

4 reasons observability and APM are different



Observability is trending, and for good reason. Modern observability solutions—focused on outcomes—drive innovation, exceptional experience, and ultimately, competitive edge. Because engineers now need to focus more on making the systems they build easier to observe, traditional monitoring software vendors (plus the technology industry analysts and influencers advising them) have rushed to offer their takes on observability. It's not hard to understand why creating confusion is in their interests. Don't be misled.

3 generations of disruption

Monitoring and observability are related. But they're not the same. Here's the evolution:

Generation 1 On premises (data center) 1998-2008	Generation 2 (IaaS, VM-based) 2008-2018	Generation 3 (Microservices and containers) 2018-?
<p>Performance monitoring was added to monolithic applications that ran on dozens of data center servers. SNMP traps and agents recorded (red/yellow/green) status of physical servers, storage and networking. Virtual machines (VMs) and cloud changed everything.</p>	<p>Application performance monitoring (APM) tools debuted when 1000s of VMs in data centers ran across many hosts. They delivered visibility into the performance and availability of private, then public cloud services with VMs and the applications running on them. Simple, siloed APM data was enough until cloud footprints scaled and teams embracing DevOps needed scalability, reliability, and shared data insights.</p>	<p>Observability solutions now empower teams widely adopting containers and microservices architectures for speed, flexibility, and scalability with meeting business goals. Observability tools scale. They have cloud native world capabilities and give developers flexibility to choose which data from apps and infrastructure they want to collect and analyze—all without vendor lock in.</p>

4 reasons observability is better than APM tools for cloud native environments

1. Data volume

With APM tools, data collection (particularly high-cardinality data collection and analysis) is limited. Containers and VMs produce the same volume of telemetry data. Scaling from thousands of VMs to millions of containers delivers an order of magnitude increase in observability data to collect and analyze. Observability solutions are optimized to handle data at scale.

2. Ephemerality

Tools from APM vendors weren't designed for dynamic environments. Yet containers are dynamic. There are so many of them and containers may only live for a few minutes while VMs may exist for many months. Observability solutions maximize the value of data in dynamic environments by providing flexibility and control of data for both short- and long-term use cases.

3. Interdependence

APM tools are good at handling potential and anticipated issues. Observability solutions are too, but they do so much more. Relationships between apps and infrastructure are predictable for organizations running only monolithic apps and VMs. Contrast those with relationships between microservices and containers in the cloud era that are much more fluid and complex. With cloud environments, data cardinality is higher as well, making it much more challenging for teams to make associations between applications, infrastructure, and business metrics. Observability connects the dots.

4. Data formats

Observability solutions ensure freedom of choice. APM tools lock users in because their appointed agents only ingest and store data in proprietary formats that the vendors decide. And managing those silos inhibits collaboration while increasing costs. With observability solutions, organizations get the compatibility with open source standards and data ownership they want and need. Teams can also share and access data across domains to better collaborate which leads to faster detection and issue resolution.

The bottom line: Observability is the new operational paradigm.

Traditional technology for cloud APM tools alert organizations that there is a problem. Modern technology for cloud native, observability delivers detailed data in context for fast remediation. True cloud native observability focuses on business outcomes—knowing, triaging and understanding issues—so teams improve mean time to remediate (MTTR) and mean time to detect (MTTD) while achieving KPIs such as boosting experience.

Download the [Get the facts about cloud native observability](#) ebook to learn more.

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