

Electron macOS Performance Regression Report

Summary

After upgrading the Electron runtime used by an NSB/AppStudio 9.5.1 application, a significant performance regression was observed on macOS. The application source code remained unchanged throughout testing. The Windows build remains fast and responsive.

Test Environment

Component	Version / Details
Hardware	Apple Silicon M1, 16 GB RAM
Operating System	macOS Tahoe 26.4.1
NSB/AppStudio	9.5.1
Application	Approx. 5 controls on login screen, ~15 controls after login
Architecture	ARM64
Windows Build	Fast and responsive

Isolation Testing

The identical application source code was rebuilt using multiple Electron versions. To eliminate additional variables, AppStudio remained at 9.5.1 and later tests used electron-builder 24.13.3 and npm 10.8.2.

Electron Version	Result
31.2.0	Fast
32.3.3	Fast
33.4.11	Fast
34.5.8	Fast
35.7.5	Very slow
38.8.6	Very slow
40.8.0	Slow
43.1.1	Slow (better than 38, but still significantly slower than 34.5.8)

Observations

- The performance regression begins between Electron 34.5.8 and Electron 35.7.5.
- Application startup becomes noticeably slower.
- The entire UI becomes less responsive.

- Chrome DevTools Performance indicates degraded INP (Interaction to Next Paint) and LCP (Largest Contentful Paint).
- Disabling hardware acceleration improves responsiveness slightly but does not resolve the issue.
- The Windows build of the identical application remains fast.
- The application UI is relatively simple, so the issue does not appear to be related to UI complexity.

Conclusion

Testing strongly indicates that the regression is introduced by the Electron runtime after version 34.5.8. Since the application code, AppStudio version and operating conditions remained constant, the issue appears to be associated with changes in Electron and/or Chromium rather than the application itself.

Request

Could you please investigate whether Electron 35 and later introduce a rendering or performance regression affecting NSB/AppStudio-generated applications on Apple Silicon Macs running macOS Tahoe? If this behaviour can be reproduced, guidance on recommended Electron versions, configuration changes or possible workarounds would be greatly appreciated.