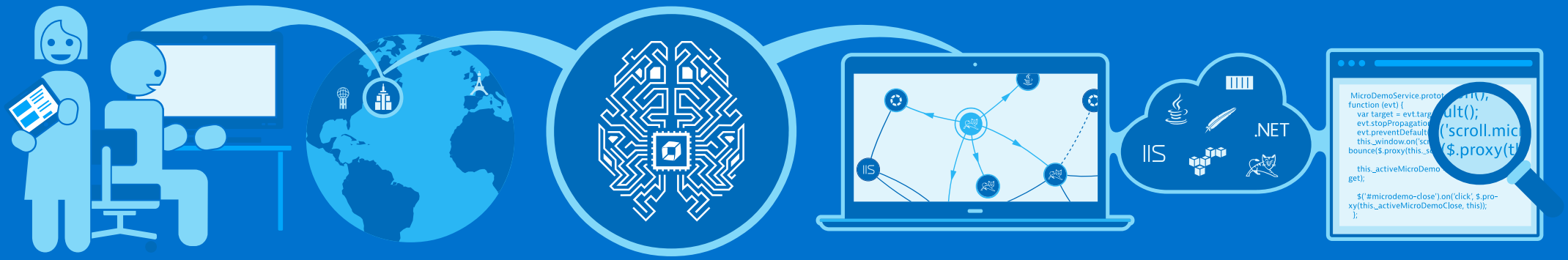
dynatrace

OpenStack Monitoring & Troubleshooting

OpenStack, Japan

July 21, 2017



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APM

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Application Performance Management

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dynatrace

9000+ Customer

Leader in the APM Market

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9000+ Customer Leader in the APM Market

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Technology Lead OpenStack

dirk.wallerstorfer@dynatrace.com
@wall_dirk

Daisuke Akane
Sales Engineer

daisuke.akane@dynatrace.com

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OpenStack

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OpenStack + Dynatrace APM

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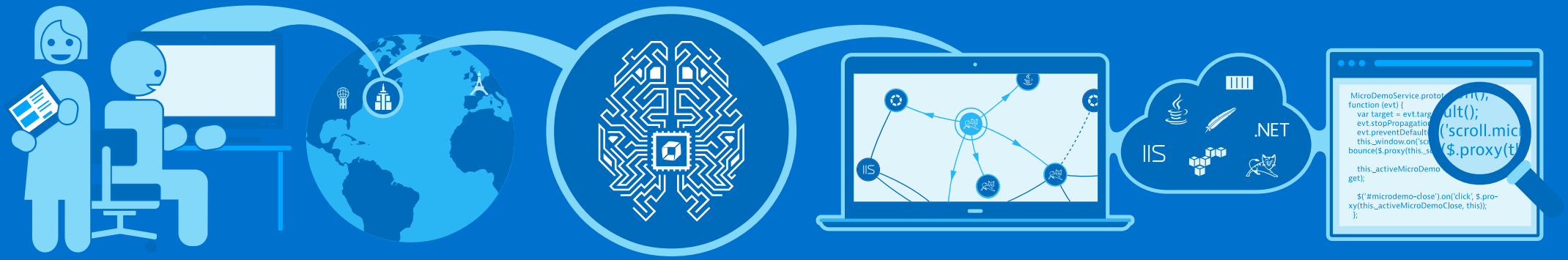
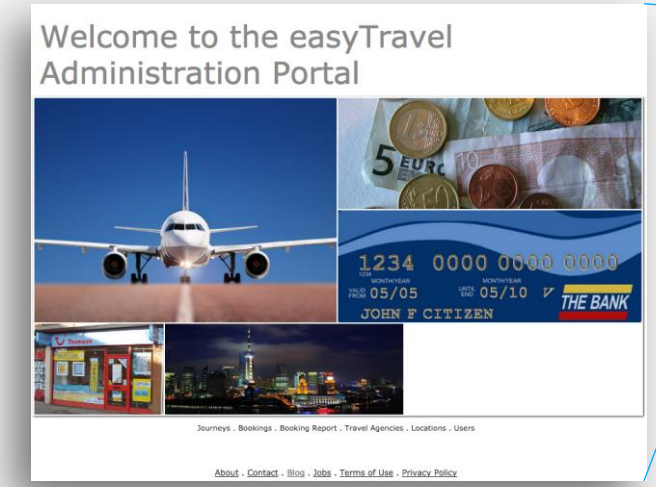
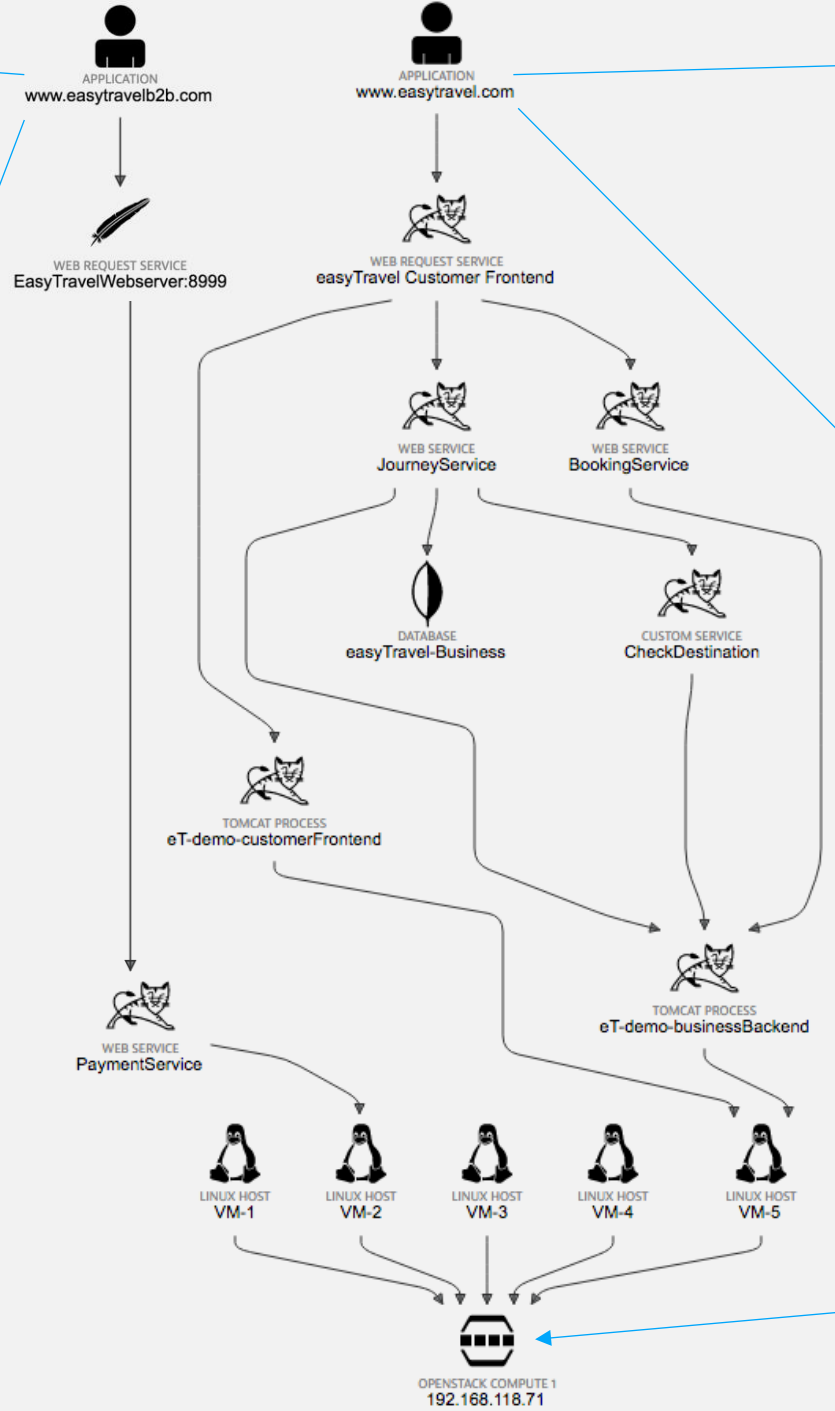
Full Stack Monitoring




Welcome to the easyTravel Administration Portal
1234 0000 0000 0000
05/05
05/10
JOHN F CITIZEN
THE BANK
Journeys . Bookings . Booking Report . Travel Agencies . Locations . Users
About . Contact . Blog . Jobs . Terms of Use . Privacy Policy


APPLICATION
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easyTravel Customer Frontend
WEB SERVICE
JourneyService
WEB SERVICE
BookingService
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CUSTOM SERVICE
CheckDestination
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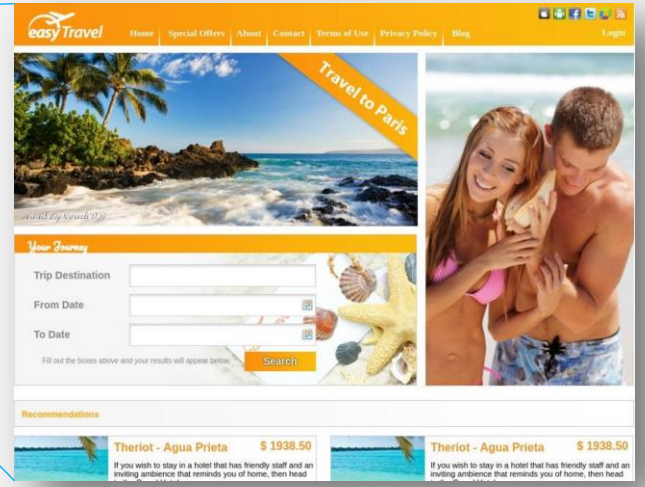
OPENSTACK COMPUTE 1
192.168.118.71

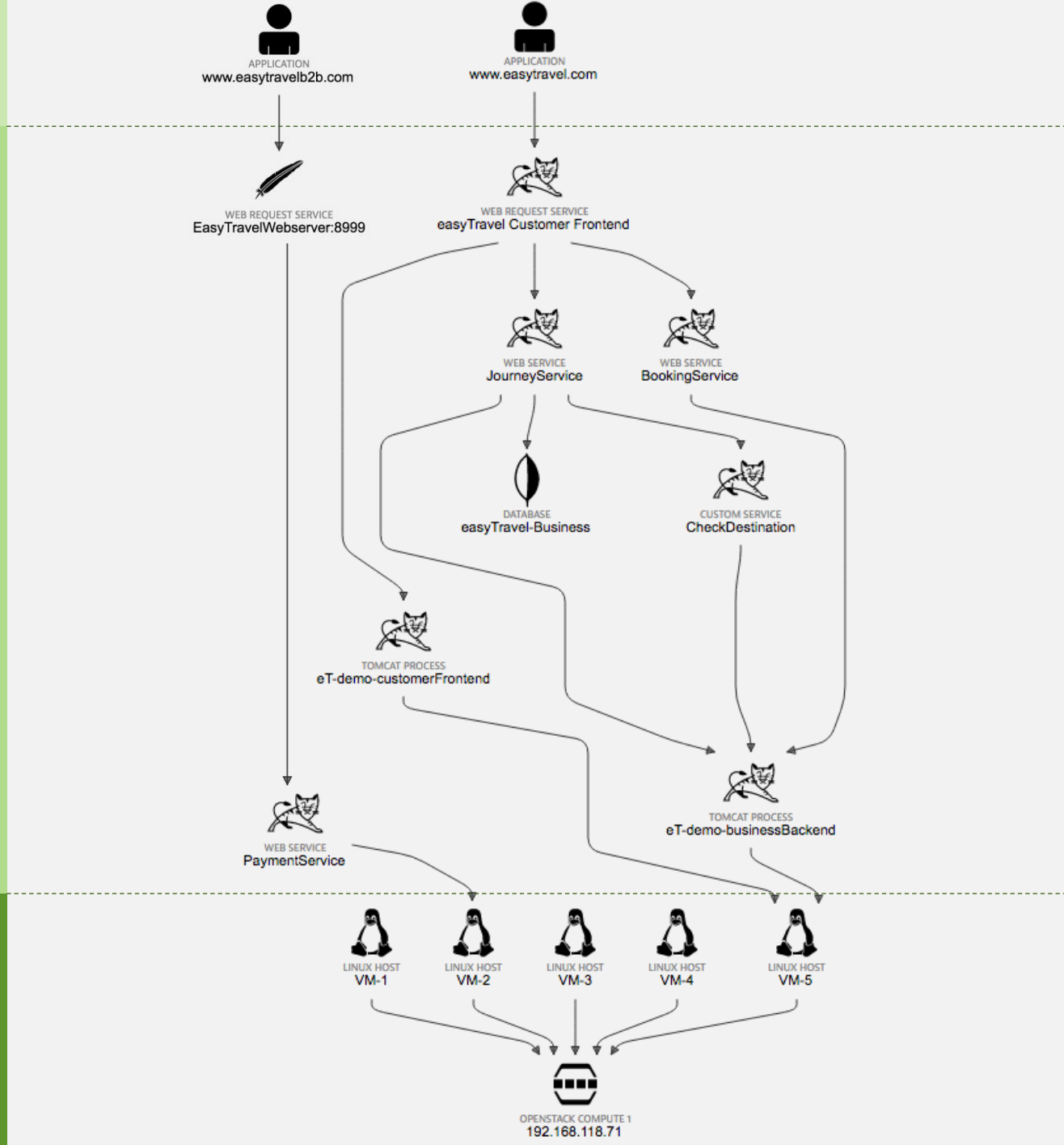

easyTravel
Travel to Paris
Trip Destination
From Date
To Date
Search
Recommendations
Theriot - Agua Prieta
$ 1938.50
Theriot - Agua Prieta
$ 1938.50

openstack®

UX is important!

Cloud is all about applications

Hello, I’m cloud



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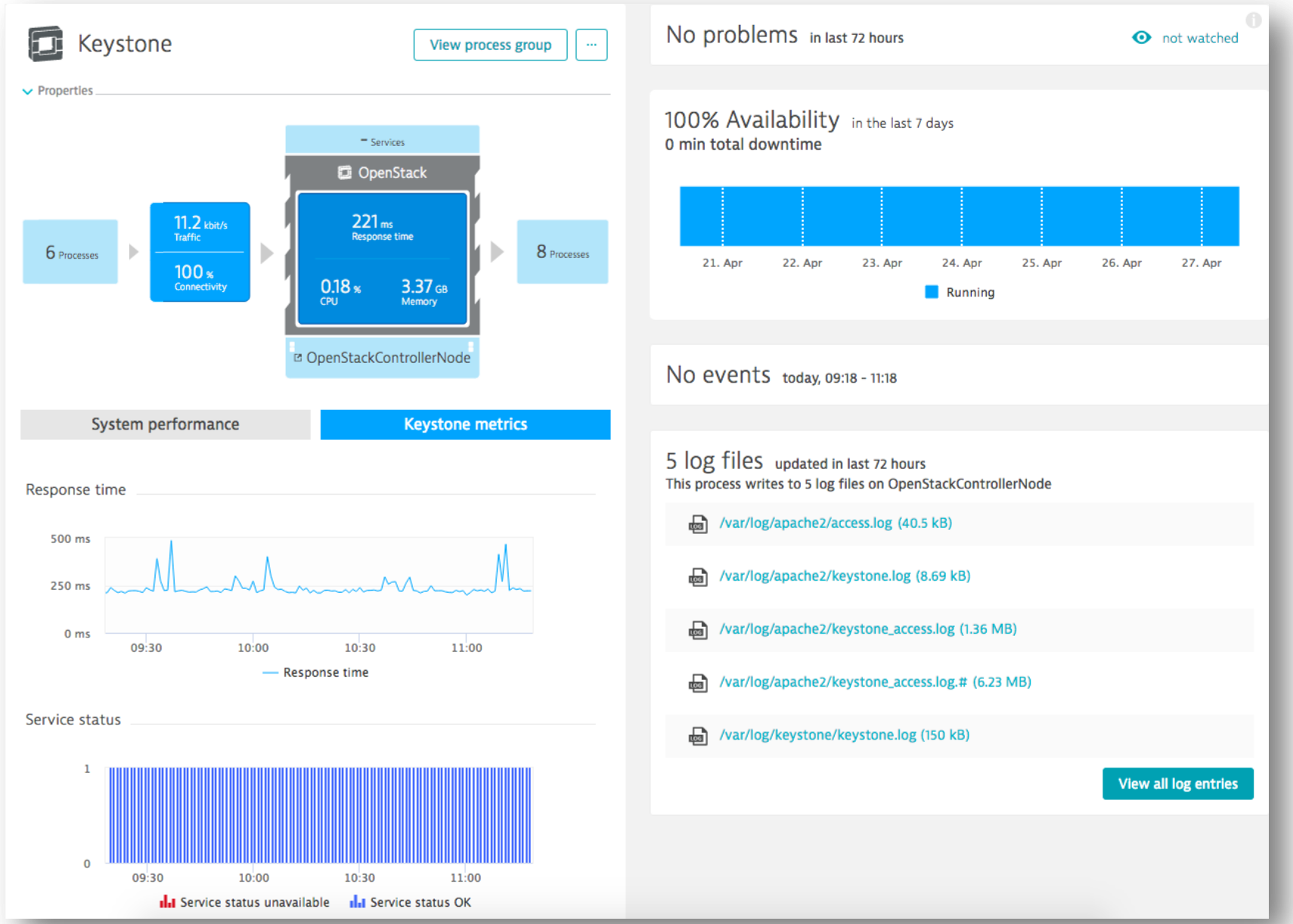
http://pcwallart.com/image-post/180280-tip-of-the-iceberg-wallpaper-2.jpg.html

OpenStack service availability/performance



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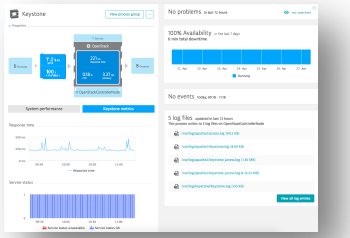
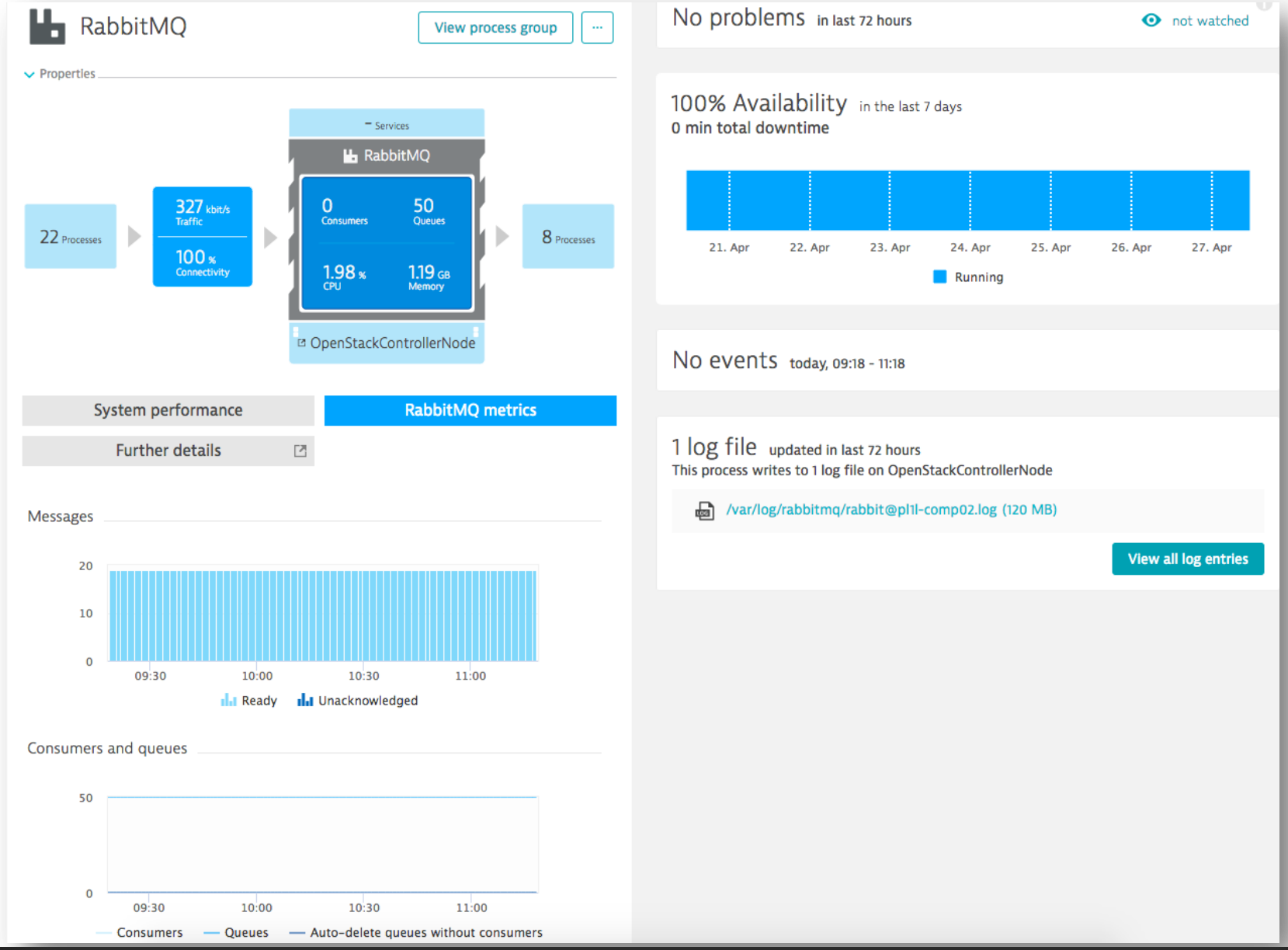
Supporting services



OpenStack service availability/performance



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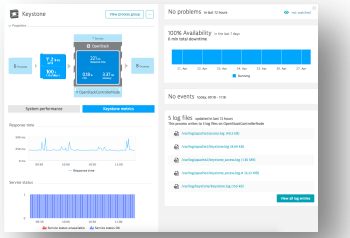
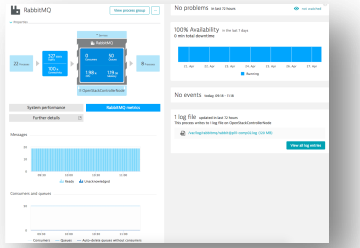
Resource capacity and utilization



OpenStack service availability/performance



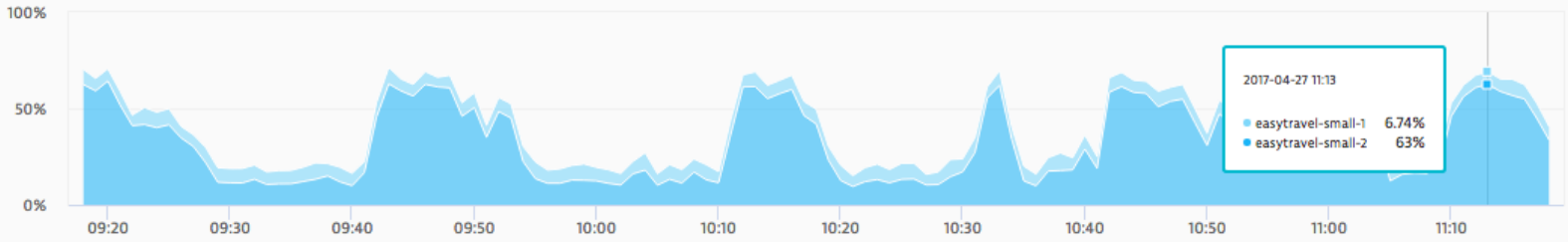
Supporting services

3 Compute nodes | 1 Project

Start typing to filter...

Hypervisor	Name ▲	No. of VMs	State	vCPU	Memory	Used disk space	Network	Details
QEMU	pl1l-comp03	4	running	6	12.8 GB	120 GB	67.6 Mbit/s	⌄
QEMU	pl1l-comp04	3	running	1	2.56 GB	20 GB	66.4 Mbit/s	⌃

CPU usage | Memory usage | Used disk space | Network | Availability



lwrona-instance3 (m1.small) Start monitoring your VM Download OneAgent	running	1	-	20 GB	8.2 Mbit/s	
easytravel-small-2 (m1.small)	running	1 (32.9 %)	1.17 GB	18.1 GB	22.7 Mbit/s	
easytravel-small-1 (m1.medium)	running	2 (7.12 %)	604 MB	9.69 GB	35.5 Mbit/s	
QEMU pl1l-comp05	3	running	4	8.7 GB	80 GB	39.4 Mbit/s ⌄

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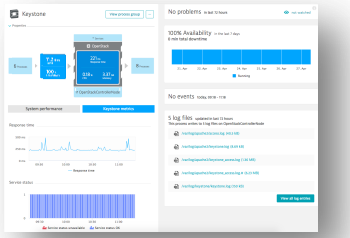
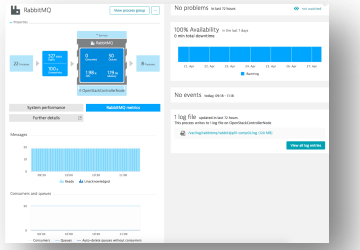
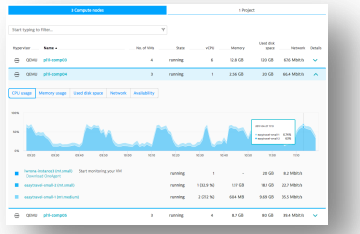
Log analytics



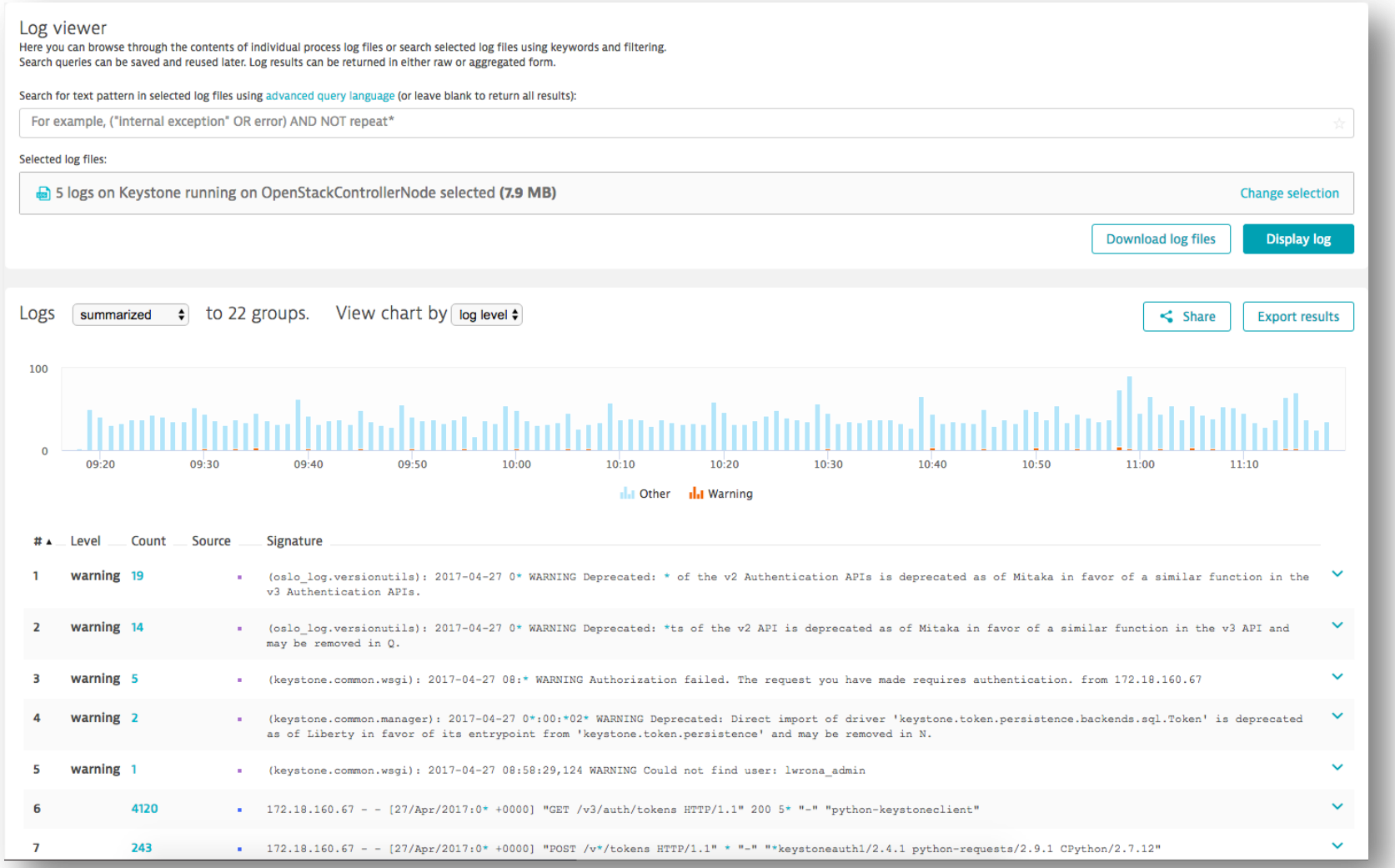
OpenStack service availability/performance



Supporting services



Resource capacity and utilization



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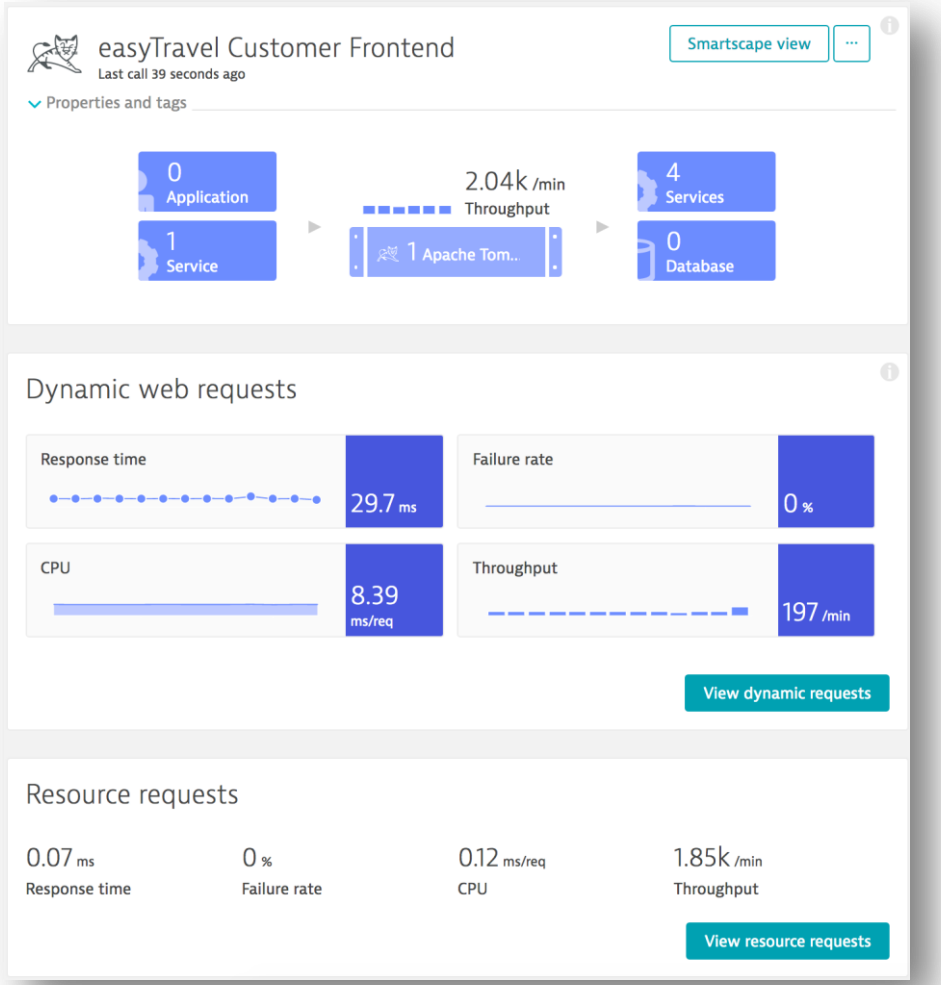
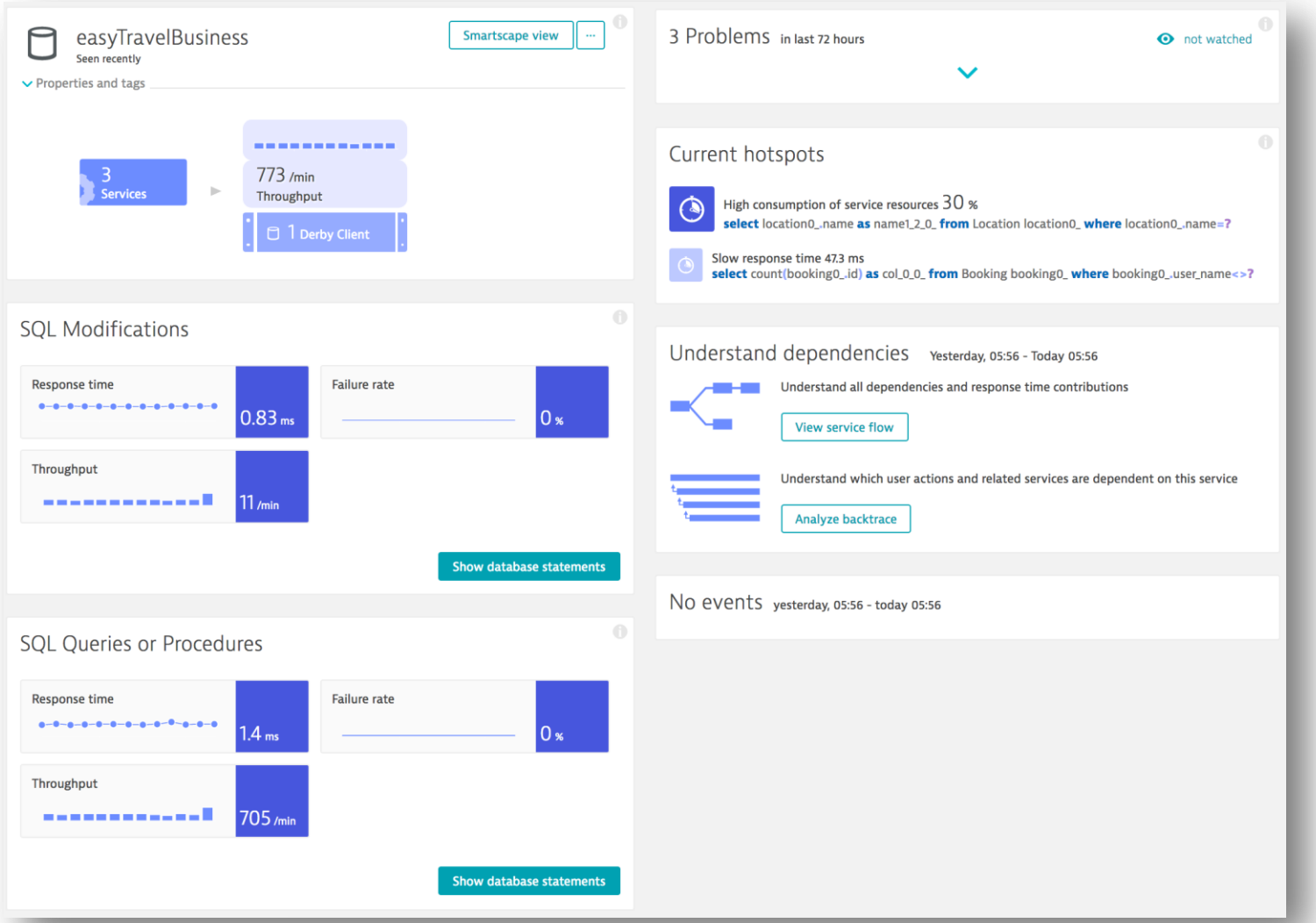
Cloud is all about applications





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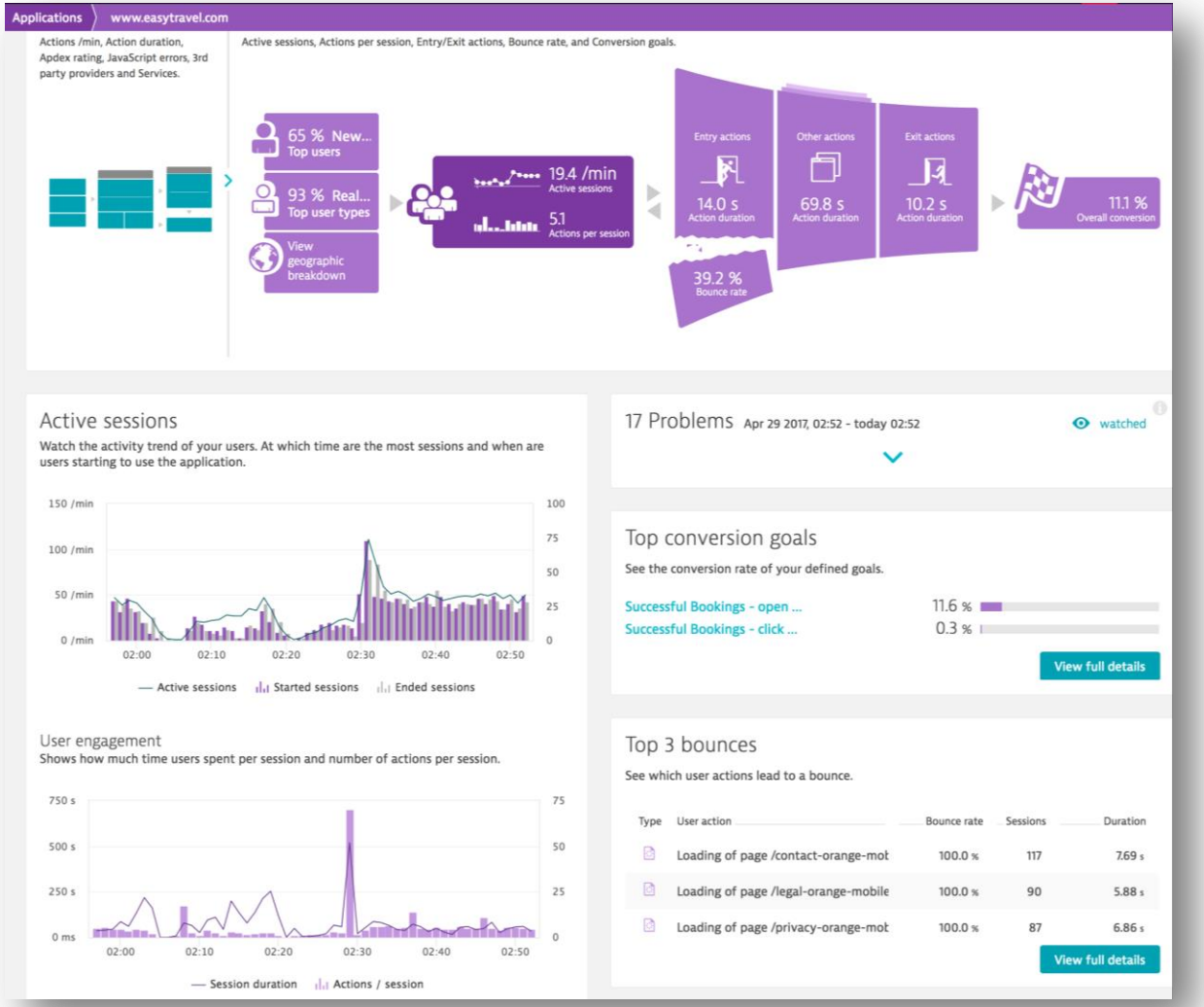
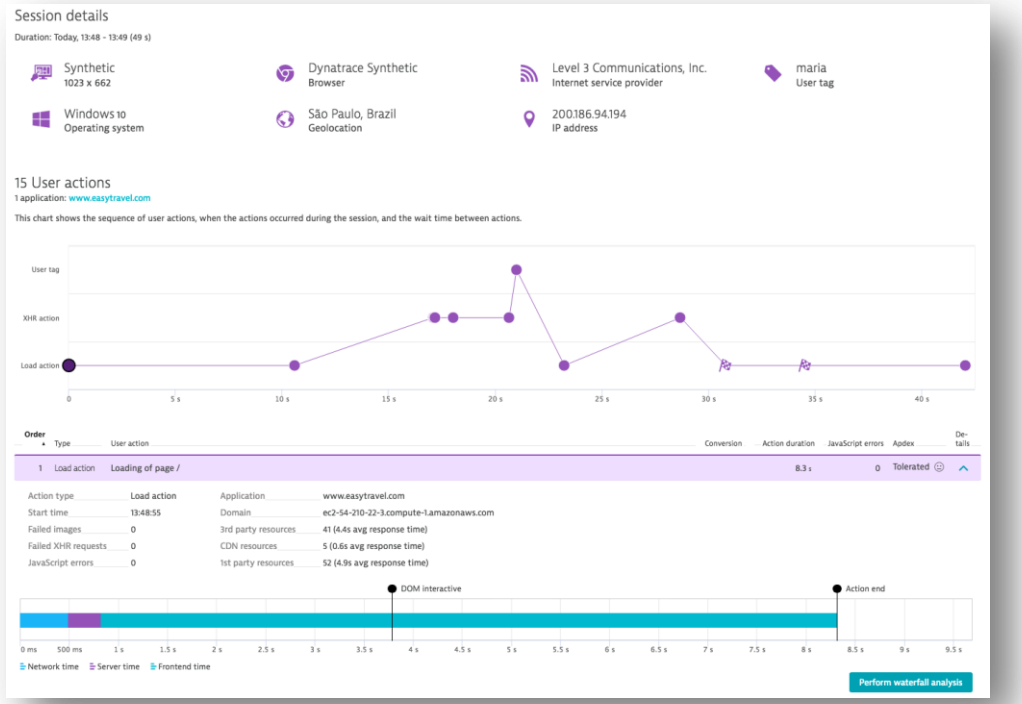
Celebrate the power of the individual





Correlation

- Correlation is a statistical measure that indicates the extent to which two or more variables fluctuate together.

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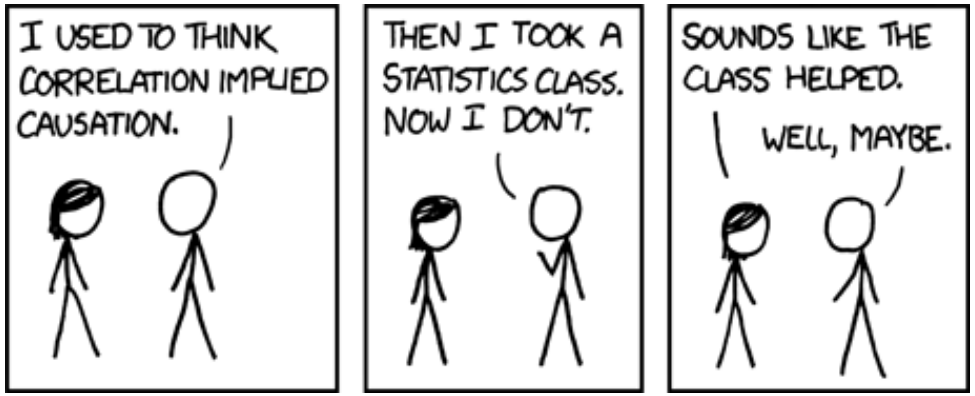
Correlation doesn‘t imply causation

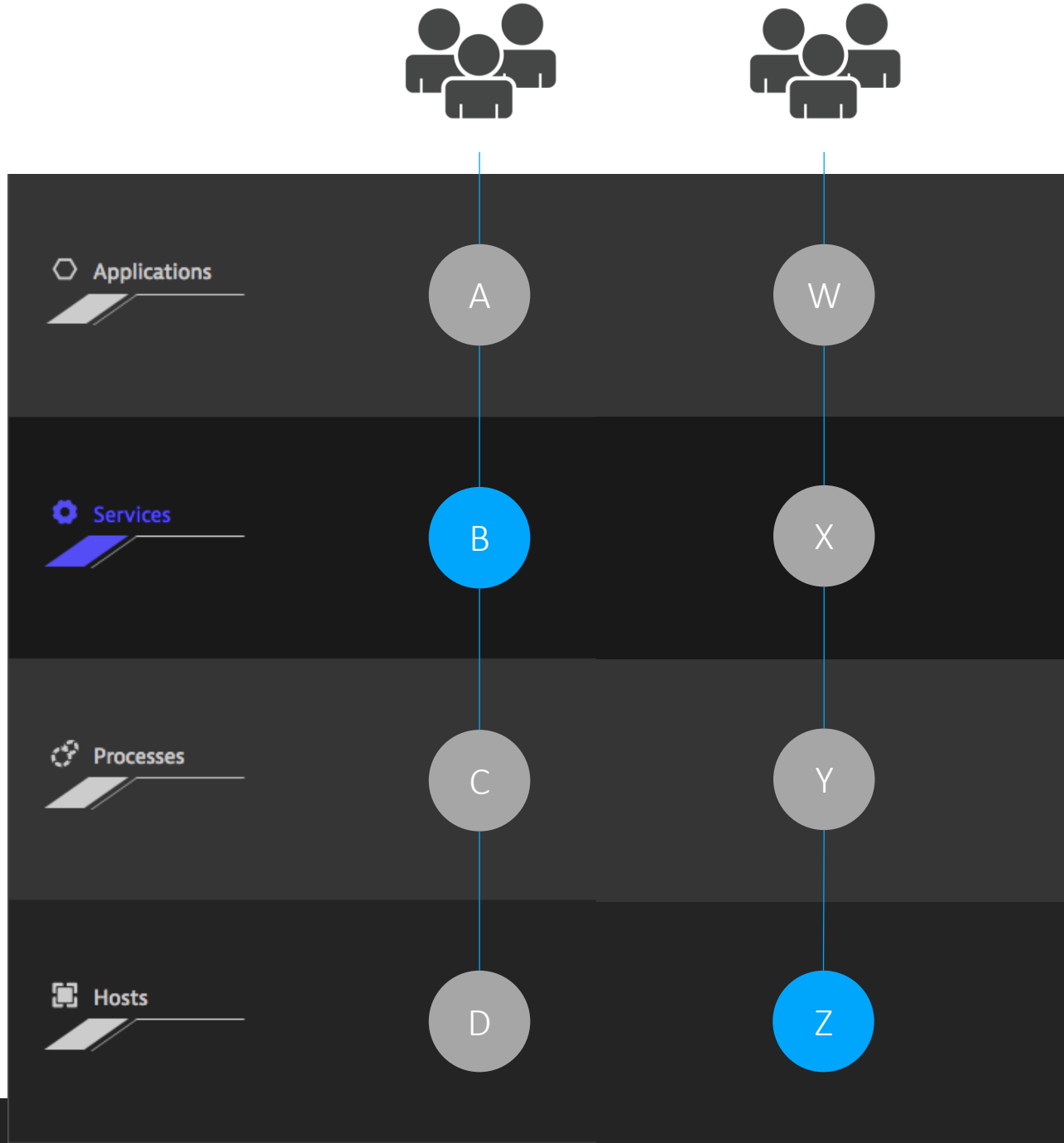
B

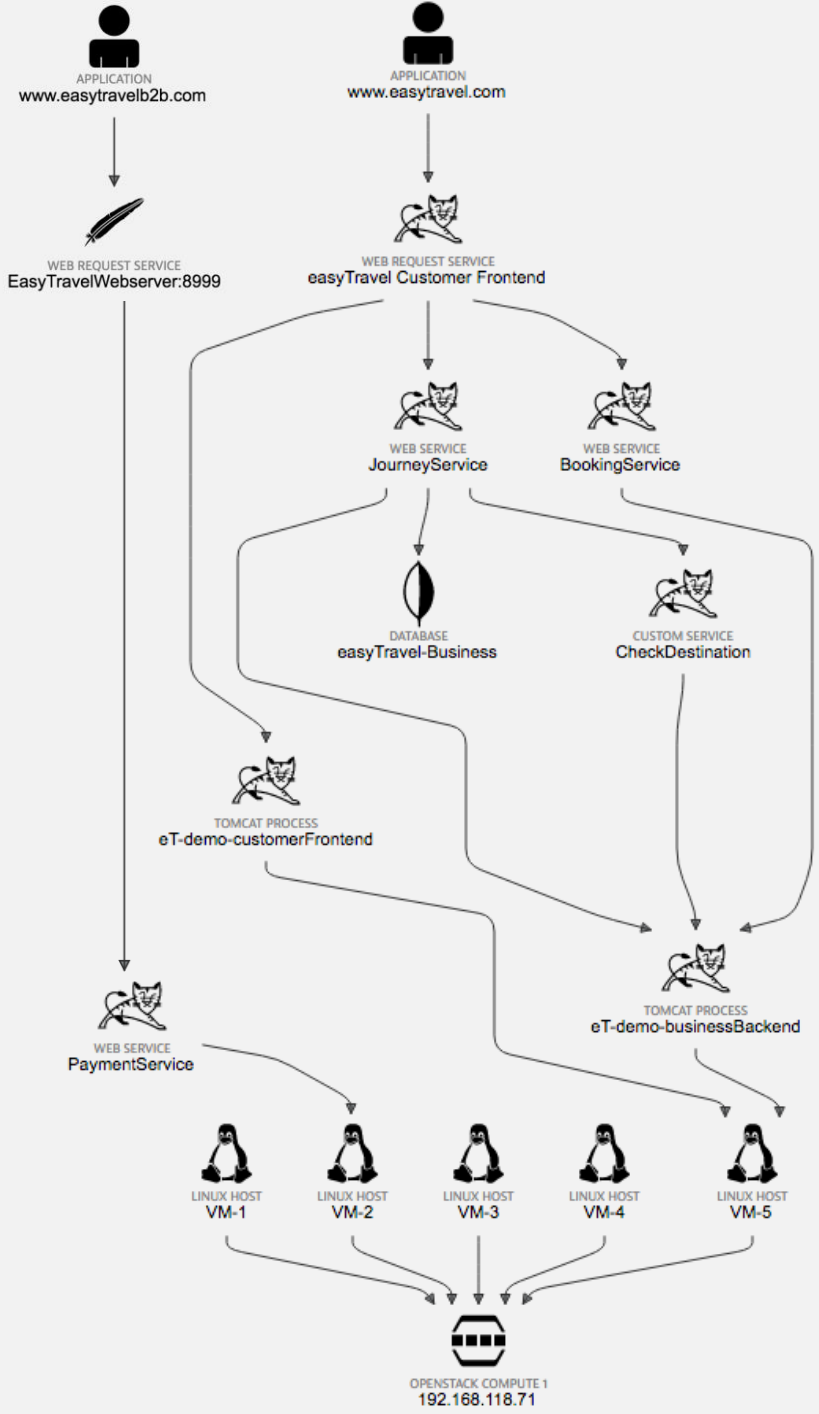
BookingService response time increases by 2 seconds

Z

Host CPU > 90%






APPLICATION
www.easytravelb2b.com
APPLICATION
www.easytravel.com
WEB REQUEST SERVICE
EasyTravelWebserver:8999
WEB REQUEST SERVICE
easyTravel Customer Frontend
WEB SERVICE
JourneyService
WEB SERVICE
BookingService
DATABASE
easyTravel-Business
CUSTOM SERVICE
CheckDestination
TOMCAT PROCESS
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WEB SERVICE
PaymentService
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VM-1
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VM-2
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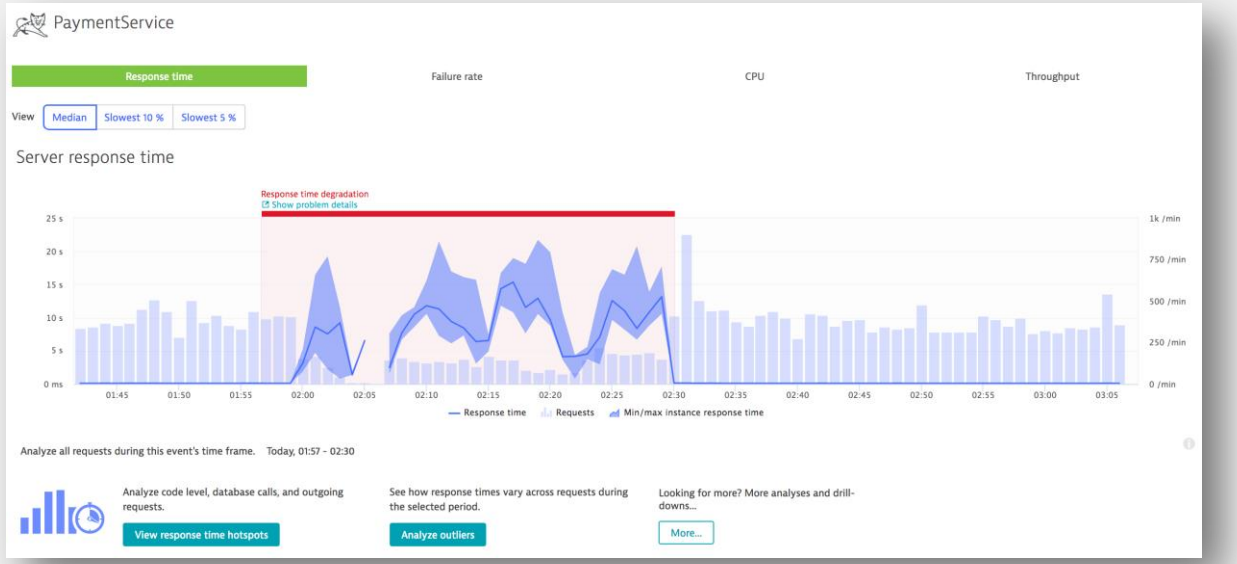
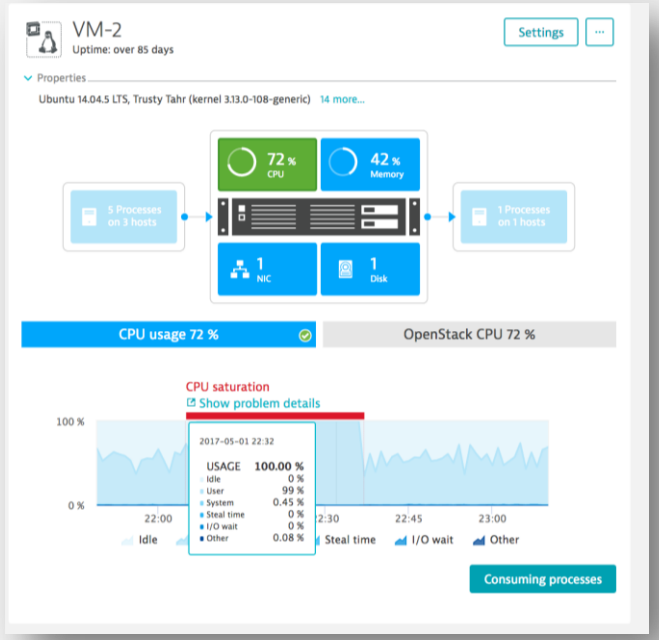
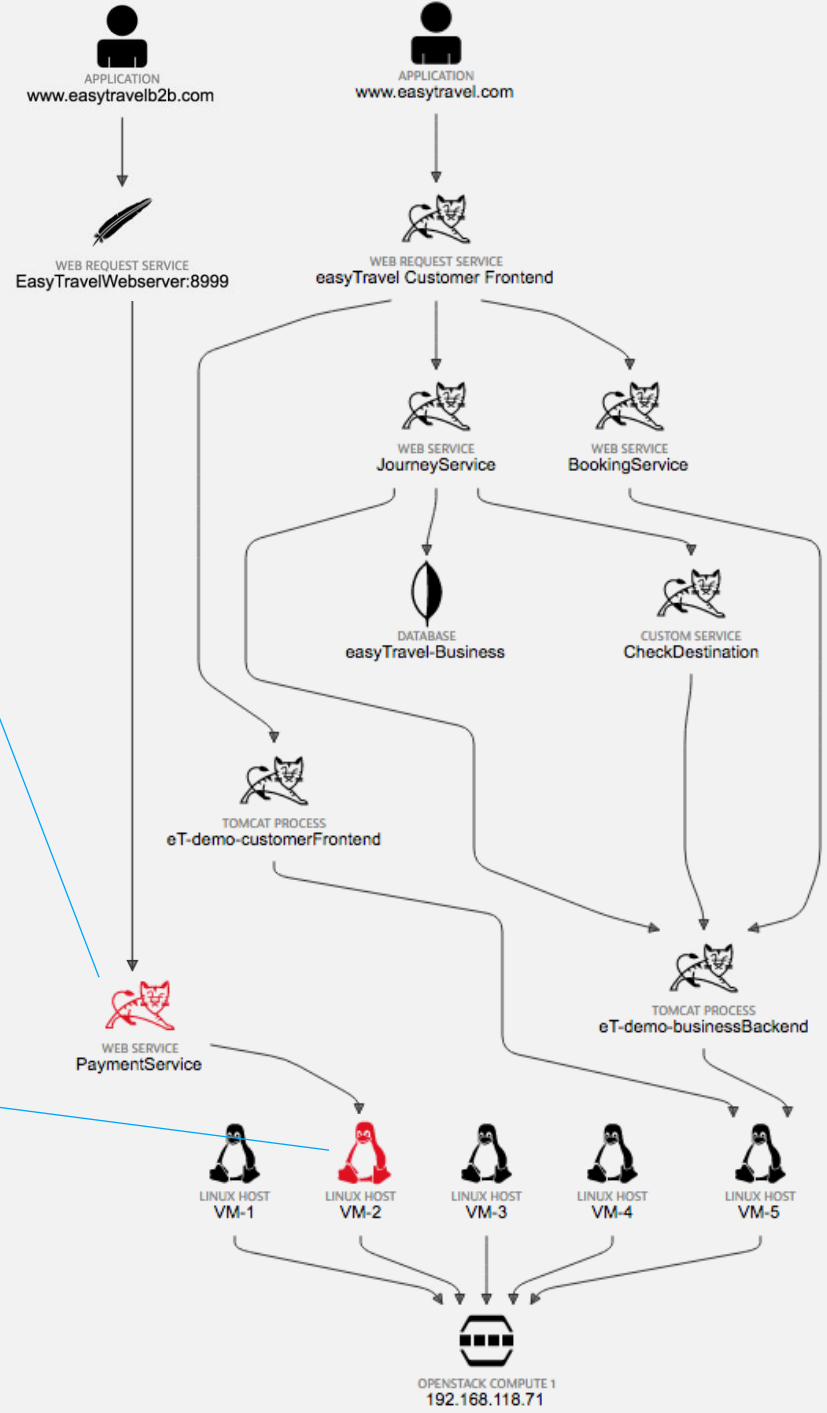
VM-3
LINUX HOST
VM-4
LINUX HOST
VM-5
OPENSTACK COMPUTE 1
192.168.118.71


PaymentService
Response time
Failure rate
CPU
Throughput
View
Median
Slowest 10 %
Slowest 5 %
Server response time
Response time degradation
Show problem details
Response time
Requests
Min/max instance response time
Analyze all requests during this event's time frame. Today, 01:57 - 02:30
Analyze code level, database calls, and outgoing requests.
View response time hotspots
See how response times vary across requests during the selected period.
Analyze outliers
Looking for more? More analyses and drill-downs...
More...


VM-2
Uptime: over 85 days
Settings
Properties
Ubuntu 14.04.5 LTS, Trusty Tahr (kernel 3.13.0-108-generic) 14 more...
72 % CPU
42 % Memory
5 Processes on 3 hosts
1 Processes on 1 hosts
1 NIC
1 Disk
CPU usage 72 %
OpenStack CPU 72 %
CPU saturation
Show problem details
2017-05-01 22:32
USAGE 100.00 %
Idle 0 %
User 99 %
System 0.45 %
Steal time 0 %
I/O wait 0 %
Other 0.08 %
Consuming processes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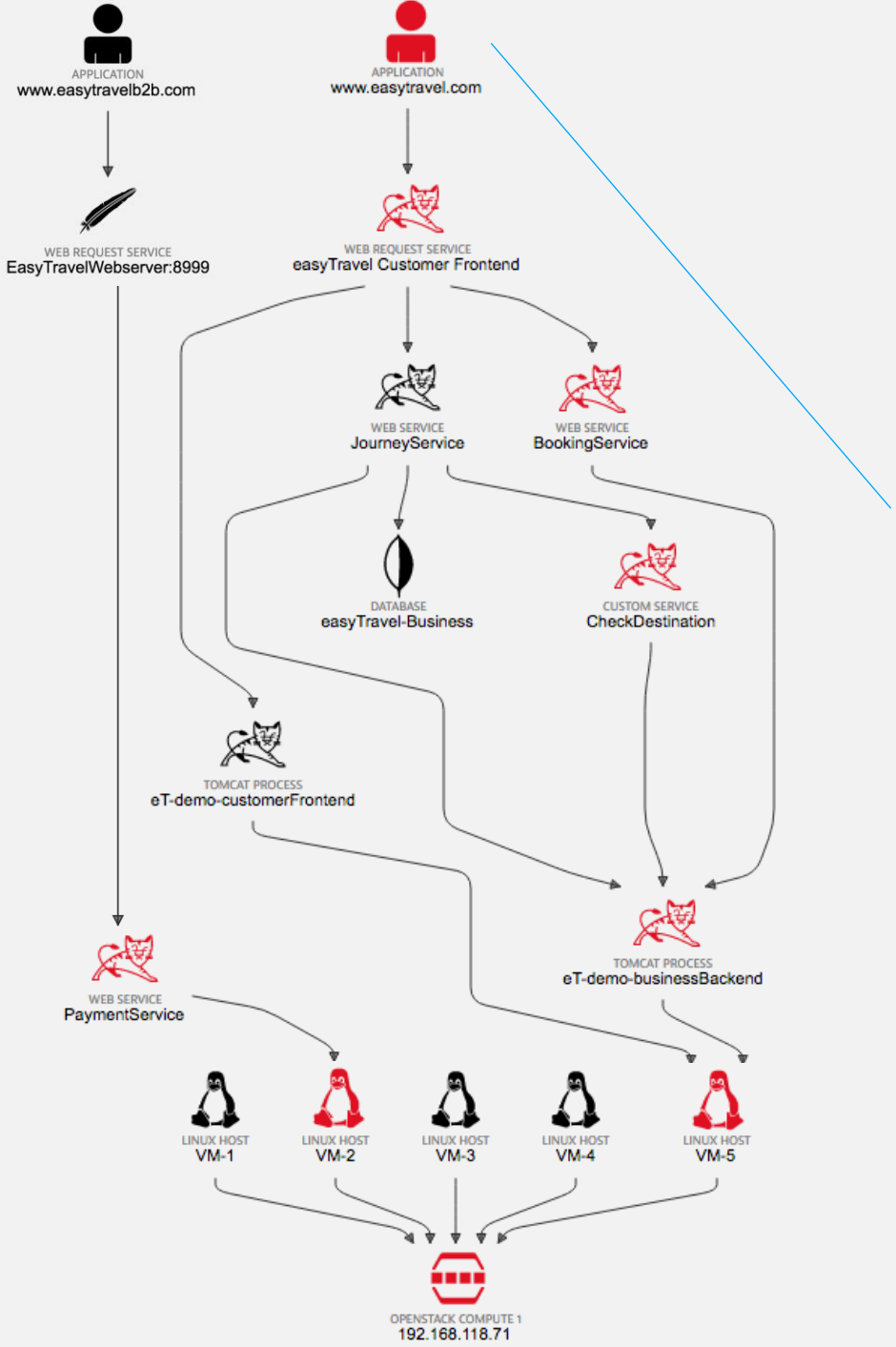
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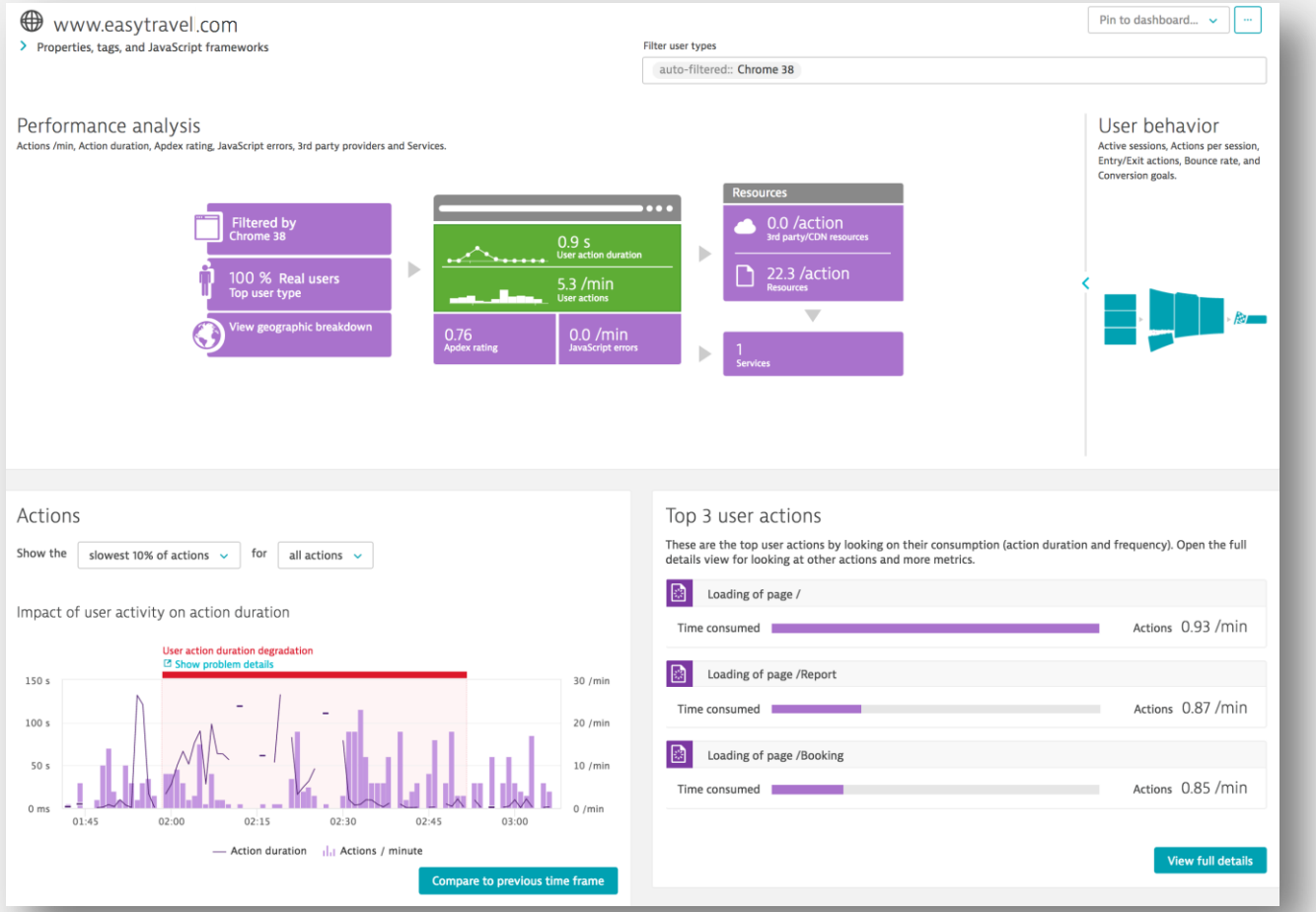
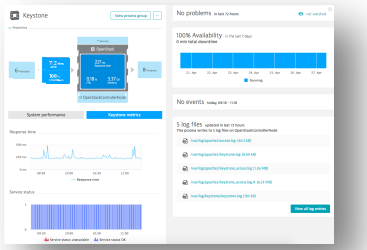
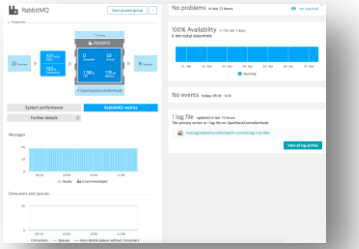
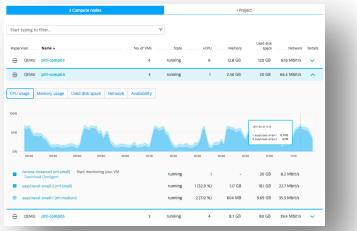

www.easytravel.com
Properties, tags, and JavaScript frameworks
Pin to dashboard...
Filter user types
auto-filtered:: Chrome 38
Performance analysis
Actions /min, Action duration, Apdex rating, JavaScript errors, 3rd party providers and Services.
Filtered by
Chrome 38
100 % Real users
Top user type
View geographic breakdown
0.9 s
User action duration
5.3 /min
User actions
0.76
Apdex rating
0.0 /min
JavaScript errors
Resources
0.0 /action
3rd party/CDN resources
22.3 /action
Resources
1
Services
User behavior
Active sessions, Actions per session, Entry/Exit actions, Bounce rate, and Conversion goals.
Actions
Show the
slowest 10% of actions
for
all actions
Impact of user activity on action duration
User action duration degradation
Show problem details
150 s
100 s
50 s
0 ms
30 /min
20 /min
10 /min
0 /min
01:45
02:00
02:15
02:30
02:45
03:00
Action duration
Actions / minute
Compare to previous time frame
Top 3 user actions
These are the top user actions by looking on their consumption (action duration and frequency). Open the full details view for looking at other actions and more metrics.
Loading of page /
Time consumed
Actions 0.93 /min
Loading of page /Report
Time consumed
Actions 0.87 /min
Loading of page /Booking
Time consumed
Actions 0.85 /min
View full details



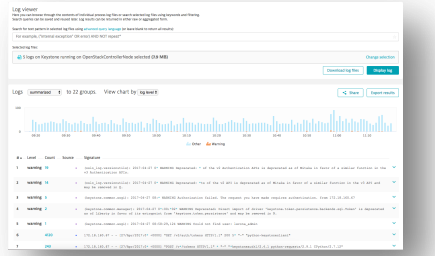
OpenStack service availability/performance



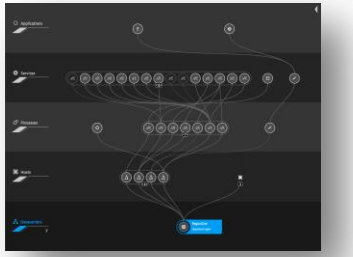
Supporting services



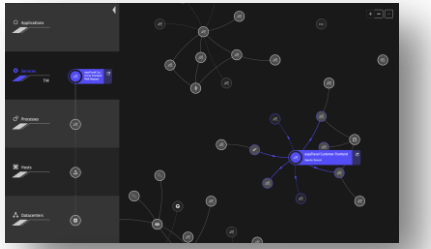
Resource capacity and utilization



Log analytics

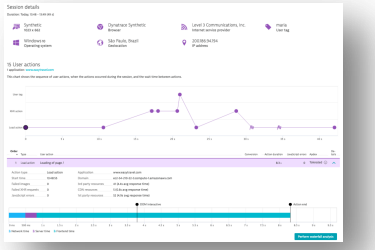


Dependencies



Applications running on top

Correlation of metrics/events/data



Real user monitoring, UX affects $

PaaS

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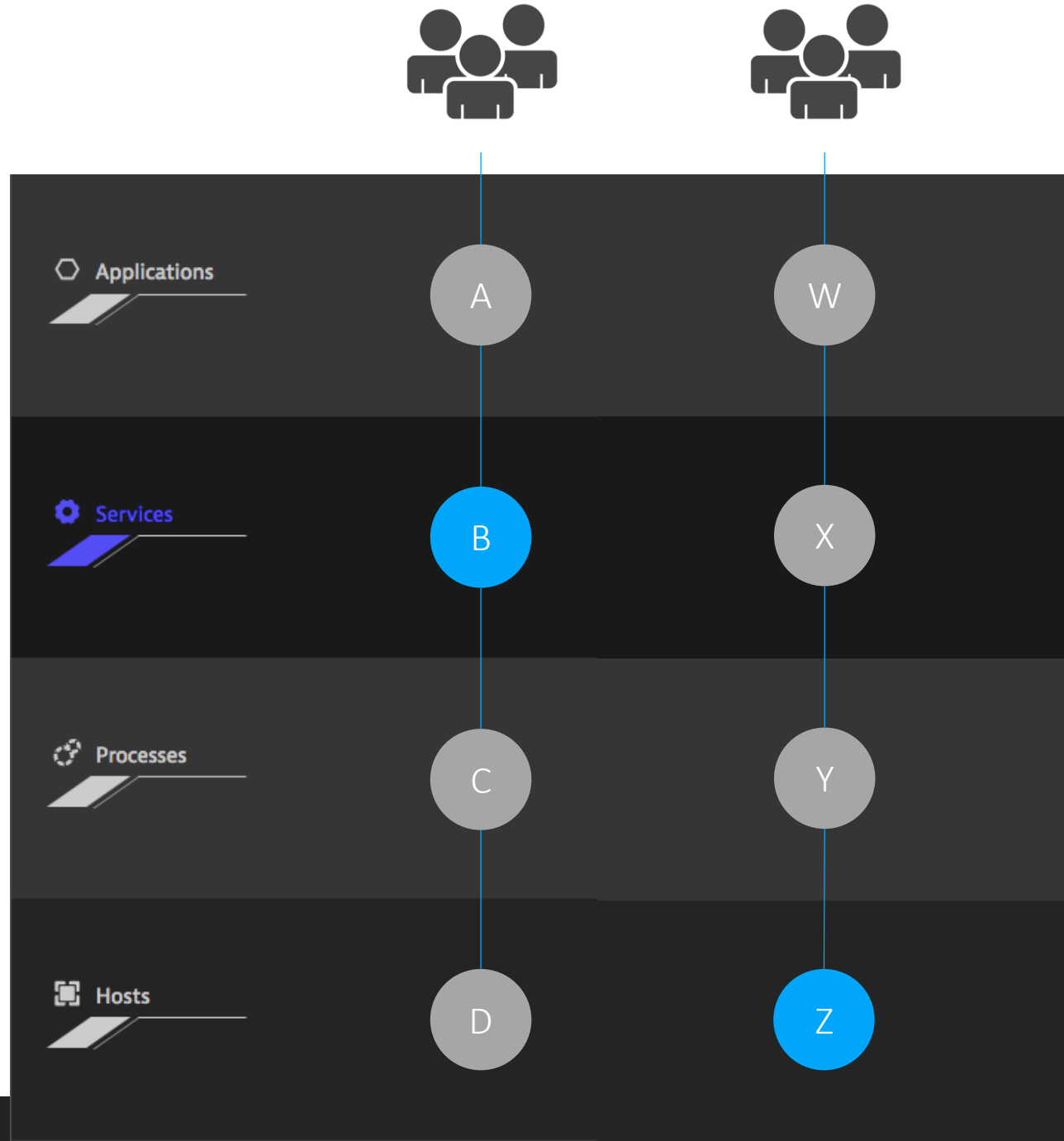
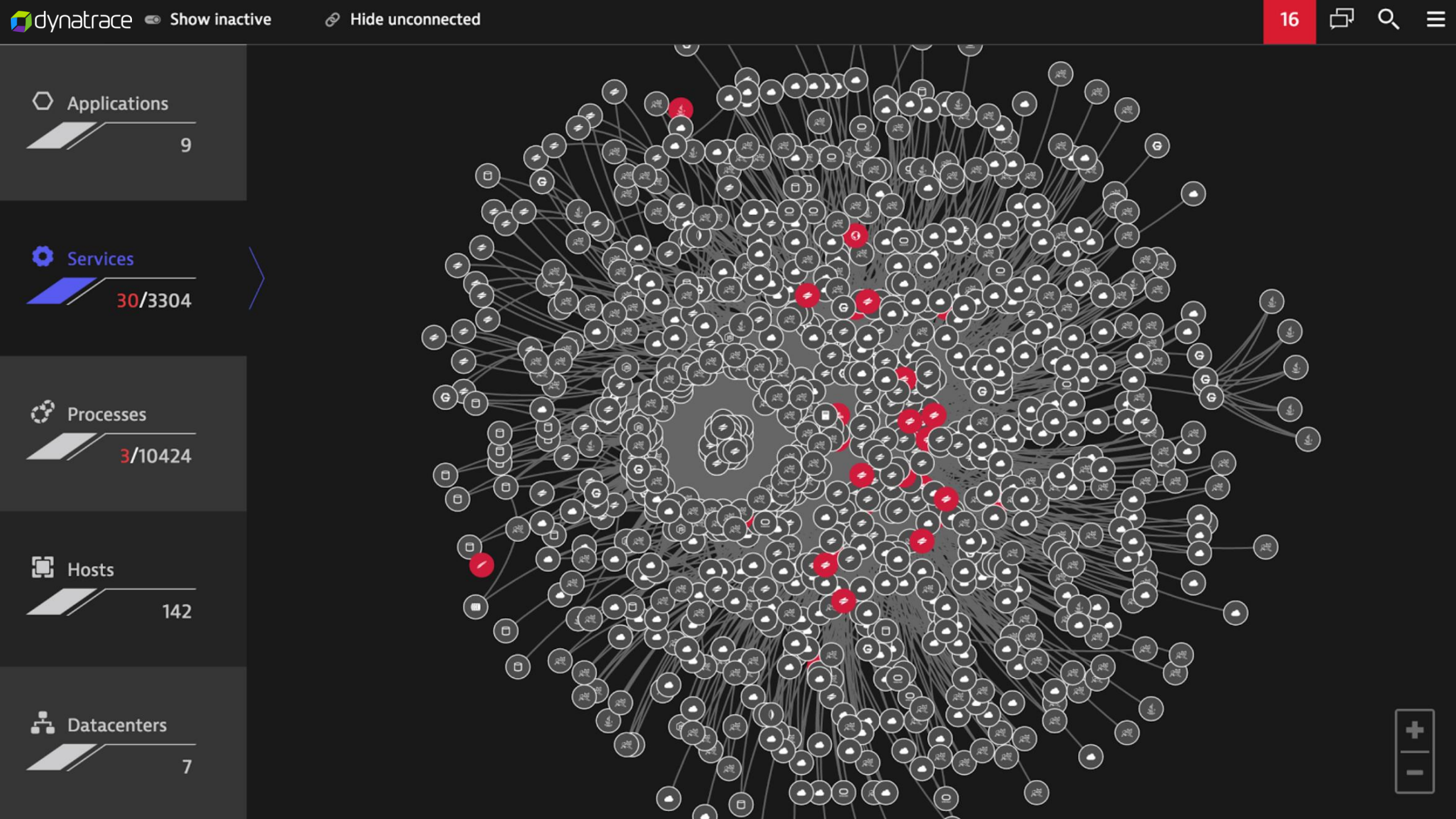
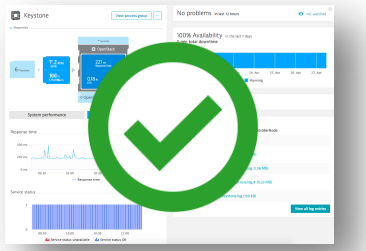
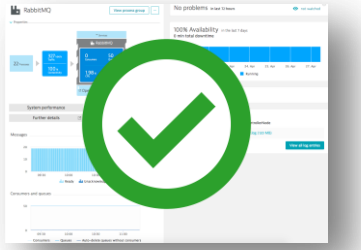
This is **NOT** a **REGULAR SIZE** application environment!



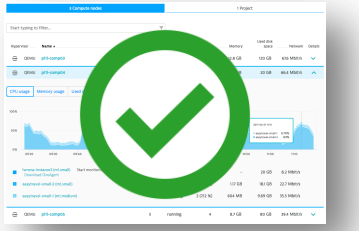

dynatrace
Show inactive
Hide unconnected
16
Applications
9
Services
30/3304
Processes
3/10424
Hosts
142
Datacenters
7



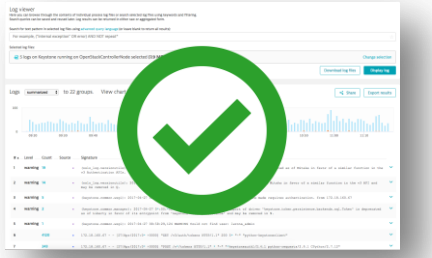
OpenStack service availability/performance



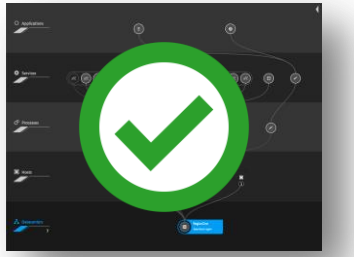
Supporting services



Resource capacity and utilization

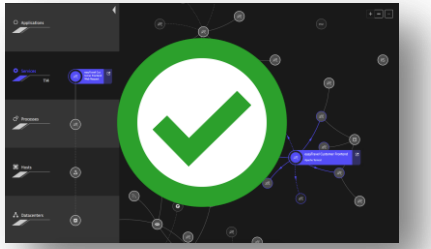


Log analytics



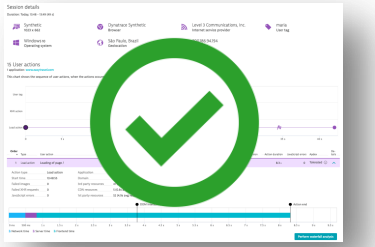
Dependencies

dynatrace

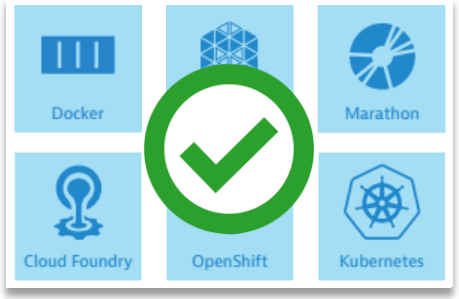


Applications running on top

Correlation of metrics/events/data



Real user monitoring, UX affects $



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Questions?

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Katalin Varga

Katalin is a huge Dynatrace fan who does content marketing. She is enthusiastic about fostering new relationships and strengthening the Dynatrace brand in the marketplace. She has a strong affinity for yoga, guitar music, and Dynatrace's OpenStack monitoring.

Six mistakes in your OpenStack monitoring process...and how to fix them

by Katalin Varga on July 13, 2017 in Cloud and microservices

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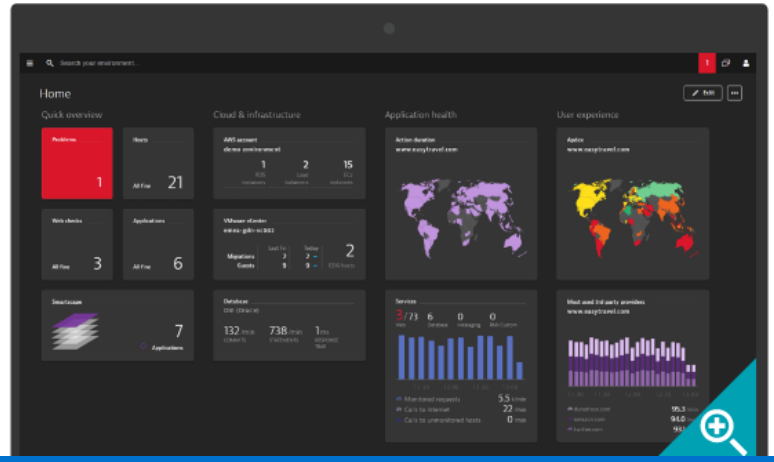

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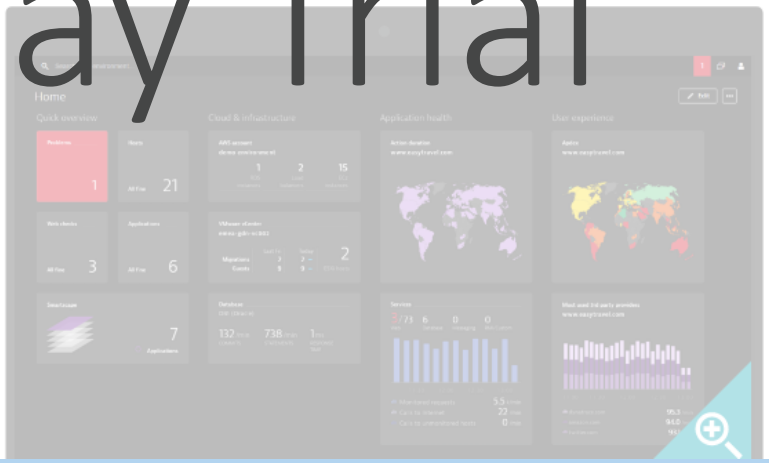

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Thank you!

ありがとう!

Danke!

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