



Cosmopterix ADQL test platform

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A set of Docker containers which provide a basic install of each of the database platforms used in the IVOA.

Aim is to make it much easier to test and experiment with ADQL syntax.

These are not intended to be production deployments.



GitHub project
contributions welcome

<https://github.com/ivoa/cosmopterix>

Working implementations

- PostgreSQL
- MySQL
- MariaDB
- Oracle
- HSQLDB
- Apache Derby

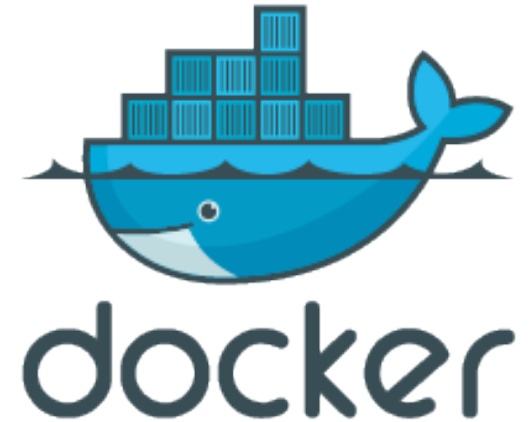
Future work

- SQLite
- Firebird

- Qserv
- SpiderEngine

- SQLServer





Using Docker containers, to wrap the different database platforms to provide the same set of basic commands for all of them.

Simple command to start a database service

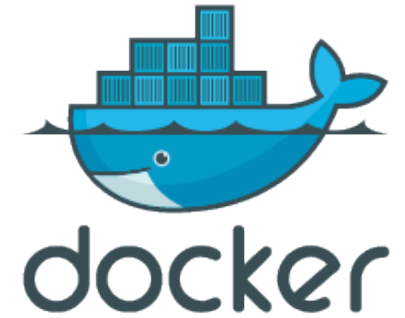


```
docker run \  
  --detach \  
  'cosmopterix/pgsql'
```

Same command to start a different platform

```
docker run \  
  --detach \  
  'cosmopterix/mysql'
```

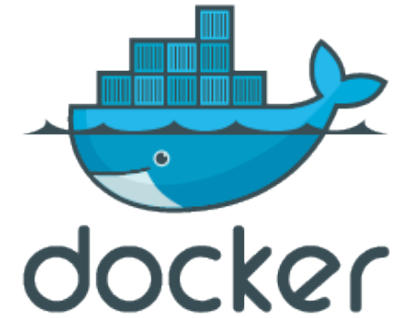




Standard set of properties to configure the database name and user account.

```
docker run \  
  --detach \  
  --env databasename=mydata \  
  --env databaseuser=myname \  
  --env databasepass=mypass \  
  'cosmopterix/pgsql'
```



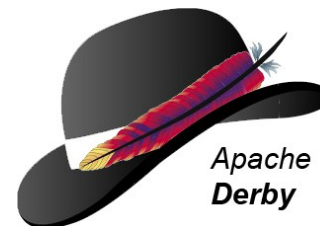


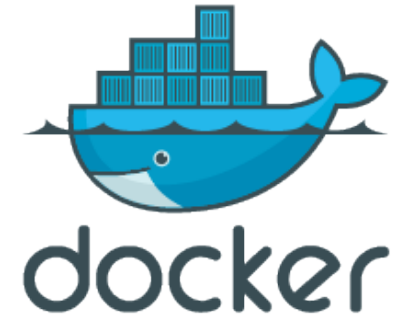
Standard location to put configuration files.

```
docker run \ MySQL®  
  --detach \  
  --volume "mycfg:/database.config" \  
  cosmopterix/mysql'
```

Standard location to put shell scripts and SQL files.

```
docker run \  
  --detach \  
  --volume "test.sh:/database.init/test.sh" \  
  --volume "data.sql:/database.init/data.sql" \  
  'cosmopterix/derby'
```



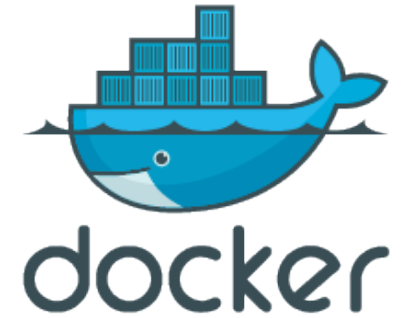


Simple table with id, ra, dec and 45 rows of test data.

```
CREATE TABLE IF NOT EXISTS alpha_source
(
  id      SERIAL PRIMARY KEY,
  ra      DOUBLE PRECISION NOT NULL,
  decl    DOUBLE PRECISION NOT NULL
);
```

Enough to run simple syntax checks.





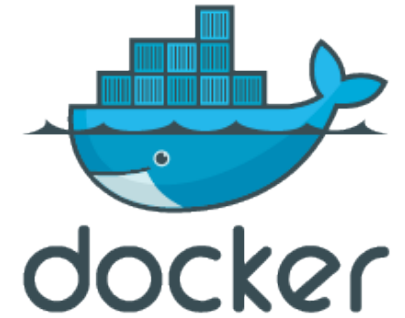
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);
```

Enough to run simple syntax checks.

```
SELECT
  id,
  ra,
  decl
FROM
  alpha_source
LIMIT 10 OFFSET 10
```





Developed as part of syntax checking for ADQL-2.1.

- HEX literals :-)
- OFFSET clause :-)
- Unnamed columns :-)

Lots of different uses in the future



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