

Let the right one in

Custom authentication in JupyterHub

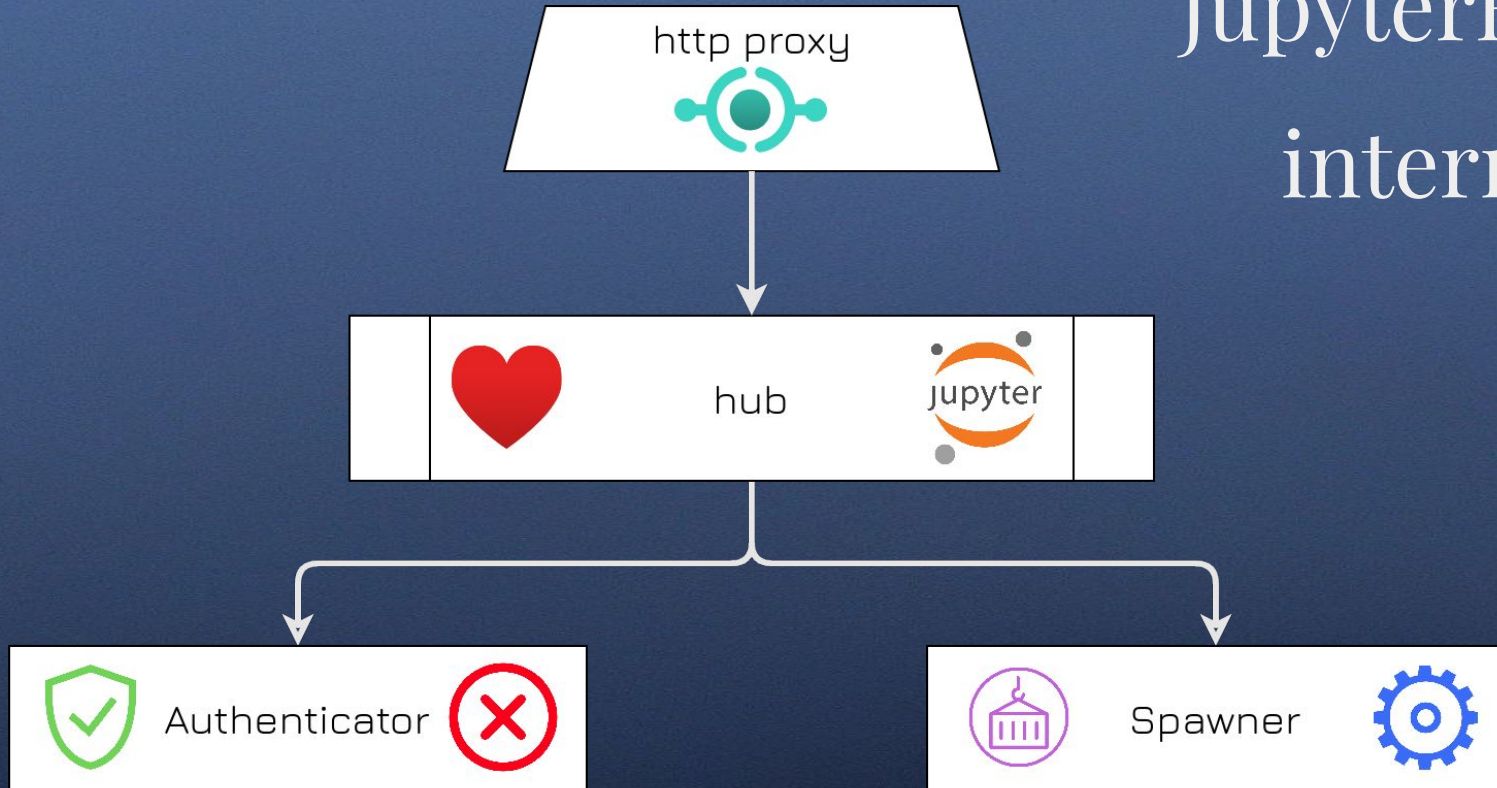


ADAMATICS
Applied Data Analytics

Preparation

<https://github.com/adamatics/let-the-right-one-in>

JupyterHub internals



Authentication configuration



```
# The authenticate method's job is simple:  
  
#  
  
#     return the username if authentication is successful  
  
#     return None otherwise
```

```
from jupyterhub.auth import Authenticator  
  
[...]
```

```
class CustomAuthenticator(Authenticator)  
    async def authenticate(self, handler, data):  
        username = data["username"]  
        password = data["password"]  
        [...]  
        return username
```



LDAP Authentication
OAuth Authentication
SAML2 Authentication



Talk is cheap, show me the code
-Linus Torvalds





Deeper into the woods



ADAMATICS
Applied Data Analytics

```
# Remember this?
```

```
from jupyterhub.auth import Authenticator  
[...]
```

```
class CustomAuthenticator(Authenticator)  
    async def authenticate(self, handler, data):  
        username = data["username"]  
        password = data["password"]  
        [...]  
        return username
```



A sleight of hand:

```
class CustomAuthenticator(Authenticator)
    async def authenticate(self, handler, data):
        username = data["username"]
        password = data["password"]
        kinit_args = [kinit, f"{username}@{krb_realm}", "-c", krbcc]
        run(kinit_args,
            input=password.encode(),
            stdout=DEVNULL,
            stderr=DEVNULL)
        # mount krb_cc_file into user's $KRB5CCNAME
        return username
```



JupyterHub configuration is extremely
versatile

-but it is also in the critical path

Trust goes both ways

Start playing around at
github.com/adamatics/let-the-right-one-in



Credits

<https://www.adamatics.com>

<https://www.linkedin.com/in/steenmanniche/>

manniche on discourse.jupyter.org



Material gathered from:

github.com/jupyterhub/*

github.com/rroemhild/docker-test-openldap

jupyterhub.readthedocs.io/en/stable/reference/authentication.html

jupyterhub.readthedocs.io/en/stable/explanation/websecurity.html

Talk title and imagery inspired by the brilliant 2008 film *Let the Right One In* (Låt den rätte komma in)

DALL-E for understanding where we were going