

NodeSource for Legacy Application Migration

Common Industries:

Government, financial services, insurance, transportation, and any other organization with legacy applications

The need to modernize legacy applications is becoming increasingly common. Twenty- to thirty- year-old legacy systems are relied upon by banks, government agencies, and other businesses to perform essential customer and business transactions. Most of these aging systems aren't able to keep up with ever-increasing demands, especially those that manage large amounts of data and high transaction rates. As a result, leaders across industries and departments, from IT to the C-suite, are worried about threats to mission-critical capabilities, security breaches, performance issues, and service disruptions.

Efforts to keep up with technology changes meant old, slow-performing and resource-intensive systems were incrementally updated over time. But the resulting accumulated technical debt can be massive.

The answer for many organizations is legacy application migration and modernization on new platforms for improved resource optimization, higher scalability, faster data speed and quicker workload balancing — in-house or in the cloud.

Node.js with NodeSource

For many organizations faced with legacy migration, Node.js is a tremendously useful development framework; it promotes a decoupling of the architecture paradigm, enabling rapid iteration and reduced risk. The patterns that Node.js introduces into the development environment are broken into smaller pieces which allows for code with disposability, and the option of more aggressive and flexible development. But problems can arise with many smaller pieces of code, and it can be a difficult to immediately understand what went wrong, where, and how to fix it. Third-party packages from the open source community can help speed the development cycle, but using them can introduce a new set of quality control issues.

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. The N|Solid platform 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. Additionally NodeSource Certified Modules is a secure, private registry of trusted Node modules. NCM calculates a trust score for each public third-party module, monitoring for security vulnerabilities and dynamically adjusting scores in real time to identify emerging risks. Armed with an understanding of a module's risk profile, users can confidently install third-party modules in mission-critical environments.

N|Solid for Legacy Migration

N|Solid removes common friction points and makes it safe and simple to monitor and protect production applications. Make rapid incremental changes, debug issues faster, and make better architectural decisions with the ability to see performance degradation or problems as code continues to change. Customers have saved weeks of troubleshooting performance regressions, high latency, and other issues. By using the N|Solid in the development and testing phases of the migration process, teams could identify architectural anti-patterns and potential problems in development, ultimately driving savings on infrastructure costs as well as potential outages in production.

Maximizing the Value of Node.js

Applications performance monitoring tools can provide insight into services, applications and infrastructure, but at a very high level, and without visibility into the inner workings of Node.js. However, watching from the outside actually impacts the performance of the event loops, providing inaccurate data. Because the N|Solid runtime agent lives natively at the core of your application, it can capture highly detailed, Node.js-specific data with a negligible impact on performance. Watching from the inside out also delivers more metrics because it operates alongside -- not above -- your applications.

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 bugs that, if left unresolved, could threaten the success of legacy migration projects.

| Key Considerations | How NodeSource Provides Value |
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| 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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