SIMPLIFIED TEACHING AND RESEARCH APPLICATION PLATFORM

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AGENDA

I have five minutes

Brief overview

Conclusion

IMPETUS

- UVic RCS ARC Software Team is brand new. Members: 1
- Projected workload: infinite
- We want to enable, not just create, software for research

IMPETUS

- A lot of our researchers have or need to deploy web applications
- What do you need to do when you build and deploy web applications?
    - Identity management
    - Database administration and tuning
    - Logging
    - Backups
    - Documentation
    - Oh yeah, write the application
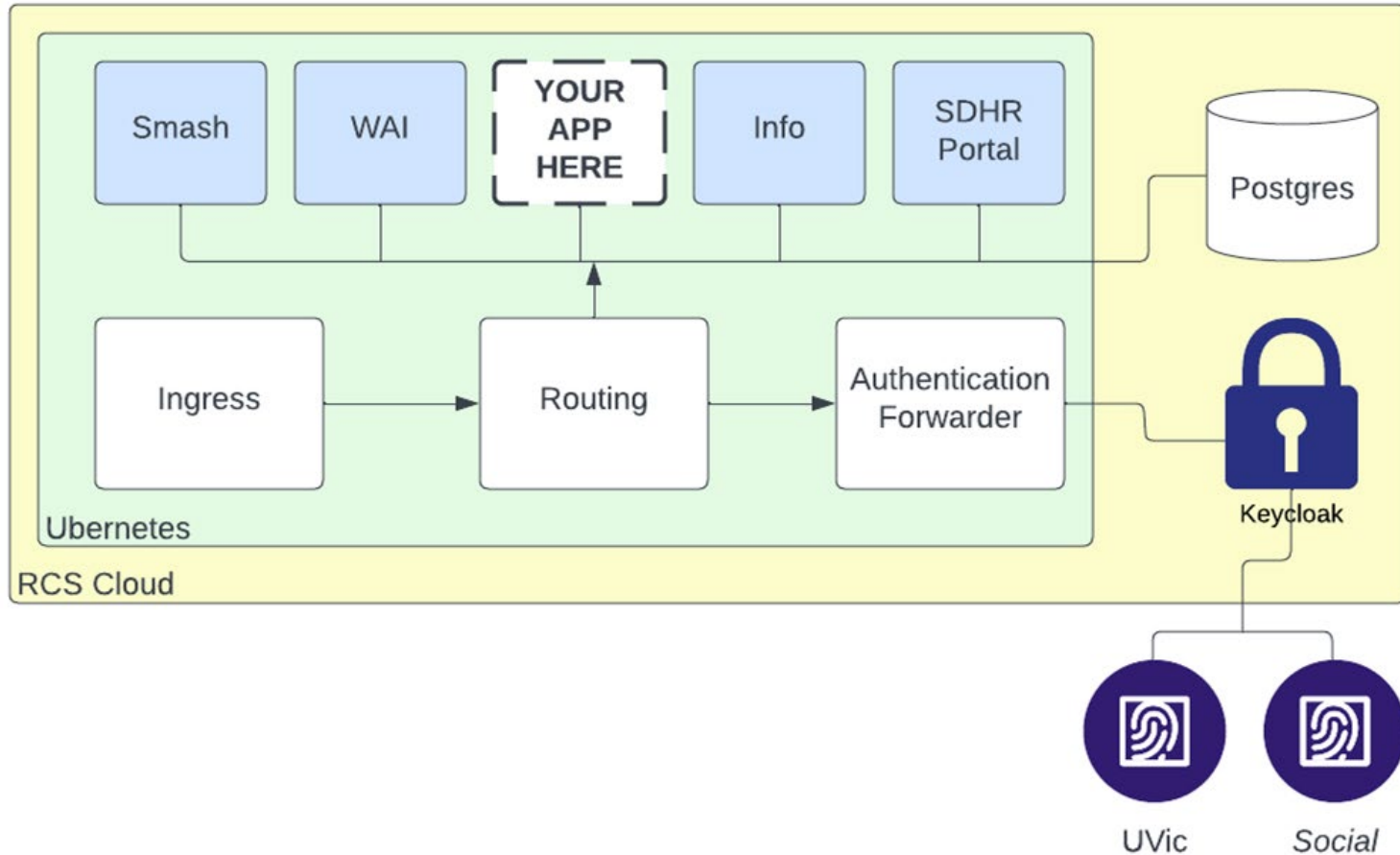   - Deploy it on a thing and maintain the thing

HOW DO YOU DO THAT?

- You may have a dedicated research support analyst who'll help
- At UVic we do. He has deployed ~100 such applications and they represent 30% of his workload
- Problems with this:
    - 30% of his workload! ~100 projects!
    - Also, this is *not his area of expertise.*
    - He has 12 PhDs but he is not a systems administrator.
- Researchers should do research.
- Systems experts should manage systems.
- Each should be aware of the other context, but *shouldn't have to swim in it.*

STRAP: APPROACH

- Opinionated platform: flexible, but limited choices
- We provide the common parts for free
- For the researcher: develop your application as a container, following a few basic conventions, and don't worry about:
  - Authentication
  - Databases
  - Logging and backups
  - TLS termination, load balancing
  - Infrastructure

STRAP: ARCHITECTURE

PICS OR IT DIDN'T HAPPEN

SO THEN WHAT

- Terraformation!
- Database created on configured server
- Client created on Keycloak configured for appropriate realm
- Helm chart deployed to Kubernetes:
  - Ingress routes created
  - Authentication forwarding invoked
  - Application deployed as pods, services
- Wildcard DNS and wildcard LE cert already taken care of

CURRENT STATUS

- Concluded proof of concept, on to prototype/alpha stage
- First goal is to get the STRAP manager self-hosted
- Sending out first invitations for early adopters

HOW TO GET THERE

- Tutorials and consultation on containerizing applications
- Application templates
  - Have one using Python and Flask
  - Maybe new projects with other environments will lead to new ones
- Cross-pollination opportunities with developers on the administration side

Thank you!
No time for questions!

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