

# Virtualized Build and Test Automation

*Dynamically provision virtual environments using  
ElectricCommander*

“In recent research, we found that organizations reported an average reduction in their development and testing costs by as much as 50 percent per project through the use of virtual machines. Our research in software production management shows that productivity was increased by as much as 12 times when using software production management tools. Every organization needs to include virtualization and software production management in their lifecycle strategy.”

– **Theresa Lanowitz,**  
**industry analyst, Voke**

Electric Cloud's ElectricCommander® is integrated with VMware® Lab Manager to deliver dynamically provisioned virtual machines for the software build-test-deploy process. The integrated solution delivers “push button” environment configuration to the development and QA organizations. This translates to faster time to market, better software quality and higher productivity for development organizations while reducing IT infrastructure and administration costs.

Most enterprise software build and test infrastructures are ripe for automation and virtualization:

- Multiple, disconnected build and test systems across locations
- Dedicated, underutilized hardware
- Home-built systems that are inflexible, error-prone, and don't scale
- Slow overall build and release cycles

ElectricCommander is the perfect complement to virtualization, making software production processes and tools as easy to configure, flexible and self-service as the virtualized environments on which they run.

VMware Lab Manager and ElectricCommander together create a “self-service” virtual lab that:

- Dramatically reduces server sprawl through consolidation
- Cuts the effort required to configure and run environments
- Improves quality through frequent testing
- Reduces the development organization's dependence on IT operations
- Reduces development and testing costs up to 50%
- Delivers savings of as much as \$1.5 million dollars per year <sup>1</sup>

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<sup>1</sup> From Voke Market Snapshots “Virtual Lab Automation,” and “Software Production Management,” Theresa Lanowitz and Lisa Dronzek.

The integration allows ElectricCommander users to create simple steps in their build and test procedures which will *automatically trigger* VMware Lab Manager to provision virtual servers and clean them up. Users can request a particular configuration from a library, have that configuration set up, run an automated build and smoke tests, and then tear down the configuration – with no manual intervention. The experience is seamless from within the ElectricCommander interface.

This capability gives developers the ability to build and test across multiple platforms and configurations prior to code check-in. QA has the ability to automatically snapshot virtual environments for troubleshooting if there's a failure. For IT operations, this translates to fewer dedicated hardware resources, and fewer ad hoc resource requests from development.

For software development organizations overall, this equates to reduced infrastructure costs, lower administrative overhead, better test coverage across platforms, and better software quality.

## About ElectricCommander

ElectricCommander is the only enterprise-class solution for automating and managing software build-test-deploy processes. It is language- and build tool-agnostic, so in any environment it will make software production tasks more repeatable, more visible, and more efficient.

ElectricCommander distributes individual jobs in parallel across multiple servers for faster throughput and efficient resource utilization.

ElectricCommander has an extensible, 3-tier architecture that can scale to manage any size project. It provides the reporting and visibility you need for compliance efforts and release planning, plus unprecedented dynamic resource provisioning for either physical or virtual resources. Teams can integrate and validate against all target platforms and configurations, improving software quality.

## About VMware Lab Manager

Building on VMware infrastructure, VMware Lab Manager enables software developers and QA engineers to suspend, then capture to a shared storage library, a complete state of “configurations” – or collections of running, interdependent computer systems that span multiple machines. Over time, organizations can build up a library of configurations, including test scenarios, production environments and customer system configurations.

Gathering machines, installing operating systems, installing and configuring applications, establishing inter-machine connections used to be a painstaking, multi-hour exercise. VMware Lab Manager reduces this process to a simple self-service provisioning task, accomplished with a single click of the mouse.

## 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 award-winning products help development organizations speed time to market, boost developer productivity, and improve software quality. Leading companies across a variety of industries, including semiconductors, enterprise IT, ISVs, mobile devices, and transactional Web sites rely on Electric Cloud's SPM solutions to transform software production from a liability to a competitive advantage.



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