

“Having New Eyes”


The Power of Application
Observability

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Agenda



- Please define Observability
- The 'before times'
- Observability+
- Prerequisites

Marco Coulter

Technical Evangelist

@marcocoulter

Marco Coulter is passionate about the experience that humans have when interacting with technology. A former startup CTO, Marco led the data science organization at 451 Research; managed global engineering and operations organizations at several major banks and hospitals. He earned him the nickname "tech-whisperer" for his skills in translating business drivers for techies and technical concepts for business leaders. When taking the rare break from technology, Marco can be found harvesting fresh vegetables from his apartment garden.

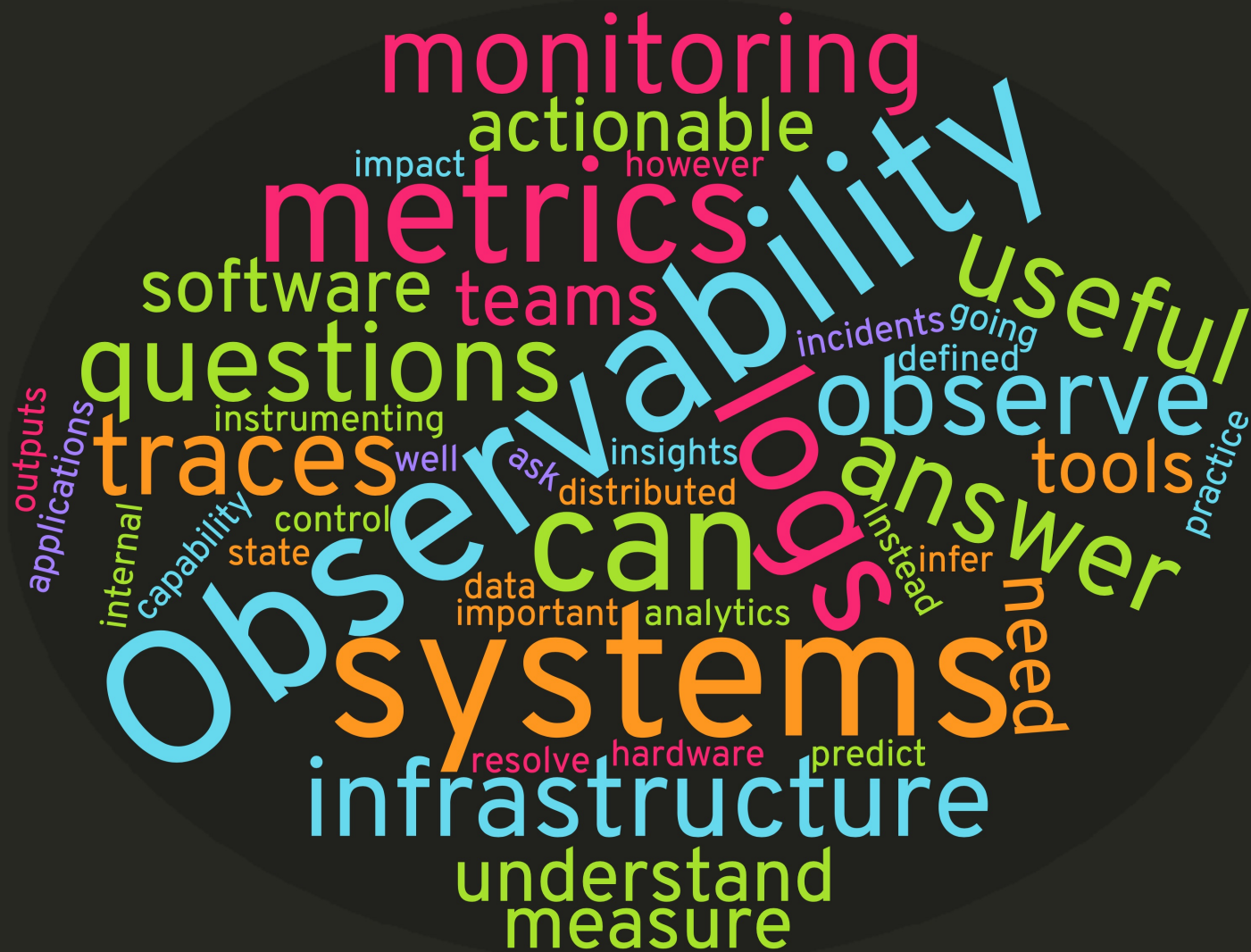
Defining observability

Ummmm. ...

A word cloud featuring various technology and observability-related terms. The words are arranged in a roughly circular pattern, with some words appearing more prominently than others. The colors of the words include orange, pink, light blue, green, and cyan.

splunk
sumologic
Technologies
bmc
New-Relic
Observability
Need
Lightstep
StackState
honeycomb
newstack
VMWare
AppDynamics
Twitter





Observability
can
metrics
ops
systems
performance
monitoring

What does this code do ... ?

The 'before times'

The Dev vs Ops wars

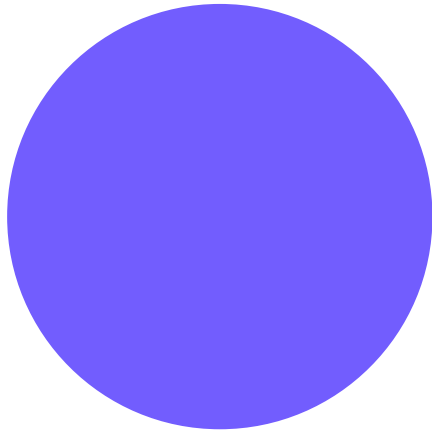


App Man Adventures - www.appdynamics.com © 2011

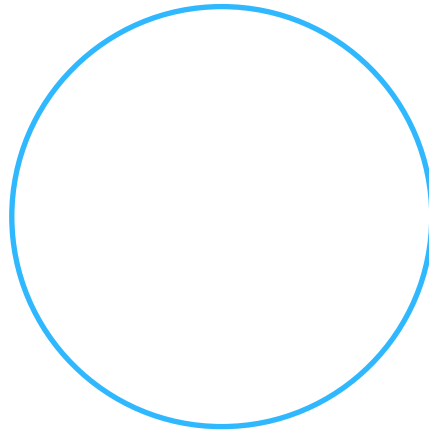
DAYS

[illegible]

“In the before time ...”

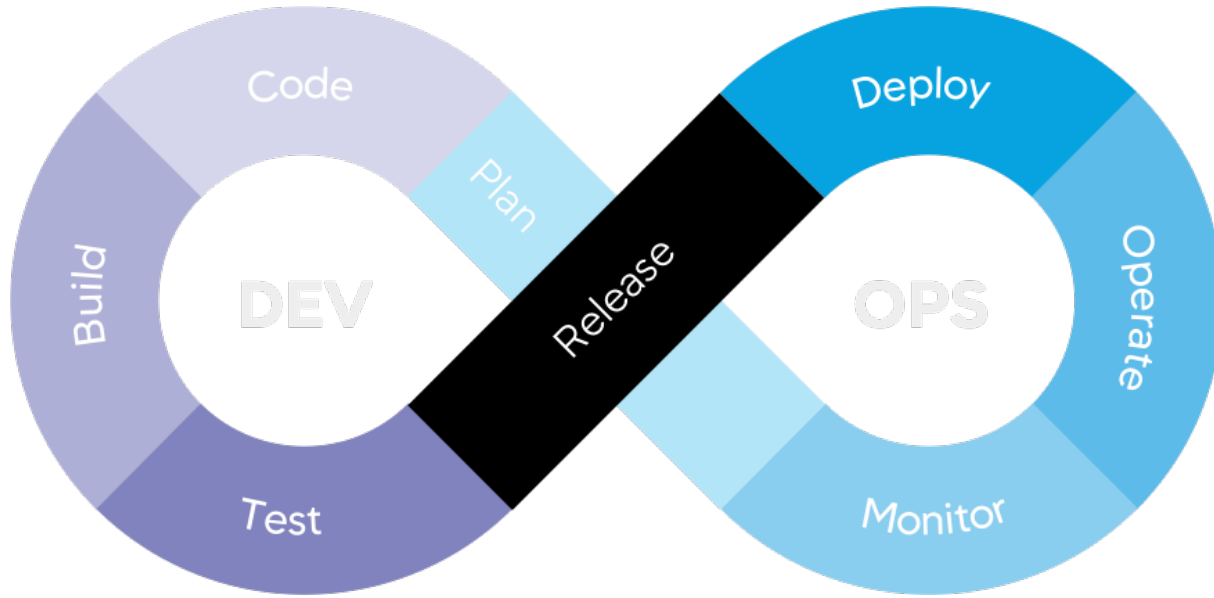


Monitoring



Observability

DevOps is born



Monitoring evolves



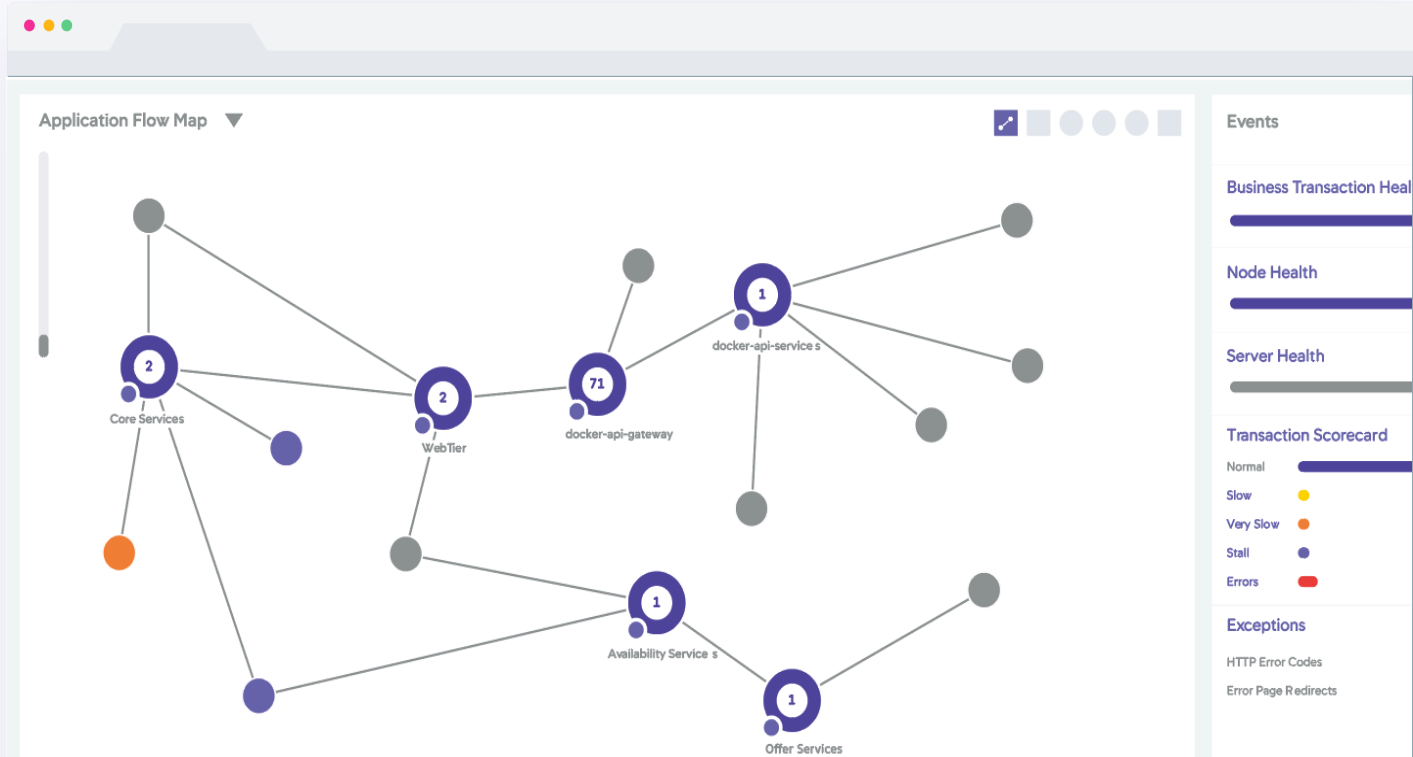
Decentralized code

New York data centers:

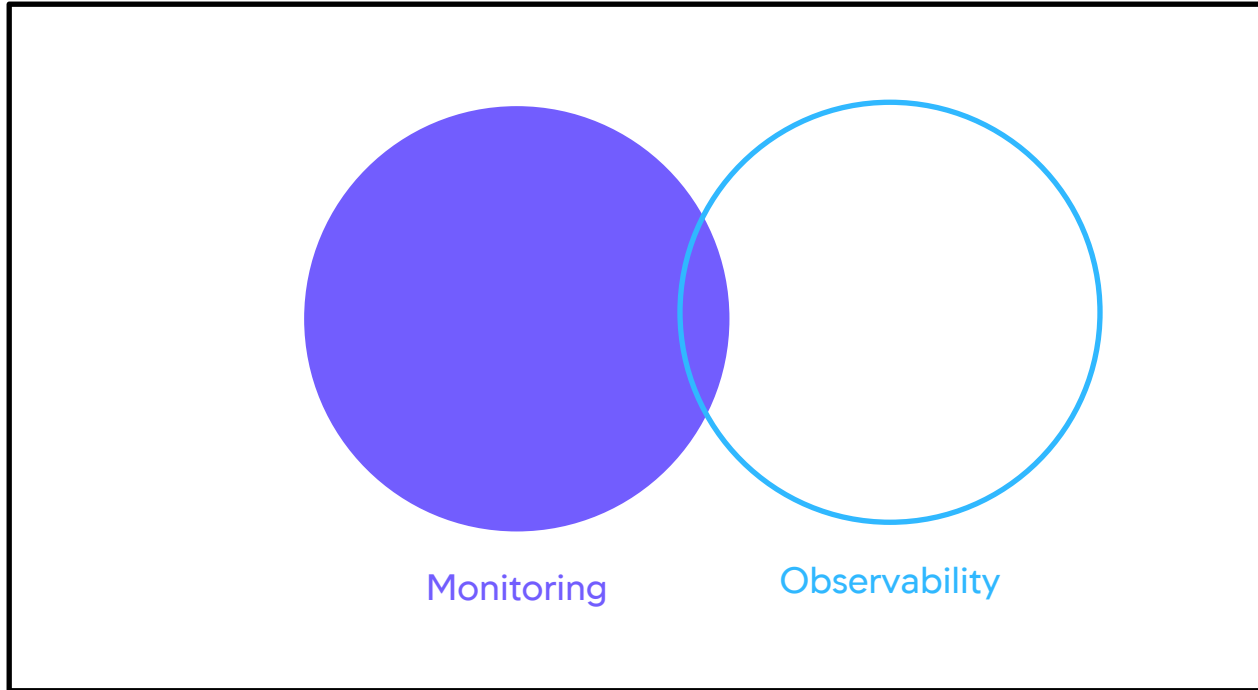


Server name	Role
NYCFE01	Enterprise Edition Front End server
NYCFE02	Enterprise Edition Front End server
NYCFE03	Enterprise Edition Front End server
NYCBE01	Enterprise Edition Back End server
NYCBE02	Enterprise Edition Back End server
NYCBE03	Enterprise Edition Back End witness server
NYCOWAS01	Office Web Apps server
NYCOWAS02	Office Web Apps server
NYCEDGE01	Edge Server
NYCEDGE02	Edge Server

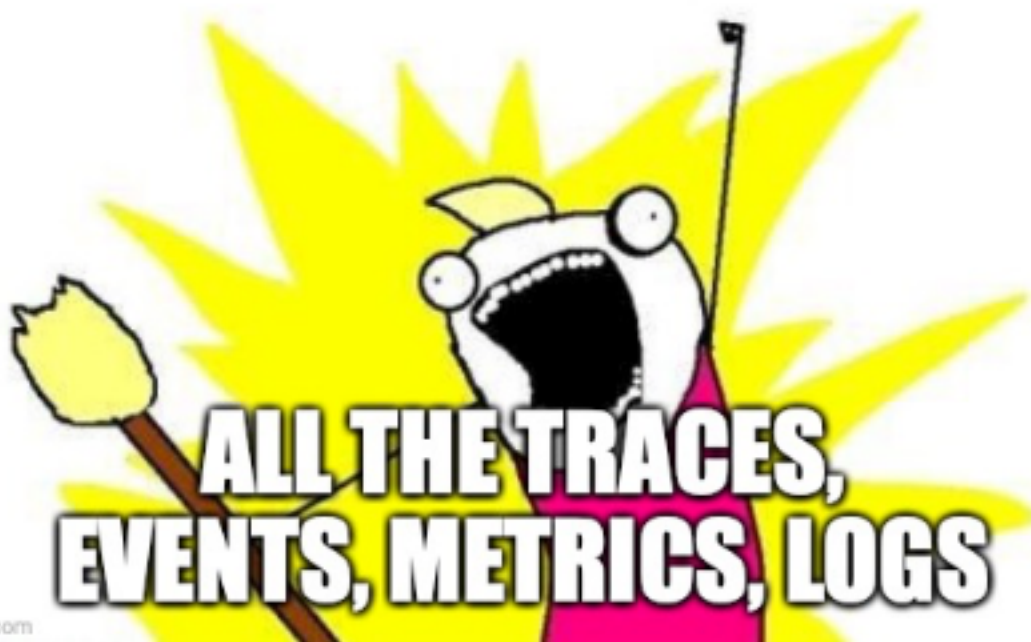
What does this code do ... to infrastructure?



“... a little better all the time ...”



KEEP



imgflip.com

Summary

User Experience: Very Slow

Execution Time
26.4 s

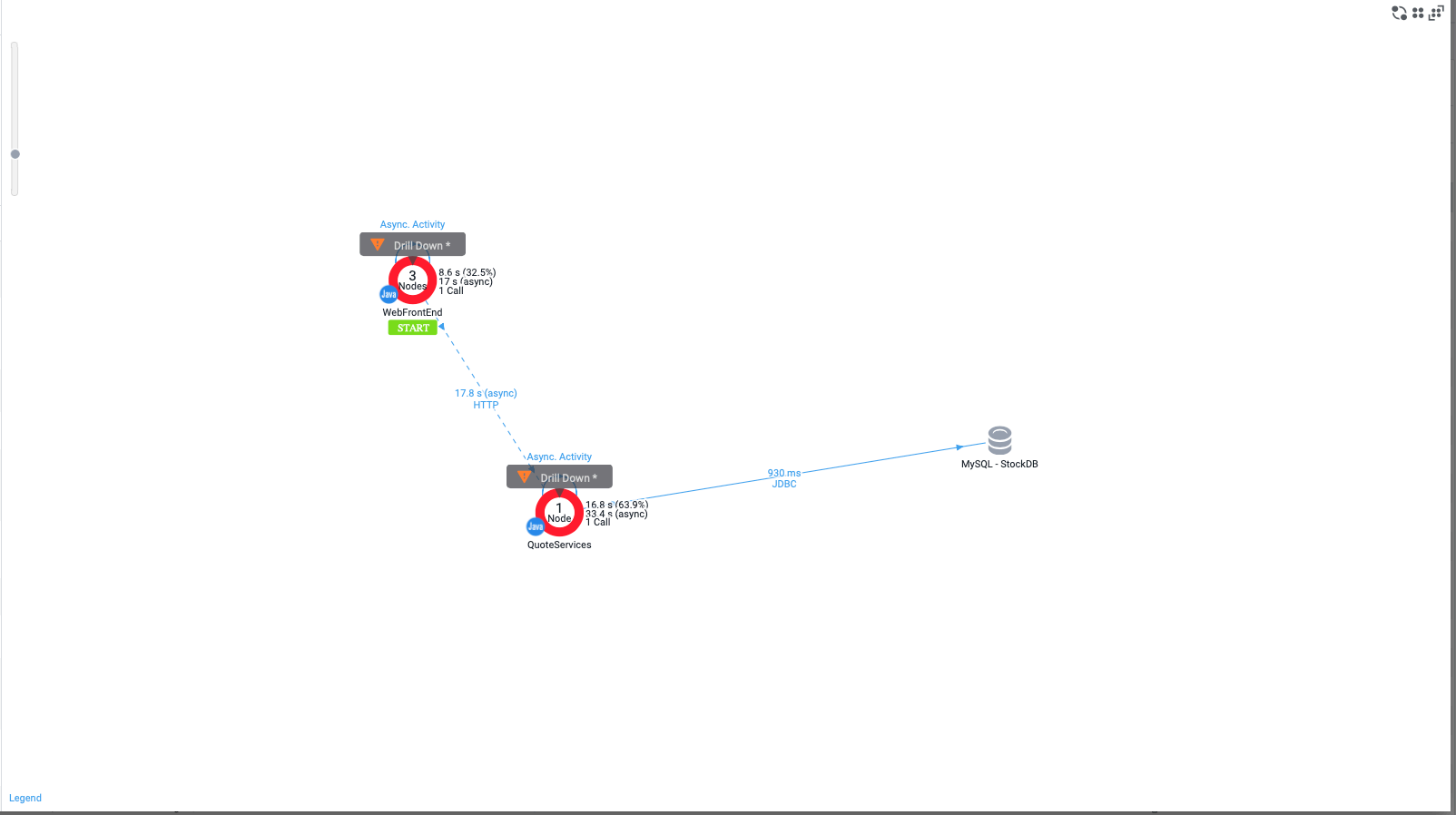
Timestamp
07/30/20 12:08:22 PM

Business Transaction
[Get Quote](#)

More Details >

Potential Issues

com.appdynamics.sample.service.BaseService.makeWebRequest	17.8 s
http://quoteServices:8080/rest/quoteServices/getStockQuote/ABC?speed=slow&traffic=heavy	17.8 s
java.util.concurrent.locks.LockSupport.parkNanos	16.7 s
java.lang.Object.wait	16.7 s
Thread Contention - Blocked on java.util.concurrent.locks.ReentrantReadWriteLock\$NonfairSync@4e82847	16.7 s
com.appdynamics.sample.service.BackgroundWorker\$Worker.cryptolock	16.4 s
java.lang.Object.wait	8.5 s
java.util.concurrent.locks.LockSupport.parkNanos	8.5 s
Thread Contention - Blocked on java.util.concurrent.locks.ReentrantReadWriteLock\$NonfairSync@28c5d61...	8.5 s
com.appdynamics.sample.service.BackgroundWorker\$Worker.cryptolock	7.8 s
Query=Select * From Stock Wh	930 ms



HomeApplicationsUser ExperienceDatabasesServersAnalyticsDashboards & ReportsAlert & Respond

Transaction: f1e492ee-5d6a-4f80-b62c-e4402cd6eb6026,366 ms - WebFrontEnd

🔍 ⌵

OverviewCall GraphSlow Calls & ErrorsDB & Remote Service CallsServerNetworkMore

Actions ⌵

Execution Time26.4 sWait Time8.5 sBlock Time0 msNodeWebFrontEndNode-2Timestamp07/30/20 12:08:22 PM

Snapshot call graph contains CPU times - This is a Hotspot call graph

👁️🔍📄🔄📤

DetailsFiltersSet RootReset RootExport

🔍

Showing 12 of 12

Name	Time (ms)	Percent %	Thread State	Exit Calls / Thread...	S...
org.jboss.resteasy.plugins.server.servlet.HttpServletDispatcher.service	6 ms (self)	0%			
com.appdynamics.sample.service.WebFrontEnd\$Proxy\$_\$\$_WeldClientProxy.getQuote	0 ms (self)	0%			
com.appdynamics.sample.service.WebFrontEnd.getQuote:169	0 ms (self)	0%			
com.appdynamics.sample.service.BaseService.processCustomerRequest:48	0 ms (self)	0%			
com.appdynamics.sample.service.BaseService.processCustomerRequest:85	0 ms (self)	0%			
com.appdynamics.sample.service.BackgroundWorker.doBackgroundWork:108	0 ms (self)	0%			
com.appdynamics.sample.service.BackgroundWorker.doWorkBackground:86	0 ms (self)	0%			
Constructor of com.appdynamics.sample.service.BackgroundWorker\$Worker:18	69 ms (self)	0.3%			Async. Activity (2)
java.lang.Thread.join:1326	0 ms (self)	0%			
java.lang.Thread.join:1252	0 ms (self)	0%			
java.lang.Object.wait	8,505 ms (s...	32.3%			
com.appdynamics.sample.service.BaseService.makeWebRequest:97	17,785 ms (...)	67.5%			HTTP

Some packages have been excluded from this Call Graph

HomeApplicationsUser ExperienceDatabasesServersAnalyticsDashboards & ReportsAlert & Respond

Transaction: f1e492ee-5d6a-4f80-b62c-e4402cd6eb6026,366 ms - WebFrontEnd

OverviewCall GraphSlow Calls & ErrorsDB & Remote Service CallsServerNetworkMore

Execution Time 26.4 sWait Time 8.5 sBlock Time 0 msNode WebFrontEndNode-2Timestamp 07/30/20 12:08:22 PMSnapshot call graph contains CPU times - This is a Hotspot call graph

DetailsFiltersSet RootReset RootExport

Showing 12 of 12

org.jboss.resteasy.plugins.server.servlet.HttpServletDispatcher.service

com.appdynamics.sample.service.WebFrontEnd\$Proxy\$.\$\$_WeldClientProxy.getQuote

com.appdynamics.sample.service.WebFrontEnd.getQuote:169

com.appdynamics.sample.service.BaseService.processCustomerRequest:48

com.appdynamics.sample.service.BaseService.processCustomerRequest:85

com.appdynamics.sample.service.BackgroundWorker.doBackgroundWork:108

com.appdynamics.sample.service.BackgroundWorker.doWorkBackground:86

Constructor of com.appdynamics.sample.service.BackgroundWorker\$Worker:18

java.lang.Thread.join:1326

java.lang.Thread.join:1252

java.lang.Object.wait

com.appdynamics.sample.service.BaseService.makeWebRequest:97

makeWebRequest:97

Name

Type

Class

Method

Line Number

com.appdynamics.sample.service.BaseService.makeWebRequest

POJO

com.appdynamics.sample.service.BaseService

makeWebRequest

97

Self Time 17,785ms

67.5%

Total Time 17,785ms

67.5%

Details: Block: 0 ms, Wait: 0 ms

Exit Calls

Type	Details	Count	Time (ms)	% Time	From	To
HTTP	http://quoteServices:8080/rest/quoteService...	1	17784	67.5%	WebFrontE...	QuoteServi...

HTTP Exit Call

Time 17,784ms

From WebFrontEnd

To QuoteServices

Details http://quoteServices:8080/rest/quoteServices/getStockQuote/ABC?speed=slow&traffic=heavy

Properties

Start Time 1596125663575

Drill Down into Downstream Call

Name	Time (ms)	Percent %	Thread State	Exit Calls / Thread...	S...
org.jboss.resteasy.plugins.server.servlet.HttpServletDispatcher.service	6 ms (self)	0%			
com.appdynamics.sample.service.WebFrontEnd\$Proxy\$.\$\$_WeldClientProxy.getQuote	0 ms (self)	0%			
com.appdynamics.sample.service.WebFrontEnd.getQuote:169	0 ms (self)	0%			
com.appdynamics.sample.service.BaseService.processCustomerRequest:48	0 ms (self)	0%			
com.appdynamics.sample.service.BaseService.processCustomerRequest:85	0 ms (self)	0%			
com.appdynamics.sample.service.BackgroundWorker.doBackgroundWork:108	0 ms (self)	0%			
com.appdynamics.sample.service.BackgroundWorker.doWorkBackground:86	0 ms (self)	0%			
Constructor of com.appdynamics.sample.service.BackgroundWorker\$Worker:18	0 ms (self)	0%			
java.lang.Thread.join:1326	69 ms (self)	0.3%			Async. Activity (2)
java.lang.Thread.join:1252	0 ms (self)	0%			
java.lang.Object.wait	0 ms (self)	0%			
com.appdynamics.sample.service.BaseService.makeWebRequest:97	8,505 ms (s...	32.3%			
	17,785 ms (...)	67.5%			HTTP

Some packages have been excluded from this Call Graph

Get Quote - AppDynamics

HomeApplicationsUser ExperienceDatabasesServersAnalyticsDashboards & ReportsAlert & Respond

Transaction: f1e492ee-5d6a-4f80-b62c-e4402cd6eb6026,366 ms - WebFrontEnd17,777 ms - QuoteServic...

OverviewCall GraphSlow Calls & ErrorsDB & Remote Service CallsServerNetworkMore

Execution Time17.8 sWait Time16.7 sBlock Time0 msNodeQuoteServicesNodeTimestamp07/30/20 12:08:30 PMSnapshot call graph contains CPU times - This is a Hotspot call graph

DetailsFiltersSet RootReset RootExport

Showing 12 of 12

Name	Time (ms)	Percent %	Thread State	Exit Calls / Thread...	S...
org.jboss.resteasy.plugins.server.servlet.HttpServletDispatcher.service	105 ms (self)	0.6%			
com.appdynamics.sample.service.QuoteServices\$Proxy\$_\$\$_WeldClientProxy.getStockQuote	0 ms (self)	0%			
com.appdynamics.sample.service.QuoteServices.getStockQuote:57	0 ms (self)	0%			
com.appdynamics.sample.service.BaseService.processCustomerRequest:85	0 ms (self)	0%			
com.appdynamics.sample.service.BackgroundWorker.doBackgroundWork:108	0 ms (self)	0%			
com.appdynamics.sample.service.BackgroundWorker.doWorkBackground:86	0 ms (self)	0%			
Constructor of com.appdynamics.sample.service.BackgroundWorker\$Worker:18	27 ms (self)	0.2%			Async. Activity (2)
java.lang.Thread.join:1326	0 ms (self)	0%			
java.lang.Thread.join:1252	0 ms (self)	0%			
java.lang.Object.wait	16,715 ms (...)	94%			
com.appdynamics.sample.service.BaseService.queryDB:44	0 ms (self)	0%			
com.appdynamics.sample.service.MySQLConnection.queryDB:32	930 ms (self)	5.2%			JDBC

Some packages have been excluded from this Call Graph

HomeApplicationsUser ExperienceDatabasesServersAnalyticsDashboards & ReportsAlert & Respond

Transaction: f1e492ee-5d6a-4f80-b62c-e4402cd6eb6026,366 ms - WebFrontEnd17,777 ms - QuoteService...

OverviewCall GraphSlow Calls & ErrorsDB & Remote Service CallsServerNetworkMore

Execution Time17.8 sWait Time16.7 sBlock Time0 msNodeQuoteServicesNodeTimestamp07/30/20 12:08:30 PMSnapshot call graph contains CPU times - This is a Hotspot call graph

DetailsFiltersSet RootReset RootExport

Showing 12 of 12

org.jboss.resteasy.plugins.server.servlet.HttpServletDispatcher.service

com.appdynamics.sample.service.QuoteServices\$Proxy\$\$\$_WeldClientProxy.getStockQuote

com.appdynamics.sample.service.QuoteServices.getStockQuote:57

com.appdynamics.sample.service.BaseService.processCustomerRequest:85

com.appdynamics.sample.service.BackgroundWorker.doBackgroundWork:108

com.appdynamics.sample.service.BackgroundWorker.doWorkBackground:86

Constructor of com.appdynamics.sample.service.BackgroundWorker\$Worker:18

java.lang.Thread.join:1326

java.lang.Thread.join:1252

java.lang.Object.wait

com.appdynamics.sample.service.BaseService.queryDB:44

com.appdynamics.sample.service.MySQLConnection.queryDB:32

queryDB:32

Namecom.appdynamics.sample.service.MySQLConnection:queryDB

TypePOJO

Classcom.appdynamics.sample.service.MySQLConnection

MethodqueryDB

Line Number32

Self Time930ms

Total Time930ms

DetailsBlock: 0 ms, Wait: 0 ms

Exit Calls

Type	Details	Count	Time (ms)	% Time	From	To
JDBC	Query=Select * From Stock Where ID = ?	1	930	5.2%	QuoteServ...	MySQL - St...

JDBC Exit Call

Time930ms

FromQuoteServices

ToMySQL - StockDB

DetailsQuery=Select * From Stock Where ID = ?

Properties

Start Time1596125680425

QuerySelect * From Stock Where ID = ?

Time (ms)

Percent %

Thread State

Exit Calls / Thread...

S...

105 ms (self)0.6%

0 ms (self)0%

0 ms (self)0%

0 ms (self)0%

0 ms (self)0%

0 ms (self)0%

0 ms (self)0%

27 ms (self)0.2%Async Activity (2)

0 ms (self)0%

0 ms (self)0%

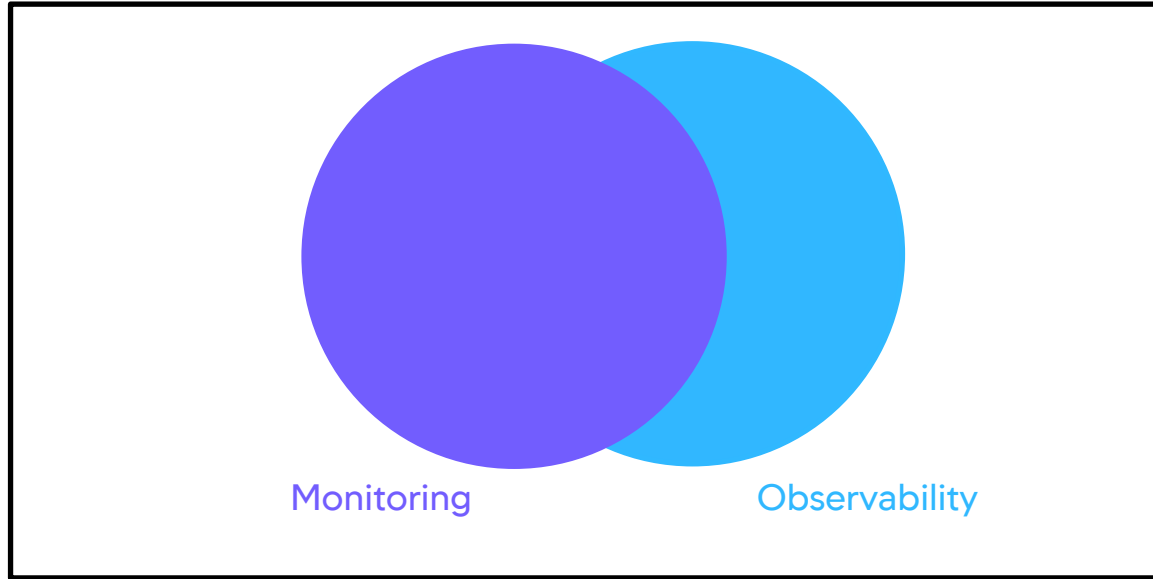
16,715 ms (...)94%

0 ms (self)0%

930 ms (self)5.2%JDBC

Some packages have been excluded from this Call Graph

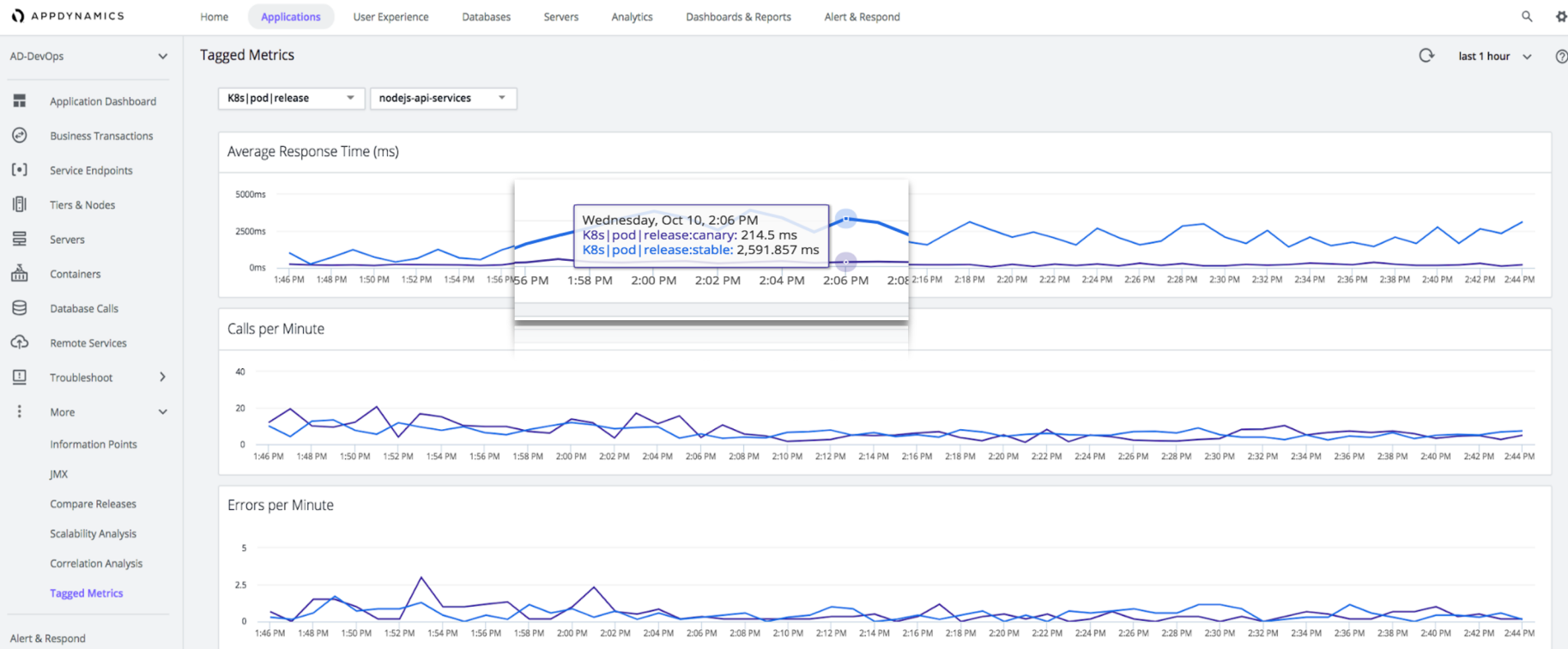
‘ ... getting closer ... ’



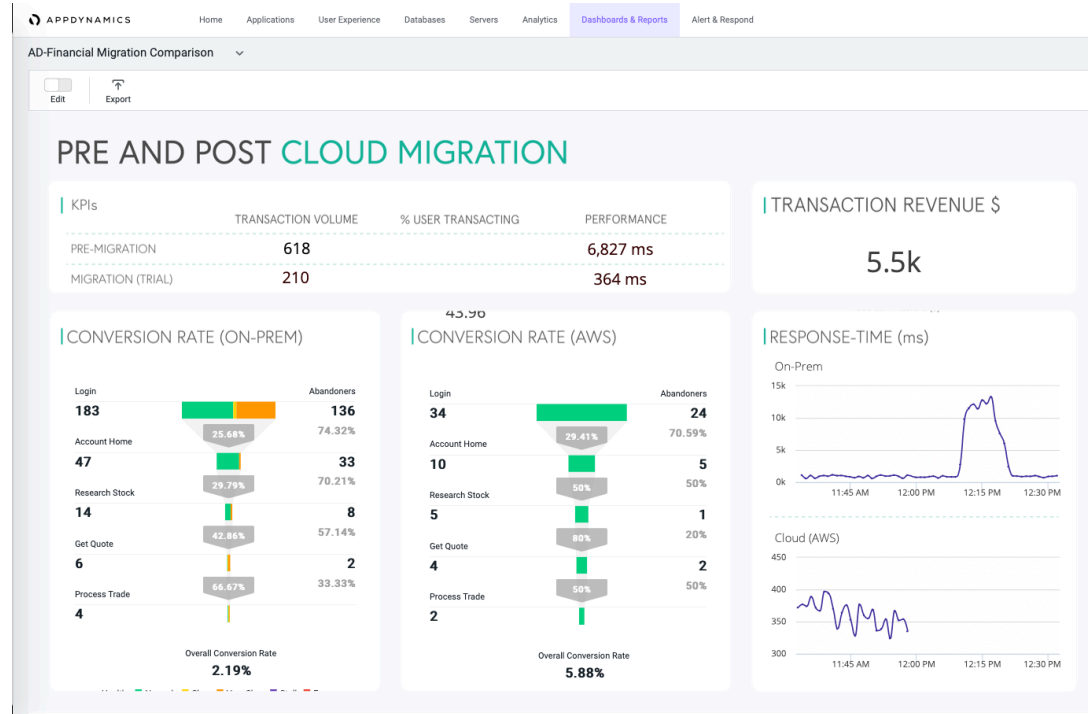
**Observability
Supports
Diagnosis**

**Insight
Supports
Resolution**

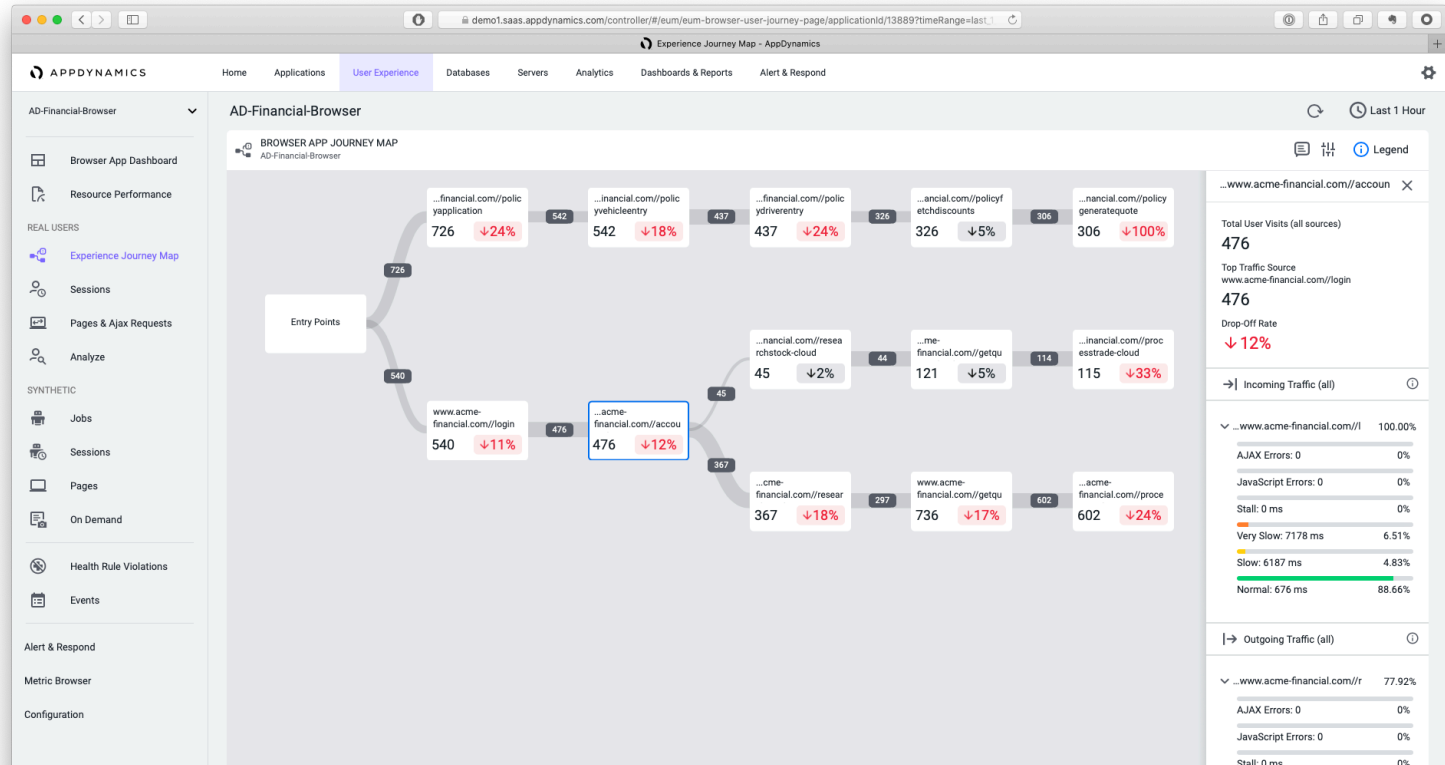
What does this code do ... differently from the last version?'



What does this code do ... across architectures?



What does this code do ... for users?



What does this code do ... now?

The screenshot displays the AppDynamics IDE interface. The central editor shows the `CreditCheck.java` file with the following code:

```
// CHECK FICO SCORE
getFICOScore();

// Decide
if (score < 650)
    approve = false;

double adjustedAmount = this.currentApplication.getAmount();

// offer platinum members more money based on their credit score
if (currentCustomer != null && currentCustomer.getLevel() == "Platinum"){
    long coeff = MAX_SCORE-currentCustomer.getCreditScore()/MAX_SCORE;
    double adjustment = this.currentApplication.getAmount()/coeff;
    adjustedAmount += adjustment;
}

// Update Status
updateApplicationStatus(approve);

message = "Customer ID: " + customerid + " FICO Score: " + score + " Approved: " + approve
}

response.setContentType("text/html");
response.setHeader("Access-Control-Allow-Origin", "*");
PrintWriter out = response.getWriter();
log.info("Credit Check: " + message);

out.println(message);
out.flush();
} catch (Exception e) {
    log.error(e.getMessage());
    StringWriter writer = new StringWriter();
    PrintWriter pw = new PrintWriter(writer);
    e.printStackTrace(pw);
    log.error(writer.toString());
}
```

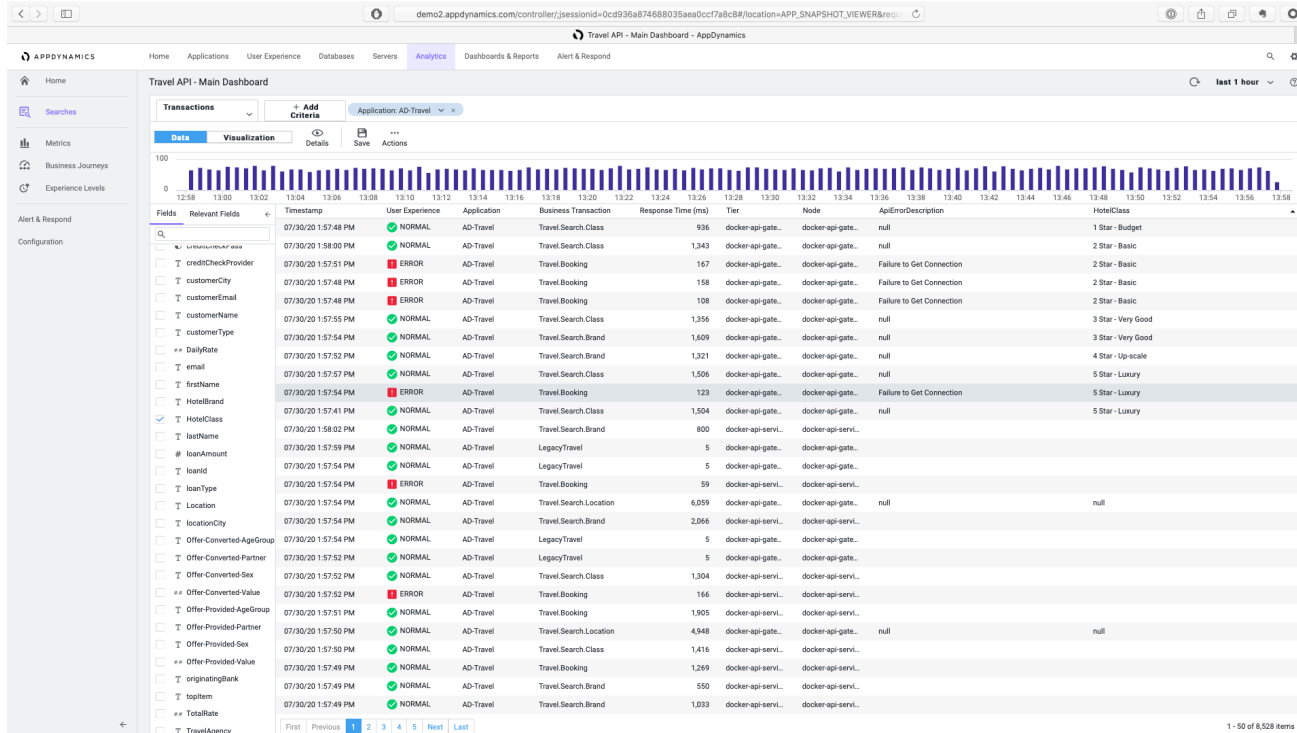
The right-hand pane shows the execution logs for `CreditCheck.java` at line 67. The logs indicate that the code was hit on the processor at 03:30:41 PM. The message data shows the following values:

- `adjustedAmount`: 75000
- `approve`: false
- `coeff`: 0
- `currentCustomer`: (Customer) {creditScore: 772, found = true}
- `message`: "No application found for credit approval"
- `request`: (RequestFacade) (request: Request)
- `response`: (ResponseFacade) (response: Response)
- `this`: (CreditCheck) {applicationId: "0003fe51-7..."}

The bottom pane shows the messages log, which includes the following entry:

Timestamp	Breakpoint	Hostname	Data
03:34:14:291 PM	CreditCheck.java : 67	processor	CreditCheck.java@67 was hit on processor

What does this code do ... for our business?



demo2.appdynamics.com/controller/jsessionId=0cd936a874688035aea0ccf7a8c8#/location=APP_SNAPSHOT_VIEWER&requ

Travel API - Main Dashboard - AppDynamics

APPDYNAMICS

HomeApplicationsUser ExperienceDatabasesServersAnalyticsDashboards & ReportsAlert & Respond

Transaction: 35cafe49-64d3-42fe-be48-38be9177ca661115 ms - docker-api-s...

OverviewCall GraphSlow Calls & ErrorsDB & Remote Service CallsServerNetworkMore

Execution Time 114 msWait Time 0 msBlock Time 0 msNode docker-api-services-n1Timestamp 07/30/20 1:57:54 PM

DetailsFiltersSet RootReset RootExport

Showing 5 of 5

Name	Time (ms)	Percent %	Thread State	Exit Calls / Thre...	S...
org.jboss.resteasy.plugins.server.servlet.HttpServletDispatcher.service	4 ms (self)	3.5%			
com.appdynamics.sample.service.BookingReservation\$Proxy\$\$_WeldClientProxy.bookProperty	0 ms (self)	0%			
com.appdynamics.sample.service.BookingReservation.bookProperty:151	0 ms (self)	0%			
org.apache.http.impl.client.CloseableHttpClient.execute:57	0 ms (self)	0%			
org.apache.http.impl.client.CloseableHttpClient.execute:82	110 ms (s...	96.5%		HTTP	

execute:82

Nameorg.apache.http.impl.client.CloseableHtpClient.execute

TypePOJO

Classorg.apache.http.impl.client.CloseableHtpClient

Methodexecute

Line Number82

Self Time 110ms96.5%

Total Time 110ms96.5%

Details Block: 0 ms, Wait: 0 ms

Exit Calls

Type	Details	Count	Time (ms)	% Time	From	To
HTTP	http://external-services-mock-9999/res...	1	108	94.7%	docker-a...	/reservati...

HTTP Exit Call

ErrorNoHttpResponseException: external-services-mock-9999 failed to respond

Time108ms

Fromdocker-api-services

To/reservation/book/fault

Detailshttp://external-services-mock-9999/reservation/book/fault

Properties

Start Time1596131874134

Some packages have been excluded from this Call Graph

Transaction: 35cafe49-64d3-42fe-be48-38be9177ca662345NextLast

1 - 50 of 8,528 items

Answers to unpredictable questions

Home

Applications

User Experience

Databases

Servers

Analytics

Dashboards & Reports

Alert & Respond

Home

Searches

Metrics

Business Journeys

Experience Levels

Alert & Respond

Configuration

New Search

Baseline...last 1 hour

BasicSearch

1 SELECT * FROM

transactions
logs
browser_records
mobile_snapshots
mobile_crash_reports
web_session_records
mobile_session_records
synth_session_records
iot_records
mobile_non_fatal_issue_records
loanapproval

DataVisActions

013:3213:3413:3613:3813:4013:4213:4413:4613:4813:5013:5213:5413:5613:5814:0014:0214:0414:0614:0814:1014:1214:1414:1614:1814:2014:2214:2414:2614:2814:3014:32

FieldsRelevant Fields

Q

Fields (14)
Unselect All

☒ T Application

☒ T Business Transaction

☐ T Error

☐ T Error Code

☐ T Error Detail

☐ T Error Type

☐ # Http Time (ms)

☐ # JMS Time (ms)

☒ T Node

☐ T requestGUID

☒ # Response Time (ms)

☒ T Tier

☒ T Timestamp

☒ T User Experience

Custom Method Data (37)
Unselect All

☐ T accountid

☐ T ApiErrorCode

☐ T ApiErrorDescription

☐ T BookingOfferCode

☐ T BookingOfferDescription

☐ # cartTotal

☐ creditCheckPass

☐ T creditCheckProvider

☐ T customerCity

Timestamp

User Experience

Application

Business Transaction

Response Time (ms)

Tier

Node

07/30/20 2:31:56 PM

ERROR

AD-Travel

Travel.Booking

140

docker-api-services

docker-api-services-n1

07/30/20 2:31:54 PM

ERROR

AD-Travel

Travel.Search.Class

445

docker-api-services

docker-api-services-n1

07/30/20 2:31:53 PM

ERROR

AD-Travel

Travel.Booking

101

docker-api-services

docker-api-services-n1

07/30/20 2:31:53 PM

ERROR

AD-Travel

Travel.Booking

100

docker-api-gateway

docker-api-gateway-n1

07/30/20 2:31:50 PM

ERROR

AD-Travel

Travel.Booking

54

docker-api-services

docker-api-services-n1

07/30/20 2:31:49 PM

ERROR

AD-Travel

Travel.Booking

137

docker-api-services

docker-api-services-n1

07/30/20 2:31:49 PM

ERROR

AD-Travel

Travel.Booking

116

docker-api-services

docker-api-services-n1

07/30/20 2:31:33 PM

ERROR

AD-Travel

Travel.Search.Class

515

docker-api-services

docker-api-services-n1

07/30/20 2:31:33 PM

ERROR

AD-Travel

Travel.Booking

142

docker-api-services

docker-api-services-n1

07/30/20 2:31:20 PM

ERROR

AD-Travel

Travel.Booking

99

docker-api-gateway

docker-api-gateway-n1

07/30/20 2:31:19 PM

ERROR

AD-Travel

Travel.Booking

109

docker-api-services

docker-api-services-n1

07/30/20 2:31:18 PM

ERROR

AD-Travel

Travel.Booking

121

docker-api-services

docker-api-services-n1

07/30/20 2:31:18 PM

ERROR

AD-Travel

Travel.Booking

210

docker-api-gateway

docker-api-gateway-n1

07/30/20 2:31:10 PM

ERROR

AD-Travel

Travel.Booking

122

docker-api-gateway

docker-api-gateway-n1

07/30/20 2:31:10 PM

ERROR

AD-Travel

Travel.Booking

151

docker-api-gateway

docker-api-gateway-n1

07/30/20 2:31:08 PM

ERROR

AD-Travel

Travel.Booking

84

docker-api-gateway

docker-api-gateway-n1

07/30/20 2:30:55 PM

ERROR

AD-Travel

Travel.Booking

136

docker-api-gateway

docker-api-gateway-n1

07/30/20 2:30:43 PM

ERROR

AD-Travel

Travel.Booking

156

docker-api-services

docker-api-services-n1

07/30/20 2:30:43 PM

ERROR

AD-Travel

Travel.Booking

145

docker-api-services

docker-api-services-n1

07/30/20 2:30:36 PM

ERROR

AD-Travel

Travel.Booking

142

docker-api-gateway

docker-api-gateway-n1

07/30/20 2:30:35 PM

ERROR

AD-Travel

Travel.Booking

126

docker-api-gateway

docker-api-gateway-n1

07/30/20 2:30:31 PM

ERROR

AD-Travel

Travel.Booking

212

docker-api-services

docker-api-services-n1

07/30/20 2:30:29 PM

ERROR

AD-Travel

Travel.Booking

128

docker-api-gateway

docker-api-gateway-n1

07/30/20 2:30:18 PM

ERROR

AD-Travel

Travel.Booking

145

docker-api-gateway

docker-api-gateway-n1

07/30/20 2:30:18 PM

ERROR

AD-Travel

Travel.Booking

137

docker-api-services

docker-api-services-n1

07/30/20 2:30:09 PM

ERROR

AD-Travel

Travel Search Class

439

docker-api-services

docker-api-services-n1

First

Previous

1

2

3

4

5

Next

Last

1 - 50 of 691 items

Home

Searches

Metrics

Business Journeys

Experience Levels

Alert & Respond

Configuration

demo2.appdynamics.com/controller/jsessionid=0cd936a874688035aea0ccf7a8c8#/location=ANALYTICS_ADQL_SEARCH&tr

New Search - AppDynamics

HomeApplicationsUser ExperienceDatabasesServersAnalyticsDashboards & ReportsAlert & Respond

New Search

Baseline...last 1 hour

1 SELECT * FROM transactions WHERE application = "AD-Travel" AND userExperience = "ERROR"

Search

DataVisualizationDetailsSaveActions

020

13:3213:3413:3613:3813:4013:4213:4413:4613:4813:5013:5213:5413:5613:5814:0014:0214:0414:0614:0814:1014:1214:1414:1614:1814:2014:2214:2414:2614:2814:3014:32

FieldsRelevant Fields

Fields (14)Unselect All

☒Application

☒Business Transaction

☐Error

☐Error Code

☐Error Detail

☐Error Type

☐# Http Time (ms)

☐# JMS Time (ms)

☒Node

☐requestGUID

☒# Response Time (ms)

☒Tier

☒Timestamp

☒User Experience

Custom Method Data (37)Unselect All

☐accountid

☐apiErrorCode

☐apiErrorDescription

☐bookingOfferCode

☐bookingOfferDescription

☐# cartTotal

☐creditCheckPass

☐creditCheckProvider

☐customerCity

Timestamp

User Experience

Application

Business Transaction

Response Time (ms)

Tier

Node

07/30/20 2:31:20 PM

ERROR

AD-Travel

Travel.Booking

99

docker-api-gateway

docker-api-gateway-n1

07/30/20 2:31:19 PM

ERROR

AD-Travel

Travel.Booking

109

docker-api-services

docker-api-services-n1

07/30/20 2:31:18 PM

ERROR

AD-Travel

Travel.Booking

121

docker-api-services

docker-api-services-n1

07/30/20 2:31:18 PM

ERROR

AD-Travel

Travel.Booking

210

docker-api-gateway

docker-api-gateway-n1

07/30/20 2:31:10 PM

ERROR

AD-Travel

Travel.Booking

122

docker-api-gateway

docker-api-gateway-n1

07/30/20 2:31:10 PM

ERROR

AD-Travel

Travel.Booking

151

docker-api-gateway

docker-api-gateway-n1

07/30/20 2:31:08 PM

ERROR

AD-Travel

Travel.Booking

84

docker-api-gateway

docker-api-gateway-n1

07/30/20 2:30:55 PM

ERROR

AD-Travel

Travel.Booking

136

docker-api-gateway

docker-api-gateway-n1

07/30/20 2:30:43 PM

ERROR

AD-Travel

Travel.Booking

156

docker-api-services

docker-api-services-n1

07/30/20 2:30:43 PM

ERROR

AD-Travel

Travel.Booking

145

docker-api-services

docker-api-services-n1

07/30/20 2:30:36 PM

ERROR

AD-Travel

Travel.Booking

142

docker-api-gateway

docker-api-gateway-n1

07/30/20 2:30:35 PM

ERROR

AD-Travel

Travel.Booking

126

docker-api-gateway

docker-api-gateway-n1

07/30/20 2:30:31 PM

ERROR

AD-Travel

Travel.Booking

212

docker-api-services

docker-api-services-n1

07/30/20 2:30:29 PM

ERROR

AD-Travel

Travel.Booking

128

docker-api-gateway

docker-api-gateway-n1

07/30/20 2:30:18 PM

ERROR

AD-Travel

Travel.Booking

145

docker-api-gateway

docker-api-gateway-n1

07/30/20 2:30:18 PM

ERROR

AD-Travel

Travel.Booking

137

docker-api-services

docker-api-services-n1

07/30/20 2:30:09 PM

ERROR

AD-Travel

Travel.Search.Class

439

docker-api-services

docker-api-services-n1

07/30/20 2:30:07 PM

ERROR

AD-Travel

Travel.Booking

109

docker-api-gateway

docker-api-gateway-n1

07/30/20 2:29:54 PM

ERROR

AD-Travel

Travel.Booking

154

docker-api-gateway

docker-api-gateway-n1

07/30/20 2:29:52 PM

ERROR

AD-Travel

Travel.Booking

56

docker-api-services

docker-api-services-n1

07/30/20 2:29:52 PM

ERROR

AD-Travel

Travel.Booking

79

docker-api-gateway

docker-api-gateway-n1

07/30/20 2:29:51 PM

ERROR

AD-Travel

Travel.Booking

127

docker-api-gateway

docker-api-gateway-n1

07/30/20 2:29:51 PM

ERROR

AD-Travel

Travel.Booking

139

docker-api-services

docker-api-services-n1

07/30/20 2:29:46 PM

ERROR

AD-Travel

Travel.Booking

110

docker-api-gateway

docker-api-gateway-n1

07/30/20 2:29:46 PM

ERROR

AD-Travel

Travel.Booking

219

docker-api-services

docker-api-services-n1

07/30/20 2:29:30 PM

ERROR

AD-Travel

Travel.Booking

102

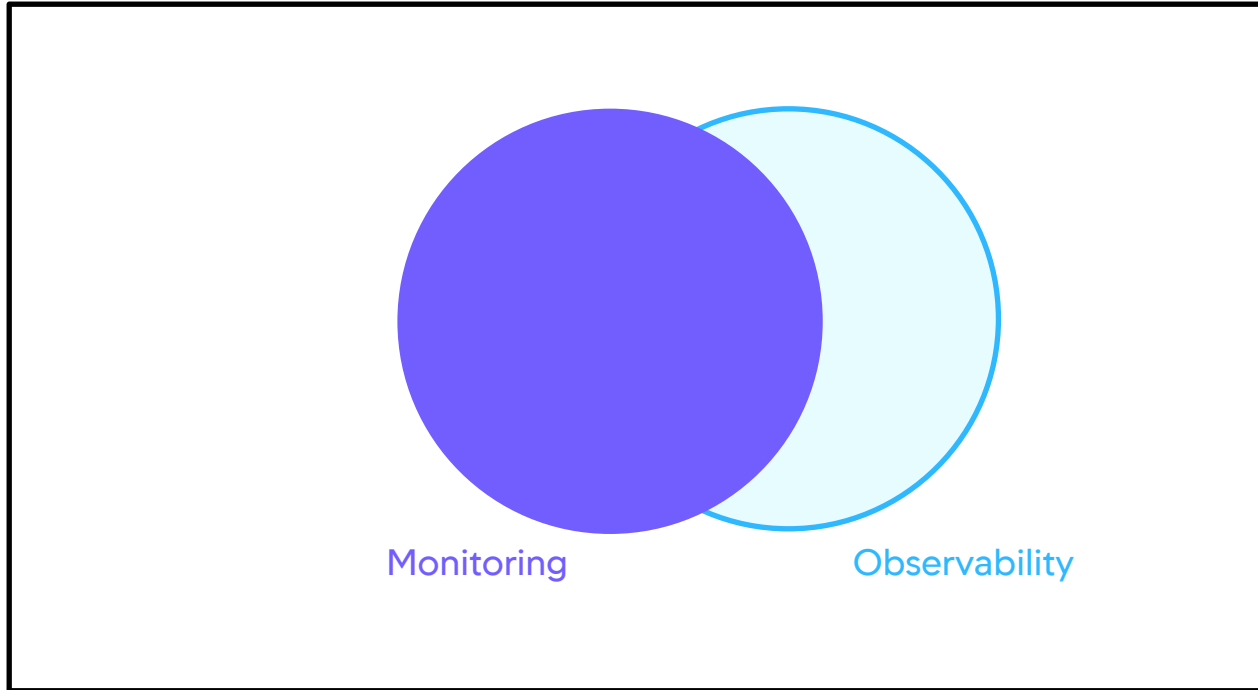
docker-api-services

docker-api-services-n1

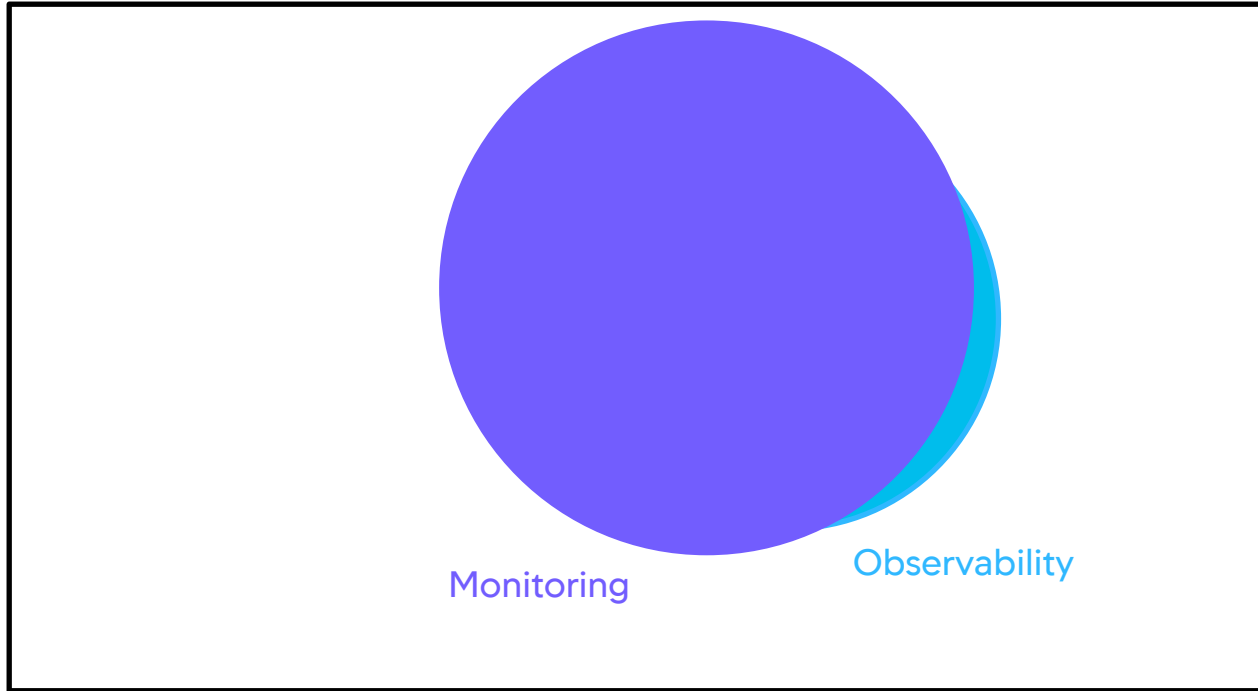
FirstPrevious12345NextLast

1 - 50 of 690 items

‘ ... getting closer ... ’

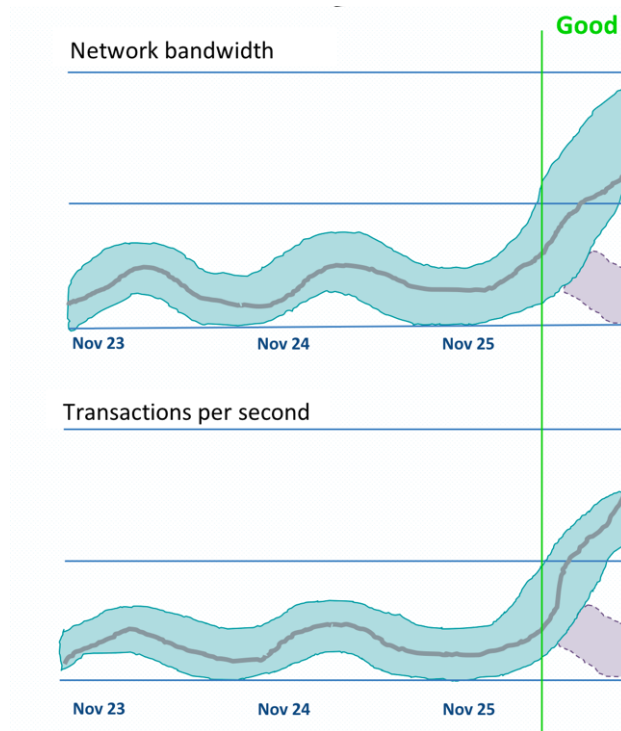


“ ... all that you see ... ”

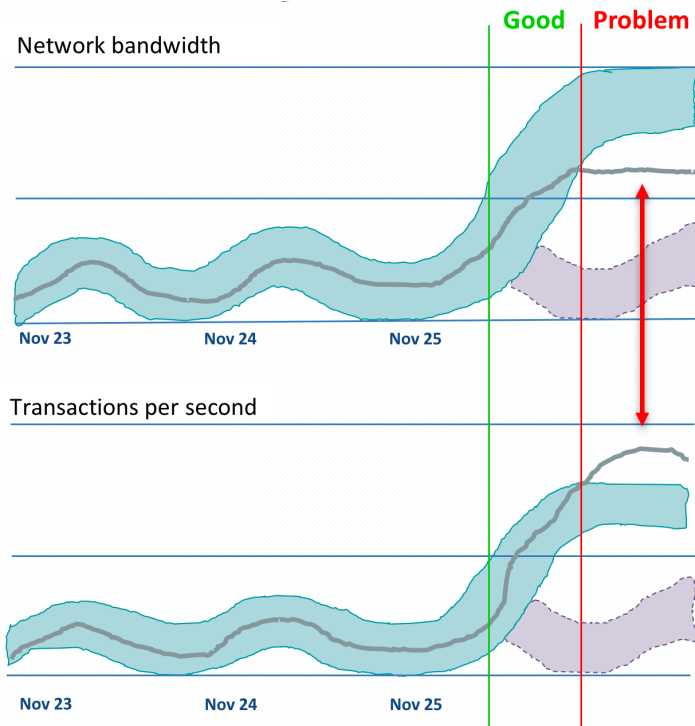


Observability+ with AIOps

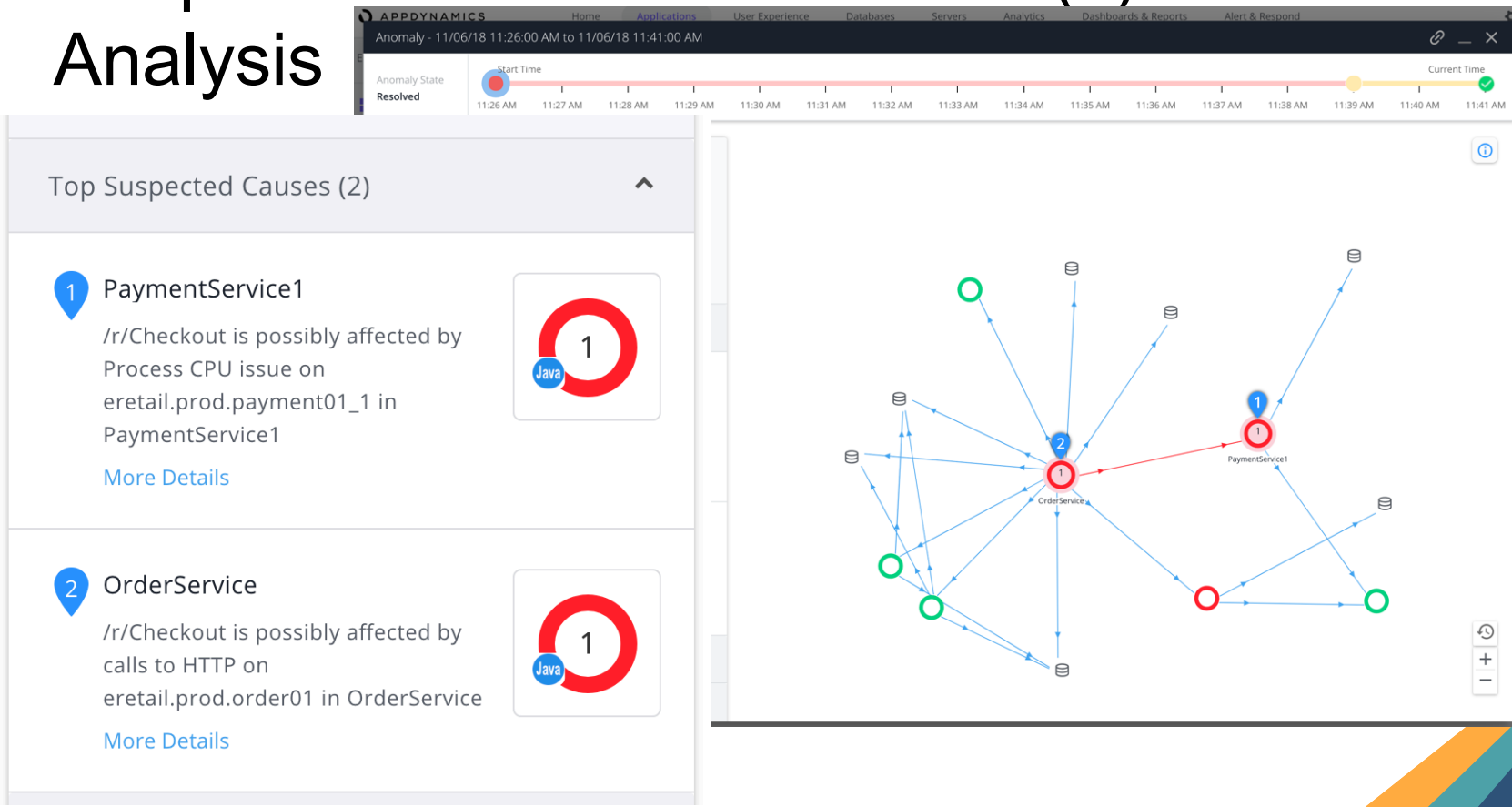
AI Ops: Contextually Correlate Metrics



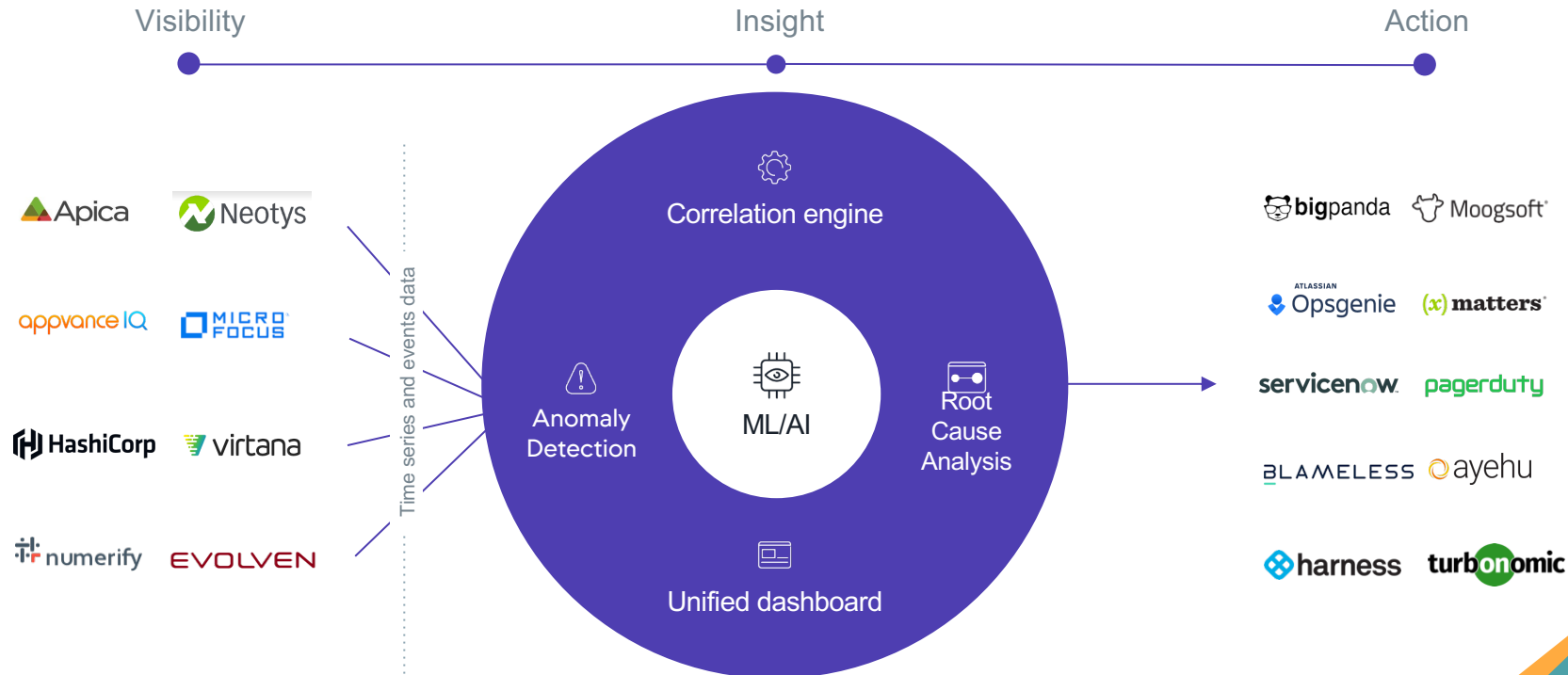
AI Ops: Contextually Correlate Metrics



AI Ops: Automated Root Cause(s) Analysis

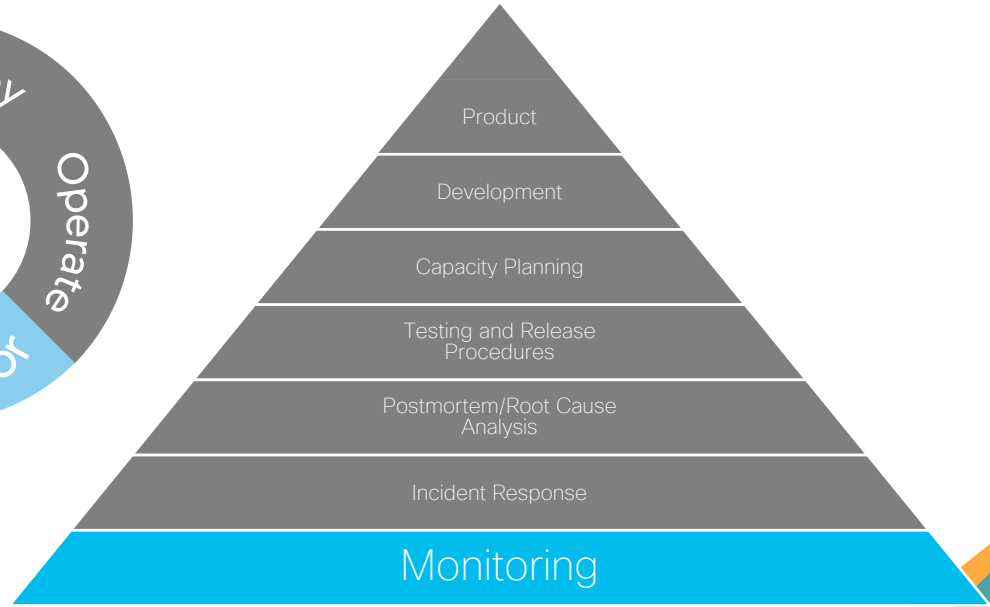
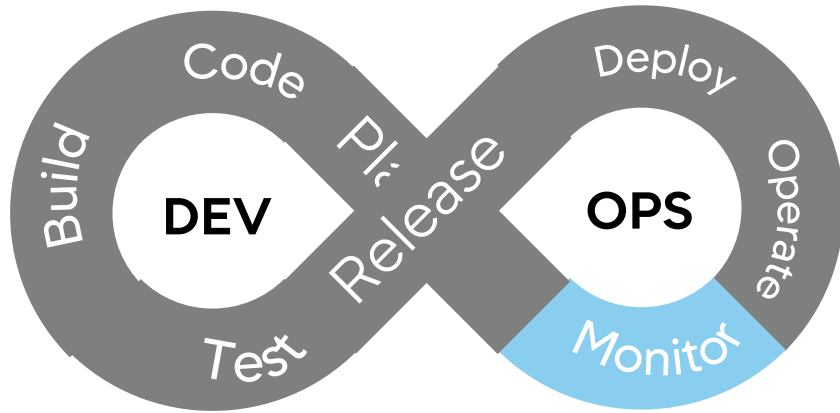


Central Nervous System



Prerequisites to observability

Monitoring for DevOps & SRE



“experience with performance tuning and monitoring has moved ... to a 39% must-have skill ranking.”

Source: DevOps Institute | 2020 Upskilling: Enterprise DevOps Skills Report



Answer what does this code do ...

- To infrastructure
- To performance
- Differently from the last version
- By transaction
- Across architectures
- With third parties
- For users
- Right now, live

**“Discovery is not in
seeking new landscapes
but in having new eyes”**

MP

**“Observability is not in
adding new products
but in having new eyes”**

MC

Links



- Accelerating Digital Transformation In Turbulent Times
- <https://bit.ly/accelturbulent>
- AppDynamics Provides Comprehensive Observability
<https://bit.ly/obs-serverless>
- Central Nervous System (and AIOps strategy)
<https://www.appdynamics.com/central-nervous-system/>
- Slowdown is the New Outage
<https://bit.ly/slowdownoutage>
- Doctors Without Borders https://bit.ly/msf_dwb

THANK YOU!

Meet Me in the Network
Chat Lounge for Questions

