Microservices & DevOps Live!

Tech Overview + Demo + Q&A

KEYHOLE SOFTWARE

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Attributes Of A Microservices Platform

Stability

The ability of your system to continue to perform when resources become unavailable or experience increased loads.

Health Accessibility

The ability of your platform to commun
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Health Accessibility

The ability of your platform to communicate its current health status.

On-Demand Capacity

The ability for new computing resources to be added or removed in an on-demand manner without side effects.

Minimum Platform Elements

- Routing and Load Balancing
- Configuration
- Orchestration
- Monitoring and Health Checks
- Immutable Container Repository
- Log Aggregation

"Ready To Bake" Platform Options

Heroku (Salesforce)

Cloud Foundry (Pivotal)

BlueMix (IBM)

VSO/ Service Fabric (Microsoft)

Google App Engine

- There is a distinction between Platform As A Service and Infrastructure As A Service
- EC2, Azure - Infrastructure As A Service

DevOps: Key To Success

Automated (PUSH BUTTON) deployment to your platform.

Continuous Integration

On code check-in, a service is compiled, tests are applied, and a Docker image for the service is created and pushed to an Image repository. The image repo can be a simple file system or an actual Docker repository.

Continuous/Rolling Deployment

Docker images are pulled from the repo and moved into a server operating system. The image to be replaced is stopped and the new image is started (i.e. starting and stopping images will automatically update Eureka).

Health Check Status

Tools like logging dashboards, exception alerts, resource monitors, metrics monitors, and circuit breaker dashboards need to be applied and aggregated so the platform health can be easily assessed.

Automate everything, or as much as possible.

Assembling A Platform

We implemented our own Minimal Platform using popular enterprise software.

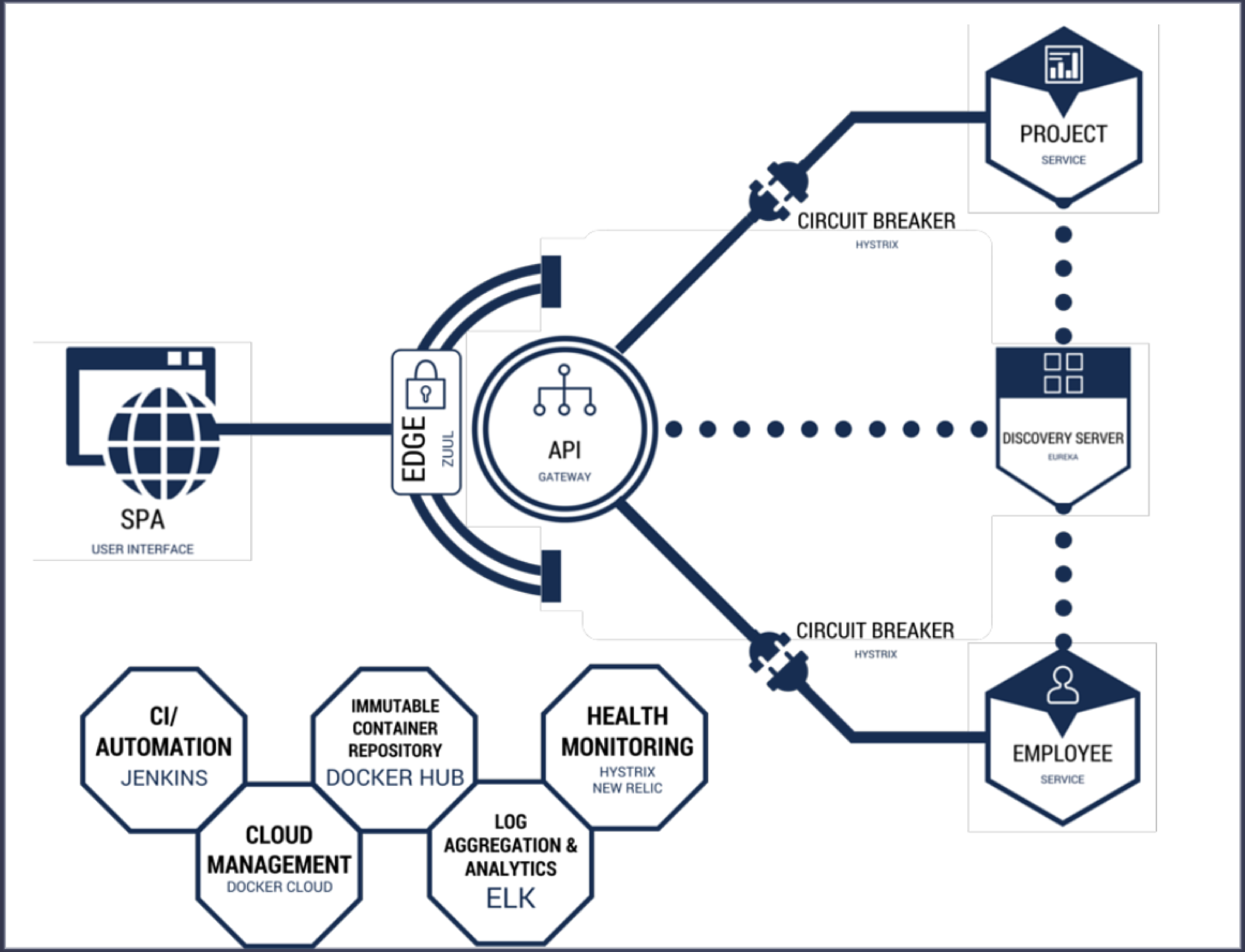
Runtime Platform

- Routing and Orchestration - Zuul/Eureka
- Log Aggregation - Paper Trail or ELK
- Configuration - Eureka / Spring Configuration
- Health Management Monitoring - New Relic, Hystrix

SDLC DevOps Support

- Jenkins CI
- Maven
- Git
- Docker Cloud

Now To The Demo



Suggested Path

- Introduce an SPA; decouple your UI from server side.
- Automate that.
- Selectively pull out services from your monolith.
- Automate logging & service registry dashboards.

Questions?

- Ask away.
- We have a (free) Microservices presentation for dev teams, too.
- Tutorials: https://keyholesoftware.com
- asktheteam@keyholesoftware.com
- @keyholesoftware