



# **Modern Observability and Automation**

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A Strategy for  
Enterprise Transformation

**Organizations with the right level of observability can gain insight into user experiences and the inner workings of their complex environments.**

While IT organizations have traditionally monitored systems and applications through metrics, traces and logs, these approaches have not often been linked. A modern operations environment evolves from availability and applications performance monitoring to include observability. An effective observability approach built on a set of principles that leverage people, process, and technology to gather data will allow organizations to gain insight into the behavior and performance of complex systems by bringing together data from disparate systems, services, and applications, discovering and linking dependencies. This is increasingly important in the context of modern distributed and cloud-based architectures, where applications are composed of numerous interconnected components running across different environments.

Ultimately, this part of a modern operation enables positive business outcomes—and leads to proactive conversations.

But this all depends on one critical element. Automation. An organization's ability to leverage its data to improve performance, availability, and other key business metrics is crucial. To get the best results, observability should be integrated into development and automated deployment pipelines, rather than added after.



**By 2026, [Gartner projects](#) that 70% of organizations that employ observability will reduce decision-making latency, giving them a competitive edge.**

# A Holistic View With Observability

The value of modern observability lies in its ability to provide a holistic view of the system's health and performance, enabling organizations to proactively identify and resolve issues, optimize performance, and improve the overall reliability and user experience. Key aspects of the value of observability are:



## Problem Identification & Troubleshooting

Quickly identify and diagnose issues within complex systems. This helps reduce mean time to resolution (MTTR) and minimizes the impact on users.



## Performance Optimization

Optimize the performance of your systems. By monitoring and analyzing metrics, teams can identify bottlenecks, fine-tune configurations, and make data-driven decisions.



## Capacity Planning & Scalability

Gain insights into the resource utilization patterns and system trends.



## SLA Management

Proactively identify deviations and take necessary actions to prevent issues and ensure service availability.



## Continuous Improvement

Provides valuable feedback loops for continuous improvement.



## Collaboration & Shared Understanding

Facilitate collaboration among different teams involved in the development and operation of software systems with a common set of data and tools enabling more efficient problem-solving.

# Automation

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The new hybrid world requires automation. It enables organizations to deliver system availability, performance, resiliency, security, and operational improvements in a complex, constantly changing environment.

To keep up with the pace of infrastructure demands from DevOps teams, developing an effective automation strategy is a must for any modern operations organization. Automation empowers IT teams by:

- Eliminating manual, time-consuming tasks, allowing IT professionals to focus on more strategic and high-value activities.
- Ensuring tasks and processes are executed consistently and according to predefined standards.
- Integrating operational disciplines and tools into CI/CD pipelines to ease developer access to critical production capabilities.
- Enabling IT operations to keep pace with the rapidly changing demands of modern environments and respond quickly to changing business needs.
- Ensuring that systems adhere to security policies and regulatory requirements, reducing the risk of non-compliance and associated penalties.

This enables organizations to focus on strategic initiatives, reduce downtime, optimize costs, and enhance collaboration, ultimately driving improved business outcomes.

It is these enabling capabilities that makes automation essential to observability.

# Observability Defined

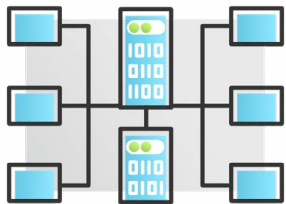
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Observability enables an organization to collect and aggregate data from disparate systems within their production environment, analyze that collected data, identify errors, anomalies and potential sources of disruption, create support tickets, and apply remediation. Tickets are then closed automatically using an already-in-place runbook. This type of automated process can run on its own 24/7.



# Automation and Observability

Organizations integrating automation into their observability approach should consider four core benefits that will enable innovation and drive better outcomes.



## 1. Data Management

Centralized operational data management enables efficient data analysis, correlation, and reporting, empowering teams to gain comprehensive visibility into system behavior and performance. Automated processes can be set up to fetch data from different systems, components, or services and feed it into a centralized observability data store, facilitating easier access and analysis.

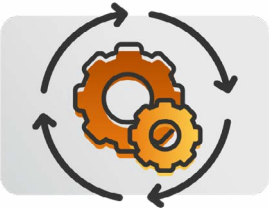
Added benefits include optimized data storage with purging or archiving based on automated retention policies, ensuring that data stored remains optimized and relevant and cost is streamlined. By automating user management, permissions, and authentication processes, organizations can enforce access and ensure compliance with security and privacy requirements to the centralized observability data.

By leveraging automation to manage observability data in one central location, organizations can streamline data management, improve accessibility, and enhance the ability to derive meaningful insight, reducing the risk of missing critical information.



## 2. Manage the Observability Environment

Modern systems are often highly distributed, dynamic, and scalable, with numerous components and services. Manually instrumenting and configuring observability tools across these systems can be time-consuming and error prone. Automation allows for the efficient and scalable deployment of observability solutions, ensuring that new components are automatically instrumented, and existing ones are reconfigured or updated as needed. This scalability is crucial as systems evolve and grow.



## 3. Release Cycle

As part of the release process, observability practices can be automated to ensure that monitoring and instrumentation are consistently applied to new features or changes. This includes automated deployment of observability agents or libraries, configuration of monitoring and logging settings, and the inclusion of relevant metrics, logs, and traces in the release artifacts. In addition, by automating the provisioning of resources, such as virtual machines, containers, or cloud services, organizations can ensure that the necessary infrastructure for observability is in place during the release process.

Additionally, automation can help ensure that testing is executed consistently and efficiently as part of the release process. During the release and post-release, monitoring rules, thresholds, and alerting mechanisms can be implemented to ensure that the system is effectively working and, if any issues are detected, automated rollback processes can be triggered to revert the release and restore the previous version, preventing potential disruptions to observability.



## 4. Remediation

The integration of observability and remediation creates a closed-loop feedback system that enables continuous monitoring, analysis, and action. It promotes faster incident response/management, supports continuous improvement, and optimizes resource allocation, allowing organizations to proactively and efficiently manage their systems. The result is improved performance, reliability, and user experience.

By setting up predefined rules or algorithms, organizations can automatically detect patterns or anomalies in observability data and trigger remediation actions without human intervention. Automated remediation also enables organizations to handle a larger volume of incidents without requiring additional human resources. This scalability helps organizations manage complex or highly distributed systems and respond to issues in a timely manner, even during periods of high demand. Most importantly, teams are freed-up to focus on more strategic or complex tasks.

# Modern Observability With a Proactive, Transformational Approach

Organizations looking to build or transform their observability capabilities require a solid foundation built on industry-leading AI-powered automation capabilities.

## Observability Solutions With Automation and AI

IBM offers a deep portfolio of industry-leading, AI-powered observability solutions that integrate automation at their core. These transformational tools include:

### IBM Instana Observability

IBM Instana Observability helps organizations monitor and manage the performance and health of their applications and infrastructure. Instana provides automated application performance monitoring and infrastructure monitoring capabilities, allowing teams to gain real-time insights into their systems and quickly identify and resolve issues.

[LEARN MORE](#)

### IBM Turbonomic

IBM Turbonomic ensures optimal performance and resource utilization across application and infrastructure environments. It uses AI-driven automation to analyze real-time data on application workloads, infrastructure resources, and business policies to make intelligent decisions and take actions to optimize resource allocation.

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### IBM SevOne Network Performance Management

IBM SevOne Network Performance Management assists organizations with monitoring and optimizing the performance of network infrastructure. It provides comprehensive visibility into network devices, links, applications, and services, allowing teams to proactively detect and address network performance issues the performance of their network infrastructure.

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### IBM Watson AIOps

IBM Watson AIOps (Artificial Intelligence for IT Operations) helps organizations streamline and enhance their IT operations and service management processes. It leverages artificial intelligence, machine learning, and automation to intelligently analyze and interpret vast amounts of data from IT systems, infrastructure, and applications, enabling proactive monitoring, faster incident response, and efficient problem resolution.

[LEARN MORE](#)

These IBM tools provide IT operations teams with the power to manage the complexity of a modern operations environment. Allowing them to stay ahead of the demand for better user experiences and achieve greater operational efficiencies to drive better outcomes.



# Developing a Comprehensive Observability Strategy

To drive these outcomes, having the right tools is important, but it is essential to have the right experienced team, skills, and processes.



This combination forces introspection on the business impacts of observability, as they relate to monitoring, availability, performance, and security. It requires knowing the desired observability outcomes and business goals, determining the process and skills needed to define them, and aligning the outcomes with the business goals.

This sets a roadmap for deploying tools such as Instana, SevOne, Watson AIOps, and Turbonomics, within cloud-native monitoring environments or heavily distributed network environments.

# Modern Operations and Observability With Evolving Solutions

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No matter where you are in your observability journey, Evolving Solutions meets you right where you need them, to help you:

- Understand the current state of your technology stack
- Ensure your platforms deliver the best experience and value to your users
- Identify and resolve issues faster

Whether you need to implement a fully autonomous process or take the next step in your journey, the observability experts at Evolving Solutions know just how to help you get started.

Our team works with you to understand how the underlying technology processes will impact your desired business outcomes. We also define how your business goals relate to the technology process, tools, and capabilities, and translate them into the changes needed to optimize your IT environment.



**Let's talk**