Capgemini

# Ops, **AI Did it Again**

AI comes to the rescue of complex IT operations, improving step-by-step efficiency and reliability while it learns, on its way to full autonomy

So many systems, services, devices and applications swarming around in an enterprise IT operations landscape. So much disjointed data available in real-time about how they perform, succeed and fail. It's the perfect playground for AI to get a grip on the complexity, by learning from IT operations data to provide improvement. First by giving better insight into the performance of operations and by real-time detection of disturbances. Then - through predictive analytics and system inference - by anticipating these disturbances and inferring what is occurring inside opaque systems, timely measures can be taken. Finally - when it has found even the most complex, hidden patterns - by autonomously optimizing IT operations. Oops, is that infrastructure simply taking care of itself?

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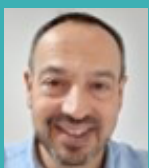
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WHAT

- AI for IT Operations (AIOps) collects and analyzes IT operations data, often in real-time, to improve observability, continuously fix, and improve IT operations' performance.
- Data to drive AIOps is ingested from multiple and diverse sources including; system logfiles, edge device logs, IT operations management platforms, problem ticket data, connected devices, 'wire' network traffic data and event monitoring / alert systems.
- AI / machine learning and (intelligent) process automation are critical to gather, collect, correlate, learn and resolve unwanted anomalies without human involvement.

USE

- An American sports equipment manufacturer identified the cause of an incident that impacted user experience, on their ecommerce site that they could not see without the observability tools and that traditional APM and logging tools did not expose the issue.
- A fortune 500 US bank found that almost complete visibility of the state of its infrastructure to be able to attain almost 100% uptime and service restoration in seconds, rather than hours in order to retain customers. The volume of change, and the scale of data was too much for traditional monitoring and AiOps tools were needed.
- Implementing AIOps at a leading entertainment company was able to reduce the volume of alerts by over 80%.
- The global ride sharing company with over 3000 microservices being migrated between data centres, was able to identify the cause of a doubling in latency that was having a significant impact on customers.

IMPACT

- A plethora of cloud-native and platform as a service (PaaS) technologies reduce complexity for developers and end-users resulting in visibility challenges for operations teams.
- Automation and AI / machine learning tools pave the way to a full self- service infrastructure platform and applications management landscape.
- Routine, repeatable IT operations tasks are automated, so staff can focus on more strategic, value-adding activities.
- Better delivery of Service Level Agreements (SLAs) and increased customer satisfaction, e.g. through faster problem resolution and fewer outages.
- Training and sustaining AI systems for operational improvement requires new skills and roles within operational teams. As intelligent machines and people collaborate, their skills and roles will evolve.

TECH

- Observability: Honeycomb.io, Lightstep, Splunk, Datadog, NewRelic
- AIOps: MoogSoft, Splunk, IBM Watson AIOps, BigPanda, Anodot, SumoLogic, BMC
- SRE, Chaos and Application Operations: Splunk On-Call, ServiceNow, Gremlin

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