



## **ElectricAccelerator Release Notes**

**Version 8.0.2**

**Electric Cloud, Inc.**  
35 South Market Street, Suite 100  
San Jose, CA 95113  
[www.electric-cloud.com](http://www.electric-cloud.com)

## Product Description

ElectricAccelerator® is a software build accelerator that dramatically reduces build times by distributing the build over a large cluster of inexpensive servers. ElectricAccelerator (“Accelerator”) uses a patented dependency-management system to identify and fix problems in real time that break traditional parallel builds. Accelerator plugs seamlessly into existing software development environments and includes web-based management and reporting tools.

Accelerator includes the following components:

- Electric Make® (eMake)
- Electric File System (EFS)
- ElectricAccelerator Agents (“Agents”)
- Cluster Manager
- Electrify

## What's New or Modified

### New Features and Functionality

- Performance is improved (sometimes significantly) when eMake creates or updates history files. (EC-11321)
- Conflict checking for statcache jobs is improved. (EC-9720)

### Resolved Issues

- An issue that caused the following assertion failure on some builds is fixed:  

```
emake: CacheableOperation.cpp:1491: void ResultBinaryOutputArchive::defineIfNew  
(Id): Assertion `dirNameIndex' failed
```

  
(EC-11418)
- Agent-to-diskcache connections are now cached for better performance and scalability in builds with heavy agent-to-agent activity. (EC-11407)
- The HTTP TRACE and TRACK methods in the Apache server on the Cluster Manager are disabled to fix potential cross-site scripting vulnerabilities. (EC-11397)

### New Platforms

Support is added for Microsoft Windows Server 2012 R2.

## Installation and Upgrade Notes

### MariaDB Replaces MySQL as the Default Local Database

Electric Cloud no longer bundles MySQL as the default local database for Accelerator on the Cluster Manager. Electric Cloud now bundles MariaDB and installs it as the default local database. When you upgrade the Cluster Manager, MariaDB replaces the local MySQL database (if applicable) and migrates all information from it.

MariaDB is an open-source database that is fully compatible with MySQL. You can alternatively use the MySQL, Oracle, or SQL Server databases. See the Cluster Manager online help topic “Database Configuration” for information about configuring Accelerator to use an external database.

## Hardware Requirements

- Accelerator 7.2 and newer versions require a Pentium 4 or newer processor when running in a 32-bit Solaris x86 environment.
- The recommended total amount of RAM for an agent host is 2 GB *per agent* plus the amount of RAM normally needed to execute your build. For example, if you are running four agents, and your build normally needs 16 GB, you will need  $((2 * 4) + 16) = 24$  GB.

## Backing Up Before You Upgrade

- Back up the `/opt/ecloud/<arch>/ccloud` directory for Linux and Solaris or `C:\ECloud\<arch>` for Windows to a safe location. The upgrade process does not preserve the existing files.
- For additional security, perform a database backup following the recommended procedure from your database vendor.

## Installing JDBC Drivers for MySQL or Oracle Databases

Electric Cloud no longer distributes the JDBC drivers for MySQL or Oracle databases. If you want to use one of these databases, you must download its driver directly from the Oracle website, copy it to the appropriate directory on the Cluster Manager server, and restart the Cluster Manager service. For more information, see the “Installing JDBC Database Drivers” section in Chapter 3 of the *ElectricAccelerator 8.0 Installation and Configuration Guide* at [http://docs.electric-cloud.com/accelerator\\_doc/AcceleratorIndex.html](http://docs.electric-cloud.com/accelerator_doc/AcceleratorIndex.html).

## Copying the execserver Executable to a New Location if You Relocate eMake

If you copy the 'emake' executable to a new location, you must also copy the execserver executable to that location. By default, the path to the execserver executable is `/opt/ecloud/i686_Linux/bin/execserver` (or `/opt/ecloud/i686_Linux/64/bin/execserver`, if you are running 64-bit eMake).

## Regenerating History Files After an Upgrade

The identifier that is used to find certain types of jobs in the eMake history file is changed in version 8.0. After an upgrade from version 7.2.2 or older versions to version 8.0 or newer versions, users should regenerate their history files by running their first build with the `--emake-history=create` eMake option to avoid unnecessary serializations. This build might have more conflicts than normal (but subsequent builds should return to normal).

## Known Issues

### Linux Kernel Issue That Affects ElectricAccelerator Performance

#### Affected Kernel Versions

- RHEL kernel versions later than 2.6.18-194.32 and earlier than 2.6.32-131
- Ubuntu Linux kernel versions 2.6.31, 2.6.32, 2.6.33, and 2.6.34

#### Symptoms

Affected systems might encounter reduced performance on both ext3 and ext4 file systems. Symptoms might include

- `hung_task_timeout_secs` messages in system dmesg logs
- Widely variable agent availability (entering and exiting agent “penalty” status frequently)

- Contention over the `ecagent.state` file
- Slower builds (with unexplained variances)

To help determine if this issue exists, run the `dmesg | grep hung_task_timeout command.hung_task_timeout` errors show that this issue is present. Contact your kernel provider for another version of the precompiled kernel.

### **Fixes for Systems Running RHEL 5.6, 5.7, 5.8, and 6.0**

You should consider upgrading to 2.6.32-131 (RHEL 6.1) or downgrading to 2.6.18-194.32 (RHEL 5.5).

### **Fixes for Systems Running Ubuntu 10.04**

You should consider upgrading to kernel 2.6.35 or newer. To install the upstream kernel, follow the example below (replace \* with the version that you want to install):

```
sudo add-apt-repository ppa:kernel-ppa/ppa
sudo aptitude update
sudo apt-get install linux-image-2.6.35-*-generic
sudo apt-get install linux-headers-2.6.35-*-generic
sudo apt-get install linux-maverick-source-2.6.35 linux-maverick-headers-2.6 (optional)
```

A kernel upgrade might require you to reinstall kernel modules such as video drivers, `efs`, and `vm-tools`. You can do so by running `apt-get dist-upgrade` and then rebooting.

## **Other Known Issues**

- Options in the `emake.conf` configuration file override options that are set using Accelerator environment variables (such as `EMAKE_CM`). (EC-10272)
- Because of a Linux kernel compatibility issue with LOFS, Accelerator agents cannot be installed on Ubuntu 12.10.
- For Visual Studio 2012, if project dependencies are not fully defined, the project build order under eMake might be different to Visual Studio. If a build fails because a prerequisite project was not built, you can work around this issue by adding an explicit project dependency to the solution.
- If Apache fails to start properly after a new Cluster Manager installation, reboot the system.

## **Documentation**

### **Product Documentation**

Accelerator documentation is available at [http://docs.electric-cloud.com/accelerator\\_doc/AcceleratorIndex.html](http://docs.electric-cloud.com/accelerator_doc/AcceleratorIndex.html) as follows:

- *ElectricAccelerator Installation and Configuration Guide*
- *ElectricAccelerator Electric Make User Guide*
- *ElectricAccelerator cmtool Reference Guide*
- *ElectricAccelerator Visual Studio Integration Guide*
- *ElectricAccelerator Release Notes* (this document)
- PDF, HTML, and mobile-optimized HTML versions of the online help that is also built into the Cluster Manager

Documentation on the website is updated periodically.

## Cluster Manager Online Help and Tooltips

Built into the Cluster Manager are the following:

- A complete, robust, context-sensitive online help system (click the Help link in any page of the Cluster Manager web UI). See the documentation website as described above for the latest updates to this information
- Tooltips with information to help fill in form fields

## Troubleshooting and Getting Help

### Technical Support

Contact Electric Cloud technical support:

- 408.419.4300, option 2. Hours are 9 A.M.–5 P.M. PT Monday–Friday (except holidays)
- [support@electric-cloud.com](mailto:support@electric-cloud.com)

You will be asked to provide the following information:

- Your name, title, company name, phone number, and email address
- Operating system and version number
- Product name and release version
- Problem description

### Electric Cloud "Ask" Website

Go to <http://ask.electric-cloud.com>:

- Ask questions or read answers to questions from other users
- Get help with installation and configuration
- Submit feedback

**ElectricAccelerator Version 8.0.2**

© 2002–2015 Electric Cloud, Inc. All rights reserved.

Published 5/28/2015

Electric Cloud® believes the information in this publication is accurate as of its publication date. The information is subject to change without notice.

THE INFORMATION IN THIS PUBLICATION IS PROVIDED “AS IS.” ELECTRIC CLOUD, INC. MAKES NO REPRESENTATIONS OR WARRANTIES OF ANY KIND WITH RESPECT TO THE INFORMATION IN THIS PUBLICATION AND SPECIFICALLY DISCLAIMS IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Use, copying, and distribution of any Electric Cloud software described in this publication requires an applicable software license.

**Trademarks**

Electric Cloud, ElectricAccelerator, ElectricAccelerator Huddle, ElectricCommander, ElectricFlow, ElectricInsight, and Electric Make are registered trademarks or trademarks of Electric Cloud, Incorporated.

Electric Cloud products—ElectricAccelerator, ElectricAccelerator Huddle, ElectricCommander, ElectricFlow, ElectricInsight, and Electric Make—are commonly referred to by their “short names”—Accelerator, Huddle, Commander, Flow, Insight, and eMake—throughout various types of Electric Cloud product-specific documentation.

All other trademarks used herein are the property of their respective owners.