APPM

Performance monitor and workload sample collector for Oracle Database

built and maintained by Abakus

Quick Installation Guide

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APPM collects, analyzes and displays historical and current performance statistics of an Oracle Database.
Following is a tutorial on how to install a Free Edition of APPM on your own VM.

1 Prepare virtual machine

You can start with either latest Debian/Ubuntu or latest Oracle Enterprise Linux virtual machine. Regardless of the chosen distribution, perform minimal installation (you are free to install any additional software on this vm if you choose to; this tutorial says minimal install because that is all that is needed for APPM. And we do recommend that you create a dedicated VM for APPM).

Optionally, you can make sure that following folders are mount points before moving on to the next step:

- `/srv/appm` – This is where installation will put the most files. Also, postgres datafiles will be located under this mountpoint (you can start off with, say, 30 GB)
- `/var/lib/docker` - Because the software is Docker-based (even though packaged as rpm/deb), those docker images and containers need space and we don't want root file system to fill up if anything goes wrong)

2 Install APPM Free Edition

Simply login to the prepared virtual machine and issue following commands:

for Ubuntu/Debian:

```
wget -O - https://appm.abakus.si/tools/setup-debian-repo.sh | bash
apt update && apt full-upgrade
apt install aba-appm-repository
```

for Oracle Linux:

```
wget -O - https://appm.abakus.si/tools/setup-oel-repo.sh | bash
dnf update
dnf install aba-appm
```

It will take about a minute or two for the app to start. You can monitor the startup process using following command:

```
tail -F /srv/appm/vol/wf-log/server.log
```

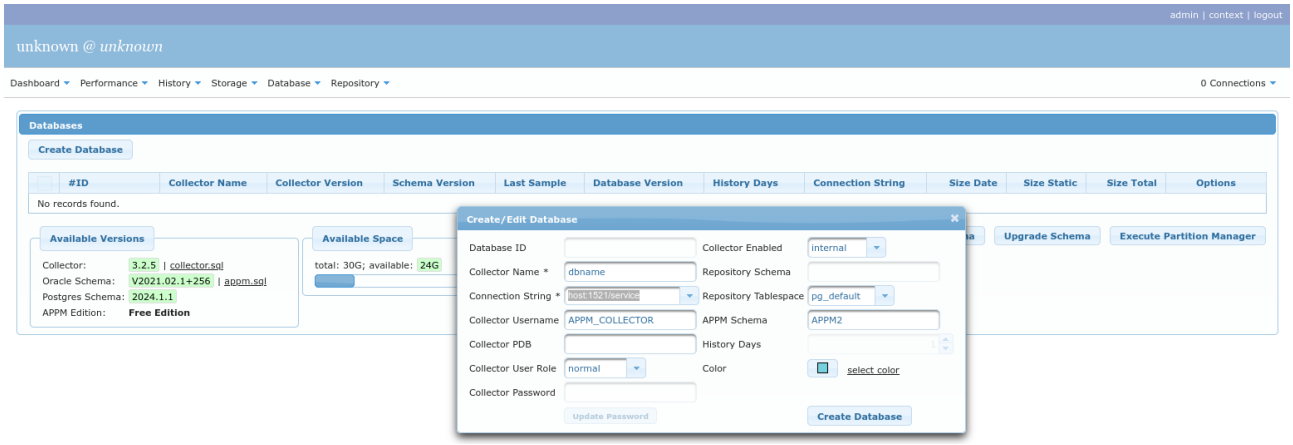
When the app is started, you can use any browser and open following URL:

https://<hostname>/appm/

Default username/password is admin/**change_me**. Please, do actually change the password after first login.

3 Create Postgres Schema

Now that APPM is installed and functional we must tell it which database(s) should it monitor. We call this procedure "registering a database". It's done through a graphical interface. Simply click "Repository" → "Databases" in main menu and then "Create Database" button. Following screen should appear:



Note that the only two *required* fields are:

- **Collector Name:** name of your database, but also the name of Postgres schema, which will hold performance related data for your database. It's generally a good idea to avoid exotic characters here.
- **Connection String:** Either EasyConnect string in format `host:port/service_name` or `@ALIAS` (note the @ prefix), which means, use `ALIAS` from `/etc/appm/tnsnames.ora`. (after editing mentioned tnsnames.ora, you must restart aba-appm systemd service, e.g. "systemctl restart aba-appm")

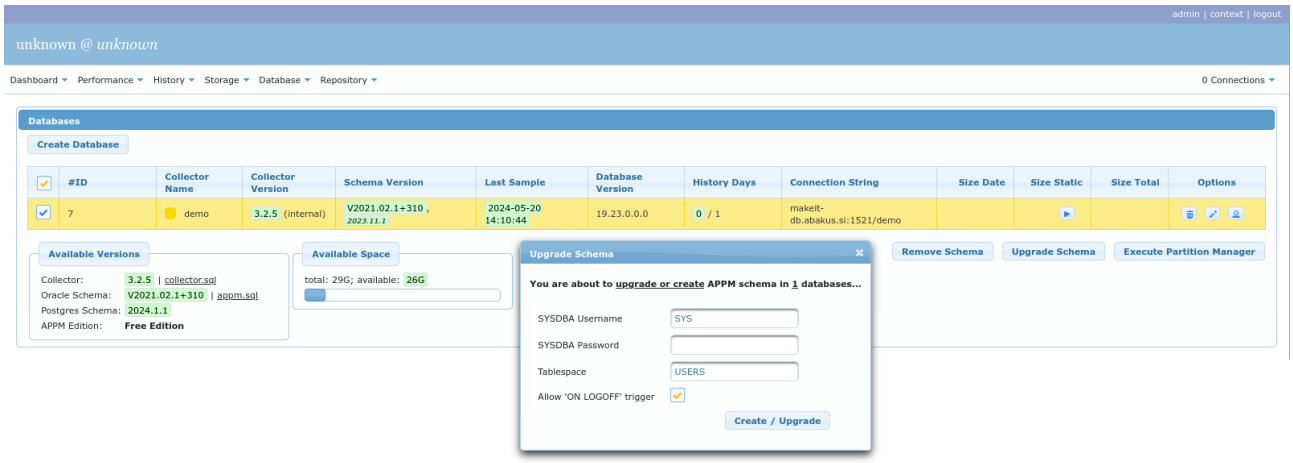
You can keep all the other fields at their default values. What and why they are is explained in official installation guide.

When you press "Create Database", APPM will create Postgres schema. That will take a bit of time (about a minute or so). You can monitor it's progress in detail by issuing the following command:

```
tail -F /srv/appm/vol/wf-log/server.log
```

4 Create Oracle Schema

On the same screen as you were in previous step, check the newly registered databases (left column of the table) and click "Upgrade Schema". Following screen should appear:



Enter username and password of any user that can connect AS SYSDBA. Also, enter the name of **already existing** tablespace, which should be used as default tablespace for APPM2 schema (which will be created once you click "Create / Upgrade" button.

You can monitor detailed progress (every SQL executed) using following command (yes, it's the same throughout this tutorial and is the main source of information when things go wrong):

```
tail -F /srv/appm/vol/wf-log/server.log
```

It will create two users on your Oracle Database:

- APPM2, which contains views and packages required for APPM to work. This user will be locked (e.g. schema only account).
- APPM_COLLECTOR, which has very limited access and is used by collector agent to periodically collect performance samples from this database.

If you drop those two users then you've effectively uninstalled APPM2 from your database.

5 Restart APPM Collector

Finally, we're ready to start collecting performance data. After any change in "Repository" → "Databases" screen, it's safest to simply restart aba-appm service:

```
systemctl restart aba-appm
```

Alternatively, you can just stop/start the actual collector in "Repository" → "Collector", but be aware that in some edge cases it's not a trivial to safely abort (interrupt) a thread. So if you suspect that collector might be stuck or not collecting samples due to a change in "Repository" → "Databases", simply restart aba-appm service as described above.

It would be incomprehensible if all errors regarding sample collection would be available in following file (though, some of the most importat issues are reported here):

```
tail -F /srv/appm/vol/wf-log/server.log
```

So, do check "Repository" → "Collector" for collector issues regarding specific database.

6 Crontab jobs

Add following to the crontab (you can use `crontab -e` command to start editing crontab entries):

```
SHELL=/bin/bash
15 * * * *  /srv/appm/utl/logrotate.sh > /srv/appm/vol/hk-log/logrotate-$(date '+%Y-%m-%d').log
2>&1
```

This will make sure that old logs are being deleted and thus make sure that you don't needlessly run of disk space.

7 Dashboard

You may see "empty" dashboard, right after login. This is because Dashboard displays "Groups" of databases, rather than a specific database. So, in order to make the most of Dashboard, go to "Repository" → "Groups" and create your first group. A group can be a group of:

- PDBs in the same containers
- Databases on the same host
- Datasbases in the same cluster
- … or any other logical group that you can thing of

Use “folder” icon in the table row on the left side, to manage the contents of any group.

8 Final Notes

I’ve describe the simplest way to install APPM. There are some alternative options that DBAs might prefer. Most notably, instead of entering SYSDBA password and letting APPM create Oracle schema, you may download `appm.sql` and `collector.sql` to create them yourself (they’re availble in “Repository” → “Databases” screen on bottom left side).

9 Support

Let us know if things don’t go as expected, we have a public bug tracker at GitHub:

https://github.com/Abakus-Plus-d-o-o/APPM/issues

Also, for enterprise level support and maintenance (and other paid services), contact us at:

Abakus Plus d.o.o.
https://www.abakus.si/en/
mail: abakus@abakus.si