Cosmopterix
ADQL test platform

D.Morris
Institute for Astronomy,
Edinburgh University
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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
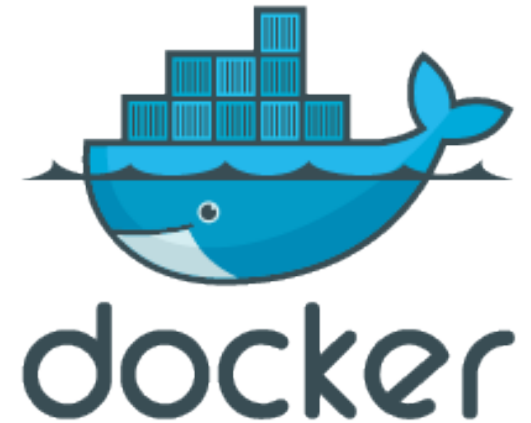
- SQLServer

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Wrap the different database platforms to make them easier to use.

Simple command to start a database Service:
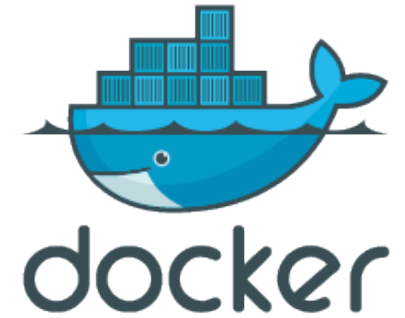
```
docker run \
    --detach \
    'cosmopterix/pgsql'
```

Simple command to start another service:

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

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Institute for Astronomy,
Edinburgh University
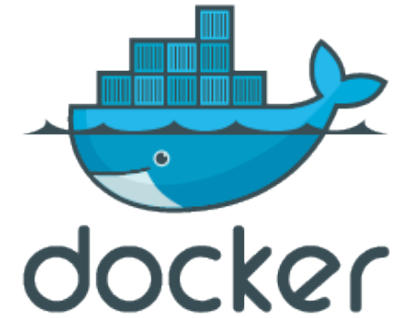May 2016

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

```
docker run \
    --detach \
    --env databasename=mydata \
    --env databaseuser=myuser \
    --env databasepass=mypass \
  'cosmopterix/pgsql'
```
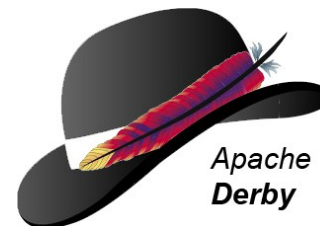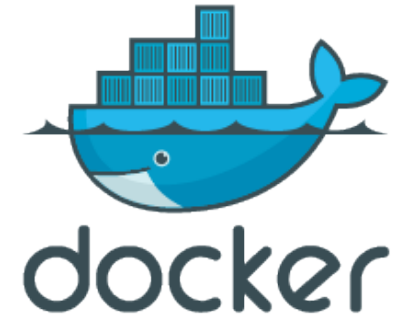
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Standard location to put configuration files.

```
docker run \
   --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'
```

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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
    );
```
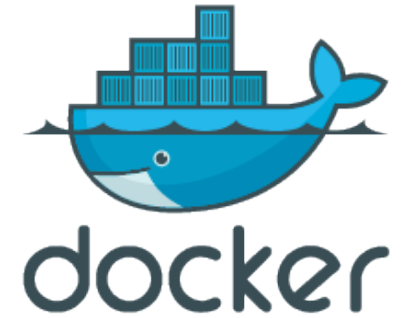
Enough to run simple syntax checks.

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

```
SELECT
    id, ra, decl
FROM
    alpha_source
OFFSET 10 ROWS
FETCH FIRST 10 ROWS
```

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Institute for Astronomy,
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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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