

AppDynamics support for Internet of Things

What is it?

It's no secret that one of the hot topics in the market right now is the Internet of Things. Gartner defines the Internet of Things (**IoT**) as a network of physical objects that contain embedded technology to communicate and interact with external systems. These devices come in different forms — wearables, connected cars, smart home appliances, medical equipment, industrial equipment, and a host of other consumer, industrial, and business products.

IoT performance management requirements and challenges

Today, enterprises have deployed monitoring solutions to ensure that their customer-facing applications are running at optimal levels at all times. With IoT, the stakes for performance management are even higher. For example, in a medical environment, a non-responsive IoT device could lead to a potentially hazardous condition for the end user or patient. That's why it's even more imperative to manage the performance and experience of IoT devices.

What makes IoT application management hard? In one word: **COMPLEXITY**. IoT applications present several new issues:

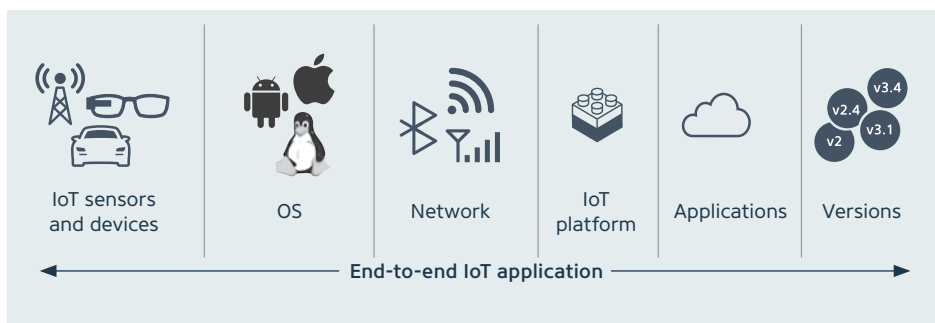
- Device and interconnectivity protocols explosion: IoT devices come in all forms and flavors, and will interconnect using many different networking standards. Instrumenting and collecting relevant metrics from these diverse platforms will be a challenge for any management solution.
- Many systems and platforms: To support a wide variety of IoT use cases, IoT applications will use many off-the-shelf IoT software platforms. The performance of the IoT application will depend on the performance of these platforms.
- Dramatically increased scale of everything: In a world with billions of devices, the scale of data — monitoring data, application data, etc. — that needs to be managed will increase significantly.
- Increased reliance on cloud systems: To manage the scale and growing needs of IoT devices, many applications will be architected using cloud-based systems.
- The need for integrated analytics to make sense of IoT data and connect operational data to business impact.

The world will see 25 billion internet “connected things” by 2020 and IoT will produce close to \$2 trillion of economic benefit globally.

Gartner

KEY FEATURES

- Trace end-to-end IoT applications and business transactions from end-point, platform, and back-end application
- Automatically baseline and monitor all IoT transactions
- Integrated analytics to collect and correlate business, usage, and operational metrics



How AppDynamics supports effective IoT management

AppDynamics provides the industry-leading Application Intelligence Platform solution to manage IoT applications and systems. The AppDynamics solution provides the following capabilities:

- **Comprehensive instrumentation of the end-to-end IoT application:** Collect metrics and events from all elements and systems that support the IoT applications, including IoT devices and apps, cloud, application servers, databases, cloud (private/public), and server and network components; the AppDynamics solution consumes very low overhead, typically less than 2%.
- **Monitor, baseline, and ensure IoT application performance and experience:** AppDynamics automatically traces and visualizes the end-to-end application and its business transactions; it also sets the baseline for all business transaction metrics, and when these metrics are breached, the solution triggers alerts to quickly identify and troubleshoot issues.
- **Analyze all IoT application data:** The AppDynamics Application Analytics solution automatically collects and correlates application performance and business data to provide actionable insights into IT operations, customer experience, and business outcomes. With this simple and easy-to-use platform, IT and business users can now quickly answer deeper, more meaningful questions than ever before, all in real time.

AppDynamics IoT case study: Connected car management

A tier-1 connected car company was looking to manage its in-car source of infotainment and entertainment center, which provided key services for the driver — including access to Facebook, weather, maps and routes, etc. The connected car manufacturer uses AppDynamics to collect metrics from its car-based Java machine; the business transactions from this IoT device are also traced all the way back to the back-end application. Now when the user calls with a car issue, the service desk has proactive visibility into the issues so they can be addressed quickly.

KEY BENEFITS

- Automated and accurate visibility into IoT applications
- Proactive IoT application performance management and reduced MTTR
- Understand the performance/operational impact on business outcomes
- Scalable, secure, flexible on-premises and cloud-based platform

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