

# Dynatrace Cloud Infrastructure Monitoring

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Simplified. AI-powered. All-in-one.

 dynatrace  
**Perform**



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Director, Product Management

Dynatrace

# Agenda

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- The Best Kept Secret at Dynatrace
- Simplified, All-in-one, Cloud Monitoring
- Top Use Cases for Cloud Infrastructure Monitoring
- Product Overview / Demo



# The Best Kept Secret at Dynatrace

**The move to the enterprise cloud presents an opportunity...**

- To apply AI-based monitoring to infrastructure
- To effectively automate monitoring for dynamic cloud environments
- To replace legacy monitoring tools

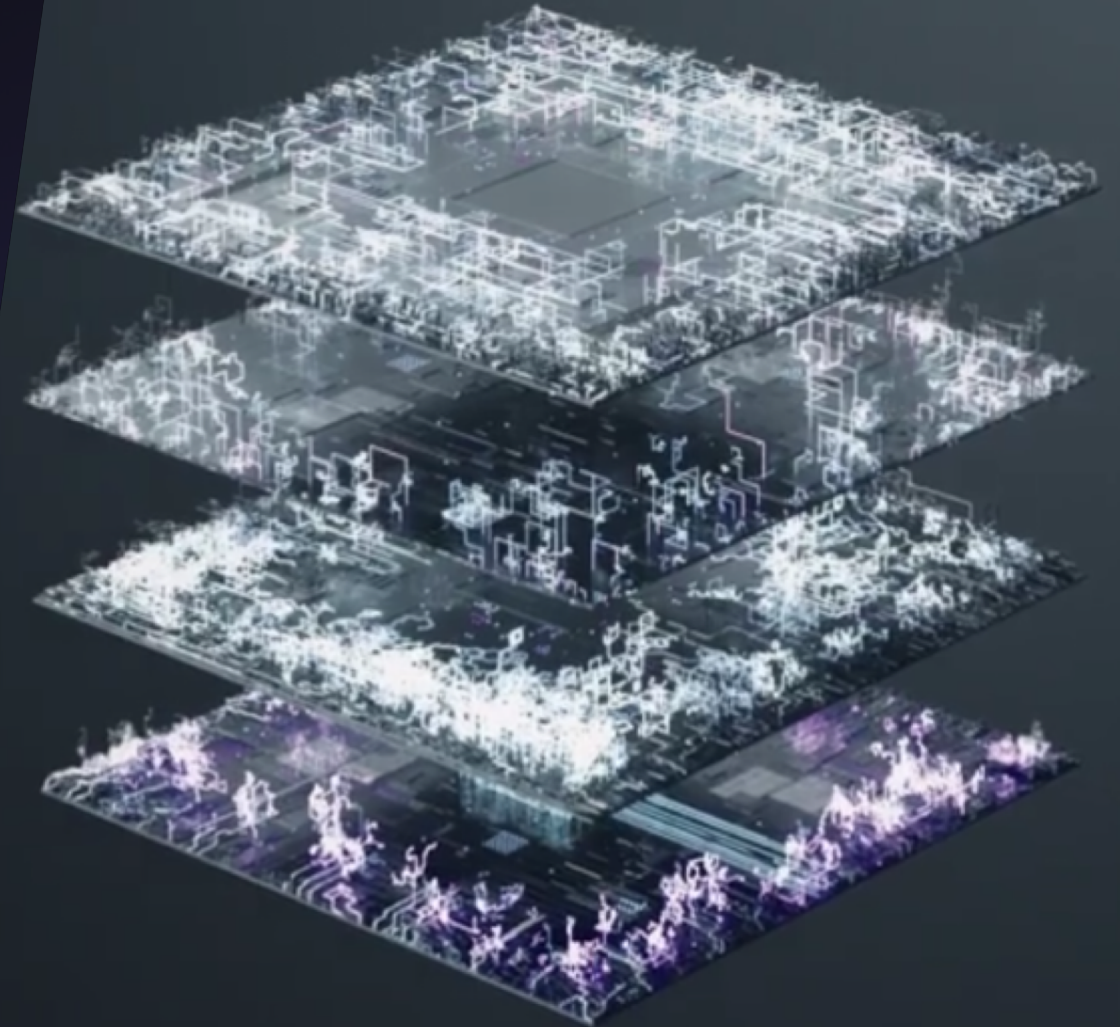
**...All In One Place with Dynatrace**



# Infrastructure and Applications are now Inextricably Linked

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- DevOps and CI/CD
- Microservices and Containers
- Serverless
- Software-defined
  - Servers
  - Storage
  - Networks
- Enterprise Hybrid Cloud



# Traditional and Cloudy Monitoring Approaches Aren't Working

## Traditional Tools

- Many siloed tools
- Too much manual setup and config
- Not cloud-ready
- Not intelligent

## Cloud Point Tools

- Too many tools
- Difficult to set up and integrate
- No answers, just data
- Too much noise/info



## Dynatrace Cloud Infrastructure Monitoring. Simplified. AI-powered. All-in-one.

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- ① Automatically maps and monitors your enterprise cloud without manual configuration
- ② Applies Dynatrace AI magic to infrastructure monitoring
- ③ A single product with a unified full-stack view for Dev, Ops, and Infra teams

# THE SOLUTION

Simplified



AI-powered and  
Automated

All-in-one

## Simplified Enterprise Cloud Monitoring

- **OneAgent** single installer automatically discovers, maps, and monitors infrastructure components anywhere in your enterprise cloud.
- **Reduces the need for legacy and platform-specific point tools** and manual configuration
- **Dynatrace Smartscape** makes understanding and managing your dynamic cloud architecture simple and understandable





## THE SOLUTION

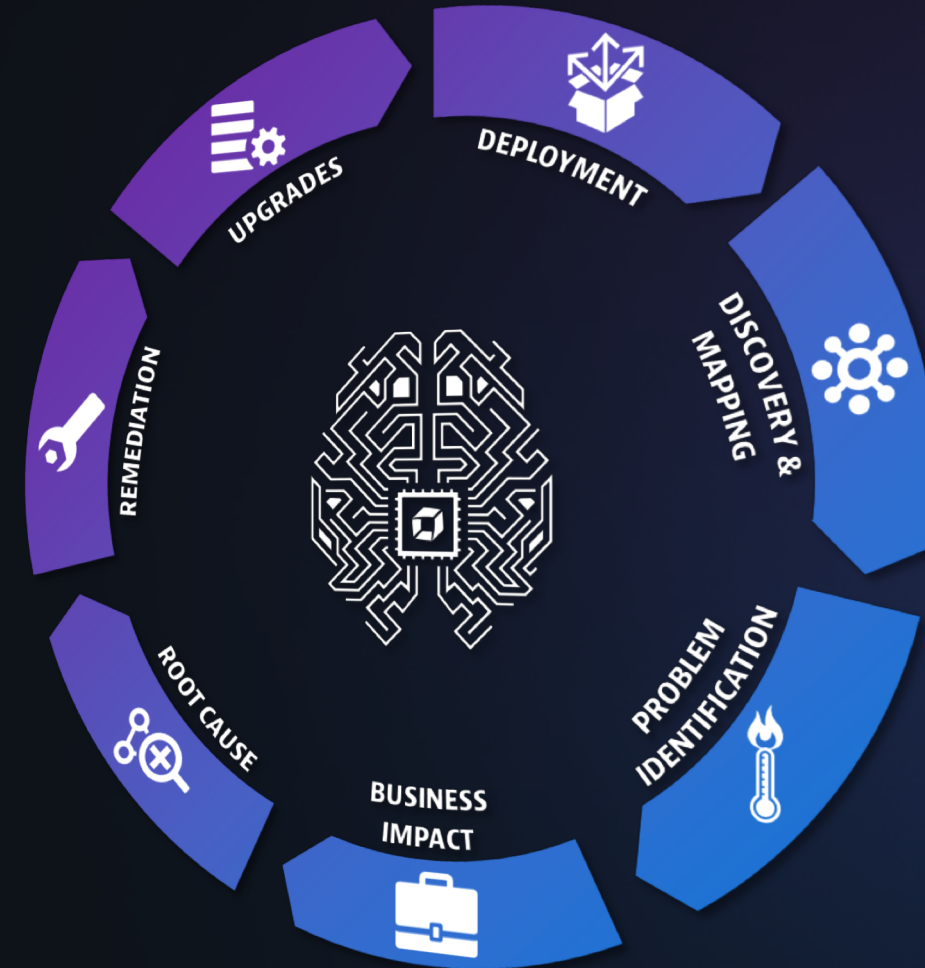
Simplified

AI-powered and  
Automated

All-in-one

## Fully automated, with scale, out of the box.

- **AI** continuously baselines performance and serves precise root causation
- **Automatic** topology mapping in a dynamic environment
- **OneAgent** automated deployment and updates
- **Web-scale** without throttling capture



## THE SOLUTION

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Simplified

AI-powered and  
Automated

All-in-one ◀

## One Platform For the Enterprise Cloud

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- **Single view** across your entire hybrid-cloud ecosystem from monolithic and mainframe to your new cloud platform.
- **Full stack coverage** for Application Performance, Cloud Infrastructure, Digital Experience and AIOps
- **Deep cloud integrations** with all leading cloud providers.



## Example Cloud Infrastructure Monitoring Use Cases

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Application Services  
Architecture

Packaged/Business  
Applications

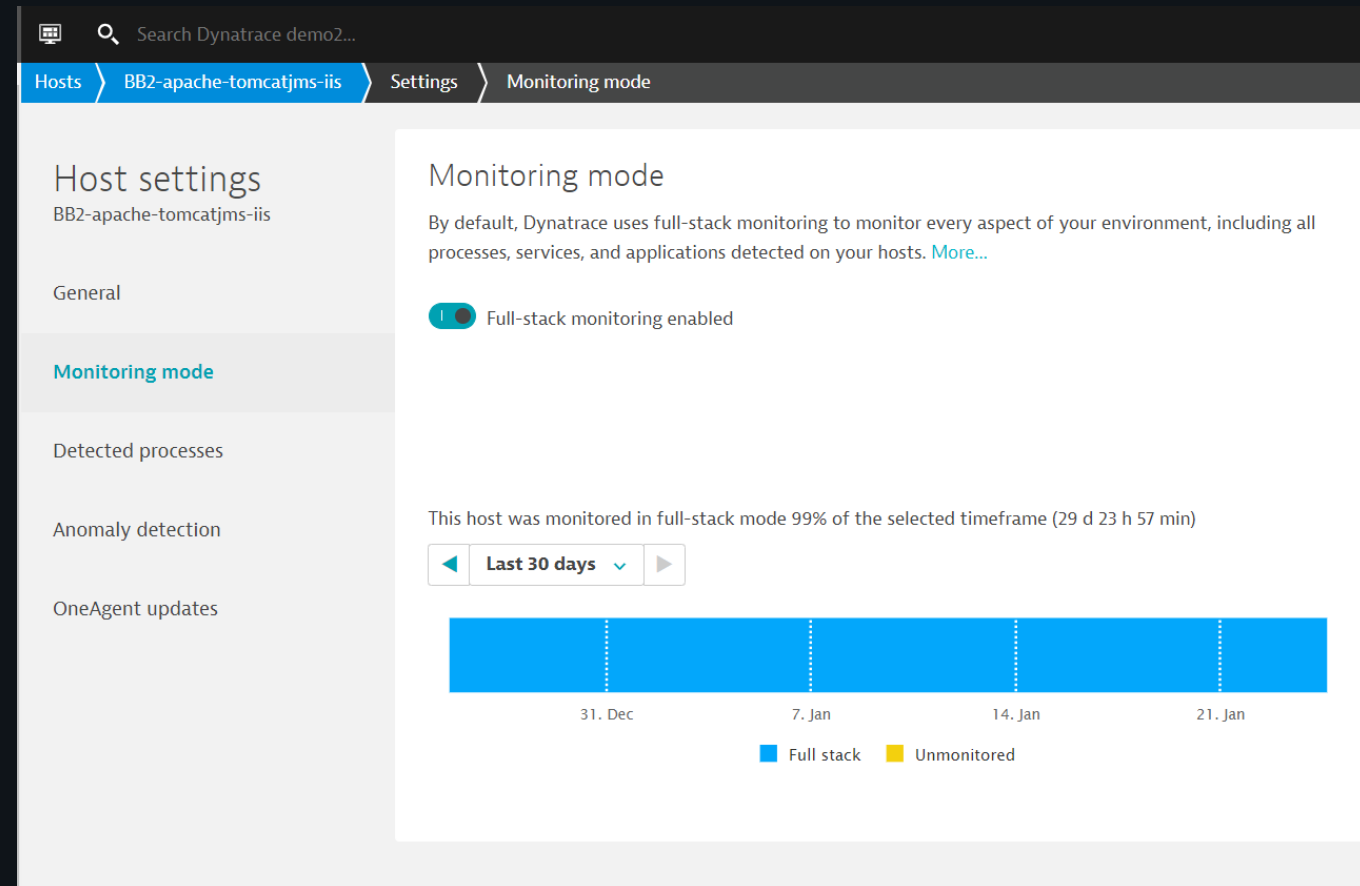
Secondary Apps and  
Systems

# Product Demo

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# Enabling Infrastructure Only Mode

- Any system with a OneAgent is automatically monitored
- Choose between full-stack and infrastructure-only mode at any time in Dynatrace settings



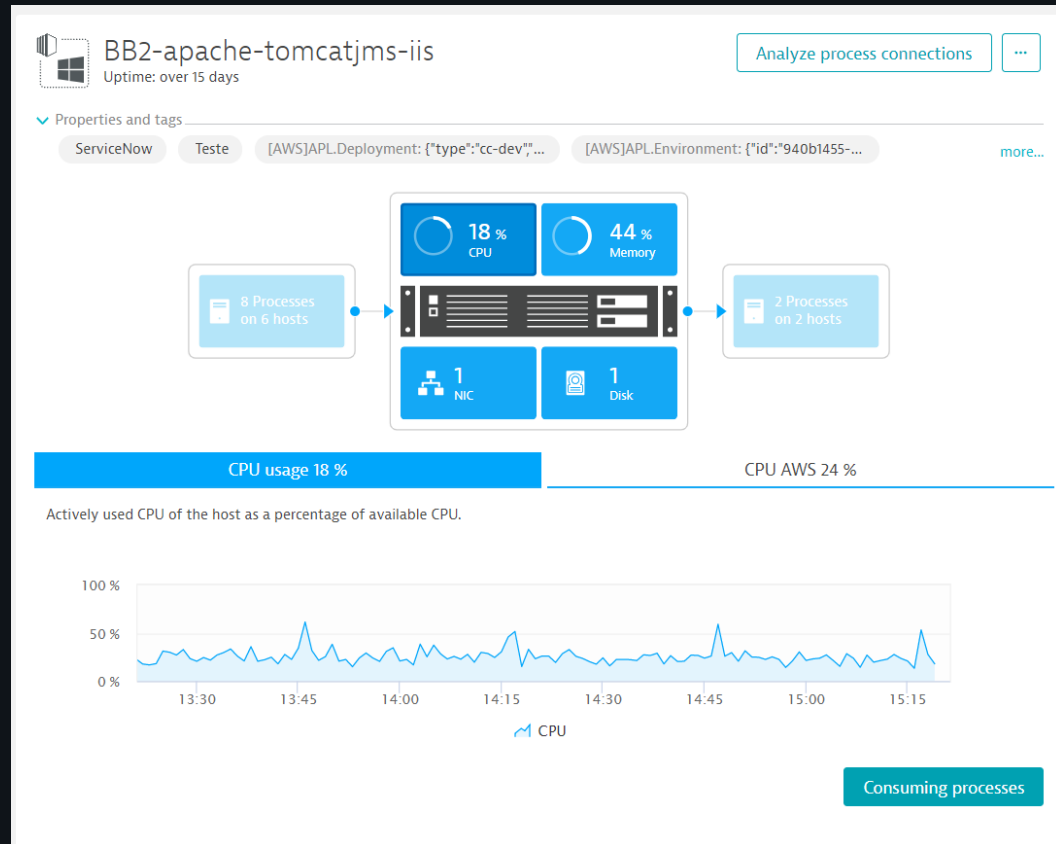
The screenshot shows the Dynatrace web interface. The top navigation bar includes 'Hosts', 'BB2-apache-tomcatjms-iis', 'Settings', and 'Monitoring mode'. The left sidebar lists 'Host settings' (selected), 'General', 'Monitoring mode', 'Detected processes', 'Anomaly detection', and 'OneAgent updates'. The main content area is titled 'Monitoring mode' and contains the following information:

- A description: "By default, Dynatrace uses full-stack monitoring to monitor every aspect of your environment, including all processes, services, and applications detected on your hosts. [More...](#)"
- A toggle switch for 'Full-stack monitoring enabled', which is currently turned on.
- A summary statement: "This host was monitored in full-stack mode 99% of the selected timeframe (29 d 23 h 57 min)".
- A time range selector set to 'Last 30 days'.
- A horizontal bar chart showing the monitoring status over time. The bar is almost entirely blue, indicating 'Full stack' monitoring. A legend at the bottom shows a blue square for 'Full stack' and a yellow square for 'Unmonitored'.

The bar chart has four vertical dashed lines marking the dates: 31. Dec, 7. Jan, 14. Jan, and 21. Jan.

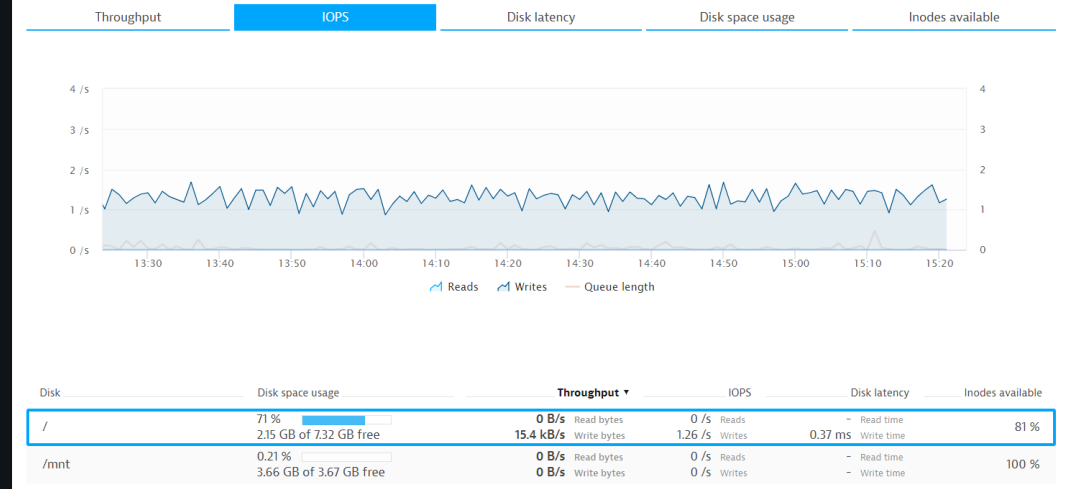


# Infrastructure components monitored in Dynatrace Hosts



Process	Type	CPU	Memory	Traffic	Retransmissions	Connectivity
eT-demo-2-BusinessBackend (eT-demo-2-BusinessBackend-1-WIN2)	Apache Tomcat	12 %	473 MB	306 kbit/s	0.7 %	100 %
eT-demo-2-BusinessBackend (eT-demo-2-BusinessBackend-2-WIN2)	Apache Tomcat	12 %	473 MB	228 kbit/s	0.25 %	100 %
Windows System	Windows	0.29 %	445 MB	-	-	-
IIS app pool dotNetFrontend_easyTravel_x64	ASP.NET	0.31 %	333 MB	1.26 Mbit/s	0.21 %	100 %
IIS app pool dotNetBackend_easyTravel_x64	ASP.NET	0.39 %	305 MB	19.9 kbit/s	3.17 %	100 %
com.dynatrace.easytravel.cmdlauncher.jar easyTravel (x*)	Apache Tomcat	0.04 %	182 MB	12.6 kbit/s	0.8 %	100 %
XenDpriv.exe	.NET	0.14 %	97.5 MB	2.51 kbit/s	2.13 %	100 %
OneAgent system monitoring	Dynatrace	0.14 %	70.8 MB	13 kbit/s	1.25 %	100 %
apl-remotecontrol.jar	Java	0.14 %	68 MB	1.15 kbit/s	4.76 %	100 %
eT-demo-2-BusinessBackend-LoadBalancer	Apache HTTP Server	0.25 %	65.2 MB	666 kbit/s	1.49 %	100 %
XenGuestAgent.exe	.NET	0 %	41.3 MB	-	-	-
Ec*Config.exe	.NET	0 %	41.1 MB	126 bit/s	0 %	100 %

## Disks



# Dynatrace Infrastructure Dashboards

## Enterprise Cloud Dashboard

Owned by gavin.hunter@dynatrace.com






### Enterprise Cloud Summary

Problems

0/1

Technologies

.NET 

24 more

Service health

All fine 124

Application health

All fine 17

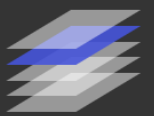
Database health


All fine 15

Host health

All fine 52

Smartscape

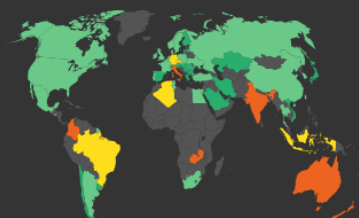


221  Services

### User Experience

Apdex

www.easytravel.com



Key user actions

www.easytravel.com

- 4 😊 Excellent apdex rating
- 6 😊 Good apdex rating
- 2 😐 Fair apdex rating
- 1 😞 Poor apdex rating
- 0 😞 Unacceptable apdex rating
- 0 — Unknown apdex rating

13 Key user actions

### Hybrid Cloud

AWS account

AWS

1 RDS instances

2 Load balancers

13 EC2 instances

VMware vCenter

emea-gdn-vc002

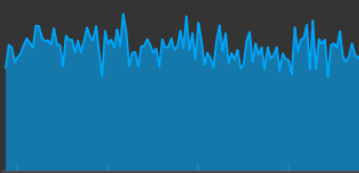
	Last Thu	Today	2 ESXi hosts
Migrations	2	0 ↓	
Guests	7	7 —	

Network metrics

Traffic 404 Mbit/s

Retransmissions 0.27 %

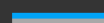
Connectivity 98 %

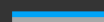


### Micro Services

Docker


5 Docker hosts

Containers  54 now 54


Images  19 19

Service

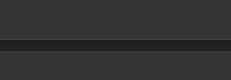
easyTravel Customer Frontend



179 /min Dynamic requests



2.8 % Failure Rate



47.5 ms Response Time

Service

easyTravel Customer Frontend

179 /min Dynamic requests

2.8 % Failure Rate


47.5 ms Response Time

### SLA's and Availability


Browser monitor

www.easytravel.com

3 Locations



100 % Availability



4.69 s Duration

Mobile app

easyTravel Mobile

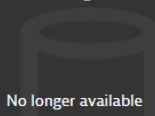
1.2k Users

100.00 % Crash-free users

0.0 Crashes

Database

easyTravelOpenShift-Business (MongoDB)



No longer available

# Investigating and Resolving Problems

▼ Impact

Applications43

Services30

Infrastructure99

Keep this filter

▼ Alerts

Default121

deploymentchange13

processcrash87

rguerrero121

servicescalling13

testing121

▼ Context

Non-maintenance133

▼ Tags

[CloudFoundry]deployment t...1

davis-webhook-sprint-dialogflow

Lambda high error rate

Problem 745

From 14:08 - 14:13 for 5 minutes

Impacted components

davis-webhook-sprint-dialogflow

3 applications

User action duration degradation

Problem 931

From 01:58 - 02:53 for 55 minutes

Impacted applications

www.easytravelb2b.com, www.easytravel.com, www.angular.easytravel.com

Impact

531 user actions/min affected

multiple user actions

Root cause

BB2-apache-tomcatjms-iis - CPU saturation

BB1-apache-tomcatjms-iis - CPU saturation

CheckDestination - Response time degradation

Root cause

Based on our dependency analysis all incidents have the same root cause

CheckDestination

Custom service

Response time degradation

The current response time (7.92 s) exceeds the auto-detected baseline (133 ms) by 5,849 %

Affected requests789 /min

Service methodAll methods affected

BB1-apache-tomcatjms-iis

Host

CPU saturation

100 % CPU usage

Analyze logs

BB2-apache-tomcatjms-iis

Host

CPU saturation

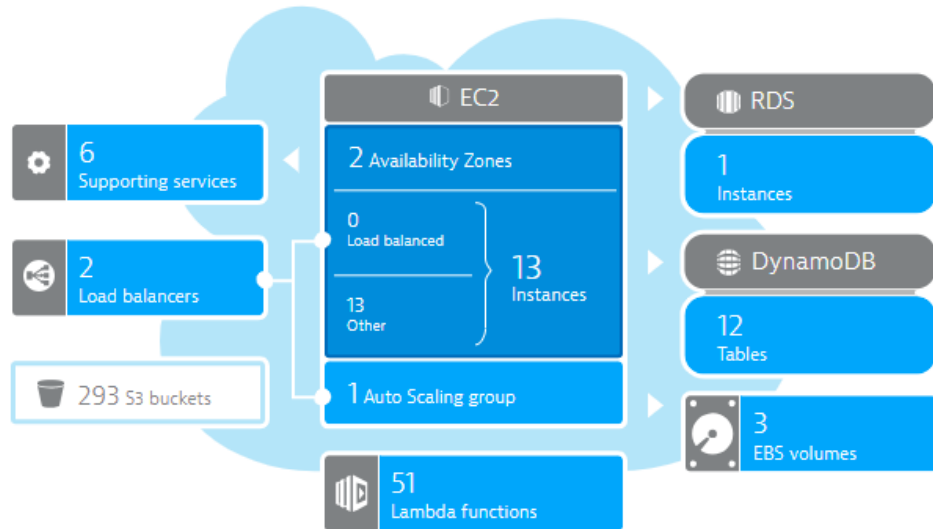
100 % CPU usage

Analyze logs

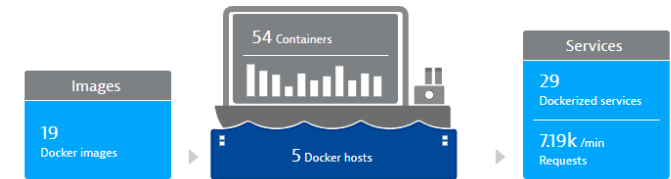
Confidential

15

# AWS and Docker Infrastructure Monitoring



## Docker



### Top 3 of currently running containers

1. k8s\_easytravel-frontend\_easytravel-frontend-6f66749ccb-7txgk\_demo-live-2\_4460ff80-1597-11e9-926b-005056b4ca39\_0, 955 MB memory
2. k8s\_easytravel-frontend\_easytravel-frontend-6f66749ccb-c5x9h\_demo-live-2\_4463db9e-1597-11e9-926b-005056b4ca39\_0, 925 MB memory
3. k8s\_easytravel-backend\_easytravel-backend-6dc74f6dc9-j9cdm\_demo-live-2\_43f4a6e4-1597-11e9-926b-005056b4ca39\_0, 865 MB memory

### Latest container started

mesos-1f5421c5-7904-4a79-8908-2ad3b585a68b-50.d1a3604d-f599-4a49-a3d6-742fa6b9750a started from image easytravel/nodejs-proxy

### Top 3 active images

1. k8s.gcr.io/pause, 12 containers
2. easytravel/nodejs-proxy, 10 containers
3. sha256, 9 containers

# Extensions and Plugins

## ActiveGate Plugins

Technology

[DataPower](#)

[F5 BIG-IP LTM](#)

[Windows Server 2003](#)

## OneAgent Plugins

Technology	Versions
.NET CLR	
<a href="#">ActiveMQ</a>	5.8.0+
<a href="#">Cassandra</a>	2.0+
<a href="#">Couchbase</a>	4.3+
<a href="#">CouchDB</a>	1.5.0+
<a href="#">Elasticsearch</a>	2.3+
<a href="#">Hadoop</a>	2.4.1+
<a href="#">HAProxy</a>	Daemon-mode only (-D option) 1.4, 1.5, 1.6
<a href="#">Kafka</a>	0.9.0.1+
<a href="#">Memcached</a>	1.4.24+
<a href="#">Microsoft SQL Server</a>	2008, 2012, 2014, 2016, 2017
<a href="#">MySQL<sup>1</sup></a>	5.7
<a href="#">MongoDB</a>	2.6+
<a href="#">PostgreSQL</a>	9.1+
<a href="#">RabbitMQ<sup>3</sup></a>	3.4.0+
<a href="#">Redis</a>	2.8+
<a href="#">Spark</a>	1.6



# Management Zones

## Management zones settings BETA

Management zones enable defining fine grained access rights to parts of an environment. A Management zone consists of a set of entities like applications, hosts, process groups, or services. For each Management zone you can define which user groups have access to them. This way you can ensure the confidentiality of certain parts of an environment and still keep an end to end view across all components for the users that need it.

Add new management zone

Filter by management zone

Name ▲

Azure

Cloud Foundry

easytravel Apps

ESXi\_visibility

k8s

Linux hosts

# Call to Action: Extend the power of Dynatrace to Cloud Infrastructure!

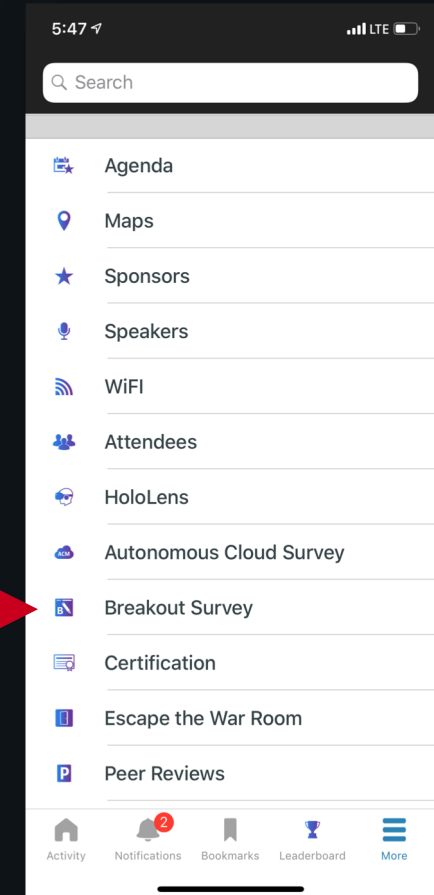
## Your To-Do List

- ✓ Deploy a OneAgent in Infrastructure-only mode
- ✓ Try a OneAgent or ActiveGate Extension
- ✓ Finally kick out a legacy tool
- ✓ Meet us in the Marketplace

## Let us know how we did!

- 2 minute survey
- Find it from the Perform app menu
- Complete survey for each breakout you attend

**Track = Software Intelligence**





Thank you





# Backup Slides

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