ElectricFlow 9.0.2

Release Notes

Electric
Cloud

Contents

ElectricFlow 9.0.2 Release Notes

ElectricFlow 9.0.2 is a maintenance release (MR). For details about the ElectricFlow release strategy, see the ElectricFlow/ElectricCommander Release Strategy Update.

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

Resolved Issues

NMB-27817	The full list of intrinsic properties are now available with the `describeObject` API command.
NMB-27835	Moved `pruneUpgradeObsolete` to all APIs.
NMB-27945	Problem resolved where ACLs were not preserved for promoted plugins during Electric Flow server upgrade.
NMB-28040	Apache PHP OpenSSL extension was upgraded.
NMB-28071	Swagger - Use of JavaScript Library with Known Vulnerability.
NMB-28200 NMB-21324	Resolved problem where the installer deleted the symbolic link to the plugins folder during upgrade and reverted to default folder.
NMB-28201 NMB-16268	Improved handling of symbolic links for data, artifacts, and apache during upgrade.
NMB-28215	The DevOps Insight server is upgraded from version 5.3.1 to version 6.6.2 of the Elasticsearch search engine and the Logstash data-collection and log-parsing engine. If you have customized your Elasticsearch configuration or have built custom reports built using the Elasticsearch queries directly, see the "Breaking Changes" documents at https://www.elastic.co/guide/en/elasticsearch/reference/index.html for Elasticsearch releases 5.4 through 6.6 for details.
NMB-28255	Resolved an errror when installing DevOps Insight Server using install directory `C:\Program Files (x86)\Electric Cloud\ElectricCommander` on Windows.
NMB-28271 NMB-28067	Resolved an error that caused a step to hang for hours because a `stepEvent` message was processed twice due to a `TransactionRetry`.
NMB-28295 NMB-27983	Resolved an issue with the Flow UI where the repository did not preserve the directory structure when uploading a folder using **Folder Upload** option.
NMB-28348 NMB-26039	The version of ActiveMQ Artemis in ElectricFlow has been updated to v1.5.6.

NMB-28368 NMB-27960	Timestamps in email notifications now use the preferred timezone instead of the UTC time zone.
NMB-28525	The `getFullCredential` call fails when trying to get a credential in another project.
CEV-22100 CEV-22719	Calling a component process with a "bad Property Reference" within a, application processs step does not prevent user from running (which is ok) but "Succeeds" without error on the top level step (not ok). The top level step should fail with PropertyReferenceError.
CEV-22125 CEV-22584	Flow page does not load when a user group has session ACLs defined. Needs read privilege on systemObject `devOpsInsightServerConfigurations`
CEV-22247	Gate approval no longer requires pipeline execution permission.
CEV-22418 CEV-22664	Selected environments disappear when selecting configuration
CEV-22750	Smart deploy now works properly for master components.

Documentation Enhancements

NMB-26697	A new "Configuring ElectricFlow Server-to-Agent Communication to Use Trusted HTTPS" section is added to the "Configuring ElectricFlow" chapter of the *ElectricFlow 9.0 Installation Guide*.
NMB-26764	The "ecremotefilecopy" section in the "Automation Platform" chapter of the *ElectricFlow 9.0 User Guide* is updated for clarity.
NMB-28097	The "Network Plugins Shares for High-Availability ElectricFlow Components" section in the "Configuring ElectricFlow" chapter of the *ElectricFlow 9.0 Installation Guide* is updated.
NMB-28379	Instructions for configuring multiple web servers behind a load balancer for an HA environment are added to the "Configuring Web Server Properties" and "Installing and Configuring a Load Balancer" sections in the "Configuring ElectricFlow" chapter of the *ElectricFlow 9.0 Installation Guide*.

Database Support

NMB-28510	Support for Oracle 19c is added.

Updated Plugins

This section lists plugins that have new functionality introduced in this release. The version numbers are provided for convenience: refer to the individual plugin documentation for more details.

Name	New Version
ECSCM-Git	3.10.0.2019082001
EC-ServiceNow	2.6.0.2019081401
EC-EC2	2.6.0.2019081303

Name	New Version
EC-WebSphere	2.7.0.2019081301
EC-JIRA	1.6.2.2019081301
EC-Jenkins	1.15.0.2019071901
EC-Bamboo	1.5.1.2019071101
EC-ALM	1.2.2.45
ECSCM	2.3.1.43
ECSCM-Perforce	2.9.1.14
EC-AgentManagement	1.4.0.138058
EC-SingleSignOnConfigurator	1.1.0.138023
EC-ESX	2.3.5.49
EC-CIManager	1.4.3.12
EC-CloudFoundry	1.5.1.25
EC-DslDeploy	2.1.2.1
ECSCM-File	2.0.5.201905291
EC-Tomcat	2.3.4.132
ECSCM-Property	2.0.3.201905281
EC-Azure	1.1.8.78
EC-Chef	1.2.4.37
EC-IIS	3.1.5.87
EC-JBoss	2.6.3.202
EC-Puppet	1.1.5.30
EC-Docker	1.5.3.140
EC-Kubernetes	1.2.2.216
EC-AzureContainerService	1.2.1.2019052701
EC-FileSysRepo	1.0.2.39
EC-Artifactory	1.4.2.177
EC-MYSQL	2.0.11.6
EC-Oracle	2.0.8.5
EC-Kubectl	1.0.2.41
EC-Security	1.2.3.3
EC-Selenium	2.0.7.9

Name	New Version
EC-SQLServer	2.0.10.201905241
EC-WebLogic	3.4.3.261
EC-SendEmail	1.0.4.4
EC-OpenShift	1.5.4.118
EC-SonarQube	1.2.1.2019052401
EC-Tutorials	1.0.2.4
EC-Core	1.2.8.9
EC-DefectTracking	1.1.10.201905231
EC-FileOps	2.0.7.5
EC-Homepage	1.4.3.6
EC-Jetty	1.0.5.201905231
EC-Maven	2.4.6.34
EC-MSBuild	2.0.7.201905231
EC-Powershell	2.1.2.9
EC-Dynatrace	1.1.1.2019052301
EC-GoogleContainerEngine	1.2.1.2019052301
EC-Artifact	1.1.7.5
EC-AmazonECS	1.1.1.116
EC-AzureContainerService-Docker	1.1.1.2019052201
unplug	2.3.4.10017
EC-PluginManager	1.5.1.201905171
EC-Ansible	1.2.0.2019051101

For a complete list of bundled plugins, see the "Plugins That are Bundled with ElectricFlow" appendix in the *ElectricFlow 9.0 User Guide* found here.

Installation and Upgrade Notes

For complete installation and upgrade information, see the *ElectricFlow 9.0 Installation Guide* found here.

Upgrading Your Existing ElectricFlow Environment

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

- Upgrades to ElectricFlow 9.*x* are supported only from ElectricCommander 5.0 or any version before 9.0. Upgrade to version 9.x from any ElectricCommander version that is 4.2 or earlier is

not supported. For upgrade instructions, see the *ElectricFlow 9.0 Installation Guide* found here.

- Upgrading from any version before ElectricFlow 8.5 to 9.0.2 requires upgrading your older version of DevOps Insight server to DevOps Insight server 9.0.2. Customers upgrading from 8.5 do not need to upgrade their DevOps Insight server instance which is expected to already be version 8.5 as ElectricFlow 8.5 required DevOps Insight server 8.5.

- 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 9.0 Installation Guide* found here.

- 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**>
    <**applicationServiceMapping**Id>9efcda31-a85f-11e7-8500-0800279f198d</**applicationServiceMapping**Id>
    <**applicationServiceMapping**Name>9efcda31-a85f-11e7-8500-0800279f198d</**applicationServiceMapping**Name>
    …
  </**applicationServiceMapping**>

  to

  <**serviceClusterMapping**>
    <**serviceClusterMapping**Id>9efcda31-a85f-11e7-8500-0800279f198d</**serviceClusterMapping**Id>
    <**serviceClusterMapping**Name>9efcda31-a85f-11e7-8500-0800279f198d</**serviceClusterMapping**Name>
    …
  </**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 9.0 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)

Ensuring the Correct Default MySQL Collation

- Since release 8.0.1, Electric Cloud has instructed customers using a MySQL database to use the following two lines in their MySQL configuration:

  ```
  init_connect='SET collation_connection = utf8_unicode_ci, NAMES utf8'

  skip-character-set-client-handshake
  ```

Before upgrading ElectricFlow, you must remove these lines or comment them out. Otherwise, jobs will not start. For further details about MySQL configuration recommendations, see Knowledge Base article *KBEC-00356*. (NMB-27937)

- If the collation is not configured correctly, then entering non-ASCII text into ElectricFlow might cause errors. For example, setting a release name to a non-ASCII value and attempting a search causes an exception.

- If your MySQL database schema or any tables in it are set to a non-UTF-8 collation order, see Knowledge Base article *KBEC-00385* for detailed instructions about safely converting your schema to UTF-8. (NMB-26521)

Upgrading Agents that Run the ec-groovy Job Step in Multizone Deployments

In multi-zone ElectricFlow deployments, ElectricFlow agents that are in a different zone than the ElectricFlow server must be upgraded to version 9.0 or later for the `ec-groovy` job step to run successfully on those agents. You must also upgrade the gateway agents that lead back to the server's zone including those in any zones in between the agent's zone and the server's zone. (NMB-27490)

For details about multiple zones and gateway agents, see the "Gateways and Zones," "Zones," and "Gateways" sections in the "Automation Platform" chapter of the *ElectricFlow User Guide* found here.

Removing the SSL 2.0 Client Hello or SSLv2Hello Protocol from Your Security Configurations

We recommend removing the `SSL 2.0 Client Hello` or `SSLv2Hello` protocol from your security configurations for all components. When you do this, you would also need to upgrade older agents to the latest version to avoid security risks. You would need to upgrade agents if you are using the following agent versions. (NMB-27934)

- Windows, Linux: 6.0.3 or older; 6.2 or older

- Sun Solaris, HP UX, Mac OS: 8.4 or older

Upgrading the DevOps Insight Server

This section provides information about upgrading the DevOps Insight server from Version 7.3 to Version 9.0.

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

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.

DevOps Insight Server Configuration Notes

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 for details.

Updating Application Component Plugins

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 9.*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 9.*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)

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.

Known Issues

CEV-21426	If the Release Command Center is setup for JIRA for user-stories and defects, and the JIRA project name is mapped to the release project name using the following field mapping:
	
	`projectName:releaseProjectName`
	
	then, *before* upgrading to ElectricFlow 9.0.1 from version 8.5 or earlier, the field mapping must be updated to mention the actual release project name using the following field mapping format:
	
	`"release-project-name-in-ElectricFlow":releaseProjectName`

CEV-19239 CEV-19259	The ability to search by assignee in a Deployment Report is not available in the DevOps Insight report editor.
CEV-18531	All subreleases of a release must appear before the release in the DSL for the release-to-subrelease link to be created.
CEV-17164	When you do a full import from version 8.0 to version 8.2 or newer 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-16930	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-16250	A project import might not include the path-to-production view.
CEV-16245	Multiple mapped environments with the same name from different projects are not supported in email notifications.
CEV-15829	The retry count for group tasks or rules using "automated retry on error" is missing from the Pipeline runtime page.
CEV-15122	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-14689	No error prompt appears for failed tasks and retry tasks during a pipeline runtime.
CEV-12429	The stage inclusion status in the Release Dashboard changes color after a stage is renamed.
CEV-12363	Error prompts for runtimes started by a schedule are not visible if the schedule was created with a missed configuration.
CEV-11106	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.

NMB-26962	(Windows platforms only) If the Elasticsearch cluster, which is used by DevOps Insight, is in the red state (in Elasticsearch, this means that it only partly functions and some data is unavailable), then upgrade, reconfigure, or uninstall operations will not work. Because the Elasticsearch service can not be stopped when a cluster is in red state, kill the Elasticsearch service process by the task manager before running the installer for these actions.
NMB-26406	(Windows platforms only) When installing DevOps Insight, you cannot use parentheses (round brackets) in the installation directory or data directory paths. For example, the path `C:\Program Files (x86)\ElectricCommander` is not valid.
NMB-26021	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-24949	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-25784	Problem resolved when web artifact upload failed with error `Upload file: CGI open of tmpfile: Too many open files.`
	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 9.0 User Guide* found here.
	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.

Documentation and Online Help

Product Documentation

ElectricFlow product documentation is available here as follows:

- *ElectricFlow Installation Guide*
- *ElectricFlow User Guide*
- *ElectricFlow API Guide*
- *ElectricFlow Release Notes*

- *Groovy API Guide*

- *DevOps Foresight Installation and User Guide*

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.

Rollup of 8.x Features

Besides providing the many new improvements outlined above in these release notes, ElectricFlow v9.0 rolls up previous feature releases since v8.0. Please see the links below for information about each.

- Release Notes v8.5

- Release Notes v8.4

- Release Notes v8.3

- Release Notes v8.2

- Release Notes v8.1

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

- 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.

ElectricFlow Knowledge Base