



ElectricFlow 8.0.1 Release Notes

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ElectricFlow version 8.0.1

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Contents

ElectricFlow 8.0.1	1
Product Description	1
What's New or Modified	1
Resolved Issues	1
Bundled Plugins	1
Installation and Upgrade Notes	75
Upgrading Your Existing ElectricFlow Environment	75
Upgrading the DevOps Insight Server from Version 7.3 to Version 8.0.x	75
Running the DevOps Insight Server on a System with Other ElectricFlow Components	76
Configuration Notes	76
Performing a Full Import	76
Updating Application Component Plugin Versions in the Export File When Upgrading from 5.4 to 8.x	76
Registering a Custom Plugin Procedure for the Step Creation Dialog	77
Diffie-Hellman Key Size Incompatibility	77
Limitations	77
Known Issues	78
Performance and Scalability Issues	79
Documentation	80
Product Documentation	80
Automation Platform Online Help	81
Troubleshooting and Getting Help	81
Technical Support	81
Electric Cloud "Ask" Website	81
ElectricFlow Knowledge Base	81

ElectricFlow 8.0.1

ElectricFlow 8.0.1 is a maintenance release (MR). For more information about ElectricFlow software release strategy, go to the [ElectricFlow/ElectricCommander Release Strategy Update](#).

Product Description

ElectricFlow® is an enterprise-grade DevOps Release Automation platform that simplifies provisioning, building, and releasing multi-tiered applications. Its model-driven approach to managing environments and applications lets teams coordinate multiple pipelines and releases across hybrid infrastructure in an efficient, predictable, and auditable way. Releases and pipelines are part of a separately licensed ElectricFlow Release module.

What's New or Modified

Resolved Issues

- (Windows platforms only) First-time installations of the DevOps Insight server no longer fail with the following error message: `Service CommanderElasticsearch is in the stopped state.` (NMB-25384)
- Upgrades of ElectricFlow that use a MySQL database and involve a large number of pipeline runs no longer require an excessive amount of time. (CEV-15394)
- All non-intrinsic properties that are returned in response to the `getRelease` API command are now available via `ectool` or DSL. (CEV-15286)
- An error message with instructions now appears during an upgrade of the DevOps Insight server or ElectricFlow when installing both on same machine. (NMB-25397)
- (Windows platforms only) The Elasticsearch service account password in the `installer-EFlowReportServ.log` file is now encrypted. (NMB-25389)
- You can now use `--timeout` in the `ecrptdataParams` parameter to extend the API call timeout that is passed to the `ecrptdata.pl` script. This parameter is in the "runEcrptdata" step of the "runReports" procedure in the "Electric Cloud" project. (NMB-25382)
- The `changeOwner` API command now supports all arguments for DevOps Insight as follows: `dashboardName`, `reportName`, `reportObjectTypeName`, and `widgetName`. (NMB-25376)
- The error message that appears when the DevOps Insight server installer tries to connect the DevOps Insight server to a version 7.3 ElectricFlow server is improved. It now indicates that 8.0 is the minimum supported version of the ElectricFlow server. (NMB-25358)

Bundled Plugins

The following plugins are new or updated. For a complete list of bundled plugins, see the "Plugins That are Bundled with ElectricFlow" appendix in the *ElectricFlow 8.0 User Guide* at http://docs.electric-cloud.com/eflow_doc/FlowIndex.html.

Name	New Version	Status
EC-AmazonECS	1.0.2.72	New

Name	New Version	Status
EC-Ant	2.0.9.121268	Updated

Name	New Version	Status
EC-AzureContainerService	1.0.0.10	New

Name	New Version	Status
EC-CheckStyle	2.0.5.121268	Updated

Name	New Version	Status
EC-Clover-CMD	2.0.3.121268	Updated

Name	New Version	Status
EC-Cobertura	2.0.6.121268	Updated

Name	New Version	Status
EC-CodeScanner	2.0.4.121268	Updated

Name	New Version	Status
EC-Core	1.2.5.121268	Updated

Name	New Version	Status
EC-Coverity	1.0.2.121268	Updated

Name	New Version	Status
EC-CppCheck	2.0.5.121268	Updated

Name	New Version	Status
EC-CppNcss	2.0.4.121268	Updated

Name	New Version	Status
EC-CSH	2.0.2.121268	Updated

Name	New Version	Status
EC-DBI	2.0.2.121268	Updated

Name	New Version	Status
EC-DefectTracking-ALM	1.0.5.121268	Updated

Name	New Version	Status
EC-DefectTracking-Bugzilla	2.0.7.121268	Updated

Name	New Version	Status
EC-DefectTracking-CQ	2.0.5.121268	Updated

Name	New Version	Status
EC-DefectTracking-Fortress	2.0.7.121268	Updated

Name	New Version	Status
EC-DefectTracking-JIRA	2.1.3.121268	Updated

Name	New Version	Status
EC-DefectTracking-MKS	2.0.3.121268	Updated

Name	New Version	Status
EC-DefectTracking-QC	2.0.9.121268	Updated

Name	New Version	Status
EC-DefectTracking-Rally	2.0.5.121268	Updated

Name	New Version	Status
EC-DefectTracking-RTC	2.1.1.121268	Updated

Name	New Version	Status
EC-DefectTracking-TeamForge	2.0.7.121268	Updated

Name	New Version	Status
EC-DefectTracking-TestTrack	2.0.3.121268	Updated

Name	New Version	Status
EC-DefectTracking-TFS	2.0.7.121268	Updated

Name	New Version	Status
EC-DefectTracking	1.1.7.121268	Updated

Name	New Version	Status
EC-Dynatrace	1.0.0.21	New

Name	New Version	Status
EC-EMake	1.0.6.121268	Updated

Name	New Version	Status
EC-EMMA	2.0.1.121268	Updated

Name	New Version	Status
EC-ESX	2.3.2.35	Updated

Name	New Version	Status
EC-FileOps	2.0.5.121268	Updated

Name	New Version	Status
EC-FindBugs	2.0.4.121268	Updated

Name	New Version	Status
EC-Flog	2.0.3.121268	Updated

Name	New Version	Status
EC-GoogleContainerEngine	1.0.2.70	New

Name	New Version	Status
EC-Groovy	2.0.3.121268	Updated

Name	New Version	Status
EC-Jasmine	2.0.1.121268	Updated

Name	New Version	Status
EC-Jenkins	1.8.3.31	Updated

Name	New Version	Status
EC-Jetty	1.0.3.121268	Updated

Name	New Version	Status
EC-JMeter	2.0.4.121268	Updated

Name	New Version	Status
EC-JTest	2.0.4.121268	Updated

Name	New Version	Status
EC-Klocwork-EA	1.0.4.121268	Updated

Name	New Version	Status
EC-Klocwork	2.0.3.121268	Updated

Name	New Version	Status
EC-Kubernetes	1.0.1.26	New

Name	New Version	Status
EC-KVM	1.0.6.121268	Updated

Name	New Version	Status
EC-LabManager	2.2.3.121268	Updated

Name	New Version	Status
EC-Make	2.0.5.121268	Updated

Name	New Version	Status
EC-MSBuild	2.0.5.121268	Updated

Name	New Version	Status
EC-MSSystemCenterVMM	2.0.2.121268	Updated

Name	New Version	Status
EC-MSTest	1.0.4.121268	Updated

Name	New Version	Status
EC-MYSQL	2.0.8.121268	Updated

Name	New Version	Status
EC-NAnt	2.0.4.121268	Updated

Name	New Version	Status
EC-NCover	2.0.2.121268	Updated

Name	New Version	Status
EC-NMake	2.0.3.121268	Updated

Name	New Version	Status
EC-NMakeATT	1.0.7.121268	Updated

Name	New Version	Status
EC-OpenShift	1.2.1.19	New

Name	New Version	Status
EC-Oracle	2.0.5.121268	Updated

Name	New Version	Status
EC-Pclint	2.0.4.121268	Updated

Name	New Version	Status
EC-PHP	2.0.4.121268	Updated

Name	New Version	Status
EC-PMD	2.0.4.121268	Updated

Name	New Version	Status
EC-Powershell	2.0.4.121268	Updated

Name	New Version	Status
EC-PureCoverage	1.0.5.121268	Updated

Name	New Version	Status
EC-Purify	2.0.4.121268	Updated

Name	New Version	Status
EC-Python	2.0.6.121268	Updated

Name	New Version	Status
EC-QTP	2.0.7.121268	Updated

Name	New Version	Status
EC-Quantify	1.0.6.121268	Updated

Name	New Version	Status
EC-Rake	2.0.3.121268	Updated

Name	New Version	Status
EC-Rcov	2.0.4.121268	Updated

Name	New Version	Status
EC-ReportEngine	1.0.0.121268	Updated

Name	New Version	Status
EC-Reports	2.1.0.121268	Updated

Name	New Version	Status
EC-Ruby	2.0.6.121268	Updated

Name	New Version	Status
EC-Security	1.2.1.121268	Updated

Name	New Version	Status
EC-Selenium	2.0.5.121268	Updated

Name	New Version	Status
EC-SendEmail	1.0.1.121268	Updated
EC-SilkCentral	1.0.5.121268	Updated
EC-SilkTest	1.0.7.121268	Updated
EC-Sonar	2.0.4.121268	Updated
EC-Splint	2.0.3.121268	Updated
EC-SQLServer	2.0.7.121268	Updated
EC-Tclsh	2.0.3.121268	Updated
EC-TCSH	2.0.3.121268	Updated
EC-TestNG	2.0.4.121268	Updated
EC-Tomcat	2.1.1.121268	Updated
EC-Twitter	1.0.1.121268	Updated
EC-vCloudDirector	1.4.6.121268	Updated
EC-VirtualBox	1.0.4.121268	Updated
EC-VisualStudio	2.0.3.121268	Updated
ECSCM-Accurev	2.0.2.121268	Updated
ECSCM-Bazaar	2.0.2.121268	Updated
ECSCM-ClearCase	2.0.2.121268	Updated
ECSCM-CVS	2.0.6.121268	Updated
ECSCM-File	2.0.3.121268	Updated
ECSCM-Mercurial	2.0.5.121268	Updated
ECSCM-Property	2.0.1.121268	Updated
ECSCM-StarTeam	2.0.2.121268	Updated
ECSCM-TFS	2.3.5.2	Updated
ECSCM-Vault	2.0.1.121268	Updated
ECSCM	2.2.12.121268	Updated

Installation and Upgrade Notes

- In `DATA_DIR/conf/wrapper.conf`, change the default prefix for StatsD as follows (NMB-22835):
 from

```
wrapper.java.additional.802=-DCOMMANDER_STATSD_PREFIX=commander
```

 to

```
wrapper.java.additional.802=-DCOMMANDER_STATSD_PREFIX=flow
```
- In the Oracle database, set the `OPEN_CURSORS` parameter to at least 1000 to prevent ElectricFlow from running out of open cursors.

For complete installation and upgrade information, see the *ElectricFlow 8.0 Installation Guide* at http://docs.electric-cloud.com/eflow_doc/FlowIndex.html.

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

Upgrading Your Existing ElectricFlow Environment

- Upgrades to ElectricFlow 8.x are supported only from ElectricCommander 4.2.x or from any version prior to 8.0. Any ElectricCommander systems and servers that are older than 4.2 must be upgraded to a 4.2.x release. For upgrade instructions, see the *ElectricFlow 8.0 Installation Guide* at http://docs.electric-cloud.com/eflow_doc/FlowIndex.html.
- Upgrading to ElectricFlow 8.x from ElectricCommander 4.2.x might require a database upgrade. For details, see the “Roadmap to Upgrade ElectricFlow” chapter in the *ElectricFlow 8.0 Installation Guide* at http://docs.electric-cloud.com/eflow_doc/FlowIndex.html.
- The built-in database is not recommended or supported for use in a production environment. Therefore you cannot upgrade from a pre-8.x version running the built-in database as an in-place upgrade. If you want to continue using the built-in database in ElectricFlow 8.x, you must do a full backup export to XML and import it into a clean installation of 8.x (in which you can then use the built-in database or a supported external database). For details, see the following information in the *ElectricFlow 8.0 Installation Guide* at http://docs.electric-cloud.com/eflow_doc/FlowIndex.html:
 - “Roadmap to Upgrade ElectricFlow” chapter
 - “Switching to an Alternate Database,” “ElectricFlow Server Backups,” and “ElectricFlow Server Restores” sections in the “Maintenance” chapter
- ElectricFlow 8.0.x is not backward-compatible with the ElectricFlow Reporting server version 7.3. This means that upgrading from ElectricFlow 7.3 to ElectricFlow 8.0.x requires also upgrading the ElectricFlow DevOps Insight server (previously named the ElectricFlow Reporting server) from version 7.3 to 8.0.x. (Upgrading from ElectricFlow 8.0 to ElectricFlow 8.0.1 or higher does *not* require upgrading versions 8.0.x of the DevOps Insight server.)

Upgrading the DevOps Insight Server from Version 7.3 to Version 8.0.x

Re-Specifying Configuration Settings Not Preserved During the Upgrade

The installers (GUI, interactive console, and silent mode) for the DevOps Insight server do not preserve the configuration setting for the DevOps Insight server host name (`--hostName`) or the setting for the Elasticsearch number of shards (`--elasticsearchNumberOfShards`) during the upgrade from 7.3 to 8.0.x. If

you specified nondefault values during the 7.3 Reporting server installation, you must re-specify these settings during the upgrade. (All other settings are preserved.)

Configuring DevOps Insight Server Security

The introduction of enhanced security for the DevOps Insight server in version 8.0 requires that you specify the new security settings during DevOps Insight server installation. These settings are used to enable connectivity and authentication between the DevOps Insight server and the ElectricFlow server. For details about specifying these settings during DevOps Insight server installation, see the “Installing ElectricFlow” chapter of the *ElectricFlow 8.0 Installation Guide* at http://docs.electric-cloud.com/eflow_doc/FlowIndex.html.

Running the DevOps Insight Server on a System with Other ElectricFlow Components

For a production environment, Electric Cloud recommends that you install the DevOps Insight server on a system other than systems running other ElectricFlow components (such as the ElectricFlow server, web server, repository server, or agent). If you must install it on the same system (such as for testing or other non-production or trial-basis situations) see the “Running the DevOps Insight Server on a System with Other ElectricFlow Components” section in the *ElectricFlow Installation Guide* at http://docs.electric-cloud.com/eflow_doc/FlowIndex.html for details.

Configuration Notes

Performing a Full Import

When you do a full import, the import operation might hang in the following scenarios. To successfully import into ElectricFlow 8.x, perform the appropriate workarounds:

- A manual process step in a process has formal parameters. The workaround is to remove the entry related to the property sheet for the job step that is associated with the manual process step.
- In the exported XML file from the earlier release, two pipelines are in different projects and both pipelines have no gate tasks. The flow associated with the pipeline is duplicated under both projects. The workaround is to remove the flow element under the projects.
- When you import ElectricFlow version 6.4 into a later version, an issue with `deployerflow` under any project in the export file might cause an import failure with a `java.lang.NullPointerException` error. As a workaround, delete the `<flow>` element containing `deployerflow` under those projects in the export file. For example, delete:

```
<flow>
...
<flowName>b93a96f5-8262-11e7-a195-005056330e87_deployerflow</flowName>
...
</flow>
```

(CEV-15447 and CEV-11873)

Updating Application Component Plugin Versions in the Export File When Upgrading from 5.4 to 8.x

When you export your project data before upgrading from ElectricCommander 5.4 to ElectricFlow 8.x, you must replace the application component plugin versions, including EC-Artifact, in the export file before importing the project data to ElectricFlow 8.x. (CEV-6679)

Registering a Custom Plugin Procedure for the Step Creation Dialog

You must register a user-developed plugin so that it appears as an option (CEV-3649):

- When you use 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.

Diffie-Hellman Key Size Incompatibility

To enable the ElectricFlow server version 7.0 or newer to configure Diffie-Hellman cipher suites properly, ElectricFlow uses OpenSSL-1.0.1T with SSLv2 enabled. Because of OpenSSL and JRE changes, the minimum Diffie-Hellman key size requirement is increased to 1024 bits (from 768 bits) as of version 7.0.

Server versions 7.0 or newer use Jetty (a Java HTTP server), which listens on the 8000 (unsecure) and 8443 (secure) ports. Server versions 7.0 or newer use Java 1.8.0_66, in which the ephemeral DH key size defaults to 1024 bits during SSL/TLS handshaking in the SunJSSE provider.

For details on the increase of the key size requirement as of Java 1.6-u101, see the Java release note at <http://www.oracle.com/technetwork/java/javase/overview-156328.html#6u101-b31>. For details as of Java 1.7-u85, see the Java release note at <http://www.oracle.com/technetwork/java/javase/7u85-relnotes-2587591.html>.

Because their minimum key size is 1024 bits, agent versions 7.0 or newer can connect only to:

- Server versions 5.4, 6.0.1, or 6.5 or higher via ectool
- External applications that require SSL with a minimum key size of 1024 bits

However, ElectricCommander agents of versions 5.0.6, 5.3, or 5.4 and ElectricFlow agent versions 6.0.1 or 6.5 or newer can connect to all ElectricFlow server versions (including 7.0 or newer) via ectool and ec-perl.

ElectricCommander server versions 5.0.6 or 5.3 or newer can run jobs using all agent versions (including 7.0 or newer). ElectricFlow server versions 7.0 or newer can run jobs using ElectricCommander agent versions 5.0.6 or 5.3 or newer.

Limitations

- When an application is cloned from one project (the original project) to another (the destination project), the tier maps for the application will point to the environments with the same names in the destination project. If you want to deploy the application to the environments in the original project, you must create tier maps connecting the application to those environments.
- When an assignee is added in a manual process step or stage task through the web interface, the Search field displays only the users who have actually logged into the system.
- 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

- The access control rules defined on widgets are not honored when the widgets appear in the DevOps Insight dashboards. The workaround is to create a copy of the dashboard and restrict access to the copied dashboard by defining access control rules on that dashboard. (CEV-15242)
- A component process uses `runProcess` parameters to identify the final artifact version to be retrieved by the component. Therefore, retry steps will continue to use the parameters even if the artifact version is updated in the component definition. (CEV-15207)
- An application process step that is run using “retry on error” that calls a component process containing many steps (at least one of which is a step using “stop on error”) causes the job to abort without a retry of the application process. (CEV-15171)
- If an application process step cannot expand to its child steps (because of an invalid run condition or an invalid formal parameter), then the step is not retried even if it uses “retry on error” error handling. The job eventually completes with an error. (CEV-15122)
- “Retry on error” icons might remain in the pipeline runtime UI even though the corresponding gate rules were executed to completion. (CEV-14706)
- No error message appears for failed tasks and retry tasks during a pipeline runtime. (CEV-14689)
- Error messages for runtimes started by a schedule are not visible if the schedule was created with a missed configuration. (CEV-12363)
- A `NonUniqueResultException` might occur when multiple runs of an application process against the same environment are launched simultaneously. (CEV-12403)
- Stage inclusion status in the Release Dashboard changes color after a stage is renamed. (CEV-12429)
- 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 or higher, the import operation fails. (CEV-11106)
- An application deployment job will hang when a process step name is a number (for example, 1 or 2) or has a slash (/ or \) in it. The workaround is to change the process step name to be non-numeric and to not have a slash (/ or \). (CEV-10238)
- (Solaris and AIX platforms only) The artifact cache is not updated during artifact retrieval operations. (NMB-24955)
- When you use the Automation Platform UI to upload and publish artifact files with non-English characters in their file names, the operation fails with the following error: `Upload file: Exit code 1: ERROR: Publish failure: Unexpected retrieval exception for repository error.` (NMB-24949)
- If the user email address is changed in the Active Directory server or the LDAP server for an existing external user, email notifications continue to use the old user email address.

The workaround is to delete the entry for the remote user in ElectricFlow. The next time the user entry is retrieved from the directory server (for example, upon user login), the external user record will be created in ElectricFlow with the updated email address. (NMB-24052)

- You can revert changes only for high-level design objects such as applications, procedures, procedure steps, workflow definitions, and state definitions.

IMPORTANT: Restarting the ElectricFlow server while new records are created for all tracked objects might take at least as long as an export or import of all projects (a large project can take 10 to 40 minutes).

- System performance might decrease if you disable change tracking at the server level and then you re-enable it at that level. (Change tracking is enabled by default.)

For details about using change tracking, see the “Change Tracking” chapter in the *ElectricFlow 8.0.1 User Guide* at http://docs.electric-cloud.com/eflow_doc/FlowIndex.html.

- Pages in the ElectricFlow UI might render slowly if the application or environment has too many tiers.

Performance and Scalability Issues

Performance Impact of Recursive Traversal of Group Hierarchy

Enabling **Recursively Traverse Group Hierarchy** might impact system performance when the LDAP group hierarchy is traversed. The amount of impact varies with the configurations of the ElectricFlow and LDAP servers, the depth of group hierarchy in the LDAP server, and the network latency between the servers. Make sure that your directory provider can handle the additional load to support nested group hierarchy traversal.

The following response times were recorded during Electric Cloud performance tests of nested LDAP groups support.

Test Environment Details

- ElectricFlow server
 - Intel® Core™ i5-3210M CPU at 2.50GHz CPU
 - 3011MiB RAM
 - 80 GiB (85 GB) VBOX HARDDISK disk
- Active Directory server
 - Intel Core i5-3210M CPU at 2.50GHz CPU
 - 2 GB RAM
 - Windows Server 2012 R2 OS
- Performance data set
 - 5040 users
 - 126 groups
 - Average number of 40 users per group
 - Average number of two immediate groups per parent group
 - Maximum depth of six in group hierarchy

Response Times with Active Directory

Average of 1000 API calls with user and group at the fifth nested level in the Active Directory group hierarchy.

API command	ElectricFlow 6.5 without recursive group hierarchy traversal	ElectricFlow 6.5 with recursive group hierarchy traversal
login	1.066 seconds	1.195 seconds
getUser	1.086 seconds	1.213 seconds
getGroup	0.918 seconds	1.102 seconds

Response Times with OpenLDAP

Average of 1000 API calls with user and group at fifth nested level in the Active Directory group hierarchy.

API command	ElectricFlow 6.5 without recursive group hierarchy traversal	ElectricFlow 6.5 with recursive group hierarchy traversal
login	0.744 seconds	0.753 seconds
getUser	0.705 seconds	0.714 seconds
getGroup	0.657 seconds	1.011 seconds

Scalability Issues

- Hundreds of parallel job steps might cause Job Scheduler performance issues at job startup. (NMB-16185)
- The time needed to add a property to a job increases with the number of properties . (NMB-16120)
- The time needed to add a step to a procedure increases with the number of steps . (NMB-16118)

Documentation

Product Documentation

ElectricFlow documentation is available at http://docs.electric-cloud.com/eflow_doc/FlowIndex.html as follows:

- *ElectricFlow Installation Guide*
- *ElectricFlow User Guide*
- *ElectricFlow API Guide*
- *ElectricFlow Release Notes*
- *ElectricFlow SDK Plugin Developer Guide* (updated on its own release cycle)
- *ElectricFlow SDK Plugin Developer Release Notes* (updated on its own release cycle)

Documentation on the website is updated periodically.

Automation Platform Online Help

The Automation Platform has a complete, robust, context-sensitive online help system. To use it, click the **Help** button in any page of the Automation Platform web UI.

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

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

ElectricFlow Knowledge Base

Go to <https://helpcenter.electric-cloud.com/hc/en-us/sections/200516863-ElectricFlow-KB> to find in-depth explanations of specific topics and solutions for specific problems.