

DELIVER A WORLD-CLASS END USER EXPERIENCE USING SERVICENOW AND AIOPS

Infosys Enterprise Service Management Café, part of Infosys Cobalt, leverages the power of AIOps to deliver ready-to-launch applications that accelerate enterprises' digital transformation

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Abstract

The world is transitioning to an era in which end-user experience can make or break a business. Customers, employees and other stakeholders are extremely demanding about good service experience. Powered by the cloud, businesses are digitalizing at unprecedented speed even as IT operations struggle to keep up with the complexity and pace of change.

In this hyper-connected digital world, IT operations teams must trace, track and respond to numerous events using siloed monitoring tools in real time. They expend significant time and effort on correlating disconnected data to identify impacted services and the root cause of failures. The teams are often hindered by their reliance on brittle model-based processes, increasing specialization in disconnected silos and voluminous repetitive manual activity. These factors have made it difficult for IT ops to keep in step with the ever-increasing demands on their time.

With AIOps, IT operations teams can see actionable alerts and impacted services on a single console, eliminating considerable manual effort. AIOps enables IT operations to attain the level of speed and agility that users expect and seek.



An introduction to AIOps

AIOps refers to using artificial intelligence (AI) for IT operations. It combines algorithmic and human intelligence to provide full visibility into the state and performance of IT systems. AIOps uses machine learning and data science to give IT operations teams real-time information about any issues affecting the availability or performance of the systems under their care.



How AIOps helps manage IT health

By giving IT teams quick access to appropriate historical information as well as real-time contextual data, AIOps improves issue diagnosis and resolution. Developers can understand how similar incidents were resolved in the past and can even remedy issues automatically. Such AIOps capabilities significantly lower mean time to resolution (MTTR), reduce the number of major incidents, and enhance operational health and efficiency. Other capabilities include:

- Noise versus alerts – AIOps separates and removes noise, enabling IT SMEs to focus on what is important and not be distracted by irrelevant alerts
- Correlating information – By correlating information across multiple data sources, AIOps eliminates silos and provides a single view across the entire IT environment (physical, virtual and cloud)
- Advanced machine learning – AIOps

constantly tracks and captures useful information in the background, making predictive intelligence available for operational excellence

- Auto remediation – Based on the predictive intelligence generated by analytics, machine learning (ML) and natural language processing (NLP), AIOps can perform and/or initiate auto remediation, thereby reducing manual effort and preventing outages

Business challenges affecting organizations

1. Service unreliability – Negative impact on business services due to unplanned outages arising from the lack of proper monitoring tools and preventive measures
2. No visibility into IT health – Inability to identify which systems are connected to which services, resulting in delayed resolution. This also creates problems in determining service impact, affected users, locations, etc., resulting in

delayed or improper communication

3. Performance issues affecting user experience – With multiple tools and data sources as well as large volumes of data that are processed in silos, the important performance metrics may not be tracked properly. This creates performance issues that directly impact user experience and productivity
4. Reactive incident management – User and service experience are directly proportional to service availability. Without predictive intelligence and auto remediation, IT is more reactive than proactive, and this break-fix model leads to ineffective IT operations
5. Configuration Management Database (CMDB) health – The completeness, correctness and compliance of data in the CMDB determine the health of CMDB and, thereby, the efficiency of IT operations. The success of any automation workflow depends on the accuracy of CMDB data and its relationships



Factors essential for a great AIOps system

- Well-defined CMDB, business service modelling and application mapping
- System to consolidate events and identify root causes
- System to capture operational metrics and decipher anomalies
- System to store historical data – incidents, problems, changes, and service requests
- Mature and well-maintained knowledge base
- Predictive intelligence capabilities and machine learning techniques
- Self-healing mechanisms



ServiceNow, AIOps and ITOM Health

The ongoing evolution of IT infrastructure models demand equally dynamic technology and processes for their management. As infrastructure evolves, old model-based systems require more effort to maintain even as they lose speed and efficiency.

Without the proper tools, IT operations has limited visibility into how infrastructure and services are connected. Enterprises cannot manage today's dynamic IT landscape with yesterday's tools.

ServiceNow® IT Operations Management (ITOM) delivers comprehensive AIOps capabilities built seamlessly on the ServiceNow Platform. ITOM delivers intelligence to rapidly find service degradations and outages, understand issues, automate remediation, and optimize cloud spend.

How ServiceNow uses AIOps to provide world-class ITOM

Service-aware CMDB

ServiceNow CMDB acts as a single system of record that maintains and updates data about key infrastructure elements (configuration items or CIs) like servers, printers, routers, switches, etc. A service-aware CMDB is a critical and powerful source of data for AIOps.

ServiceNow discovery can be used to populate and update the CMDB, thereby ensuring that CI data and relationships are always relevant and reliable. For effective AIOps, the CMDB should have service context, which is automated by the service mapping feature. To realize maximum value from ServiceNow products and achieve effective service level reporting, we recommend following the common services data model (CSDM) for modeling the CMDB and services data.

Knowledge base and historical task data

The availability of historical data for incidents, changes and problems enables

ServiceNow to make more accurate and effective predictions related to task creation, routing and remediation. The presence of a knowledge base that is mature, properly categorized and continuously managed also makes ServiceNow AIOps more effective.

Event management and predictive intelligence

The effective use of predictive intelligence and machine learning techniques enable event correlation, anomaly detection and prevention, and self-healing through automated remediation. It also provides a unified view into IT health, service performance, availability, and related alerts and events.

Cloud management and optimization

ServiceNow improves productivity and visibility of all cloud services by bringing all cloud data and resources together. It also manages and provisions cloud resources and optimizes cloud spend through advanced analytics and automated workflows.



Digital transformation accelerators

AIOps is a key theme enabling enterprises to embark on digital transformation journeys. [Infosys' Enterprise Service Management Café](#), built on the ServiceNow cloud platform, leverages the power of AIOps to deliver ready-to-launch applications. This flagship solution, part of [Infosys Cobalt](#), comprises over 50 industry cloud solution blueprints,

process templates and ready-to-deploy code that accelerate service experience transformation.

Benefits of AIOps on IT health

Some of the key benefits of AIOps are:

- Improved uptime and business service availability
- Reduced event and incident volume using cognitive patterns and operational intelligence

- Improved agility to adapt to the speed and complexity of changing technologies
- Real-time visibility into the health of key business services
- Improved productivity, world-class customer and employee experience
- Zero-touch resolution through automated remediation and self-healing mechanisms



Conclusion

Digital transformation has become necessary not only for facilitating competitive advantage but also for ensuring the survival of most organizations. Nowadays, IT departments are expected to become strategic partners in managing organizational digital transformation initiatives. AIOps with its capabilities like self-healing, auto remediation, IT health visibility, and more, can help IT departments effectively drive such initiatives. Choosing the right cloud-based platform and accelerators is what will differentiate enterprises as they chart out successful digital transformation journeys.



About the Authors



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Lakshmi Sirisha heads the IT Operations Management service line for Infosys Cloud and Infrastructure practice. She has extensive experience in ITOM, AIOps, Cloud Service Integration, Enterprise Asset and Software Asset Management. She leads multiple transformation programs involving consultation and implementation of various ServiceNow solutions with focused cost optimization objectives. She actively works for women enablement and is committed towards diversity and inclusivity at the workplace.



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Ashok is a core member of the Infosys IT Operations Management (ITOM) Center of excellence and he has been leading the development of content like training materials, thought leadership documents, pre-sales decks, delivery accelerators etc. for the ITOM service line. He has extensive experience in IT Operations Management (especially CMDB), IT Asset Management and Software Asset Management. He was part of various successful ServiceNow implementation programs related to these areas.

Infosys Cobalt is a set of services, solutions and platforms for enterprises to accelerate their cloud journey. It offers over 14,000 cloud assets, over 200 industry cloud solution blueprints and a thriving community of cloud business and technology practitioners to drive increased business value. With Infosys Cobalt, regulatory and security compliance, along with technical and financial governance comes baked into every solution delivered.

For more information, contact askus@infosys.com



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