

Active, Infinite scale

Active Observability, and Why You Need a Data Fabric



How Businesses Benefit from Data Control

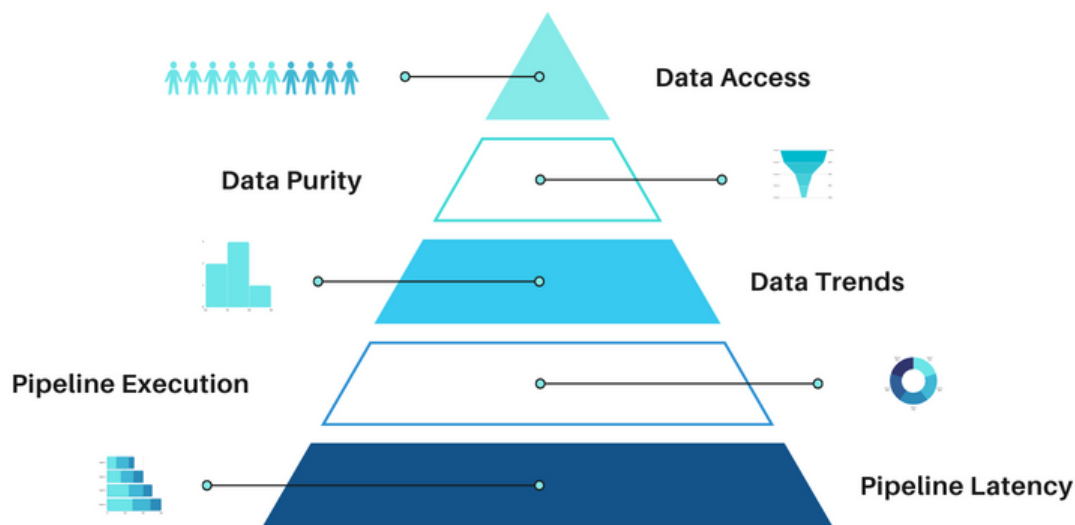
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Understanding Active observability

Active Observability deals with how we understand and manage complex software ecosystems. Unlike traditional monitoring, where data is collected and analyzed retrospectively, active observability embraces a proactive stance. It actively generates, collects, and analyzes real-time data streams, unveiling insights that are not only informative but actionable.

For instance, imagine an e-commerce platform that utilizes active observability. As traffic surges during a flash sale, active observability detects a potential performance bottleneck in real-time. The system automatically scales resources to accommodate the influx, ensuring seamless user interactions. Simultaneously, predictive insights identify a potential security vulnerability, prompting an automated security patch deployment. These actions transpire in real-time, enhancing performance, security, and user satisfaction.

Active Observability Steps



Benefits of Active Observability

1. **Instant Issue Identification:** Active Observability allows organizations to identify and address issues in real-time, preventing potential downtimes and minimizing disruptions.
2. **Enhanced User Experience:** By proactively optimizing performance, organizations can deliver a seamless user experience, thereby improving customer satisfaction.
3. **Efficient Resource Allocation:** Real-time insights enable precise resource allocation, ensuring optimal utilization and cost-efficiency.
4. **Predictive Insights:** Active Observability's predictive capabilities enable organizations to anticipate and mitigate issues before they escalate.
5. **Automation-Driven Efficiency:** Proactive automation reduces manual intervention, accelerating incident response and resolution.

Active Observability with Apica

OBSERVE from Apica introduces an advanced solution for comprehensive visibility into your digital ecosystem. With automatic anomaly detection and root cause analysis, gain real-time insights across all infrastructure layers.

OBSERVE allows you to:

- Optimize performance
- Reduce downtime, and ensure data control without vendor lock-in.
- Boost compliance and adapt to evolving business needs effortlessly.
- Elevate your observability strategy with Apica's Active Observability.

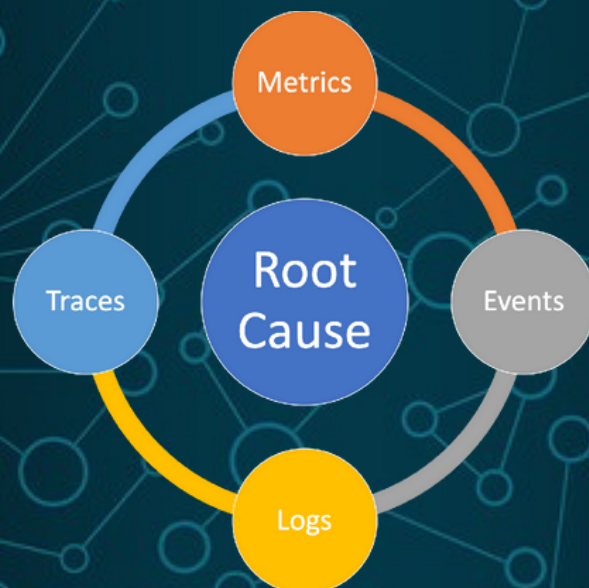
MELT and getting to Root cause

MELT, which stands for Metrics, Events, Logs, and Traces, is a comprehensive approach in the field of IT and software engineering for monitoring and troubleshooting complex systems. This methodology integrates four distinct types of data sources to provide insights into the performance, behavior, and health of systems, applications, and services. MELT is particularly useful for identifying and resolving issues efficiently, with a focus on getting to the root cause of problems.

Now that we understand MELT, let us see how root cause analysis needs MELT. Root cause analysis is the process of identifying the underlying cause of a problem. For e.g. let's say you have an application showing a performance degradation say an API showing slower response increased.

So as you can see, MELT is essential for root cause analysis. But does MELT address all of your needs? What if you need the data available for other looking at the trace data, You can see that the slow down is happening at the database query.

This is where logs come in. By looking at the logs of the database query, you can see that there were traces that came in. Traces show you the flow of a request as it goes through your system. Metrics play a role. By looking at the metrics of the API, you can see that the response time has increased. But this is not enough to root cause, you need to understand why the API is running slow. This is time. In order to root cause, you first need a way to see that the API is running slow. This is where Events also help in this process. By raising an event when the database connectivity fails, you can Now that you know where the problem is, you need to understand why the database query is slow.



Beyond MELT to an observability data fabric

“By 2024, data fabric deployments will quadruple efficiency in data utilization while cutting human-driven data management tasks in half.” - Gartner



Think of data fabric as a self-driving car:
An autonomous system for your complex data flows.

A Data Fabric is a platform that allows you to not only collect, store, and query data from all layers of your technology stack but also provides you with controls to transform and connect your data to consumers on-demand.

From this observability data lake, you can then connect your data to consumers on-demand using a variety of methods such as streaming, batch jobs, or API calls. This allows you to not only provide observability data to the consumers that need it but also gives you the ability to control how this data is used.

Data control is an important part of any observability strategy. Data control includes things such as data filtering, data augmentation, volume reduction, control license spending, and having rapid control for flexible data retention on demand. E.g. some parts of your observability data may need to be retained for 30 days while others for 1 yr.

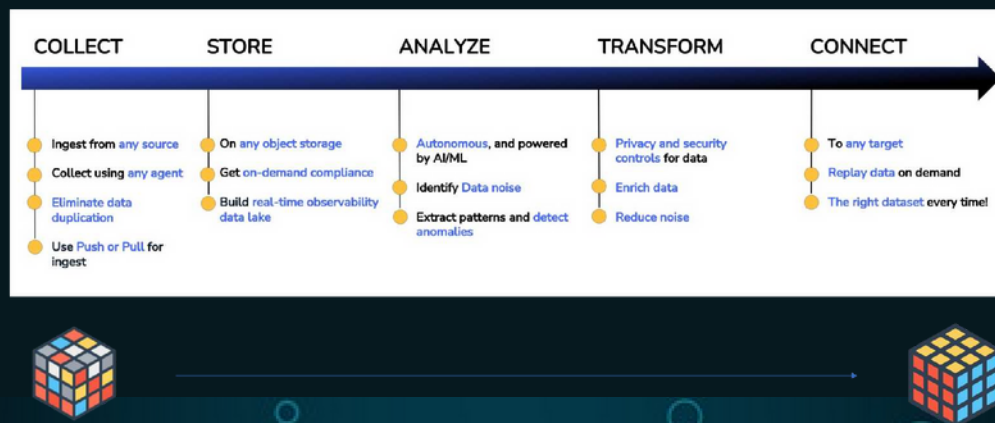


It's all about data control!

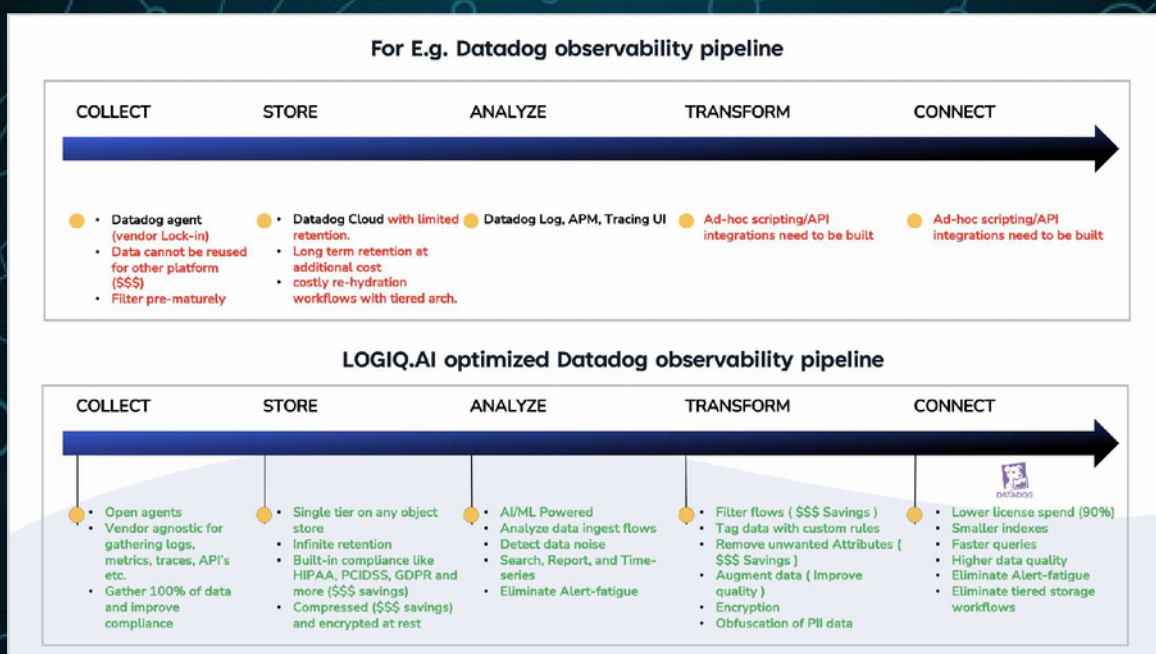
Understanding data control

“Data is a precious thing and will last longer than the systems themselves.” Tim Berners-Lee

Let us look at a few other examples of data control. Data filtering is the process of removing sensitive or unwanted data from your observability data before it is made available to consumers. This can be done using a variety of methods such as whitelisting, blacklisting, or user-defined filters. Data augmentation is the process of adding additional context to your observability. There are many aspects and benefits of implementing an observability data fabric for your organization. Here's an infographic that can help you visualize the various



Let us see how this can help with your observability implementations. Let's take an example of a Datadog observability implementation. How can an observability data fabric help with Datadog?



The same gains can be realized by using the apica.io observability data fabric with many vendor solutions such as Datadog, Splunk, NewRelic, Elastic to name a few.



Modernize your active observability projects with a data fabric. Bring agility, automation, cost savings, and compliance.

2X More data

1/2 Cost



90%

Reduction in TCO

Conclusion

An Active Observability Data Fabric provides you with a complete view of your system by collecting data from all layers of your technology stack and making this data available to consumers on-demand. This allows you not only to root cause problems quickly but also to prevent problems from happening in the first place.

So what's the haul about? Start with Apica's Active Observability Data Fabric today!