Cloud innovation and automation

Building a Zero Dashboard NOC

Beachbody's smarter operations with zero-dashboard monitoring lets machines do the boring stuff

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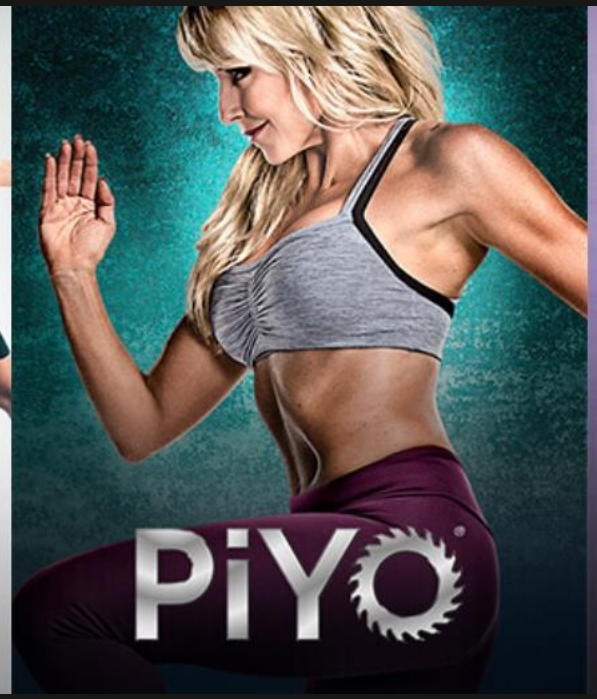
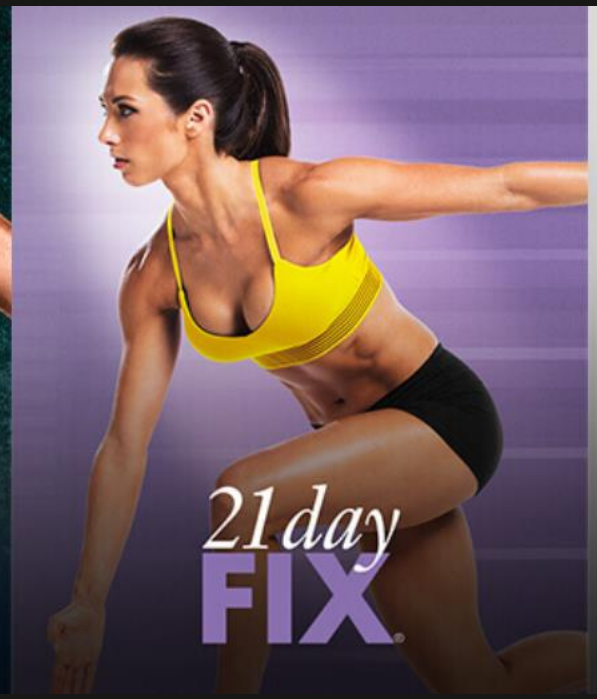
Beachbody

BEACHBODY

Decide. Commit. Succeed.®





Our story begins in Santa Monica

Inside the Beachbody NOC

Unhandled Hosts down

All problem hosts have been acknowledged.

Tactical overview

Type	Totals	Percentage %
Hosts up	4/4	100
Hosts down	0/4	0
Services up	10/26	38.46
Services down	16/26	61.54

Unhandled service problems

Host	Service	Output	Last statechange	Last check
192.168.5.64	NRPE	Connection refused	2011-07-26 16:38:08	2012-01-20 10:42:21
192.168.5.84-linux	/ Disk Usage	CHECK_NRPE: Received 0 bytes from daemon. Check the remote server logs for error messages.	2011-08-10 12:29:56	2012-01-20 10:41:01
192.168.5.84-linux	/tmp Disk Usage	CHECK_NRPE: Received 0 bytes from daemon. Check the remote server logs for error messages.	2011-11-17 20:51:41	2012-01-20 10:42:21
192.168.5.84-linux	CPU Stats	CHECK_NRPE: Received 0 bytes from daemon. Check the remote server logs for error messages.	2011-08-10 10:13:03	2012-01-20 10:43:37
192.168.5.84-linux	Cron Scheduling Daemon	CHECK_NRPE: Received 0 bytes from daemon. Check the remote server logs for error messages.	2011-11-17 21:26:21	2012-01-20 10:43:36
192.168.5.84-linux	Load	CHECK_NRPE: Received 0 bytes from daemon. Check the remote server logs for error messages.	2011-11-17 20:51:40	2012-01-20 10:41:01
192.168.5.84-linux	Memory Usage	CHECK_NRPE: Received 0 bytes from daemon. Check the remote server logs for error messages.	2011-11-17 20:51:41	2012-01-20 10:42:21
192.168.5.84-linux	Open Files	CHECK_NRPE: Received 0 bytes from daemon. Check the remote server logs for error messages.	2011-08-10 10:13:00	2012-01-20 10:43:37
192.168.5.84-linux	Sendmail	CHECK_NRPE: Received 0 bytes from daemon.	2011-08-03 16:49:26	2012-01-20 10:42:21

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THE TRADITIONAL NOC

What is a traditional NOC?

- A whole lot of tooling going on
- Myopic monitoring
- Dashboards for days
- Look at data to find issues

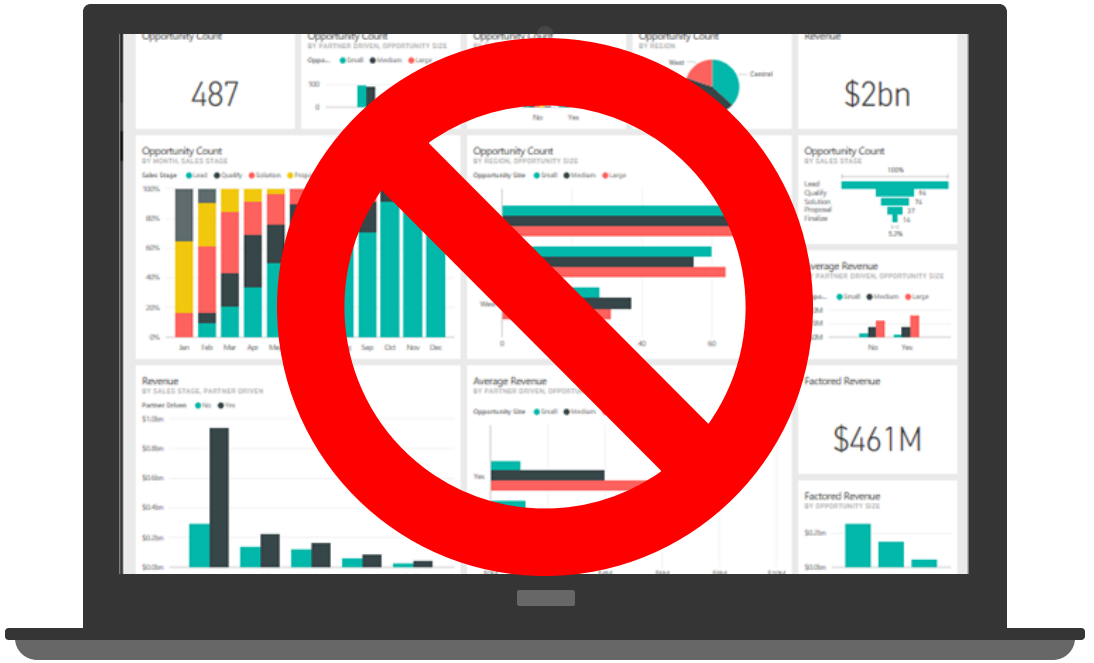
What's wrong with this approach?

- Maintenance
- Blind spots
- Requires knowledge
- Fail first before monitoring
- Thresholds and guess work
- Monitor 24/7
- Issue investigation
- Resources wait for action

THE MODERN NOC

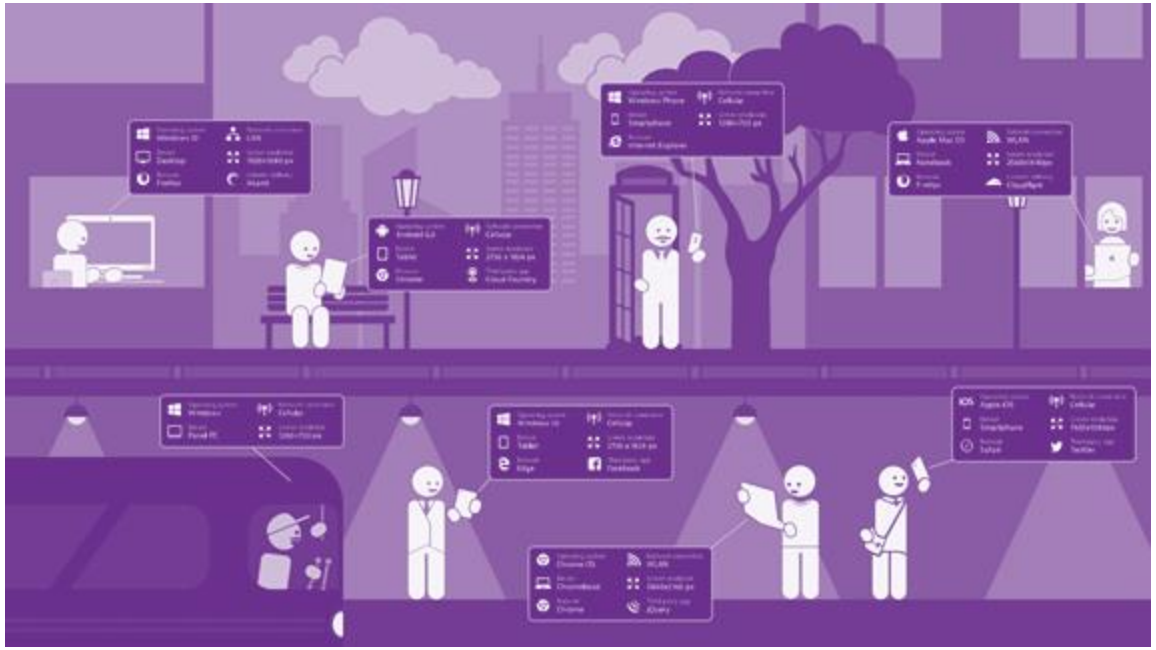
So what is a “modern” NOC?

- Virtual
- Driven by self discovery
- Leverages machine learning
- Does not look at dashboards
- Problem alerts vs. individual sensor alerts
- Builds automated actions



Advantages Of The Modern Noc

- Ambiguity is no longer an issue
- Alerted before things become an issue
- Machines alert you to issues
- Downtime reduced
- Automation allows for more time to build more automation
- Save money buying all those TVs



Getting There

Start with a vision

D x V x F = R

D x V x F = R

D = Dissatisfaction

- How unhappy are people with the way things are now? (0 – 10)

V = Vision

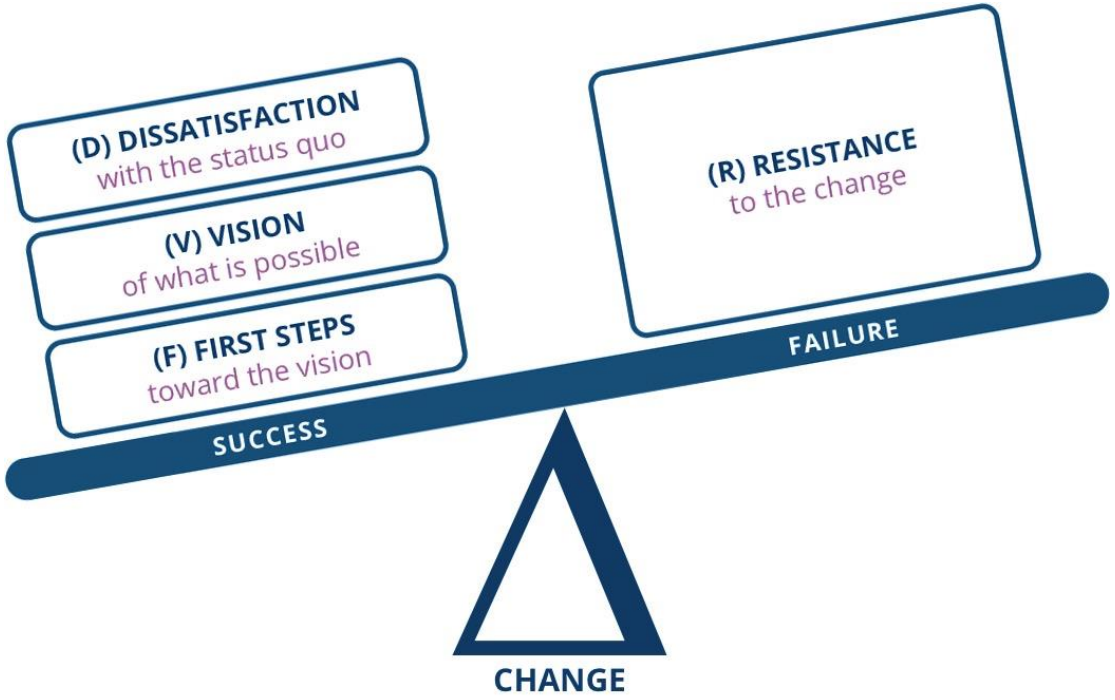
- How strong is your vision? (0 – 10)

F = First Steps

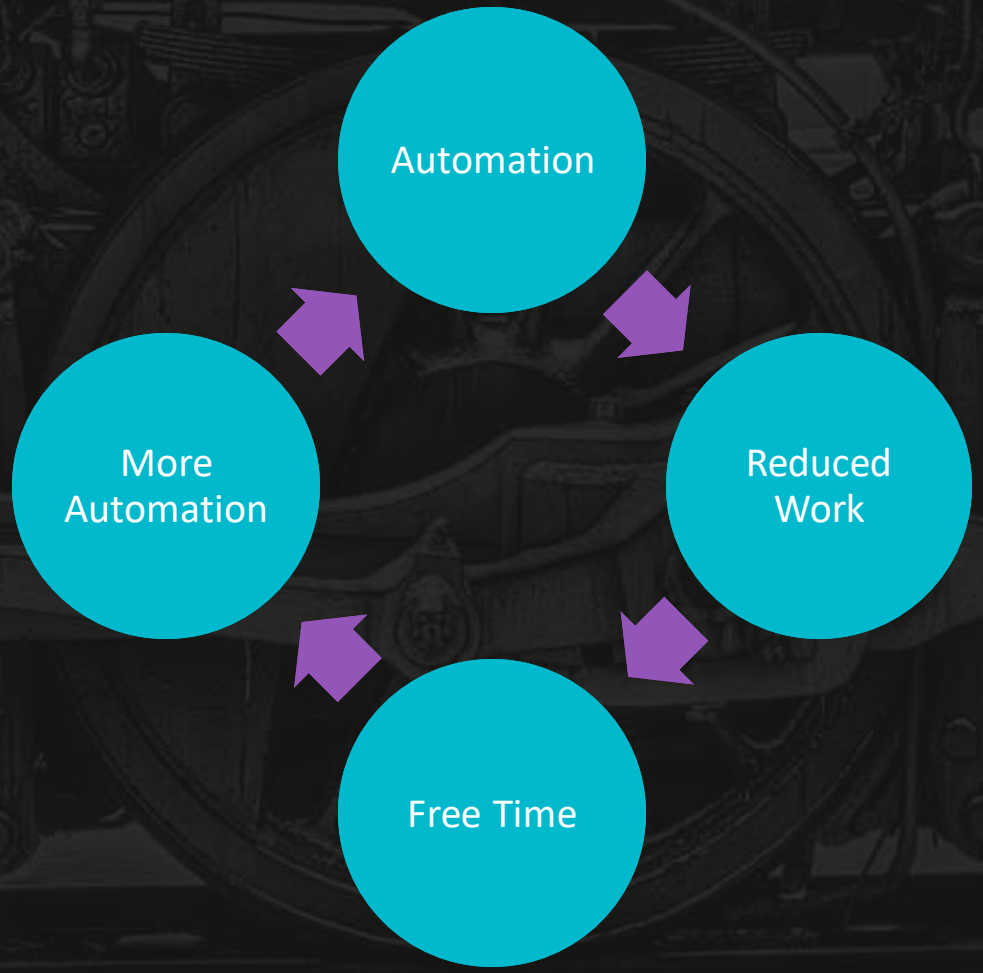
- How solid are your first steps? (0 – 10)

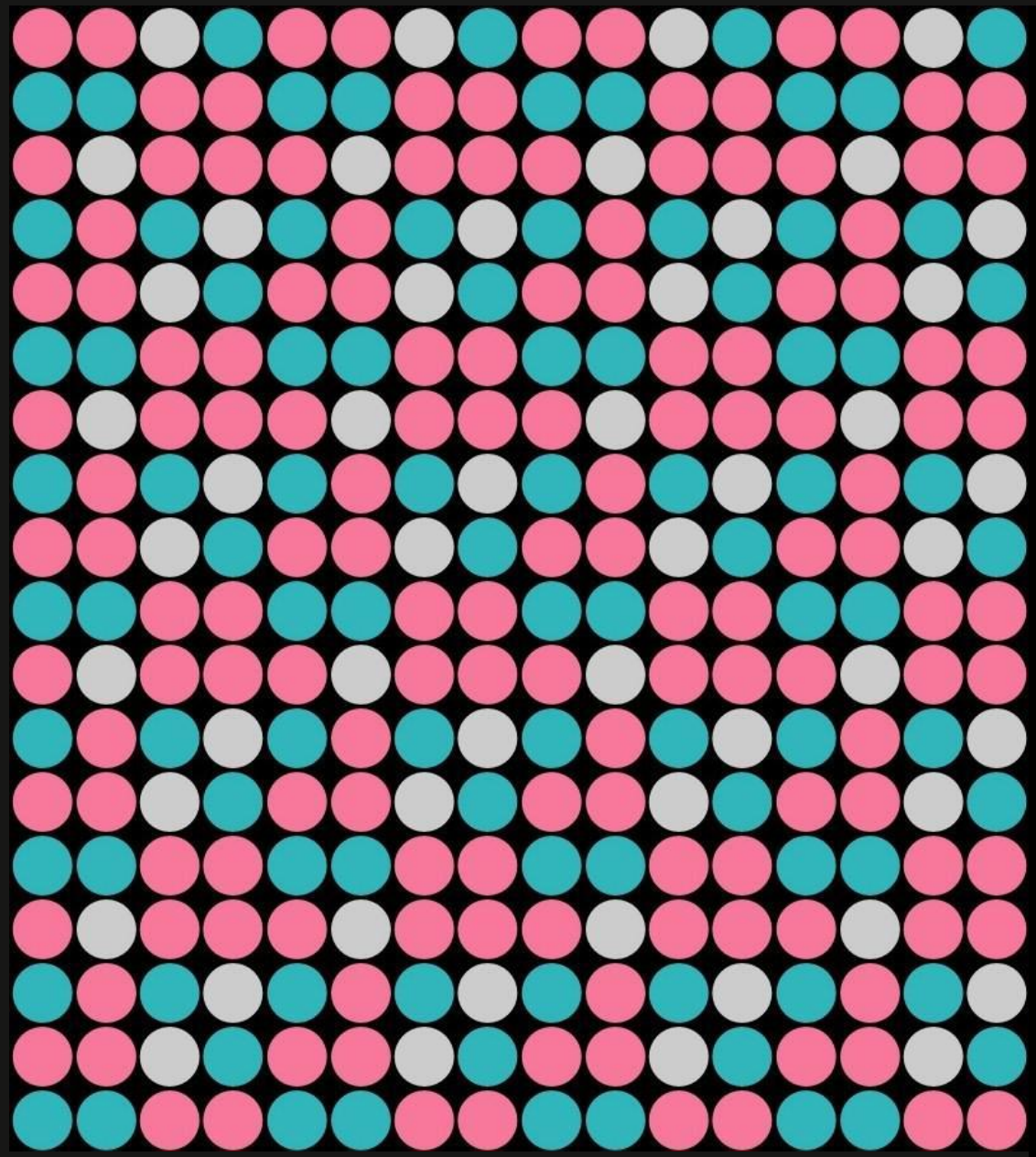
R = Resistance

- What is the resistance to this change in your organization? (0 – 1000)



It’s hard to start the wheel of automation





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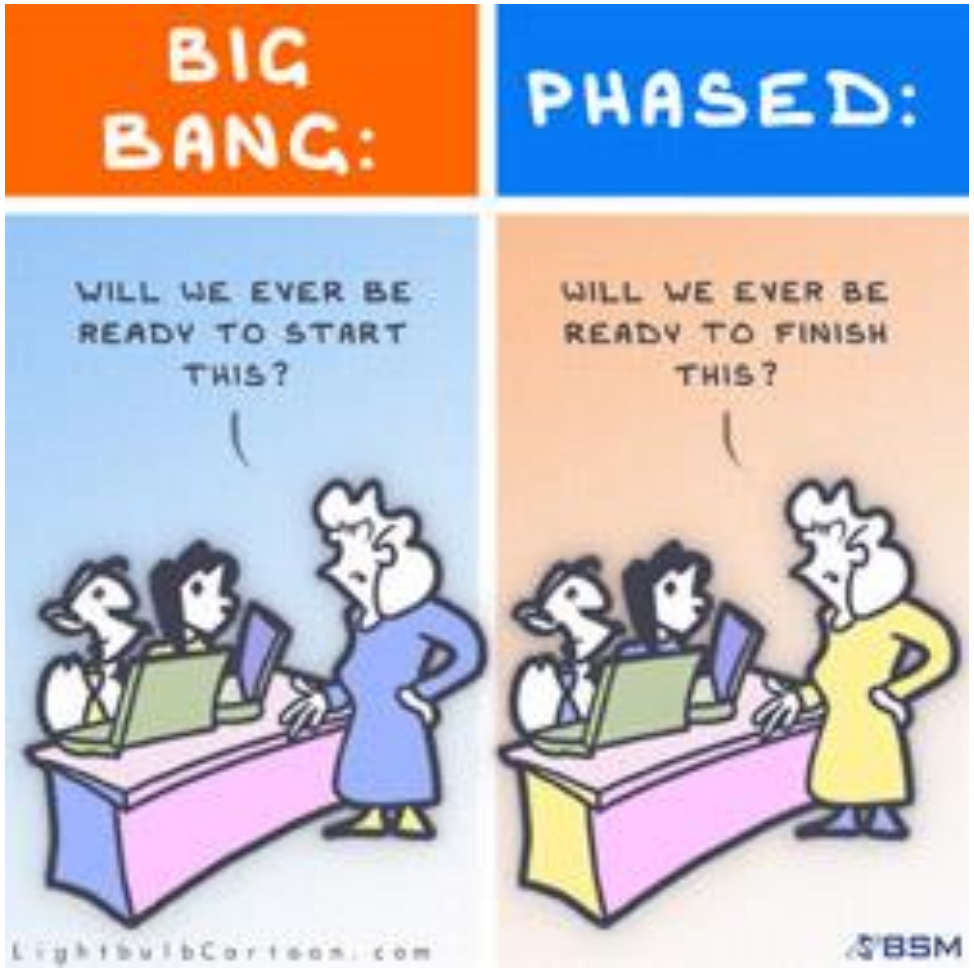
X 52

X 92

Take a phased approach

- Remember the phrase "**crawl, walk, run**"
  - You have to get little wins before you can enact sweeping changes
- Don't forget that people fear change
  - Comfort fear with a solid vision
- Sell change with value
  - "What's in it for me?"
- Make small incremental improvements
  - Choose smaller changes that can add value quickly and are easy to accomplish



To Do

- ✓ Create, share and sell the vision
- ✓ Consolidate and improve toolset
- ✓ Build an SRE function
- ✓ Get the automation wheel turning
- ❑ Completely transition from firefighting to fire prevention
- ❑ Complete re-tooling efforts
- ❑ Expand SRE function
- ❑ Utilize output of alerting to build automation roadmap

From Dashboards to (almost) “Zero Dashboards”

Dynatrace APP 12:27 AM

Elastic load balancer has a high backend failure rate on Elastic Load Balancer coo-reports-1p1p4h929-prod-1

Problem 767: Elastic load balancer has a high backend failure rate in environment: Production

Jan 13th

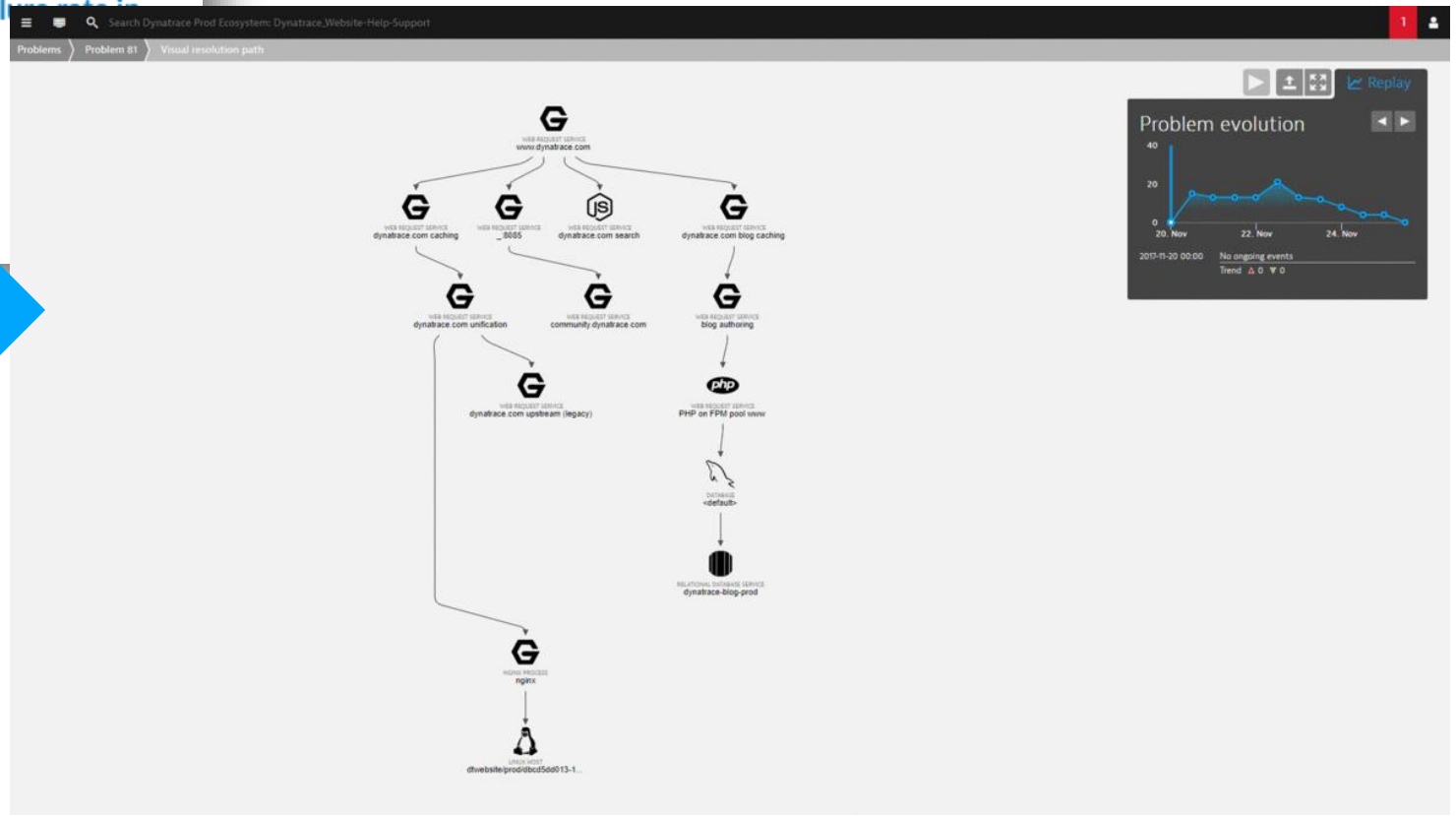
coo-reports-1p1p4h929-prod-1

Elastic load balancer has a high backend failure rate

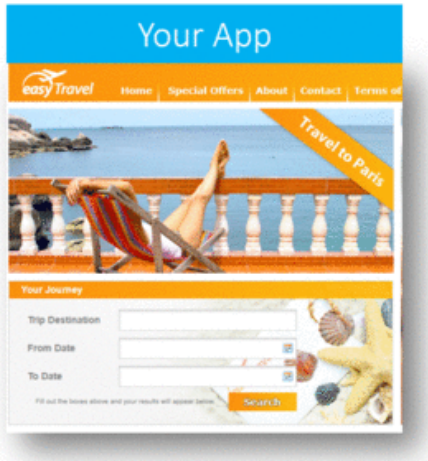
Elastic load balancer has a high backend failure rate

ChatOps

Problem Evolution



To “Self-Healing” via smart remediation, e.g: AWS Lambda, Ansible Tower, StackStorm …



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BEACHBODY
Decide. Commit. Succeed.®
Thank you
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dynatrace
Every user, every app, everywhere.