

# ElectricFlow 8.3 Release Notes

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## **ElectricFlow version 8.3**

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## ElectricFlow 8.3

ElectricFlow 8.3 is a feature release (FR). Feature releases make new features available more frequently than long-term support (LTS) releases (such as ElectricFlow 8.0). 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, 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.

## What's New or Modified

### New Features and Functionality

ElectricFlow 8.3 provides new functionality such as managing complex enterprise releases with dependencies, accelerating container adoption, providing enhanced visibility into Kubernetes clusters, and simplifying the user experience for many key activities. This version provides the following updates to the Automation Platform and the ElectricFlow Deploy and Release modules.

#### ***Management of Release and Pipeline Dependencies with the Portfolio View***

The release and pipeline dependency Portfolio View is introduced to provide support for hierarchical releases and pipelines. This feature lets you model, automate, and visualize dependencies across releases.

The Portfolio View provides easier management of enterprise releases that are comprised of other subreleases and groups of applications, each with their own pipeline and timelines. For details, see the "Hierarchical Releases and Pipelines with Portfolio Views" section in the "Release Management" > "Release Concepts" section of the *ElectricFlow 8.3 User Guide* at [http://docs.electric-cloud.com/eflow\\_doc/FlowIndex.html](http://docs.electric-cloud.com/eflow_doc/FlowIndex.html). (CEV-17345)

#### ***SmartMap Topology View of Container Platform Clusters***

The SmartMap Topology View is introduced. This feature provides a 3-D view into container platform clusters so you can visualize running microservices with their dependencies and connections to applications.

The SmartMap Topology View helps you visualize and manage container cluster environments by showing the interdependent services, clusters, and pods deployed in Kubernetes as well as the connections to the microservice and environment models in ElectricFlow. Using capabilities to rotate and zoom in on focus areas, view live deployment status, and drill down into details, you can quickly understand your complex microservice topology. This feature also helps with troubleshooting and impact analysis.

For details, see the "Using the SmartMap Topology View to Visualize Running Microservices" section in the "Deployment Automation" chapter of the *ElectricFlow 8.3 User Guide* at [http://docs.electric-cloud.com/eflow\\_doc/FlowIndex.html](http://docs.electric-cloud.com/eflow_doc/FlowIndex.html).

#### ***Property Viewing, Authoring, and Usage Enhancements***

Viewing, creating, and using properties is enhanced with two new features:

- **Property Browser**—This lets you view and manage all properties defined on an object and its hierarchy of related objects in a single browser view. Functions to copy and move properties or folders (property sheets) make it easy to create complex structures across an object. This feature saves time for users who otherwise need to browse, search for, and update properties.
- **Property Picker**—When writing your pipeline automation, you can use the Property Picker to select built-in or custom properties or parameters that you need to reference without remembering and writing out property names and paths.

For details about these enhancements, see the *ElectricFlow 8.3 User Guide* at [http://docs.electric-cloud.com/eflow\\_doc/FlowIndex.html](http://docs.electric-cloud.com/eflow_doc/FlowIndex.html). (CEV-13431)

### **Pipeline Restart from Any Stage or Task Without a New Run**

You can now restart pipelines from any stage or task for better control when recovering from failures. This feature provides more flexibility and granularity over pipeline restarts so you can determine which set of tasks needs to be restarted and from where, while maintaining the context of the entire pipeline. The previous run could have completed successfully, failed, or could be still active (such as when it is waiting on a manual task). The pipeline view lets you easily see all runs of stages and tasks.

This feature lets you restart a pipeline manually or automatically at an earlier point. You can restart an entire stage using the parameter values and output properties from the prior pipeline stages. This functionality provides a single view for all runs if you have multiple runs for each stage, so that you do not need to know the specific runs where a stage succeeded.

For details, see the “Restarting a Pipeline from Any Stage Without a New Run” section in the “Pipelines” chapter of the *ElectricFlow 8.3 User Guide* at [http://docs.electric-cloud.com/eflow\\_doc/FlowIndex.html](http://docs.electric-cloud.com/eflow_doc/FlowIndex.html). (CEV-17257)

### **Output Parameters**

You can now define output parameters on processes, procedures, and pipelines. For details, see the *ElectricFlow 8.3 User Guide* at [http://docs.electric-cloud.com/eflow\\_doc/FlowIndex.html](http://docs.electric-cloud.com/eflow_doc/FlowIndex.html). (CEV-17196)

### **Lift and Shift of Traditional Java or .NET Artifacts to Containers**

Lift and Shift functionality for microservices is introduced to let you quickly realize the benefits of running applications inside containers by “lifting and shifting” existing monolithic artifacts without decomposing and rewriting them. This capability speeds container adoption and quickly provides benefits such as code portability, simplified deployments, and easy scaling to cater to the increased demands of containers.

Lift and Shift takes traditional build output and uses built-in templates to build and publish Docker images automatically that are deployable to your container runtime. You can start from existing artifacts for container deployments rather than after containers are in the registry. This functionality lets you shift existing artifacts as-is and then re-architect monolithic applications into smaller services over time.

For details, see the “Using Lift and Shift to Migrate Applications to Containers” section in the “Deployment Automation” chapter of the *ElectricFlow 8.3 User Guide* at [http://docs.electric-cloud.com/eflow\\_doc/FlowIndex.html](http://docs.electric-cloud.com/eflow_doc/FlowIndex.html).

### **Automated Microservice Discovery and Onboarding**

Automated discovery and onboarding of microservices is introduced. You use existing microservices to automate modeling via ElectricFlow functionality that provides discovery and onboarding. With automated onboarding, you can translate your existing assets quickly to start using ElectricFlow’s native microservice support to manage and deploy your microservices.

You perform discovery and onboarding via items in the ElectricFlow Self-Service Catalog. When using these catalog items, you enter details about your cluster or your Kubernetes YAML or Docker Compose files. For more information, see the “Automated Microservice Discovery and Onboarding” section in the “Deployment Automation” chapter of the *ElectricFlow 8.3 User Guide* at [http://docs.electric-cloud.com/eflow\\_doc/FlowIndex.html](http://docs.electric-cloud.com/eflow_doc/FlowIndex.html).

### **Utility Resources for Application and Environment Modeling**

Utility resources for application and environment modeling are introduced. Using a utility resource, in addition to running deployment process steps against entire environment tiers, you can now specify a specific resource to run on. This helps you easily define and model your custom deployment processes with utility steps such as integrating with a third-party tool (for example, updating load balancer settings) and sending notifications. (CEV-10999)

### **Licensing Enhancements**

Licensing based on microservices and registered users is introduced. For details, see the following sections of the *ElectricFlow 8.3 User Guide* at [http://docs.electric-cloud.com/eflow\\_doc/FlowIndex.html](http://docs.electric-cloud.com/eflow_doc/FlowIndex.html): “User Details,” “Users and Groups,” “Licenses,” and “View License.” (NMB-25924)

### **DevOps Insight Installer Support for Moving Elasticsearch Data Files**

The DevOps Insight server installers are enhanced to support moving the Elasticsearch data files. For details, see the following sections in the *ElectricFlow 8.3 Installation Guide* at [http://docs.electric-cloud.com/eflow\\_doc/FlowIndex.html](http://docs.electric-cloud.com/eflow_doc/FlowIndex.html). (NMB-25525)

- “Running a DevOps Insight Server Graphical User Interface Installation”
- “Running a DevOps Insight Server Interactive Command-Line Installation”
- “Silent Installation Arguments”
- “Upgrading the ElectricFlow DevOps Insight Server”

### **Other Enhancements**

- Column headers are added to the DevOps Insight TABLE report widget. (CEV-17670)
- The pie chart colors in the Manual versus Automated Process Time section in the release Planned vs Actual view are updated for more clarity. For details, see the “Planned Versus Actual View to Analyze Pipeline Status” section in the “Release Management” chapter of the *ElectricFlow 8.3 User Guide* at [http://docs.electric-cloud.com/eflow\\_doc/FlowIndex.html](http://docs.electric-cloud.com/eflow_doc/FlowIndex.html). (CEV-17501)
- The **Region** and **City** pulldown menus in the **Timezone > Timezone Setting** dialog box on the ElectricFlow home page are combined into one pulldown menu to simplify timezone selection. (CEV-17447)
- Property reference expansion is now deferred in the service definition for undeploying a service. (CEV-17215)
- You can now select multiple application processes in releases. (CEV-16505)
- You are now able to search for a project when defining a procedure step in a deploy process. (CEV-16467)
- You can now use parameters in the Pipeline Name Template in server settings. (CEV-16053)

- Pipeline parameters and properties are now visible on the pipeline run screen. (CEV-8915 and CEV-8695)
- The **Job Details** page in the Automation Platform now displays process and pipeline information. (NMB-25805)
- Users' "Last login on" information is now provided in the users and groups pages in the Automation Platform. (NMB-19059)
- You can now see projects in the **Project List** page without going to the Automation Platform. You can also create projects using this same menu.
- For creating a stage task or process step that invokes a plugin procedure, a **Configurations** drop-down menu is added. This allows you to view the list of available plugin configurations as well as create or update a plugin configuration from within Deploy without navigating to the Automation Platform UI. This capability is added for container plugins (such as Kubernetes and Docker) and plugins for certain other third-party integrations (such as Jenkins, JIRA, and Tomcat). (CEV-17256)

### Database Support

The built-in (default) ElectricFlow database (which is used non-production installations) is replaced with MariaDB. For related details about ElectricFlow database requirements, database port usage, database installation, starting and stopping the ElectricFlow Database service, and other information, see the *ElectricFlow 8.3 User Guide* at [http://docs.electric-cloud.com/eflow\\_doc/FlowIndex.html](http://docs.electric-cloud.com/eflow_doc/FlowIndex.html). (NMB-25218)

### Resolved Issues

#### Security-Related Issues

- PHP is upgraded to version 5.6.34. (NMB-25812 and NMB-25786)
- OpenSSL is upgraded to version 1.0.2o. (NMB-25812 and NMB-25786)

#### Other Issues

- An issue where times (Elapsed Time, Process Time, Automated, and Manual) in a release's **Planned vs Actual** screen do not show anything larger than hours is fixed. (CEV-18467 and CEV-18144)
- In the Chrome browser, the **Assignees** dialog box for creating manual pipeline tasks no longer hangs when you begin to enter text into the assignees field. (CEV-18463)
- Undeploying services from Amazon EC2 Container Service (ECS) and Google Container Engine (GCE) clusters is now supported. The following error no longer appears when undeployment is performed: `Step error [PropertyReferenceError]: couldn't find property 'ec_container_service_plugin/operations/undeployService/procedureName' in invoking service 'ec_container_service_plugin/operations/undeployService/procedureName'.` (CEV-17140)
- Cloning a DevOps Insight dashboard and editing it no longer causes the original dashboard to break. (CEV-17884)
- An issue where creating a master component resulted in multiple master components being created that cannot be deleted either through the UI or using `ectool createComponent` is fixed. (CEV-17865)



- The DevOps Insight dashboard UI no longer breaks if the dashboard contains a widget with an incomplete definition. (CEV-17666)
- The DevOps Insight Widget Definition fields that are required are now labeled. (CEV-17663)
- Renaming an application process no longer causes changes in other pipelines. (CEV-17465)
- Application process steps are no longer unexpectedly skipped when any incoming condition is met and the branching condition is set to **Always**. (CEV-16796)
- Encoding for the `http_authorization` string in the DevOps Insight server response header is strengthened. (CEV-16536)
- A property named "User" no longer causes DSL import to fail. (CEV-15590)
- The `elasticsearch.yml` configuration file now includes a `Custom Settings` section, which lets you add settings not managed by the DevOps Insight server without being lost during an upgrade. If you added settings to this file that you want to preserve, you must back up the file to a separate location *before* upgrading and then add the settings to the `Custom Settings` section after the upgrade. During future upgrades, the installer will preserve the settings in the `Custom Settings` section. For details, see the "Preserving Non-DevOps Insight Custom Settings in the `elasticsearch.yml` File" section in the "Upgrading the ElectricFlow DevOps Insight Server" chapter of the *ElectricFlow 8.3 Installation Guide* at [http://docs.electric-cloud.com/eflow\\_doc/FlowIndex.html](http://docs.electric-cloud.com/eflow_doc/FlowIndex.html). (NMB-25850)
- The "Install Agent" procedure in the EC-AgentManagement plugin can now handle special characters in the password in the "Install" step. (NMB-25846)
- Instructions for managing DevOps Insight server Elasticsearch data backups are added to the *ElectricFlow 8.3 Installation Guide*. (NMB-25831)
- An issue is fixed in which the default working directory of a procedure with no working directory that is launched using `createJobStep` is the working directory of the parent step (the step that invoked `createJobStep`). (NMB-25826)
- Newlines (`\n`) in commands no longer disappear when you export DSL from the UI. (NMB-25824)
- An issue in which the ElectricFlow repository did not delete stale `partialArtifactXXXX.tar` files generated in the repository server if the download process was canceled in a browser during artifact download is fixed. (NMB-25823)
- A Chrome browser issue in which fields for entering values in the **Attach Credential** and **Attach Parameter Credential** dialog boxes in the Automation Platform are not shown properly is fixed. (NMB-25781)
- An issue is fixed where a `wrapper.java.additional.1001=-Dec.logHistory=7` entry added to the `wrapper.conf` file did not remove logs with a time frame larger than the entry and that have names using format `commander.yyyy-mm-dd.XXXX.log.zip` where `XXXX` exceeds 999. (NMB-25728)
- (MacOS platforms only) An issue with user impersonation on agent hosts running MacOS 10.13 ("High Sierra") is fixed. (NMB-25427)
- To improve performance, ElectricFlow now creates GUIDs in an order that Microsoft SQL Server considers to be sequential to minimize fragmentation in clustered indexes. (NMB-25714, NMB-25713, and NMB-25392)

- A job execution performance improvement is made for when a large number of concurrent steps are in the processing queue. This issue appeared in ElectricFlow versions as early as 6.0.0. (NMB-25707)
- ElectricFlow now bundles Oracle's JDBC driver, which does not have a cursor leak when ElectricFlow loads the schema metadata from JDBC with the default Oracle cursor limit of 300 cursors. This means that you no longer need to set the `OPEN_CURSORS` parameter to at least 1000 in the Oracle database. The `java.sql.SQLException: ORA-01000: maximum open cursors exceeded` error message no longer appears in the `<DATA_DIR>/logs/commander.log` file. (NMB-25632)
- Unsupported arguments are removed from the `ectool` command-line Help for the `modifyJobStep` API command. The *ElectricFlow 8.3 API Guide* is updated accordingly. (NMB-23694)
- Artifact retrieval can now retrieve dependent artifacts with the same group ID and artifact key. (NMB-23179)
- An `OutOfMemoryError: Requested array size exceeds VM limit` error during an ElectricCommander 6.0.1 or ElectricFlow 8.0 restart when `JAVA_HOME` was set to JDK 7 or JDK 8 respectively is fixed. (NMB-22687)
- An issue with failed snapshot procedures is fixed. (NMB-22306)
- The user ID in the Destinations field and the Formatting Template field as a "cc:" line are no longer expanded differently. (NMB-19344)
- An issue where agent logging configuration settings `ec.logHistory` had no effect is fixed. (NMB-17994)
- The message that appears upon setting a mutable intrinsic property is improved for clarity. (NMB-11109)

### Behavior Changes

Drill-down for the Success Rate and Average Time to Deploy widgets is removed from the Deploy pipeline phase in the Release Command Center dashboard. (CEV-16503)

### Bundled Plugins

The following plugins are new or updated. Certain plugins require specific versions of the ElectricFlow server and ElectricFlow agents as noted in the table.

Name	New Version	Status	Notes
EC-ALM	1.1.1	Updated	-
EC-AmazonECS	1.0.4	Updated	-
EC-Ansible	1.0.5	Updated	-
EC-Artifactory	1.1.2	New	-
EC-AzureContainerService	1.0.3	Updated	-

Name	New Version	Status	Notes
EC-AzureContainerService-Docker	1.0.1	New	–
EC-Docker	1.3.0	Updated	This version requires ElectricFlow server version 8.3 and ElectricFlow agents version 8.3.
EC-EC2	2.4.0	Updated	–
EC-IIS	3.1.1	Updated	–
EC-JBoss	2.5.0	Updated	–
EC-Jenkins	1.9.2	Updated	–
EC-JIRA	1.1.3	Updated	–
EC-Kubernetes	1.1.0	Updated	This version requires ElectricFlow server version 8.3 and ElectricFlow agents version 8.3.
EC-Maven	2.4.2	Updated	–
EC-OpenShift	1.3.2	Updated	–
EC-ServiceNow	2.1.3	Updated	–
EC-SonarQube	1.0.4	Updated	–
EC-Tomcat	2.1.2	Updated	–
EC-WebLogic	3.2.4	Updated	–
EC-WebSphere	2.3.1	Updated	–

For a complete list of bundled plugins, see the “Plugins That are Bundled with ElectricFlow” appendix in the *ElectricFlow 8.3 User Guide* at [http://docs.electric-cloud.com/eflow\\_doc/FlowIndex.html](http://docs.electric-cloud.com/eflow_doc/FlowIndex.html).

# Installation and Upgrade Notes

For complete installation and upgrade information, see the *ElectricFlow 8.3 Installation Guide* at [http://docs.electric-cloud.com/eflow\\_doc/FlowIndex.html](http://docs.electric-cloud.com/eflow_doc/FlowIndex.html).

## Changing the Default Prefix for StatsD

In `DATA_DIR/conf/wrapper.conf`, change the default prefix for StatsD from

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

to

```
wrapper.java.additional.802=-DCOMMANDER_STATS_D_PREFIX=flow
```

(NMB-22835)

## Upgrading Your Existing ElectricFlow Environment

**Important:** *Before starting an upgrade, make sure to back up your existing ElectricFlow data.*

- Upgrades to ElectricFlow 8.x are supported only from ElectricCommander 4.2.x or any version before 8.0. 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 8.3 Installation Guide* at [http://docs.electric-cloud.com/eflow\\_doc/FlowIndex.html](http://docs.electric-cloud.com/eflow_doc/FlowIndex.html).
- Upgrading to ElectricFlow 8.x from ElectricCommander 4.2.x requires a database upgrade.
- You cannot upgrade from a previous version running the built-in database to an ElectricFlow 8.x database. If you want to continue using the built-in database in ElectricFlow 8.x, follow the database upgrade procedures described in the *ElectricFlow 8.3 Installation Guide* at [http://docs.electric-cloud.com/eflow\\_doc/FlowIndex.html](http://docs.electric-cloud.com/eflow_doc/FlowIndex.html).

- If your XML export file from ElectricFlow 8.0.1 or earlier versions has elements containing `applicationServiceMapping`, you must change all instances of that string in the file to `serviceClusterMapping` before importing the file into version 8.1. For example, change the following XML:

```
<applicationServiceMapping>
  <applicationServiceMappingId>9efcda31-a85f-11e7-8500-
0800279f198d</applicationServiceMappingId>
  <applicationServiceMappingName>9efcda31-a85f-11e7-8500-
0800279f198d</applicationServiceMappingName>
  ...
</applicationServiceMapping>
```

to

```
<serviceClusterMapping>
  <serviceClusterMappingId>9efcda31-a85f-11e7-8500-
0800279f198d</serviceClusterMappingId>
  <serviceClusterMappingName>9efcda31-a85f-11e7-8500-
0800279f198d</serviceClusterMappingName>
  ...
</serviceClusterMapping>
```

(CEV-16237 and CEV-16158)

- The DevOps Insight installer overwrites the `elasticsearch.yml` configuration file with a new file. As of DevOps Insight version 8.3, the file includes a `Custom Settings` section, which lets you add Elasticsearch settings not managed by the DevOps Insight server without being lost during an upgrade. If you added settings to this file in version 8.2 or earlier that you want to preserve, you must back up the file to a separate location *before* upgrading to version 8.3 or newer versions and then add the settings to the `Custom Settings` section after the upgrade. During future upgrades, the installer will preserve the settings in the `Custom Settings` section. (NMB-25850)

## Upgrading the DevOps Insight Server from Version 7.3 to Version 8.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.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 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 8.3 Installation Guide* at [http://docs.electric-cloud.com/eflow\\_doc/FlowIndex.html](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 "Running the DevOps Insight Server on a System with Other ElectricFlow Components" in the *ElectricFlow Installation Guide* at [http://docs.electric-cloud.com/eflow\\_doc/FlowIndex.html](http://docs.electric-cloud.com/eflow_doc/FlowIndex.html) for details.

## Configuration Notes

### Performing a Full Import

During a full import, the import operation might hang in the following scenarios. To import successfully into ElectricFlow 8.0 and newer versions, perform the appropriate workarounds (CEV-15447 and (CEV-11873):

- 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.

### Updating Application Component Plugin Versions in the Export File When Upgrading from 5.x to 8.x

Application components are based on plugins (EC-Artifact, EC-Maven and EC-FileSysRepo) with plugin details (such as name, procedure, and parameters) stored in properties on the component. Before version 5.4, the value for the `pluginProjectName` property included the plugin name and version (for example, `EC-Artifact-1.0.3.4`), which closely tied components to specific versions.

When you export your project data before upgrading from ElectricCommander 5.0, 5.1, 5.2, or 5.3 to ElectricFlow 8.x, you must update the application component plugin versions in the export file to the versions on the target ElectricFlow server before importing the data to ElectricFlow 8.x.

For example, if the promoted EC-Artifact plugin version is 1.0.4.1, then in the snippet below, you would change `EC-Artifact-1.0.3.4` to `EC-Artifact-1.0.4.1`:

```
<property>  
  <propertyId>3f509ffd-506b-11e6-9960-f01faf2c26a3</propertyId>  
  <propertyName>pluginProjectName</propertyName>  
  <counter>0</counter>  
  <createTime>2016-07-23T00:20:20.829Z</createTime>  
  <expandable>1</expandable>  
  <lastModifiedBy>admin</lastModifiedBy>  
  <modifyTime>2016-07-23T00:20:20.829Z</modifyTime>  
  <owner>admin</owner>  
  <tracked>1</tracked>  
  <value>EC-Artifact-1.0.3.4</value>  
</property>  
</property>
```

Starting with release 5.4, ElectricFlow uses the plugin key (which does not include the version) when defining a component. (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 :

- 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](http://docs.electric-cloud.com/eflow_doc/FlowIndex.html). (CEV-3649)

## Diffie-Hellman Key Size Incompatibility

To enable the ElectricFlow server versions 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. 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, they are logged out only on that node.
  - When a user is deleted from the system, their session is active until it expires.
  - When a job ends, the user's session is active until it expires.

## Known Issues

### 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 for supporting nested group hierarchy traversal.

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

#### **Test Environment Details**

- ElectricFlow server
  - Intel® Core™ i5-3210M CPU @ 2.50GHz CPU
  - 3011MiB RAM
  - 80 GiB (85 GB) VBOX HARDDISK disk
- Active Directory server
  - Intel Core i5-3210M CPU @ 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 2 immediate groups per parent group
  - Maximum depth of 6 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

## Other Known Issues

- All subreleases of a release must appear before it in the DSL for the release-to-subrelease link to be created. (CEV-18531)
- The Property Picker does not display output parameters for procedure tasks in pipeline gates. (CEV-18369)
- You cannot view properties for group tasks in a pipeline runtimes. (CEV-18163)
- When you do a full import from version 8.0 to version 8.2 and two or more releases have the same name (under different projects) and are associated to the same pipeline, then after import, the runs for all releases might become associated to the first imported release.

This is because ElectricFlow cannot differentiate runs between the releases since all runs are under the same pipeline project and have the same name. To work around this issue, rename releases in the export file so that all their occurrences (in `deploymentHistoryItem`, `flowRuntime`, and so on) are unique. (CEV-17164)

- Jobs might not appear upon drill-down into the "Clusters With Most Deployments" widget in the DevOps Insight Microservices Dashboard if the service does not contain a deploy step in the process. (CEV-16930)
- A project import might not include the path-to-production view. (CEV-16250)
- Multiple mapped environments with the same name from different projects are not supported in email notifications. (CEV-16245)

- During an upgrade from version 8.0 (and prior versions with service and container support) to 8.1, the installer adds a default process to the application scoped service if the service is referenced in an application process step. For all other services in the application that have no reference in the application process step, you must manually create the process using the Hierarchy Menu. (CEV-16212)
- The Environments list page might not display the numbers of deployed services in individual environments. (CEV-16138)
- Restarting of imported pipeline runs is not supported. (CEV-16121)
- The retry count for group tasks or rules using “automated retry on error” is missing from the Pipeline runtime page. (CEV-15829)
- 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)
- The stage inclusion status in the Release Dashboard changes color after a stage is renamed. (CEV-12429)
- Error messages for runtimes started by a schedule are not visible if the schedule was created with a missed configuration. (CEV-12363)
- 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)
- Modifications of LDAP user data (such as email addresses) on an Active Directory server after registration in ElectricFlow do not appear properly in user details (in the Automation Platform UI or ectool) until the ElectricFlow server is restarted. (NMB-26021)
- The details popup that appears after you click the Track Changes button in a procedure in the Automation Platform might cause the **Change History** window to hang when you click the Expand Details button for a specific change. (NMB-25520)
- (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)
- You can revert changes only for high-level design objects such as applications, procedures, procedure steps, workflow definitions, and state definitions.

**Note:** 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 (10 to 40 minutes for a large project).

- System performance might decrease if you disable change tracking at the server level and then 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 8.3 User Guide* at [http://docs.electric-cloud.com/eflow\\_doc/FlowIndex.html](http://docs.electric-cloud.com/eflow_doc/FlowIndex.html).)

## Documentation and Online Help

### Product Documentation

ElectricFlow product documentation is available at [http://docs.electric-cloud.com/eflow\\_doc/FlowIndex.html](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 web UI has a complete, robust, context-sensitive online help system. To use it, click the **Help** button in any page of the web UI.

## Troubleshooting and Getting Help

### Technical Support

Contact Electric Cloud technical support:

- +1 408.419.4300, option 2. Hours are 9 A.M.–5 P.M. PT Monday–Friday (except holidays)
- [support@electric-cloud.com](mailto:support@electric-cloud.com)
- <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>—a member-moderated community forum where you can:

- Ask and answer questions as well as comment on (and vote for) the questions of others and their answers
- 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.