

**Abakus**

# APPM

## Abakus Plus Performance Monitor



Copyright © Abakus plus  
information engineering d.o.o.,  
Ljubljanska cesta 24a, Kranj, Slovenia,  
[www.abakus.si](http://www.abakus.si), +386 4 287 11 00



# About Abakus plus

## High Availability & Performance

We are a team of professional **DBAs**, sysadmins and hardware specialists, who design and maintain highly available Oracle Database infrastructures.

While our first priority has always been data security and business continuity, we also put a lot of effort into monitoring and improving performance of the maintained setups.

This is how the idea of “APPM - Abakus Plus Performance Monitor” was born. We needed a tool that would:

- run on Oracle Database Standard Edition,
- monitor multiple databases at once,
- be able to produce performance reports of the past with a long history.

So we made such a tool. Keep reading to learn more about how and what our tool collects, measures and displays.

# APPM

## Performance issue root cause detection tool

1

### **Central Repository**

*Compare performance statistics between different environments and time frames.*

2

### **Graphical frontend for variety of performance related tools**

*Such as SQL tracing, SQL patching, Statspack, etc...*

3

### **Minimal production footprint**

*No data is stored in production database.*

4

### **Oracle Standard Edition compatibility**

*Provides alternative for ASH & AWR functionality which is only available in Enterprise Edition*

# 01 Overview

## Performance monitor and workload sample collector for Oracle Standard Edition.

APPM collects, analyzes and displays historical and current performance statistics of an Oracle Database. It collects performance data such as wait events and active session history (ASH). Collected data is stored in central repository and used to identify and analyze performance issues like, for example, identifying a resource intensive SQL statement.

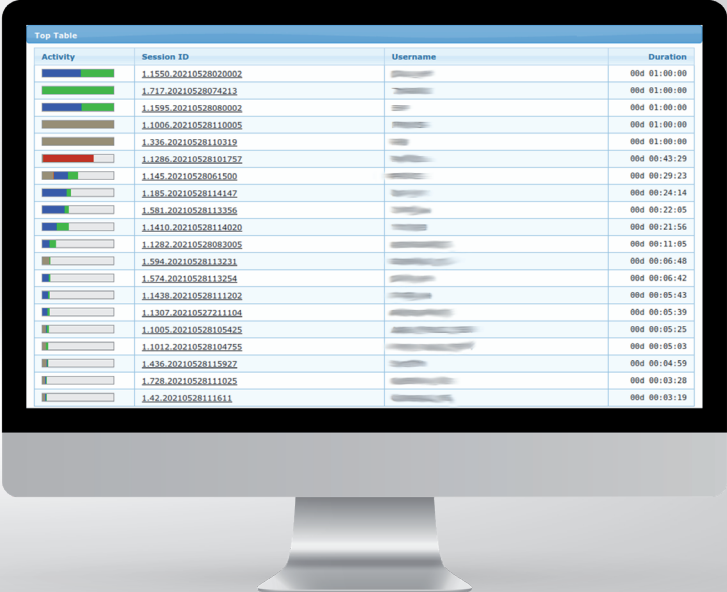
## APPM provides ASH like functionality on Standard Edition



One of its key features is to display information required to identify the root cause of a performance issue in a very convenient manner. It also allows drilling down on identified performance bottlenecks.

This tool will prove most beneficial to DBAs, system performance engineers and programmers.

### APPM provides ASH like functionality on Standard Edition

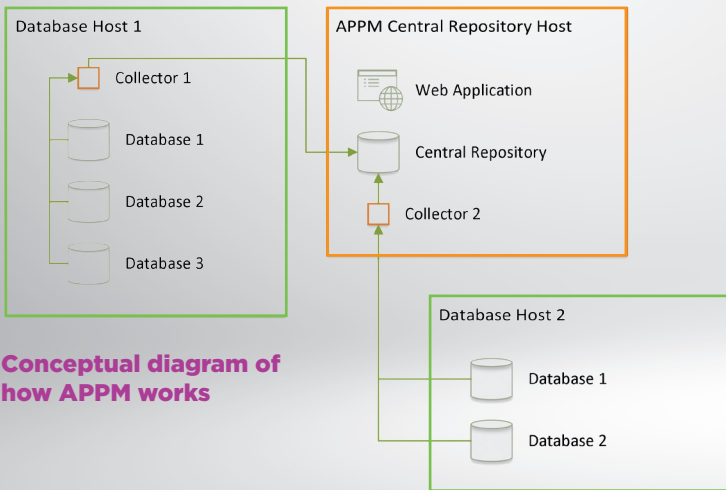


## 02 Central Repository

APPM Collector collects samples of monitored database's performance statistics and stores them in APPM Central Repository. Sample collection has minimal performance impact on monitored databases. APPM Central Repository requires no Oracle license.

APPM Collector can run on the same host as database or it can collect samples via SQL\*Net.

APPM Central Repository is based on Docker Containers and can run on any host that can run Docker Containers. This is usually a dedicated virtual machine. It's also possible to deploy it in Oracle Cloud.



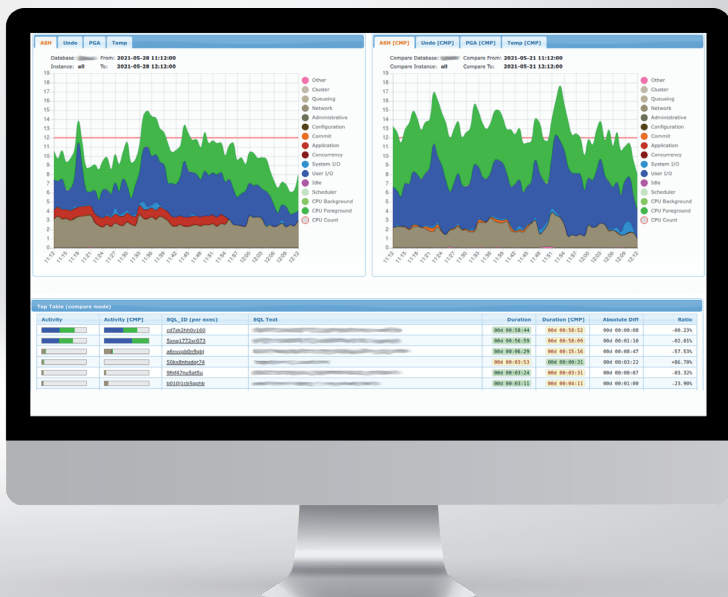
**Conceptual diagram of how APPM works**

# 03 Benefits of long-term performance statistics

By storing performance related statistics, such as ASH, for long periods of time APPM can provide comparative reports which are very useful for comparing:

- ✓ performance before and after a database upgrade
- ✓ performance on old server and more powerful new server
- ✓ performance before and after replacing storage with a faster one
- ✓ ...

## Comparing reports



# 04 Performance Monitoring Tools

APPM can establish SQL\*Net connections to monitored databases. Such connections can be used to access V\$ performance views and other performance tuning tools via APPM graphical front-end.

- **SQL Plan Baseline (from 19c)**
- **Response time analysis**
- **Active sessions, transactions, processes, ...**
- **SQL statistics and plans**
- **SQL Patching (apply hint to specific SQL without modifying its sql text)**
- **Memory consumption (reports like top PGA users and buffer cache contents)**
- **Locking details (who is blocking who and what is being locked)**
- **SQL Tracing and parsing of trace files (raw traces, tkprof & tvdx-tat)**
- **Statspack frontend**
- **Access to alert log**
- ...

## Report of current UNDO usage (active transactions)

Undo Consumption							
Inst ID	Tablespace	Block Size	Transaction Count	Undo Active MB	Undo Capacity MB		
1	UNDOTBS1	8192	26	103.99	160511.98		

Active Transactions								
Addr	Session	Username	Logon Time	Start Time	Status	Used UBLK	Used UREC	Used MB
00000003863873F0	1550_30669_@1		2021-05-28 02:00:02	05/28/21 02:00:01	ACTIVE	13283	568569	103.77
000000038A9E5570	1265_17163_@1		2021-05-28 08:40:03	05/28/21 12:12:58	ACTIVE	3	212	.02
000000038AA2C170	336_39833_@1		2021-05-28 11:03:19	05/28/21 12:03:34	ACTIVE	2	80	.02
000000038AA2D590	1590_5231_@1		2021-05-28 08:39:33	05/28/21 08:40:31	ACTIVE	2	3	.02



# 05 Intuitive interface

Utilizes a simple and effective WEB GUI to display information in a way most useful to its target audience.

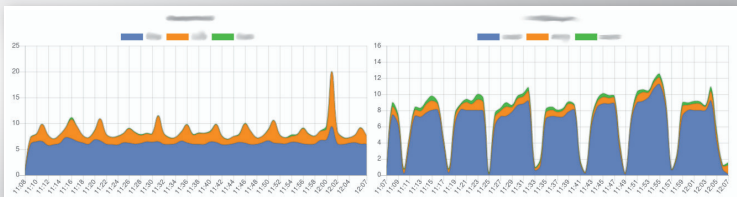
Per **host** statistics: historical data can be shown aggregated for all databases residing on a single server. This approach quickly shows exactly which database residing on a specific server uses a certain amount of system resources and helps technicians to focus only where it really matters.

Per database statistics for more in-detail analysis.

Top 10 most resource demanding SQL statements: quickly see which SQL statements generate the most wait events and what types of wait events.

GUI can display multiple reports at once and thus allows for parallel comparison of interlinked databases and hosts. You don't have to export reports to other tools and compare them externally.

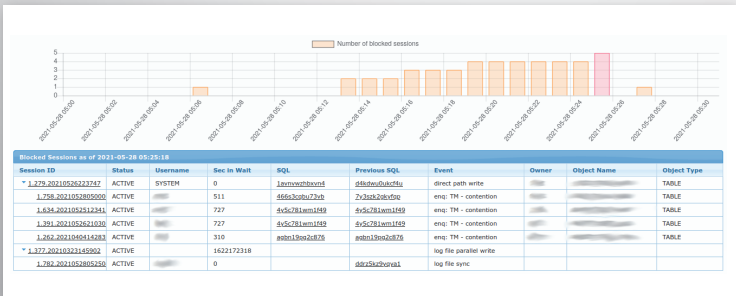
## Comparing performance between two hosts, both hosting multiple databases



# 06 Target audience

- **DBAs** appreciate a helpful tool for daily database performance tracking.
- **System performance engineers** use it to optimally allocate system resources to where they can be used/utilized most efficiently.
- **Programmers** can quickly and accurately pinpoint performance bottlenecks and optimize them.

## Blocking locks showing who was blocking who in a specific period of time



## 07 APPM Licensing

APPM tool can be licensed with an unlimited license that allows for monitoring of unlimited number of databases or with a per-database license where each individual monitored database is licensed.

One installation can monitor any number of hosts or databases.

**Samples retention period is limited only by APPM Central Repository storage capacity.**

APPM Central Repository is distributed as a Docker container and can be deployed as:

- **Software Only:** you can deploy it on existing host within your organization.
- **Appliance:** Integrated with hardware that is optimally tailored to your needs.
- **Cloud:** Deploy on Oracle Cloud Compute (or any other cloud)

Because APPM works independently from monitored databases it doesn't use valuable and expensive production resources which could be put to better use for production load.


NOTE: No additional Oracle licenses are required.

# Abakus

www.abakus.si



 [abakus@abakus.si](mailto:abakus@abakus.si)

 +386 4 287 11 00

 +386 4 287 11 05