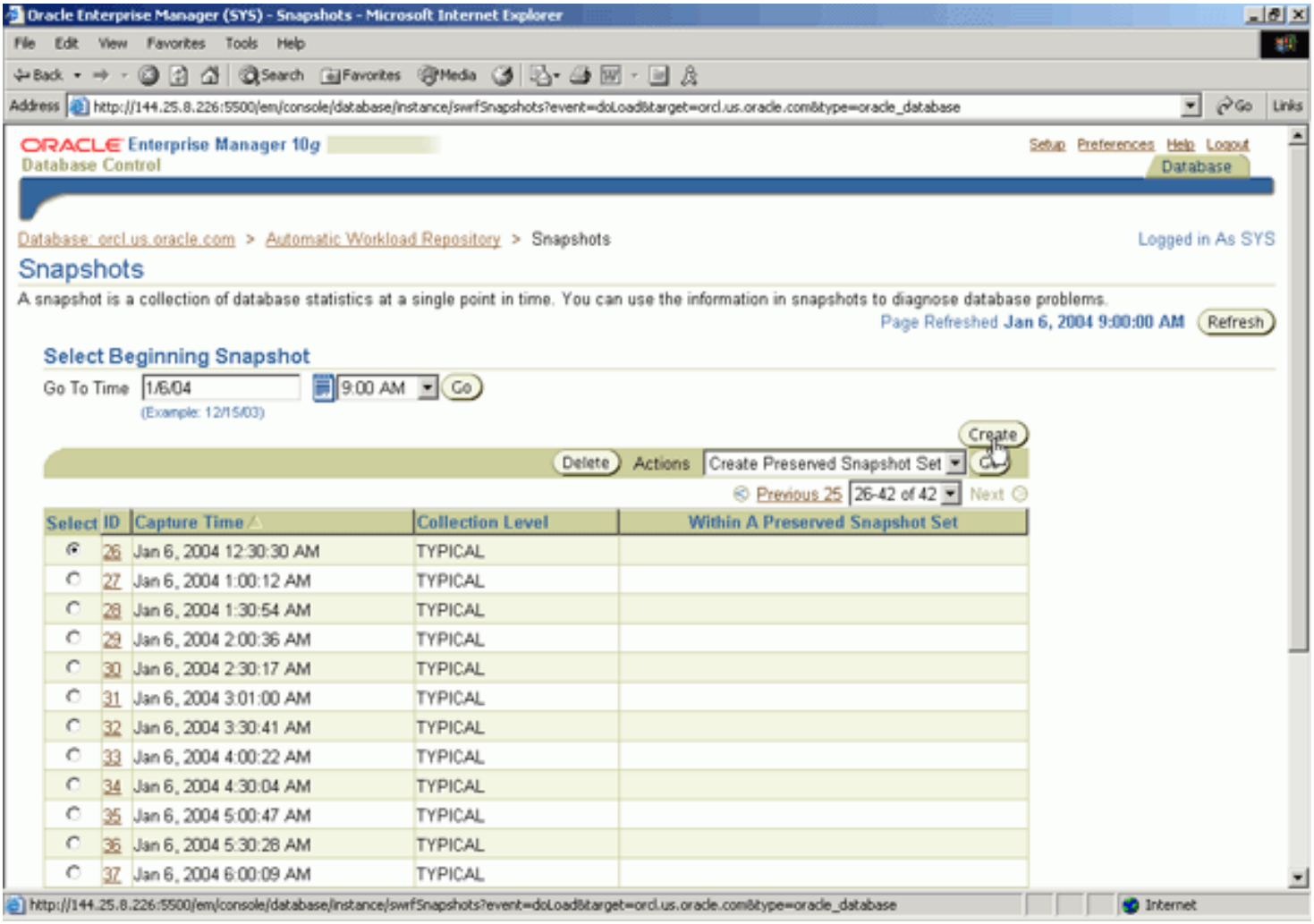
☐ **4.** You see that the sessions waiting is very high. Wait about 10 minutes and scroll down to the bottom of the window.



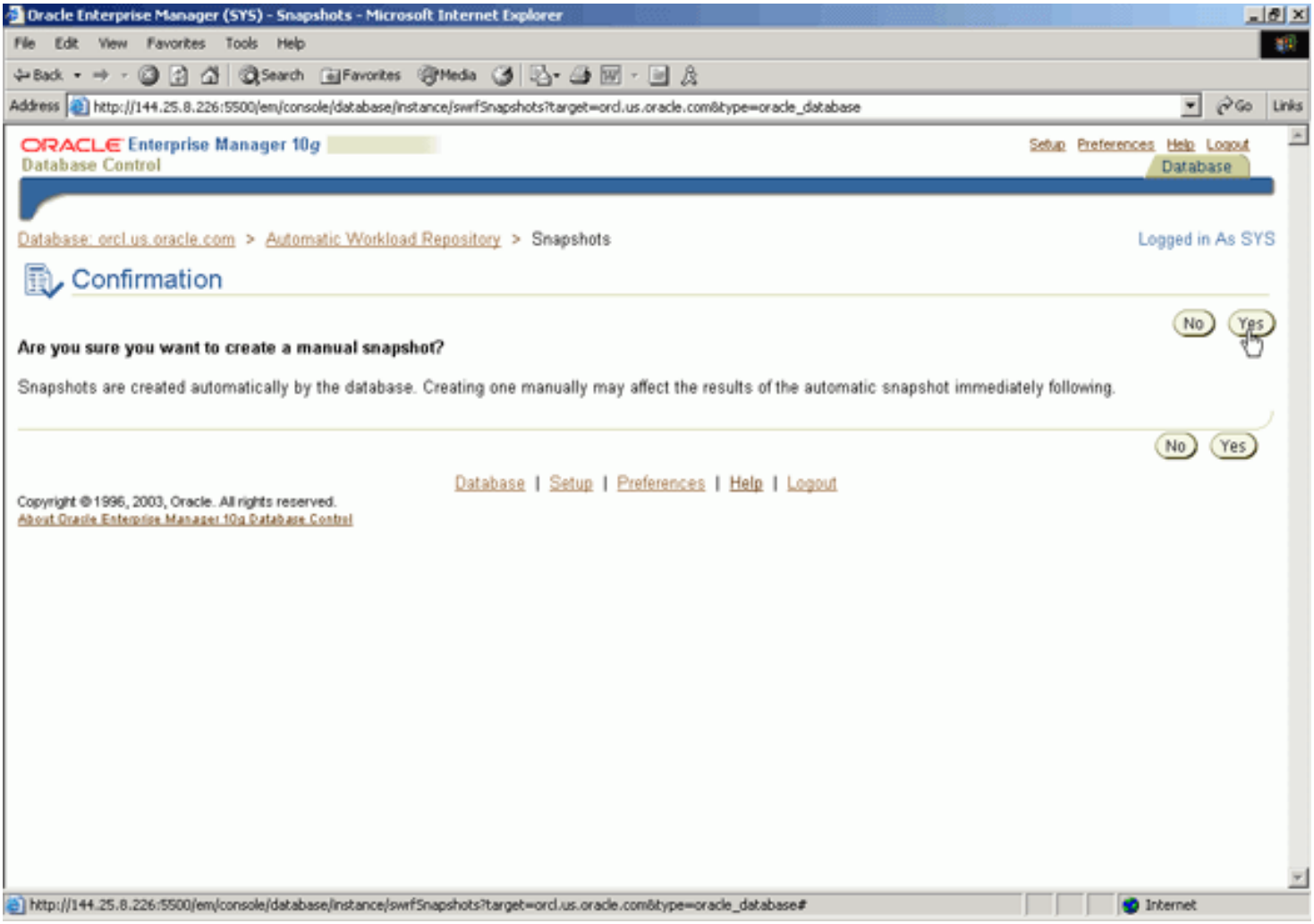
☐ **5.** You want to create a snapshot to capture the performance finding. Click on **Snapshots.**



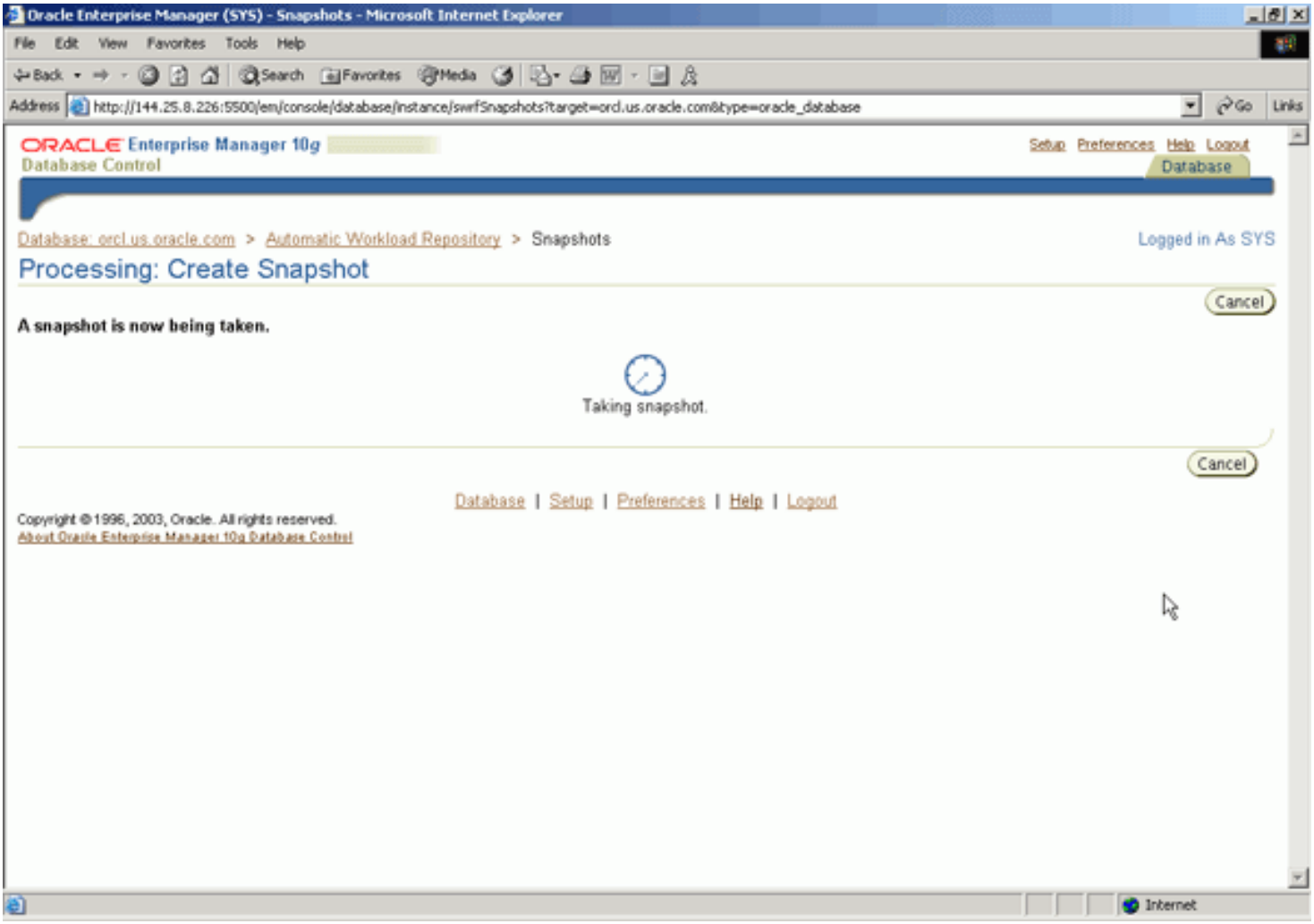
☐ **6.** Click **Create** to create a snapshot.



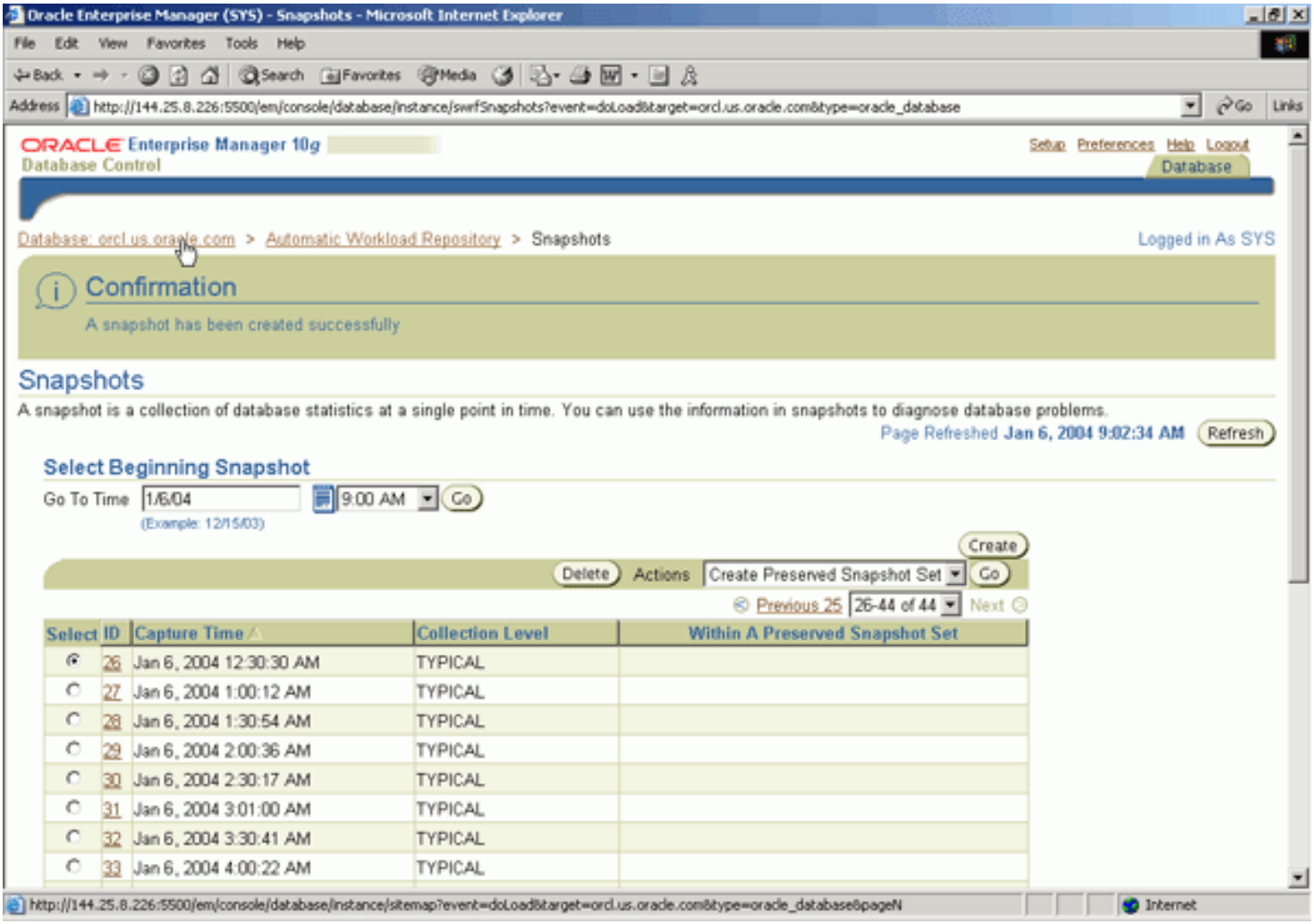
☐ **7.** Click **Yes** to create a Manual Snapshot.



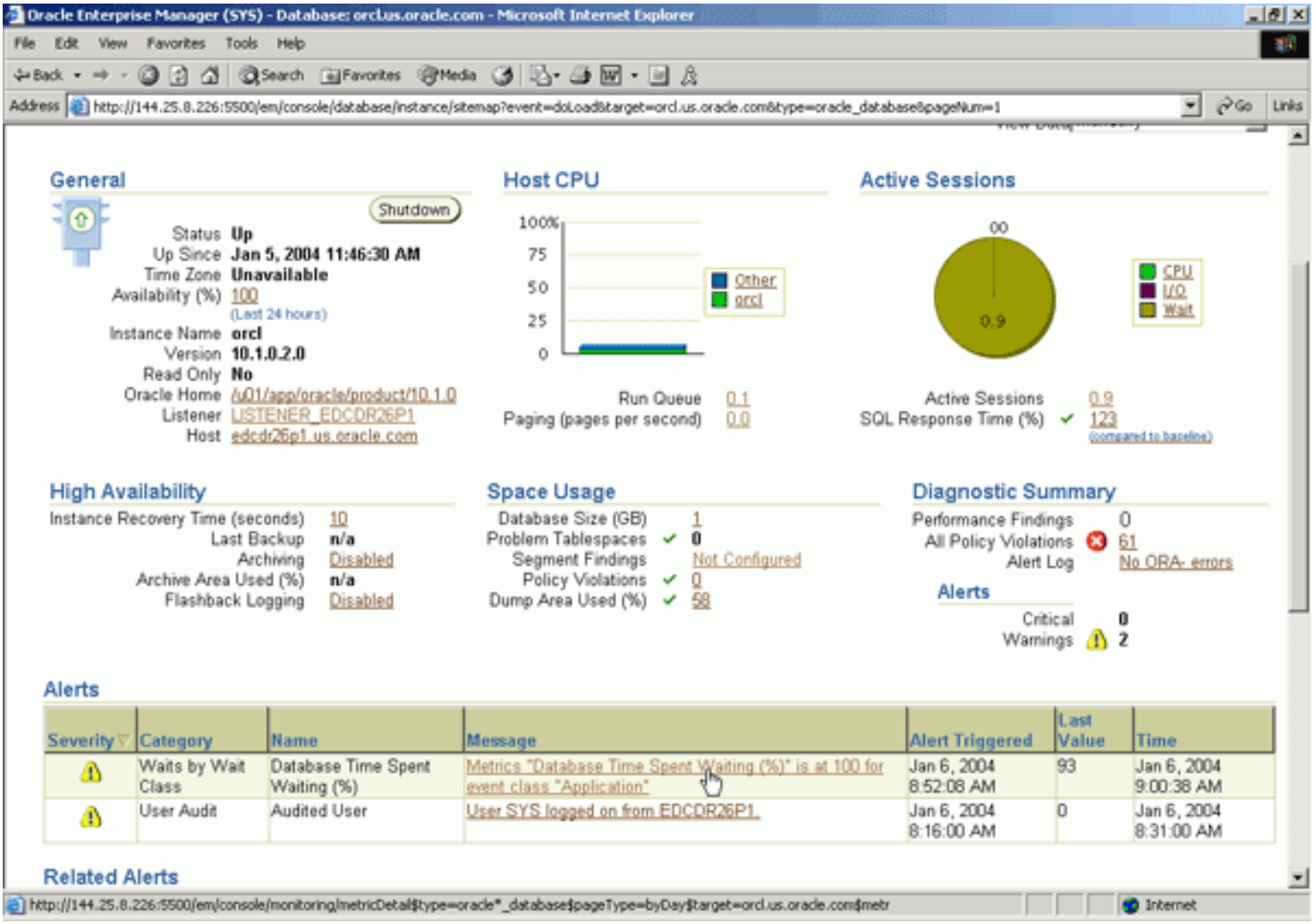
☐ **8.** A snapshot is now being taken.



☐ **9.** Once the snapshot is created, click the **database** breadcrumb then the **home** tab.



10. ☐ A performance finding is now detected through an alert in the Alert section of the Home page.



Resolving the Performance Finding using ADDM

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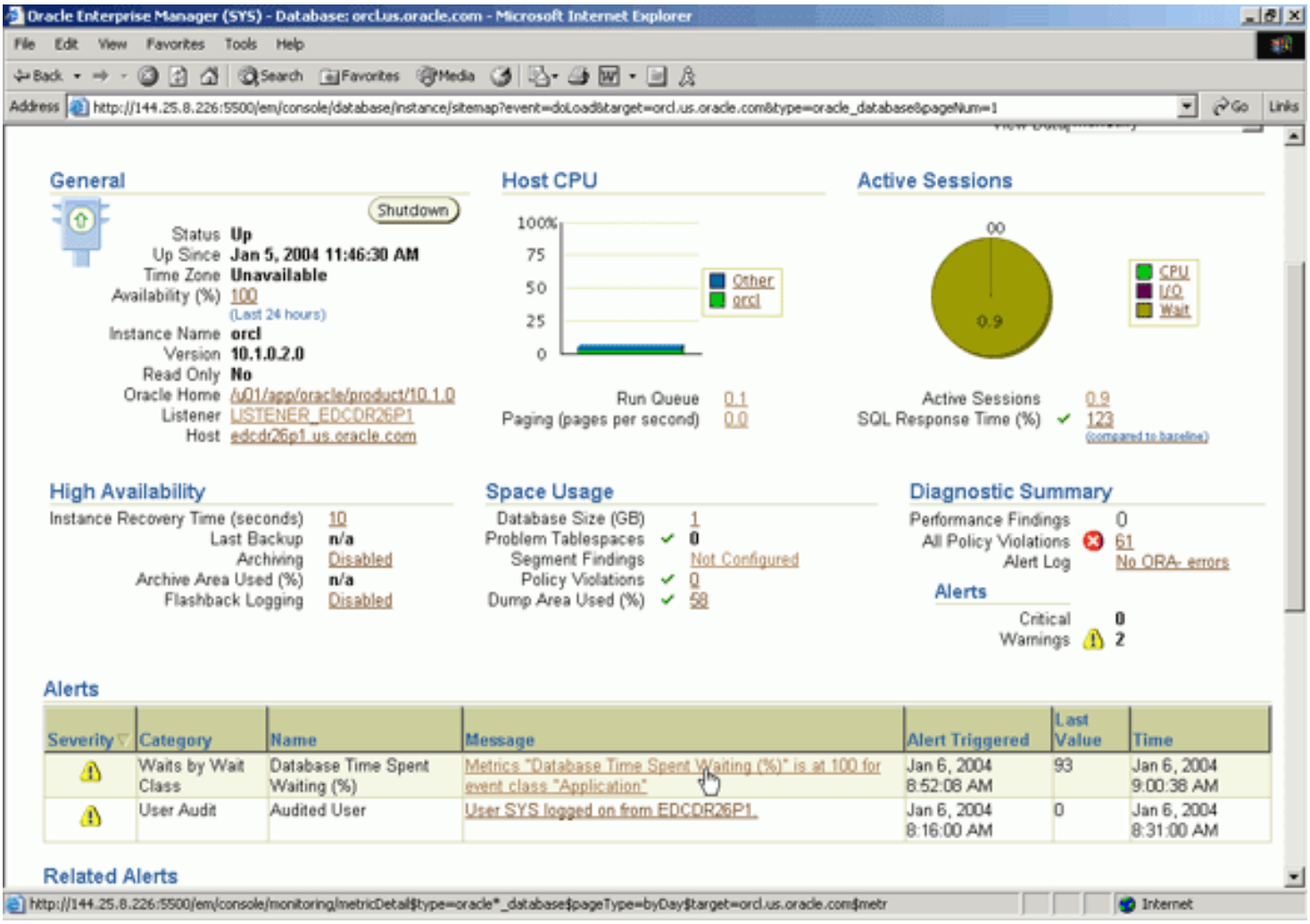
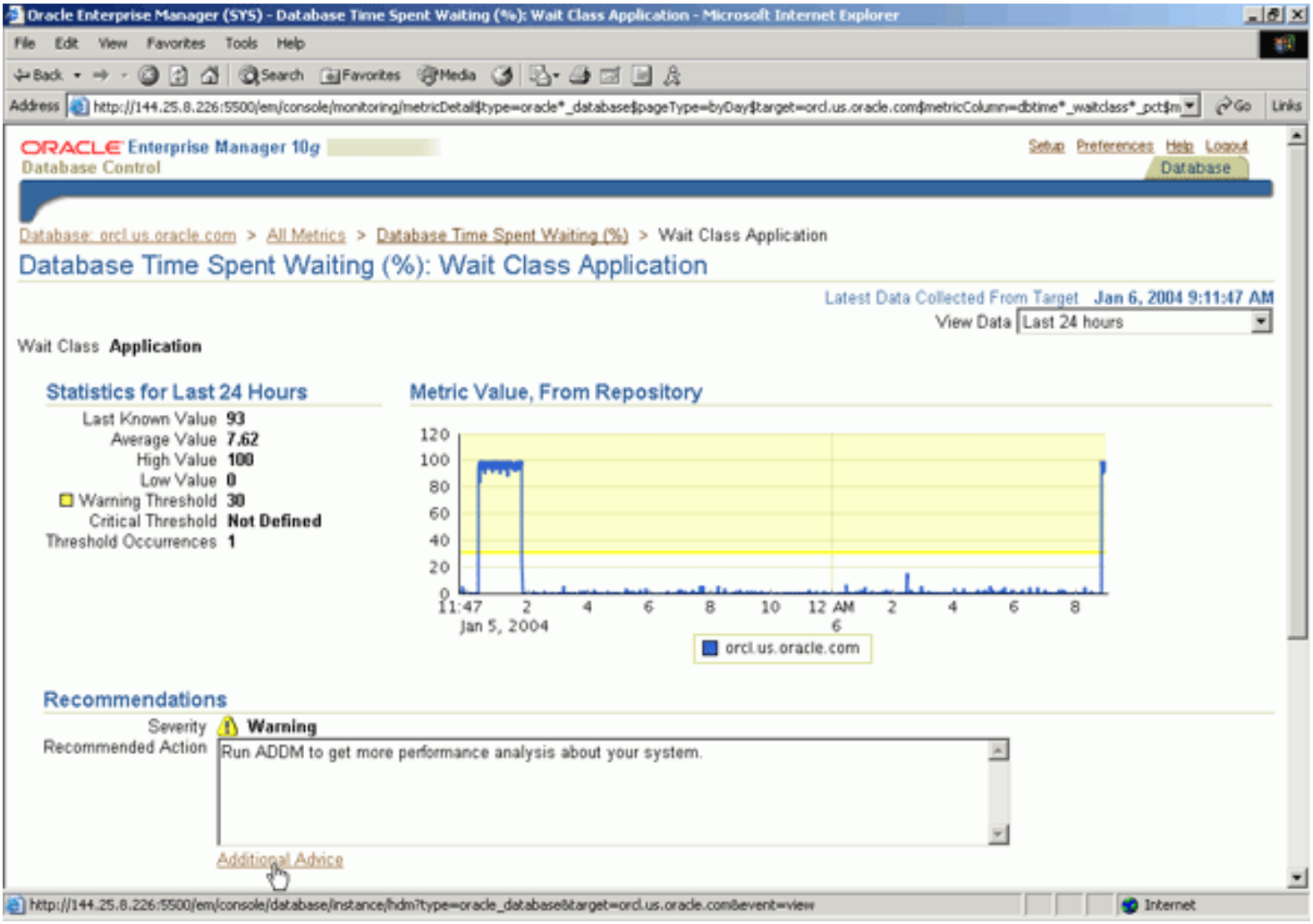
When a performance finding is encountered, you can use ADDM to resolve it. Perform the following:

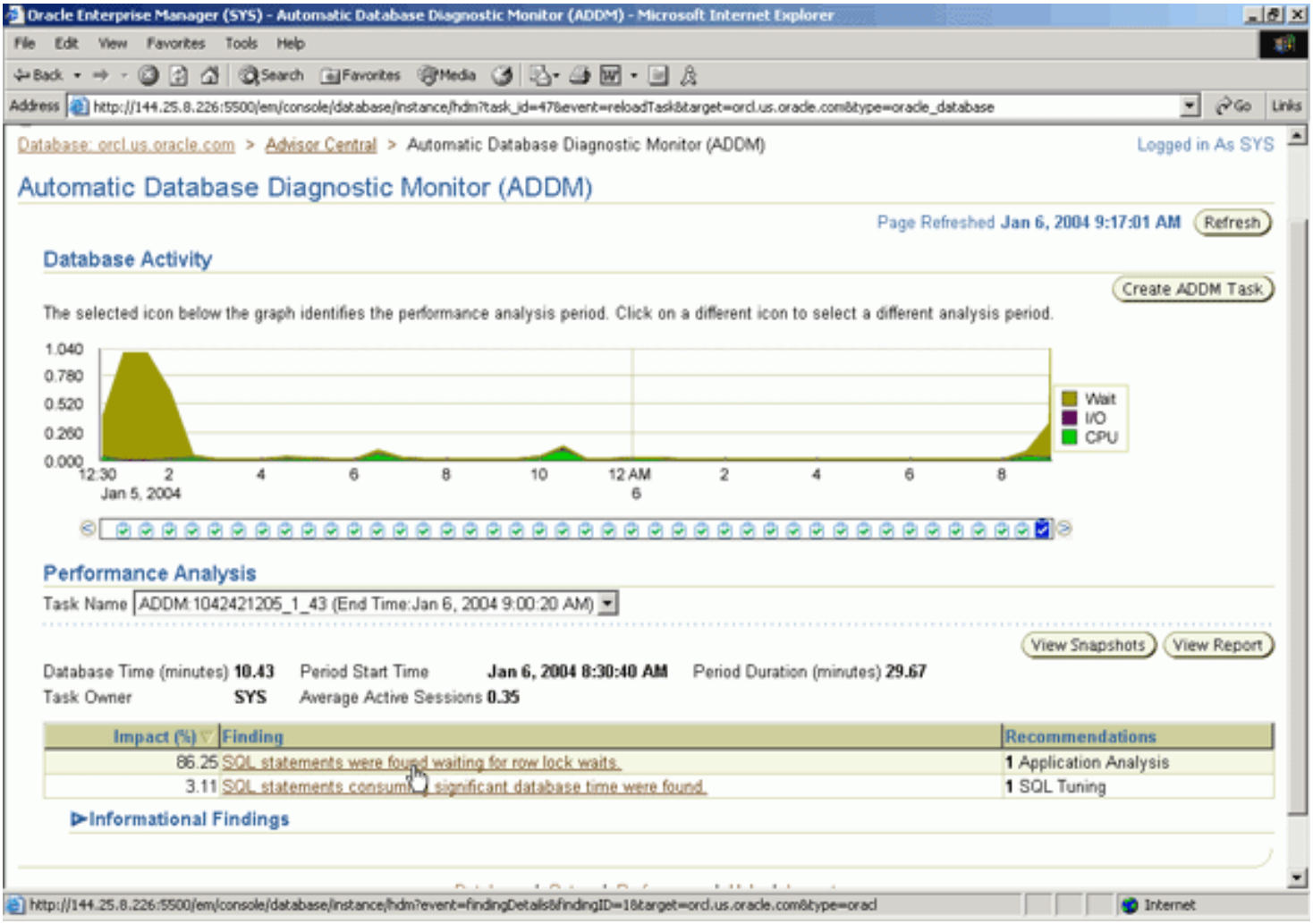
☐ **1.** Click on the Alert **Database Time Spent Waiting** .



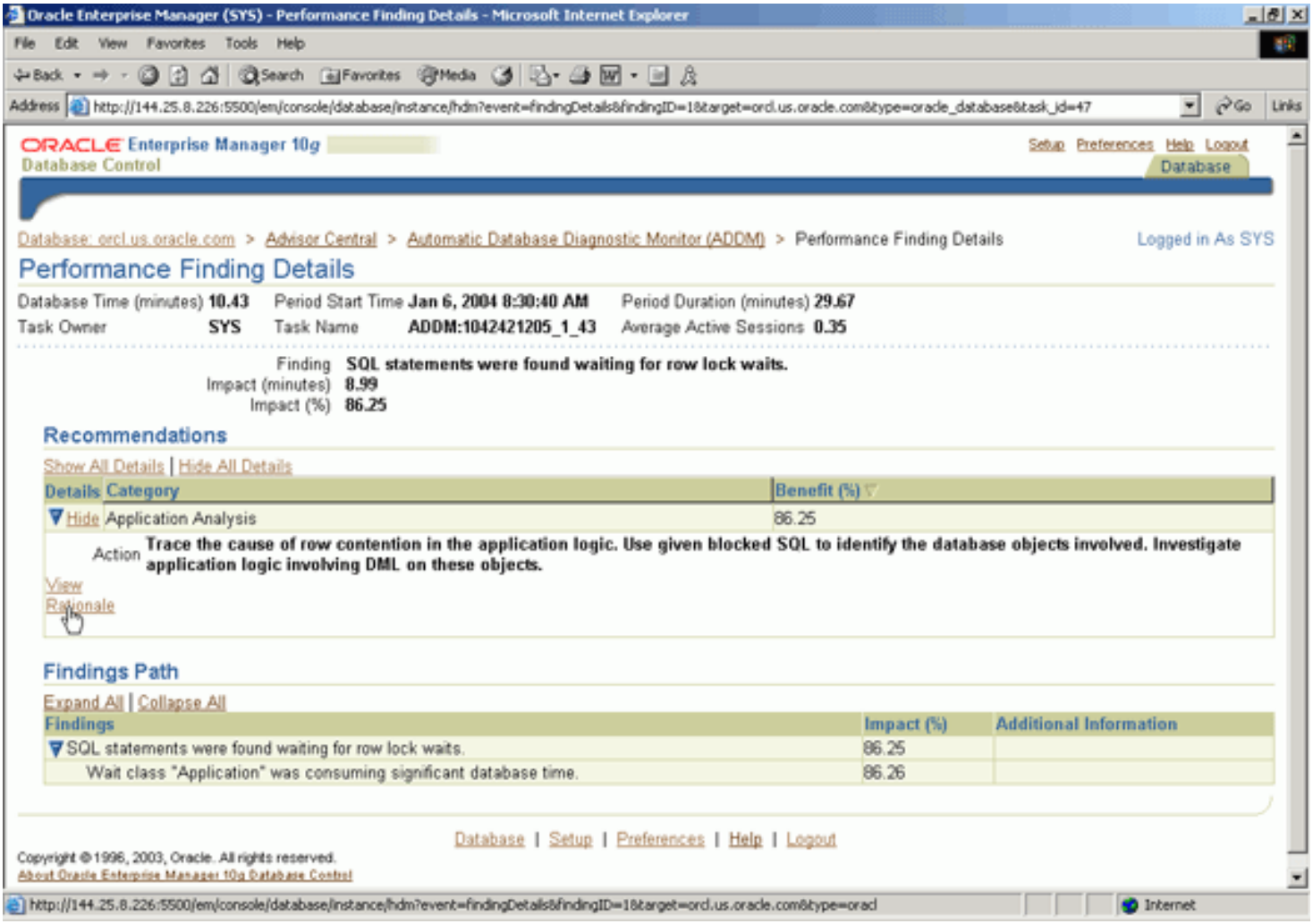
☐ **2.** You notice that the recommended action is to run ADDM to get more performance analysis about your system. Click **Additional Advice** .



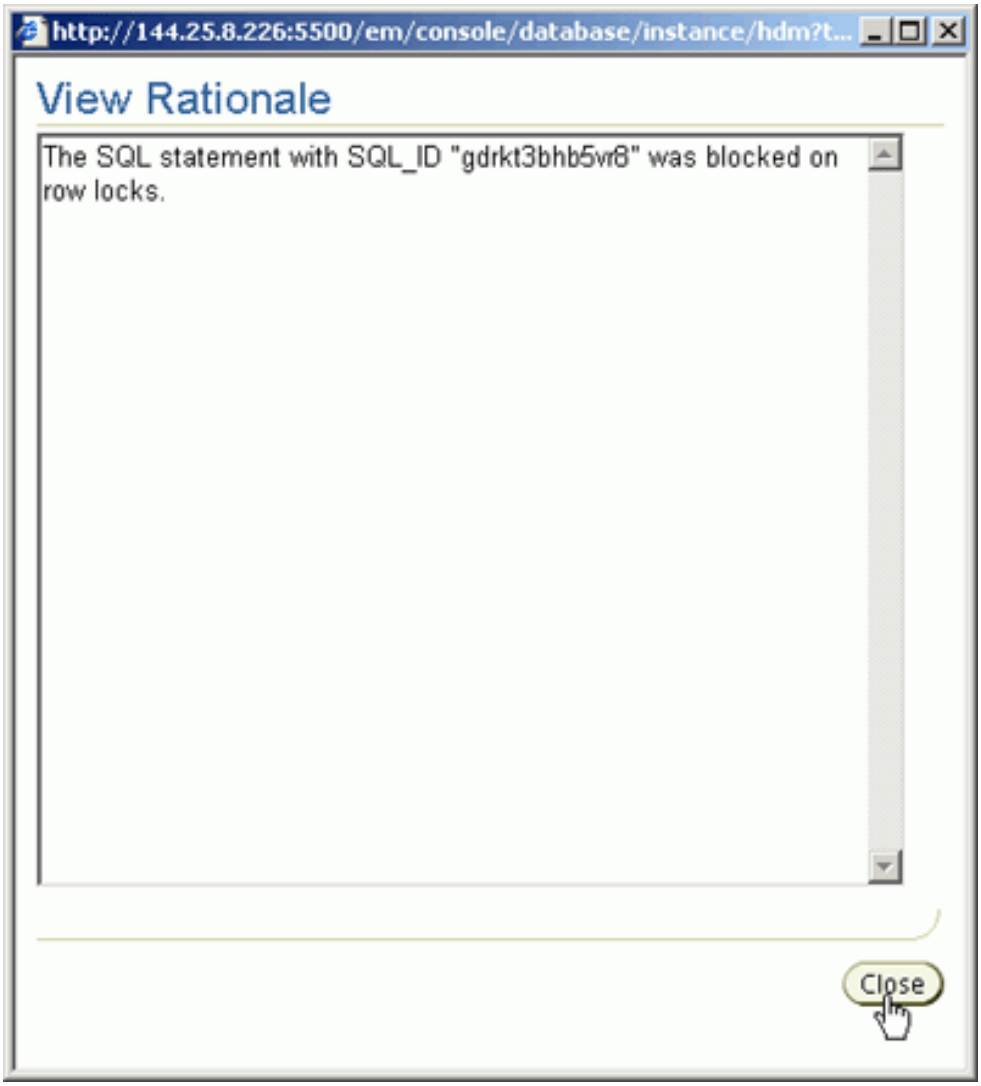
☐ **3.** Make sure the snapshot you took is selected from the list. Notice that **SQL statements were found waiting for row lock waits** impacting your system for more than 86% of your database time. Click on this finding in the list.



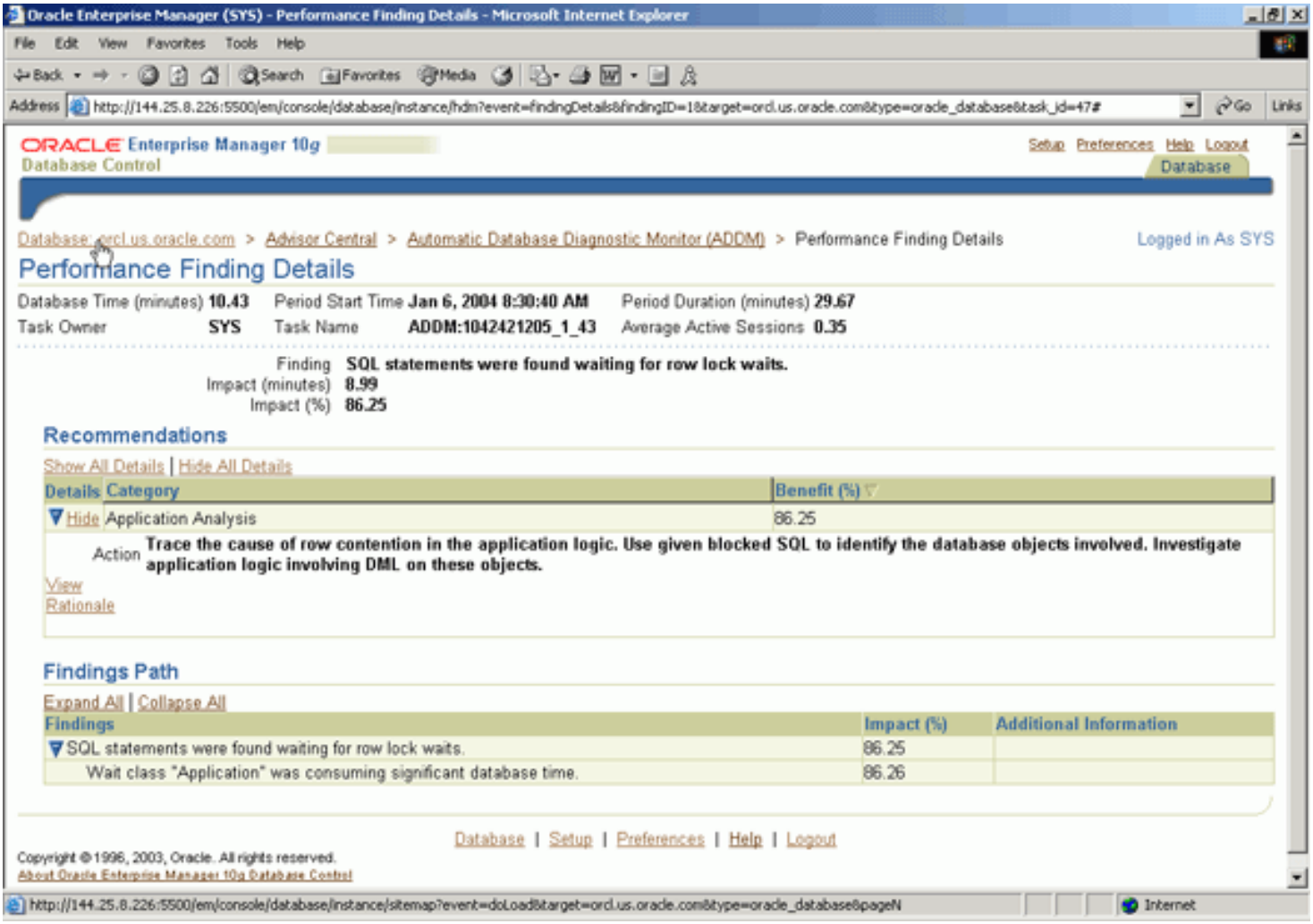
☐ **4.** You see the action that needs to be taken to resolve the performance issue. Click on **View Rationale** .



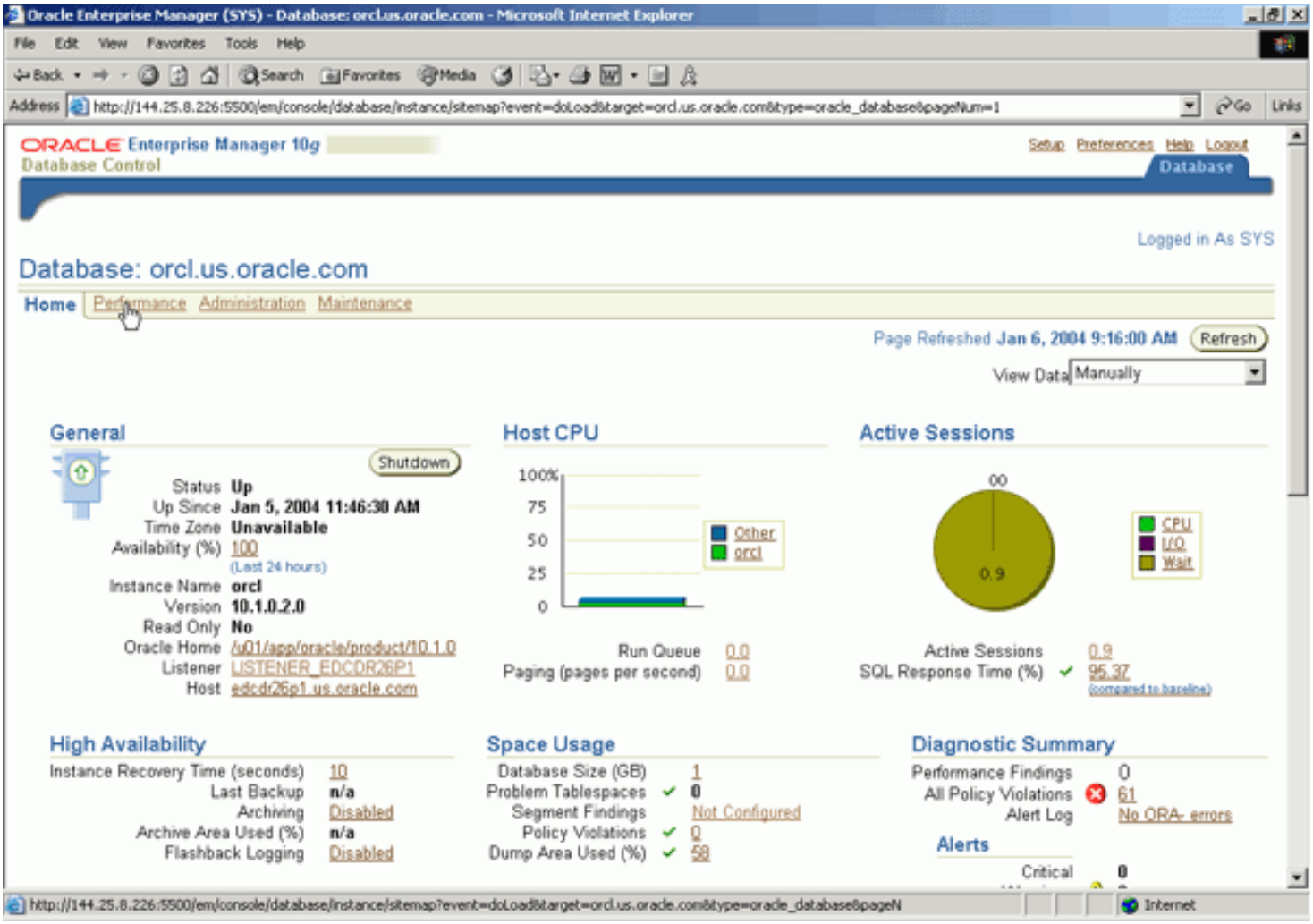
☐ **5.** You see the particular SQL ID that is causing the problem. Click **Close** .



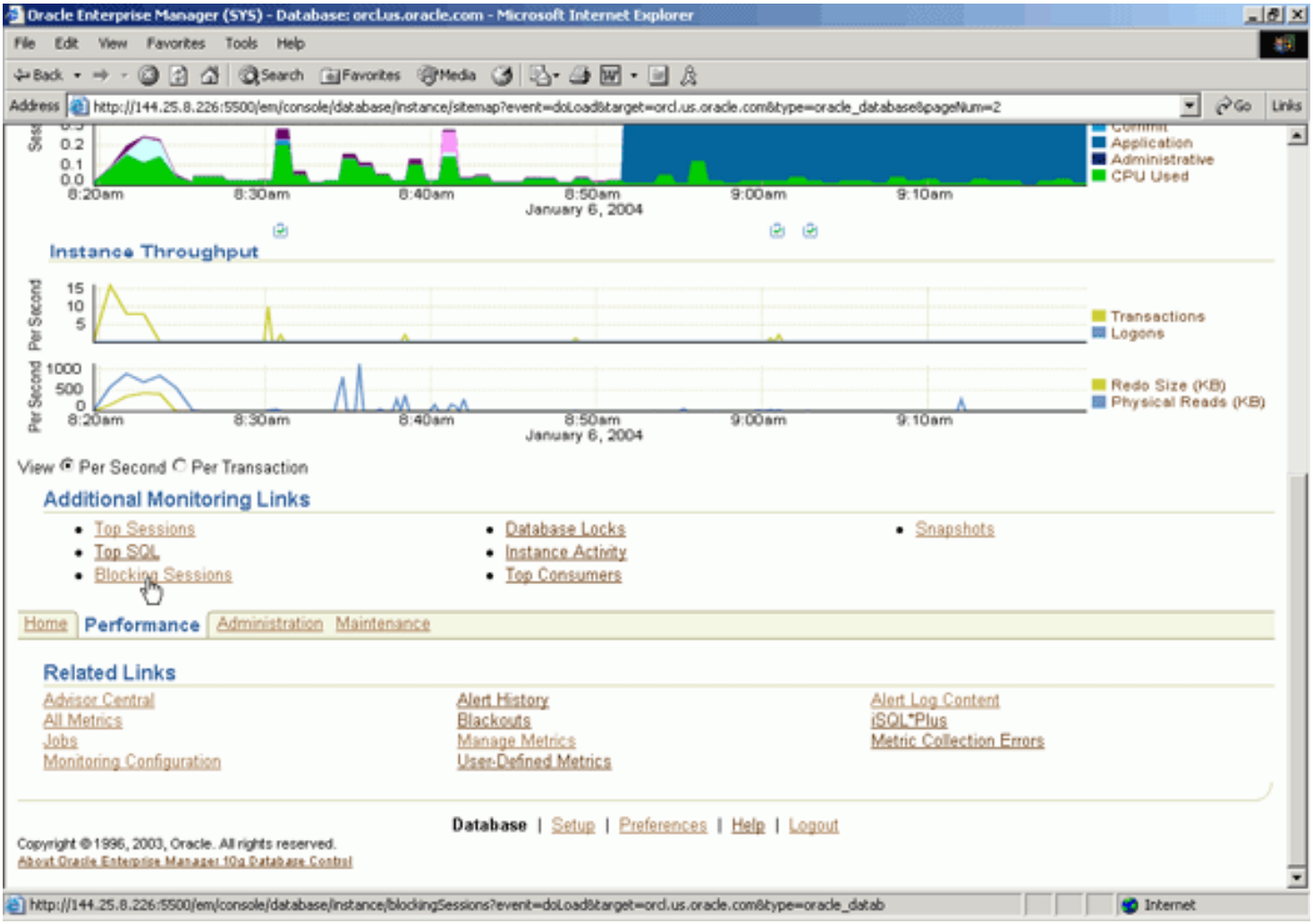
☐ **6.** To resolve the performance finding, click the **Database** breadcrumb.



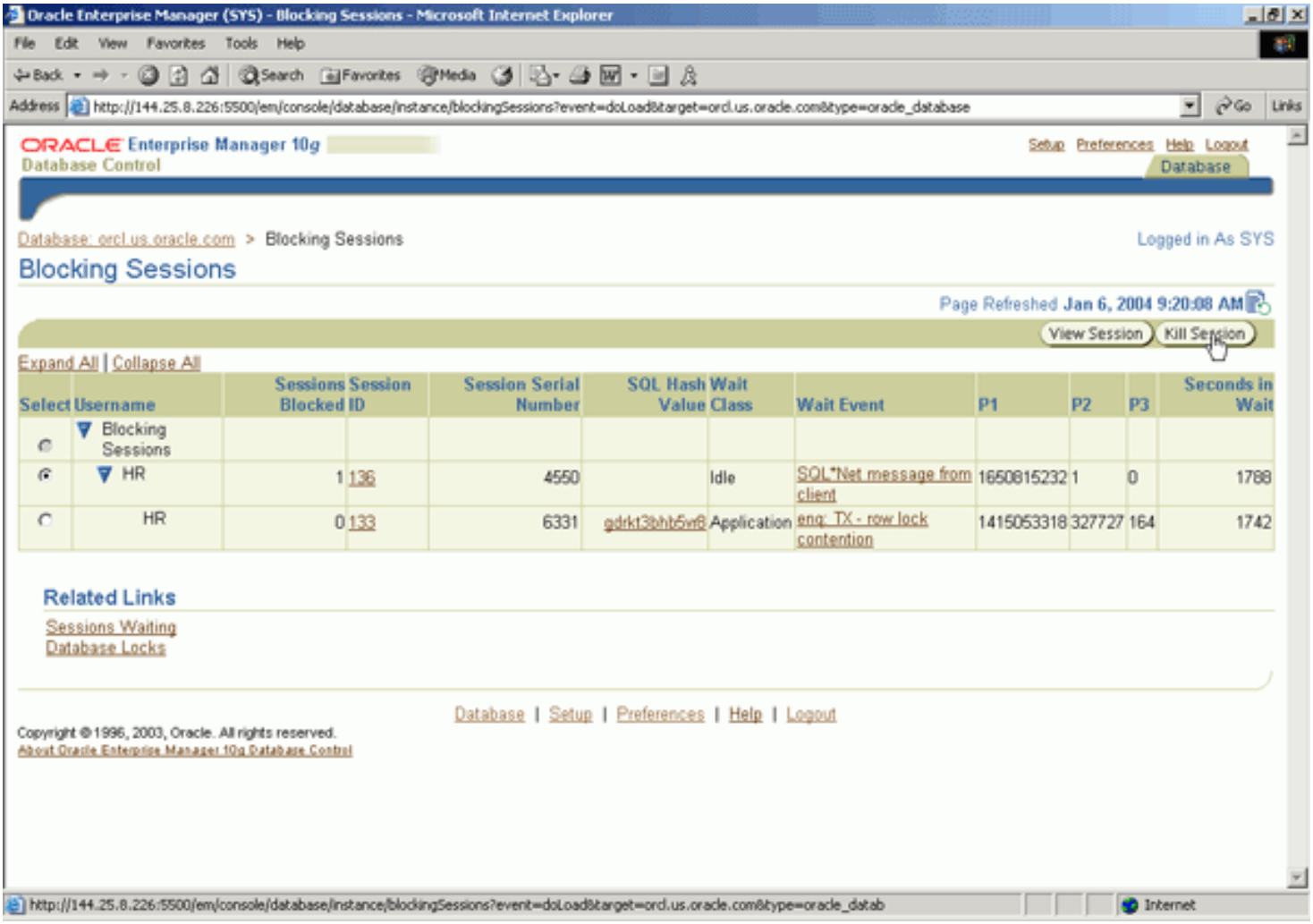
☐ **7.** Click the **Performance** tab.



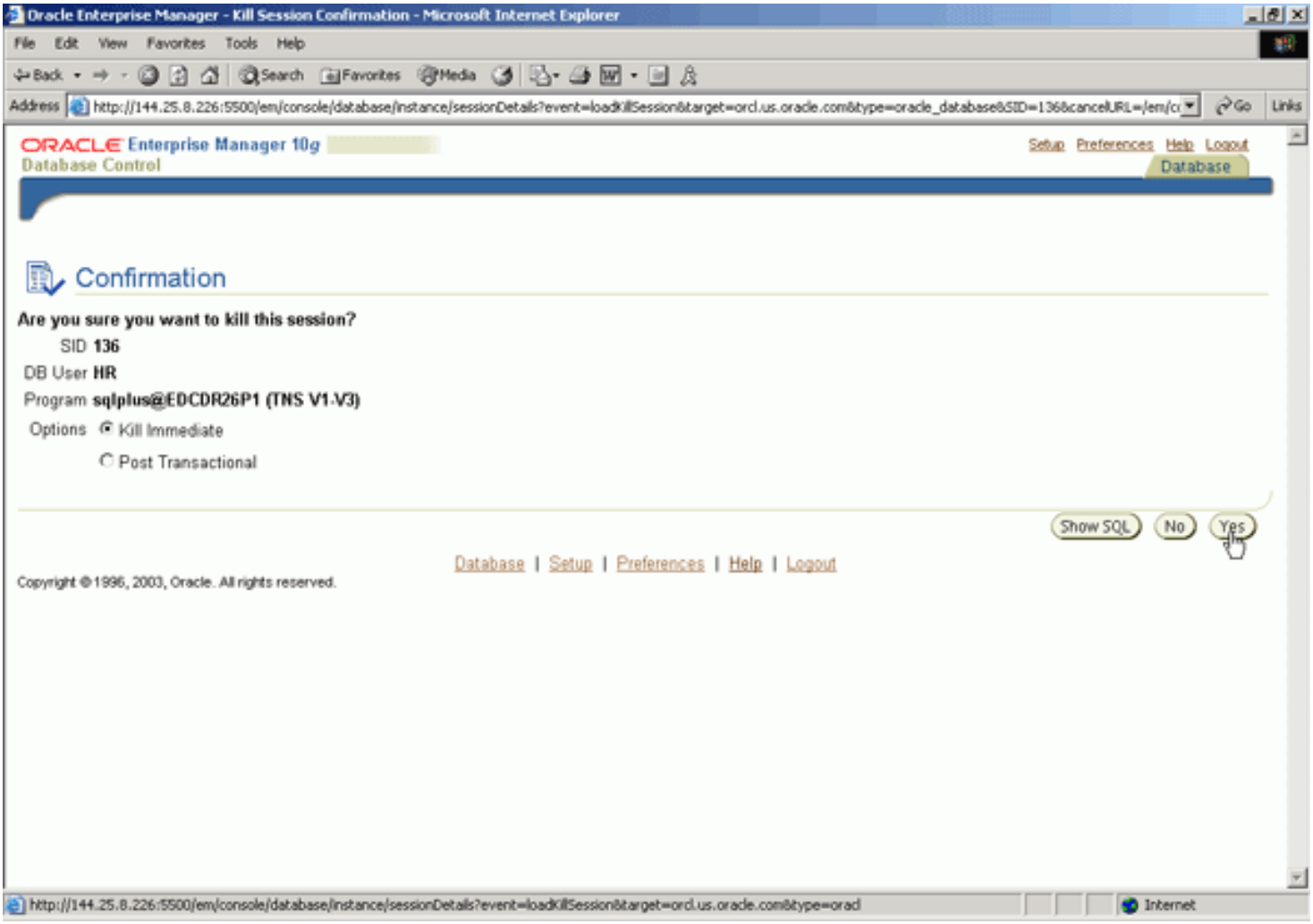
☐ **8.** Scroll down and select **Blocking Sessions** under Additional Monitoring Links.



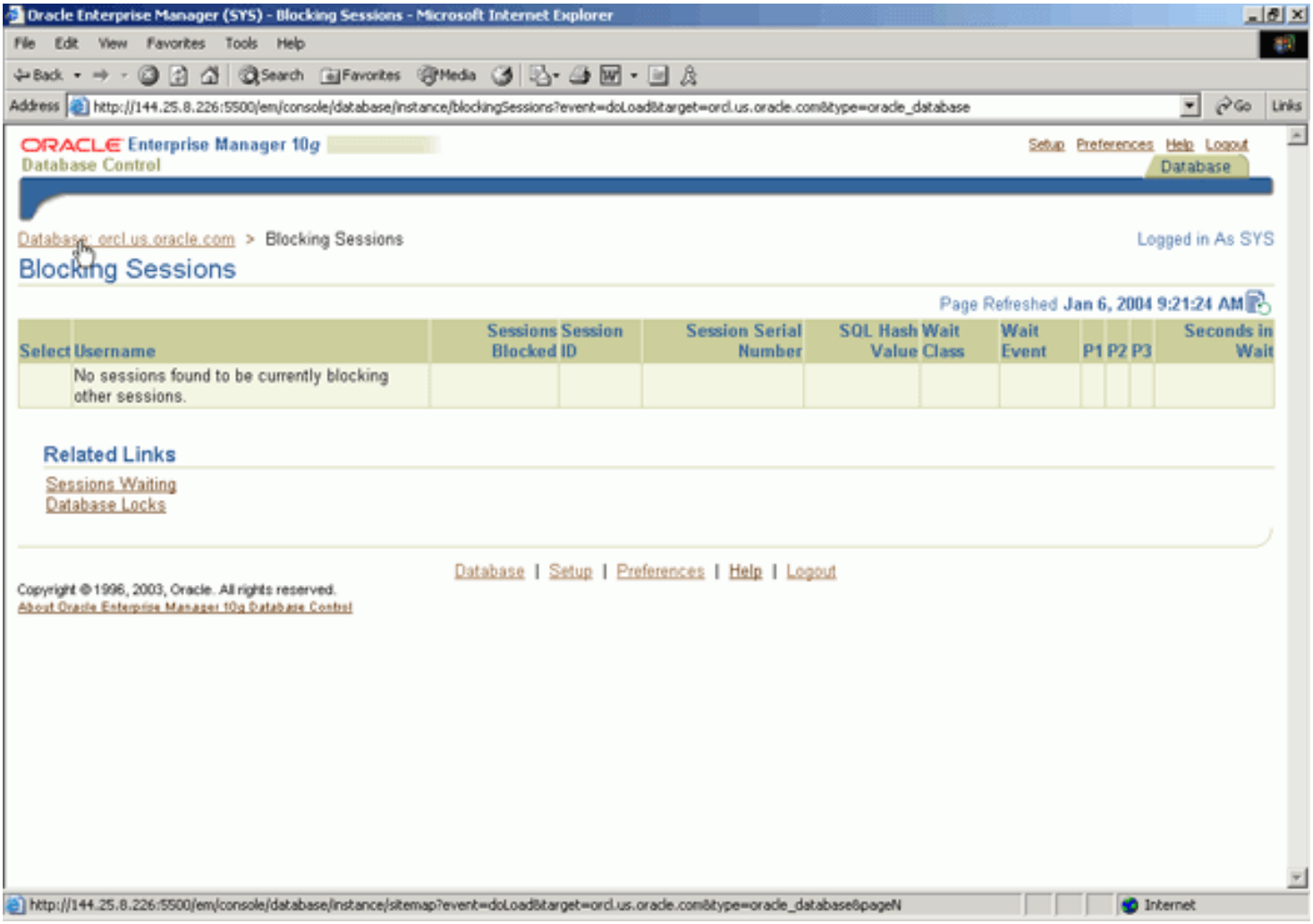
☐ **9.** Make sure the highest level HR is selected and click **Kill Session.**



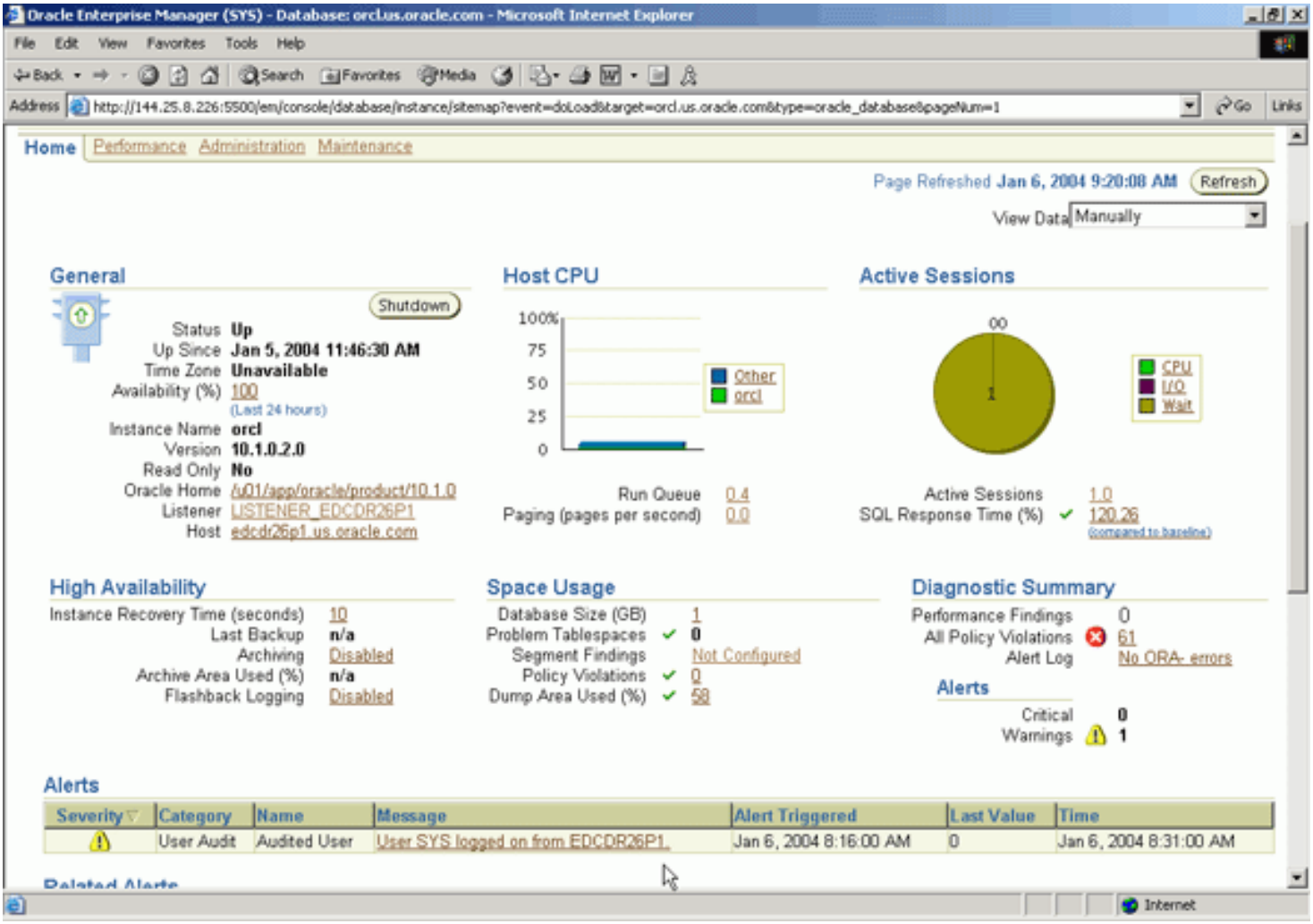
10. ☐ Click **Yes** to kill the session.



11. ☐ The session has been killed. Click the **Database** breadcrumb then click the **Home** tab.



☐ **12.** Notice the alert has disappeared.


Oracle Enterprise Manager (SYS) - Database: orcl.us.oracle.com - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Address http://144.25.8.226:5500/em/console/database/instance/sitemap?event=doLoad&target=orcl.us.oracle.com&type=oracle_database&pageNum=1
Home Performance Administration Maintenance
Page Refreshed Jan 6, 2004 9:20:08 AM Refresh
View Data Manually
General
Shutdown
Status Up
Up Since Jan 5, 2004 11:46:30 AM
Time Zone Unavailable
Availability (%) 100
(Last 24 hours)
Instance Name orcl
Version 10.1.0.2.0
Read Only No
Oracle Home /u01/app/oracle/product/10.1.0
Listener LISTENER_EDCDR26P1
Host edcdr26p1.us.oracle.com
Host CPU
100%
75
50
25
0
Other
orcl
Run Queue 0.4
Paging (pages per second) 0.0
Active Sessions
00
1
CPU
I/O
Wait
Active Sessions 1.0
SQL Response Time (%) 120.26
(compared to baseline)
High Availability
Instance Recovery Time (seconds) 10
Last Backup n/a
Archiving Disabled
Archive Area Used (%) n/a
Flashback Logging Disabled
Space Usage
Database Size (GB) 1
Problem Tablespaces 0
Segment Findings Not Configured
Policy Violations 0
Dump Area Used (%) 58
Diagnostic Summary
Performance Findings 0
All Policy Violations 61
Alert Log No ORA- errors
Alerts
Critical 0
Warnings 1
Alerts
Severity Category Name Message Alert Triggered Last Value Time
User Audit Audited User User SYS logged on from EDCDR26P1. Jan 6, 2004 8:16:00 AM 0 Jan 6, 2004 8:31:00 AM
Related Alerts
Internet