

Project Tye

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What problems exist with Microservices?

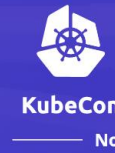


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- How do I run multiple services and their dependencies?
- How do I debug those services?
- How do I do service discovery?
- How do I view the logs for each service?
- ...

Existing solutions



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- Run a k8s cluster (locally or otherwise)
 - Picking one of the many k8s distros
- Get Docker and learn how to write Dockerfiles
- Get a container registry (like DockerHub)
- Learn how to write k8s manifests for each service
- Use a tool like skaffold to build and push to the registry when things change

Our solution: Project Tye

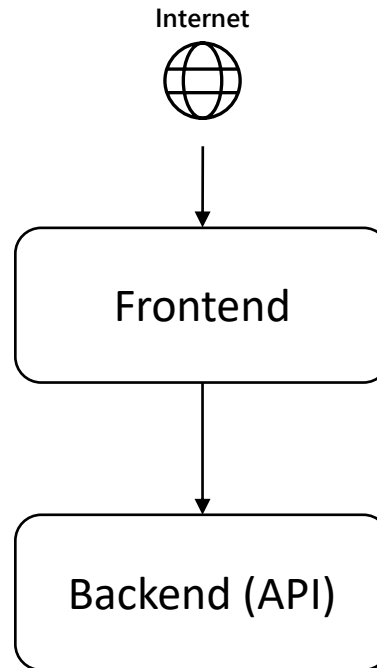


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Tye is a toolchain that

- Provides a local orchestrator for development
- Makes deploying microservices to Kubernetes easy
- Allows .NET developers to use the existing ecosystem of tools

Demo: Frontend-Backend



Next step deployment!

- Write Dockerfiles
- Write Kubernetes manifests
- Push container images to registry (with versioning)
- Profit!

Demo: Deployment



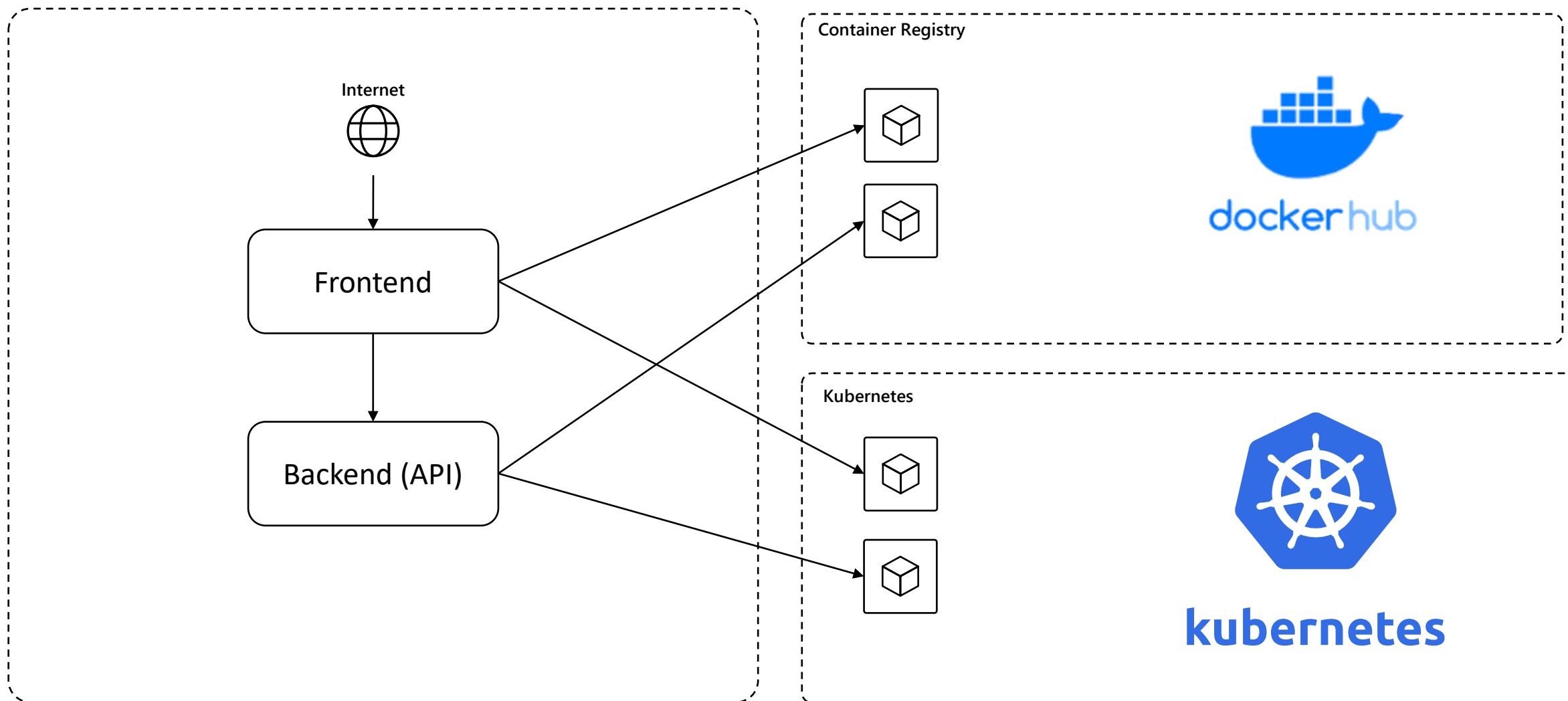
KubeCon



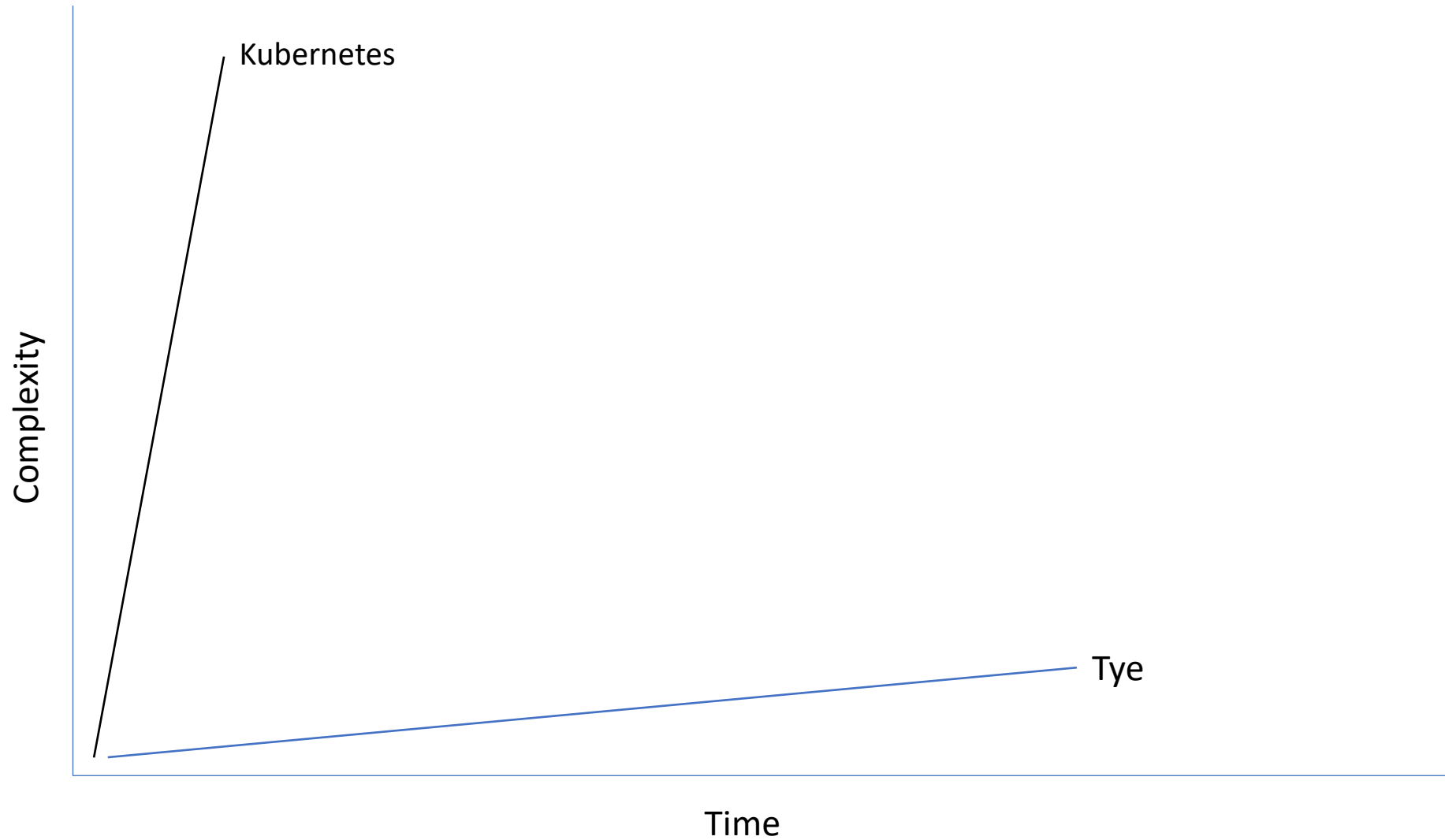
CloudNativeCon

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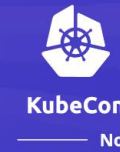
Flattening the learning curve



What else can Tye do?

- Service Discovery via configuration
- Multi-repo support
- Run and deploy ingress controller
- Can run Docker dependencies
- “Hot Reload”: Watch support
- Support sidecars in local development
- Integrations with diagnostics services
- Generate Kubernetes manifests and dockerfiles for services

What about Docker compose?

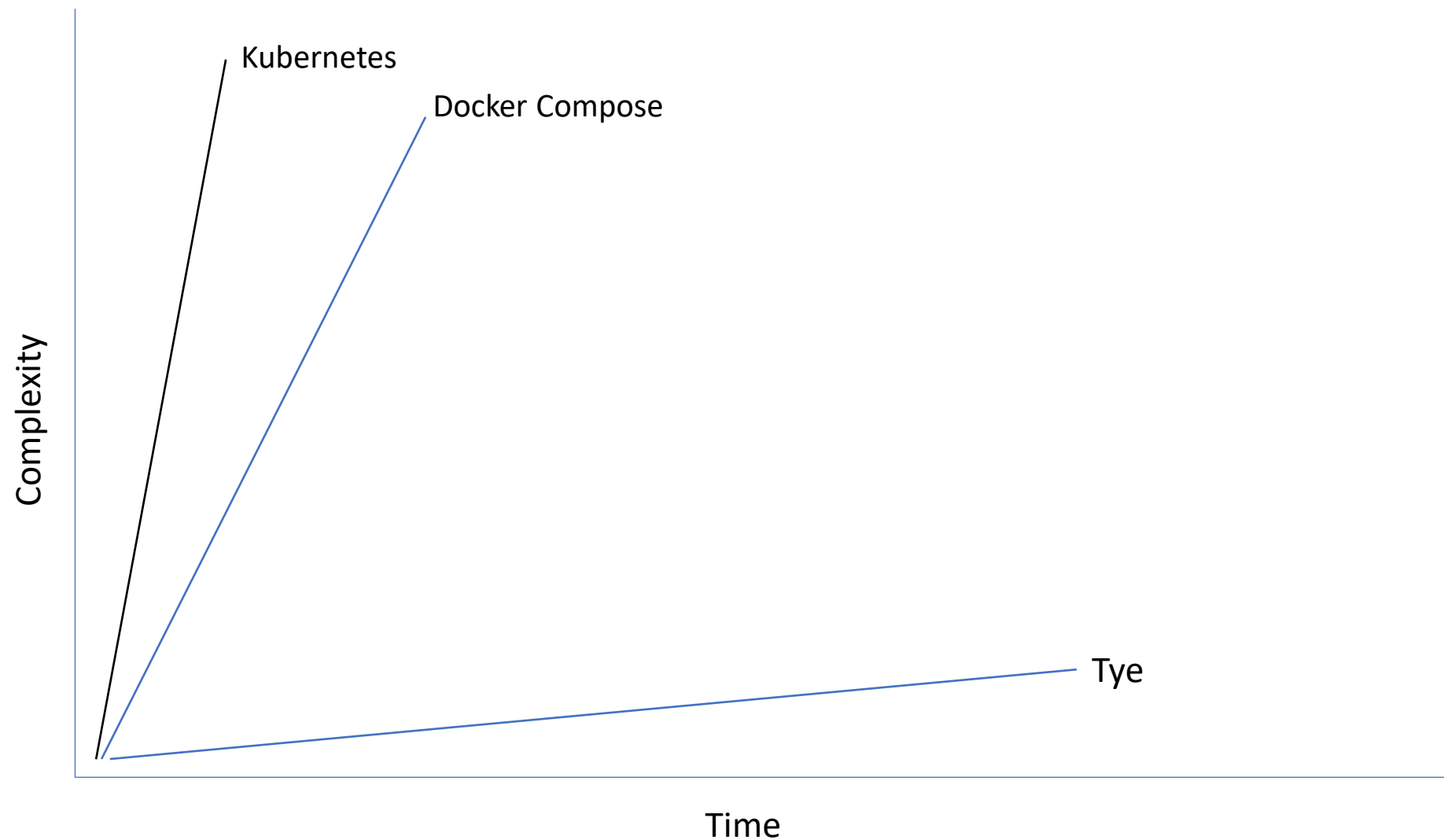


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- Steeper learning/getting started curve
- Docker is the answer to dependencies
- The docker ecosystem only partially solves the other problems we showed
- Docker is heavy during development and can make debugging hard if you are trying to run in a container on your dev machine

Docker compose



Future of Tye



Virtual

- Support for multiple languages
- More Kubernetes integrations
- Modeling more microservice primitives and patterns
- More integrations with cloud native projects



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