



Oracle Performance Issue Diagnostic Process



PROCESS

Define the problem statement

Clearly define the problem statement for the performance issue and the business impact.



Expected Response Time

Clearly define the performance expectation for the problem workload.



Application Function Name

Capture the name of the application function that requires diagnostics to be used by the technical and user teams.

EXAMPLE

“Opening the Account Enquiry screen takes longer than 30 seconds. This causes our agents to have customers waiting on the phone for at least 30 seconds to bring up their details. Many customers complain that dealing with us is too slow.”

“The Account Enquiry screen needs to open in less than 3 seconds.”

User/Role/Responsibility/Function. Detail on the specific application function that is the scope of the tuning exercise.

PROCESS

Incident Occurrence Time

Capture the exact time of occurrence.



Incident Frequency

Define the frequency of when the problem occurs.



Measure the problem

Run the relevant diagnostic script while the window is running.

EXAMPLE

"Between 09:30 - 09:35 every Tuesday morning."

"Every day", "Every Monday on the first week of the month."

"Extended SQL Trace."

Guidelines for Measuring the Problem

- Enable the trace information capture for just as long as what's needed.
- Make all attempts to **reproduce** the problem in a **test environment**.
- Attempt to **minimise additional workloads** if possible.
- Be prepared with **system metric collection** if available.

Capture Metrics & Specifications for Database SQL Trace

Database SQL Trace

It is important that the trace information captured is collected with the correct tools - incorrect collection will introduce errors into the diagnostic process.

Here are some guidelines to help determine which method to use:

- Each user of your application connects directly to the database server - use DBMS_MONITOR.SESSION_TRACE_ENABLE via session logon trigger.
- Your application has a web or application server that then connects to the database - use DBMS_MONITOR.SERV_MOD_ACT_TRACE_ENABLE (refer link here on using services if needed?)
- Your users reporting tool connects directly to the database server - use DBMS_MONITOR.SESSION_TRACE_ENABLE via session login trigger.
- Your application uses background or batch processing that users submit jobs to and wait for them to complete - use either DBMS_MONITOR.SESSION_TRACE_ENABLE via logon trigger or DBMS_MONITOR.SERV_MOD_ACT_TRACE_ENABLE.

Capture Metrics & Specifications for Formatted SQL Trace

Formatted SQL Trace

Once the performance problem has been traced we need to generate a readable report of what the database session was doing during this time.

Oracle provides a tool to interpret the “raw” trace file and generate a human readable report called **tkprof**.

When running tkprof on the database server keep a couple of things in mind:

- Do not initially sort the output of TKPROF - you want to analyze the sequence of activities along with how long they took.
- There may be more than one trace file to report on depending on how your application or users connect to the database.
- Validate that the correct period and activity has been traced.
- The summary counts at the bottom of the TKPROF file should give a good indication if the correct tracing has been performed.

Capture Metrics & Specifications for Waiters Output

Waiters Output

Output file from waiters.sql script run during the relevant window targeting the problem database session.

waiters.sql is specifically designed to provide a snapshot of a running database system at a given point in time.

waiters.sql can identify very quickly what is running on your database along with specific detailed information about any database session.

Waiters.sql does not modify or log any data or system information.

Waiters.sql requires privileged user access to run.

Free 30 Minute Consult

We have a very useful Oracle script we can run to very quickly identify what is running on your database along with specific detailed information about any database session.

It does not modify or log any data or system information.

To run this script on your system in a controlled setting, we are offering a free 30 minute consult.

Book Your Session Below

Just click the calendar below, fill out your details and choose a time that is convenient for you.



*Due to the thorough and time sensitive nature of the process, we have a strict cap of 9 spots per month Australia and IT Managers only**