Dynatrace, OpenShift & Ansible
Building an Autonomous Enterprise Cloud

Chris Geebelen
Sales Engineer Manager,
Dynatrace
We are going into the fourth industrial revolution and facing “transformation” unlike anything humankind has experienced before.

Klaus Schwab,
Head of World Economic Forum
Better data makes Dynatrace A.I. and massive automation possible

High fidelity data | Mapped end-to-end | Deterministic AI | Answers + Action

Automated problem detection
Business impact determined
Root cause explained
No alert storms
Trigger self healing

Completely automated
The world needs software to work perfectly.
Others guess. Davis knows.

Meet Davis. The Dynatrace-AI purpose built to give you precise answers for smarter clouds.
Davis is monitoring how many dependencies per problem?

Davis analyzed 209,492,640,819,000 dependencies
**Deterministic AI** performs a step-by-step fault tree analysis as is common in safety engineering.

**Machine learning AI** is a statistical approach that correlates metrics, events, and alerts to build a multi-dimensional model of the analyzed system.
Correlation vs Causation

Number of people who drowned by falling into a pool Correlates with Films Nicolas Cage appeared in

**Correlation = 66.6%**

Source: Centers for Disease Control & Prevention and Internet Movie Database
Correlation vs Causation

Per capita cheese consumption **Correlates with**
Number of people who died by becoming tangled in their bedsheets
It’s personal

“Dynatrace helps me, and my team, sleep at night. When everyone is struggling to do more with less, Dynatrace picks up the slack, and enables my team to have a better work/life balance.”
Keeping DevOps cool in a heated environment

- November 2018, Woolsey fire, considered worst wildfire to hit S. California in modern history.
  - Consumed over 150 sq miles of canyons, homes, and businesses.
  - Displaced over ¼ million residents, burning for 2 weeks.

- When thousands of lives are at risk, software infrastructure can make the difference between life and death.
  - Traceability, scalability, and reliability are crucial aspects of a cloud strategy.
Automate with confidence
Bringing the Dynatrace culture to the world

Dynatrace transformed Autonomous Cloud Operations
For Development, Operations, Business
ACM focuses on delivering software better, faster, and more frequently.

Better: 75% fewer production incidents
Faster: 97% reduction in deployment lead time
More frequent: 8 → 26 releases per year
Top Customer challenges

- Consolidate tools and automate monitoring
  2.5 weeks average time from change to production

- Moving towards Cloud-Native DevOps
  3 out of 10 deployments contained errors and affected users

- Integrating into application lifecycle ecosystem
  On average 10 hours until production issues are assigned to a developer

- Automating operational tasks
  Average MTTR is almost 5 days

- Get applications ready to manage themselves
  Average hotfix time for an application is almost 5 days

- Running applications autonomously
  7 out of 10 issues are handled manually today
What we have seen organizations actually do!

• Building Custom Integrations with OpenSource & Commercial tools for
  • Deployment Pipelines
  • Testing Pipelines
  • Auto-Remediation
  • Notifications
  • Auditing
The ACM Methodology

1. Automate Monitoring
   - Integrate monitoring into the software delivery process
     - Improve performance visibility across applications & environments
     - Decrease performance analysis time and effort
     - Eliminate manual effort to deploy monitoring

2. Automate Quality
   - Enable on-demand testing at every gate within your pipeline
     - Reduce time and effort to test changes
     - Identify code defects earlier in the lifecycle
     - Enable automated software promotion at each gate

3. Automate Software Delivery
   - Deliver code to production with no manual intervention
     - Changes are moved to production faster
     - Increase deployment frequency
     - Improve service reliability for end users

4. Automate Problem Remediation
   - Realize self-healing applications
     - Remediate problems faster and more effectively
     - Reallocate Operations resources to more strategic activities
     - Proactively mitigate poor customer experiences

FULLY AUTOMATED DELIVERY PIPELINE
ON-DEMAND PERFORMANCE TESTING
SELF-SERVICE MONITORING
SELF HEALING

The ACM Methodology
First: keptn solves the Continuous Delivery Problem!

Quote: “Pipelines seem to be becoming our new future unmanageable legacy code!”
Designed for modern applications

**GitOps-based collaboration**
All keptn workflows are based on the GitOps paradigm.

**Operator patterns for all logic components**
Logic components can be reused for other operational tasks.

**Monitoring and operations as code**
Developer-friendly definition of monitoring and operational tasks.

**Built on and for Kubernetes**
Built for modern cloud-native environments.

**Event-driven and serverless**
Powerful with a minimal resource footprint.

**Pluggable tooling**
All tools leveraged by keptn can be replaced based on your tool preferences.
“It is not the strongest of the species that survives, nor the most intelligent, but the one most responsive to change.”

- Charles Darwin, 1809
Think you know Dynatrace? Think again.

### Get ready to be amazed in 5 minutes or less

- 600+ engineers in R&D make it all possible
- 66% more than nearest competitor
- New releases every 2 weeks
- 26 releases per year

### A trusted leader

- 9 year leader in Gartner MQ
- #1 market share leader
- Trusted by 72 out of the Fortune 100

Come meet us for a Live demo

[dynatrace.com/trial](http://dynatrace.com/trial)