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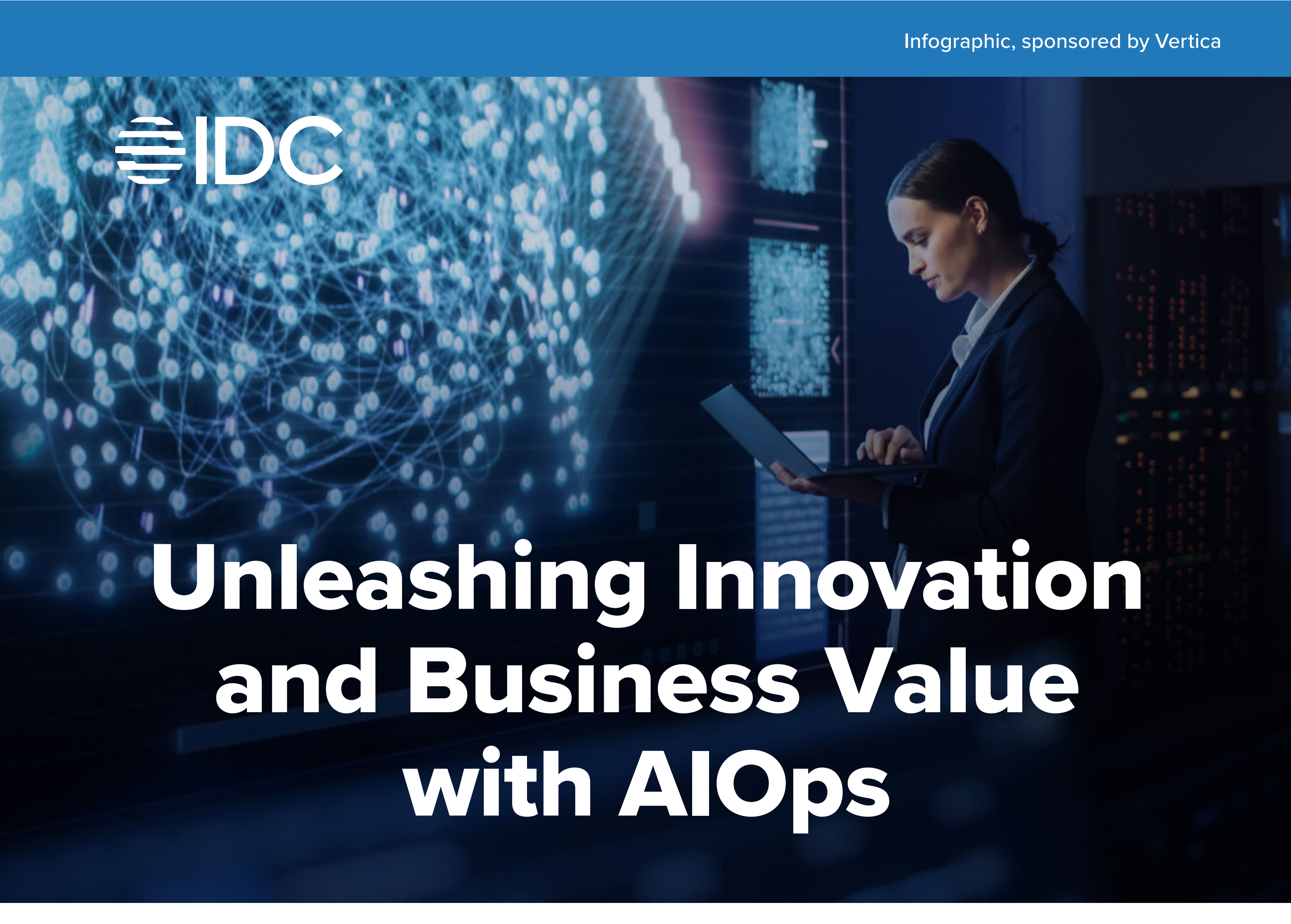

IDC

Unleashing Innovation and Business Value with AIOps

What Is AIOps?

AIOps stands for Artificial Intelligence for IT Operations.

It is advanced analytics including machine learning (ML) and other forms of AI to monitor and manage the performance and reliability of applications and hardware systems, detect anomalous problems, adapt to changes in requirements, handle failures, and to adjust proactively or rapidly with minimal disruption of services.

AIOps tools collect data from multiple IT sources including metrics, logs, traces, events, and telemetry, process the data, use machine learning to find useful information, and deliver the findings to IT operations. **The output includes** IT anomalies, patterns, correlations, and predictions.

The objective is to enable better decision making, issue avoidance, and outage prevention by:

- **Rapidly identifying the cause** of degradation or failure, and quickly restoring the service
- **Detecting and predicting failures** before they impact users. Driving more actionable insights; adopting a proactive versus reactive approach
- **Optimizing teams** by aligning people, process, and technology to deliver a better customer experience
- **Ensuring the consistent delivery** of high performing network and telecom services

How Big Is AIOps? How Fast Is It Growing?

AIOps is a large market with
$4.2 billion
in software and SaaS revenue
in 2021.

AIOps
is growing
at an annual rate
of 9.3% and is forecast
to reach
$6.6 billion
in 2026.

Growth is highest
in SaaS-based AIOps
at 17.5%.

Source: *IDC WW IT Operations Analytics Software Forecast*, 2022-2026, March 2022

AIOps Drivers

As organizations modernize, transform digitally, and adopt automated operations, they need:

Speed

Organizations must increase their speed to meet rising consumer and business demands for fast restoration of services when problems are discovered. Customers demand great experience and highly reliable services.

Scale

The explosion in scale, the amount of data and resources to be managed (metrics, logs, traces, events, telemetry, others) go beyond reasonable manual efforts. Automation is required to collect, analyze, and react to the vast data volume and varieties involved, as well as the many simultaneous workloads required.

Flexibility

Business services are becoming more distributed and interconnected across networks. Increasingly, this is a multi-infrastructure world (private cloud, hybrid, public cloud, on prem, multicloud, SaaS, etc.). Modern software and services are often also containerized; cloud-native architectures and complex networks deliver services to consumers and businesses. AIOps platforms have to be able to flex to function in all the places optimization is needed.

IT teams have to manage vast increases in data, applications, and infrastructure as a result of the advent of **5G in telecom and increasing demand for smart sensors, networks, etc.**

Business innovators depend on their organization's ability to scale, adapt, transform, and deliver IT services on demand across physical, virtual, cloud, and multicloud infrastructures.

AIOps is vital to effectively operate these complex environments. Automation corrects many minor issues, and increases productivity of IT staff by providing clues, root causes, and analyzed patterns to reduce mean time to detect issues (MTTD) and mean time to repair them (MTTR).

What Benefits Are Expected from AIOps?

- Improved customer satisfaction and retention
- Increased IT personnel productivity
- IT cost savings and containment
- Decreased downtime and increased system reliability
- Faster mean time to repair (MTTR) and problem identification
- Improved service reliability
- Increase in team collaboration
- Reduced churn rates

AIOps in Action: Use Cases

- Datacenter operations optimization
- Early fault and failure detection
- Root cause analysis
- Incident prediction
- Alert noise reduction
- Smart hardware datacenter intelligence
- Telecom network analysis
- Energy usage optimization
- Predictive maintenance
- Capacity prediction and planning

Automated IT Optimization Is Essential

Modern Networks Require Finding and Solving Issues at Machine Speed

① With cell usage data increasing and IoT and edge data flooding everything, especially 5G networks, an analytics capability that can linearly scale is essential. **Total IoT spending in 2021 totaled just over $690 billion.**

Source: IDC WW Internet of Things Forecast, August 2022

② Finding root causes of incidents and predicting incidents before they occur is needle in a haystack work that requires every single data point, not aggregates. You can't find the needle if it's been mushed into a clump of hay. **84.4 ZB of data was generated in 2021, with 55.8 ZB of that from IoT.**

Source: Worldwide IDC Global DataSphere IoT Device Installed Base and Data Generated Forecast, 2022-2026

③ Time series analytics, geospatial analytics, machine learning, event pattern matching, even good old-fashioned business intelligence – **every kind of analytics available is frequently what is needed to find, predict, prevent, or solve issues.**

④ **Engineers who can troubleshoot network problems are smart, skilled, and expensive.** Make every minute of their time count by automating and pointing them at relevant information. Don't make them search through giant piles of logs.

Message from the Sponsor

Vertica is the analytical database with the best value for the highest performance on any data analytics, at any scale, anywhere.

Best value – compressed storage, efficient processing, fungible license
Any analytics – BI, time series, IoT, geospatial, machine learning
Any scale – Terabytes to petabytes
Anywhere – on-prem, clouds, hybrid, containerized

Learn more about how Vertica can help solve AIOps challenges

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