



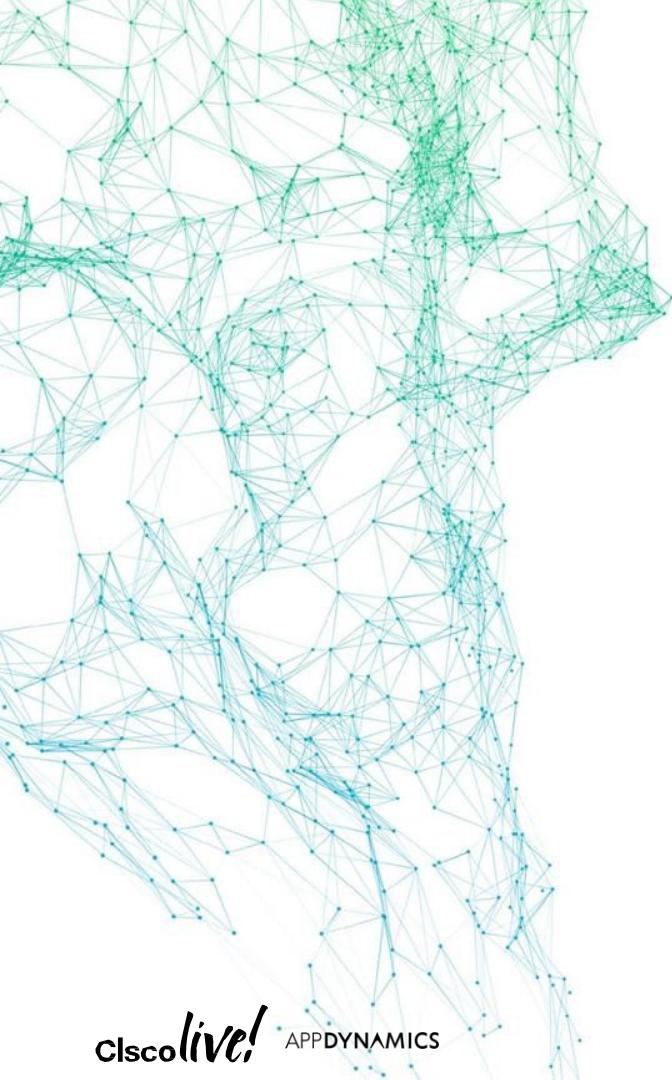
# AppDynamics for Developers

*Amit Granot- Data Center Solution Architect*



# APPDYNAMICS

**CISCO** AppDynamics is  
now part of Cisco.

A large, abstract network graph occupies the left side of the slide. It consists of numerous small, dark teal dots representing nodes, connected by a dense web of thin, light teal lines representing edges. The graph forms organic, branching clusters that cover most of the left half of the white background.

# Why Anything

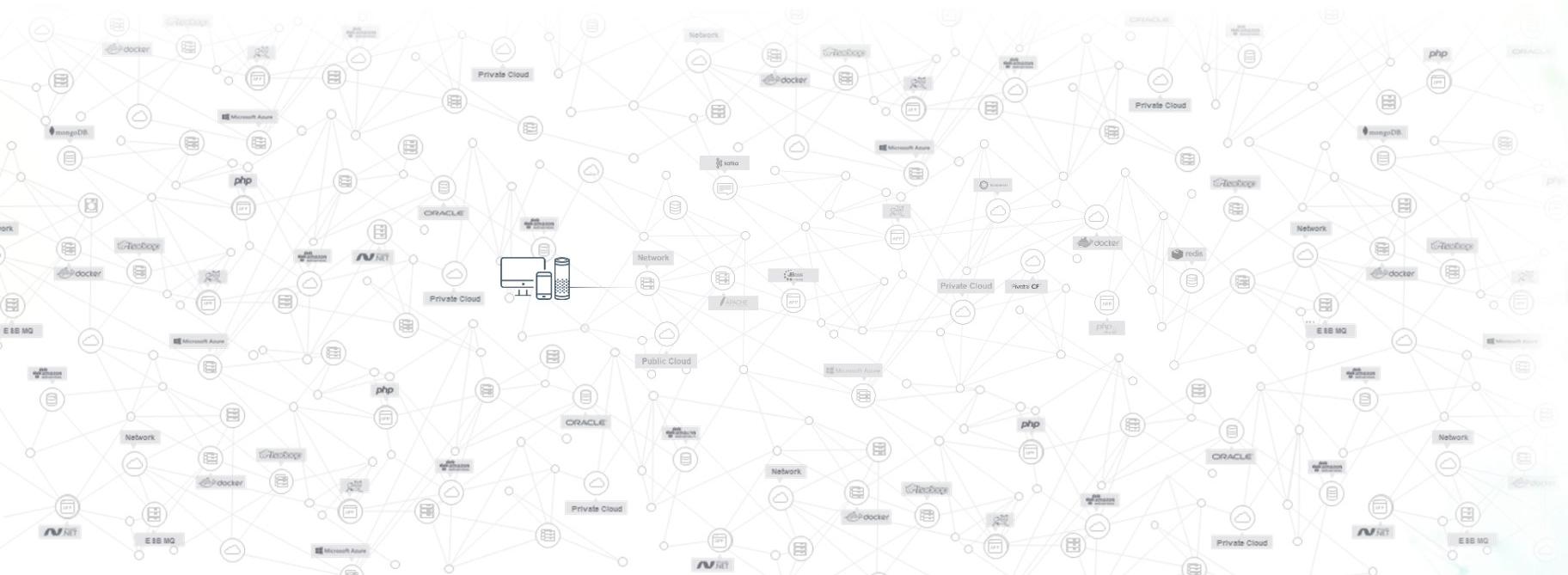
# Application Loyalty is the New Brand Loyalty



How does your app stack up against  
the new user expectation bar?



# But as The Customer Experience Simplifies... Application Complexity is Exploding

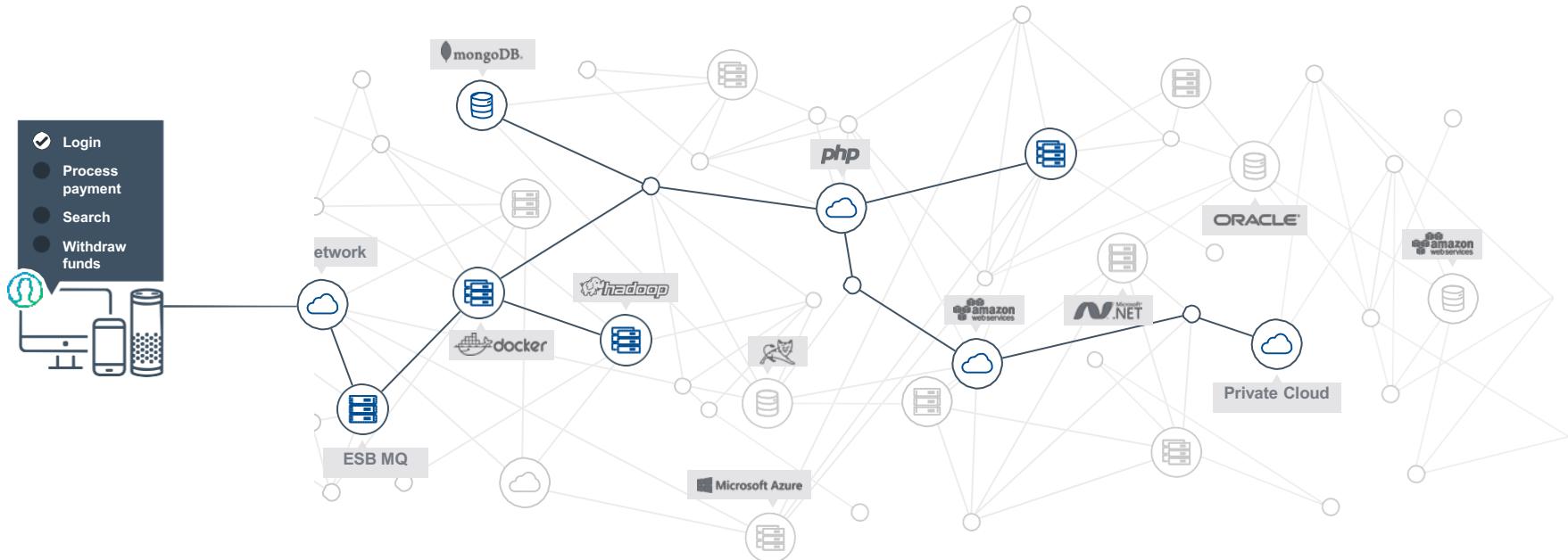


1 More Distributed

2 More Dependencies

3 Faster Cycles

# How Do You Follow The Customer Journey?



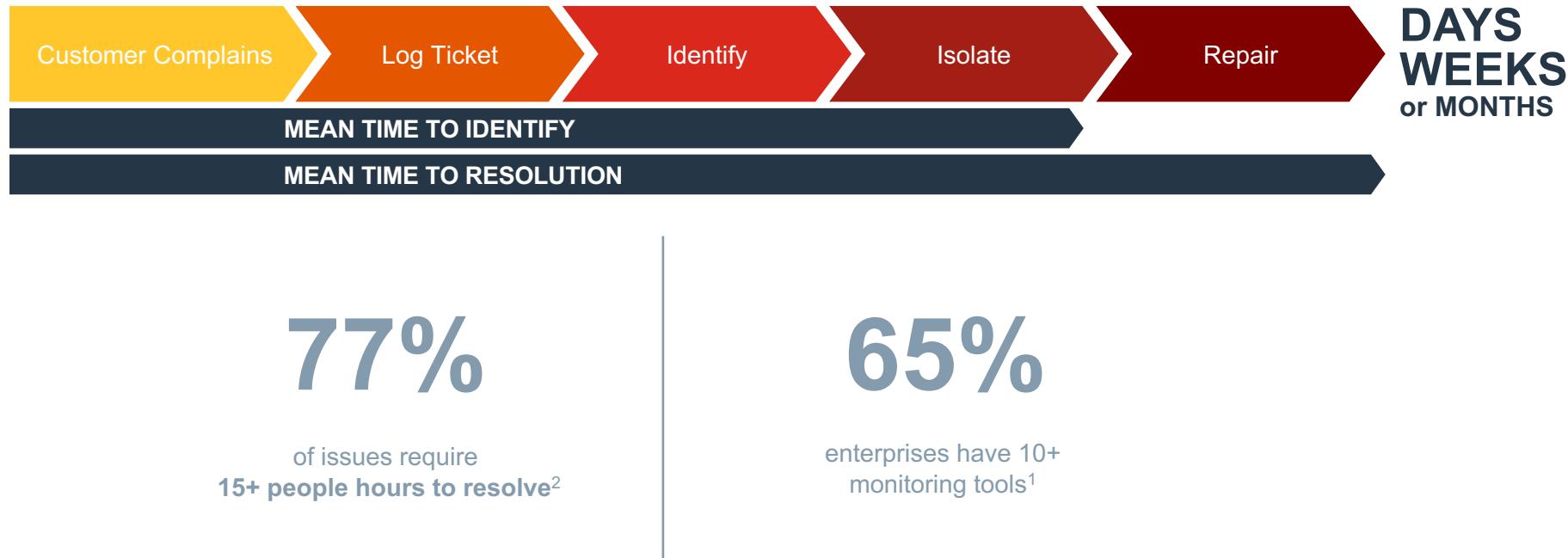
# Siloed Teams Solve Siloed Problems



The Business War Room

The War Room

# Result: Lengthy MTI & MTTR



(1, 2.) EMA APM Report, July 2015

A large, abstract network graph occupies the left side of the slide. It consists of numerous small, dark blue dots connected by thin, light blue lines, forming a complex web of triangles and quadrilaterals.

# Why APM

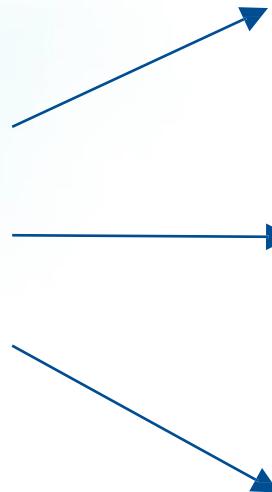
# Today's solutions fall short

```
return self.view_functions[rule.endpoint](req=req)
File "/appdynamics/src/pythonapp.py", line 154, in viewCatalog
    cursor.execute("UPDATE suppliers SET book = 'The Innocents Abroad' WHERE author= 'Twain'")
File "/usr/local/lib/python2.7/dist-packages/appdynamics/agent/interceptor/dbsql.py", line 77, in execute
    TransactionContext.lockError("lock detected")
DETAIL: Process 1673 waits for ShareLock on transaction 302295; blocked by process 57.
Process 57 waits for ShareLock on transaction 302294; blocked by process 1673.
HINT: See server log for query details.

52.36.68.48 - [09/Jun/2017 08:00:37] "GET /viewCatalog HTTP/1.1" 500
#0@0:157,B05 [INFO] [0] Thread Pool-ProxySync[0] AgentProxyService - Skipping the snapshot for request:2089142751462108222 of bt:733 since the limit for ERR
#0 snapshots has been reached.
52.36.68.48 - [09/Jun/2017 08:00:37] "GET /checkoutCart HTTP/1.1" 200 -
52.36.68.48 - [09/Jun/2017 08:00:37] "GET /viewCart HTTP/1.1" 200 -
52.36.68.48 - [09/Jun/2017 08:00:37] "GET /checkoutCart HTTP/1.1" 200 -
52.36.68.48 - [09/Jun/2017 08:00:37] "GET /viewCart HTTP/1.1" 200 -
52.36.68.48 - [09/Jun/2017 08:00:37] "GET /checkoutCart HTTP/1.1" 200 -
52.36.68.48 - [09/Jun/2017 08:00:37] "GET /viewCart HTTP/1.1" 200 -
52.36.68.48 - [09/Jun/2017 08:00:38] "GET /HTTP/1.1" 200 -
172.17.8.6 - [09/Jun/2017 08:00:38] "GET /checkoutCart HTTP/1.1" 200 -
52.36.68.48 - [09/Jun/2017 08:00:38] "GET /HTTP/1.1" 200 -
#0@146,B05 [INFO] [0] Thread Pool-ProxySync[0] AgentProxyService - Skipping the snapshot for request:2089142751462108222 of bt:733 since the limit for ERR
Traceback (most recent call last):
File "/usr/local/lib/python2.7/dist-packages/flock/app.py", line 1982, in wsgl_app
    response = self.full_dispatch_request()
    File "/usr/local/lib/python2.7/dist-packages/flock/app.py", line 1614, in full_dispatch_request
        rv = self.handle_user_exception(e)
    File "/usr/local/lib/python2.7/dist-packages/flock/app.py", line 1517, in handle_user_exception
        reraise(exc_type, exc_value, tb)
    File "/usr/local/lib/python2.7/dist-packages/flock/app.py", line 1612, in full_dispatch_request
        rv = self.dispatch_request()
    File "/usr/local/lib/python2.7/dist-packages/flock/app.py", line 1598, in dispatch_request
        return self.view_functions[rule.endpoint](req=req)
    File "/usr/local/lib/python2.7/dist-packages/appdynamics/agent/interceptor/dbsql.py", line 77, in execute
    TransactionContext.lockError("lock detected")
DETAIL: Process 1675 waits for ShareLock on transaction 302322; blocked by process 57.
Process 57 waits for ShareLock on transaction 302321; blocked by process 1675.
HINT: See server log for query details.

52.36.68.48 - [09/Jun/2017 08:00:39] "GET /viewCatalog HTTP/1.1" 500
#0@0:157,B05 [INFO] [0] Thread Pool-ProxySync[0] AgentProxyService - Skipping the snapshot for request:208403894614108211 of bt:733 since the limit for ERR
#0 snapshots has been reached.
52.36.68.48 - [09/Jun/2017 08:00:39] "GET /checkoutCart HTTP/1.1" 200 -
52.36.68.48 - [09/Jun/2017 08:00:39] "GET /viewCart HTTP/1.1" 200 -
52.36.68.48 - [09/Jun/2017 08:00:39] "GET /checkoutCart HTTP/1.1" 200 -
52.36.68.48 - [09/Jun/2017 08:00:39] "GET /viewCart HTTP/1.1" 200 -
52.36.68.48 - [09/Jun/2017 08:00:39] "GET /checkoutCart HTTP/1.1" 200 -
52.36.68.48 - [09/Jun/2017 08:00:39] "GET /viewCart HTTP/1.1" 200 -
52.36.68.48 - [09/Jun/2017 08:00:39] "GET /checkoutCart HTTP/1.1" 200 -
52.36.68.48 - [09/Jun/2017 08:00:39] "GET /viewCart HTTP/1.1" 200 -
172.17.8.6 - [09/Jun/2017 08:00:40] "GET /checkoutCart HTTP/1.1" 200 -
52.36.68.48 - [09/Jun/2017 08:00:41] "GET /HTTP/1.1" 200 -
172.17.8.6 - [09/Jun/2017 08:00:41] "GET /checkoutCart HTTP/1.1" 200 -
52.36.68.48 - [09/Jun/2017 08:00:41] "GET /HTTP/1.1" 200 -
52.36.68.48 - [09/Jun/2017 08:00:41] "GET /checkoutCart HTTP/1.1" 200 -
52.36.68.48 - [09/Jun/2017 08:00:41] "GET /HTTP/1.1" 200 -
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52.36.68.48 - [09/Jun/2017 08:00:41] "GET /viewCatalog HTTP/1.1" 200 -
52.36.68.48 - [09/Jun/2017 08:00:41] "GET /HTTP/1.1" 200 -
52.36.68.48 - [09/Jun/2017 08:00:41] "GET /viewCatalog HTTP/1.1" 200 -
52.36.68.48 - [09/Jun/2017 08:00:42] "GET /HTTP/1.1" 200 -
#0@0:141,B05 [INFO] [0] Thread Pool-ProxySync[0] AgentProxyService - Skipping the snapshot for request:3945308276413274093 of bt:733 since the limit for ERR
#0 snapshots has been reached.
52.36.68.48 - [09/Jun/2017 08:00:42] "GET /checkoutCart HTTP/1.1" 200 -
52.36.68.48 - [09/Jun/2017 08:00:42] "GET /HTTP/1.1" 200 -
52.36.68.48 - [09/Jun/2017 08:00:42] "GET /viewCart HTTP/1.1" 200 -
52.36.68.48 - [09/Jun/2017 08:00:42] "GET /HTTP/1.1" 200 -
#0@0:141,B05 [INFO] [0] Thread Pool-ProxySync[0] AgentProxyService - Skipping the snapshot for request:3945308276413274093 of bt:733 since the limit for ERR
Traceback (most recent call last):
File "/usr/local/lib/python2.7/dist-packages/flock/app.py", line 1982, in wsgl_app
    response = self.full_dispatch_request()
    File "/usr/local/lib/python2.7/dist-packages/flock/app.py", line 1614, in full_dispatch_request
        rv = self.handle_user_exception(e)
    File "/usr/local/lib/python2.7/dist-packages/flock/app.py", line 1517, in handle_user_exception
        reraise(exc_type, exc_value, tb)
    File "/usr/local/lib/python2.7/dist-packages/flock/app.py", line 1612, in full_dispatch_request
        rv = self.dispatch_request()
    File "/usr/local/lib/python2.7/dist-packages/flock/app.py", line 1598, in dispatch_request
        return self.view_functions[rule.endpoint](req=req)
    File "/usr/local/lib/python2.7/dist-packages/appdynamics/agent/interceptor/dbsql.py", line 77, in execute
    TransactionContext.lockError("lock detected")
DETAIL: Process 1675 waits for ShareLock on transaction 302295; blocked by process 57.
Process 57 waits for ShareLock on transaction 302294; blocked by process 1673.
HINT: See server log for query details.
```

clscolive! APPDYNAMICS



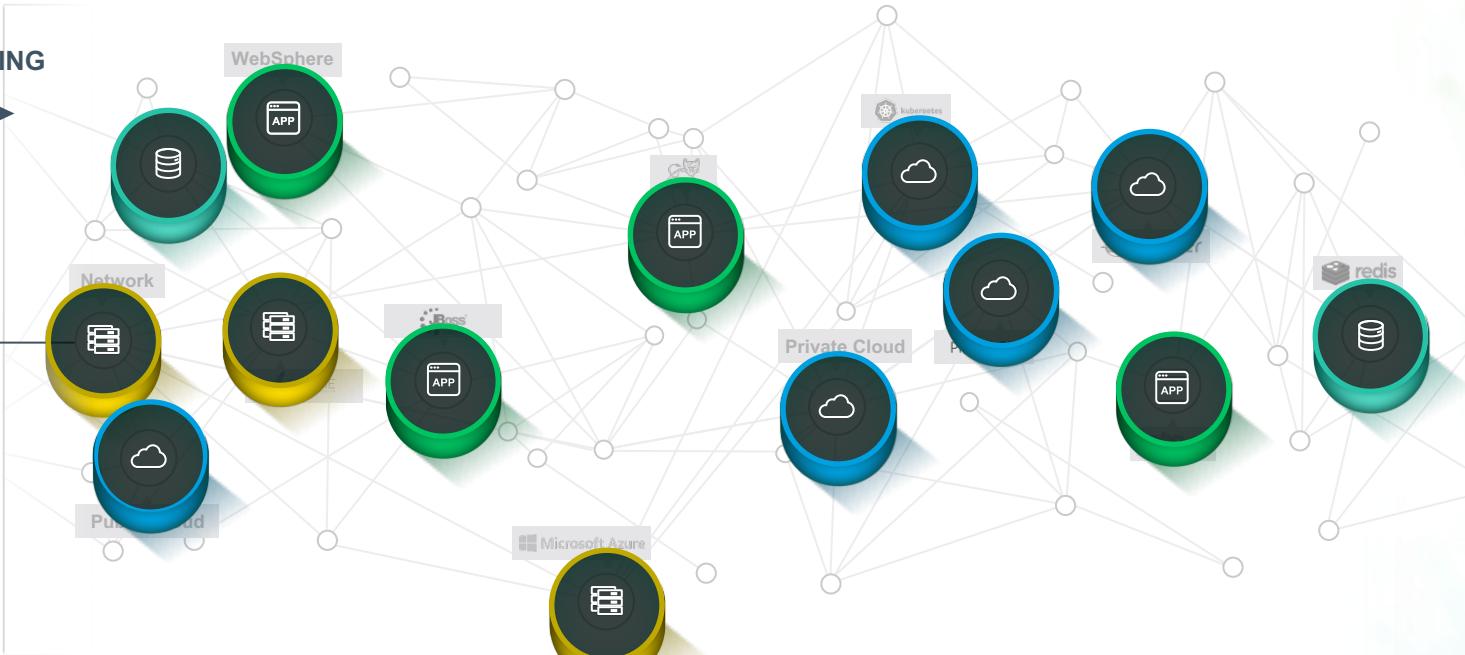
The GNU Project  
Debugger

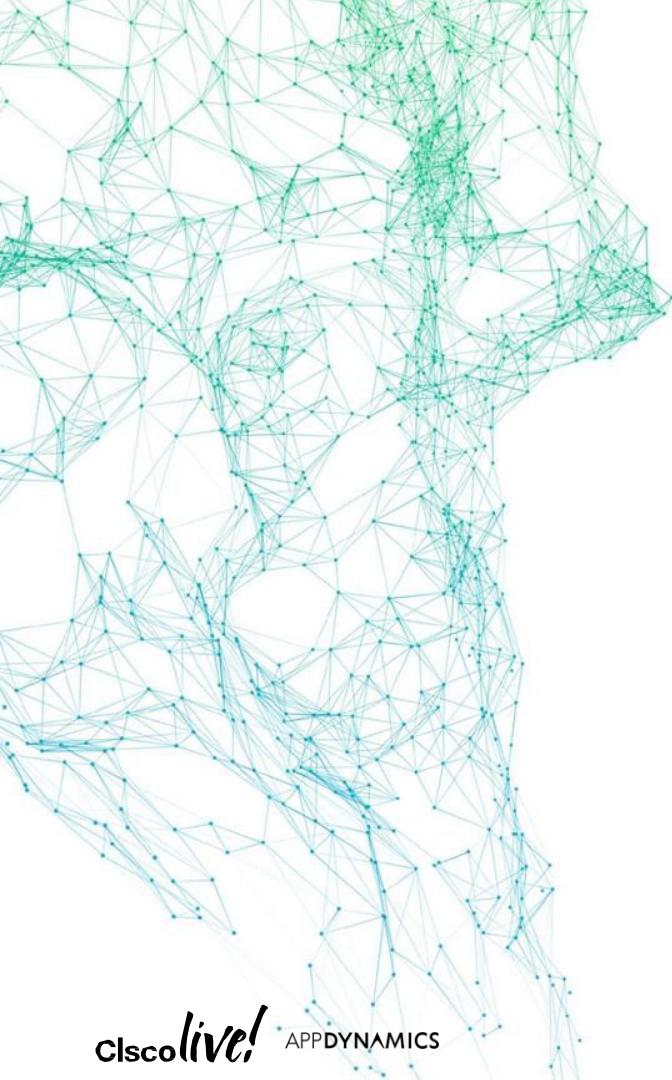


CTHGT1520

# Traditional Siloed Tools Solve Siloed Problems

## TRADITIONAL SILEOED MONITORING



A large, abstract network graph occupies the left side of the slide, composed of numerous small teal dots connected by thin green lines.

# Why AppDynamics

# Why AppDynamics?



APPDYNAMICS



Gartner



Forbes

Market leadership



Customer  
renewal rate\*



1,950+  
customers

## Our Platform



Website  
download



Smart  
services



On-Prem, SaaS,  
or Cloud



Scalable – 18/20  
largest production  
deployments



Enterprise  
adoption

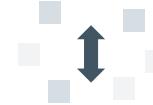
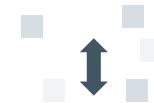


Rapid time  
to value

**See**

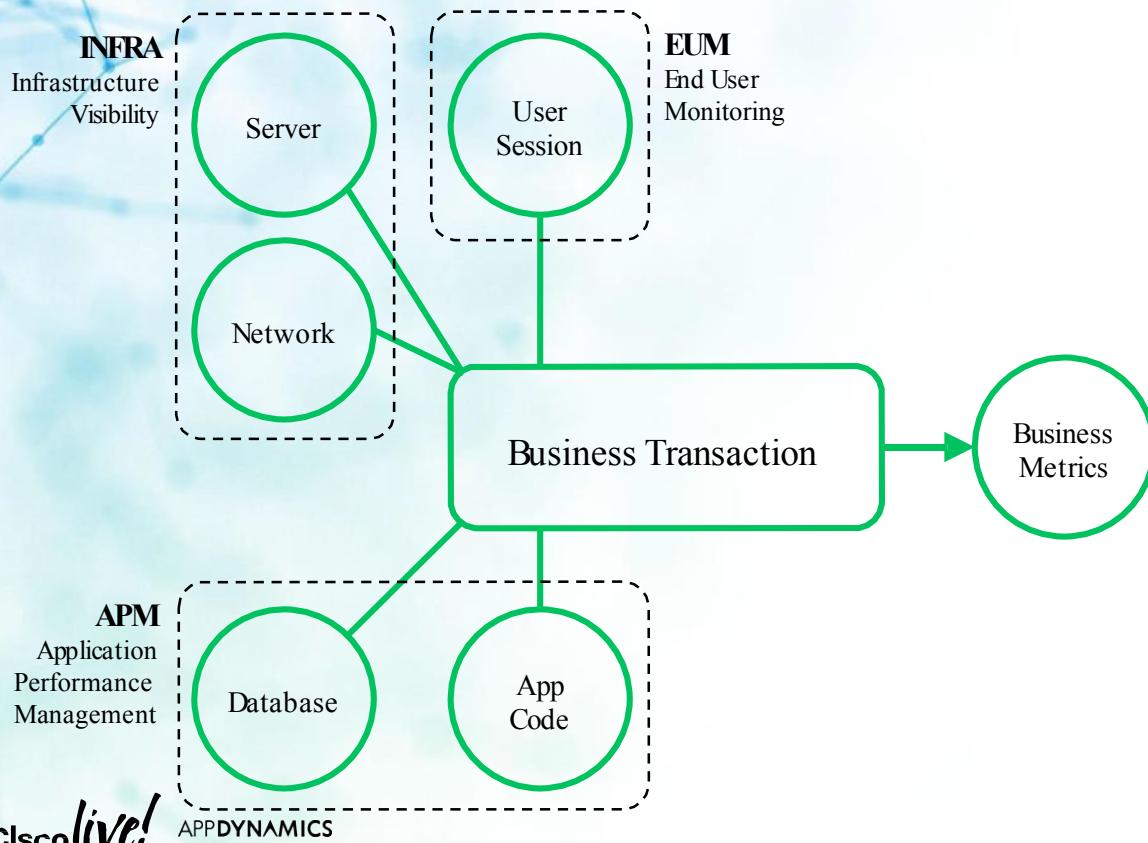
**Act**

**Know**



Application Intelligence Platform

# The What



## Illustrative Example

- Thread Connection
- Authentication Service
- Transfer Funds
- Total Customers Impacted**  
21,250 Customers Impacted  
Transferring \$104,203,000
- Platinum Customers Impacted**  
3,300 Customers Impacted  
Transferring \$44,102,000
- Alerts Initiated**  
Ticket filed in ServiceNow and  
Platinum Customer Info Sent to  
Customer Support

# Live Customer Journeys for Every Business Transaction

## Move Fast, Follow Everything & Focus on What Matters Most



Map iQ



Baseline iQ



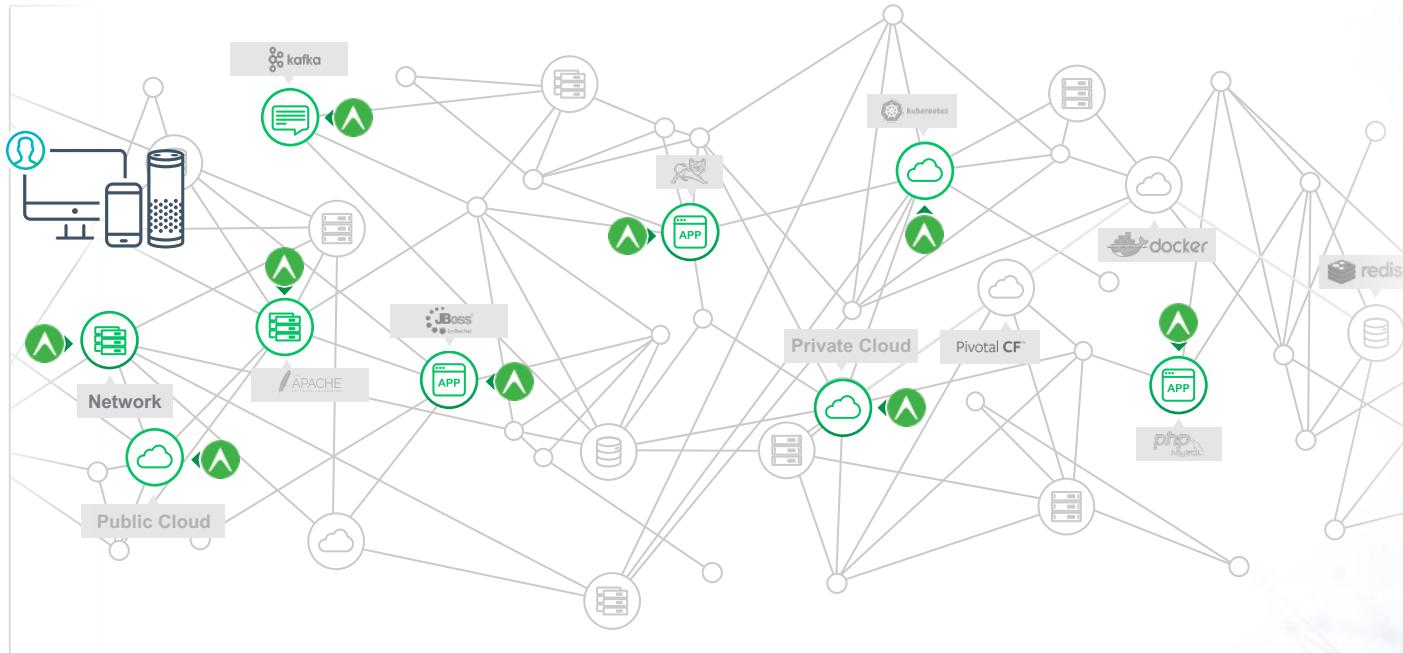
Diagnostic iQ



Enterprise iQ



Business IQ



# Live Customer Journeys for Every Business Transaction

## Move Fast, Follow Everything & Focus on What Matters Most



Map iQ



Baseline iQ



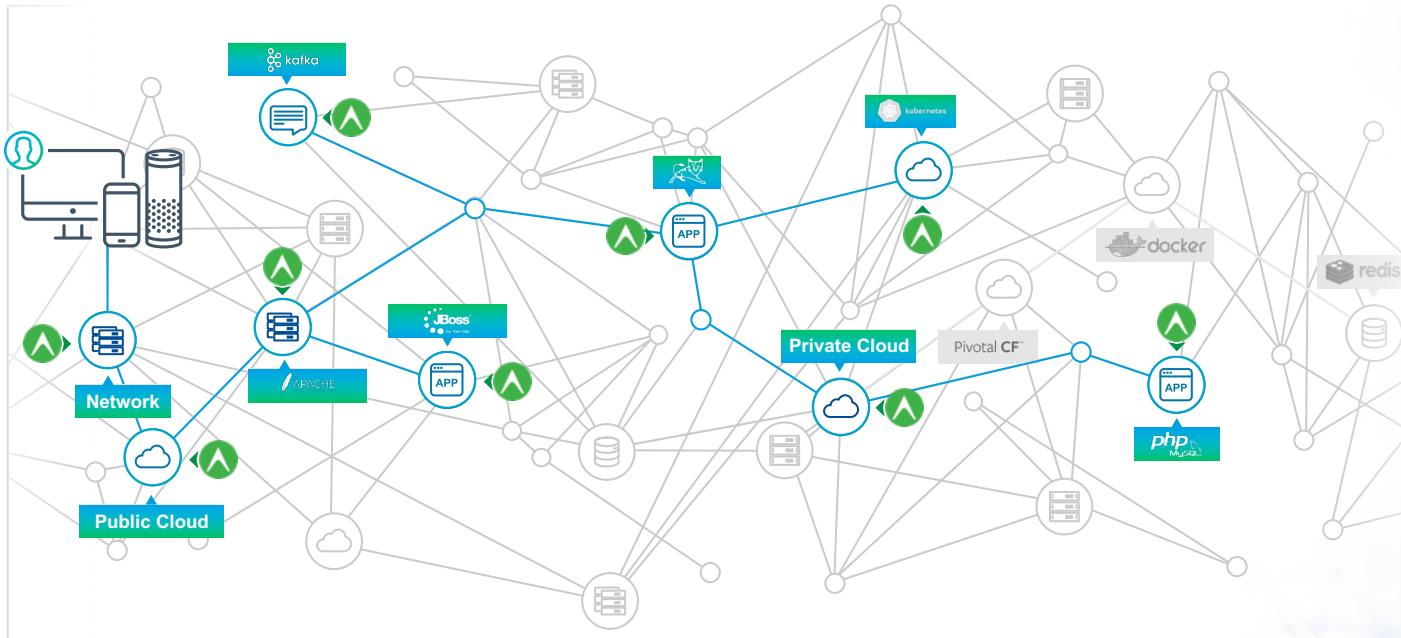
Diagnostic iQ



Enterprise iQ



Business IQ



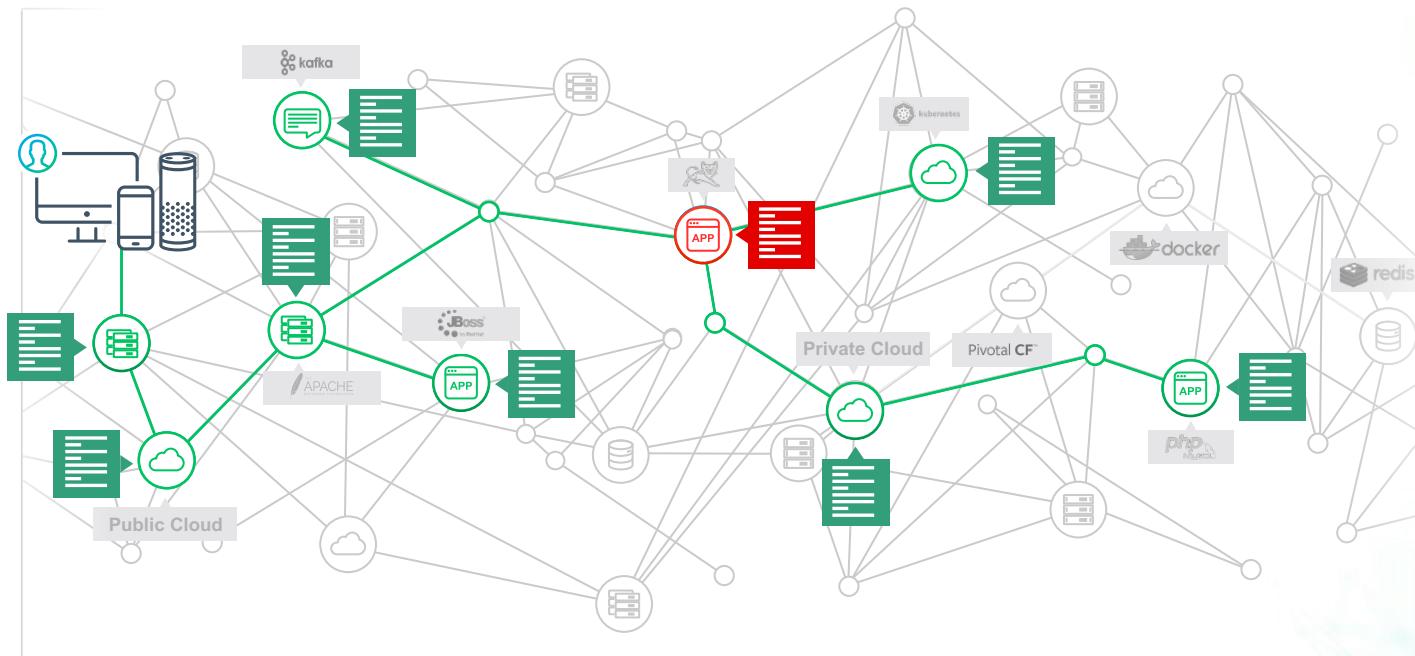
okta

“Without AppDynamics... it would be like driving a car at 100 miles per hour with your eyes closed. You can't afford not having the visibility that AppDynamics provides...”

# Detection of Issues Before Customers Notice

## Move Fast, Follow Everything & Focus on What Matters Most

- Map iQ
- Baseline iQ
- Diagnostic iQ
- Enterprise iQ
- Business IQ

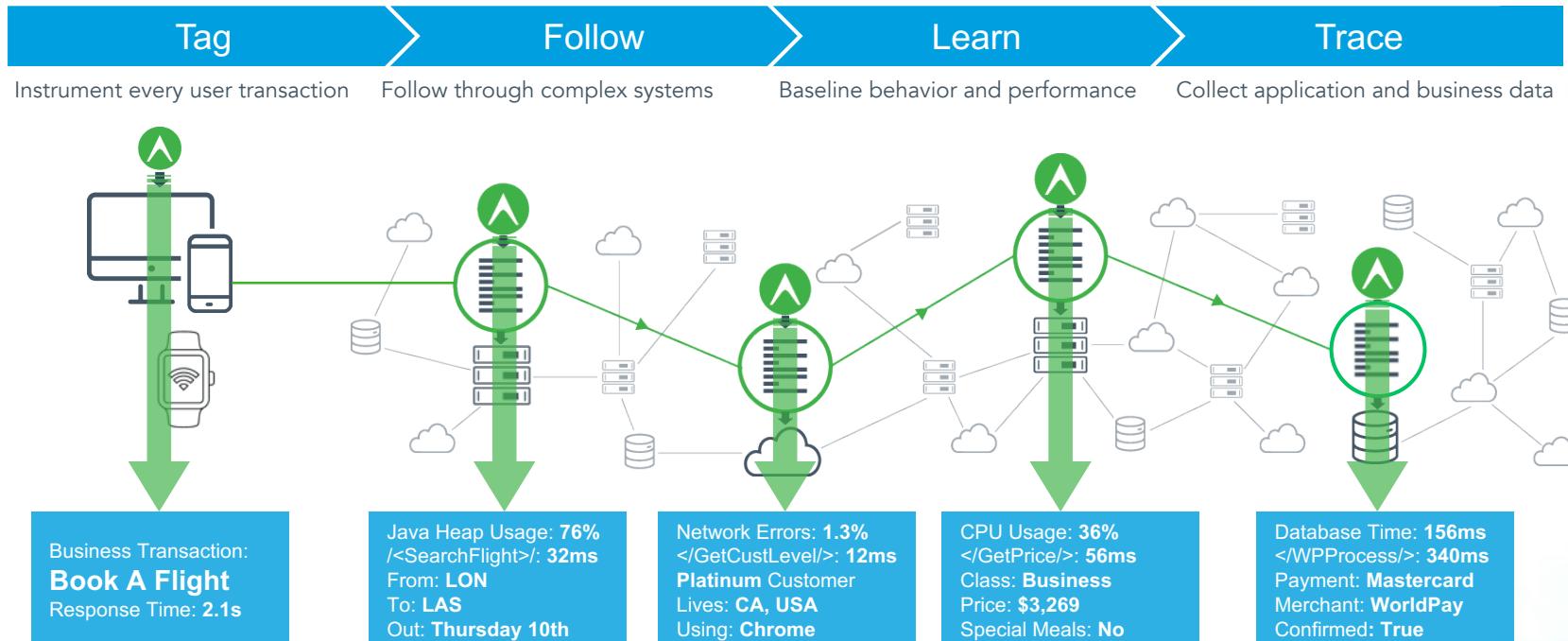


Automatic Baselines  
for Every Metric

Machine Learning  
Anomaly Detection

Prevent IT  
Alert Storms

# See: End-to-end visibility of business transactions



<HTML>



C++



node.js



php



SQL  
NoSQL

# Immediate and Automated Code Level Diagnostics

## Move Fast, Follow Everything & Focus on What Matters Most

- Map iQ
- Baseline iQ
- Diagnostic iQ
- Enterprise iQ
- Business IQ



### 3-CLICKS to ROOT-CAUSE

Down to the line-of-code

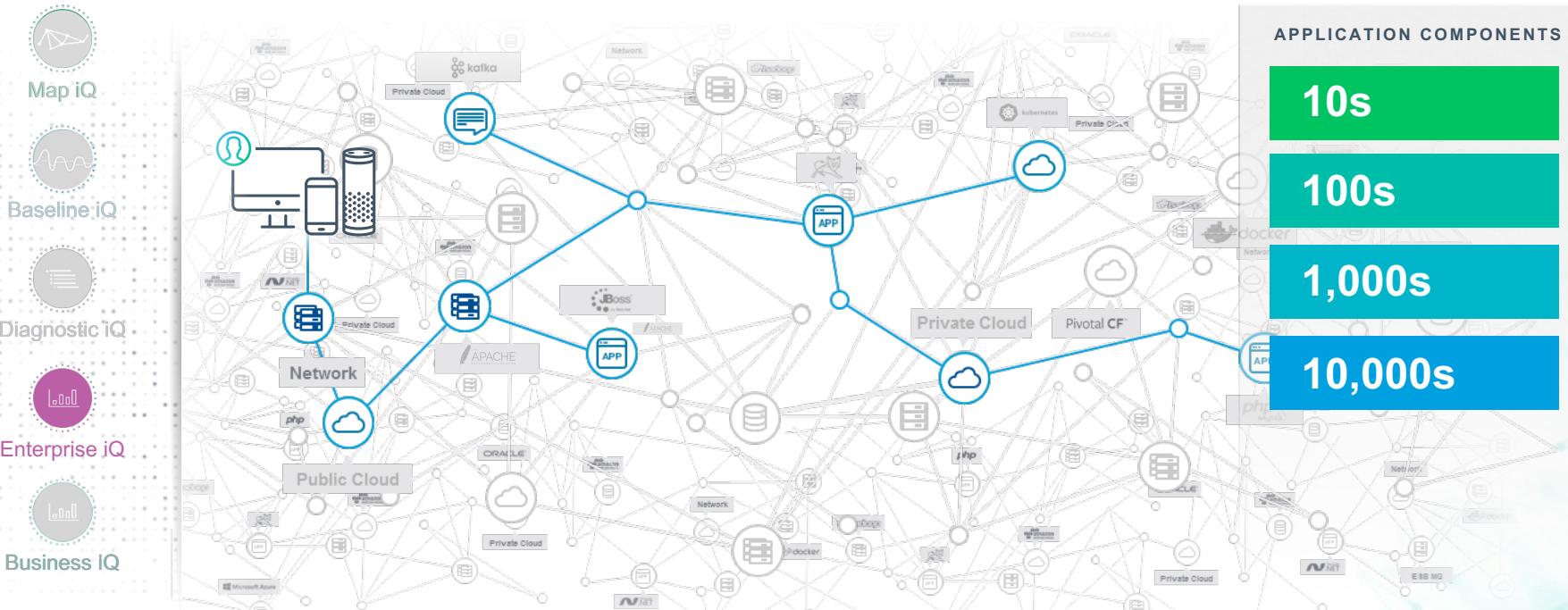
The screenshot displays a detailed call stack analysis. At the top, it says "3-CLICKS to ROOT-CAUSE" and "Down to the line-of-code". Below this is a tree view of function calls:

- initiate.write - \_stream\_writable.js:160 (0 ms (self) 0%)
  - Socket.\_write - net.js:817 (0 ms (self) 0%)
  - EventEmitter.emit - http.js:1722 (4 ms (self) 0%)
  - EventEmitter.emit - events.js:53 (4 ms (self) 0%)
- global: onread - net.js:494 (0 ms (self) 0%)
- readable.push - \_stream\_readable.js:118 (5 ms (self) 0%)
  - global: readableAddChunk - \_stream\_readable.js:136 (0 ms (self) 0%)
  - global: onReadable - \_stream\_readable.js:302 (4 ms (self) 0%)
    - global: onReadable - \_stream\_readable.js:407 (4 ms (self) 0%)
    - EventEmitter.emit - events.js:53 (5 ms (self) 0%)
    - global: (anonymous function) - \_stream\_readable.js:733 (0 ms (self) 0%)
    - global: (anonymous function) - libConnection.js:71 (0 ms (self) 0%)
      - Protocol.write - protocolProtocol.js:36 (0 ms (self) 0%)
    - readable.read - \_stream\_readable.js:202 (4 ms (self) 0%)
      - global: howMuchToRead - \_stream\_readable.js:214 (0 ms (self) 0%)
      - global: apply - (0 ms (self) 0%)
  - global: onread - http.js:1665 (0 ms (self) 0%)
  - global: parentOnHeadersComplete - http.js:68 (0 ms (self) 0%)
  - parser.onIncoming - http.js:2020 (0 ms (self) 0%)

“AppDynamics replaced 5 tools we once used to try to troubleshoot application problems. Today, everyone goes to AppDynamics to quickly determine the root of the issue.”

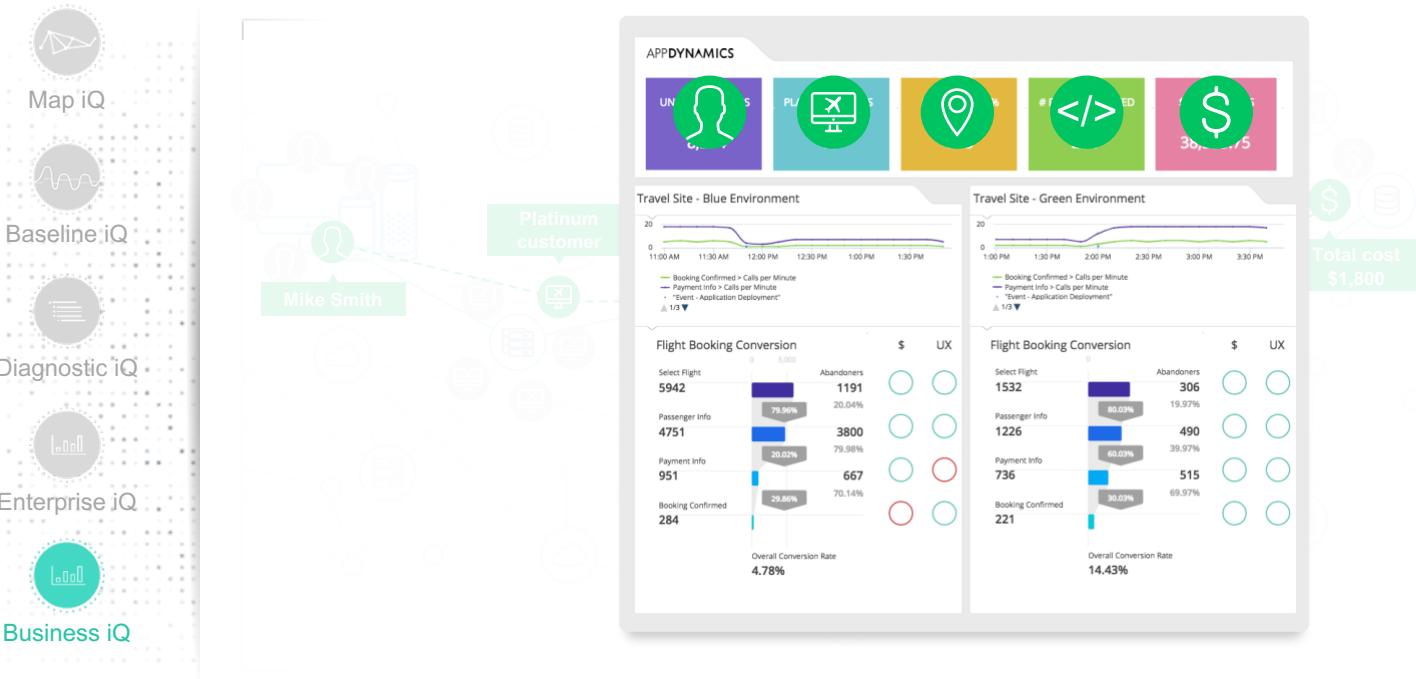
# Customer Experiences at Managed at Scale

## Move Fast, Follow Everything & Focus on What Matters Most



# Real Time Performance Intelligence

## Move Fast, Follow Everything & Focus on What Matters Most



# Real Time Performance Intelligence

## Move Fast, Follow Everything & Focus on What Matters Most



Map iQ



Baseline iQ



Diagnostic iQ



Enterprise iQ

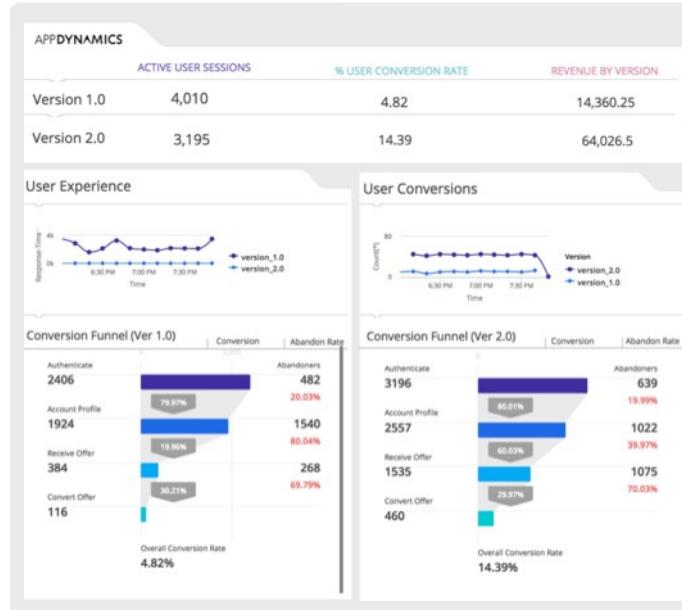


Business iQ

New code release

Compare user experience metrics

Compare conversion metrics



Compare revenue

A real-time feedback loop between application and business performance

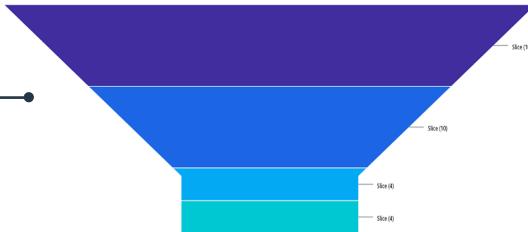
Validate new feature release

# Know: What if you knew in real-time?

## Unified Analytics

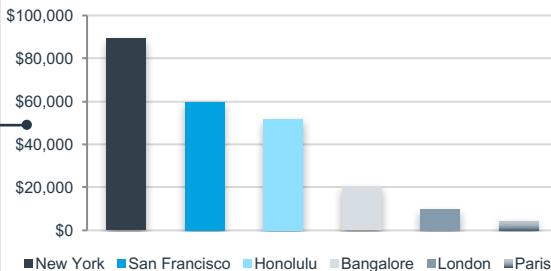
Where are you losing customers?

Track customer drop-off



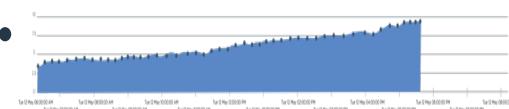
Revenue by cities

Top Cities



Performance trending towards problem

Average Response Time

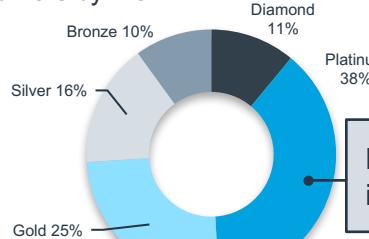


Top Product Categories



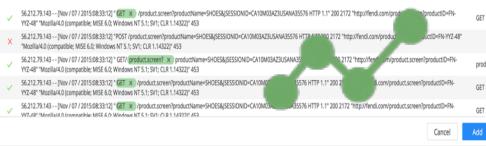
Top product categories generating highest revenue

Customers by Tier



Most of customers experiencing issues are Platinum

Intelligent logs



Combine intelligent log information



Map iQ



Baseline iQ



Diagnostic iQ



Enterprise iQ



Business iQ

## Move **Fast**

Auto-Discover and Map  
No manual configuration  
Baseline **Every** Metric

## Follow Everything

Production Monitoring  
Low overhead  
All user transactions

## **Focus** on What Matters Most

Unified Platform  
One Consistent UI  
Real-time context

# APP DYNAMICS



Thank you