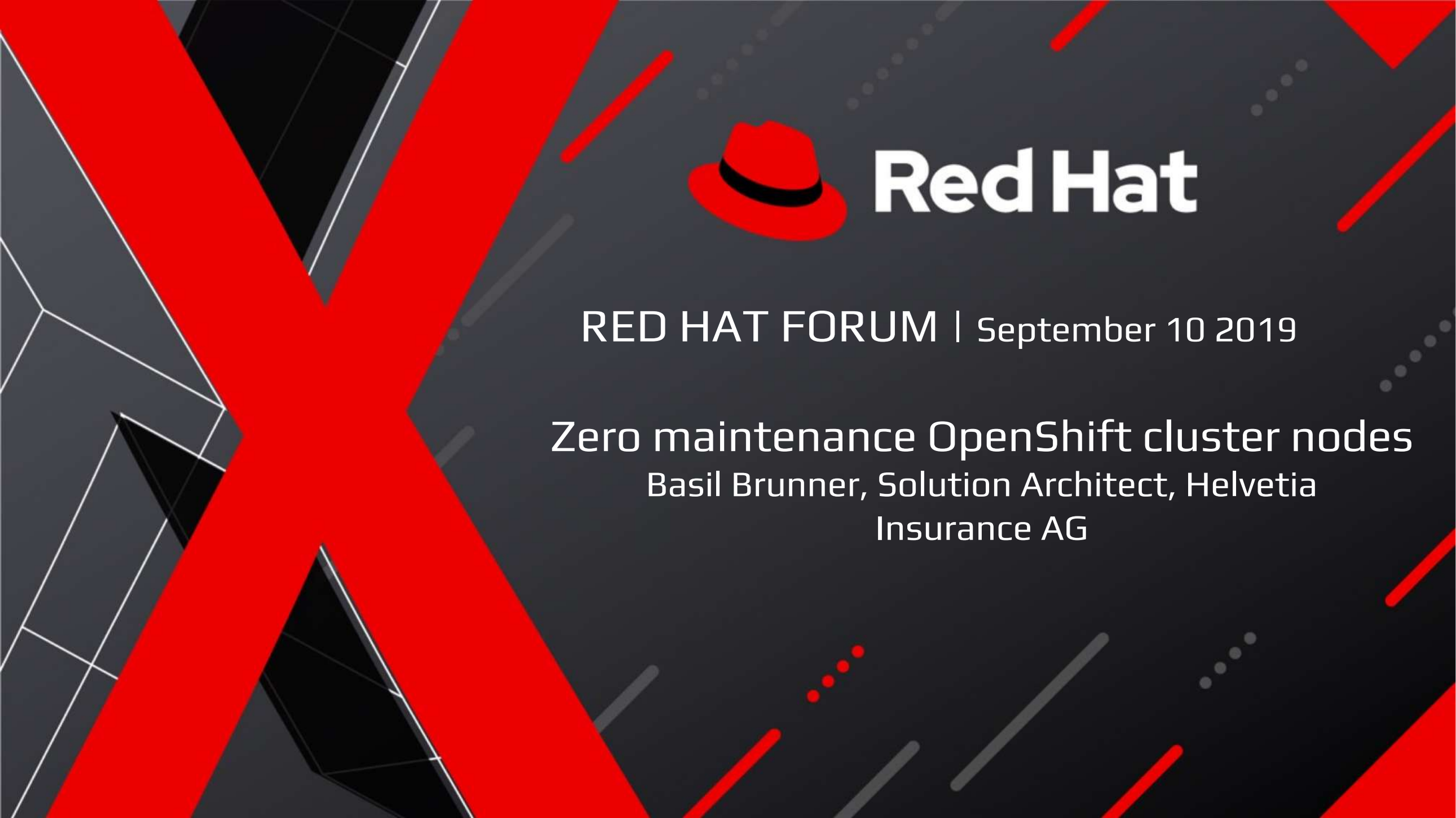

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Zero maintenance OpenShift cluster nodes

Basil Brunner, Solution Architect, Helvetia Insurance AG

OpenShift Node Updates.

Challenge.

Solution.

Basil Brunner
Solution Architect

Helvetia Insurance
Zurich, September 10, 2019

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Helvetia Container Platform.

- Application Platform based on OpenShift
- Running on AWS
- Platform Features:
  - Self Service:
    - Storage
    - Database
    - Kafka Topics
    - Backup / Restore
  - Blueprints
  - CI/CD
  - Monitoring
  - Logging (Splunk)

Logging with Splunk:

- https://red.ht/2YV17Z4
- https://youtu.be/66j70yBaWfg

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Facts and Figures

- Migration of ~100 existing Java EE applications within next 12 monts
- Default platform for new projects

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Challenge.

- Node Patching:
  - OS (Kernel, Libraries)
  - Tools
  - OpenShift
- Serial process (as nodes are unschedulable for some time)

- Time consuming & error prone
- **Goal**: Treating Nodes as Virtual Appliances

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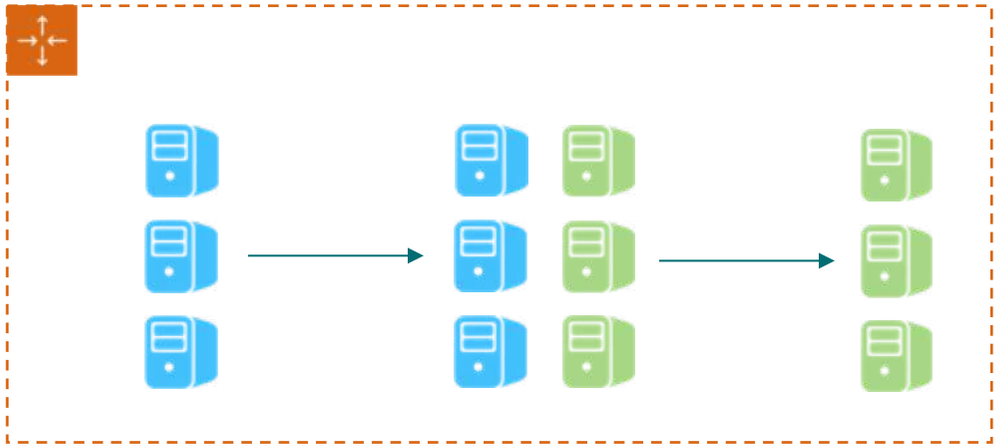
Solution.



Immutable Infrastructure:
https://vimeo.com/272531337

Primed Images:
https://red.ht/2KI0NnR

- Immutable Nodes: Replacing rather than patching (like pods!)
- Primed Amazon Machine Image (AMI)
- Nodes controlled by Auto Scaling Group (ASG)
  - Start time < 3 minutes!

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Benefits.

- Much more confidence during node update process.
- Ready for Cluster Auto Scaling
  - Use cheaper spot instances for high load
  - Scale down development projects at night/over weekends
- SSH is no longer needed

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Thank you for your attention.

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Red Hat Fuse @ SUISA: Integration im Mittelpunkt

Dieter Wijngaards, CTO SUISA
Dominik Wotruba, Red Hat Head Solution Architects ALPS