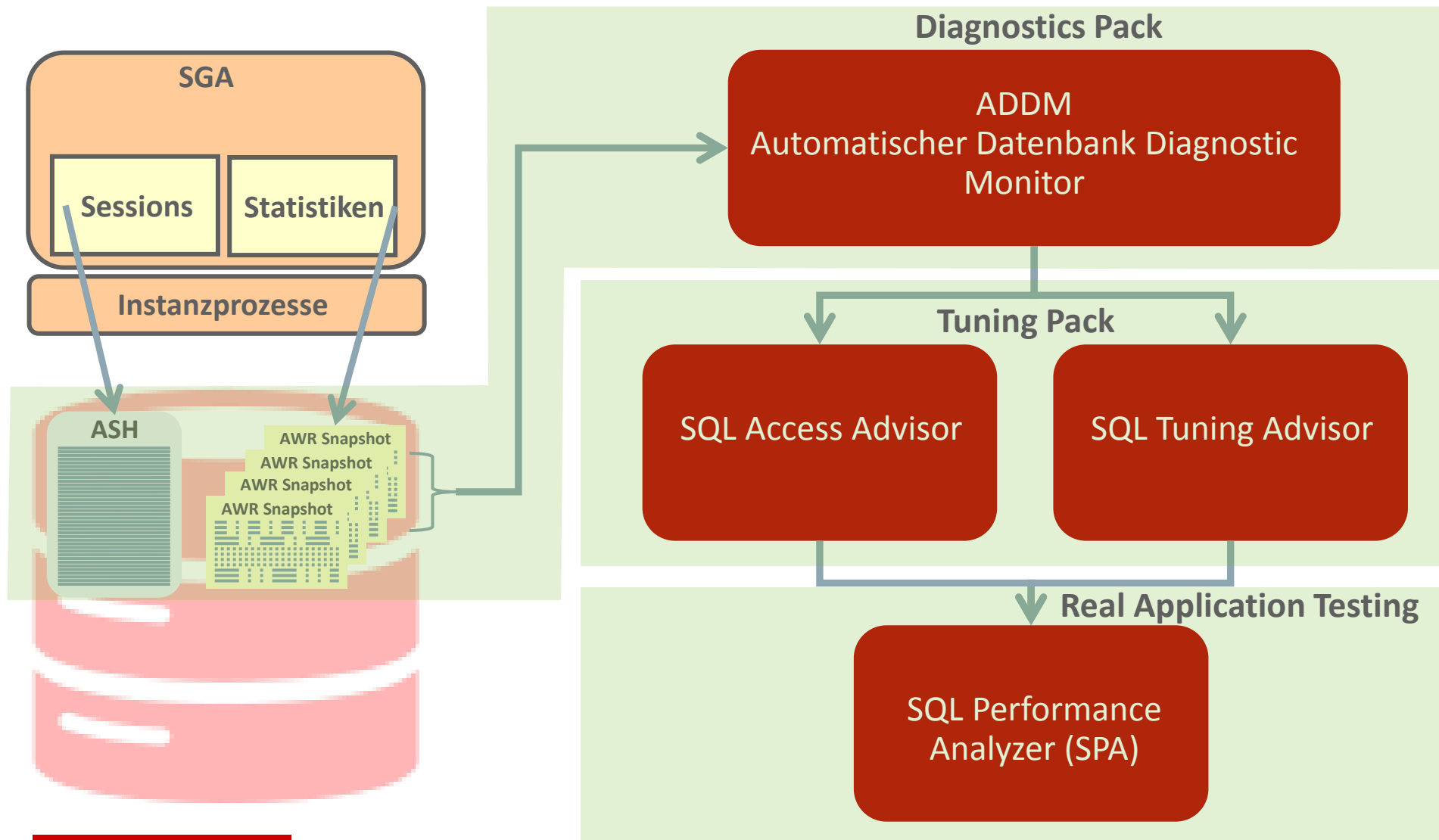


AWR Daten über Jahre speichern und analysieren

Ralf Durben
ORACLE Deutschland B.V. & Co. KG



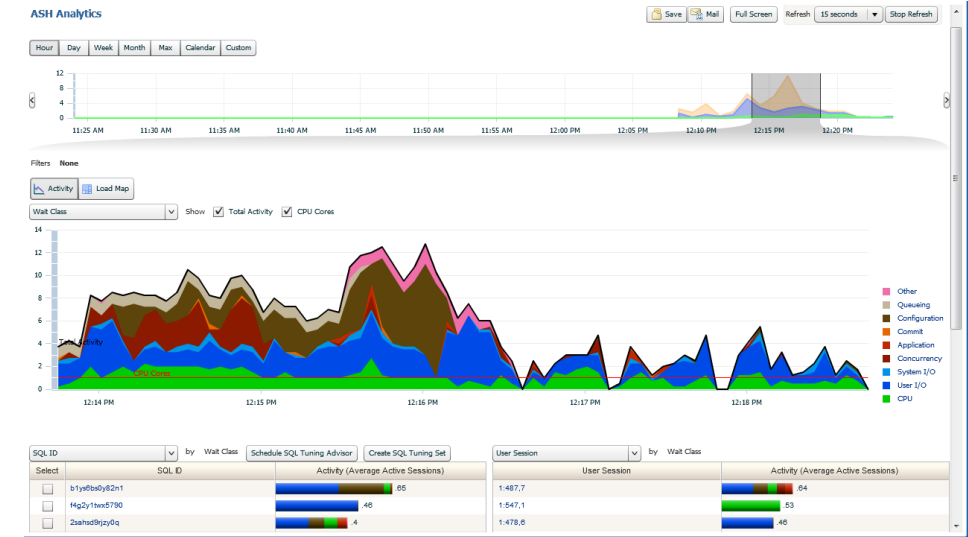
Ganzheitliches Konzept von Diagnose und Tuning



Die Basis: Diagnostic Daten

Active Session History

- Erfassungsintervall: 1 Sekunde
- Aktive (Non-Idle) Datenbanksitzungen
 - Sessioninformationen
 - SQL Statements
 - Ausführungspläne
 - Zugriffszeiten
- Speicherdauer in Produktivdatenbank - Default: 8 Tage
- **Speicherdauer in AWR Warehouse – Bis zu unbegrenzt**



Die Basis: Diagnostic Daten

Active Workload Repository

- Erfassungsintervall:
 - Default: 60 Minuten
 - Minimum: 10 Minuten
- Datenbankinstanz Statistiken
 - DB Time
 - SGA Nutzung
 - Zugriffswege und -zeiten
 - ...
- Speicherdauer in Produktivdatenbank - Default: 8 Tage
- **Speicherdauer in AWR Warehouse – Bis zu unbegrenzt**

Automatic Workload Repository

The Automatic Workload Repository is used for storing database statistics that are used for performance tuning.

General

Snapshot Retention (days) 8
Snapshot Interval (minutes) 60
Collection Level TYPICAL
Next Snapshot Capture Time Jan 29, 2015 1:18:15 PM

Edit

Manage Snapshots and Baselines

Snapshots 203
Baselines 1
Latest Snapshot Time Jan 29, 2015 12:18:15 PM
Earliest Snapshot Time Nov 2, 2014 1:00:08 AM

Run AWR Report

Aktivierung des AWR

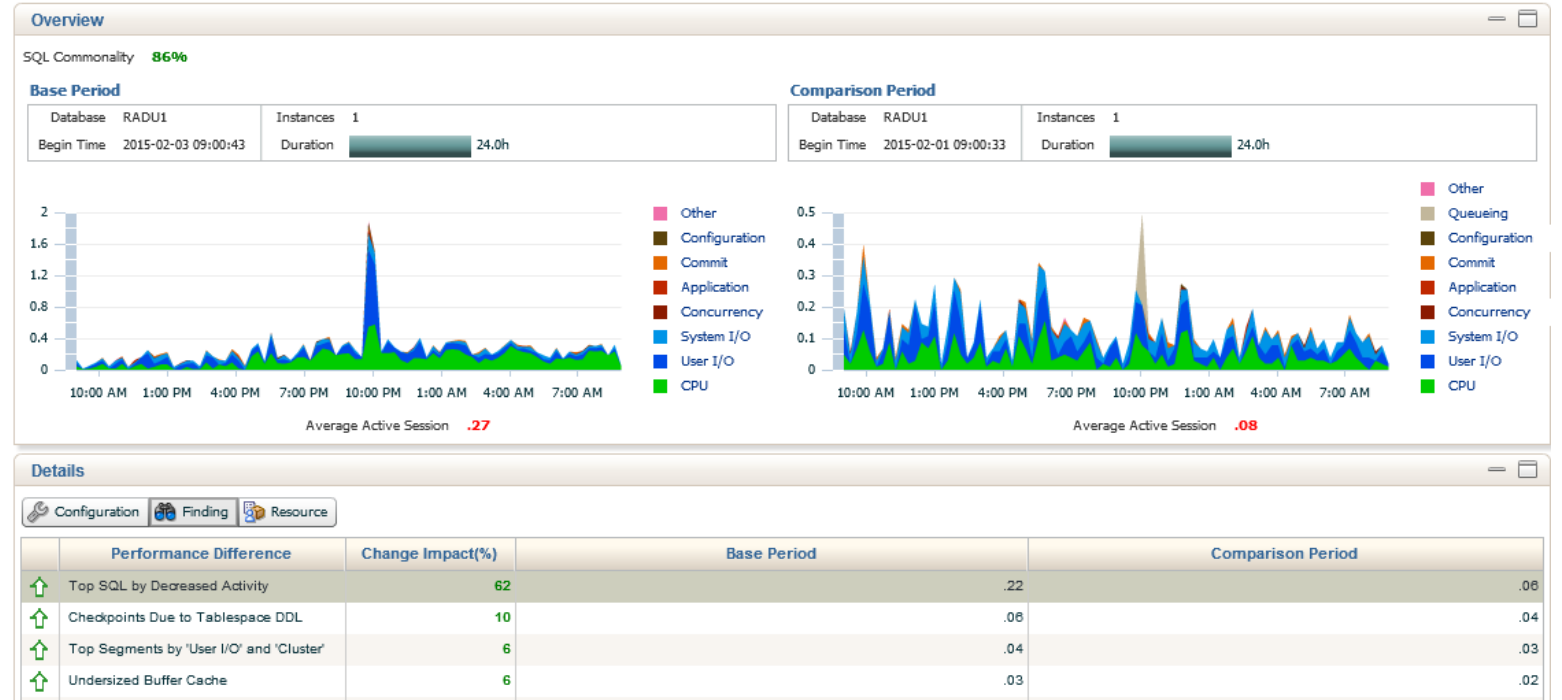
- Instanzparameter
 - STATISTICS_LEVEL = TYPICAL | ALL
 - Default: TYPICAL
 - CONTROL_MANAGEMENT_PACK_ACCESS = DIAGNOSTIC [+TUNING]
 - Default: DIAGNOSTIC+TUNING

Compare Period ADDM

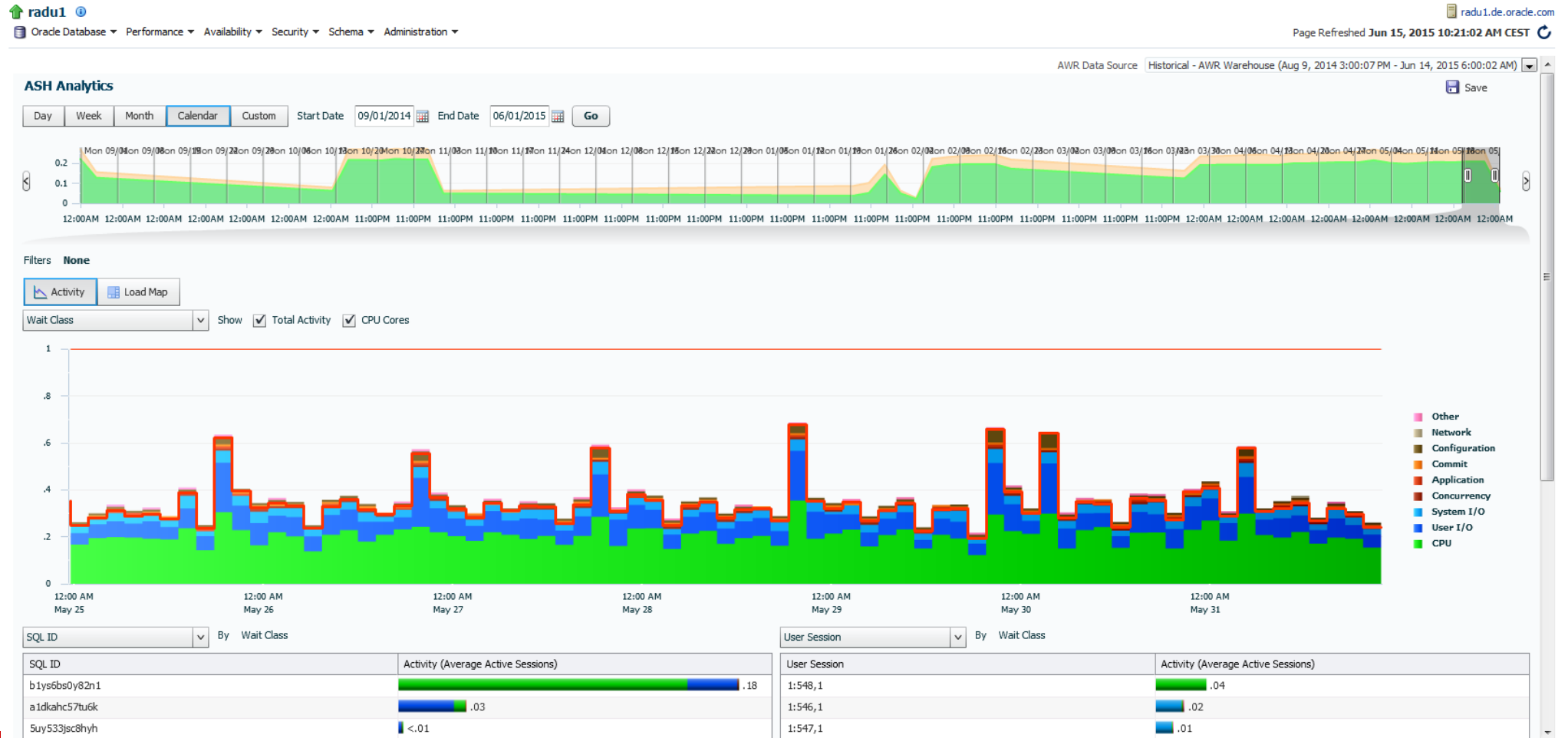
Vergleich zweier Zeiträume

- Vergleichbarkeit der Last
- Unterschiede
 - Performance
 - Ressourcennutzung
- Auch im AWR Warehouse über große Zeiträume und Distanzen

Compare Period ADDM Report



AWR Daten über lange Zeiträume analysieren



Eigenes AWR Datenrepository

- Separate Datenbank
- Einzelne Datenbanken als Datenquelle

Automatic Workload Repository Warehouse Page Refreshed Jun 15, 2015 10:10:28 AM CEST

6709 MB
of AWR Snapshots Uploaded to AWR Warehouse

2 DBs
Contribute Snapshots to AWR Warehouse

All Databases uploading AWR data as scheduled and there are no Incidents.

Recent AWR Snapshot Uploads into AWR Warehouse

Databases Uploading AWR Snapshots

Actions View Add Remove View Errors Privileges... ASH Analytics AWR Report Compare Period Performance Home

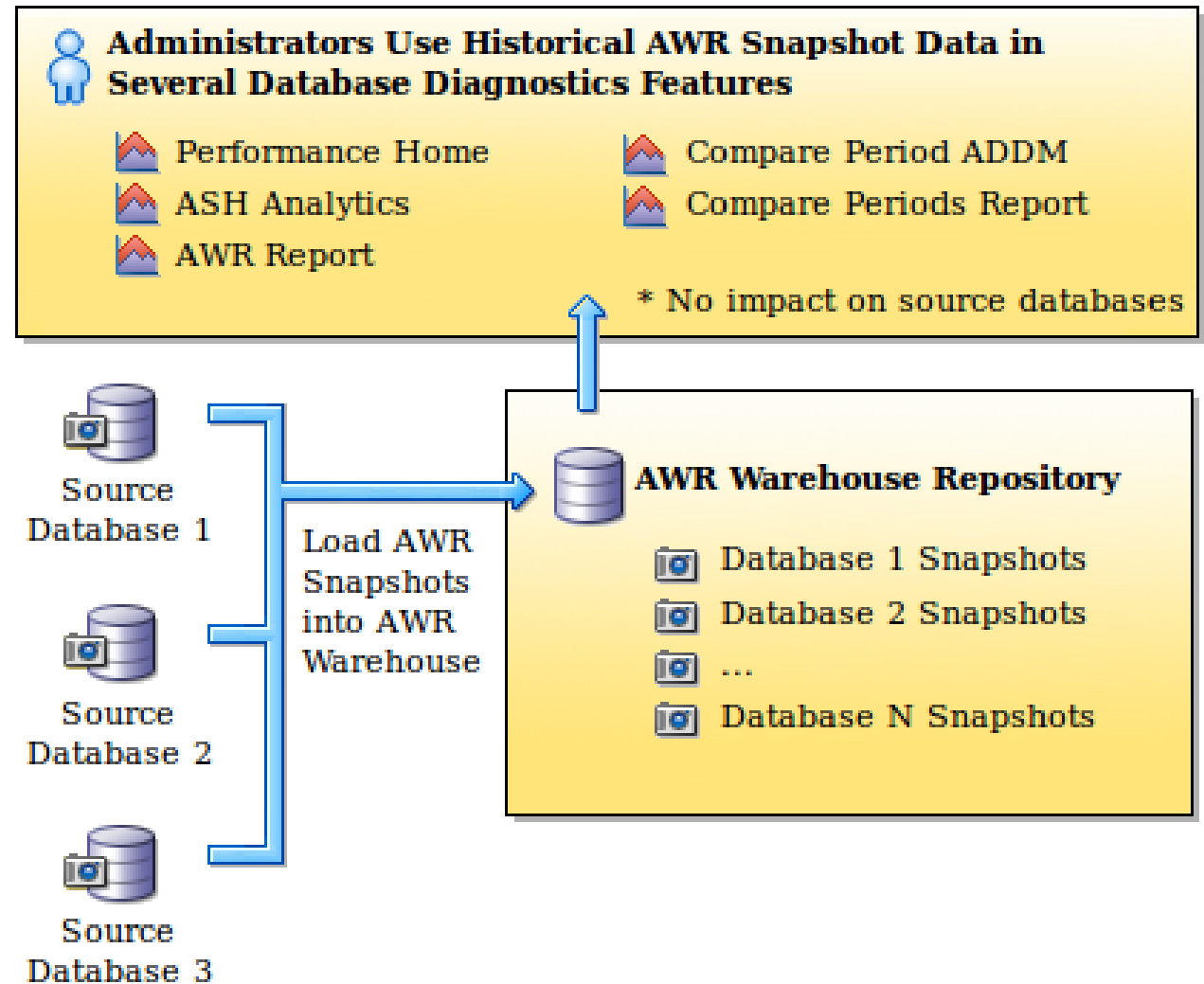
Target Name	Target Type	DB Name	Version	Owner	Snapshot Upload Enabled	Snapshots		Days	Count
						Oldest	Newest		
us_sccloud036_noncdb	Database Instance	ORCL	12.1.0.2.0	USCHWINN	✓	2014-08-10 03:00:45.0 +2:00	2015-06-14 17:00:02.758 +2:00	308	2342
radu1	Database Instance	RADU1	11.1.0.7.0	SYSMAN	✓	2014-08-09 15:10:08.769 +2:00	2015-06-14 06:00:02.638 +2:00	308	5733



AWR Warehouse

Architektur

- Alle AWR Analysen auch für AWR Warehouse
- Datenquelle (DB, AWR Warehouse) wird automatisch gewählt



Ab 12cR4 (mit Patch)

https://apex.oracle.com/pls/apex/GERMAN_COMMUNITIES.SHOW_TIPP?P_ID=3141

The screenshot shows the Oracle APEX interface. At the top, there is a navigation bar with 'Enterprise', 'Targets', 'Favorites', and 'History'. Below this is the 'Databases' section with sub-menus for 'Performance', 'Availability', 'Security', and 'Schema'. The 'Performance' menu is open, showing options: 'SQL Performance Analyzer', 'Run SQL...' (highlighted), and 'Database Replay'. Below the menu is a search bar with 'Find Name' and a search button. At the bottom, there are controls for 'View', 'Add', 'Remove', and 'Configure', and a table with one entry: 'emrep'.

The screenshot shows the Oracle APEX interface. At the top, there is a navigation bar with 'Enterprise', 'Targets', 'Favorites', and 'History'. Below this is the 'Databases' section with sub-menus for 'Performance', 'Availability', 'Security', and 'Schema'. The 'Performance' menu is open, showing options: 'SQL Performance Analyzer', 'Run SQL...', 'AWR Warehouse' (highlighted), and 'Database Replay'. Below the menu is a search bar with 'Find Name' and a search button. At the bottom, there are controls for 'View', 'Add', 'Remove', and 'Configure', and a table with one entry: 'emrep'.

Konfiguration

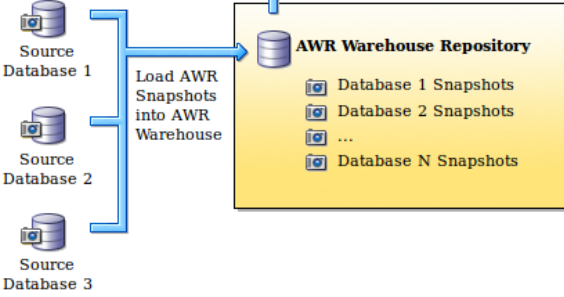
Collecting and Distributing Snapshots with AWR Warehouse



Administrators Use Historical AWR Snapshot Data in Several Database Diagnostics Features

- Performance Home
- ASH Analytics
- AWR Report
- Compare Period ADDM
- Compare Periods Report

* No impact on source databases



AWR Warehouse Repository Configuration

Status Not Configured [Configure](#)

AWR Warehouse Database

Configure AWR Warehouse Repository

- Name
- Version
- Character Set
- Host
- Port
- SID / Service Name

AWR Storage

- Space Used(MB)
- Space Available(MB)
- Retention Period
- Snapshot Upload Interval

Space Used (%)

0



Konfiguration

Repository

- Datenbank-Version
 - $\geq 12.1.0.2$
 - 11.2.0.4 (Non-Exadata) mit Patch 18547891
 - 11.2.0.4.4 (Exadata) mit Patch 18547891
- Eigene Datenbank
- Restricted Use Lizenz

AWR Warehouse Configuration

Repository

* Database

Database Credentials

Credential Preferred Named New

Credential Name

Credential Details

Attribute	Value
Username	sys
Password	*****
Role	sysdba

[More Details](#)

Host Credentials

Credential Preferred Named New

Credential Name

Credential Details

Attribute	Value
UserName	oracle
Password	*****

[More Details](#)

Konfiguration

Speicherdauer

AWR Warehouse Configuration ✕

AWR Warehouse Snapshot Management

Snapshot Retention Period Forever
 Limited Period

Years 1 2 3 4 5 6 7 8 9 10

Snapshot Upload Interval Hours

Snapshot Import Files Staging Location 🔍

Konfiguration

Quelldatenbanken hinzufügen

Automatic Workload Repository Warehouse

Page Refreshed Aug 15, 2014 11:23:53 AM CEST

229 MB
of AWR Snapshots Uploaded to AWR Warehouse

3 DBs
Contribute Snapshots to AWR Warehouse

1 DBs
Without Recent Uploads

There are no Incidents

Recent AWR Snapshot Uploads into AWR Warehouse

Date	Upload Size (MB)
8/6/14 12:00 AM	0
8/7/14 12:00 AM	~95
8/10/14 12:00 AM	~15
8/11/14 12:00 AM	~30
8/12/14 12:00 AM	~15
8/13/14 12:00 AM	~25
8/14/14 12:00 AM	~55

Databases Uploading AWR Snapshots

Actions View Add Remove View Errors Privileges... ASH Analytics AWR Report Compare Period Performance Home

Target Name	Target Type	DB Name	Version	Owner	Snapshot Upload Enabled	Snapshots		Days	Count
						Oldest	Newest		
radu151	Database Instance	RADU151	11.2.0.4.0	SYSMAN	✓	2014-08-07 20:44:41.066 +2:00	2014-08-15 00:00:11.538 +2:00	7	45
radu161	Database Instance	RADU161	12.1.0.1.0	SYSMAN	✓	2014-07-31 15:41:19.29 +2:00	2014-08-14 15:00:31.9 +2:00	13	63
RADU163C	Database Instance	RADU163C	12.1.0.2.0	SYSMAN	✓	2014-07-31 23:00:08.745 +2:00	2014-08-07 20:00:13.58 +2:00	6	42

Konfiguration

Quelldatenbanken hinzufügen

- Agenten
 - 12cR4+ mit Patch 1917606
- DB-Benutzer für Named Credential
 - grant EXECUTE on sys.dbms_swrf_internal to <user>;

Search and Select: Database

Search

Target Type: All

Target Name:

On Host:

Configuration Search: <No configuration search selected>

Search

Target Name	Target Type	On Host	Version	Status
radu152	Database Instance	serv152.example...	11.2.0.4.0	
radu154	Database Instance	serv154.example.cor	12.1.0.2.0	
radu162	Database Instance	serv162.example...	12.1.0.2.0	
RADU163S1C	Database Instance	serv164.example.cor	12.1.0.2.0	

Mode Multi-Select

Select Cancel

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