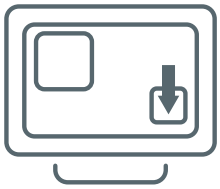
MODERN MONITORING MADE EASY

Giving Mainframe Apps a New Lease of Life

Using Node.js and CA Application Performance Management

AT A GLANCE

Digital channels. Mobile apps. Online services. The way organizations engage with their customers and employees is changing—and that means underlying IT architectures need to change too. But modernizing the mainframe can introduce new risks and challenges, especially around performance management. Discover how a leading bank is using Node.js to mobilize its mainframe applications, while safeguarding the user experience.



266,472

Node.js downloads on average per day[1]

Many Node.js apps in production now need to scale efficiently, but also be monitored, triaged and controlled.[2]

Bridging the Gap Between Mainframe and Mobile

Despite the advent of new technologies, the mainframe remains a bastion of many enterprise IT infrastructures, hosting critical datasets such as customer records, product inventories and financial transactions. Digital services and mobile apps need to draw on these datasets to provide the seamless experience that customers and employees expect.

Rather than rewrite legacy applications, organizations need to find a way to bridge the gap between the mainframe dataset at the back end and the mobile app at the front end. This often results in the introduction of a new layer of functionality—and a new layer of complexity.

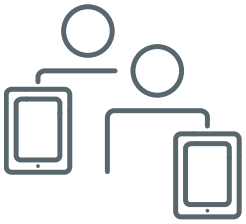
Developers are increasingly using Node.js to help expose mainframe components as APIs and to provision microservices. Although this overcomes the challenge of exploiting legacy applications for new purposes, it opens up a performance management can of worms. To ensure digital services and mobile apps meet user expectations, IT teams need to be able monitor performance at every layer and quickly determine the root cause of any outage or degradation.

Without the right performance management tools in place, Node.js applications can quickly become an IT blind spot—and a business liability. Thanks to dedicated Node.js agents, CA Application Performance Management (CA APM) can help prevent such a scenario, as one large bank discovered.

Banking on a Seamless User Experience

To stay competitive in today's application economy, banks need to continuously adapt their services to meet customer demands. As part of a digital transformation, this bank wanted to launch a mobile banking app to its customers.

As well being highly scalable, the app needed to draw on legacy mainframe applications and datasets, which is where Node.js comes in. And the bank needed to ensure its new Node.js applications were performing as expected.



74%

improvement in customer experience achieved by organizations following digital transformation[3]

CA APM Node.js agent

Key Benefits

- Optimizes user experience
- Supports digitalization and transformation
- Frees up internal resources
- Safeguards reputation and revenue

Key Features

- Monitors and detects performance problems
- Generates intelligent analytics and alerting to support triage process
- Collects deep-dive diagnostic snapshots of transactions
- Correlates performance of Node.js components to application tier

Initially, the bank decided to take an infrastructure-based approach to performance management, which actually made it difficult to correlate issues reported by individual users back to different elements in the application stack.

The company was already using CA APM to monitor its Java™ mainframe components, and added the Node.js agent to gain end-to-end visibility of the application stack and the end-user experience.

With the Node.js agents, the bank can monitor application performance from the mainframe to the mobile. Individual customer transactions are tracked as they pass from the mobile banking app through Node.js and Java components and on to the legacy mainframe application. These capabilities help the bank triage and correlate performance issues more easily—freeing staff from time-intensive troubleshooting exercises and ensuring seamless mobile banking services for thousands of customers.

Realizing New Opportunities

As more business processes and workloads become digitalized and mobilized, eliminating potential blind spots is essential. Just one break in the IT value chain can result in performance issues for thousands of users, and significant reputational and financial losses. The mainframe remains a major IT and business asset, but without modernization, it will become an untapped legacy asset.

By leveraging dynamic application development techniques, organizations can unlock new value and opportunities from existing mainframe investments—but only if they can safeguard performance and the user experience all the time, every time.

1 Rod Vagg, "Node by Numbers 2015," Jan 5, 2016, https://nodesource.com/blog/node-by-numbers-2015/

2 Joe McCann, "The (Enterprise) Node Community," Jan 12, 2016, https://nodesource.com/blog/the-enterprise-node-community/

3 CA Technologies, "Keeping Score: Why Digital Transformation Matters Report," Sep 27, 2016, https://www.ca.com/us/rewrite/articles/digital-transformation/keeping-score-why-digital-transformation-matters-report.register.html

Learn how CA APM can monitor your modern environments. Visit **ca.com/apm**

CA Technologies (NASDAQ: CA) creates software that fuels transformation for companies and enables them to seize the opportunities of the application economy. Software is at the heart of every business, in every industry. From planning to development to management and security, CA is working with companies worldwide to change the way we live, transact and communicate – across mobile, private and public cloud, distributed and mainframe environments. Learn more at **ca.com**.

Copyright © 2016 CA, Inc. All rights reserved. Java and all Java-based trademarks and logos are trademarks of Oracle Corporation in the United States, other countries, or both. All other trademarks, trade names, service marks, and logos referenced herein belong to their respective companies. This document does not contain any warranties and is provided for informational purposes only. Any functionality descriptions may be unique to the customers depicted herein and actual product performance may vary.

200-229207-1016