



# ElectricFlow 6.3

## Release Notes

April 29, 2016

These Release Notes contain supplemental information about ElectricFlow™, Version 6.3.

Topics include:

ElectricFlow 6.3 .....	2
Product Description .....	2
What's New or Modified .....	2
Release Notes for Previous ElectricFlow 6.0 Versions .....	4
Installation and Upgrade Notes .....	4
Configuration Notes .....	6
Limitations .....	6
Known Issues .....	6
Documentation .....	9
Troubleshooting and Getting Help .....	9

## ElectricFlow 6.3

ElectricFlow 6.3 is a feature release (FR). Feature releases make available new features more frequently than relying on long-term support (LTS) releases (such as ElectricFlow 6.0). The features and enhancements introduced in feature releases are typically rolled into the subsequent LTS release.

## Product Description

ElectricFlow™ is an enterprise-grade DevOps Release Automation platform that simplifies provisioning, build and release of multi-tiered applications. Our model-driven approach to managing environments and applications allows teams to coordinate multiple pipelines and releases across hybrid infrastructure in an efficient, predictable and auditable way.

## What's New or Modified

### New Features and Functionality

- Support for a native “Rollback” step in the application and component processes. This allows an automatic rollback to the environment before an erroneous deployment was attempted, or to any previous environment snapshot. This significantly shortens time to author the rollback logic.
- Artifact staging allows all the required artifacts to be downloaded and available locally on the target machines automatically before the deployment begins. This capability significantly reduces production downtime so that no time is spent in downloading large artifacts when servers are down.
- Support for manual process steps with parameter support in application and component processes. This allows human intervention to be included at various points during the deployment. With parameters, it is possible to take different paths based on user input during an active deployment. Parameter support has also been added the manual tasks in pipelines. (CEV-5117 and CEV-5669)
- Support for utility functions in application or component process steps and in pipeline stage tasks. A utility function is a higher-order operation than a third-party plugin that you can use in application and pipeline modeling.
- Support for using the Amazon Simple Storage Service (S3) web service as a backing store for a repository server. (NMB-22932)
- UI enhancements:
  - The Search functionality was added to the Applications List and Environments List UIs. (CEV-9878)
  - The “Applications / View Run” page showing the deployment details now has a “Re-run” button. (CEV-5649)
  - An application process can now be aborted from the “Applications / View Run” page using the Abort button. (CEV-4463)
- Branch conditions between process steps can be longer than 255 characters. (CEV-10915)
- Object descriptions now permit the use of hyperlinks. (CEV-9947)

- Clustering improvements:
  - Trusted agents—There are two ways to add a trusted agent to a cluster. You can now add trusted agents to a cluster without bringing down any nodes. For both procedures, go to the "Adding Trusted Agents to Clusters" section in the Clustering chapter of the [ElectricFlow 6.3 Installation Guide](#).
  - Improved ZooKeeper's performance by removing old JGroups cluster information to prevent the JGroups partitions or delaying a node from joining a cluster, resulting in multiple clusters being created. (NMB-22922 and NMB-23502)
  - Clustering robustness (NMB-23263)

## Resolved Issues

- The Search field is now active after the drop-down box is opened in the pipeline task definition dialog box. (CEV-10548)
- Running the `generateDsl` command now generates a DSL script with instructions and assignees for a manual task. (CEV-10560)
- Running the `generateDsl` command now generates a DSL script with the plugin key and parameters for a plugin task. (CEV-10561)
- Running the `generateDsl` command on a pipeline object now generates a DSL script with task information. (CEV-10563)
- Fixed the issue where the upgrade from ElectricFlow 6.1 to a later version would fail due to an index creation problem. (CEV-10701)
- A resource pool in an environment can now be changed or removed if the resource pool was renamed while still attached to the environment. (CEV-10836)
- In the ElectricFlow UI, property sheets no longer collapse after a new property is created. (CEV-10839 and CEV-10787)
- The Release dashboard now shows the running pipeline when a specific project is selected in the Pipeline Runs List. (CEV-10918)
- `evalDsl` now works when a project is created using a DSL script and the resource name is not specified (and is represented by an empty string). (CEV-11023)
- The `postp junitSummary` no longer reports twice the number of tests run. (NMB-20964)
- When a workflow waiting on a manual transition is imported, the workflow now resumes and reaches the manual transition. (NMB-23081)
- The EC-Jenkins plugin (and others) can now establish https connections with TLS enabled. (NMB-23314)
- A value for the resource step limit can now be removed in the UI. (NMB-23329)
- Fixed the security vulnerability with write permission for the `commander-upgrade.pl` file. (NMB-23350)
- Sudo can now be used in the EC-AgentManagement Install Agent. (NMB-23351)
- Fixed the issue where running the `ectool getServerStatus --diagnostics 1` command after starting the ElectricFlow server did not result in writing the diagnostic status in the log file. (NMB-23382)
- Fixed the issue where the background upgrader failed while running workflows on the ElectricFlow 4.2.x server. (NMB-23508)

- The appropriate error message appears when two projects have the same name. (NMB-23605)
- When the server starts and the `getServerStatus --diagnostics 1` command is executed, the proper output with diagnostic information is now displayed. (NMB-22423)

## Release Notes for Previous ElectricFlow 6.0 Versions

- [ElectricFlow 6.0 Release Notes](#)
- [ElectricFlow 6.1 Release Notes](#)
- [ElectricFlow 6.2 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](http://docs.electric-cloud.com/eflow_doc/FlowIndex.html).

New capabilities like Release and Pipelines are part of a separately licensed ElectricFlow Release module.

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 `waitForFlowRuntime` API command to make the system wait until the pipeline is completed or the timeout expires before process flow resumes. (CEV-10504)
- 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 `service.log` file produced by the Java Service Wrapper has been renamed to start with a prefix for the name of the component that the service is running, such as `commander-service.log`, `repository-service.log`, or `jagent-service.log`. (NMB-23201)
- 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
- 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.

## 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](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 an application with snapshots created in ElectricFlow 6.1 or earlier is cloned and a project containing this application is imported to ElectricFlow 6.3, the import operation fails. (CEV-11106)
- An application process step is defined by a component process with these credentials:
  - The first credential parameter is attached to the component process and is in a different project than the component process.
  - The second credential parameter is in the same project as the first credential parameter.

The second credential parameter cannot be attached application process step. (CEV-10392)

- An application deployment job will hang when a process step name is a number (for example, 1, 2, and so on) or has a slash (/ or \) in it. (NMB-10238)

The workaround is to change the process step name to be non-numeric and to not have a slash (/ or \).

- You can use the `generateDsl` command to generate a DSL script for any existing object except for application snapshots. (CEV-10127)
- When resources in resource pool are disabled, the system skips these resources and treats them as if they do not exist during an application deployment. The skipped resources are identified as compliance issues in the environment inventory. (CEV-9659)
- When naming processes, do not including slashes (/) in the name. (CEV-9265)
- 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.

- 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.
- 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)
  - The `service.log` file produced by the Java Service Wrapper has been renamed to start with a prefix for the name of the component that the service is running, such as `commander-service.log`, `repository-service.log`, or `jagent-service.log`. (NMB-23201)
  - 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.

- 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.

- To access the Electric Cloud API UI, use [https://<electricflow\\_server\\_hostname>/rest/doc/v1.0/](https://<electricflow_server_hostname>/rest/doc/v1.0/) where *electricflow\_server\_hostname* is the fully qualified domain name (FQDN) of the ElectricFlow server (NMB-19960).
- 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
```

- In a cluster, you must shut down the cluster and set a node to single-server mode to create a trusted agent (NMB-18924).
- 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](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
- *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](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

Copyright © 2002–2016 Electric Cloud, Inc. All rights reserved.

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

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

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