APPDYNAMICS

Central Nervous System (CNS)

AppDynamics is
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Introduction

Today's businesses are innovating and scaling in faster, more cost-effective ways to meet customer demands. But this scale and efficiency has introduced significant operational complexity that reduces visibility across the technology stack.

The result? Most organizations don't understand the connection between the changes they make and the impact these changes have on customer experience and business performance.

Enter the age of AIOps, which enables businesses to leverage artificial intelligence and machine learning to derive real-time insights and begin automating tasks to augment technology operations teams.

The Central Nervous System (CNS)

A critical element of embracing the AIOps mindset is to have a platform that can take input from various data sources, analyze it, and automate action in real-time with zero human intervention. And that's precisely what Cisco and AppDynamics aim to do with the Central Nervous System for IT operations.
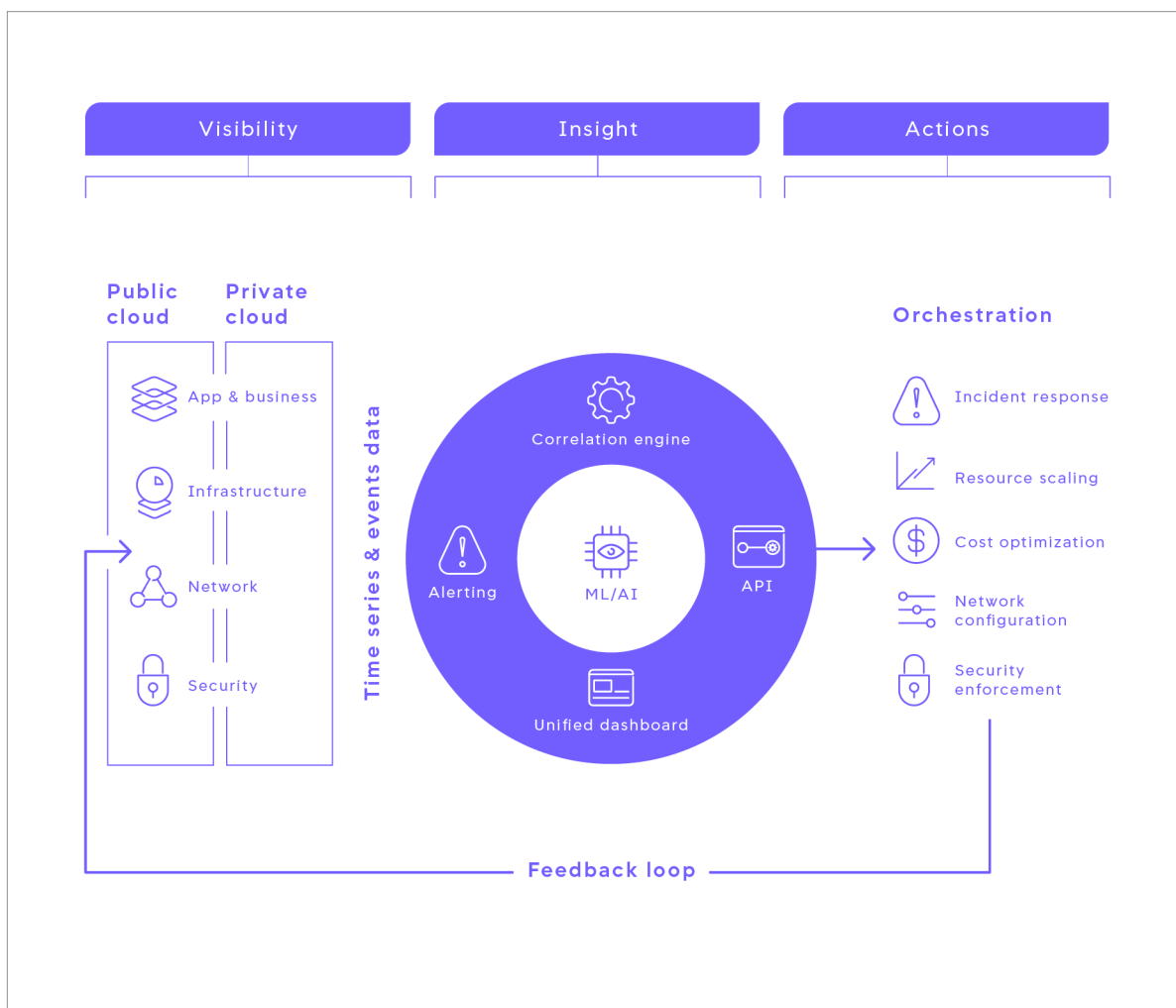
Now, let's dive a bit deeper into the pillars that make up the Central Nervous System and the power this platform can bring IT teams and enterprises.

3 Pillars of the Central Nervous System (CNS)

VISIBILITY

Get cross-domain visibility with a full view of everything happening across all technology domains, from the application and business to the infrastructure, network, and security.

INSIGHT

You can rely on insights from AppDynamics to help identify the root cause of incidents. It's a platform you can count on to take incremental actions to help remediate incidents before they impact users.

ACTION

Take action on the insights you derive and leverage intelligence to help remediate problems, prevent issues, and optimize your operating environment.

AppDynamics and Cisco help you understand the systems used to run your business by:

- Monitoring hundreds of trillions of application metrics per year

- Connecting billions of network devices

- Detecting 20 billion threats per day

- Embracing 3rd party datasets to expand intelligence

Get out of the war room and gain clarity in the chaos with cross-domain insights from AppDynamics. With our solution, you'll get:

- Concurrent use of multiple data sources

- Real-time ML/AI based insights

- Automated root cause analysis

- Predictive analytics

With autonomous action from AppDynamics and our robust partner ecosystem, IT teams will be able to:

- Automatically provision compute resources

- Dynamically create an incident in ServiceNow

- Change network policy to optimize bandwidth

Use Cases for the
# Central Nervous System (CNS)

01

Intelligent Auto-Scaling

CHALLENGE

The complexity of today's IT ecosystem is beyond what the human mind can possibly track or manage to triage user-impacting incidents before they impact customers.

USE CASE

As an IT Operations manager, I need to keep a close watch over traffic and load to know when to scale an application up or down. Unfortunately, today's monitoring and orchestration tools are so disconnected that they require complex workflows to be executed manually.
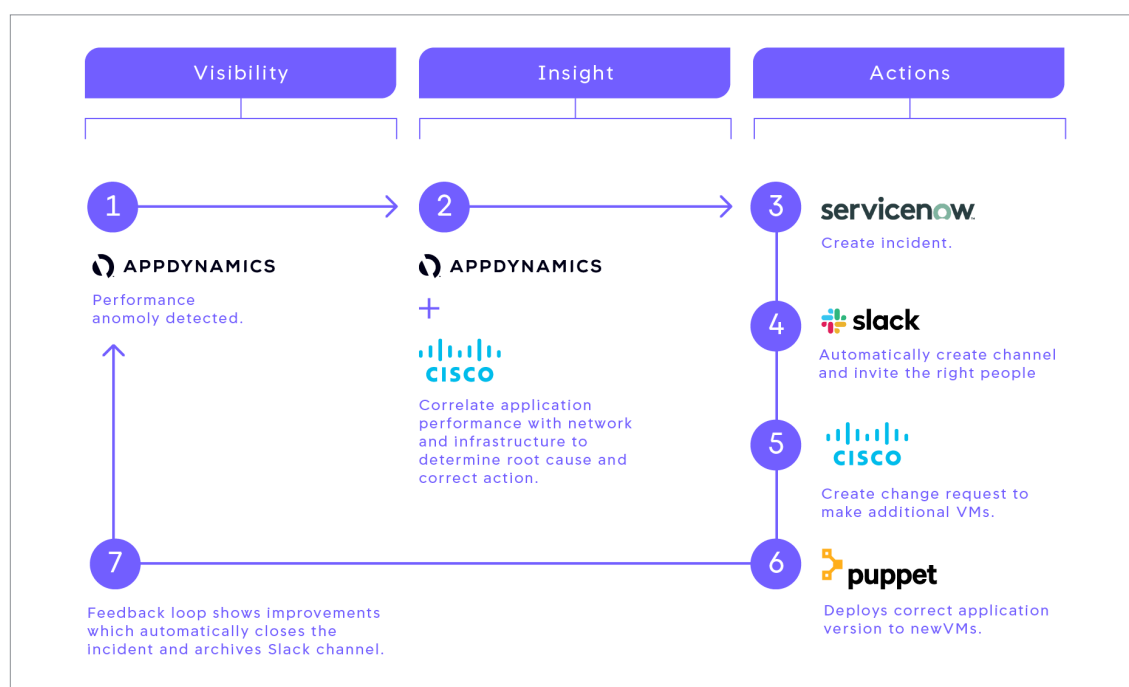
SOLUTION

AppDynamics installs a lightweight agent across your entire application ecosystem and collects a number of metrics, including load, response time, and errors. We use this information to create a dynamic baseline and detect performance anomalies, giving ITOps teams a clear indication of what normal performance looks like for their particular application.

AppDynamics also integrates with Cisco Data Center products and ServiceNow for changes to an IT compute service. This means that when AppDynamics detects an anomaly, it will correlate the app data with network metrics from Cisco ACI to identify root cause and recommend an action. A ServiceNow case is automatically opened, which notifies the ITOps war room in Slack, then the change request is made in Cisco UCS and Puppet to update the server configuration to scale the workloads.

02

Automatic Workload Optimization

CHALLENGE

Most organizations today are complementing their on-premises infrastructure with multiple public clouds. While these systems allow for easier deployment, scalability, and management—it also comes at a cost as the complexity makes it difficult to ensure the technologies are delivering the right business outcomes.

USE CASE

As an IT Operations manager, I am cautious about wasting compute resources since I have to work within a tight budget. However, my team over-provisions resources to "play it safe." This is not cost-efficient.
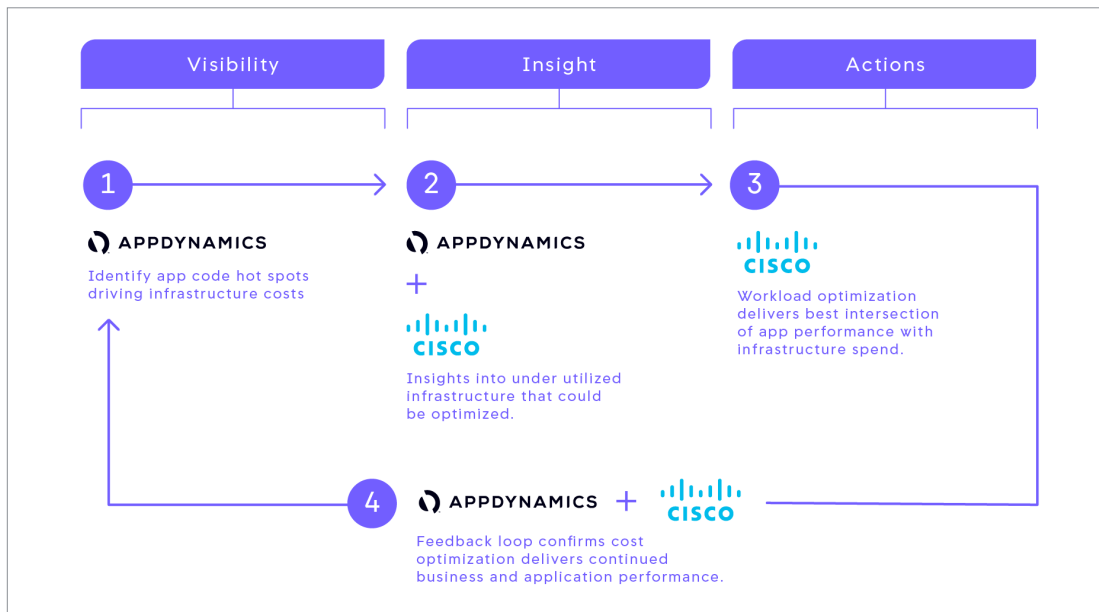
SOLUTION

To help address this challenge, AppDynamics integrates with Cisco's Workload Optimization Manager (CWOM) to help customers optimize and orchestrate workloads.

Using real-time performance data, AppDynamics can help identify degradations or "hot spots" that are driving infrastructure costs - things like errors, slow response times, loads, etc. This information then gets fed to CWOM, which can instantly scale resources up or down to alleviate or prevent issues.

Paired with CWOM, application performance metrics from AppDynamics can help optimize workload and infrastructure spend, while ensuring that infrastructure is never the cause of application performance problems.

03

Network Triage

CHALLENGE

Application and network teams too often operate in silos, which can lead to application slowdowns and longer outage-resolution times that negatively impact users—and the business.

USE CASE

As a network engineer, I have no application context when troubleshooting network performance issues. This makes it difficult for me to isolate the network policy change that is causing a negative impact on customers.
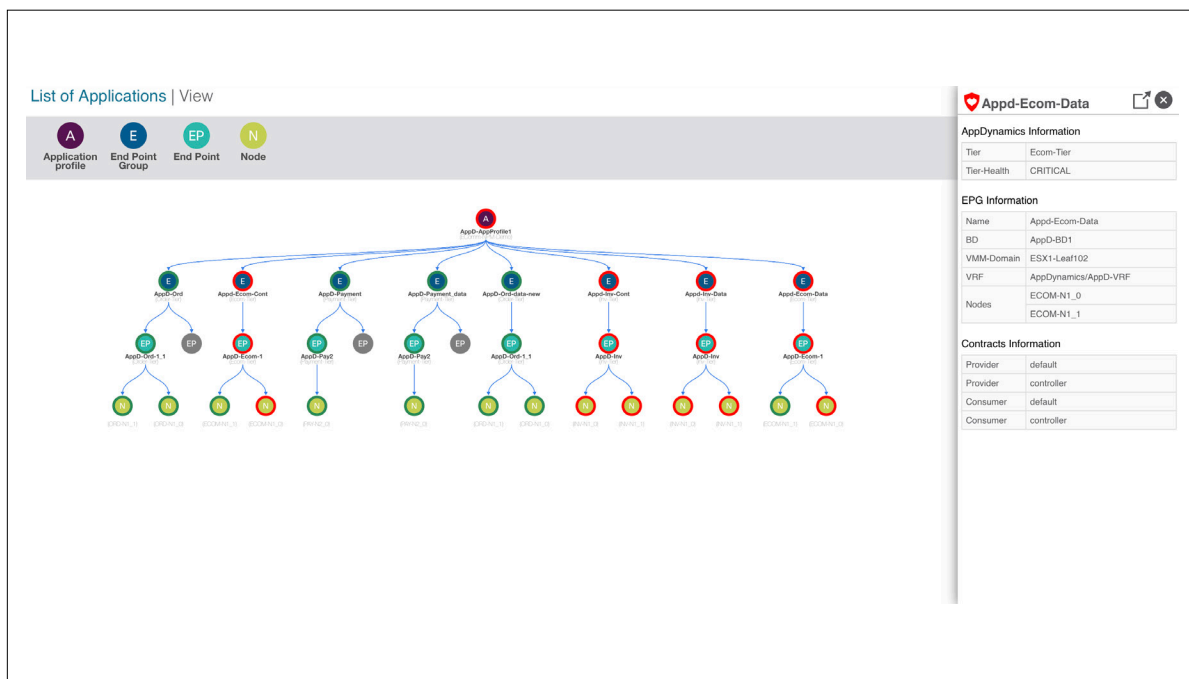
SOLUTION

When AppDynamics is used with Cisco's Application Centric Infrastructure (ACI), teams can easily identify which application services are impacted due to the network issues. Cisco ACI and AppDynamics provide an integrated application-to-network view—from code to underlying infrastructure—of business applications running across multiple clouds and data centers.

This seamless integration enables both AppOps and NetOps admins to have comprehensive visibility of the environment, making it easier and faster to identify root cause and troubleshoot the problem in the network. This solution also gives teams a shared understanding of the dependencies between applications and connections to network endpoints, which helps reduce unexpected outages when changes to the network are made.

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Want to learn more about
AppDynamics and how the
Central Nervous System (CNS)
fits into your AIOps journey?

Start a free trial today.

Start trial