

Centralize Your Automatic Workload Repository Data for Better Analysis



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Introduction

- Michael Messina
- Management Consultant with TUSC
- Background includes Performance Tuning, High Availability and Disaster Recovery
- Using Oracle for approximately 17 years
- Oracle Ace
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Challenges

- Comparing and Analyzing AWR Data Between Databases
- Single point of entry for AWR data in the Enterprise
- Maintaining AWR Snapshot Data locally for Long Periods of Time
- Comparing and Analyzing AWR Data Between Time Periods Stretched over months and/or years
- Maintaining AWR Snapshot Data locally for Long Periods of Time



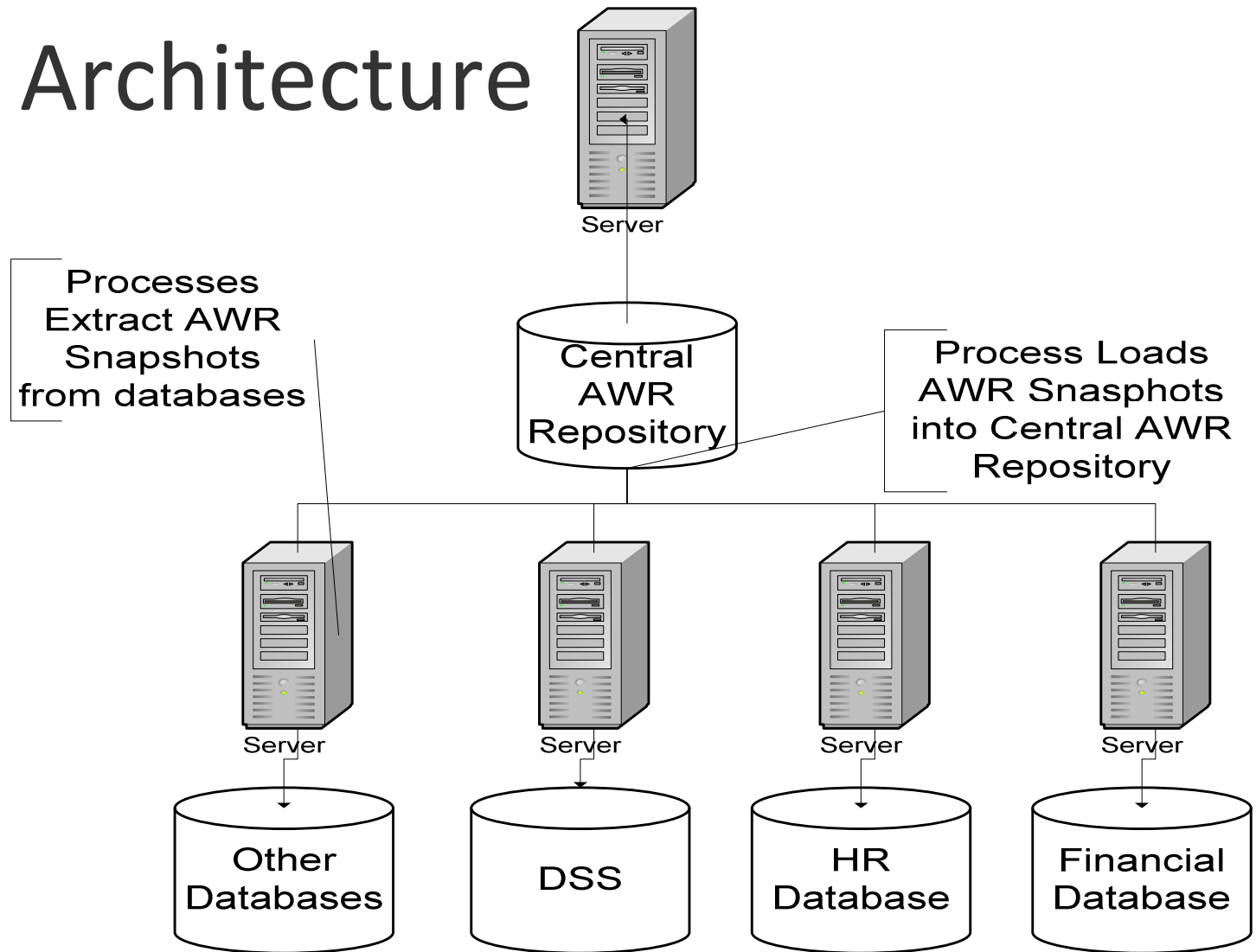


Agenda

- ✓ Central AWR Architecture
- ✓ Creating a Central AWR Repository
- ✓ Extracting AWR Data
- ✓ Loading AWR Data into Central AWR Repository
- ✓ Maintaining Central AWR Snapshots
- ✓ Using Central AWR Repository for Analysis
- ✓ Reports from Central AWR Repository
- ✓ Database Versions Tested
- ✓ Demo Application Express Front End Example
- ✓ Questions



Architecture





Creating Central AWR Repository

- Requires Oracle Database 10g or Above
 - 11g Recommended
- Local file system on each node with a database for AWR Extracts.
- Local file system on the node that houses the Central AWR Repository Database.
- Network Connectivity between the Central AWR database and the databases within your enterprise.
- Central AWR Processes





Extracting AWR Data

- Database Link
- Oracle Database Directory
 - CREATE DIRECTORY
- Stored Procedure
 - Utilizes Oracle Packaged Procedure
 - dbms_swrf_internal
 - Extracts using data pump
 - Scheduled Procedure execution using DBMS_SCHEDULER
- Extracts to a dump file on a local file system
- Transfers dump file to Central AWR Loading Location
 - DBMS_FILE_TRANSFER





Loading AWR Data into Central AWR Repository

- Oracle Directory for Central AWR load file space
 - CREATE DIRECTORY
- Stored Procedure
 - Utilizes DataPump dump files from extract procedure
 - Utilizes Internal Oracle Packages
 - DBMS_BACKUP_RESTORE
 - UTL_FILE
 - dbms_swrf_internal
- Loads files found place in the Central AWR load file space





Maintaining Central AWR Snapshots

- Determine criteria for keeping AWR Snapshot data globally
 - Easily Customized to control for each database
 - Based on # of days to keep
- PL/SQL Stored Procedure
 - Utilizes existing AWR Snapshot Purge Procedure
 - dbms_workload_repository
- Scheduled via Oracle Scheduler
 - DBMS_SCHEDULER





Using Central AWR Repository for Analysis

- Keep multiple years worth of AWR Snapshot Data
- Run AWR Reports for many snapshot periods over longer periods of time.
- Run AWR Compare Reports, week over week, month over month, Quarter over Quarter or Year over Year.
- Compare AWR snapshot periods between 2 databases





Reports from Central AWR Repository

AWR Report

```
SQL> @?\rdbms\admin\awrrpti.sql
```

Accept DBID to focus on database to run report for





Reports from Central AWR Repository

AWR Compare Report AWR

SQL> @\$?/rdbms/admin/awrddrpi.sql

Accepts 2 DBIDs for comparison, can be same DBID for 2 Snapshot periods to be compared or 2 different DBIDs to compare 2 snapshot periods from 2 different databases.





Database Versions Tested

- Database 10gR2
- Database 11gR1
- Database 11gR2





Demo Application Express Front End Example

Central AWR Login - Windows Internet Explorer

http://localhost:8080/apex/f?p=103:101:102055000819108

Links: LinkedIn My Oracle Blog Oracle Community TUSC Home TUSC Intranet TUSC Knowledgebase TUSC TRS TUSC SSL VPN TUSC Travel System

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Central AWR Login

Central Automatic Workload Repository Interface Application

nobody [Logout](#)

User Name

Password

Done

Internet 100%

Questions/Discussion

THANK YOU



Any Further Questions?