Deploy Application-Aware Infrastructure

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2009 became the year of “there’s an app for that”
3 hr 45 min*
I need help

Hi There!
I'm a banking bot. How can I help you?
32%¹ +70%²

2009 Today

Source: 1 = ec.europa.eu/Eurostat  Source: 2 = https://www.fisglobal.com/PACE2018
Hi There!
I'm a banking bot. How can I help you?
Siloed Teams Solve Siloed Problems

Which customers are affected?

Checking the logs

Conversion rates are dropping

This app is horrible!

Why is this happening?

Database looks fine

Spend is down

The War Room
Translating Digital Insight For A Business Outcome

- Business Metrics: Revenue, Conversion, Segmentation, User Journey
- Business Transactions: Log In, Add to Cart, Transfer Funds, Play Video, Book Flight
- Metrics and Events: Network Throughput, Latency, TCP Loss, CPU, Memory, Disk, Garbage Collection, Average Response Time, Errors, Load

SELECT KPIs: Mortgages Approved, Insurance Policies Issued

Prioritize issues and fix faster
Identify and optimize

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Business Insights

Conversion rates are dropping rapidly, but we don't know why.

Application Insights

Response times are rising, but we don’t know how that’s impacting our customers.
Live Customer Journeys for Every Business Transaction

Move Fast, Follow Everything & Focus on What Matters Most

— Lightweight Agents

— Deployed Throughout Application Environment

— Auto Instrument | Auto Configure
Live Customer Journeys for Every Business Transaction

Move Fast,
Follow Everything &
Focus on What Matters Most

— Every User, Every Transaction

— Automates Discovery and Correlation

— Dynamically Updated
Detection of Issues Before Customers Notice

Move Fast, Follow Everything & Focus on What Matters Most

— Automatic Baselines for Every Metric

— Machine Learning Anomaly Detection

— Prevent IT Alert Storms
Real Time Performance Intelligence

Move Fast, Follow Everything & Focus on What Matters Most

— Automatically Collected
— Fully Correlated
— Ready for Real-Time Insights
Getting to resolution
Anomaly detection, root cause analysis, autonomous action

Mean Time to Resolution
Detection Identification Fix Verify

> 70%
Automatic Detection of Anomalies in Business Transaction Performance

AI-Driven Root-Cause Analysis Identifies Top Suspected Causes
Cognition Engine

Pin-point Deviating Performance

Isolate Resource Problems

Respond with Automated Actions
Getting to resolution
Anomaly detection, root cause analysis, autonomous action

Mean Time to Resolution

Detection  Identification  Fix  Verify

~ 20 %
AIOps - Artificial intelligence for IT operations

**Goal:** Providing autonomous IT systems

- Maturity of Big Data, progress in AI, increase in network bandwidth, access to cloud computing and GPUs

**Specialized AI**

- Pattern, topology, correlation, anomaly, causality, root cause, recommendations and predictive

**AI is data hungry**

- More relevant data
- Better insights

**Big Data**

- Across IT domains (APM, DEM, Infrastructure, Network, Security)
- Types of data (events, logs, time series, topology, snapshot)
Introducing the Central Nervous System for IT operations
The Central Nervous System

Visibility

- Public cloud
- Private cloud
- App and business
- Infrastructure
- Network
- Security

Insight

- Correlation engine
- ML/AI
- Alerting
- Time series and events data
- Unified dashboard

Action

- Orchestration
- Incident response
- Resource scaling
- Cost optimization
- Network configuration
- Security enforcement

Feedback Loop
AppDynamics and CWOM
Application Aware Infrastructure Optimization

Visibility
- Public cloud
- Private cloud
- App and business
- Infrastructure
- Network
- Security

Time series and events data

Insight
- Correlation engine
- ML/AI
- API
- Alerting
- Unified dashboard

Feedback Loop

Action
- Orchestration
- Incident avoidance
- Resource scaling
- Cost optimization
- Network configuration
- Security enforcement
Use Case - Application Intelligent Provisioning

Challenge: Scaling infrastructure to meet resource demands is manual, slow and complex

Visibility

- Identify slow application response time
- Measure business impact to performance degradation

Insight

Action

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Use Case - Application Intelligent Provisioning

Challenge: Scaling infrastructure to meet resource demands is manual, slow and complex

Visibility

Insight

Action

Know exactly why the resource is constrained

Know the right action to take
(Place, Scale, Move, Configure, Start/stop, Match/Purchase RI)

Environments Turbo Automates Actions
Use Case - Application Intelligent Provisioning

Challenge: Scaling infrastructure to meet resource demands is manual, slow and complex

Visibility

Insight

Action

Over Capacity

Underutilized

Automate workload placement and sizing to guarantee customer experience
AppDynamics and CWOM Working Together
Application Performance Management + Application Resource Management

Application Intelligent Infrastructure

Visibility Into User Experience and Business Conversion

Insights into infrastructure bottlenecks and cost drivers

Action to continuously optimize infrastructure for Application Performance
Cisco Engage

Data Center Innovation

Thailand. Bangkok, 26 November 2019