

Automating and Accelerating Android Development

BUILD-TEST-DEPLOY SOLUTIONS FOR ANDROID ENVIRONMENTS



Accelerate builds
10-20x



Automate handset
testing and reduce QA
time

Device development costs have a major impact on projects based on the Android™ platform. Electric Cloud® tools, including ElectricAccelerator® and ElectricCommander®, are designed specifically to reduce those costs, providing faster software builds and build-test-deploy process automation, including on-device testing. Both products are optimized for Android environments, including support for Ubuntu Linux, and integrations with Git and Gerrit. These solutions improve developer productivity, reduce development costs and reduce schedule risk for Android-based devices.

The ElectricAccelerator software build solution is fully compatible and optimized for use with the Android operating system, enabling up to 20X faster builds with a seamless out-of-the-box experience. While build times are not significant for a base Android distribution, integration of other technology stacks such as BSPs, radio and display drivers, and multimedia applications will expand a single product build into the multi-hour range. ElectricAccelerator's unique ability to seamlessly accelerate code builds, even for sources not compatible with 'make -j' or optimized for parallel execution provides a rapid and powerful way to keep build times in the 10-20 minute range. ElectricAccelerator also features support for Ubuntu, a popular platform for Android development.

ElectricAccelerator delivers capabilities virtually impossible for other tools:

- Automatic dependency discovery for safe parallel builds
- Accurate incremental builds
- Reduced hardware costs through clustering of compute resources

The ElectricCommander automation framework is designed to automate the build-test-deploy process that follows the creation of new code. ElectricCommander allows builds and tests to be run by developers or as part of a Continuous Integration (CI) or nightly build process.

ElectricCommander features plugins for both the Git version control system and Gerrit code review tool to allow it to invoke those tools as part of a seamless automated release process. ElectricCommander can also directly interact with test devices using the Android Data Bridge (ADB) protocol for device testing.

Since prototype hardware is frequently expensive and in short supply, it is critical to get the most out of the available devices, and ElectricCommander provides essential lab management features, including access control, queueing, and reporting, enabling developers to fully share these costly devices and improve their test cycle time.

ABOUT ELECTRICACCELERATOR

ElectricAccelerator breaks the “build bottleneck” by accurately executing parallel builds across scalable clusters of standard hardware to reduce build times by as much as 20x. To do this, ElectricAccelerator leverages patented technology that identifies and monitors job dependencies so you get fast and accurate builds.

ElectricAccelerator plugs seamlessly into an existing build infrastructure, without requiring modification of existing build scripts and tools, to distribute the work of the build to a cluster of servers. ElectricAccelerator supports Make, NMAKE, Visual Studio and Ant build environments.

ABOUT ELECTRICCOMMANDER

ElectricCommander® is an enterprise-class solution for automating the build and release process, making these “back end” software development tasks more repeatable and more efficient. Whether an organization wants to implement Continuous Integration, provide on-demand builds, or simply automate regularly scheduled build and test cycles, ElectricCommander can simplify and automate these typically manual tasks.

ElectricCommander has an extensible architecture that can scale to manage any size build and release infrastructure with ease. It requires minimal process changes to get started and deploy across multiple teams. ElectricCommander also provides the reporting and visibility organizations need for compliance efforts and release planning.

ABOUT ELECTRIC CLOUD

Electric Cloud is the leading provider of Software Production Management (SPM) solutions. Electric Cloud solutions automate, accelerate, and analyze software build-test-deploy processes to optimize both physical and virtual IT environments. The company’s patented and award-winning products help development organizations to speed time to market, boost developer productivity, and improve software quality. Electric Cloud software is used by 7 of the top 10 (As defined by Gartner 2008) mobile phone manufacturers to build devices with superior feature sets and efficient development methods, and is compatible with all major smartphone and mobile device operating systems.

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