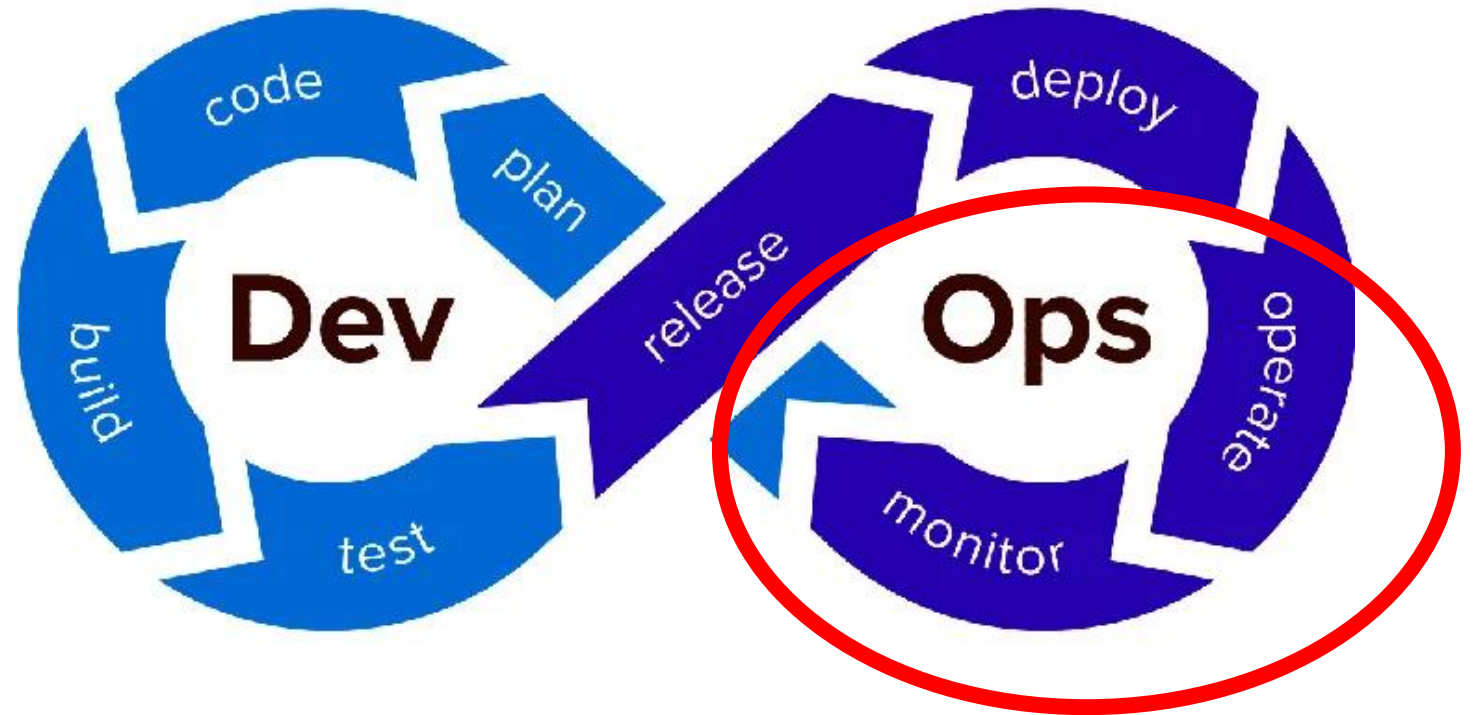


# Stratégies de surveillance d'exécution

DevOps Part4

# DevOps

Ops to Dev

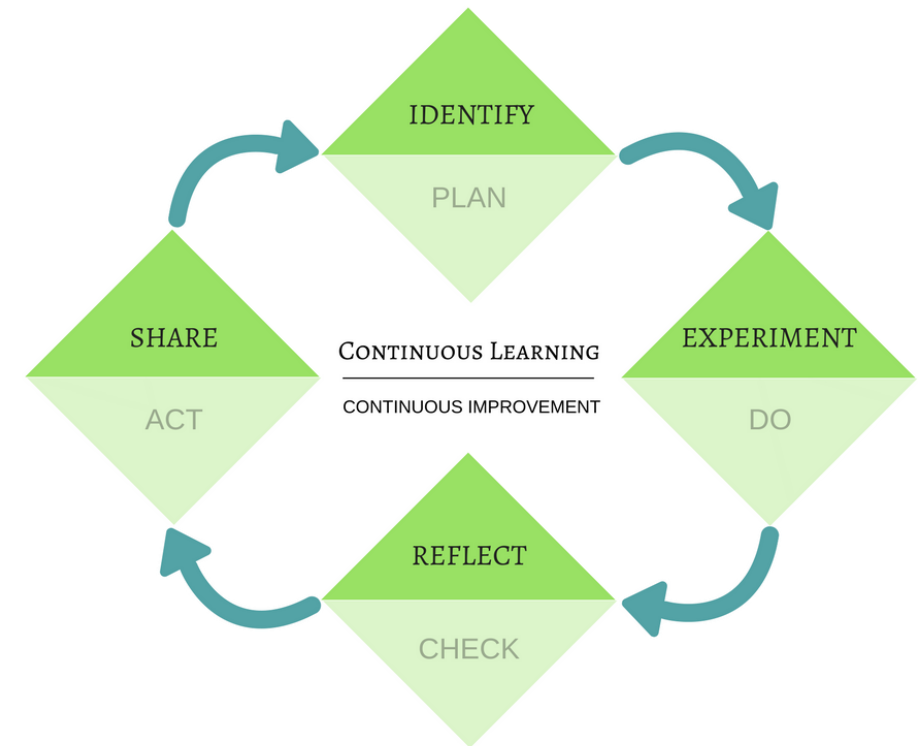


# Outline (6 modules)

- *Industrialisation du déploiement logiciel (Pipelines de Continuous Delivery)*
- *Industrialisation de la construction et de la validation du logiciel*
- *Gestion de configurations (construction et déploiement) pour différents environnements d'exécution*
- ***Stratégies de surveillance d'exécution***
- ***Automatisation de la surveillance d'exécution***
- *Gestion de l'évolution*

# Outline (Methodology)

- Agile Learning
  - → Context
    - Me
      - Tooling (Introduction)
      - Roadmaps (DevOps/ Test Application)
  - → Trying out / Applying / Testing
    - You
  - → Retrospective
    - Us
  - → Improve/Share
    - Us



# Outline

- Challenges/Challenges
- Execution monitoring
  - ELK - APM
- Infrastructure monitoring

# Introduction

# Introduction

- Monitoring ?

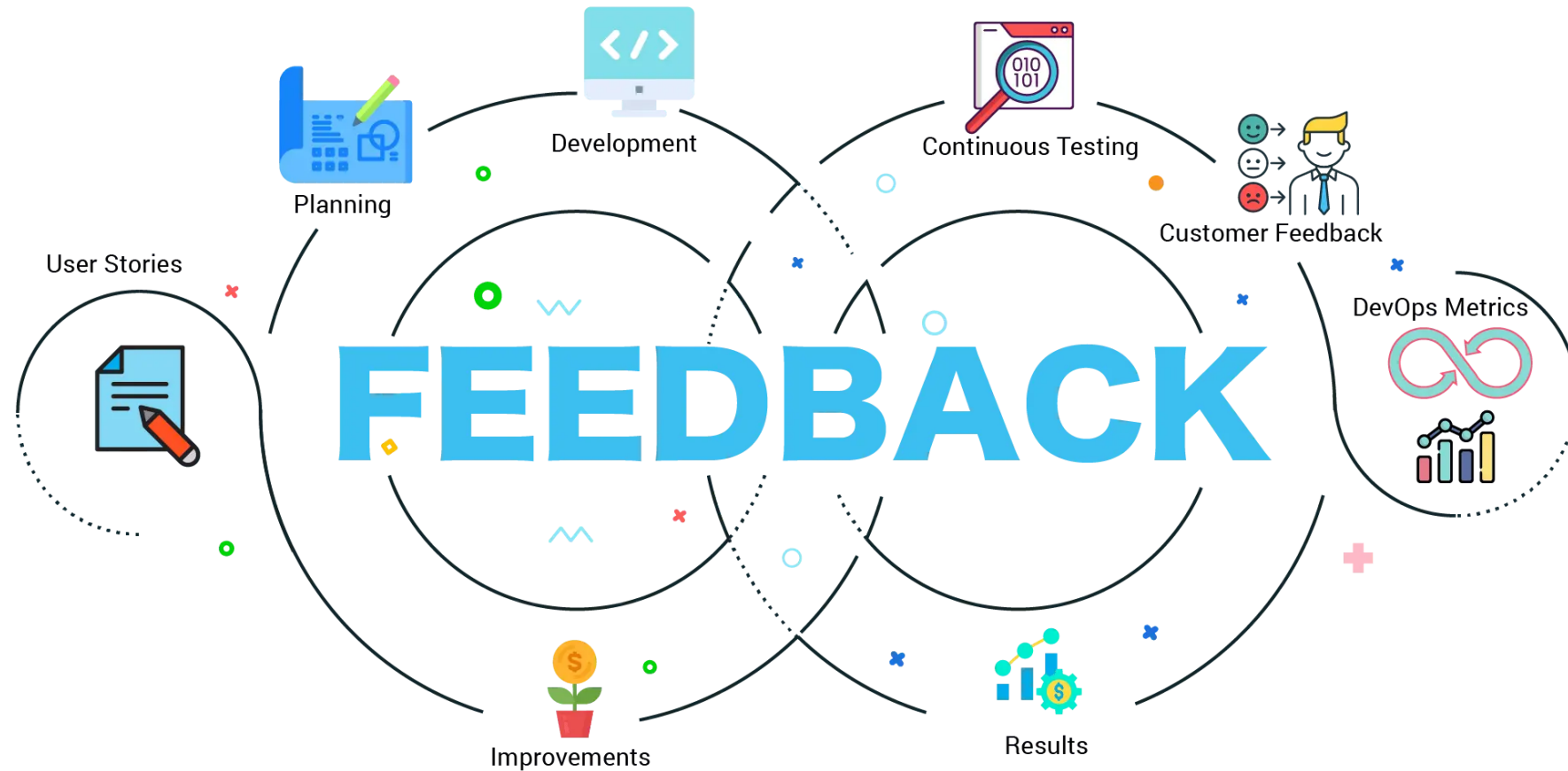


# Introduction

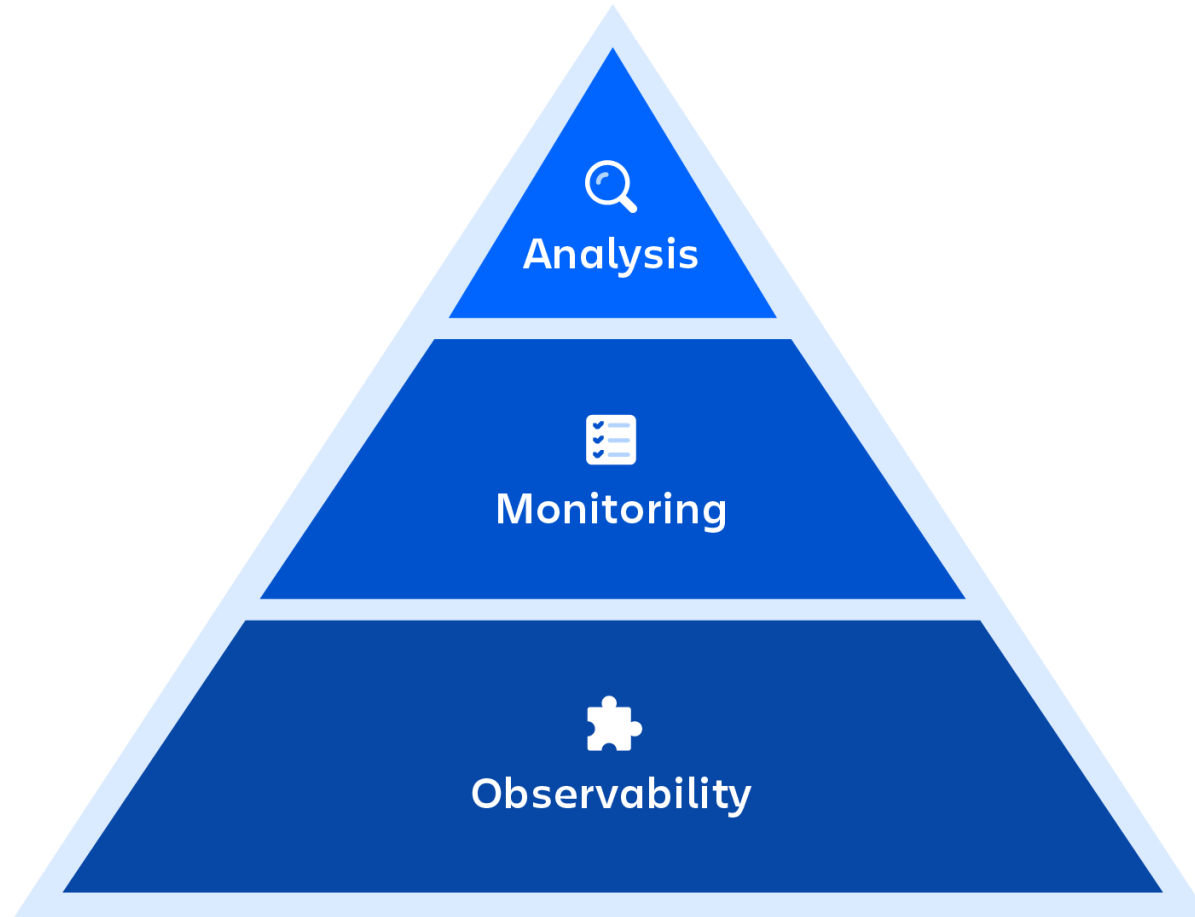
- Monitoring ?



# Introduction



# Introduction



# Part 1

Application

# Execution Monitoring

# Execution Monitoring

- Why do we monitor ?
- What do we monitor ?

# Execution Monitoring

- Facts
- KPI
- Bugs
- Performances

# Execution Monitoring (Bug)

- Without Monitoring

- T0: Bug
- T+1: Client confused
- T+10: Client still tries
- T+20: Client writes mail
- T+30: Service Desk contacts client
- T+X: Bug confirmed
- T+X+Y: Bug taken care of

- With Monitoring

- T0: Bug
- T0: Mail/Slack to Devs
- T+1: Bug taken care of

# APM Tooling

# Tooling

- Splunk
- Elastic APM
- Datadog
- Dynatrace
- AppDynamics
- ...

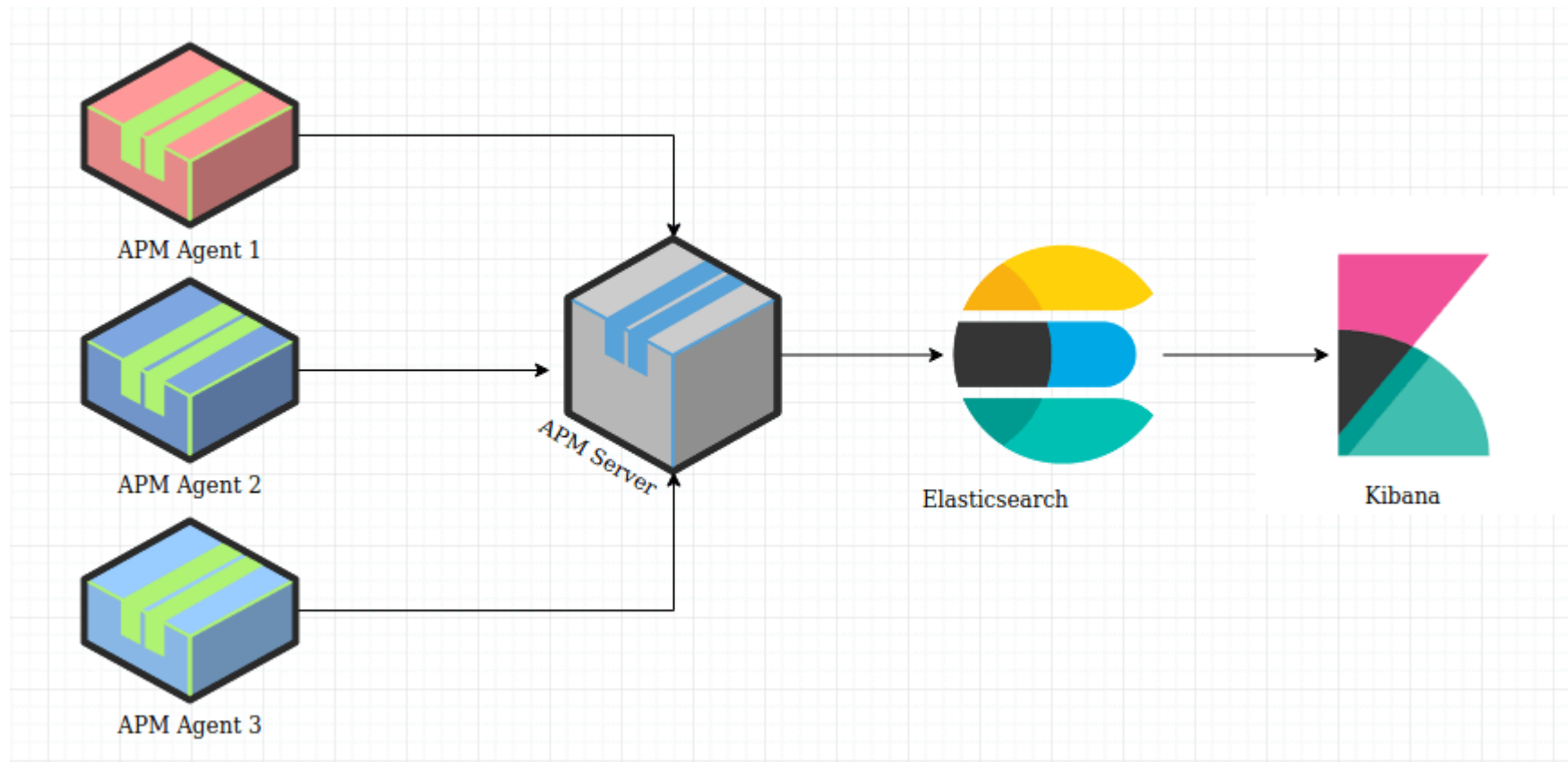
# Tooling

- Splunk
- **Elastic APM**
- Datadog
- Dynatrace
- AppDynamics
- ...

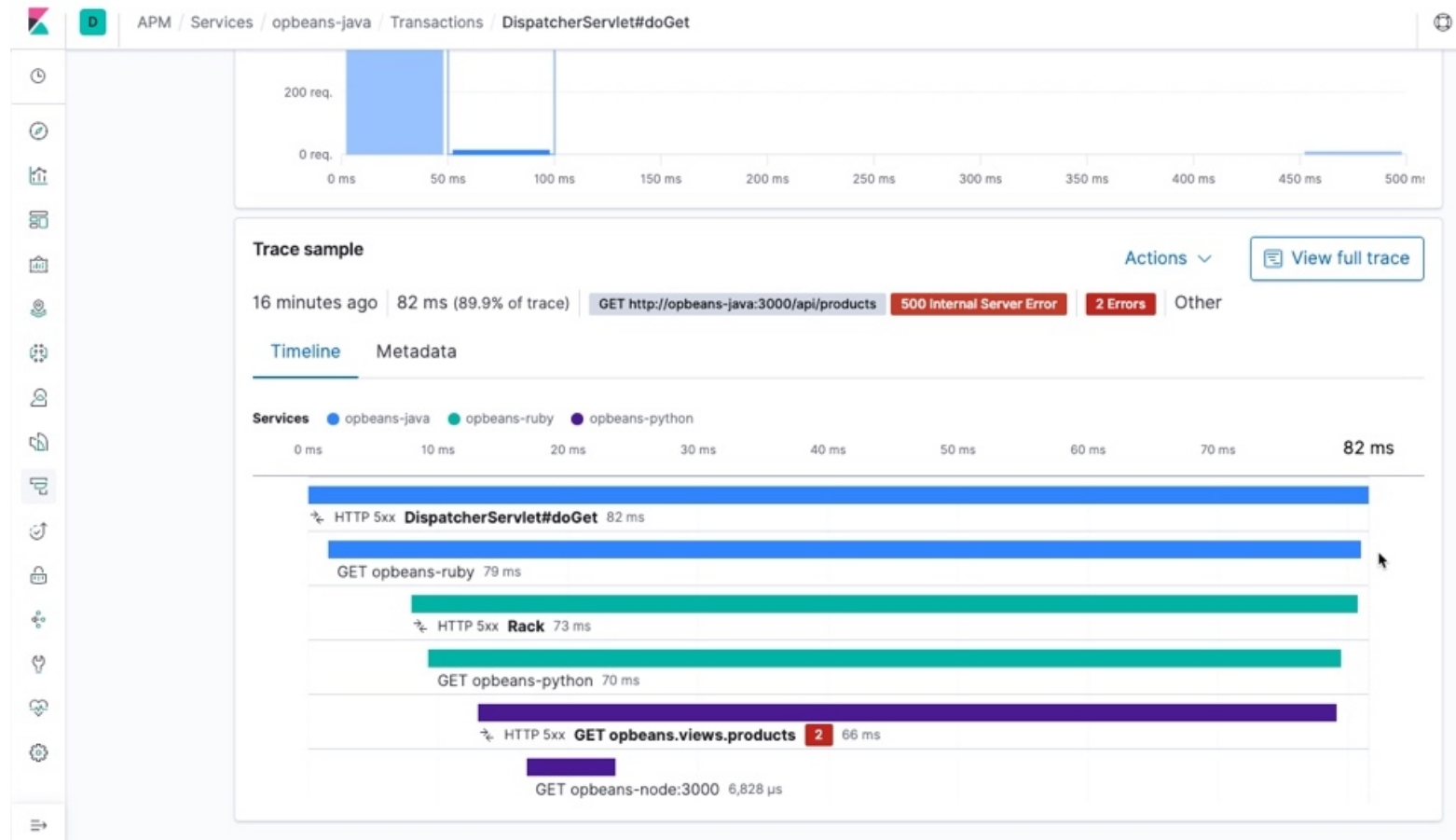
# Elastic APM

- APM platform for client/server
- Optimized for Web Apps
- Server on top of Elastic Search
- Integrated in Kibana
  
- Client libraries for almost all languages
  
- Standard integrations for all major frameworks

# Elastic APM

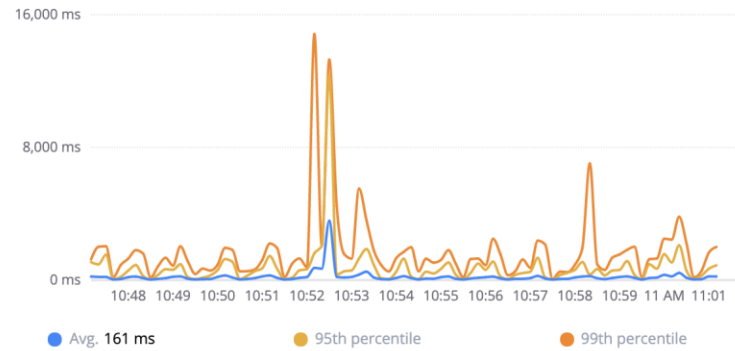


# Elastic APM

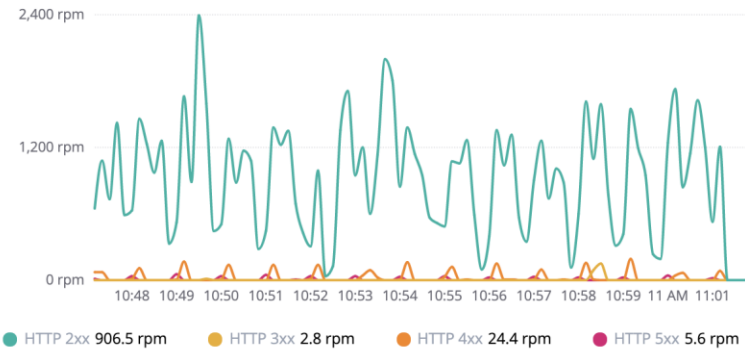


# Elastic APM

Transaction duration

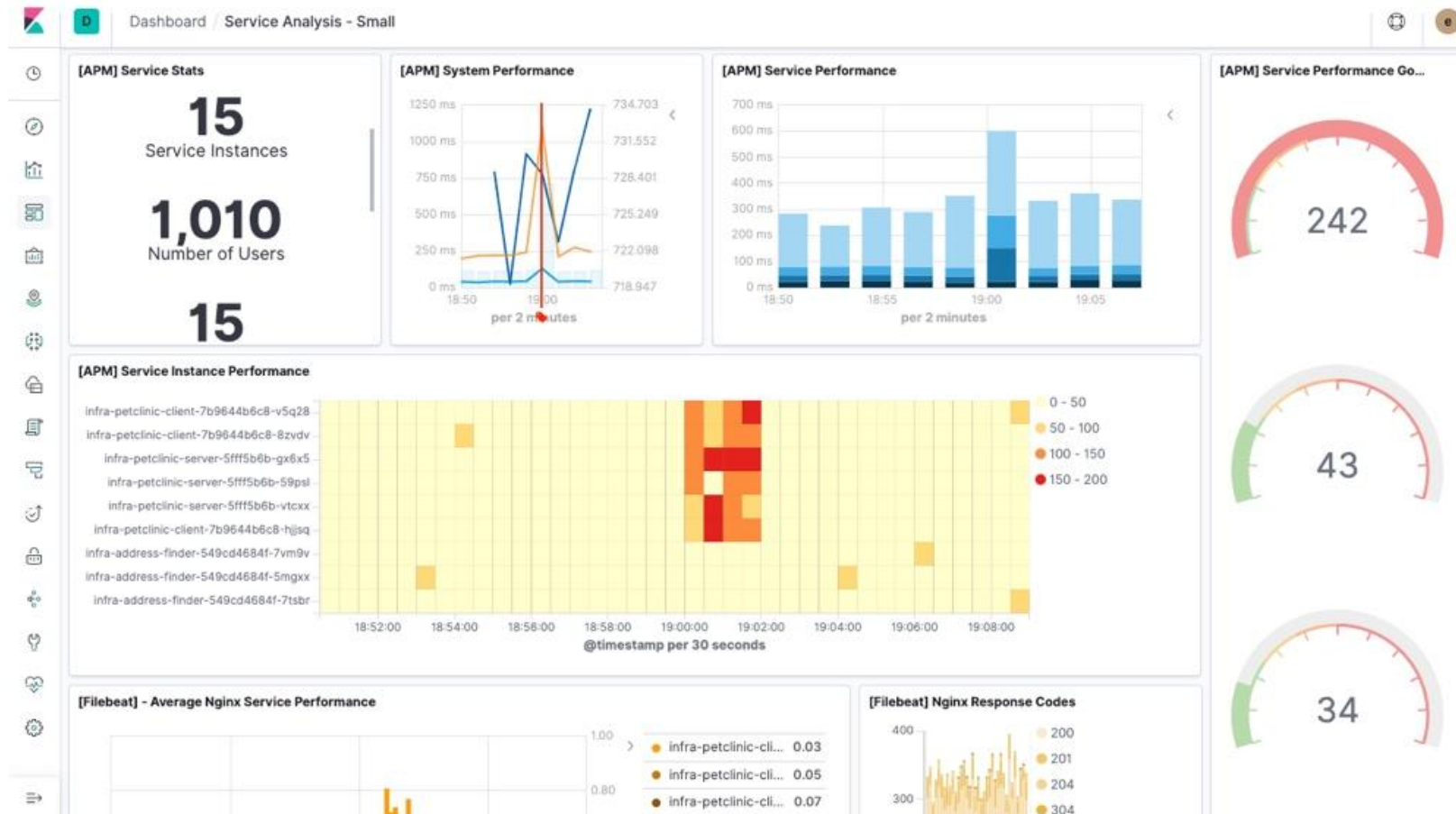


Requests per minute



Name	Avg. duration	95th percentile	Trans. per minute	Impact ↓
<a href="#">Api::V2::HostsController#facts</a>	1,631 ms	3,031 ms	33.5 tpm	<div style="width: 33.5%;"></div>
<a href="#">Katello::Api::Rhsm::CandlepinProxiesController#facts</a>	790 ms	1,288 ms	30.7 tpm	<div style="width: 30.7%;"></div>
<a href="#">Katello::Api::Rhsm::CandlepinProxiesController#get</a>	51 ms	100 ms	291.1 tpm	<div style="width: 291.1%;"></div>
<a href="#">HostsController#externalNodes</a>	253 ms	418 ms	53.9 tpm	<div style="width: 53.9%;"></div>
<a href="#">Api::V2::ConfigReportsController#create</a>	435 ms	1,277 ms	25.7 tpm	<div style="width: 25.7%;"></div>
<a href="#">Katello::Api::Rhsm::CandlepinProxiesController#consumer_show</a>	116 ms	171 ms	72.3 tpm	<div style="width: 72.3%;"></div>
<a href="#">Katello::Api::Rhsm::CandlepinProxiesController#serials</a>	64 ms	139 ms	101.5 tpm	<div style="width: 101.5%;"></div>
<a href="#">Katello::Api::Rhsm::CandlepinProxiesController#server_status</a>	36 ms	69 ms	128.1 tpm	<div style="width: 128.1%;"></div>
<a href="#">Api::V2::ExternalUsergroupsController#index</a>	116 ms	174 ms	25.5 tpm	<div style="width: 25.5%;"></div>

# Elastic APM



# Part 2

Infrastructure

# Infrastructure Monitoring

# Infrastructure Monitoring

- Why do we monitor ?
- What do we monitor ?

# Infrastructure Monitoring

- Memory usage
- Network throughput
- CPU Usage
- Disk Usage
- ...

# Infrastructure Monitoring (Problem)

- With Monitoring

- T0: Problem
- T+1: Client confused
- T+10: Client still tries
- T+20: Client writes mail
- T+30: Service Desk contacts client
- T+X: Problem confirmed
- T+X+Y: Problem taken care of

- With Monitoring

- T0: Problem
- T0: Mail/Slack to Devs
- T+1: Bug taken care of

# Infrastructure Monitoring

- Nagios
- Zabbix
- SolarWinds
- Icinga
- Splunk
- Datadog

# Infrastructure Monitoring

- Nagios

The screenshot displays the Nagios XI monitoring dashboard. The interface includes a navigation menu on the left, a main content area with several summary tables and a graph, and a footer with version and copyright information.

**Host Status Summary**

Up	Down	Unreachable	Pending
85	0	3	0
Unhandled		Problems	All
64		64	117

Last Updated: 2017-10-05 16:06:57

**Service Status Summary**

Ok	Warning	Unknown	Critical	Pending
228	12	84	20	2
Unhandled		Problems	All	
366		367	595	

Last Updated: 2017-10-05 16:06:57

**Hostgroup Status Summary**

Host Group	Hosts	Services
All EMC SAN Hosts (all_emc_hosts)	1 Up	4 OK 1 Critical
Firewalls (firewalls)	1 Up	1 OK
Host Deadpool (host-deadpool)	3 Up 1 Down 1 Unreachable	8 OK 1 Warning 1 Critical
Linux Servers (linux-servers)	3 Up	52 OK 3 Warning 5 Unknown 4 Critical
new group (new group)	4 Up 3 Down 2 Unreachable	58 OK 3 Warning 9 Unknown 15 Critical
Printers (printers)	1 Up 2 Unreachable	2 OK 1 Critical
Websites (websites)	3 Up	20 OK 2 Warning 1 Critical
Windows Servers (windows-servers)	1 Down	4 Critical

Last Updated: 2017-10-05 16:06:57

**Top Alert Producers Last 24 Hours**

Alert Producer	Count
Port-24-Gigabit---Level Bandwidth Switch 1	22
Port--1-Gigabit---Level Bandwidth Switch 1	21
Port-23-Gigabit---Level Bandwidth 192.168.5.41	18
Port-15-Gigabit---Level Bandwidth exchange.nagios.org	14
Port 1 Bandwidth vs1.nagios.com	13
Users Switch 1	12
Port-23-Gigabit---Level Bandwidth 192.168.5.41	11
Port 1 Bandwidth Switch 1	10
Port-15-Gigabit---Level Bandwidth exchange.nagios.org	7
Memory Usage exchange.nagios.org	7
Total Processes exchange.nagios.org	7

**Metrics Overview**

**Disk Usage**

Host	Service	% Utilization	Details
localhost	Root Partition	78.67%	DISK WARNING - free space: / 1207 MB (17% inode=68%):
vs1.nagios.com	/ Disk Usage	37.30%	DISK OK - free space: / 117214 MB (61% inode=99%):
exchange.nagios.org	/ Disk Usage	13.22%	DISK OK - free space: / 68067 MB (86% inode=97%):

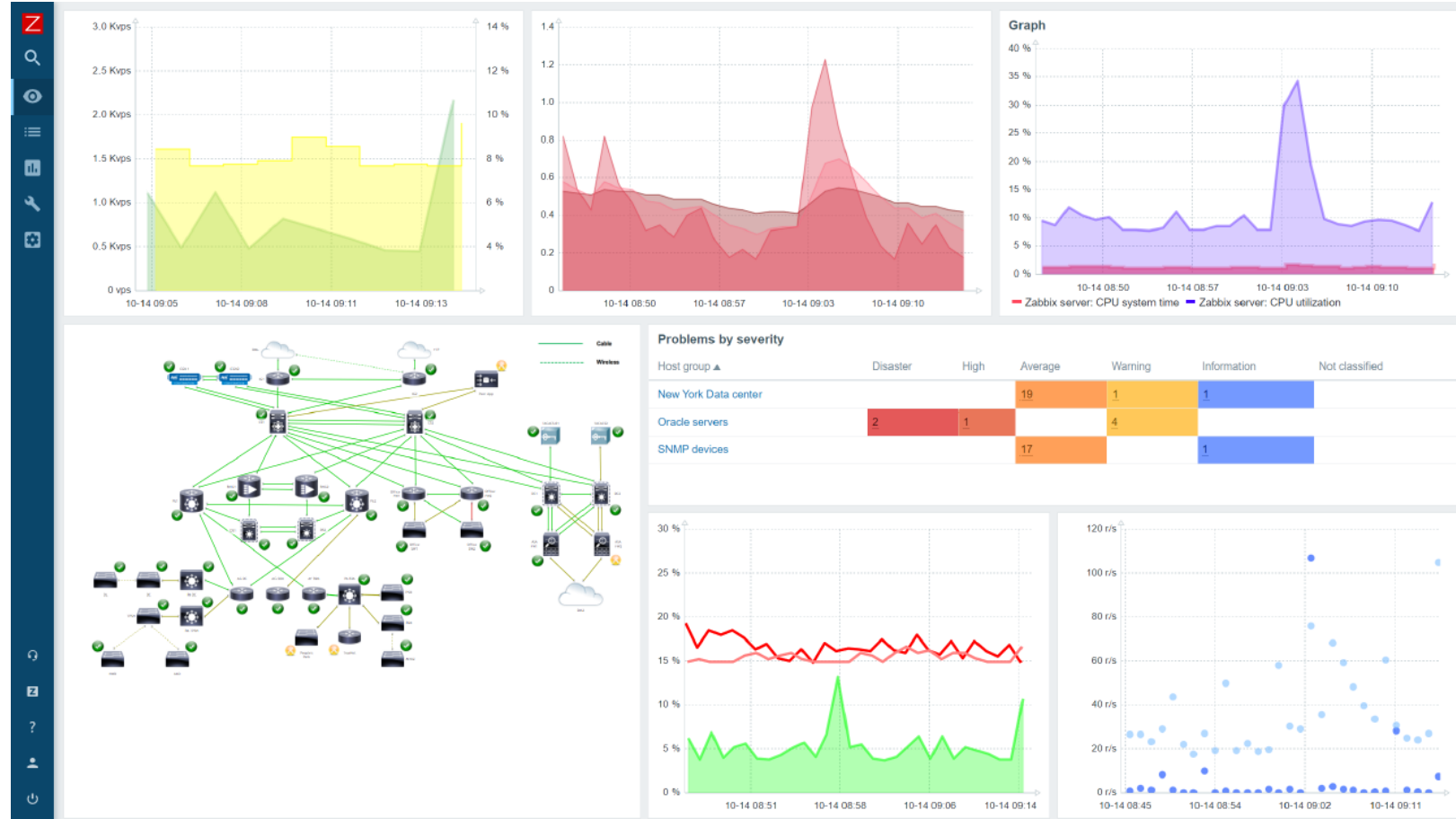
Last Updated: 2017-10-05 16:06:58

**Nagios XI 5.4.10** • [Check for Updates](#)

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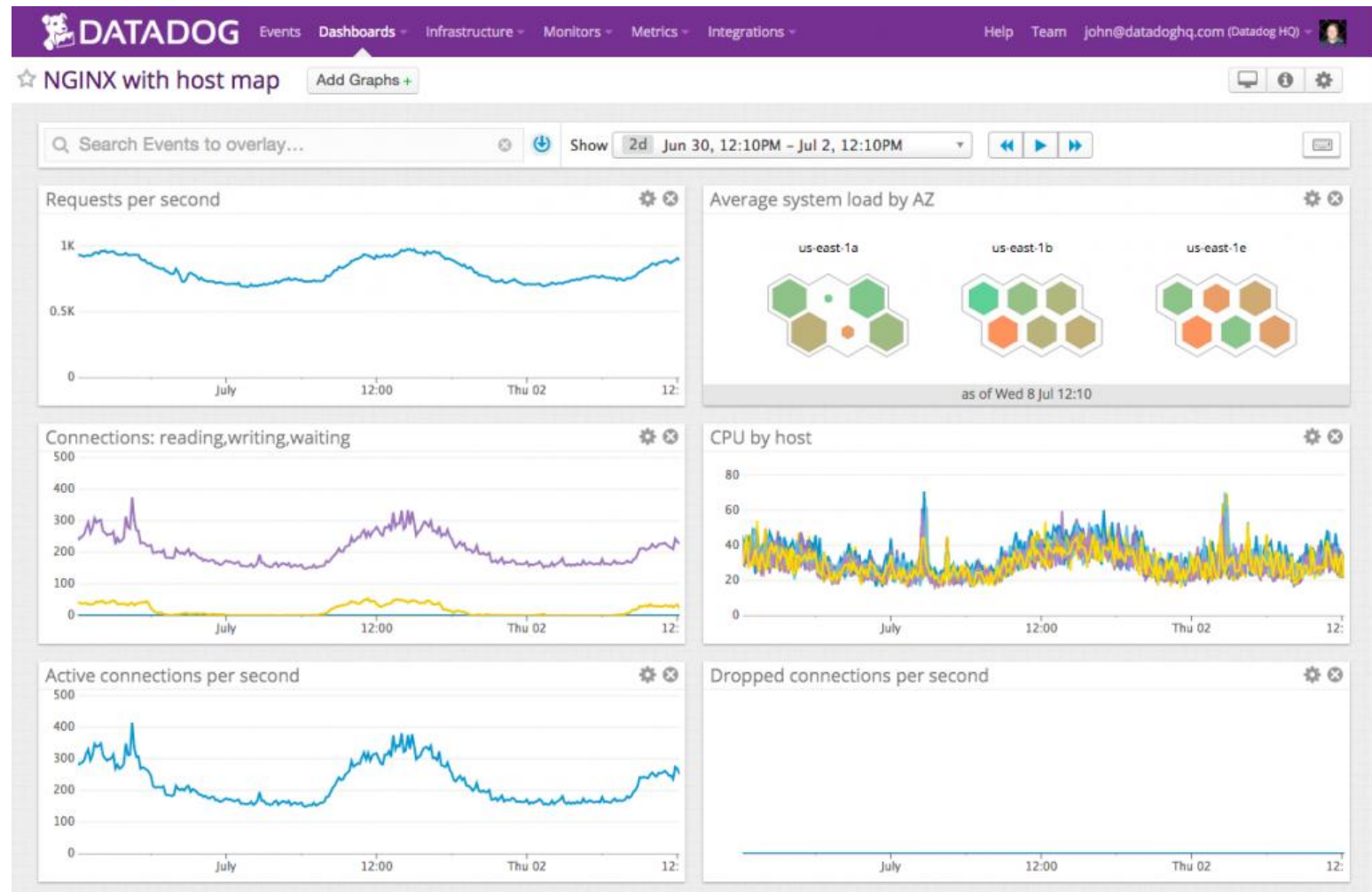
# Infrastructure Monitoring

- Zabbix



# Infrastructure Monitoring

- Datadog



# Infrastructure Monitoring

- Splunk

