



Debugging microservices applications on Red Hat OpenShift

Red Hat Summit 2019 - Workshop

Mitch Kelley - Solo.io - Software Engineer

Didier Wojciechowski - Red Hat - Senior Specialist Solution Architect

Madou Coulibaly - Red Hat - Senior Specialist Solution Architect

Tuesday, May 7th, 2019

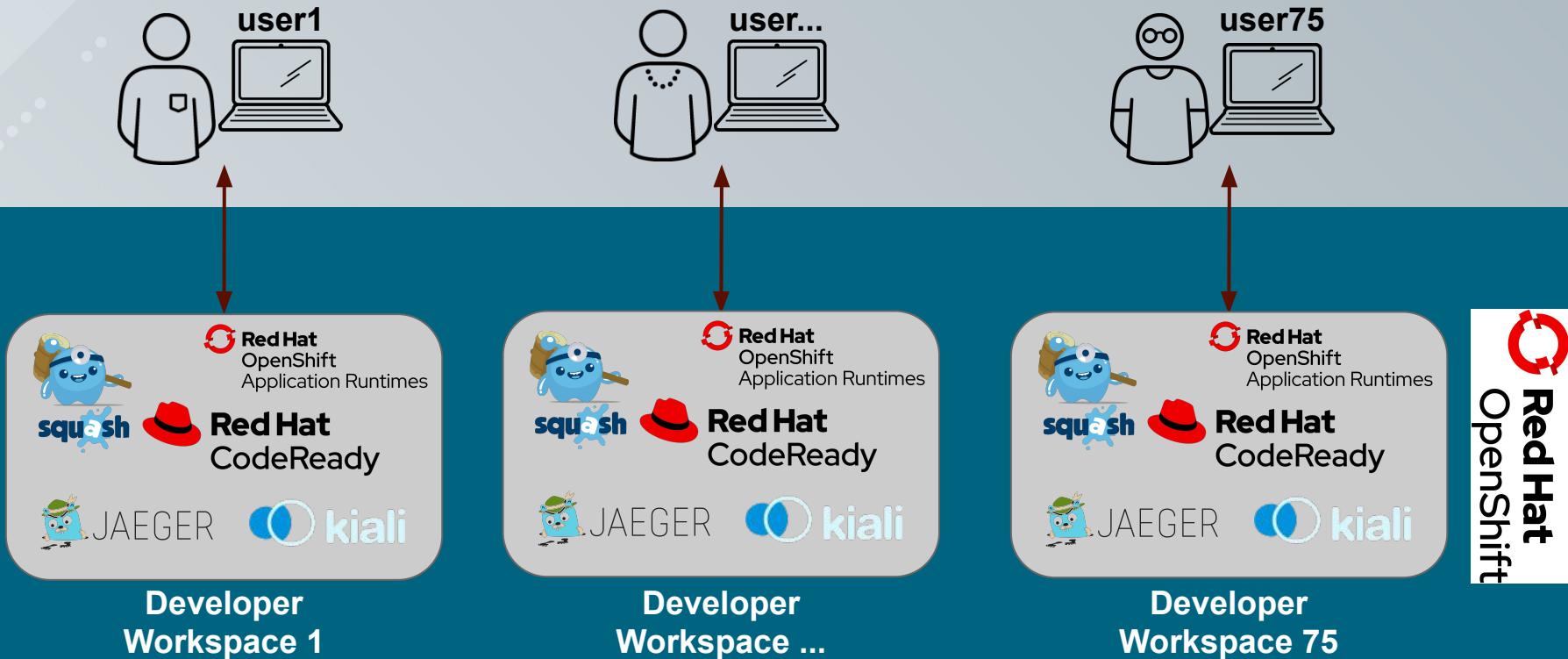
What You Will Learn

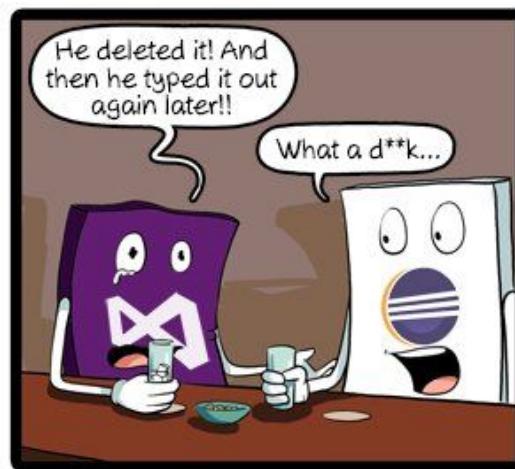
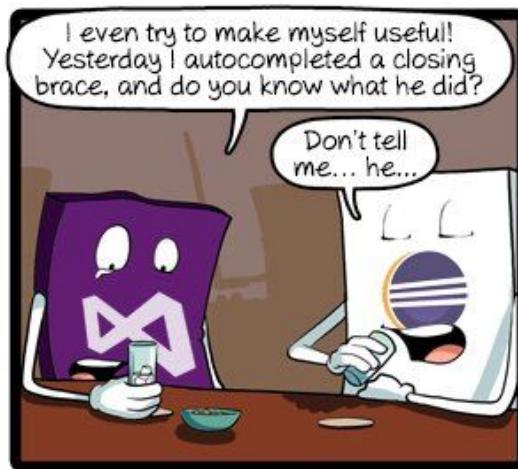
- **How to visualize and monitor a network of microservices using Istio/Kiali**
- **How to perform trace analysis using CNCF Jaeger/OpenTracing in order to discover, analyse and understand issues/problems**
- **How to execute run-time debugging across multi-microservices using squash**

How You Will Learn

1. “You Are Not Alone“ (Introduction)
2. “Bird Box”... Not Today! (Kiali)
3. “Dream Within a Dream“ (Jaeger)
4. “Mr Robot”, Please Help Me! (Squash)

What You Will Use





Hands-on-Labs:
[**bit.ly/summit-workshop-debugging**](https://bit.ly/summit-workshop-debugging)

Collaboration Link:
[**bit.ly/104C**](https://bit.ly/104C)

User: **userX**
Password: **r3dh4t1!**
Projects: **coolstoreX / infraX**



solo.io

Squash Architecture Overview

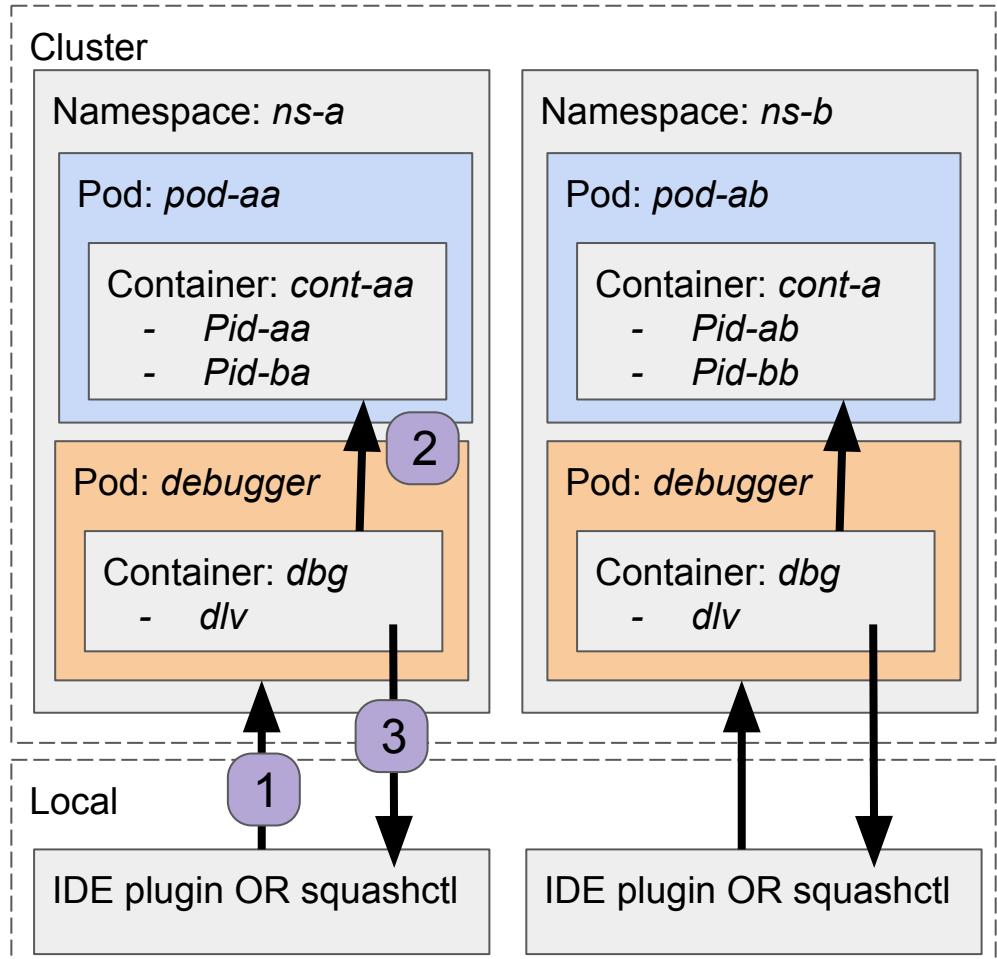
Red Hat Summit 2019
Boston, MA



How Squash Works

- User specifies debug intent
 - Namespace, Pod, Container
- Squash finds the pid of the target process
- Squash creates a pod with the corresponding debugger (dlv, gdb, etc) and triggers a debug session on the running process
- Squash forwards the debugger's port to the user's local environment
- Squash interface (IDE or CLI) connects to debug port

<https://squash.solo.io/overview/>

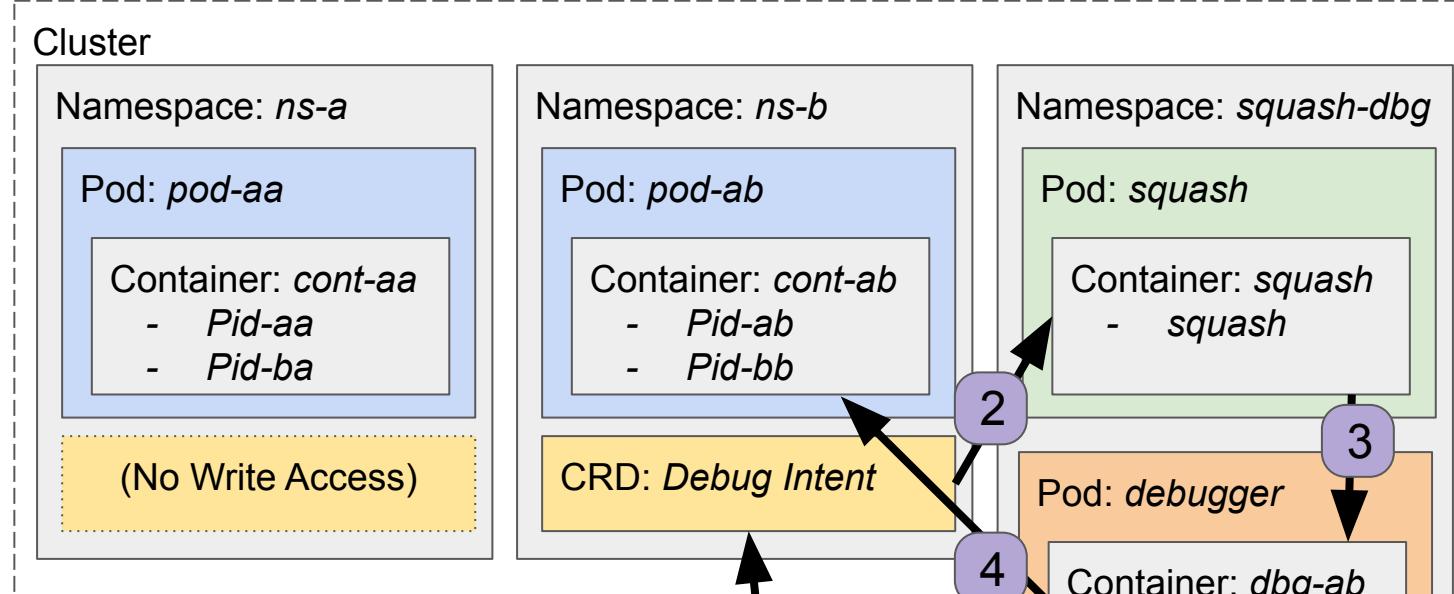


How Squash Secure-mode Works

https://squash.solo.io/secure_mode/



- Squash runs in the cluster
- User indicates debug intent by writing a CRD in the target namespace
- Squash reads the debug intent and creates the required debugger



Local

IDE Extension OR squashctl

Squash is part of a family of open-source, extensible resilience engineering tools

Mesh

with SuperGloo

Debug any service mesh environment through a common API



Chaos

with Glooshot

Coordinate chaos experiments and trigger debug sessions



Replay

with Loop

Record, replay, and debug erroneous requests outside production



Extend

make a plugin!

Squash is highly extensible for IDE, Debugger, and other tooling support





THANK YOU



plus.google.com/+RedHat



facebook.com/redhatinc



linkedin.com/company/red-hat



twitter.com/redhat



youtube.com/user/RedHatVideos