



ElectricFlow 6.0.2

Release Notes

December 10, 2015

These Release Notes contain supplemental information about ElectricFlow™, Version 6.0.2.

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ElectricFlow 6.0.2

ElectricFlow 6.0.2 is a maintenance release (MR). For more information about ElectricFlow software release strategy, go to the [ElectricFlow/ElectricCommander Release Strategy Update](#).

Product Description

ElectricFlow™ (including the ElectricFlow Platform, formerly known as ElectricCommander) is an end-to-end Continuous Delivery application suite. It accelerates the continuous delivery of software and makes software delivery processes more repeatable, visible, scalable, and efficient. It provides domain-specific capabilities to automate some or all phases of your software delivery process, including the build, test, integrate, deploy, and release processes.

ElectricFlow gives distributed DevOps teams shared control and visibility into infrastructure, tool chains, and processes. It accelerates and automates the software delivery process and enables agility, availability, predictability, and security across many build, test, deploy, and release pipelines.

What's New or Modified

New Features and Functionality

- The background upgrader script to upgrade the database from ElectricCommander 4.2.x to ElectricFlow 6.x was updated to run more efficiently. (NMB-22800)
- Support for MS SQL Server 2012 and MS SQL Server 2014.

Resolved Issues

- Fixed the issue where you could not clone an application process. (CEV-5674)
- Fixed the issue where an application could not be deployed due to a component process that used the component version as a parameter. (CEV-8808)
- Fixed the issue where the environment inventory was not created for a dynamic environment or when the environment tier had a resource pool. (CEV-9406)
- Fixed the issue where "Run once" Deploy schedules ran once a day every day after the start date. (CEV-9536)
- Fixed the issue where the "Change History - Search" dialog box did not load. (CEV-9542)
- Fixed the issue where the All Environments page in Deploy rendered slowly. (CEV-9662)
- Fixed the issue where the Apache server could not start on a 64-bit device running Red Hat Enterprise Linux 6. (NMB-14412)
- Fixed the issue where job configurations with required credential parameters could not be saved. (NMB-15872)
- Fixed the issue where an agent was not installed on Linux using Central Agent Management (CAM) when SSH key authorization is used. (NMB-18476)
- Fixed the issue where the Apache server reported the "unexpected operator" error on restart. (NMB-19934)
- The number of retry attempts can now be set for artifact retrievals. (NMB-20185)
- Folders and multiple files can now be downloaded from the Artifact Version Details page. (NMB-20187)
- Fixed the issue where unencrypted passwords were stored in properties files. (NMB-20594)

- Fixed the issue where a step **On Completion** email notifier was triggered when the step run condition was false. (NMB-21924)
- Fixed the issue where ElectricCommander, JAgent, and the repository servers stopped logging primarily on Linux platforms.(NMB-22166)
- Fixed the issue where an error occurred after saving the search criteria in a pop-up window. (NMB-22203)
- Fixed the issue where the background deleter hangs when a constraint violation occurred. (NMB-22207)
- Fixed the issue where a cluster could not restart after the upgrade to ElectricFlow 6.x. (NMB-22231)
- Fixed the issue in the Artifact Version Details page where the description text is black and when text for all other fields in the top section is white. (NMB-22239)
- Fixed the issue where resource exclusivity did not work for parallel sub-steps. (NMB-22262)
- Fixed the issue where in a clustered environment, all nodes went down when the log file area for one of the nodes runs out of disk space. (NMB-22274)
- Fixing NMB-22299 allows ElectricFlow to enable and use MySQL connector caching for prepare statements. This can be used by first disabling BoneCP prepared statement caching, which is the default caching behavior.

Make the following changes in the database.properties file, and then restart the ElectricFlow server.

1. Change the `COMMANDER_DB_STATEMENT_CACHE_SIZE` to none.
2. Add the `COMMANDER_CUSTOM_DB_URL`, which is the `COMMANDER_DB_URL` with the additional option `prepStmtCacheSize=<prepared_statement_cache_size_per_connection>`. The recommended value is 250.

Example file snippet for database.properties:

```
...
COMMANDER_DB_STATEMENT_CACHE_SIZE=none
COMMANDER_CUSTOM_DB_URL=jdbc:mysql://localhost:3306/commander?useCursorFetch\
=true&useServerPrepStmts=true&cachePrepStmts=true&useLocalSessionState=true&p
repStmtCacheSize=250
...
```

- Fixed the issue where a job step hangs in the "Starting" state in a clustered environment. (NMB-22337)
- Fixed the issue where the `getFullCredential` API call failed password when the password is empty. (NMB-22412)
- Fixed the issue where in a clustered environment, the server hangs when the `getServerStatus --diagnostics 1 execution` API is run while the server is starting. (NMB-22423)
- Fixed the issue where the agent does not get pinged by server automatically after restart due to mismatched software license signatures. (NMB-22550)
- Fixed the issue where a job hangs when its preconditions seem to have been satisfied. This issue happened when the `createJobStep` API was used in batch "single" mode. (NMB-22600)
- Fixed the issue where using the `createJobStep` API call in batch "single" mode caused the job step to fail. (NMB-22622)
- Fixed the issue where the Job Details page rendered slowly. (NMB-22644)

- Fixed the issue where it took a long time to edit a workflow when Change Tracking is enabled.(NMB-22712)
- JGroups timeout settings can now be configured. (NMB-22762)

Release Notes for Previous ElectricFlow 6.0 Versions

- [ElectricFlow 6.0 Release Notes](#)
- [ElectricFlow 6.0.1 Release Notes](#)

All ElectricFlow documentation is available on the [Electric Cloud Documentation website](#).

Installation and Upgrade Notes

IMPORTANT: Product Name Change and Deprecation Notice

To bring a singular focus to the ElectricFlow brand moving forward, the name “ElectricCommander” is being changed to “ElectricFlow”. All of the capabilities you are familiar within ElectricCommander are still available and intact. All changes (involving the new name) are being introduced in a way that ensures backward compatibility. The scripts you’ve written and URL/shortcuts you currently have should work without any changes required. We’ve posted an [FAQ](#) to help answer questions you may have concerning this name change.

The installation documentation refers to the installer using the new ElectricFlow product name. Anywhere the installer is referenced you can also use the ElectricCommander named installer. However, be aware that we intend to stop providing the installer with "ElectricCommander" in the filename after this version.

For complete installation and upgrade information, see the *ElectricFlow Installation Guide* at http://docs.electric-cloud.com/eflow_doc/FlowIndex.html.

In the Oracle database, set the OPEN_CURSORS parameter to at least 1000 to prevent ElectricFlow from running out of open cursors.

IMPORTANT: *Before beginning the upgrade process, make sure you have backed up your existing ElectricFlow data.*

Upgrading Your Existing ElectricFlow Environment

- Upgrades to ElectricFlow 6.x are supported only from ElectricCommander 4.2.x or from ElectricFlow 5.x. Any ElectricCommander systems and servers that are pre-Commander 4.2 must be upgraded to an ElectricCommander 4.2.x release. For upgrade instructions, see the *ElectricFlow Installation Guide*.
- Upgrading to ElectricFlow 6.x from ElectricCommander 4.2.x requires a database upgrade.
- You cannot upgrade the ElectricCommander 4.2.x built-in database to an ElectricFlow 6.x database. If you want to continue using the built-in database in ElectricFlow 6.x, follow the database upgrade procedures described in the *ElectricFlow Installation Guide*.

Behavior Changes

- Use the `reducedDetailChangeHistory` argument in the `export` API call when exporting a project with Change Tracking enabled but not allow changes to be tracked when ElectricFlow exports part or all server data to an XML file. Follow these usage guidelines (CEV-7785):

- The argument is a Boolean argument: `<Boolean flag - 0|1|true|false>`.
- Use this argument for large projects containing over 20,000 audited objects with Change Tracking enabled.
- When this argument is set to `true` or `1`, ElectricFlow automatically decreases the amount of Change History indexing information that it saves in a large project, reducing the level of detail for Change Tracking-intensive operations in the Change History. This can make it harder to revert an object to a specific state and to find information in the Change History when you are troubleshooting or debugging an issue.
- Set this argument to `false` or `0` to suppress to this behavior so that ElectricFlow does not change the amount of indexing information for a large project. This will cause the operation to take longer and put more load on the database, but the Change History will have the full details of the entities owned by objects in the project.
- Use the following API calls to attach a parameter to a procedure step, application process step, or workflow state (CEV-8408):

To attach a parameter to a procedure step, use an API call such as:

```
ectool attachParameter testParam paramProcedure myStep credparam1
```

To attach a parameter to an application process step, use an API call such as:

```
ectool attachParameter --projectName default --formalParameterName credparam1
--applicationName myApp --processName echoHello --processStepName myStep
```

To attach a workflow state to a workflow state, use an API call such as:

```
ectool attachParameter --projectName default --formalParameterName credparam1
--workflowDefinitionName myworkflow --stateDefinitionName mystate
```

- The default built-in database for ElectricFlow is now HyperSQL Database (HSQLDB). In releases earlier than ElectricFlow 5.0, the built-in database was H2.
- ElectricFlow 6.0 no longer supports these server and agent platforms (NMB-21606):
 - All 32-bit platforms for servers only
 - Windows XP (32-bit and 64-bit) for servers
 - Microsoft Windows 2000 for agents

Configuration Notes

- When you export your project data before upgrading from ElectricCommander 4.2.x to ElectricFlow 6.x, you must replace the component plugin versions, including EC-Artifact, in the export file before importing the project data to ElectricFlow 6.x (CEV-6679).
- You must register your plugin to display it as an option in the following situations (CEV-3649).
 - When a user uses the plugin to configure a step in a component or application process.
 - In a procedure in the automation platform.

For details, see the “Register your procedure for the step creation dialog” section in the “Examples and Tutorials” chapter of the *ElectricFlow Plugin Developer Guide* at http://docs.electric-cloud.com/eflow_doc/FlowIndex.html.

Limitations

These are the session management limitations:

- When a user logs out, the user is logged out only on the node where the logout occurred.
- When a user is deleted from the system, the user's session is active until it expires.
- When a job ends, the user's session is active until it expires.

Known Issues

- When you are importing a previously exported application from ElectricFlow 5.4 to ElectricFlow 6.x and the application has parameters with options, the application process parameters that you defined in ElectricFlow 5.4 need to be recreated (CEV-7788).
- An error occurs in the following scenario (CEV-7890):
 1. In ElectricFlow 5.4, attach credentials to a component process or a component process step.
 2. Export the application that contains the component process.
 3. Upgrade to ElectricFlow 6.x.
 4. Import the application to ElectricFlow 6.x.

When you deploy the application process that contains the component process, the error occurs.

Workaround:

1. View the details of the component process step where you previously set the credentials in the Edit Step dialog box.
 2. Click **Next**.
 3. Click **OK** to close the dialog box.
 4. Redeploy the application process.
- There is a known issue preventing the use of SSH key-based authentication when using the "Install or Upgrade Remote Agents" feature available from the Resources page (CEV-7958).

The workaround is to use password-based authentication.
 - In a cluster, you must shut down the cluster and set a node to single-server mode to create a trusted agent (NMB-18924).
 - The following entry in the wrapper.conf file might cause performance slowdowns (a gradual slowdown of everything over time), and should therefore be deleted (NMB-19735):

```
wrapper.java.additional.105=-XX:+TieredCompilation
```
 - To access the Electric Cloud API UI, use https://<electricflow_server_hostname>:8443/rest/doc/v1.0/ where *electricflow_server_hostname* is the fully qualified domain name (FQDN) of the ElectricFlow server (NMB-19960).

- When you are adding a resource to a remote ElectricFlow server during an agent installation, the server does not discover the host name of the agent machine through DNS, and an error message about the “Name or service not known” appears (NMB-20605).

The workaround is to do one of the following so that the resource is available after the agent installation:

- Add the host name of the agent machine to the hosts file of the remote server.
 - In the Resource Details panel, edit the Agent Host Name of your resource and use the IP address of the agent machine instead of the fully qualified domain name (FQDN).
- You create a dynamic environment and deploy an application in that environment by performing these steps (NMB-21176):
 1. Create and save an OpenStack configuration in a resource template.
 2. Create an environment template using the resource template.
 3. Create a dynamic environment using the environment template.
 4. Deploy the application in the dynamic environment successfully.

When you edit and resave the OpenStack configuration and then create a new dynamic environment, the application is deployed with errors, because the authentication credentials are incorrect.

- If this sequence of events occurs (NMB-21278):
 1. Changes are made to the list of credentials that are attached to a procedure, component, process, process step, or a schedule while change tracking is disabled at either the project level or the server level.
 2. Change tracking is enabled.
 3. The procedure, component, process, process step, or a schedule is reverted to a point after change tracking was enabled.

Then the changes that were made while change tracking was disabled may be lost.

- If you delete the default project and do not recreate it, ElectricFlow will no longer be available. To use it again, you must reinstall ElectricFlow.
- Before importing an export file, you must change the plugin name, including the plugin version, in the file.

- Change tracking

IMPORTANT: It can take a while to restart the ElectricFlow server, because new records are being created for all the tracked objects. This may take at least as long as it would take to export or import all the projects (a large project can take long as 10 to 40 minutes).

- You can revert changes only for high-level design objects such as applications, procedures, procedure steps, workflow definitions, and state definitions.
- When you disable change tracking and then later re-enable it, the system performance may be reduced during this sequence of events:
 1. Change tracking is disabled at the server level.
 2. Change tracking is re-enabled at the server level.

The change history for all objects, including those not in projects, is now tracked.

It can take a while to restart the ElectricFlow server, because new records are being created for all the tracked objects. This may take at least as long as it would take to export or import all the projects (a large project can take long as 10 to 40 minutes).

- Pages in the ElectricFlow UI may be slow to render if the application or environment has too many tiers.

Performance and Scalability Issues

- For hundreds of parallel job steps, you may experience Job Scheduler performance issues at job startup (NMB-16185).
- The amount of time needed to add a property to a job increases as the number of properties increases (NMB-16120).
- The amount of time needed to add a step to a procedure increases as the number of steps increases (NMB-16118).

Documentation

ElectricFlow documentation is available at http://docs.electric-cloud.com/eflow_doc/FlowIndex.html. Updated documentation will be available on that page when any documents are updated post-release.

ElectricFlow has the following product documentation:

- *ElectricFlow User Guide*
- *ElectricFlow Installation Guide*
- *ElectricFlow API Guide*
- A complete, robust online help system. Click any Help link in the upper-right corner of each web page in the platform UI
- A standalone Help system is available for viewing outside the product at http://docs.electric-cloud.com/eflow_doc/FlowIndex.html
- *ElectricFlow Help Guide*
- *ElectricFlow Release Notes*

- Additional ElectricFlow documentation that accompanies the ElectricFlow release, but not necessarily updated with each ElectricFlow release
 - *Plugin Developers Guide*, which is used with the ElectricFlow SDK, is updated on its own release cycle
 - *ElectricFlow Plugin Developer Release Notes*

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

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

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