

MariaDB notebooks in JupyterHub

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In [1]: info['JupyterHub']
Out [1]: { 'Never heard of it':

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- JupyterHub takes notebooks to the next level
- Multiple users can share the same infrastructure
- Configurable authentication methods
- Configurable server spawners
- Two specialized distributions:
 - **Zero to JupyterHub for Kubernetes**
 - **The Littlest JupyterHub**

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Out [1]: ..., 'The Littlest JupyterHub':

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- Lightweight, single-server, 0-100 users distribution
- Configurable in terms of authenticators
- Suitable for teaching small classes, tutorial sessions, etc
- Documentation is tutorial oriented

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In [2]: ...

In [1]: info['MariaDB Jupyter Kernel']
Out [1]: { 'Where does it fit in':

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- Kernels are at the heart of every notebook
- JupyterHub deploys a notebook server for each user
- A user creates notebooks with the kernels of choice
- You can create JupyterHub clusters running MariaDB notebooks

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Out [1]: ..., 'Setup examples':

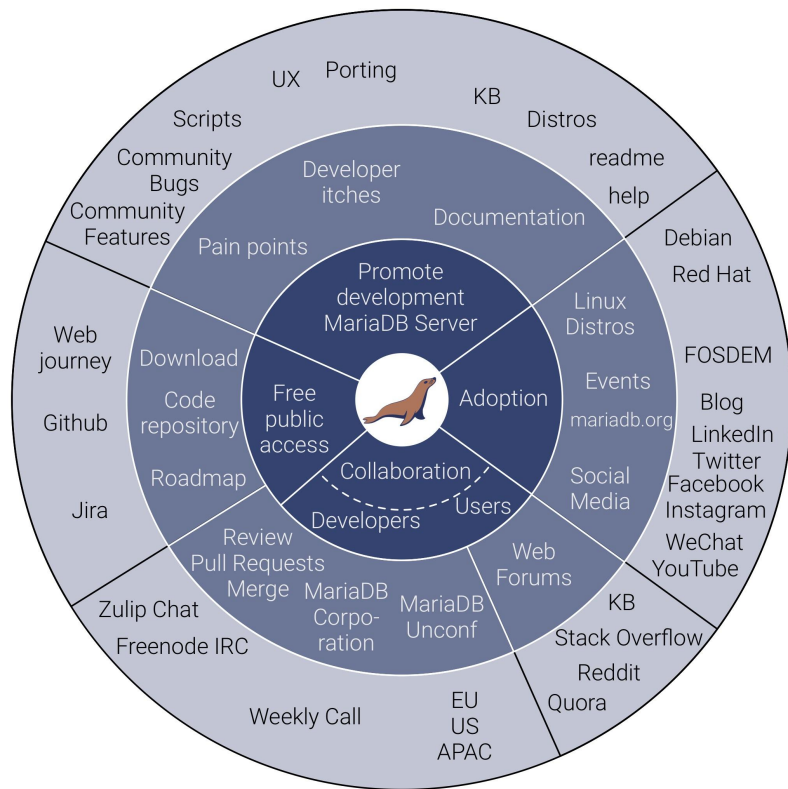
"""

- MariaDB JupyterHub deployment
- Each user has its own MariaDB server with its own private datadir
 - datadirs, configs, etc are created manually (or by script)
 - JupyterHub is configured with DockerSpawner, so datadirs, server configs can be built into a Docker image
- All users access the same MariaDB server (or MariaDB cluster of some sort)
 - Each user has access (via its own MariaDB user) to only one database
 - Wild west: each jupyter user has unlimited access to MariaDB

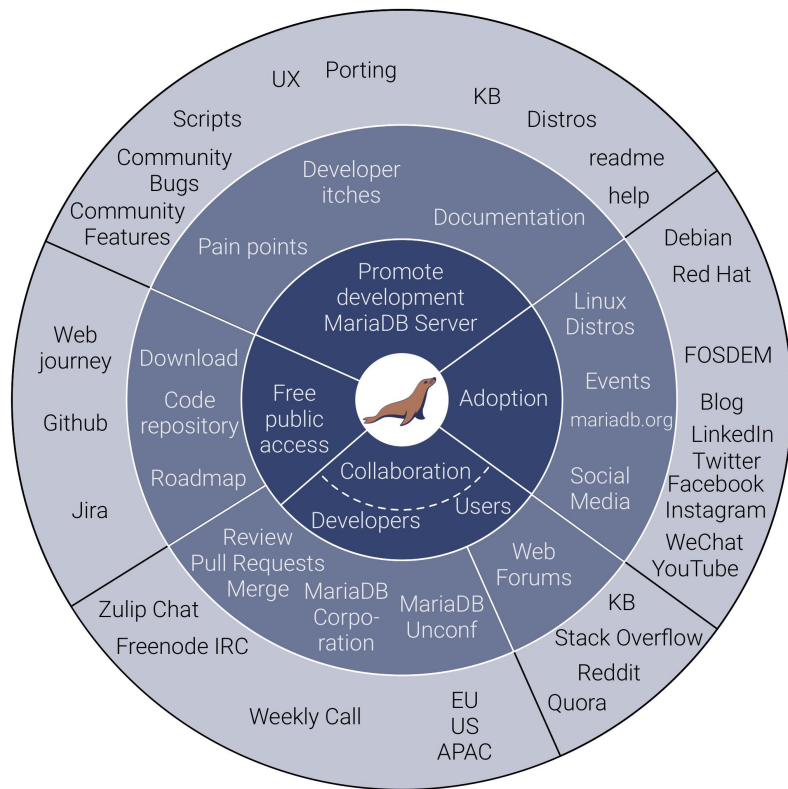
"""

}

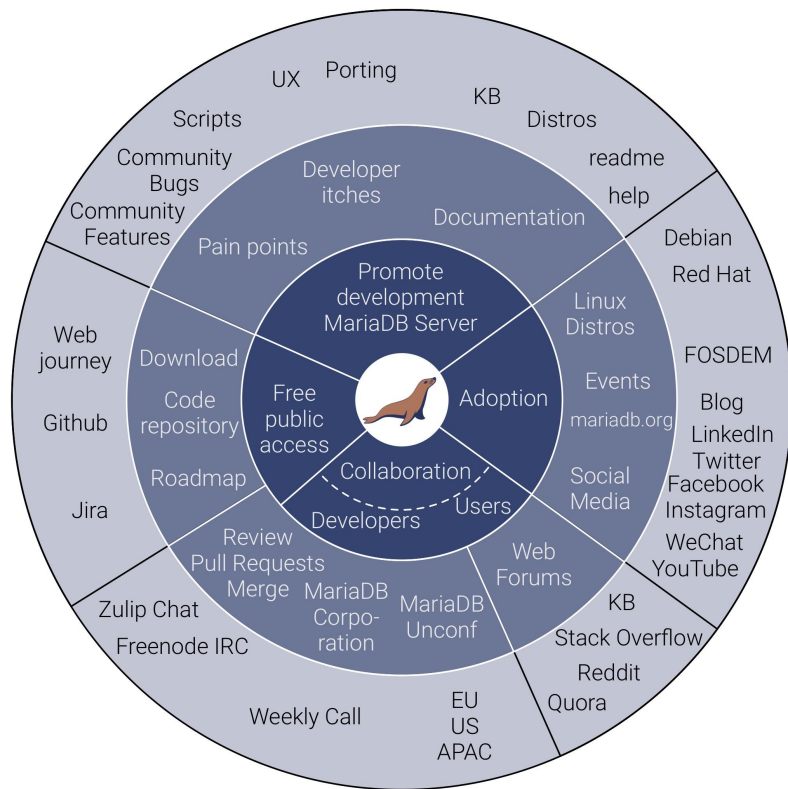
In [2]: ...



TLJH Installation



MariaDB Jupyter Kernel Installation



Setting up MariaDB

A cleaner approach?

- JupyterHub configured with DockerSpawner
- JupyterHub launches a container for each user (notebook server)
- You only need to write a Dockerfile with MariaDB Server + MariaDB kernel

Coming next

- Interactive editing of MariaDB tables from within the notebook
https://github.com/MariaDB/mariadb_kernel/issues/12
- Interactive client connections via magic commands
https://github.com/MariaDB/mariadb_kernel/issues/10
- Add auto-completion capabilities
https://github.com/MariaDB/mariadb_kernel/issues/5

Thank You!

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About:

<https://mariadb.org/about/staff/robert-bindar/>

GitHub repo:

https://github.com/MariaDB/mariadb_kernel

Docs:

<https://mariadb.com/kb/en/about-the-mariadb-jupyter-kernel/>