NodeSource for Microservices

Common industries:

Financial services, gaming, media content distribution or syndication.

A microservices architecture (including APIs and SOA) structures applications as a collection of loosely-coupled services which enable numerous granular business capabilities. In addition to making continuous delivery and deployment of large, complex applications possible, microservices also enable efficient evolution of an organization's technology stack. For organizations in many industries — from financial services to interactive gaming and media — Node.js is especially useful in allowing applications to talk to each other via APIs for increased operational and business success.

Financial Services

Many forward-thinking financial services companies strive to add value over traditional banks, adopting new technologies and delivering services through user-friendly digital channels. Node.js offers a lightweight, event-driven model ideal for building APIs that allow applications to talk to each other.

Though eager for competitive advantage, financial services businesses remain risk averse; with all the compliance, security, and privacy concerns that go along with managing customers' money. If just one application is unavailable for a single minute, millions could be lost. These "million-dollar-a-minute" apps require serious security and failure predictability, as well as the ability to quickly triage and correct any outages or issues as they arise.

Gaming and Media

If gamers lose the ability to make in-game purchases or a game goes down, primary revenue streams are interrupted, and the user experience is diminished. Interactive online games are common targets for hackers, so security is paramount. Media companies distribute content to partners and customers online, and often their entire businesses are on the web. If they can't provide the content, they lose revenue.

Node.js with NodeSource

For modern organizations, Node.js is a tremendously popular technology choice it's easy to use and rarely breaks. But when a problem does arise, it can be a difficult to understand immediately what went wrong, where, and how to fix it.

When moving from development to production, DevOps teams often struggle to understand how to monitor and predict problems with Node.js.. NodeSource provides visibility into application behavior and overall system health, so you can understand what's going on in your code more than you can with Node.js alone. NodeSource can help you find the root cause of performance issues, identify what broke, and where to go within the code to fix it -- saving days or months of work, and potentially millions of dollars in revenue.

N|Solid for MIcroservices

Microservice processes are ephemeral; because they are, short-lived and frequently changing, capturing forensic data can be a challenge, especially in regards to CPU profiling or memory snapshots — the very things that provide insight into application performance. It's possible to get those artifacts with Node.js and other open source products, but the unique challenges of transferring information about memory or crashing problems in order to examine them poses security challenges. Further, OS instrumentation and augmentation of scripts can present security risks, have adverse effects, and provide imprecise results.

N|Solid removes all these friction points and makes profiling, capturing snapshots, or troubleshooting event-loop lag simple and painless. Its architecture allows ephemeral artifacts to be moved to a stable, user-determined location. Even if the process goes down, the artifacts remain, long after a crash or machine termination.

If a process in production is completely blocked and insight into a non-responsive application is required, there is no solution in the open source world. Because the NodeSource agent lives inside the event loop, it can retrieve that critical information. Further, the system uses encryption, cryptographic keys and curves, and is a complement to any protocol.

Rigorous development processes help, as does testing in a staging environment, but production is where the heavy loads, unique use cases and long tail anomalies occur. Some patterns will only occur in a production environment. Visibility, insight and post-mortem debuggability are essential in triaging and resolving problems quickly and effectively. NodeSource saves time, money, and resources in finding and fixing a bug that, if left unresolved, could take out internal business processes, applications, or APIs, negatively impacting customers or partners.

Key Considerations	How NodeSource Provides Value
Protecting critical data and services	N|Solid ships with configurable security policies to help harden your applications. Always-on vulnerability scanning makes you aware of emerging risks in real time, not just at runtime.
Fast and reliable performance for end users	N|Solid provides tools for profiling application performance and supports workflows that give the entire team insight into behavior.
Compliance with regulatory and self-imposed standards	NodeSource Certified Modules provides license enforcement and quantitative trust in third-party Node.js modules, empowering developers to use open source code with minimal overhead while ensuring compliance and mitigating risk.
Ability to rapidly detect and remediate issues and reduce or eliminate outages	Customizable alerts give your team instant notice when a problem is detected, enabling remediation of issues before they escalate to a full-scale outage and reducing mean time-to-resolution (MTTR).
Increasing innovation velocity to maintain competitive advantage	The NodeSource platform provides a turnkey way to standardize and operationalize Node.js development across multiple teams within your organization.

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