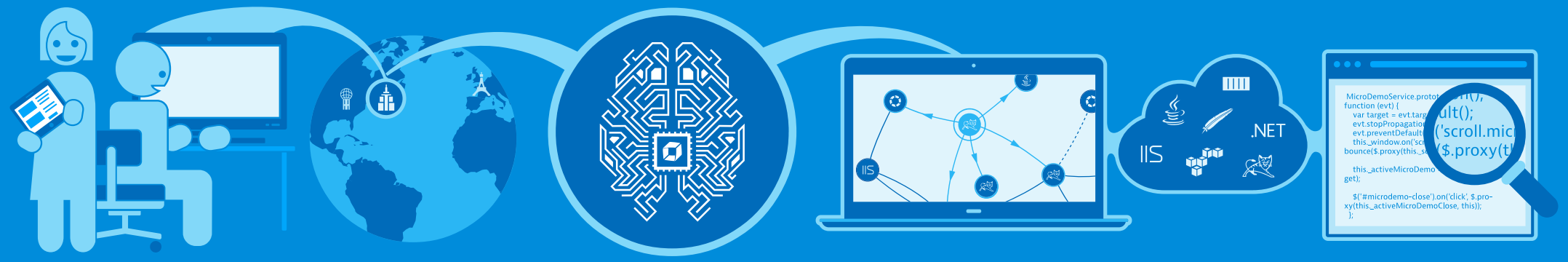
What’s new in Dynatrace APM products

Janusz Dabrowski, Sales Engineer PEER



Moscow Perform Day, 19 Oct 2017

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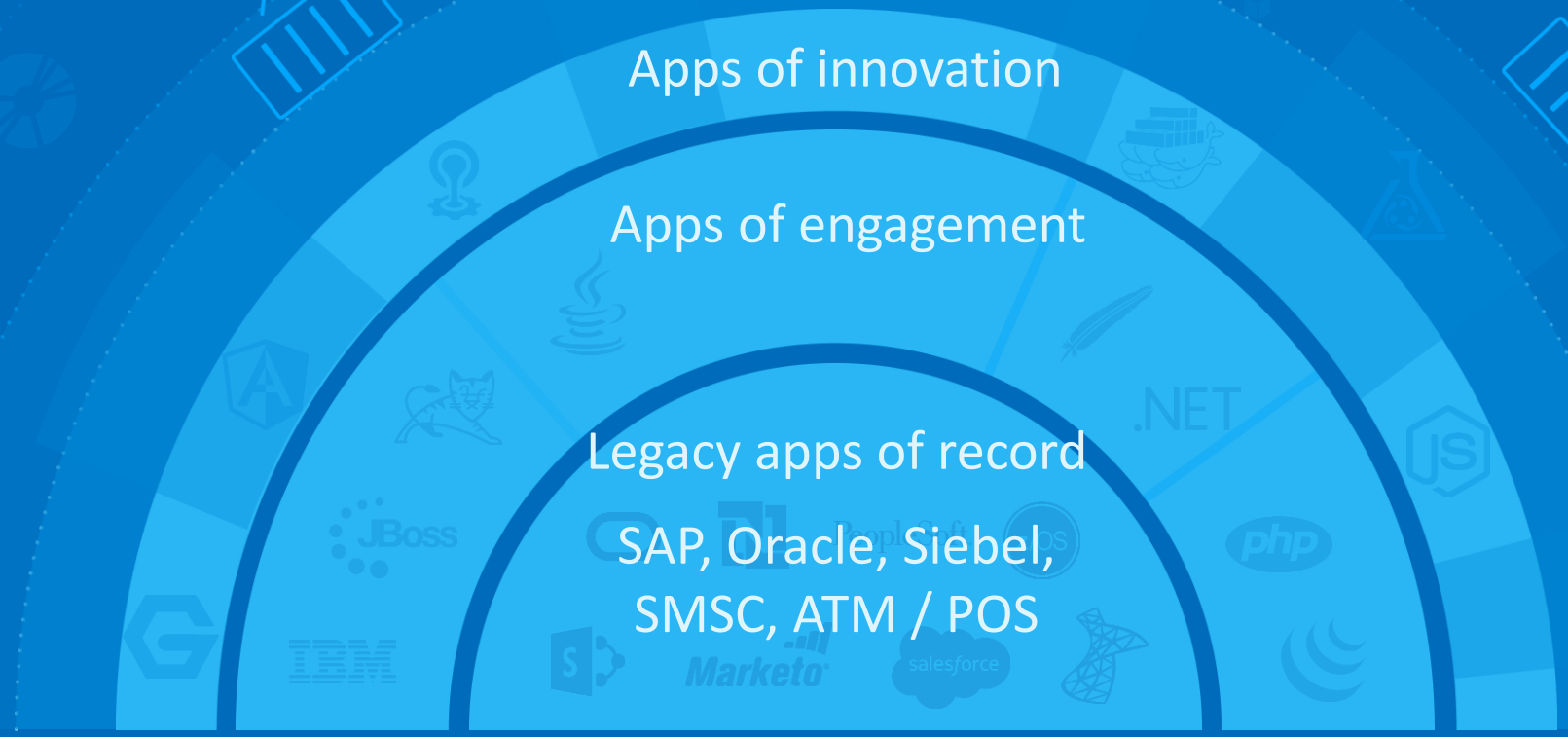
variety of applications in enterprise



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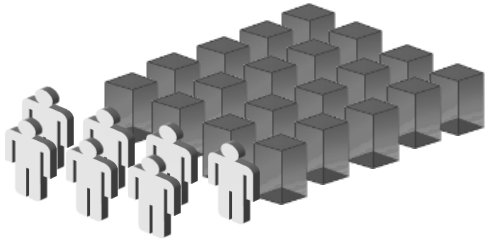
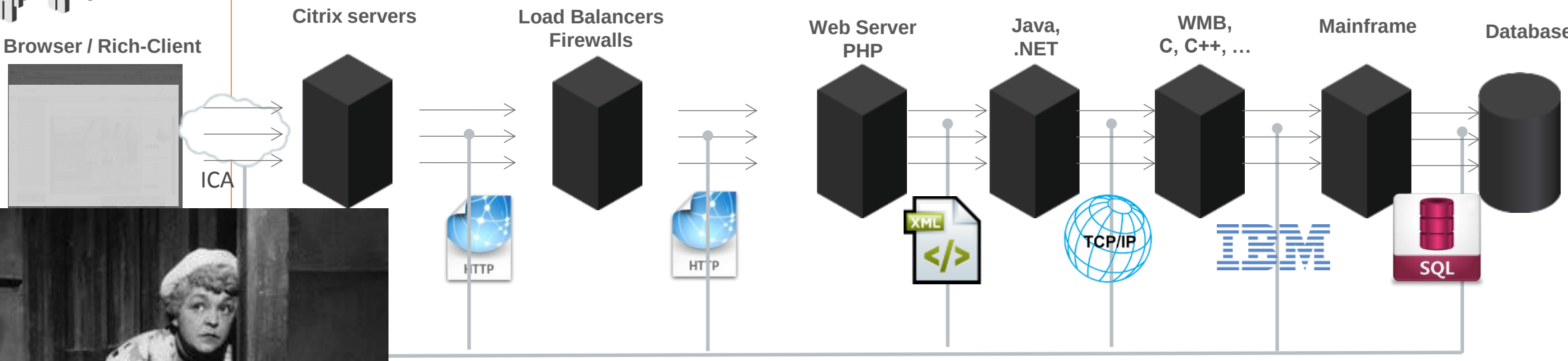


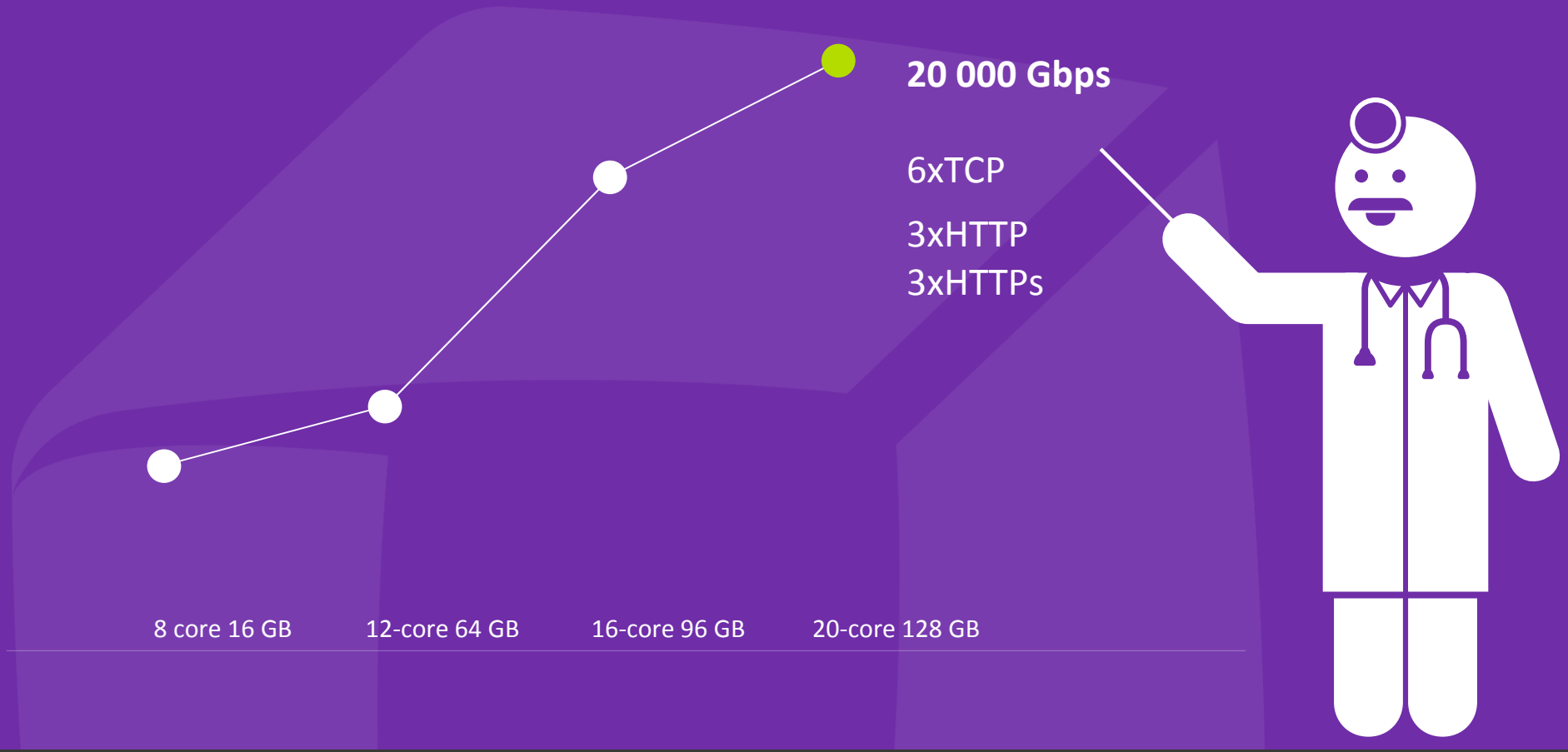
Passive network monitoring



Provides control over legacy applications performace and availability

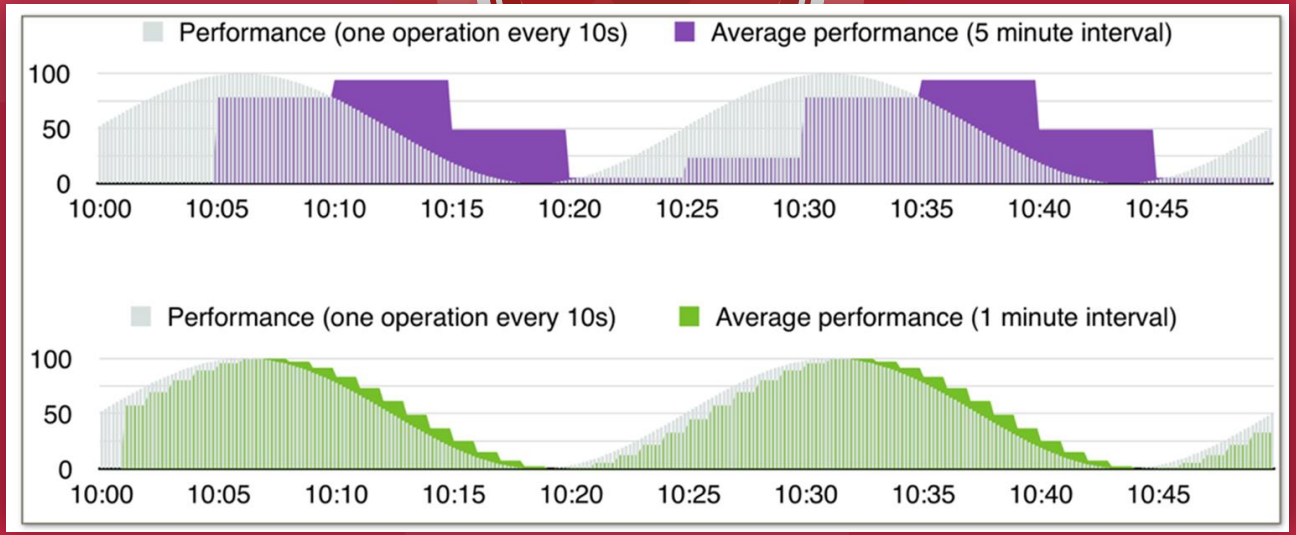
High Scale Solution

20 Gbps · Combine multiple probes · Cluster Report server



1 minute resolution for all collected data

Near-real time alerting



New decodes

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The MQ decode in action

Service	Queue	Operation MQ	Time 10:35	10:40	10:45	10:50	10:55
CWRECCRB	IRPCWFR5	WorkFlow	0	0	0	0	30
HISTOCPT	IRPHRFR2	Pilotage Historique Relation Clientele	0	0	0	1	0
RECHPRTF	IRRCOFR2	Referentiel Base Collaborateur	0	0	0	0	7

Business process…

…at fault!

Service endpoints

Business application services

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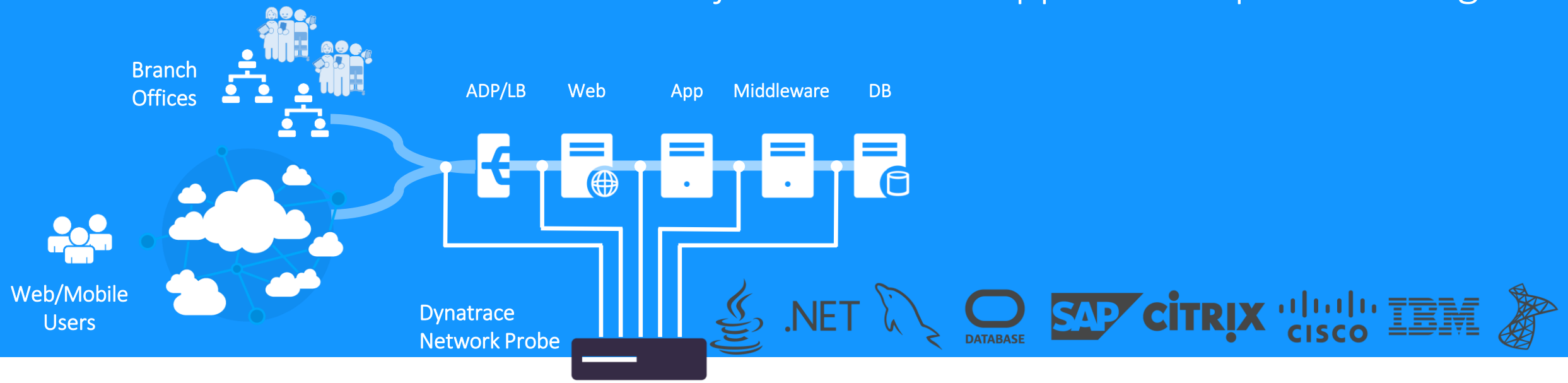
Can the wire data be the APM? YES! It just needs the application-speciic intelligence



ISO 8583

SISNAPI

Avaya CTI

LSA RPC

Websphere MQ

webMethods EntireX

Apache AJP

DIAMETER

Epic EMR

DICOM

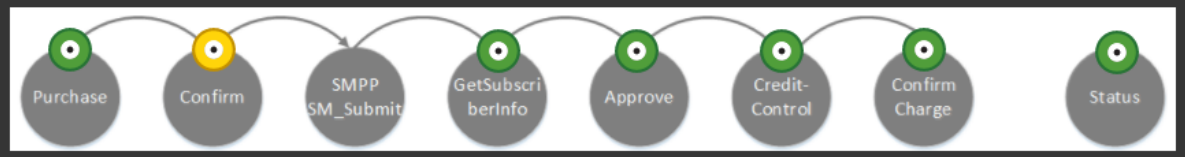
FIX

HL-7

... extendable through the Universal Decode scriptable framework

Decode for custom protocol . ru !

dynatrace dcrum — Pay transaction MFS — 21.08.17 00:00 MSK - 21.08.17 23:10 MSK — Exit full screen mode



Transaction step	Health index	Operations with breakdown	Operation time with breakdown	Two-way loss rate	Failures (total)
1) Purchase	100 %	349	272 ms	0 %	0
2) Confirm	92 %	511	3,72 s	<0,1 %	1
4) GetSubscriberInfo	99,1 %	6,57 k	791 ms	0 %	1
5) Approve	100 %	258	235 ms	0 %	0
6) Credit-control	100 %	6,64 k	37 ms	0 %	0
7) ConfirmCharge	100 %	101	162 ms	0 %	0
8) Status	100 %	208	15,9 ms	0 %	0

Find in Transaction s Find

ID checker

Operation	User name	Operations	Failures (total)	Operation time with breakdown
PURCHASE 100337 /restcon/transactions/28201397	7055533349	1	0	229 ms
PURCHASE 100337 /restcon/transactions/28186045	7059007150	1	0	193 ms
PURCHASE 100337 /restcon/transactions/28186046	7059007150	1	0	199 ms
PURCHASE 100346 /restcon/transactions/28186009	7059007150	1	0	630 ms
PURCHASE 100346 /restcon/transactions/28186613	7059007150	1	0	220 ms
PURCHASE 100346 /restcon/transactions/28186615	7059007150	1	0	189 ms
PURCHASE 100346 /restcon/transactions/28186628	7059007150	1	0	206 ms
PURCHASE 100346 /restcon/transactions/28186635	7059007150	1	0	189 ms
PURCHASE 100346 /restcon/transactions/28186661	7059007150	1	0	192 ms
PURCHASE 100346 /restcon/transactions/28197498	7712739797	1	0	194 ms
PURCHASE 100168 /restcon/transactions/28186082	7713828967	1	0	232 ms
PURCHASE 100337 /restcon/transactions/28186059	7713828967	1	0	229 ms
PURCHASE 100346 /restcon/transactions/28186672	7713828967	1	0	213 ms
PURCHASE 100346 /restcon/transactions/28186678	7713828967	1	0	279 ms
PURCHASE 100346 /restcon/transactions/28186682	7713828967	1	0	203 ms

Find purchase in Operation Find Reset (349 rows) 4 5 6 24

Pay transaction Operations + Slow operations + Failures %

1) Purchase	2) Confirm	4) GetSubscriber...	5) Approve	6) Credit-control	7) ConfirmCharge	8) Status
Operations 349	Operations 511	Operations 6,57 k	Operations 258	Operations 6,64 k	Operations 101	Operations 208
Slow operations 0	Slow operations 40	Slow operations 58	Slow operations 0	Slow operations 0	Slow operations 0	Slow operations 0

Refund Monitor

Operation	Operations	Failures (total)	Operation time with breakdown
REFUND /restcon/transactions/28184197	1	0	184 ms
REFUND /restcon/transactions/28198366	1	0	75,1 ms

Find in Software ser Find

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Community developed decodes

community.dynatrace.com

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Edit Watch Share Tools

Bespoke application monitoring with the Universal Decode

Have a bespoke enterprise app? Let us help you!

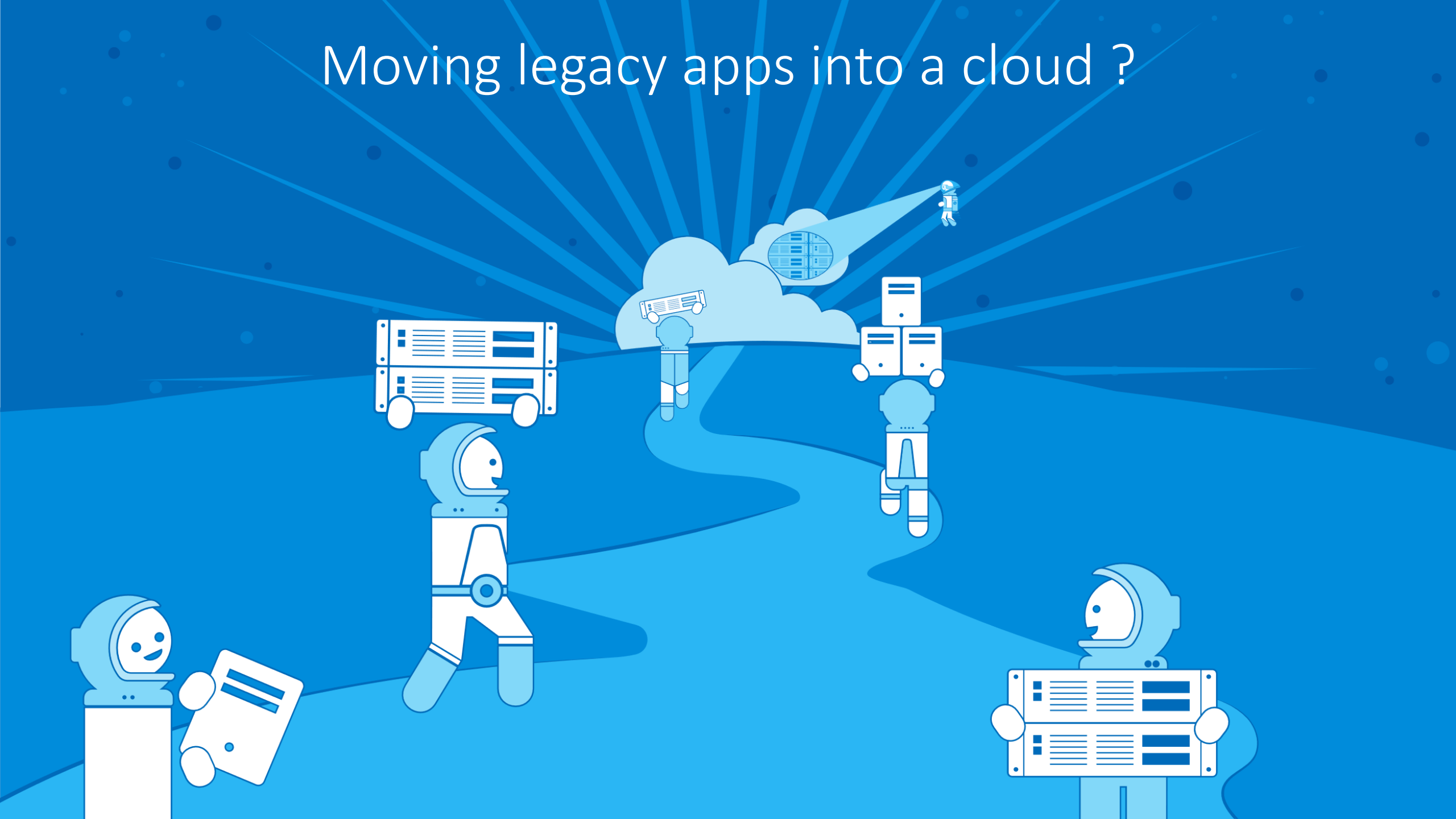
Dynatrace eXpert Services will address your application performance monitoring needs using the Universal Decode framework. Performance monitoring solutions implemented for our customers already cover:

- Apache AJP
- **CTI - NEW!**
- Epic EMR
- EntireX->ESB
- ISO 8583
- SAU
- **SISNAPI - UPDATED!**
- Tibco EMS

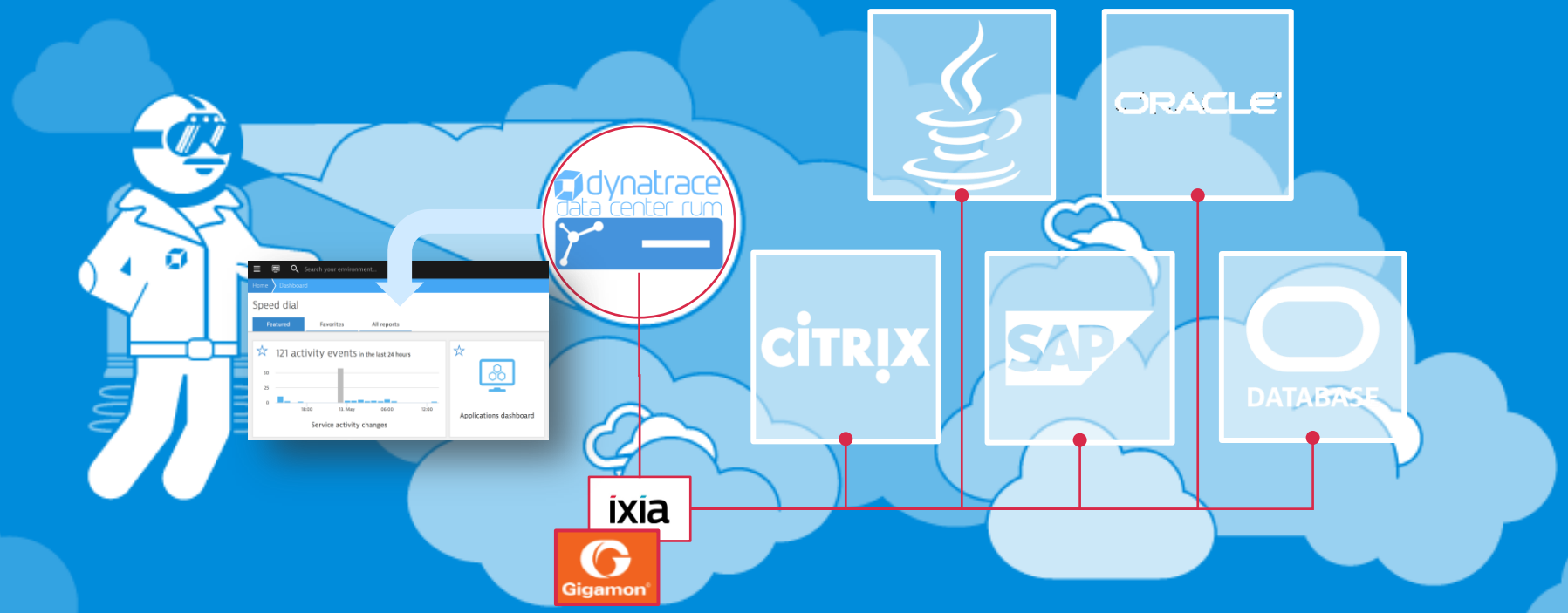
Do you need a monitoring solution for your bespoke application? Let us know!

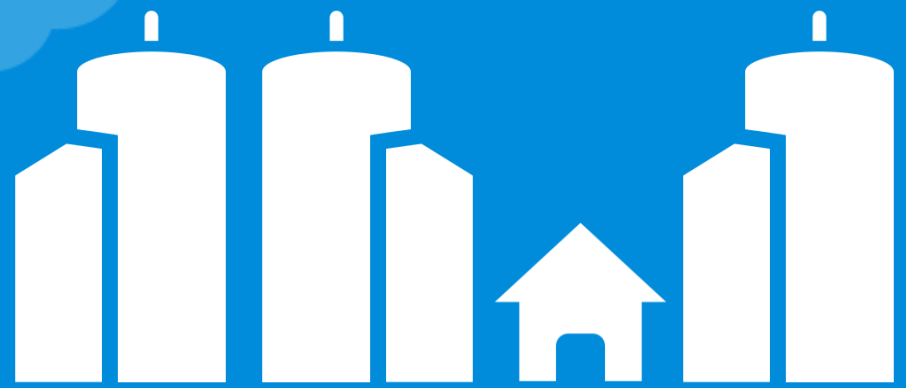
Basing on the decode scripts contributed to the Community or developing bespoke scripts when needed, Dynatrace eXpert Services deliver a monitoring solution. That is, the engagement starts with the analysis of your needs, followed by feasibility study of implementing the decode, then the decode script implementation, user training, and finally an ongoing support of the implanted solution including the decode.

Moving legacy apps into a cloud ?



Agentless monitoring in the cloud – possible !





Apps of engagement and innovation

Based on technology stack that agents
can provides visibility down to technology stack and code level

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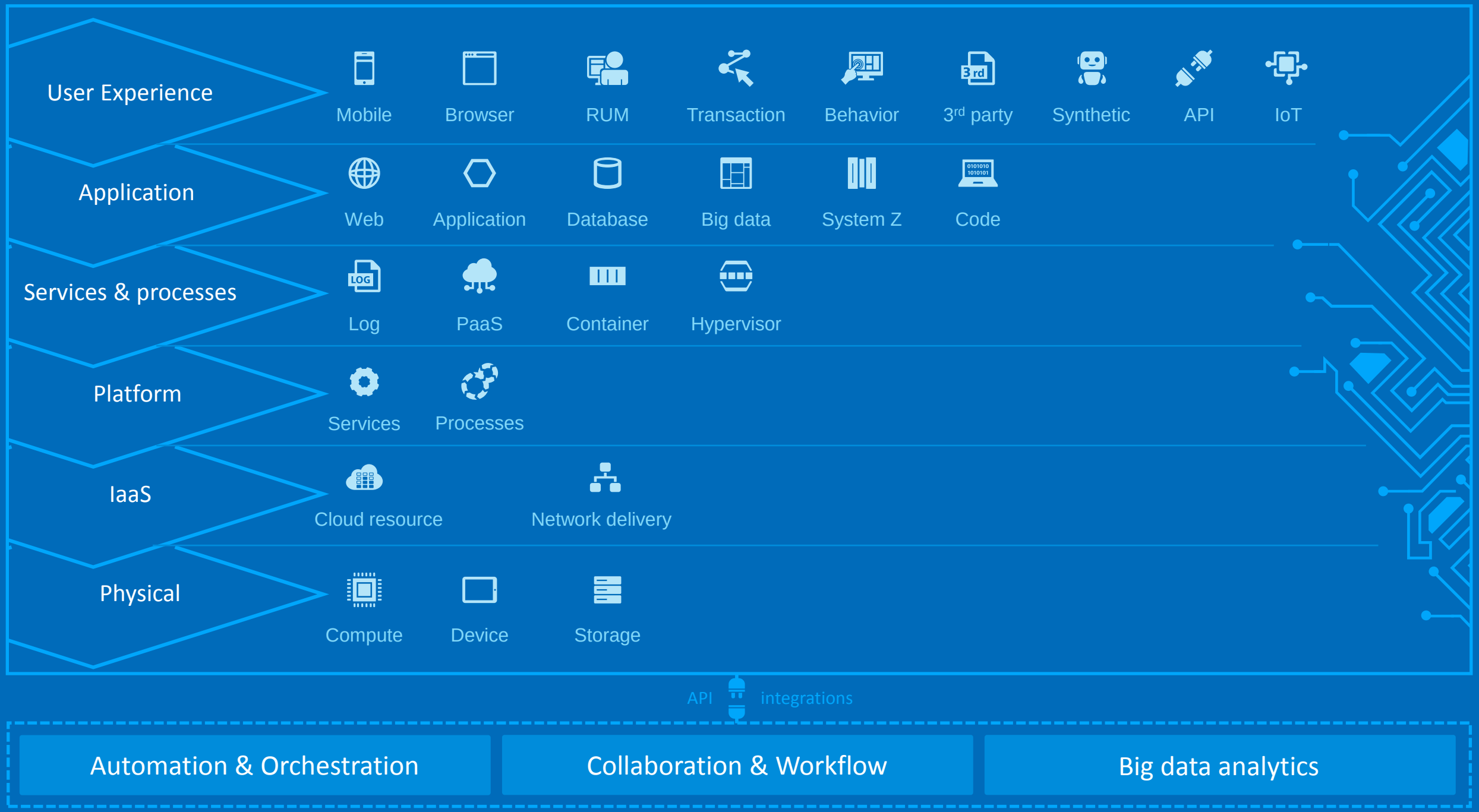
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We've redefined monitoring. Our capabilities are unrivaled.

AI-powered analytics

Full stack discovery

Fully automated

Self-healing at scale

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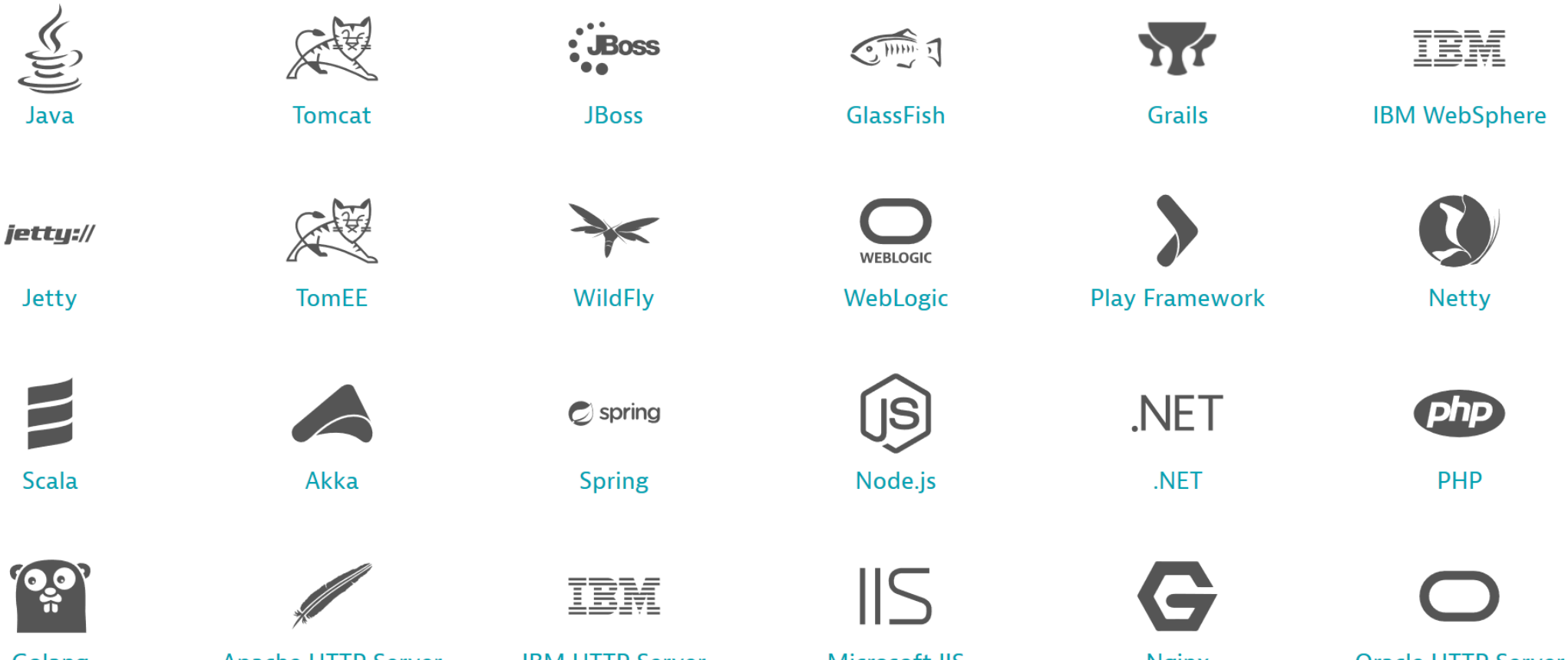
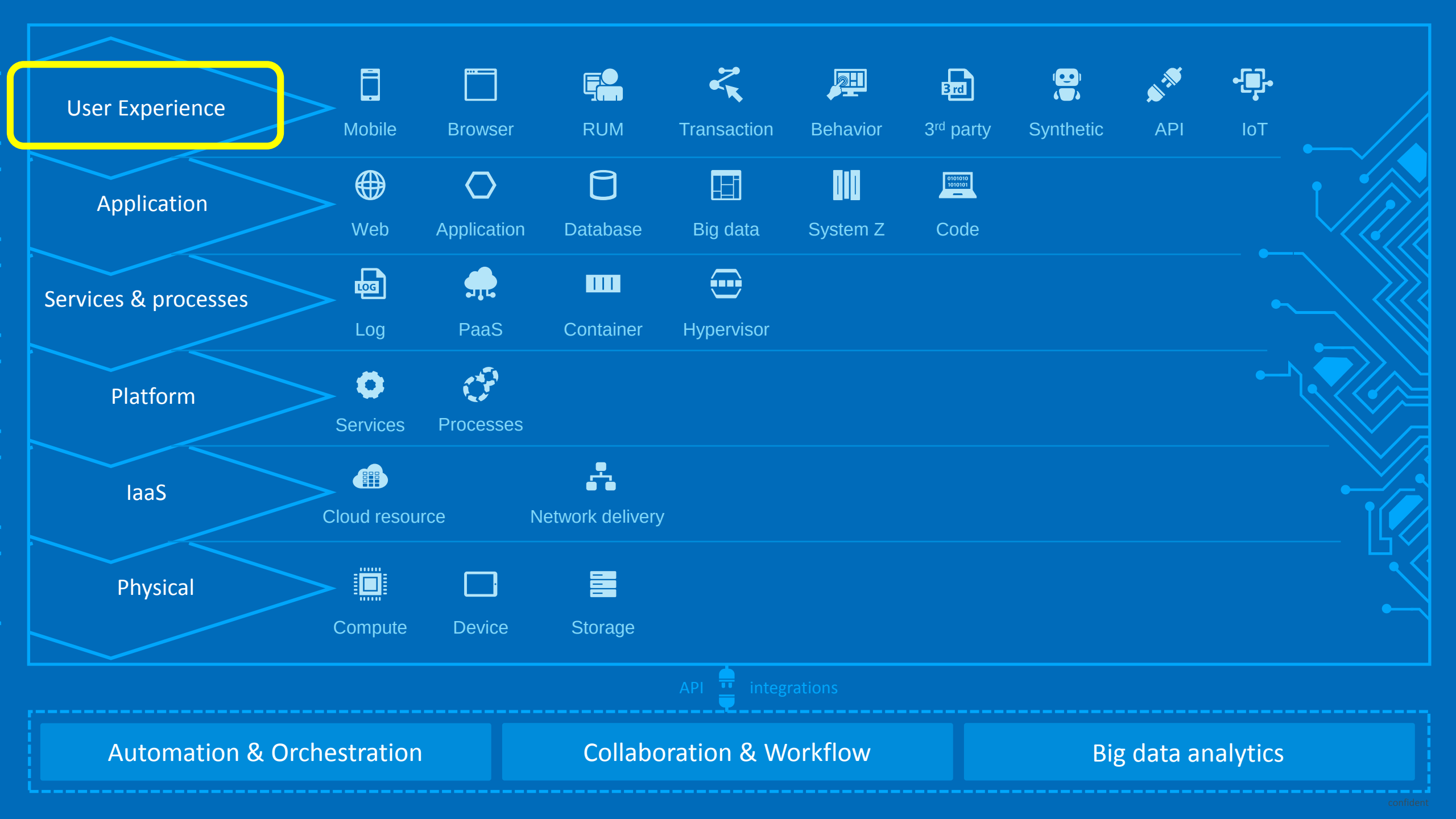
All important technology supported

Application performance

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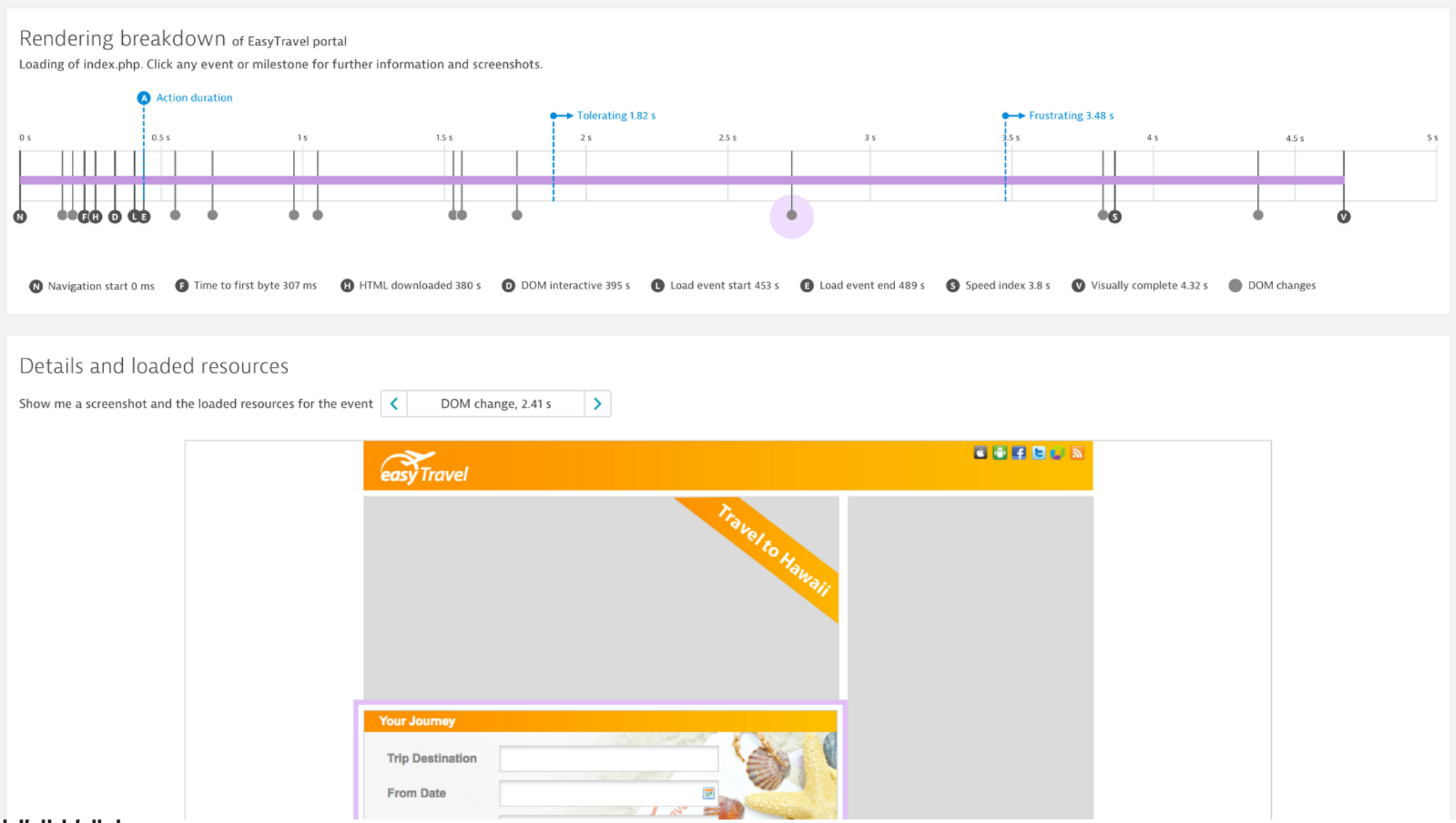
Put yourself into the user’s seat



„Visually complete" metric

easyTravel | All applications | Last 7 days

Business analytics > User actions

100 user actions

Showing the most recent user actions. Analyze the details in the resource waterfall.

Each user action shows the performance metric used.

Filter user actions

User action	Action group	Failed	Start time	Performance metric	Threshold	Details
Loading of Page /j_invalidate_session	Page Actions	No	2017-05-30 10:53	Visually complete: 121s	8.15s[1]	
click on "Book Now" on /orange.jsf	Page Actions	No	2017-05-30 10:53	Visually complete: 81.6s	8.15s[1]	
Loading of Page /privacy-orange.jsf	Page Actions	No	2017-05-30 10:56	Visually complete: 11.3s	7.83s[1]	
Loading of Page /legal-orange.jsf	Page Actions	No	2017-05-30 10:56	Visually complete: 11.3s	7.83s[1]	
Loading of Page /j_invalidate_session	Page Actions	No	2017-05-30 10:56	Visually complete: 12s	7.83s[1]	
Loading of Page /forecast	Page Actions	No	2017-05-30 10:55	User action duration: 11.6s	7.83s[1]	
Loading of Page /contact-orange.jsf	Page Actions	No	2017-05-30 10:55	Visually complete: 36s	7.83s[1]	

42.5s	42.5s	51ms	24.3s	11.9s	38ms
Response time	Network contribution	Server contribution	First party	Third party	CDN

Quickly assess how long it takes to complete the page, including exact time spent waiting for all visual page elements to load.

Tolerating 7.83s | Frustrated 31.3s | Visually complete 36s

0 s, 5 s, 10 s, 15 s, 20 s, 25 s, 30 s, 35 s, 40 s, 45 s, 50 s

N Navigation start - | R Request start 83ms | F Time to first byte 207ms | H HTML downloaded 600ms | I DOM interactive 9.1s | S Speed index 28.8s | C DOM content loaded 34.9s | D DOM complete 42.5s | L Load event start 42.5s | E Load event end 42.5s | A Action duration 42.5s

frustrated threshold exceeded by 4.69s

[1] because of a low detected bandwidth the threshold 4s was multiplied by a factor of 1.96

See each stage in every page load, including browser-level performance data.

Show visit details | Show waterfall

click on "Book Now" on /orange.jsf	Page Actions	No	2017-05-30 10:55	Visually complete: 11.4s	7.83s[1]	
click on "Book Now" on /orange.jsf	Page Actions	No	2017-05-30 10:55	Visually complete: 32.3s	7.83s[1]	

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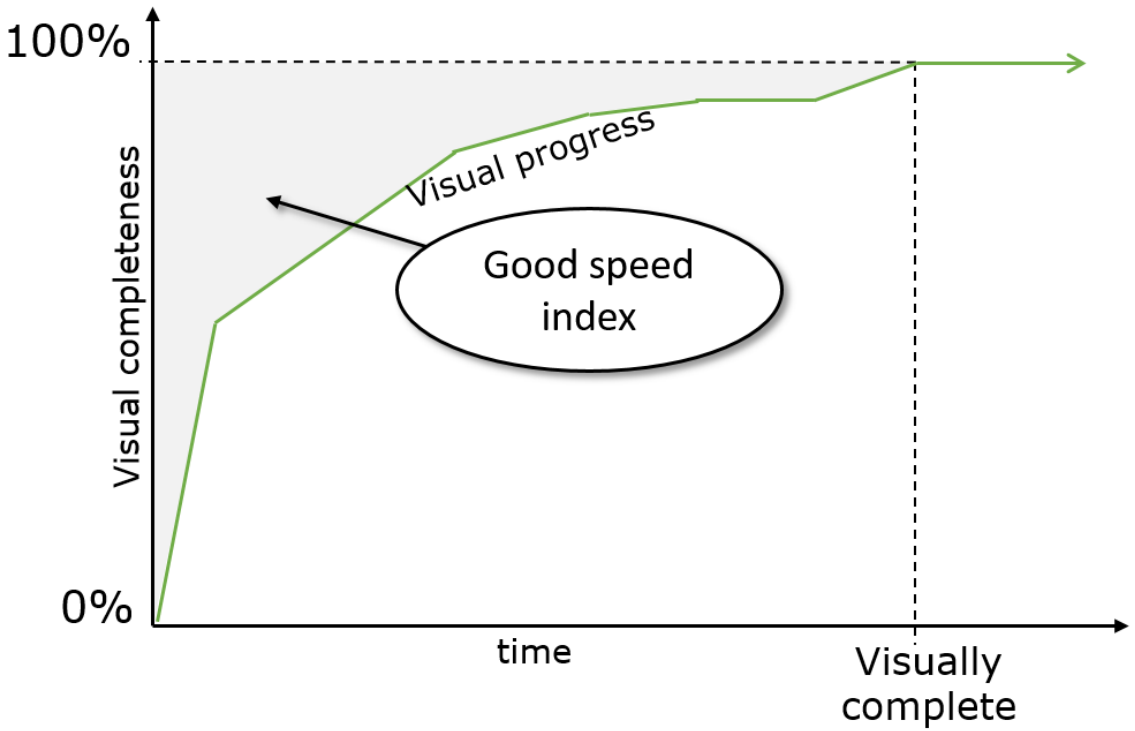
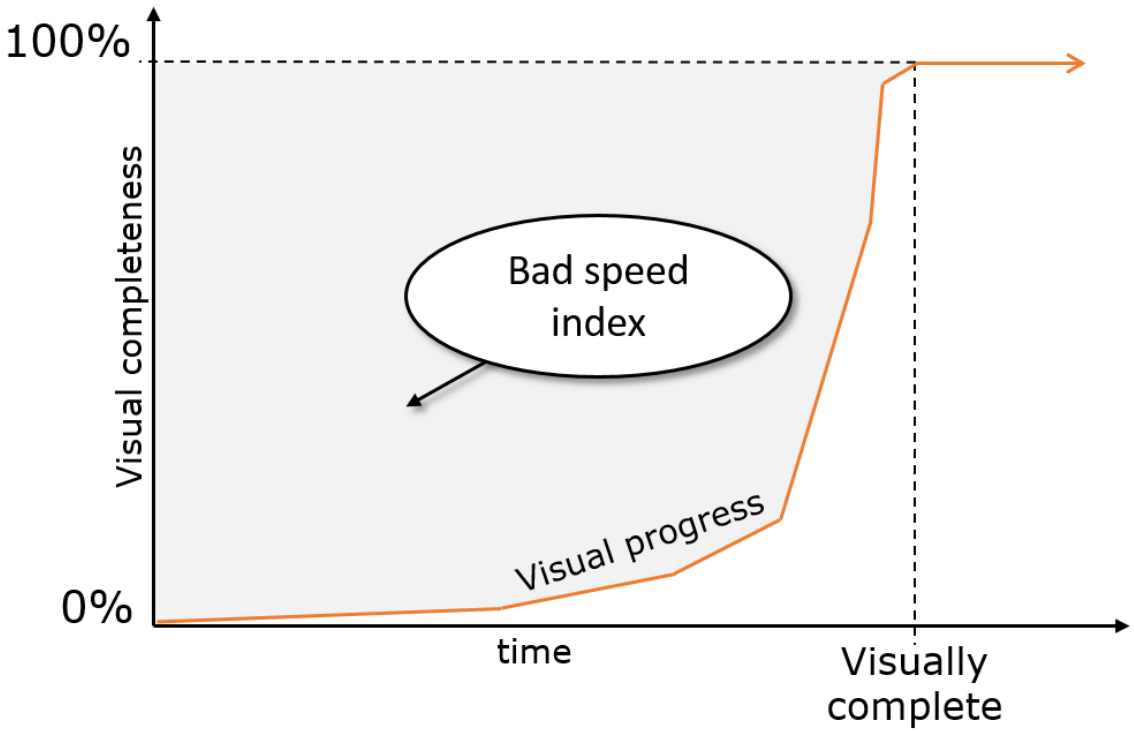
Speed Index metric





- Page starts rendering early
- Large visible areas are completed soon
- Good user experience

- Page renders very late
- User sees an empty page
- Bad user experience

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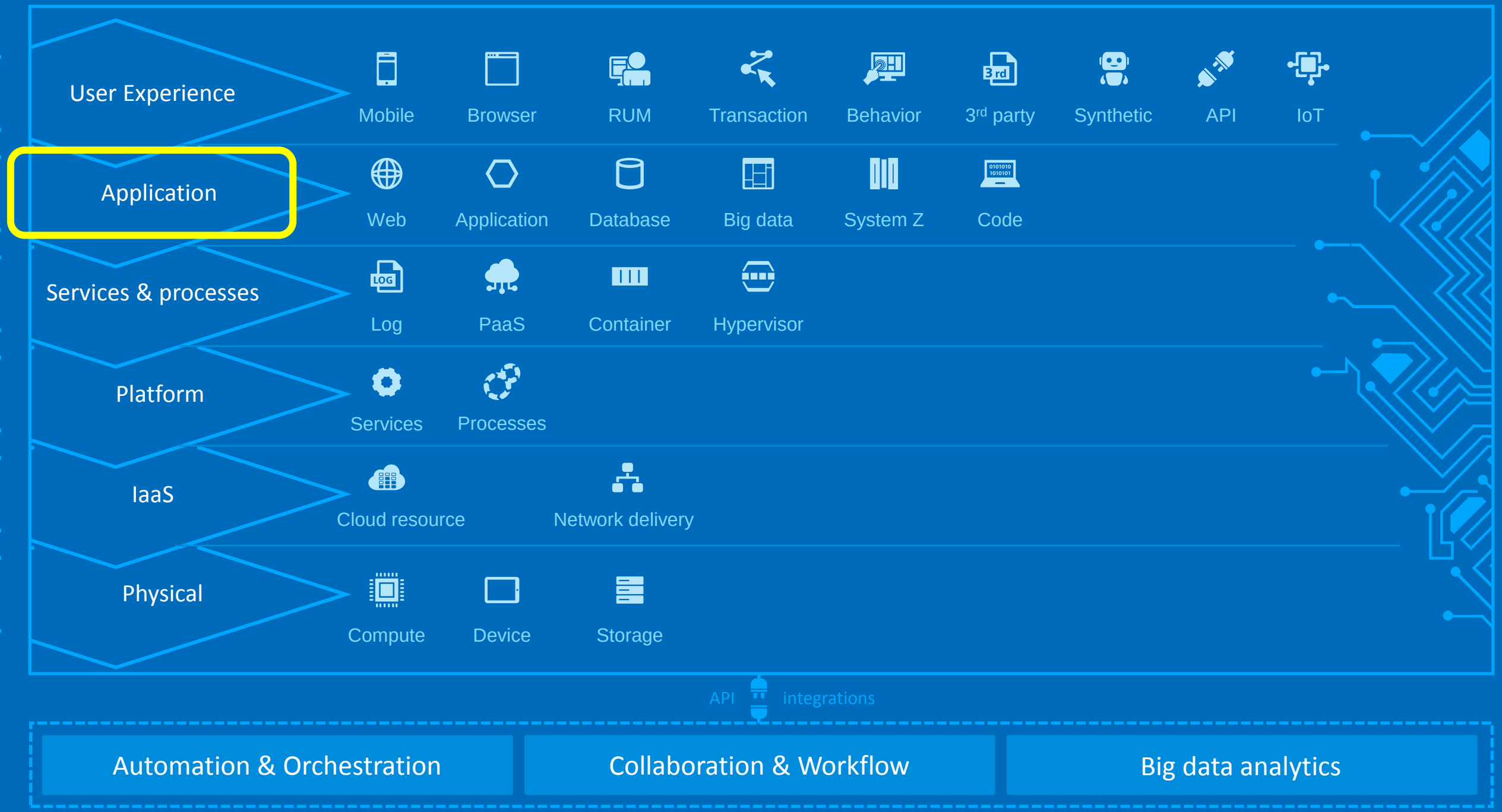
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Guided Application Analytics
From Baseline Violation to Root Cause!

easyTravel | All applications | Last 7 days

Applications > PurePath analytics

All	10.3M
Response time	
Very slow	10.3k
Slow	0
Normal	0
Fast	0
Very fast	0
State	
No errors	9.81k
Detected errors	119
Failed	416
Database	
Chatty	52
Single long SQLs	1.47k
N+1 query problem	438
Overall DB time too high	7
Web service	
High payload	5
Chatty	5
Slow	2.09k
N+1 calls	757

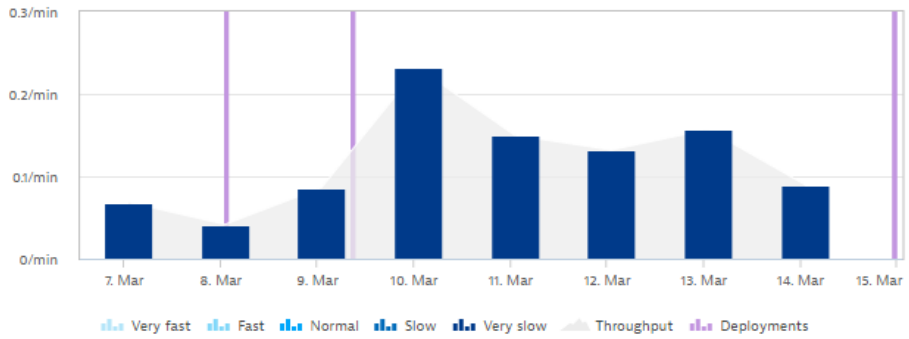
10.3k PurePaths

Analyze PurePaths

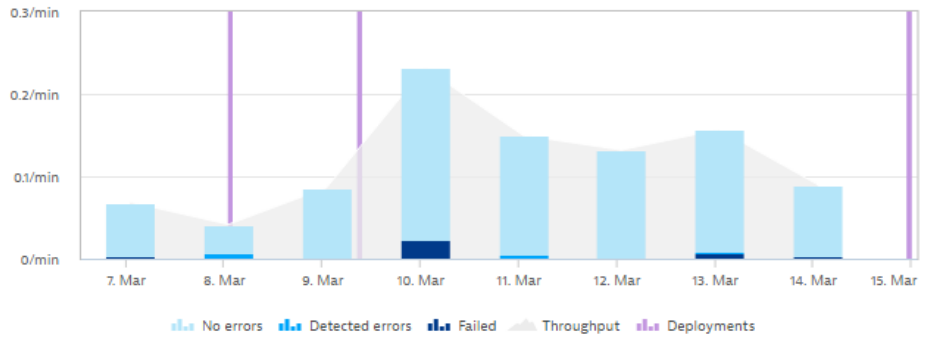
See how different PurePath top findings evolve over time and analyze their relations.

Showing data since **March 7, 01:00** (1w)

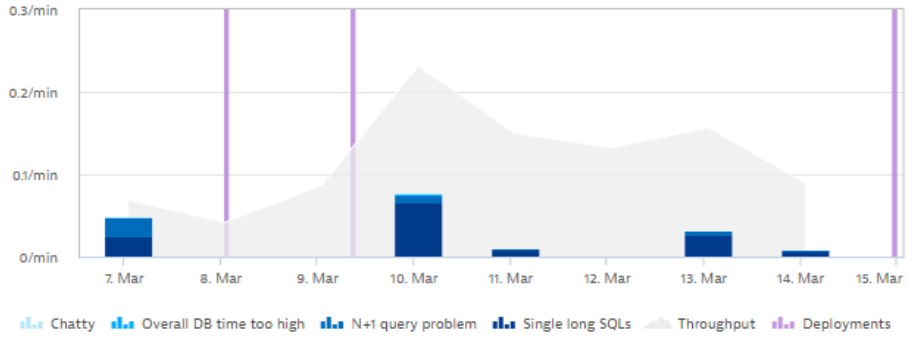
Response time



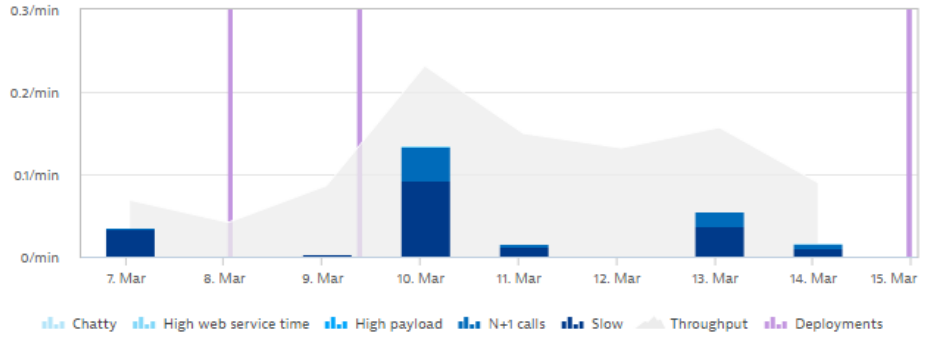
State



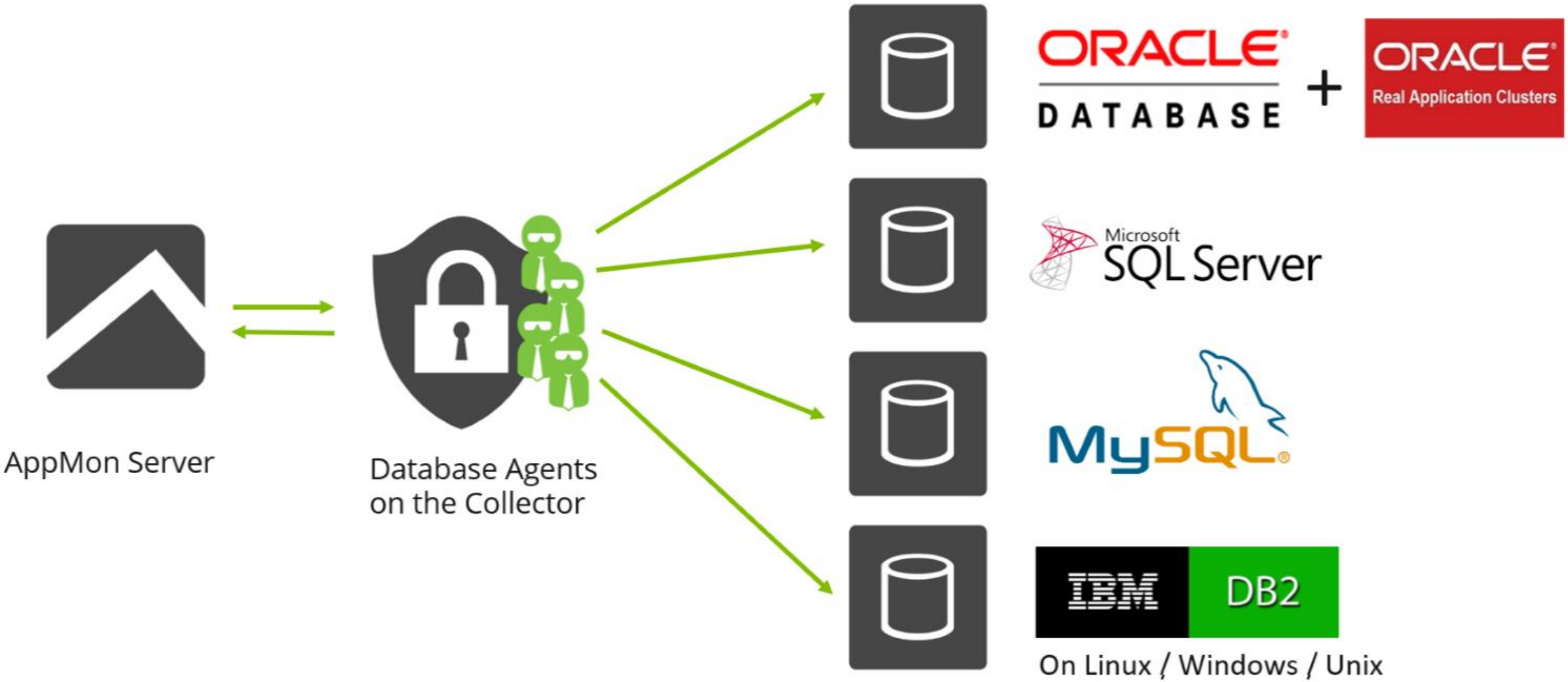
Database



Web service



All popular database platforms supported



OneAgent for AppMon

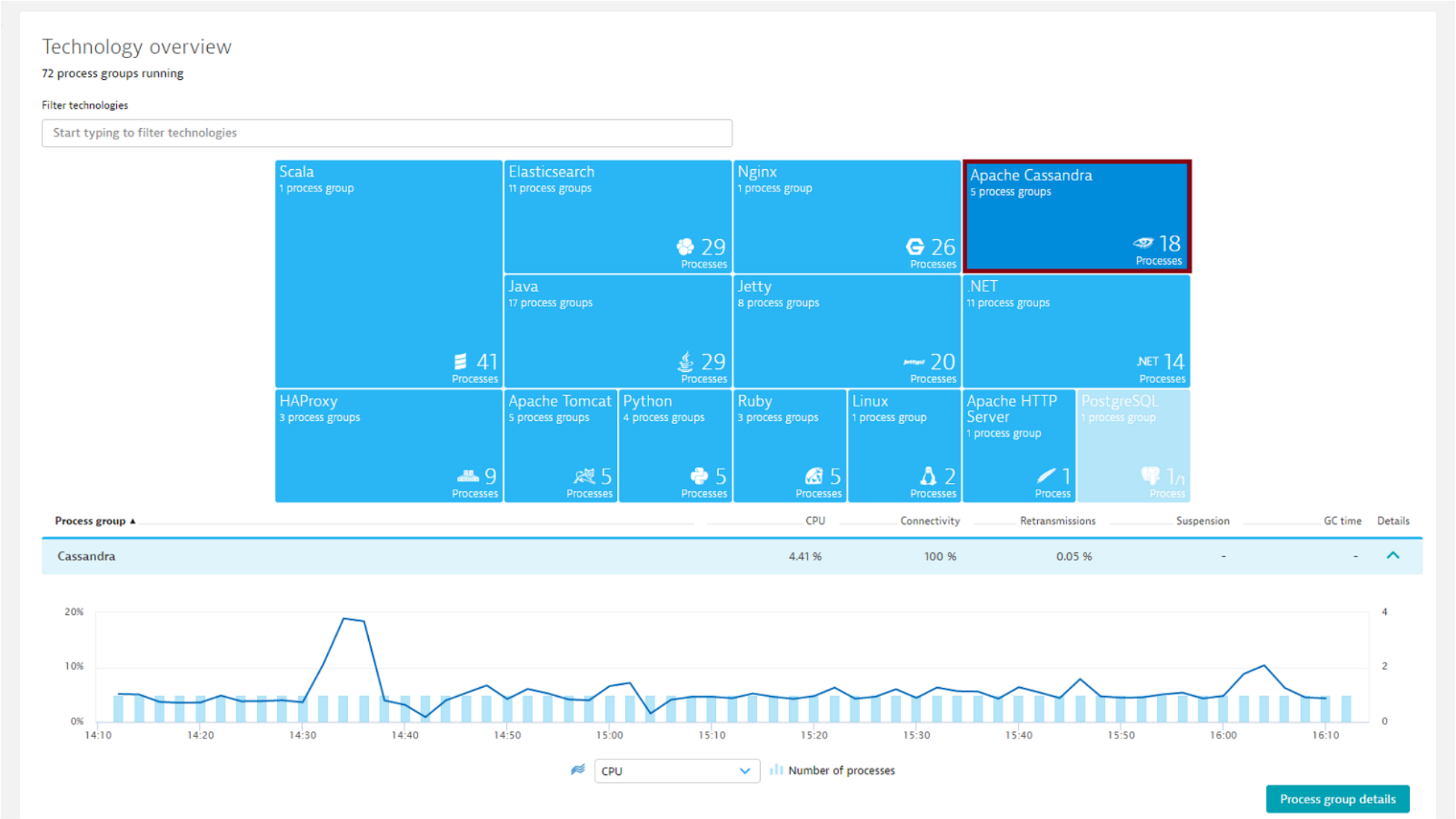
Webserver module insights for Apache and NGINX

Cloud-friendly and easy deployment

.NET

.NET Core

Apache Cassandra monitoring



Varnish cache monitoring

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Search your environment...

Dashboards & reports
- Dashboards
- Custom chart
- Reports

Analyze
- Problems
- User sessions
- Log files
- Smartscape topology
- CPU profiler (code-level)

Monitor
- Applications
- Web checks & availability
- Transactions & services
- Databases
- Data center services
- Hosts
- Network
- Technologies
- VMware
- AWS
- OpenStack
- Docker

Manage
- Deploy Dynatrace
- Deployment status
- Settings

Services > Varnish:8079 > Details > Service flow

Showing service flow of requests to 'Varnish:8079'
today, 10:57 - 16:57

Add filter

Varnish:8079
Average response time 27.9 ms
Requests 1.1M

83 % call
1× per request

easyTravel Customer Fron...
79 % response time contribution
Average response time 26.1 ms
Requests 912k

easyTravel Customer Fron...
Asynchronous invocation

nginxForCustomerFrontend
65 % response time contribution

EasyTravelBackendWebser...
8.4 % response time contribution

CouchDB_ET on port 5984
0.5 % response time contribution

2 services
0.2 % response time contribution

5 services
No contribution available

Varnish:8079
Requests 912k of 1.1M
Failed requests 1.54k of 1.1M

Filter service flow to show only those transactions that contain the current call chain

Filter service flow

See every single request in PurePath view

View PurePaths

show more

easyTravel Customer Frontend

Requests calling easyTravel Customer Frontend

Avg. response time 26.1 ms
Avg. time spent in called services 24.4 ms
Requests 912k
Failed requests 1.54k
Calls to other services 181k

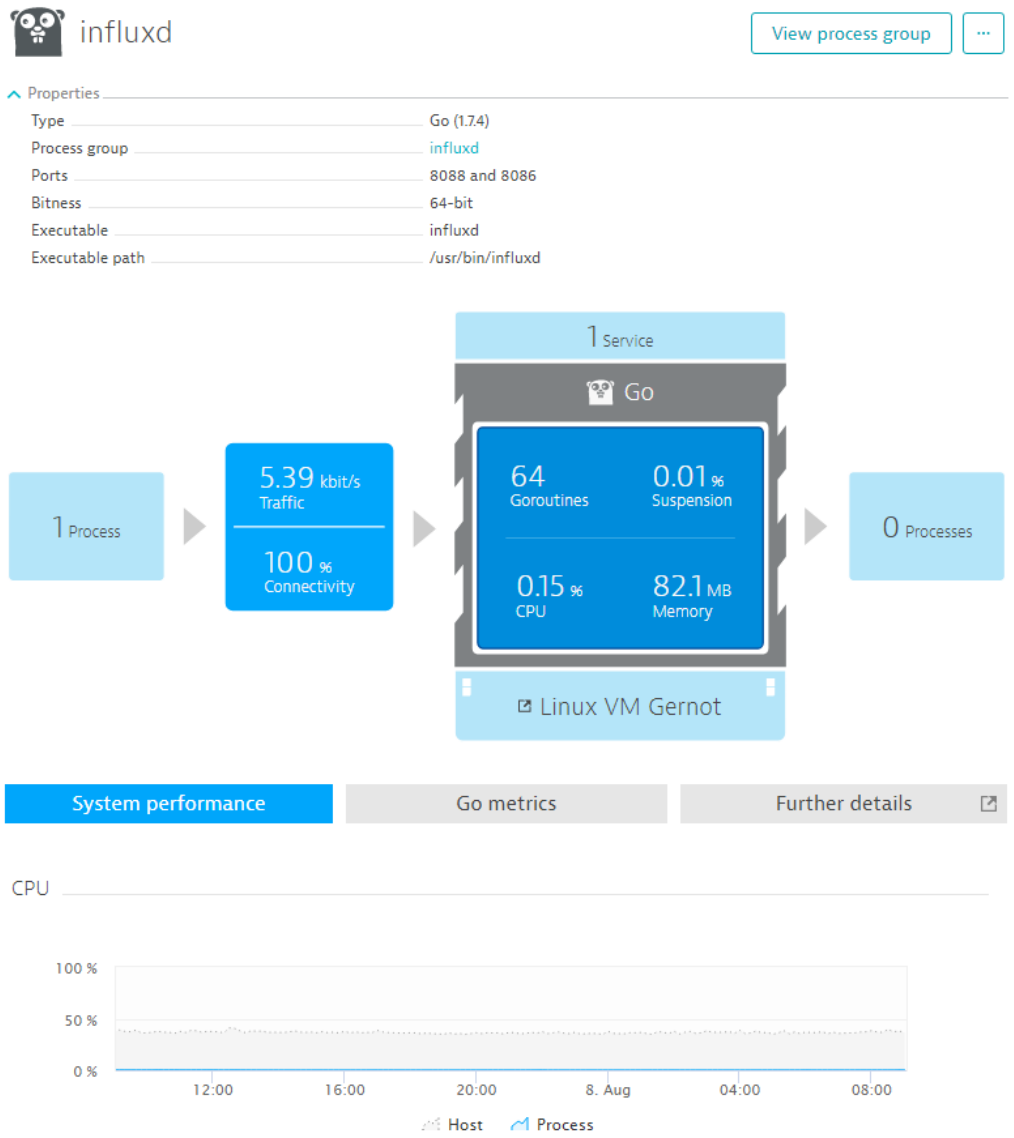
See every single request in PurePath view

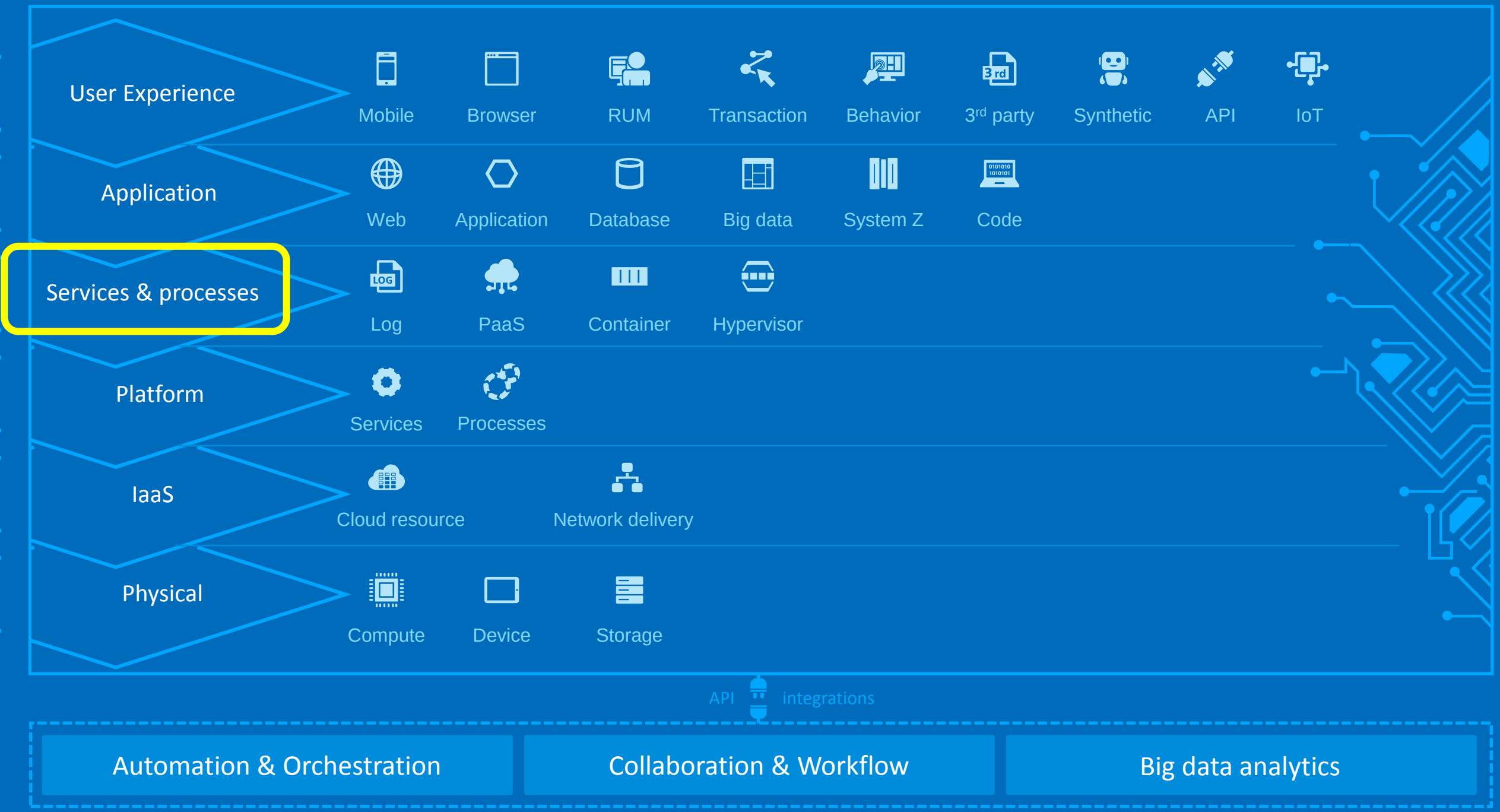
View PurePaths

show more

Technology Support – Go

- Go (or golang) – 7 year old programming language
- Some notable apps written in Go:
  - OpenShift
  - Kubernetes
  - Docker
- Intended for server side usage – application / web

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Collaboration & Workflow
Big data analytics

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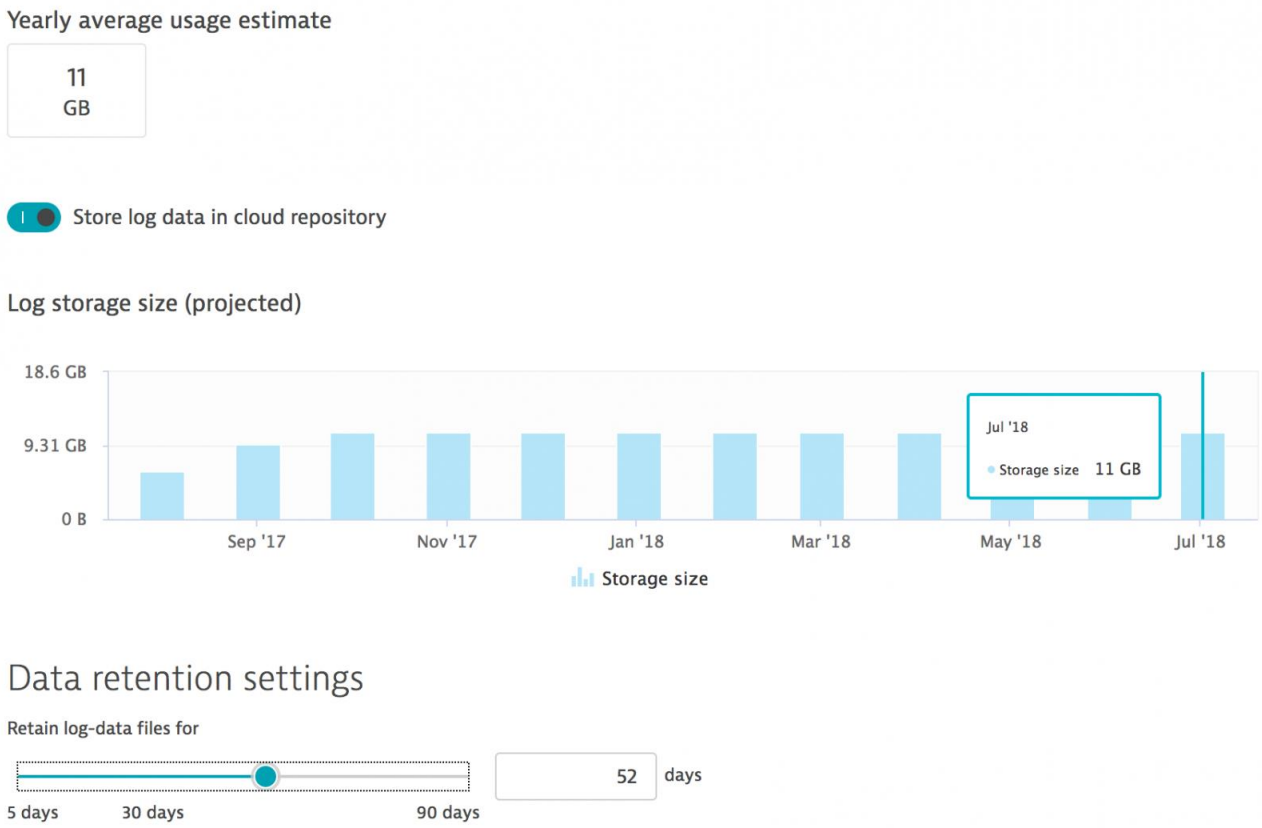
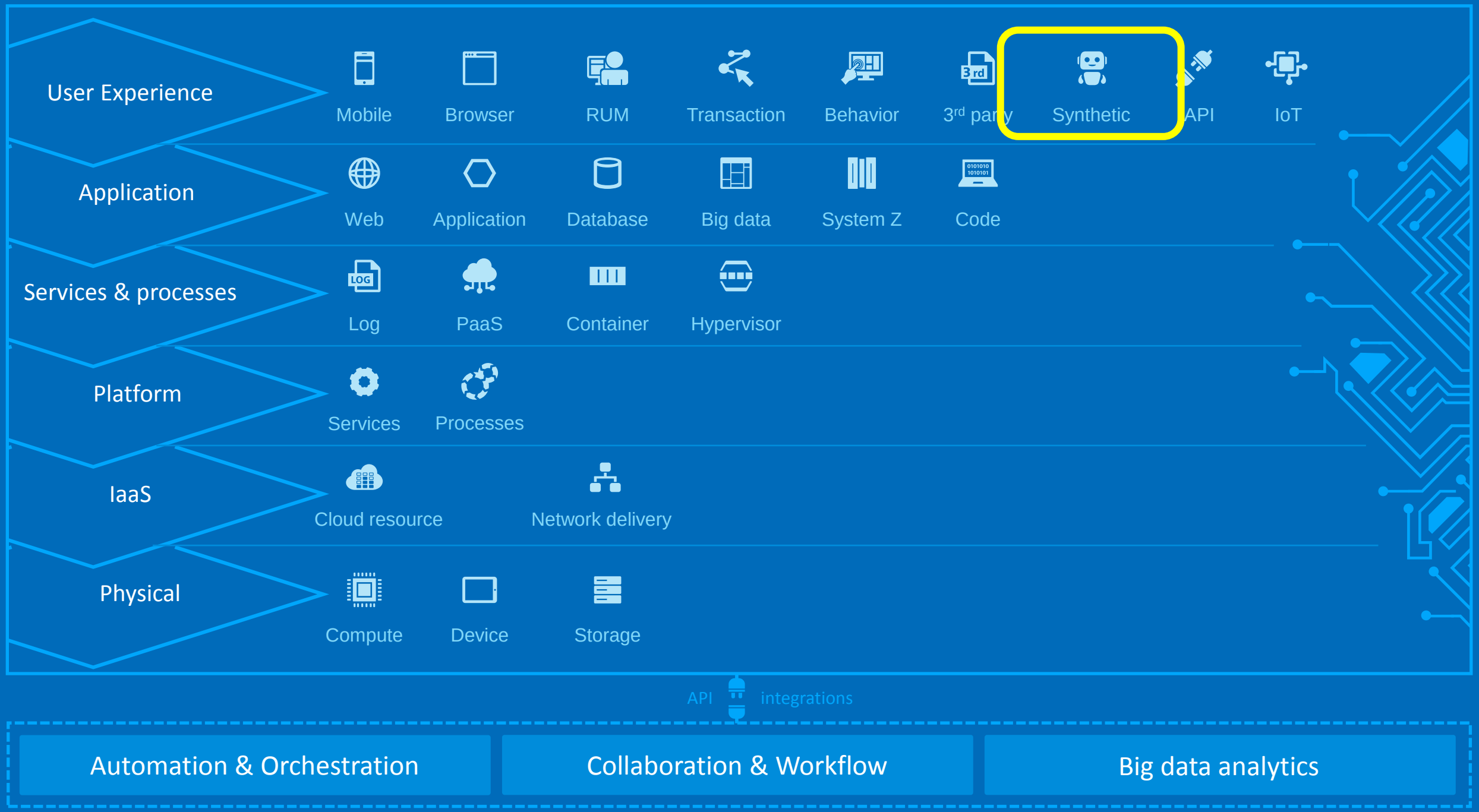
Premium Log Analytics

- Removes the limits of log analytics
  - What if you want to retain logs longer ?
  - What if your logs disapear with instance of container?
- Central storage of log files (harvesting)
  - Short log retention periods or volatile log storage
  - Legal requirements for keeping logs archived centrally for long time periods

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Waterfall findings and JavaScript error details included in web checks

Search your environment...

Web checks 〉 www.easytravel.com 〉 Analysis

Web check analysis

for web check www.easytravel.com

last 2 hours

Select Location Dallas

10:55 11:00 11:05 11:10 11:15 11:20 11:25 11:30 11:35 11:40 11:45 11:50 11:55 12:00 12:05 12:10 12:15 12:20 12:25 12:30 12:35 12:40

Top findings for the selected time range

Status
8 successful runs, 0 outages

Slowest run
5.56 s duration at May 23, 11:11:00

Fastest run
2.84 s duration at May 23, 12:26:00

Analyze a specific web check run

Select web check run for detailed analysis May 23, 10:56:00

3.06 s duration

Loading of http://ec2-54-210-22-3.compute-1.amazonaws.com:8079/

Detailed breakdown

for Loading of page /

Focus on full waterfall , and don't group

- 11 text resources not compressed
- 5 resources larger than 100 kb
- 1 slow first party resource
- 11 slow third party resources
- 19 contacted third party domains

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