

15

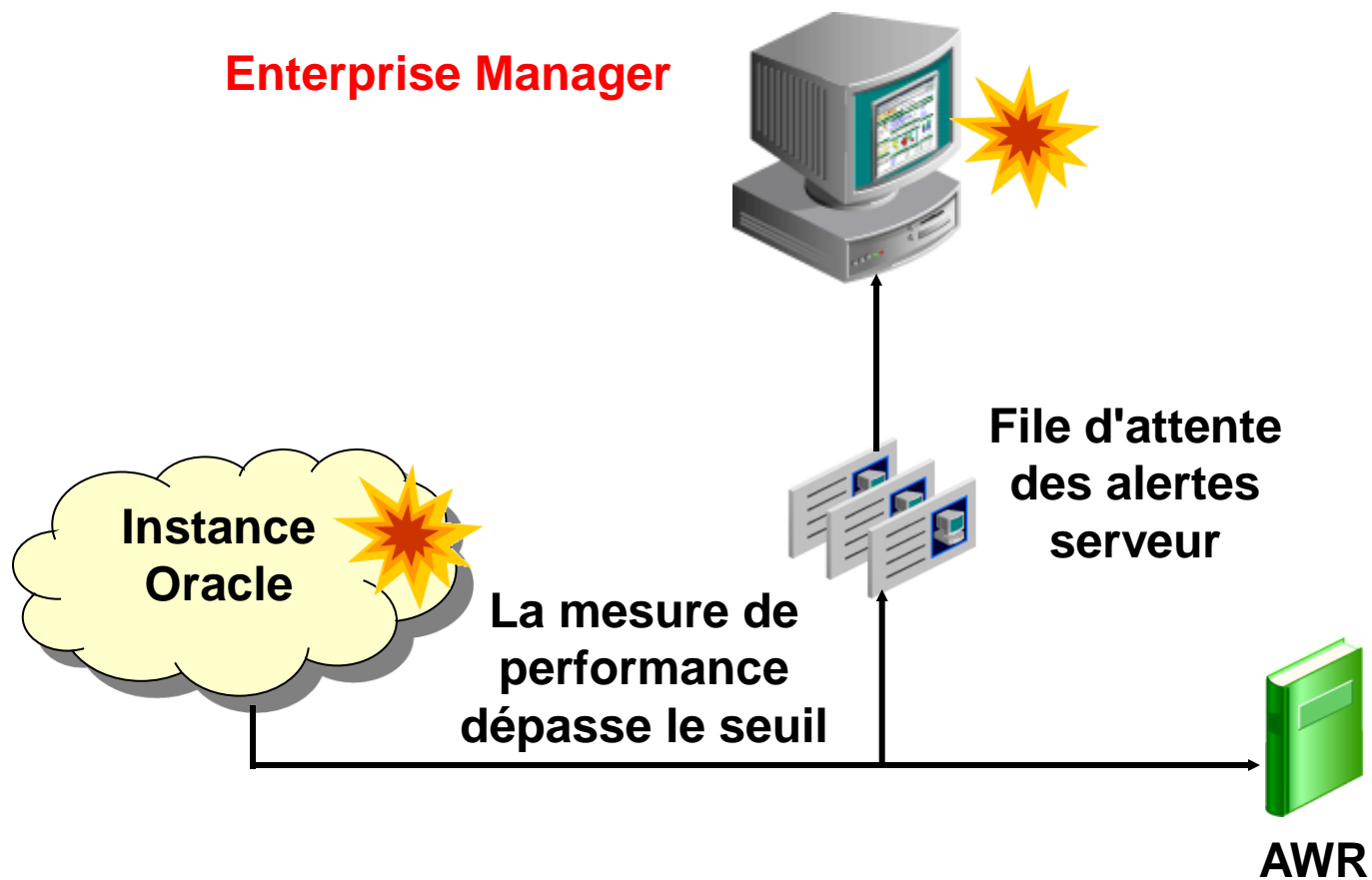
Maintenance proactive

Objectifs

A la fin de ce chapitre, vous pourrez :

- **définir des seuils d'avertissement et d'alerte critique**
- **collecter et utiliser des mesures de performance de référence**
- **utiliser les fonctions de conseil de réglage et de diagnostic**
- **utiliser ADDM (Automatic Database Diagnostic Monitor)**
- **gérer le référentiel AWR (Automatic Workload Repository)**

Alertes générées par le serveur



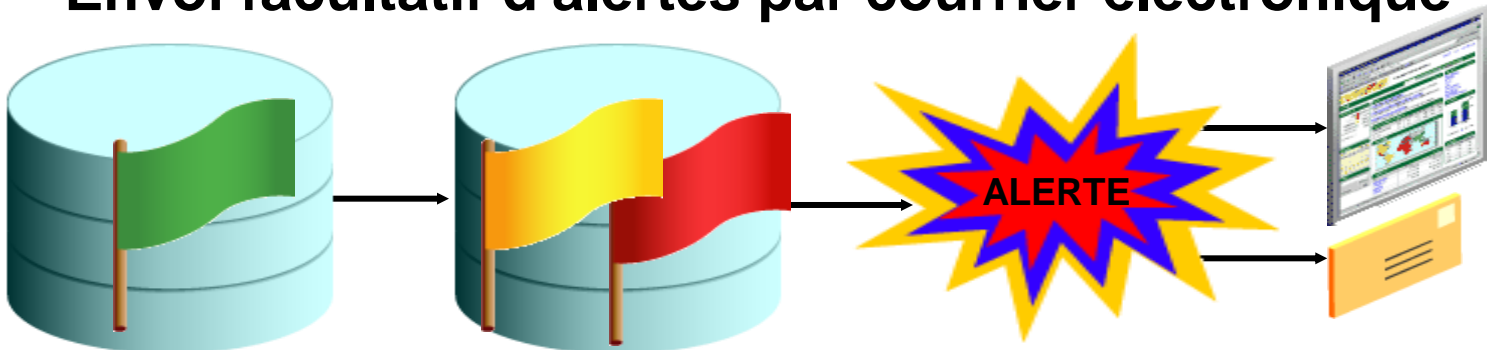
Seuils

Deux seuils peuvent être affectés à chaque mesure de performance :

- Avertissement
- Critique

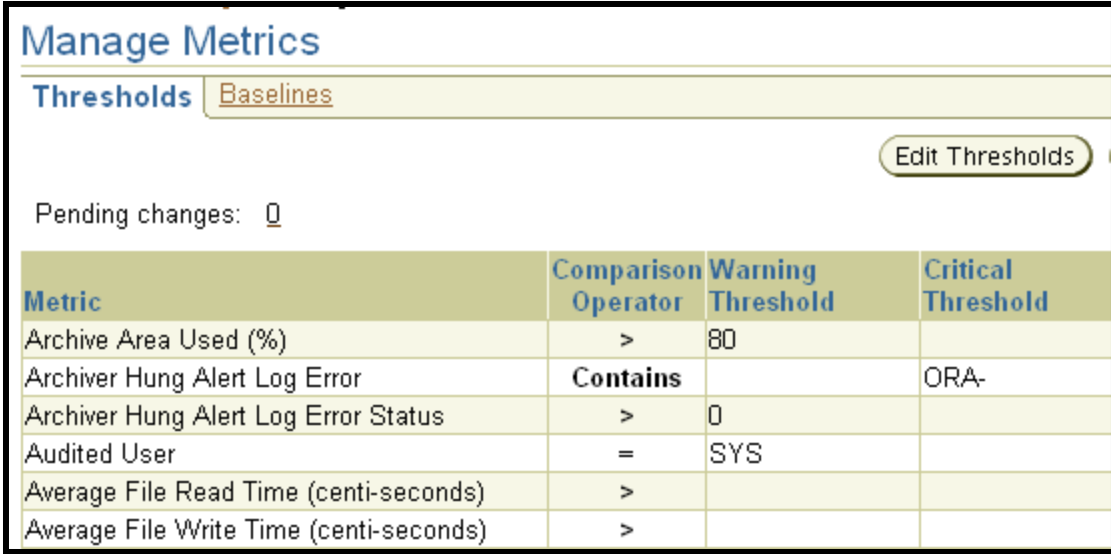
Lorsque les seuils sont atteints, des alertes sont déclenchées et signalées comme suit :

- Des notifications apparaissent dans la région Alerts de la page d'accueil Database Control
- Envoi facultatif d'alertes par courrier électronique



Définir des seuils

La page de propriétés Manage Metrics d'Enterprise Manager permet l'accès aux paramètres de seuil.



Manage Metrics

Thresholds Baselines

Edit Thresholds

Pending changes: 0

Metric	Comparison Operator	Warning Threshold	Critical Threshold
Archive Area Used (%)	>	80	
Archiver Hung Alert Log Error	Contains		ORA-
Archiver Hung Alert Log Error Status	>	0	
Audited User	=	SYS	
Average File Read Time (centi-seconds)	>		
Average File Write Time (centi-seconds)	>		


Mesures de référence

Les mesures de référence fournissent des recommandations concernant les seuils, en fonction des données réelles de performance.

Create Metric Baseline

Create a metric baseline by specifying the date whose performance metric data will be used as a basis to calculate thresholds. If you choose, Warning and Critical thresholds will be calculated based on the percentages specified. Cancel OK

* Name

* Date 
(Specify a date where performance was acceptable for this target.)
(example: Dec 15, 2003)

Hour of day AM PM

Warning Percentage

Critical Percentage
(The Warning and Critical percentages will be used against metric baseline Low and High Values to calculate metric thresholds. See help for details.)

Go

Utiliser des mesures de référence

Pour activer une mesure de référence stockée :

Database: dba10g > Manage Metrics > Edit Thresholds

Edit Thresholds

Use these metrics to monitor conditions as they reach their critical and warning thresholds. Alerts are generated when thresholds are reached. Change the thresholds as required.

TIP A Response Action is a user-specified command or script that is executed automatically by the Management Agent when the metric reaches the Warning or Critical state. The command or script specified must include a fully qualified path and must be accessible to the Management Agent.

Related Link [Response to Target Down](#)

1. Cliquez sur **Copy Thresholds From Baseline**.
2. Sélectionnez la mesure de référence appropriée.

Database: dba10g > Manage Metrics > Edit Thresholds > Copy Thresholds From Baseline

Copy Thresholds From Baseline

Select the baseline from which to copy thresholds.

Select	Name <input type="text"/>	Date
<input checked="" type="radio"/>	Mid-day Performance	19-NOV-2003 14:00:00

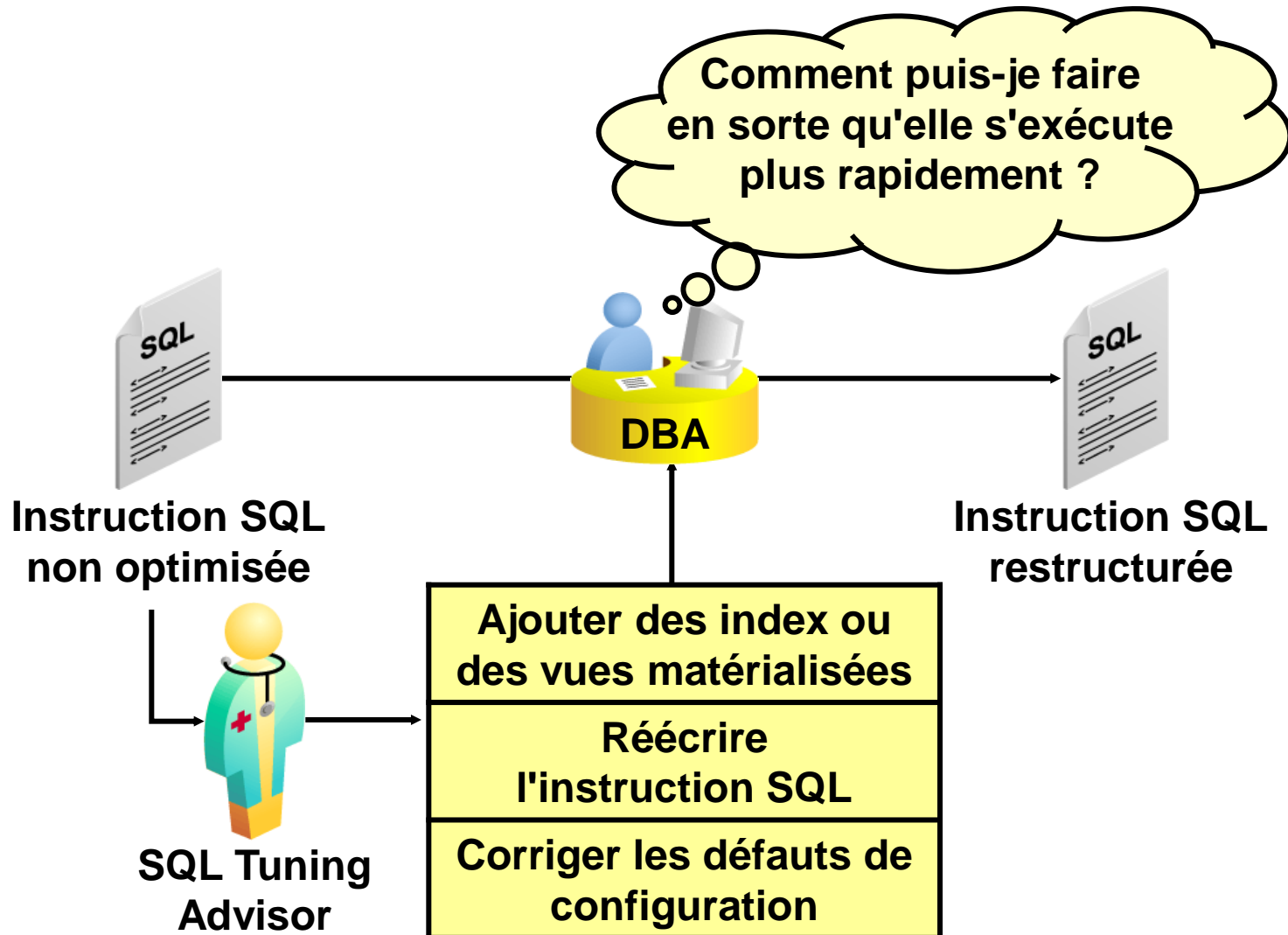
Fonctions de conseil de réglage et de diagnostic

Oracle Database 10g offre diverses fonctions de conseil de réglage et de diagnostic :

- **ADDM (Automatic Database Diagnostic Monitor)**
- **SQL Tuning Advisor et Access Advisor**
- **Memory Advisor**
- **Mean-Time-To-Recover (MTTR) Advisor**
- **Segment Advisor**
- **Undo Management Advisor**



SQL Tuning Advisor et Access Advisor

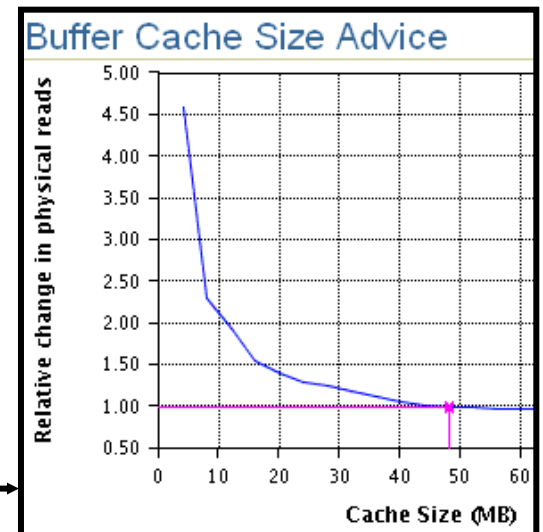
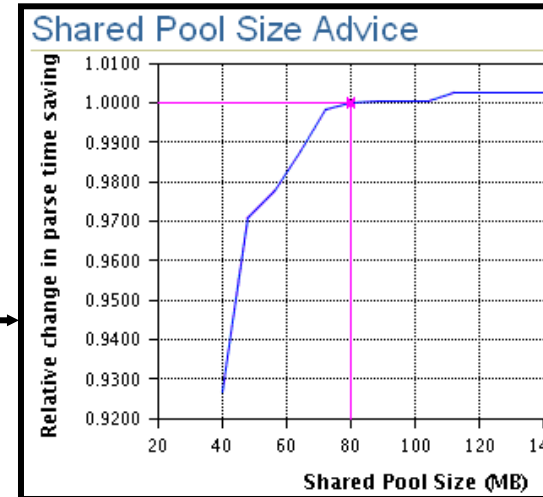



Memory Advisor

- Zone de mémoire partagée
- Cache de tampons de la base de données
- Mémoire PGA

Automatic Shared Memory Management **Disabled**

Shared Pool	<input type="text" value="80"/>	MB	<input type="button" value="Advice"/>
Buffer Cache	<input type="text" value="48"/>	MB	<input type="button" value="Advice"/>
Large Pool	<input type="text" value="8"/>	MB	
Java Pool	<input type="text" value="48"/>	MB	
Other (MB)	23		



Segment Advisor

- **Tablespace entier**
- **Objets de schéma individuels**

Segment Advisor

You can get advice on shrinking segments for individual schema objects or entire tablespaces. Cancel Continue

Tablespaces
 Schema Objects

Advisor Mode

Complete Analysis of All Segments (Comprehensive)
The advisor will sample selected objects as needed, and generate more complete recommendations. The analysis may take a long time to finish and will be scheduled as a job.

Analysis Based on Available Statistics (Limited)
The analysis will finish within 30 seconds. Due to the time limitation, the advisor may not be able to finishing evaluating all segments.

Overview

The segment advisor determines whether objects have unused space that can be released, taking estimated future space requirements into consideration.

Segment Advisor: Review

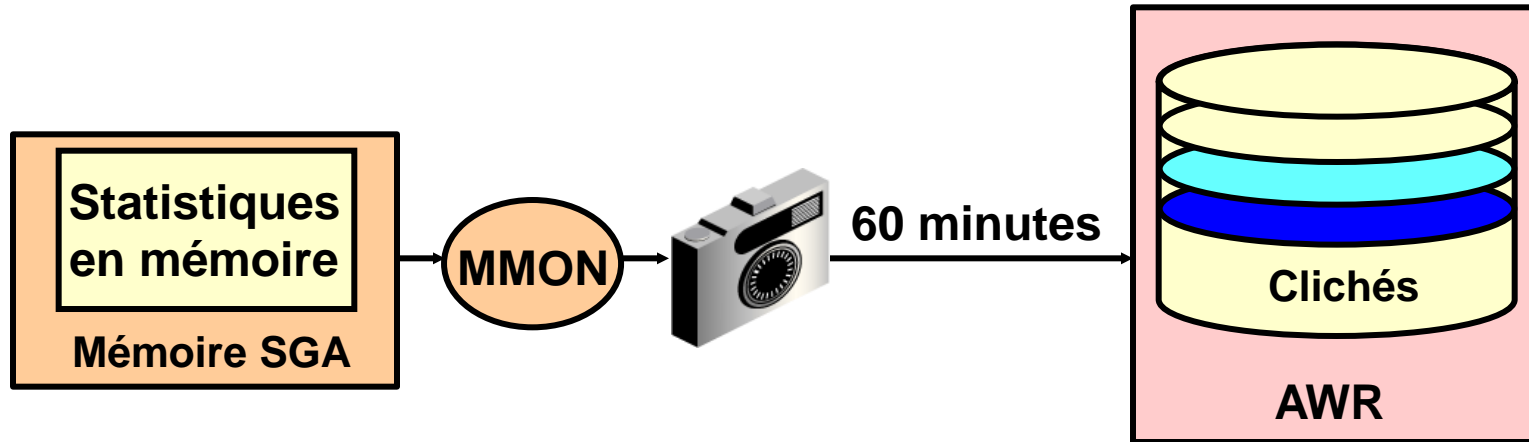
Database **dba10g** Cancel Show SQL Back Step 4 of 4 Submit

Task Name **SHRINK_2958425**
Task Description **Get shrink advice based on object growth trend**
Advisor Mode **Complete Analysis of All Segments (Comprehensive)**
Time Limit for Analysis (secs)
Advisory Results Retention (days)

Selected Objects

Tablespace	Schema	Segment Name	Partition Name	Type
EXAMPLE	HR	COUNTRIES		Table

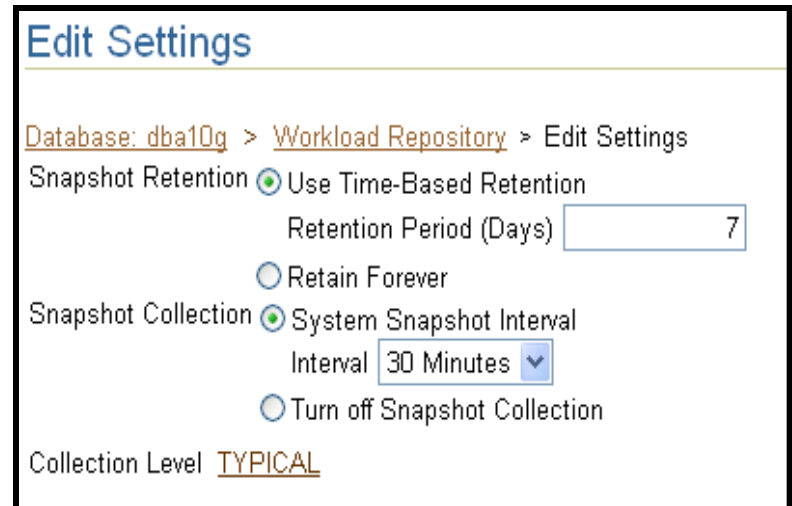
AWR (Automatic Workload Repository)



- **Référentiel intégré pour les informations relatives aux performances**
- **Clichés des mesures de performance de la base de données pris toutes les 60 minutes et conservés pendant 7 jours**
- **Systeme de base de toutes les fonctions de gestion automatique**

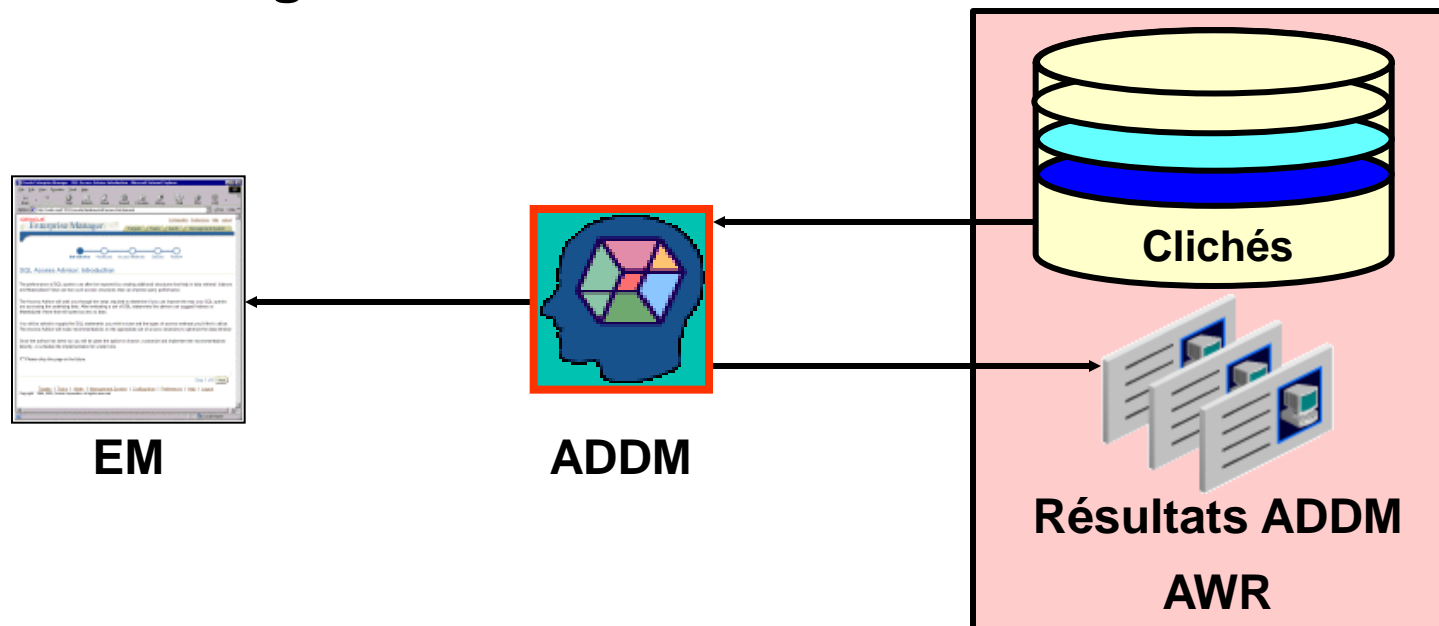
Gérer le référentiel AWR

- **Période de conservation**
 - 7 jours par défaut
 - Tenez compte des besoins en termes de stockage
- **Intervalle de collecte**
 - 60 minutes par défaut
 - Tenez compte des besoins en termes de stockage et de l'impact sur les performances
- **Niveau de collecte**
 - Basic (désactive la plupart des fonctionnalités ADDM)
 - Typical (recommandé)
 - All (ajoute aux clichés des informations complémentaires de réglage des instructions SQL)



ADDM (Automatic Database Diagnostic Monitor)

- Exécution après chaque cliché AWR
- Surveillance de l'instance et détection des goulets d'étranglement
- Stockage des résultats dans le référentiel AWR

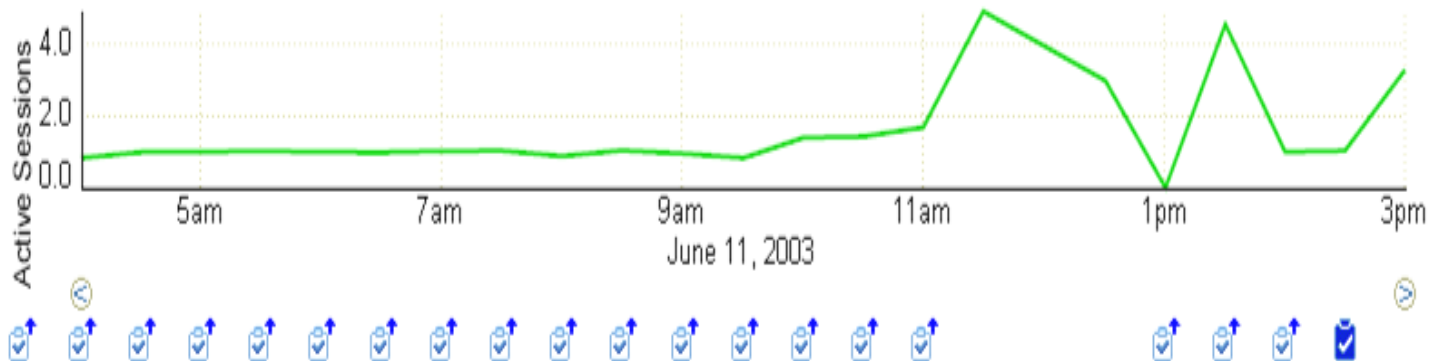


Résultats ADDM

Choose ADDM Task

Create ADDM Task...

Select the ADDM Task for which you would like to see details using the icons. Session activity is shown in the graph to help you.



ADDM Task Detail

Database Time (minutes) **94.33** Analysis Start Time **Jun 11, 2003 2:30:14 PM** Analysis Duration (minutes) **29.85**

Finding	Impact (%)	Recommendation Summary
<u>Read and write contention on database blocks was consuming significant database time.</u>	16	SCHEMA 3
<u>Contention on buffer cache latches was consuming significant database time.</u>	2	SQL TUNE 2

Recommandations ADDM

Host: usunrdi20 > Database: mgmt10i_usunrdi20 > Advisor Central > ADDM Task > ADDM Finding Details

ADDM Finding Details

Analysis Start Time Jun 10, 2003 9:30:30 AM
Analysis Duration (minutes) 29.75
Finding Read and write contention on database blocks was consuming significant database time.
Database Time (minutes) 274.16
Impact (minutes) 98.23
Impact (%) 35.83

Recommendations

[Show All Details](#) | [Hide All Details](#)

Details	Category	Benefit (minutes) ▾
▼ Hide	SCHEMA	57.56
Action	Consider using ORACLE's recommended solution of bitmapped segments in a locally managed tablespace for the tablespace "USERS" containing the database object "SCOTT.TOTO" with object id 41560.	
▼ Hide	SCHEMA	57.56
Action	Consider partitioning "SCOTT.TOTO" with object id 41560 in a manner that will evenly distribute concurrent DML across multiple partitions.	
▼ Hide	SCHEMA	57.56
Action	A temporary solution may be achieved by increasing the number of free lists in segment "SCOTT.TOTO".	

Synthèse

Ce chapitre vous a permis d'apprendre à :

- **définir des seuils d'avertissement et d'alerte critique**
- **collecter et utiliser des mesures de performance de référence**
- **utiliser les fonctions de conseil de réglage et de diagnostic**
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Exercice 15 : Maintenance proactive

Cet exercice porte sur la configuration de la base de données pour la maintenance proactive.