MariaDB notebooks in JupyterHub

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

- JupyterHub takes notebooks to the next level
- Multiple users can share the same infrastructure
- Configurable authentication methods
- Configurable server spawnners
- Two specialized distributions:
  - Zero to JupyterHub for Kubernetes
  - The Littlest JupyterHub
Out [1]: ..., ‘The Littlest JupyterHub’:

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

In [2]: ...
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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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
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
TLJH Installation
MariaDB Jupyter Kernel Installation

https://mariadb.org
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: