Electric Cloud

ElectricAccelerator
Release Notes

Version 9.1.1

ElectricAccelerator Version 9.1.1

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

Android 8 Support

Support is added for preview 4 of Android version 8 ("O") builds. For details about the template files included in Accelerator that you can modify to optimize Android builds, see the *KBEA-00130 - Best Practices for Android Builds* KB article. These files work together to provide optimal settings for Android 8.*x* as well as Android 7.*x* (Android N) and Android 6.*x* (Android M). (EC-12472)

Visual Studio Integration Update

The Visual Studio integration that is bundled with Accelerator is upgraded to version 5.2.3. For the list of new features and resolved issues, see the "What's New" section in the *ElectricAccelerator 5.2.3 Visual Studio Integration Guide* at http://docs.electric-cloud.com/accelerator_doc/AcceleratorIndex.html.

Resolved Issues

- An issue that disabled local agents in the Cluster Manager when eMake was run from an agent machine is fixed. (EC-12460)
- An issue where changing the priority of a build in the Cluster Manager produced a blank **Build Details** page is fixed. (EC-12454)
- The Cluster Manager page auto-refresh behavior is improved so that the page is no longer grayed out and unavailable while the refresh is pending. (EC-12442)
- A web page rendering issue where data in certain pages in the Cluster Manager web UI was unreadable because the data overlapped is fixed. (EC-12440 and EC-12432)
- (Windows platforms only) An EFS resource leak related to running 32-bit processes on 64-bit hosts (which sometimes caused system crashes) is fixed. (EC-12437)
- The Apache Commons Digester logging level is changed from "debug" to "warn" to resolve an issue where an excessive number of debug log messages appeared in the `accelerator.log` file. (EC-12426)

Installation and Upgrade Notes

Hardware Requirements

- Accelerator 7.2 and newer versions require a Pentium 4 or newer processor when running in a 32-bit Solaris *x*86 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

- The upgrade process does not preserve the existing files. Back up the `/opt/ecloud/<arch>/cloud` directory for Linux and Solaris or the `C:\ECloud\<arch>` folder for Windows to a safe location.

- For additional security, back up the database by 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. To use one of these databases, you must download its driver directly from the Oracle website, then copy it to the appropriate directory on the Cluster Manager server, and then restart the Cluster Manager service. For details, see the "Installing JDBC Database Drivers" section in the "Installing ElectricAccelerator" chapter of the *ElectricAccelerator 9.1 Installation and Configuration Guide* at 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` (for 32-bit eMake) or `/opt/ecloud/i686_Linux/64/bin/execserver` (for 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 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` 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 Accelerator 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).

Other Known Issues

- The following installer message might appear during an upgrade of the Cluster Manager or agent machines from version 7.2.2, 8.0, or 8.0.1 to 8.0.2 or newer versions:

  ```
  Attention! You have chosen to install Cluster Manager, but this system has
  already been installed as Huddle Server. If you wish to change the type of
  ElectricAccelerator installation you must first uninstall the previous
  installation, then install using the new type. If you did not intend to change
  the installation type, back up and choose the correct type of installation.
  ```

  You can ignore this message and can continue with the upgrade. (EC-12529)
- The cmtool `importData` command does not import license properties (such as `maxAgents`). To work around this issue, re-import the license after using `importData`. (EC-12371)
- You cannot control breakpoints from the Cluster Manager. (EC-12322)
- Options in the `emake.conf` configuration file override options that are set using Accelerator environment variables (such as `EMAKE_CM`). (EC-10272)
- 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 as follows:

- *ElectricAccelerator Installation and Configuration Guide*
- *ElectricAccelerator Electric Make User Guide*
- *ElectricAccelerator cmtool Reference Guide*
- *ElectricAccelerator Error Messages 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 accessible from the Cluster Manager **Help** button.

Documentation on the website is updated periodically.

Cluster Manager Online Help and Tooltips

Built into the Cluster Manager are

- A complete, robust, context-sensitive online help system (click the **Help** button 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
- https://helpcenter.electric-cloud.com/ and then click **Submit a request** to submit or see your support tickets

Be prepared to provide your:

- Name, title, company name, phone number, and email address
- Operating system and version number
- Product name and release version
- Problem description
- Annotation file for the build involved

Electric Cloud "Ask" Website

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

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

ElectricAccelerator Knowledge Base

Go to https://helpcenter.electric-cloud.com/hc/en-us/sections/200516893-Accelerator-KB/ to find in-depth explanations of specific topics and solutions for specific problems.