



What's new in Elastic APM? ○ A whole lot!

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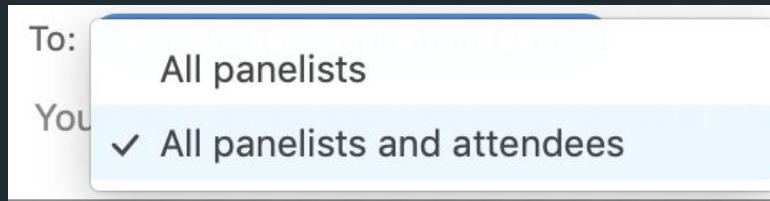
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Elastic



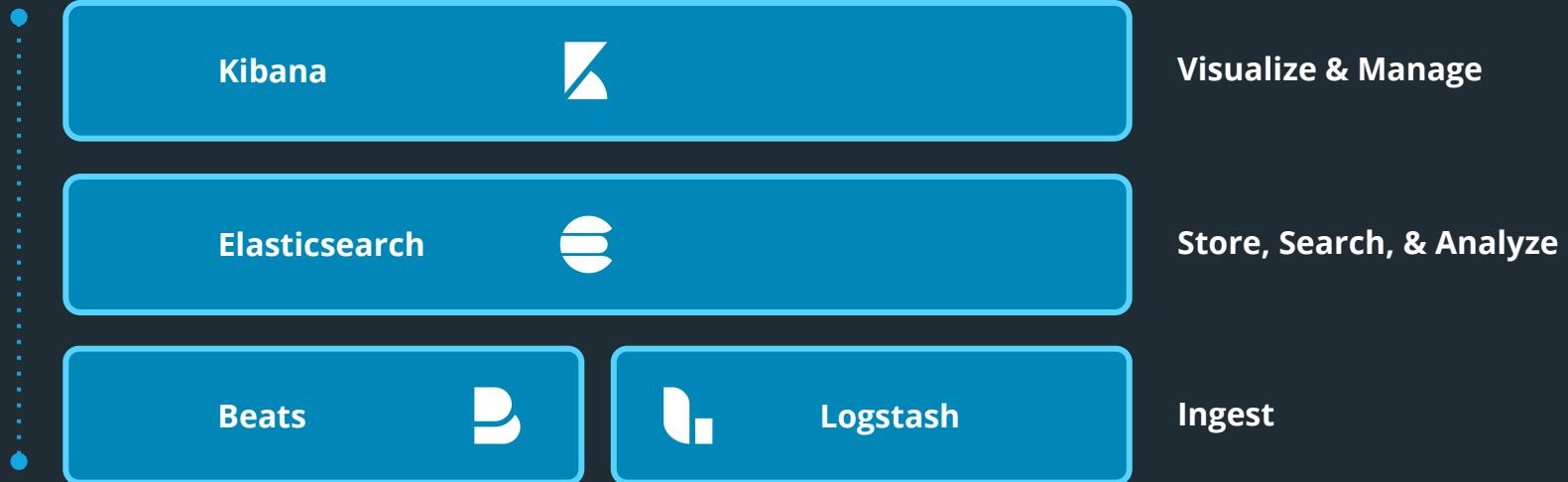
Jamie Smith
Product Marketing
Elastic

Housekeeping & Logistics

- Attendees are automatically muted when joining Zoom
- Q&A will be at the end of the webinar
 - Ask questions for us in the Zoom chat during the webinar
 - Set chat settings **To: All panelists and attendees**

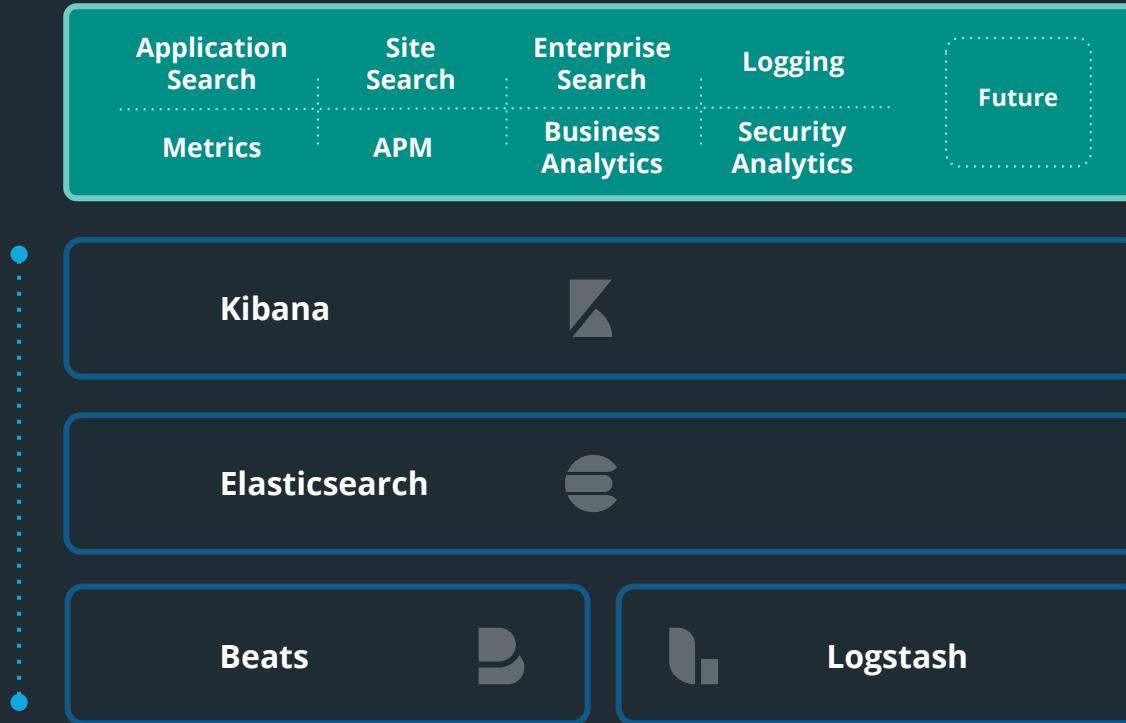


- Ask more questions on our discuss forum: **discuss.elastic.co**
- **Recording** will be available after the webinar and emailed to all registrants





Elastic Stack

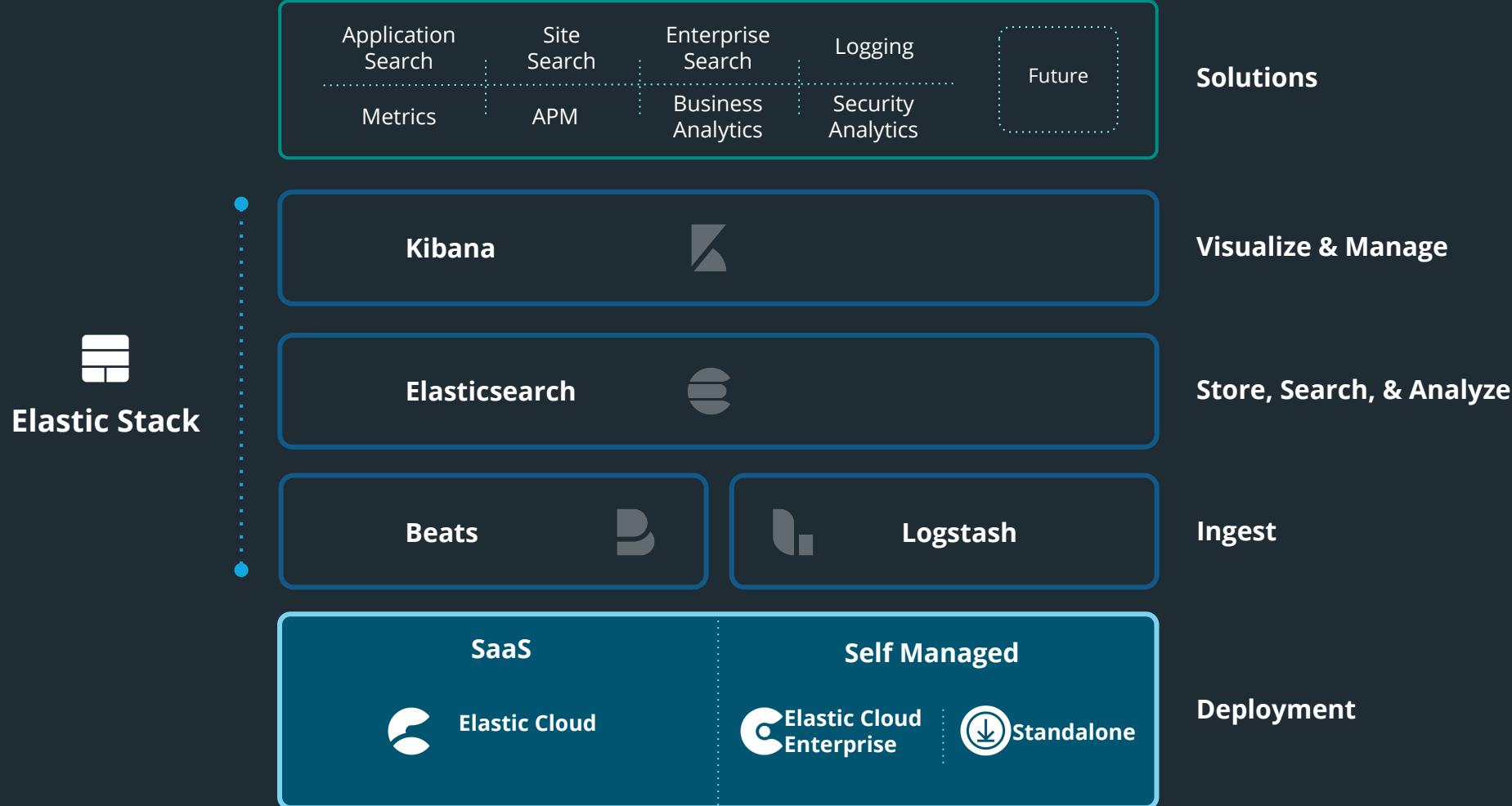


Solutions

Visualize & Manage

Store, Search, & Analyze

Ingest



SaaS



Elastic Cloud



Elasticsearch
Service



Elastic
Site Search
Service



Elastic
App Search
Service

Self Managed



Elastic Cloud
Enterprise



Standalone

Monitoring with Elastic

Full-stack observability integrated behind a single pane of glass



Real User Monitoring (RUM)



Application-level monitoring



Server-level monitoring



Logging

Application Performance Monitoring (APM)

- **End-to-end visibility**
 - Distributed Tracing. Visualize bottlenecks and how services interact including frontend application
- **Plug and play experience**
 - Out of the box instrumentation of database queries, cache, external requests, etc. for multiple language support: Java, Go, Python, Node.js, Ruby, .NET
- **Correlation with logs and metrics solutions**
 - Integration with log, metrics and application data for deeper troubleshooting
- **Error analysis**
 - Grouped exception tracking

Themes

Integrations: Unified Logs, Metrics, APM, and Uptime

One-click UI integrations between the monitoring solutions

Even more agent support

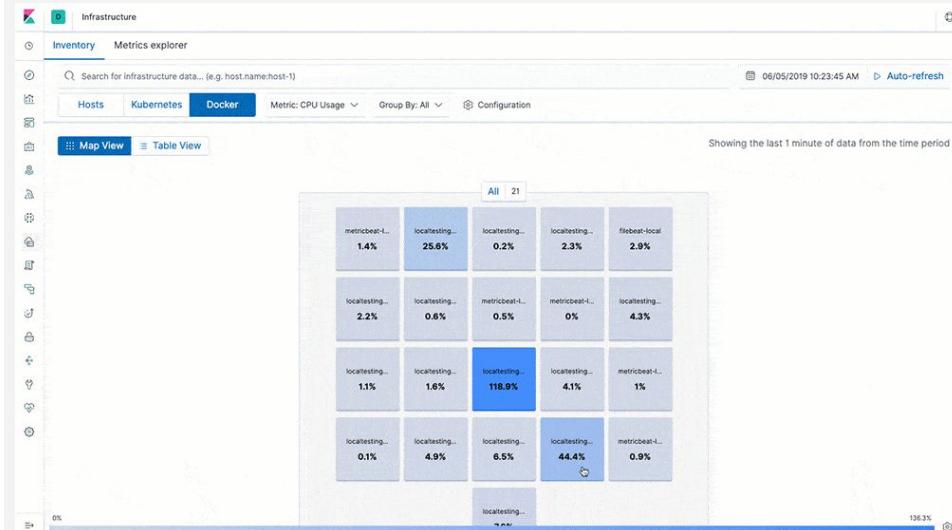
Support for .NET, RUM SPA, more Java frameworks for more turnkey APM & distributed tracing

Troubleshooting capabilities

Aggregate Service Breakdown charts, Agent runtime metrics, related errors in distributed tracing UI, GeoIP & User Agent pipelines

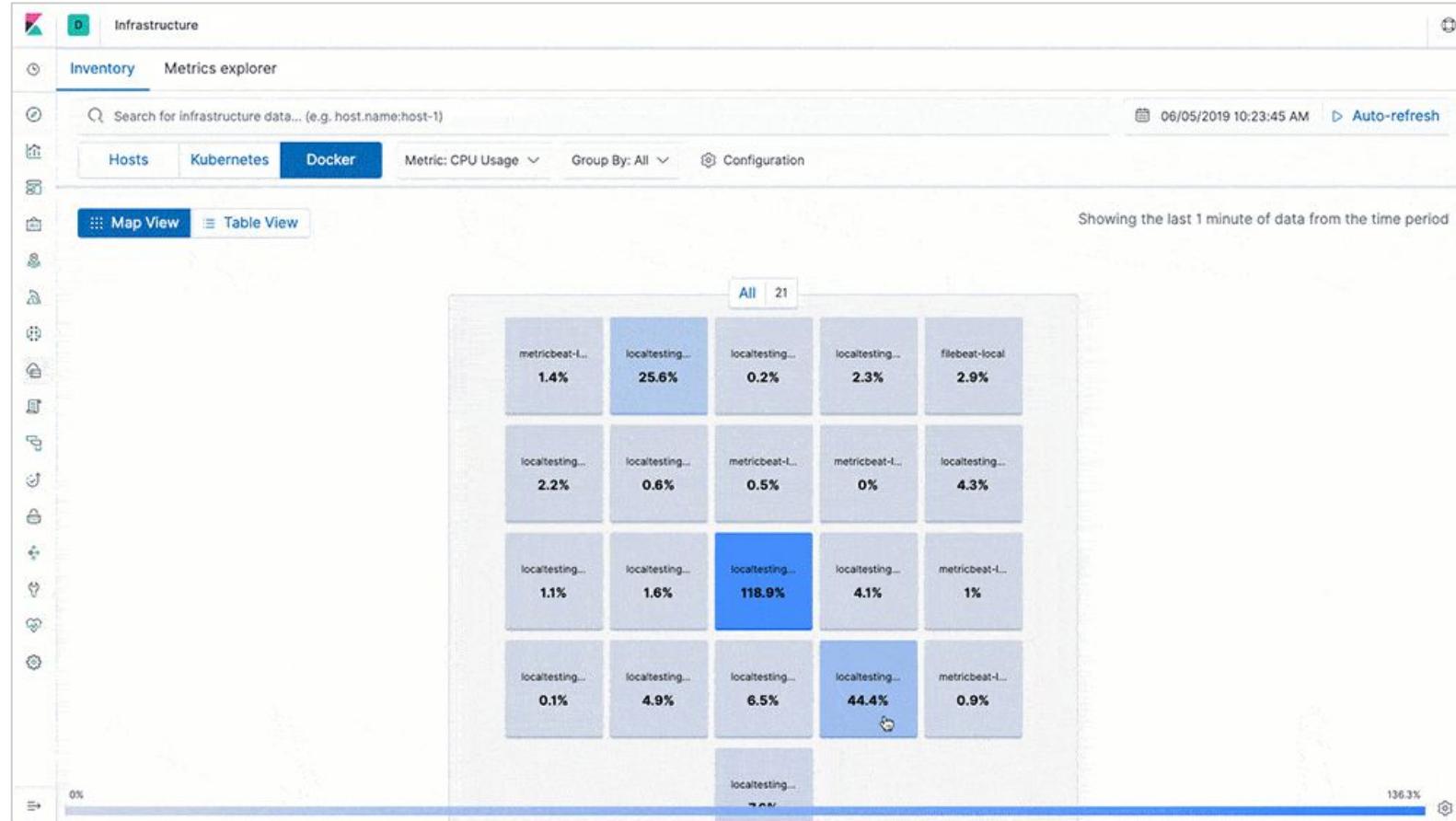
Improved administration options

Support for ILM, Sample Rate configuration from Kibana, and Environment Support



Unified visibility across logs, metrics, APM, uptime

One-click integrations between APM, logs and metrics



Strengthening APM integrations

Agent Updates

.NET APM Agent

Framework Support

ASP.NET Core 2.x+

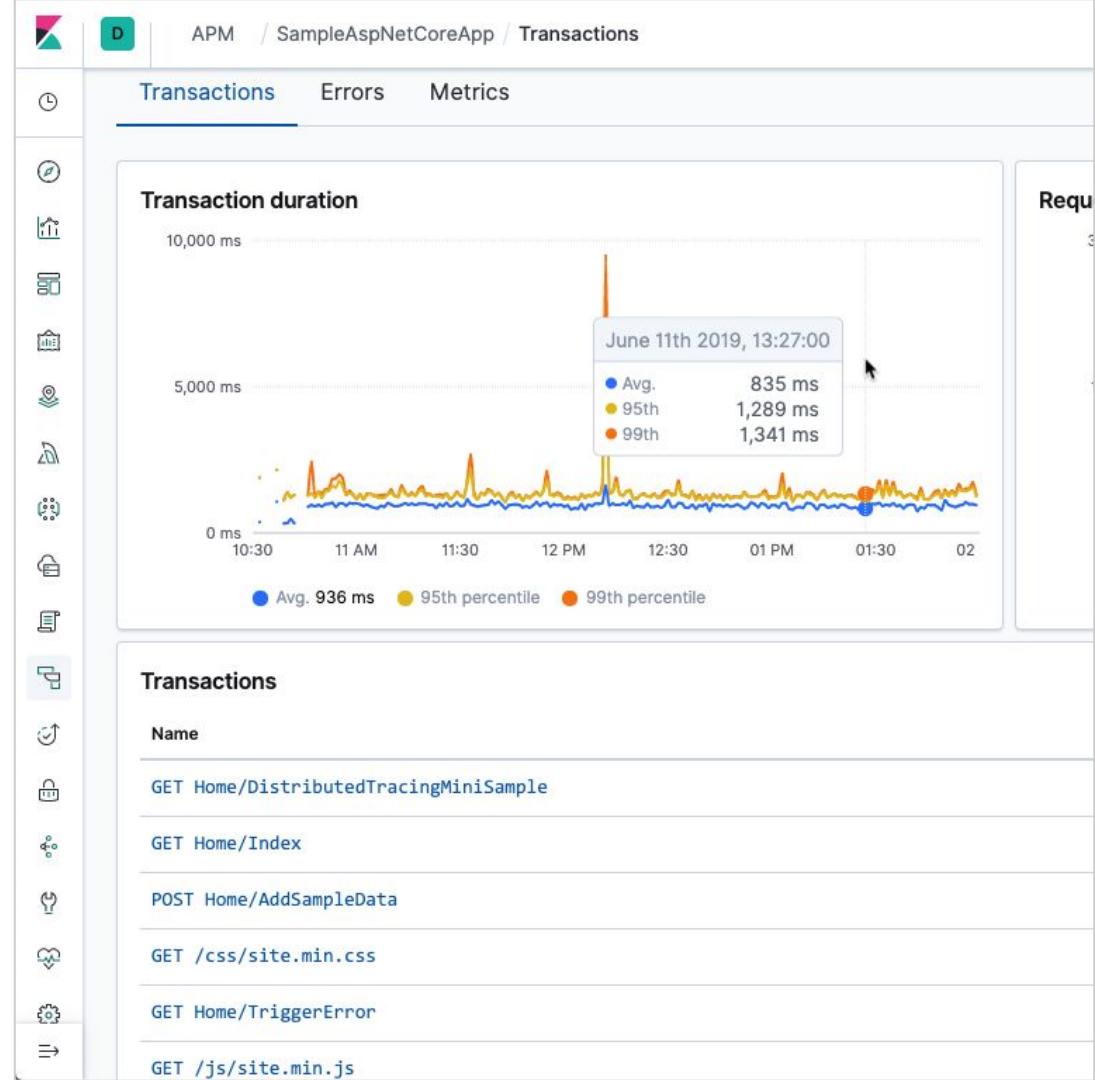
ASP.NET Core is the open-source version of ASP.NET, that runs on macOS, Linux, and Windows

Entity Framework Core 2.x+

Open-source, cross-platform version of Entity Framework, to support development of data-oriented software applications

Public Agent API

For other frameworks



RUM Agent - React SPA support

Single Page Applications now get some RUM

APM / client / Transactions

Filter by type: page-load

Page load times

- 350 ms
- 175 ms
- 0 ms

Transactions per minute

- 60 tpm
- 30 tpm
- 0 tpm

Transactions

Errors

Filter by type

- Route Change (checked)
- page-load
- custom

Transaction duration

Name	Avg. duration	95th percentile	Trans. per minute	Impact
products	267 ms	301 ms	0.8 tpm	High
dashboard	255 ms	328 ms	0.4 tpm	Medium
orders	152 ms	152 ms	0.2 tpm	Low

client Integrations

Search transactions, errors and metrics... (E.g. transaction.duration.us > 30000)

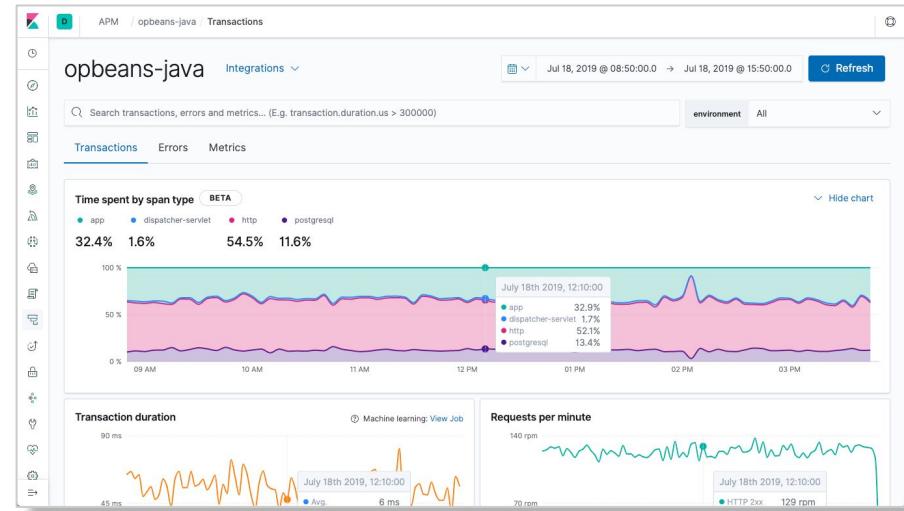
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Additional troubleshooting capabilities

Aggregate Service Breakdown Charts

Birds-eye view of where your app spends time

- Identify performance bottlenecks by visualizing aggregate time spent in app code, database or external call
- Automatically collected
- Available in Beta for all agents (except .NET and Ruby)



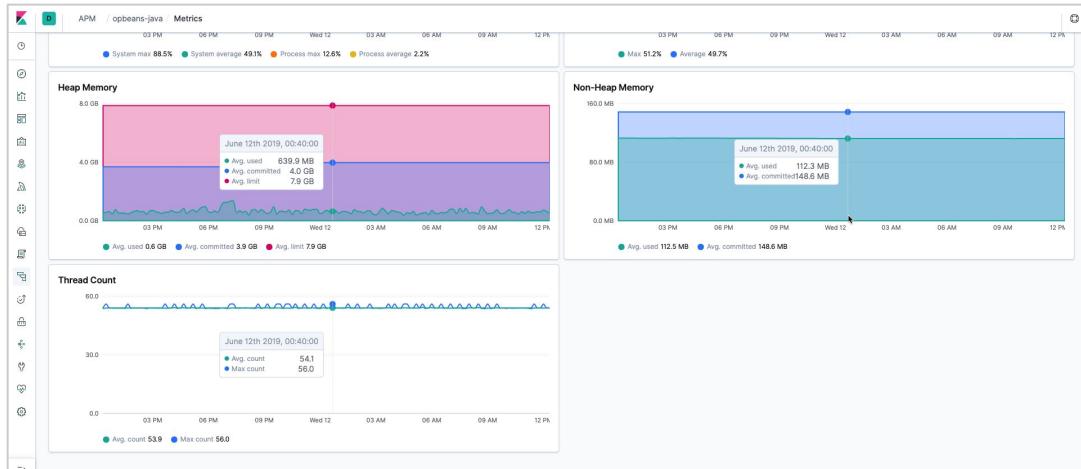
Agent Runtime Metrics

Finding performance issues with application runtime

Metrics collected:
Vary by agent, such as:

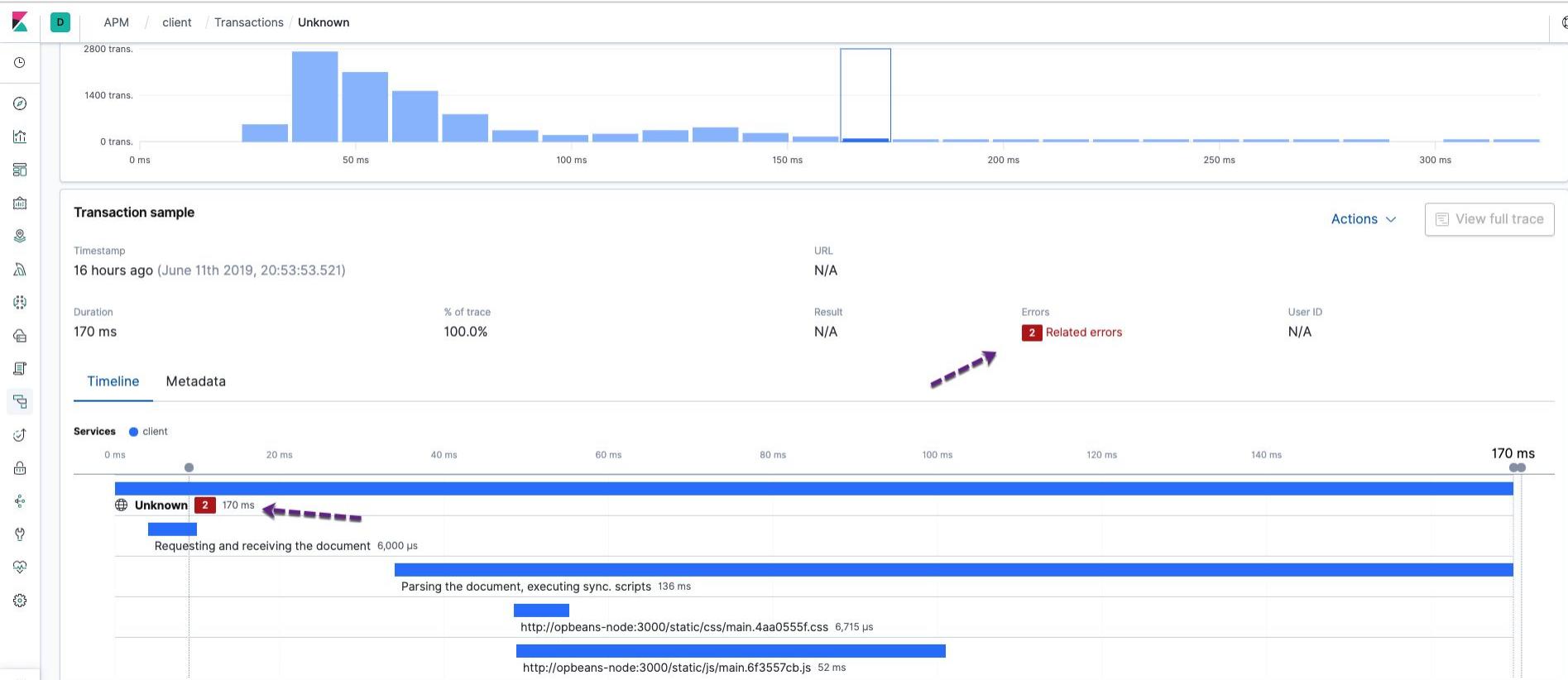
- Garbage Collection
- Memory Usage
- Thread Count
- File Handles
- CPU

APM-contrib repo has dashboards
for all agents



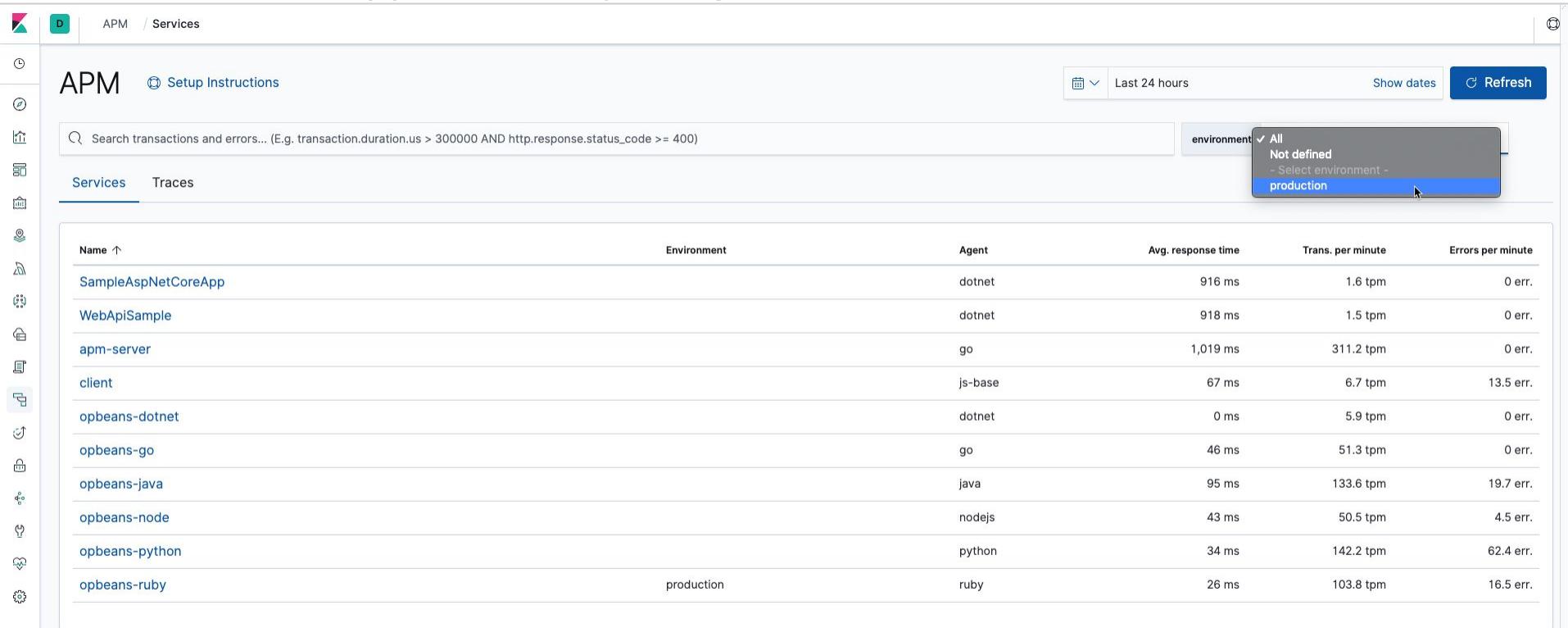
APM App Updates

"Related errors" on transaction view



APM App Updates

Environment Support for easy navigation between environments



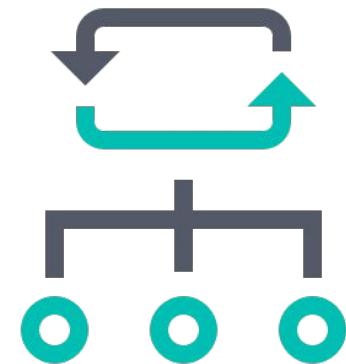
The screenshot shows the APM Services dashboard. At the top, there is a search bar with the placeholder "Search transactions and errors... (E.g. transaction.duration.us > 300000 AND http.response.status_code >= 400)". To the right of the search bar are buttons for "Last 24 hours", "Show dates", and "Refresh". Below the search bar, there is a dropdown menu for "environment" with the following options: "All" (checked), "Not defined", and "production". The "production" option is highlighted with a blue background. The main table below the search bar lists various services with their details. The table has columns: Name, Environment, Agent, Avg. response time, Trans. per minute, and Errors per minute. The "Environment" column for the "opbeans-ruby" service is explicitly set to "production".

Name	Environment	Agent	Avg. response time	Trans. per minute	Errors per minute
SampleAspNetCoreApp		dotnet	916 ms	1.6 tpm	0 err.
WebApiSample		dotnet	918 ms	1.5 tpm	0 err.
apm-server		go	1,019 ms	311.2 tpm	0 err.
client		js-base	67 ms	6.7 tpm	13.5 err.
opbeans-dotnet		dotnet	0 ms	5.9 tpm	0 err.
opbeans-go		go	46 ms	51.3 tpm	0 err.
opbeans-java		java	95 ms	133.6 tpm	19.7 err.
opbeans-node		nodejs	43 ms	50.5 tpm	4.5 err.
opbeans-python		python	34 ms	142.2 tpm	62.4 err.
opbeans-ruby	production	ruby	26 ms	103.8 tpm	16.5 err.

Improved administration options

ILM support

- Automatically manage indices over time
- Editable in Kibana
- Multiple ways to get started
 - ILM default policy
 - Manual ILM



Default APM ILM Policy

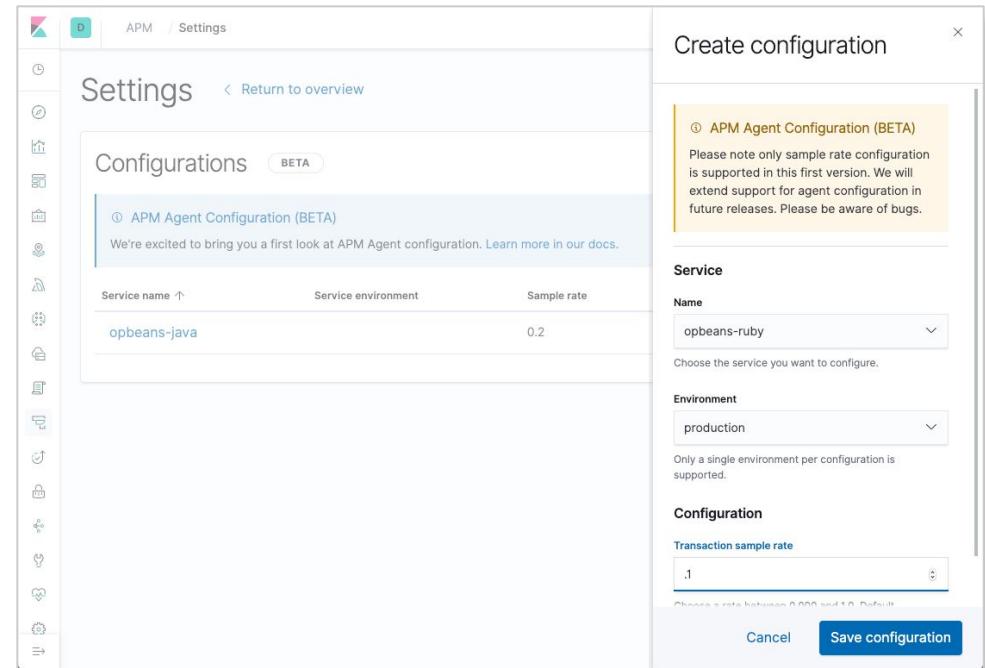
Info is available on [docs](#)

Event type	Hot	Warm
Errors & Spans	<pre>Rollover: max_size: 50gb, max_age: 1 day, priority: 100</pre>	<pre>min_age: 7 days, readonly, priority: 50</pre>
Transactions & Metrics	<pre>Rollover: max_size: 50gb, max_age: 7 days, priority: 100</pre>	<pre>min_age: 31 days, readonly, priority: 50</pre>

Agent Configuration right from Kibana!

Sample rate configuration

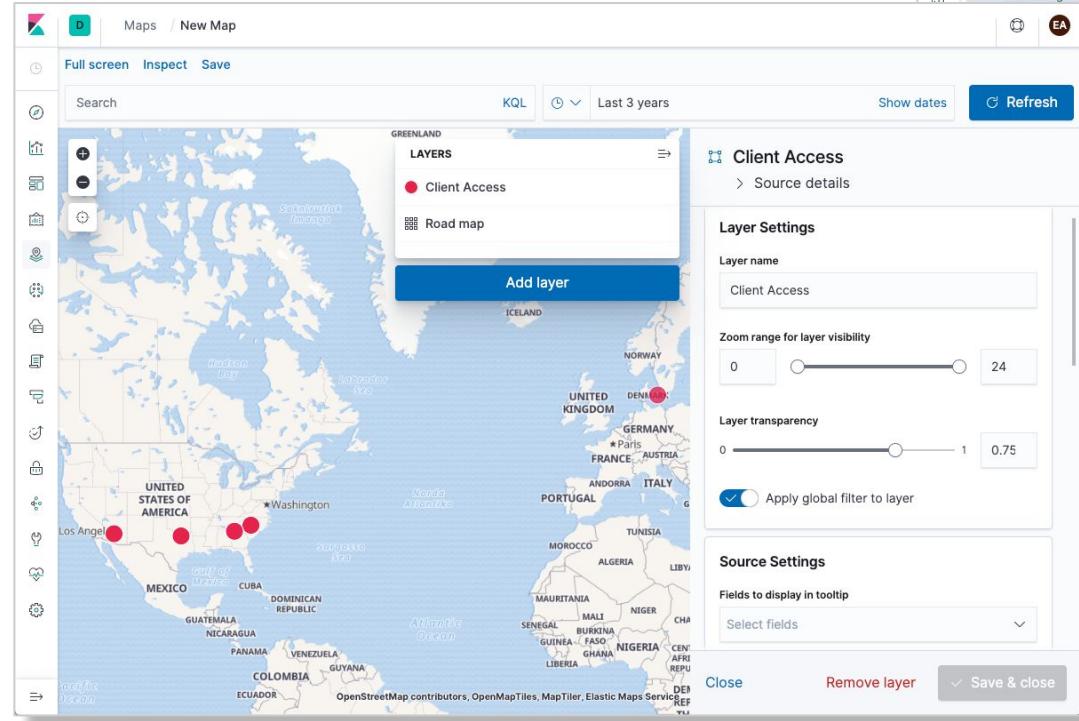
- Per-agent sample rate config
 - 0 - 1.0
 - Default is 1.0
- Environment Selector
 - Allows different rates for services in different envs
- **Errors** are *always* captured no matter sample rate



The screenshot shows the Kibana APM Settings interface. On the left, a sidebar lists various monitoring metrics and logs. The main area is titled 'Settings' and shows a 'Configurations' table with one entry: 'opbeans-ruby' with a 'Service environment' of 'production' and a 'Sample rate' of '0.2'. A modal dialog is open on the right, titled 'Create configuration'. It contains a note about APM Agent Configuration (BETA) and a 'Service' dropdown set to 'opbeans-ruby'. The 'Environment' dropdown is set to 'production'. In the 'Configuration' section, a 'Transaction sample rate' input field is set to '.1'. At the bottom of the dialog are 'Cancel' and 'Save configuration' buttons.

GeolP & User Agent pipelines

Enabled by default



```
Dev Tools
History Settings Help
Console Search Profiler Grok Debugger
1 GET _ingest/pipeline
20  "apm_user_geo" : {
21    "description" : "Add user geo information for APM events",
22    "processors" : [
23      {
24        "geoip" : {
25          "database_file" : "GeoLite2-City.mmdb",
26          "field" : "client.ip",
27          "target_field" : "client.geo",
28          "ignore_missing" : true
29        }
30      }
31    ],
32  },
33  "xpack_monitoring_7" : { },
34  "apm" : {
35    "description" : "Default enrichment for APM events",
36    "processors" : [
37      {
38        "pipeline" : {
39          "name" : "apm_user_agent"
40        }
41      },
42      {
43        "pipeline" : {
44          "name" : "apm_user_geo"
45        }
46      }
47    ],
48  },
49  "apm_user_agent" : {
50    "description" : "Add user agent information for APM events",
51    "processors" : [
52      {
53        "user_agent" : {
54          "target_field" : "user_agent",
55          "ignore_missing" : true,
56          "field" : "user_agent.original"
57        }
58      }
59    ],
60  }
61  },
62  },
63  }
```



Tour Time!



Thank You

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Questions?
