

Apache NiFi Registry 3

## Getting Started with Apache NiFi Registry

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# Contents

<b>Terminology Used in This Guide.....</b>	<b>3</b>
<b>Downloading and Installing NiFi Registry.....</b>	<b>3</b>
<b>Starting NiFi Registry.....</b>	<b>3</b>
For Linux/Unix/Mac OS X users.....	3
Installing as a Service.....	3
<b>I Started NiFi Registry. Now What?.....</b>	<b>3</b>
Create a Bucket.....	4
Connect NiFi to the Registry.....	6
Start Version Control on a Process Group.....	7
Save Changes to a Versioned Flow.....	10
Import a Versioned Flow.....	12

## Terminology Used in This Guide

In order to talk about NiFi Registry, there are a few key terms that readers should be familiar with:

**Flow:** A process group level NiFi dataflow that has been placed under version control and saved to the Registry.

**Bucket:** A container that stores and organizes flows.

## Downloading and Installing NiFi Registry

NiFi Registry can be downloaded from the *HDF Release Notes*. There are two packaging options available: a tarball and a zip file. Supported operating systems include Linux, Unix and Mac OS X.

For users who are not running OS X, after downloading NiFi Registry simply extract the archive to the location that you wish to run the application from. The registry is unsecured by default.

## Starting NiFi Registry

Once NiFi Registry has been downloaded and installed as described above, it can be started by using the mechanism appropriate for your operating system.

### For Linux/Unix/Mac OS X users

Use a Terminal window to navigate to the directory where NiFi Registry was installed. To run NiFi Registry in the foreground, run `bin/nifi-registry.sh run`. This will leave the application running until the user presses Ctrl-C. At that time, it will initiate shutdown of the application.

To run NiFi Registry in the background, instead run `bin/nifi-registry.sh start`. This will initiate the application to begin running. To check the status and see if NiFi Registry is currently running, execute the command `bin/nifi-registry.sh status`. NiFi Registry can be shutdown by executing the command `bin/nifi-registry.sh stop`.

### Installing as a Service

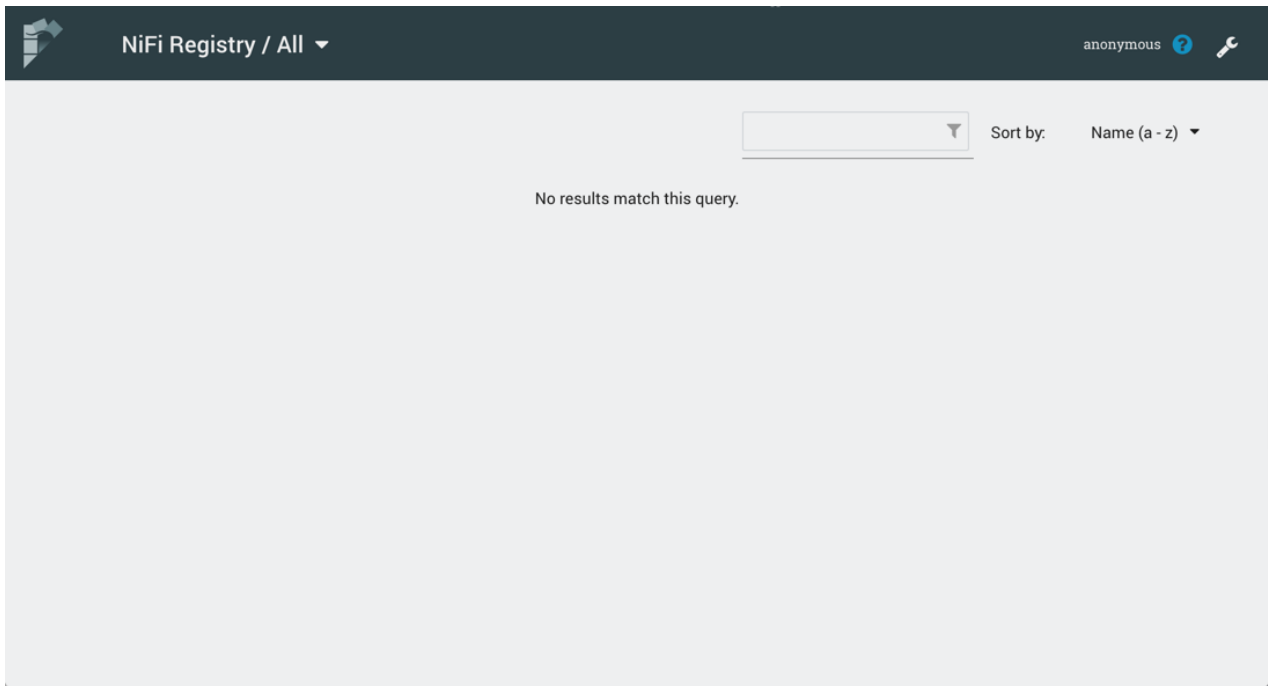
To install the application as a service, navigate to the installation directory in a Terminal window and execute the command `bin/nifi-registry.sh install` to install the service with the default name `nifi-registry`. To specify a custom name for the service, execute the command with an optional second argument that is the name of the service. For example, to install NiFi Registry as a service with the name `flow-registry`, use the command `bin/nifi-registry.sh install flow-registry`.

Once installed, the service can be started and stopped using the appropriate commands, such as `sudo service nifi-registry start` and `sudo service nifi-registry stop`. Additionally, the running status can be checked via `sudo service nifi-registry status`.

## I Started NiFi Registry. Now What?

Now that NiFi Registry has been started, we can bring up the User Interface (UI). To get started, open a web browser and navigate to `http://localhost:18080/nifi-registry`. The port can be changed by editing the `nifi-registry.properties` file in the NiFi Registry conf directory, but the default port is 18080.

This will bring up the Registry UI, which at this point is empty as there are no flow resources available to share yet:



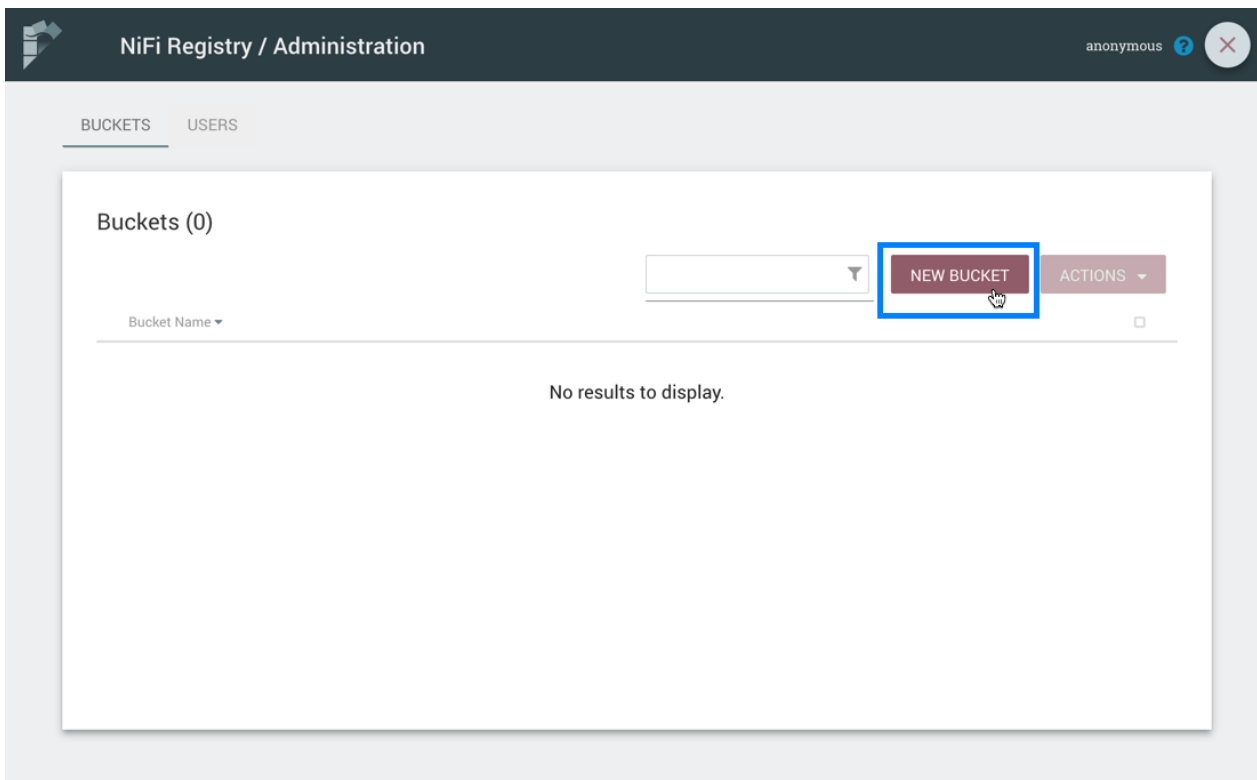
## Create a Bucket

A bucket is needed in our registry to store and organize NiFi dataflows. To create one, select the Settings icon

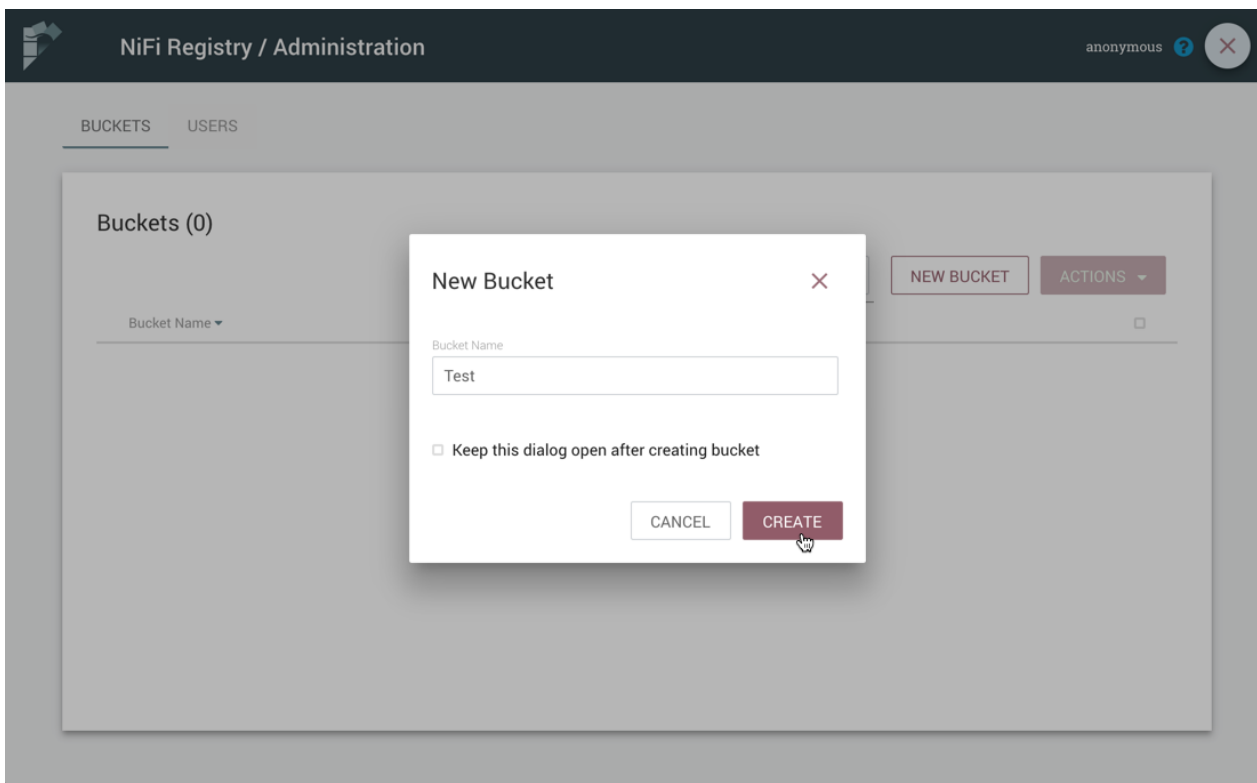


in the top right corner of the screen. In the Buckets window, select the "New Bucket" button.

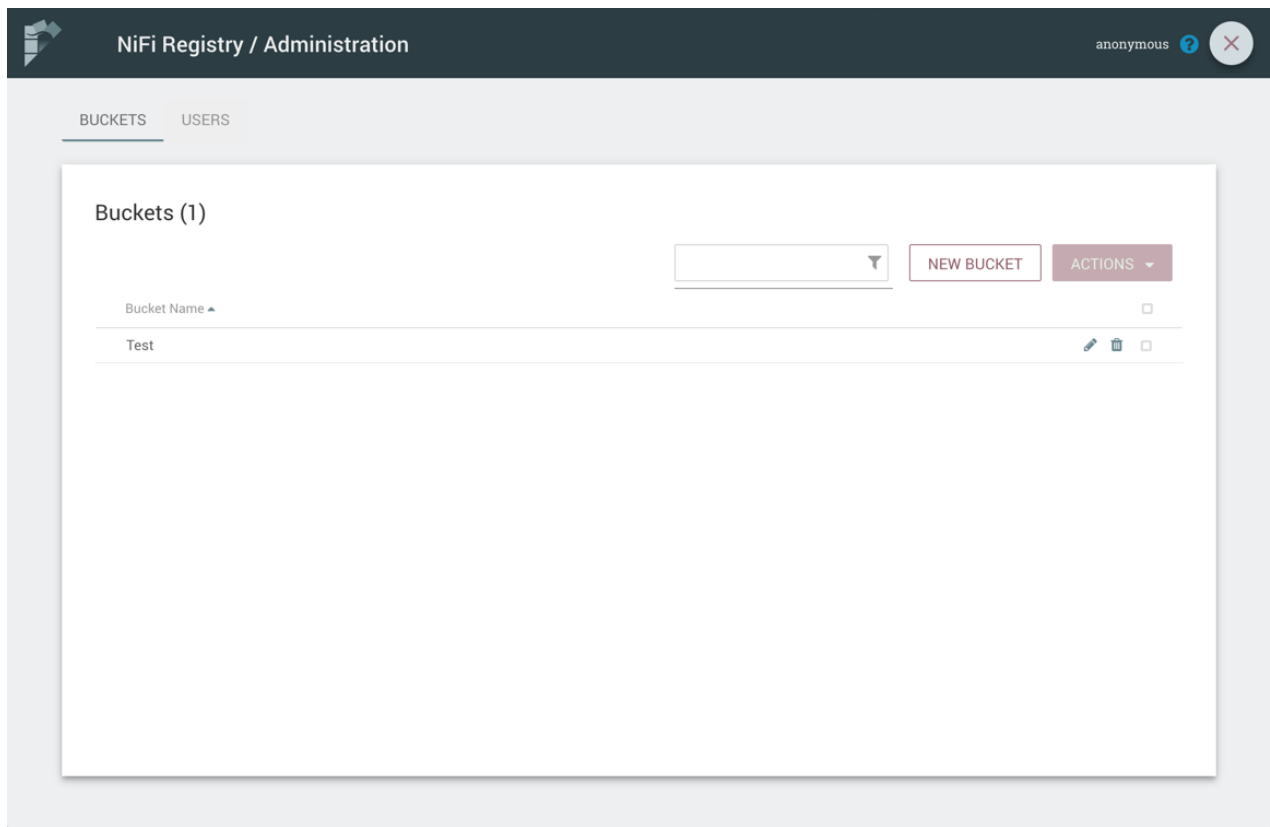
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Enter the bucket name "Test" and select the "Create" button.



The "Test" bucket is created:

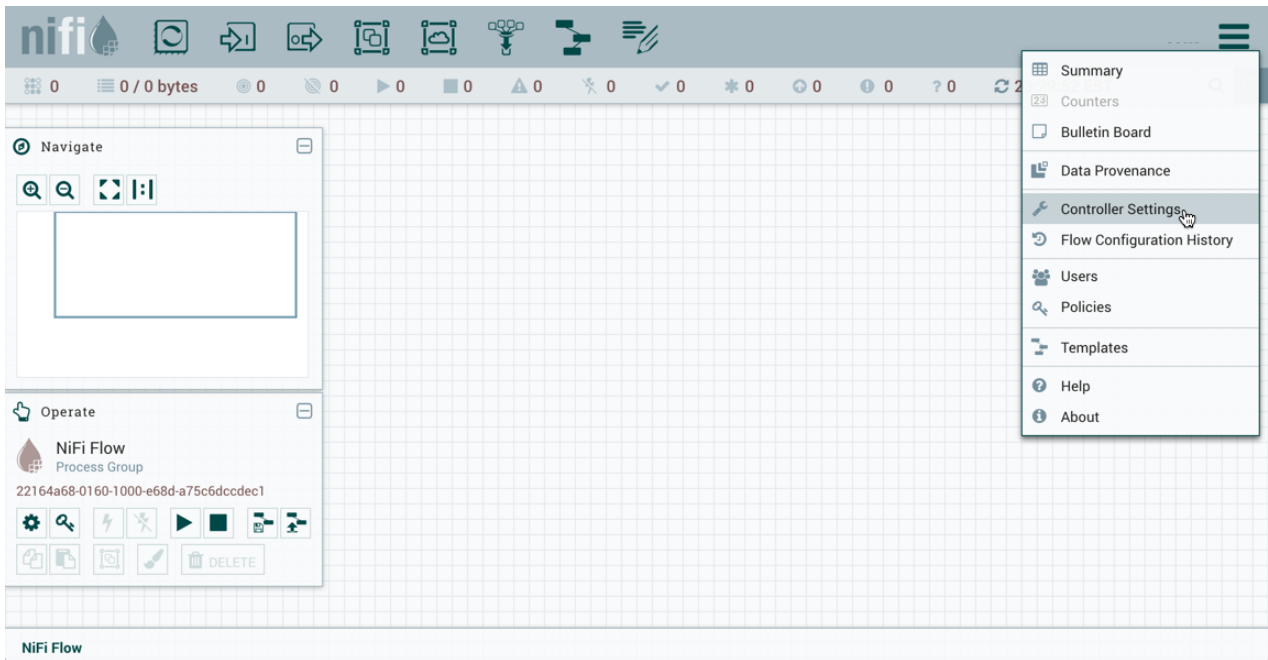


There are no permissions configured by default, so anyone is able to view, create and modify buckets in this instance.

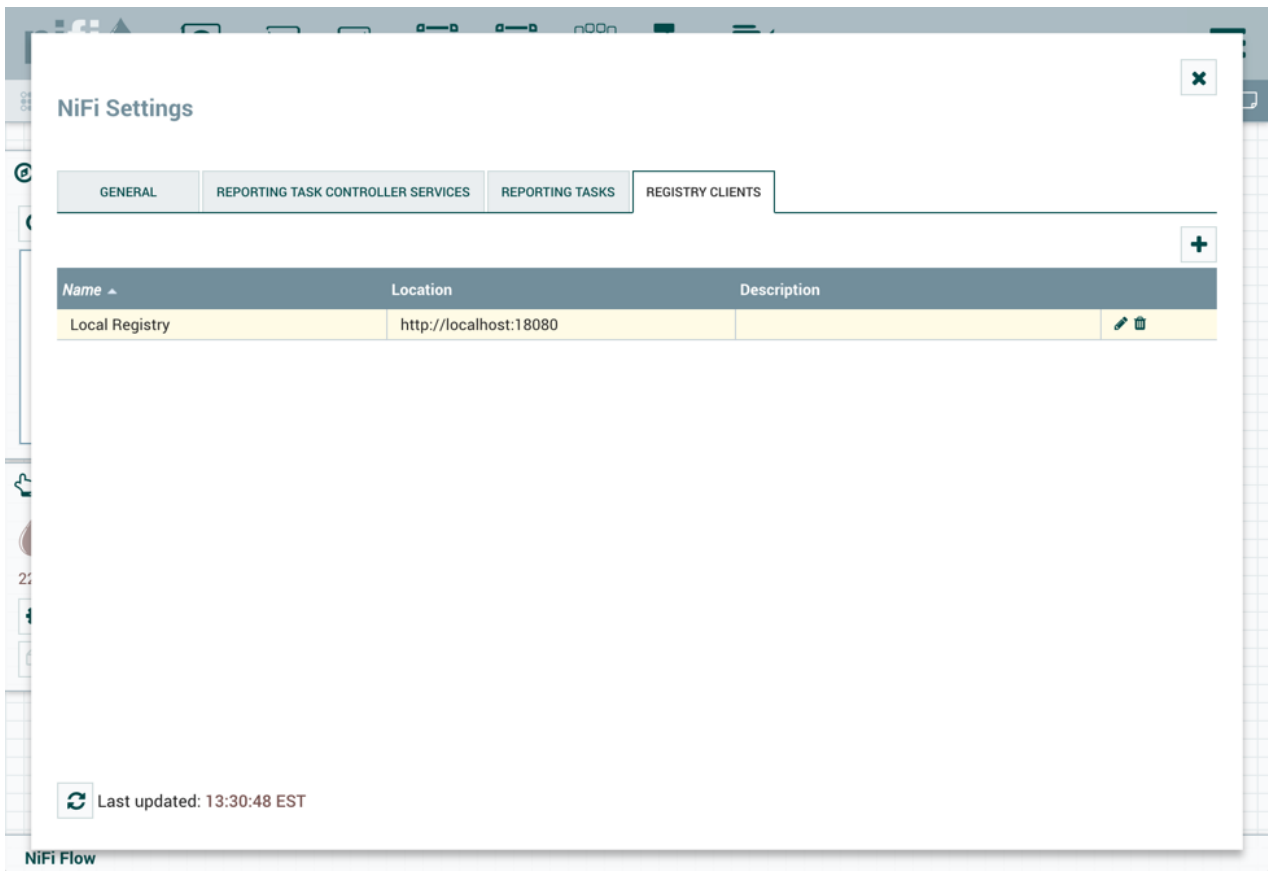
## Connect NiFi to the Registry

Now it is time to tell NiFi about the local registry instance.

Start a NiFi instance if one isn't already running and bring up the UI. Go to controller settings from the top-right menu:



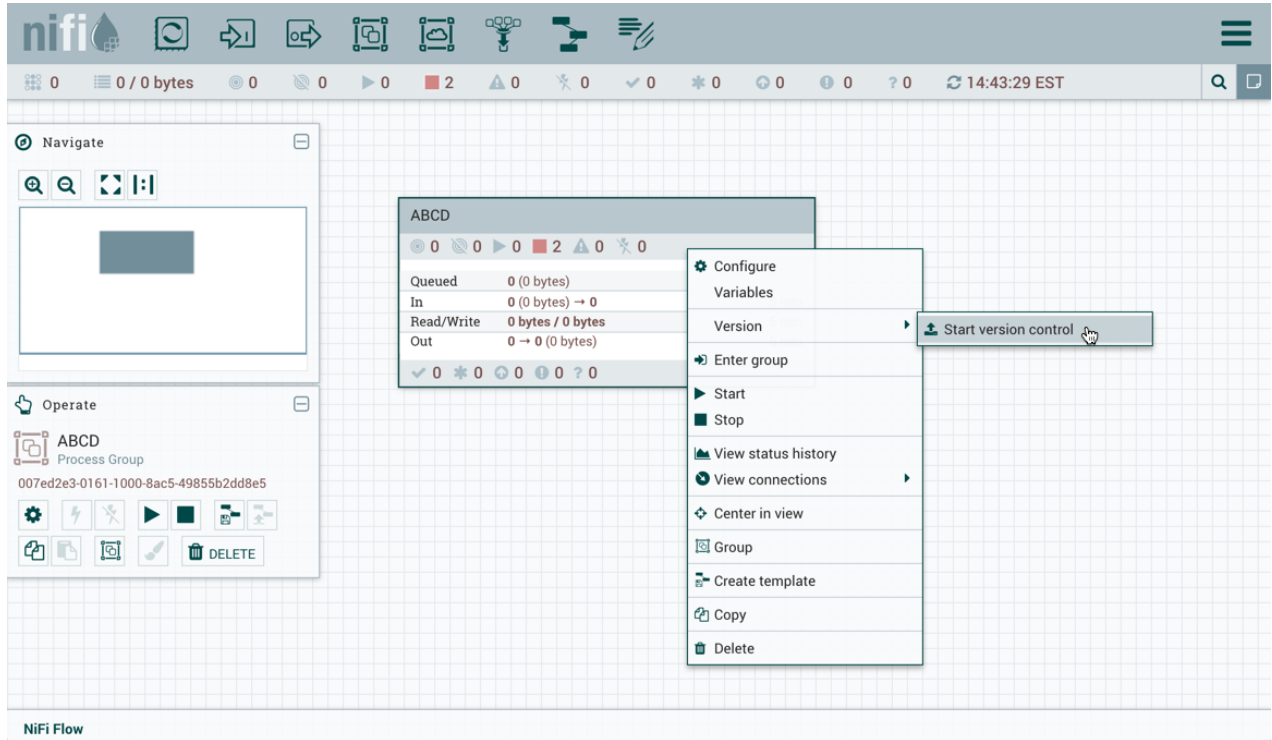
Select the Registry Clients tab and add a new Registry Client giving it a name and the URL of `http://localhost:18080`:



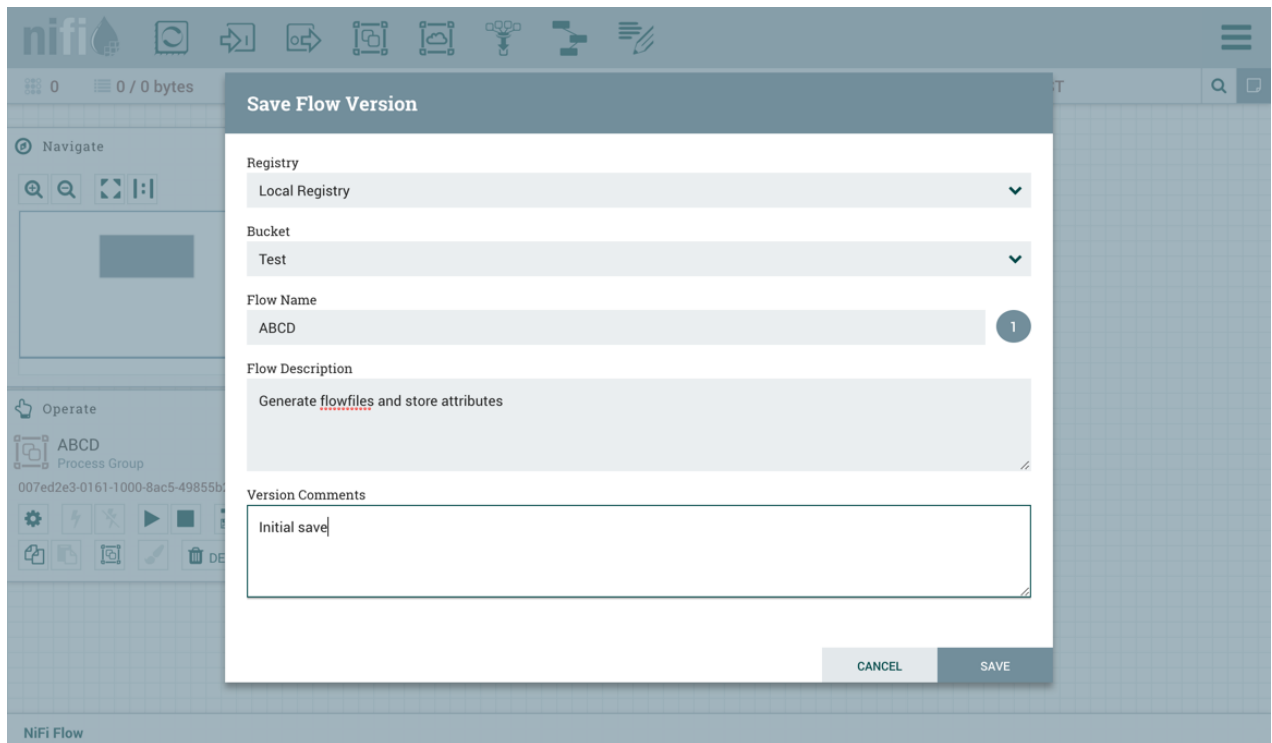
## Start Version Control on a Process Group

NiFi can now place a process group under version control.

Right-click on a process group and select "Version#Start version control" from the context menu:



The local registry instance and "Test" bucket are chosen by default to store your flow since they are the only registry connected and bucket available. Enter a flow name, flow description, comments and select "Save":

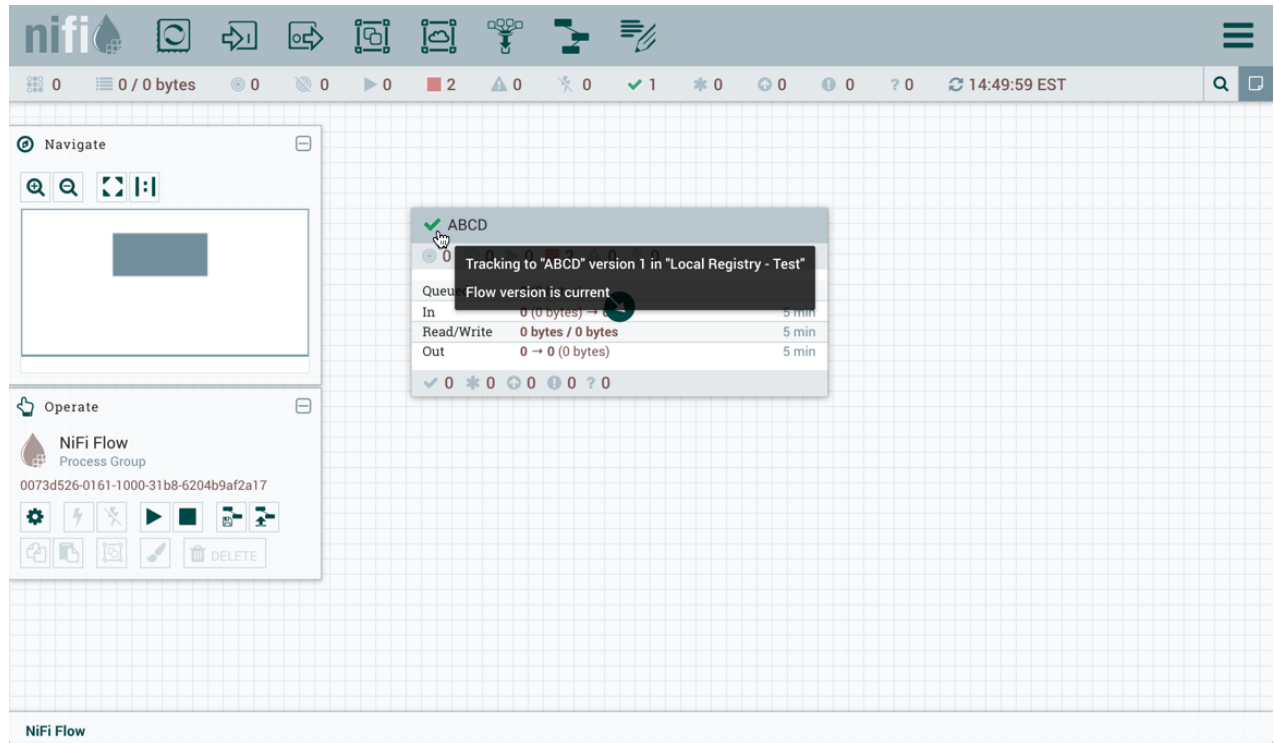




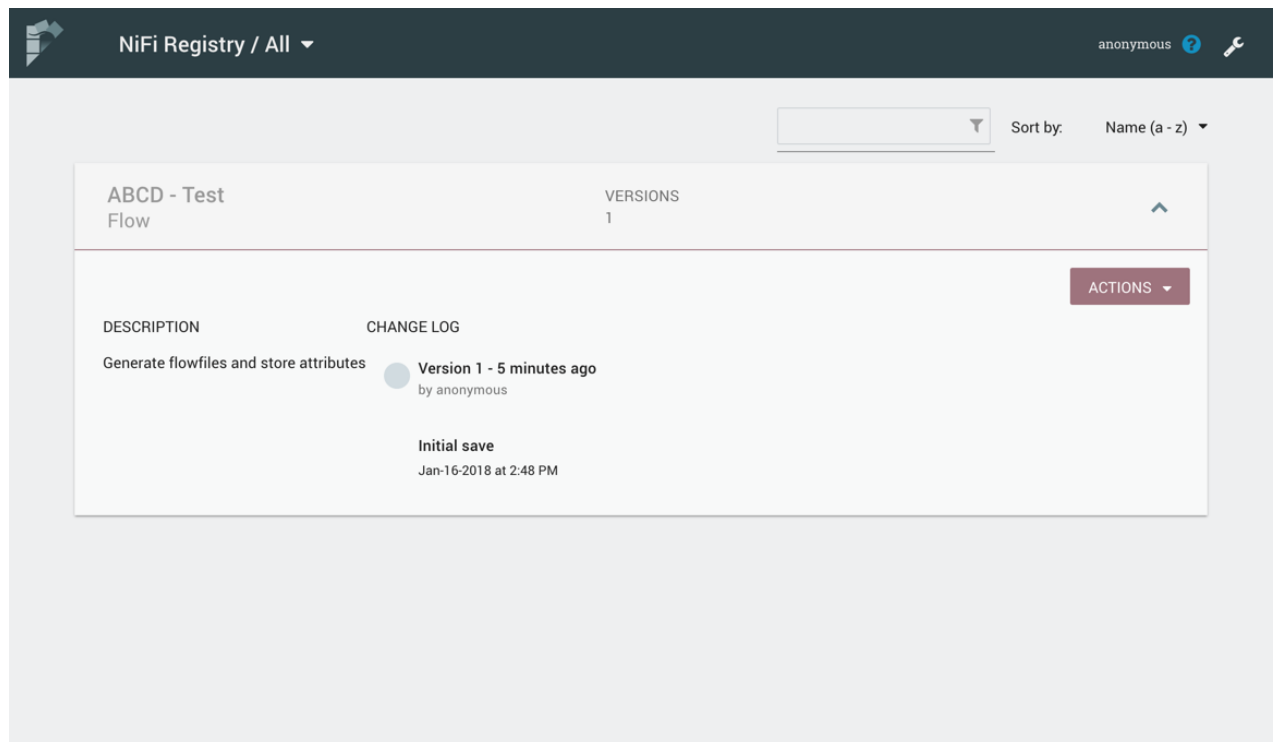
As indicated by the Version State icon



in the top left corner of the component, the process group is now saved as a versioned flow in the registry.



Go back to the Registry UI and return to the main page to see the versioned flow you just saved (a refresh may be required):



## Save Changes to a Versioned Flow

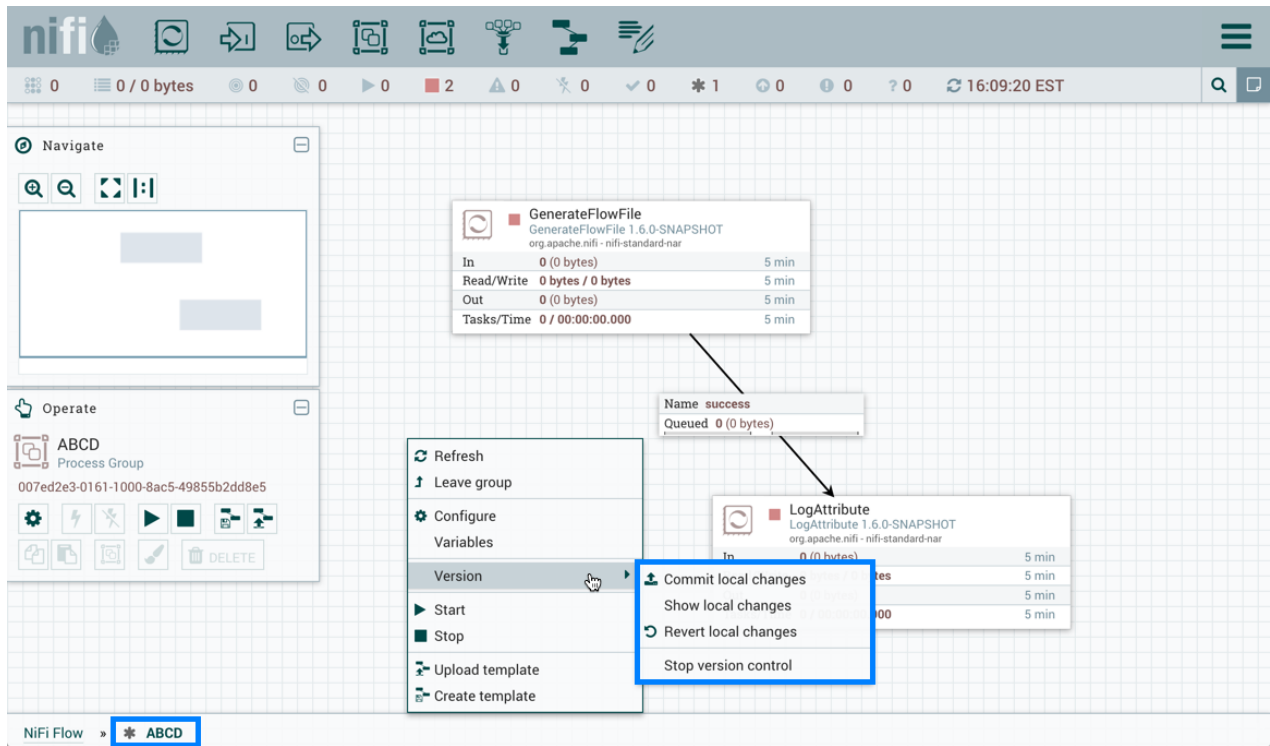
Changes made to the versioned process group can be reviewed, reverted or saved.

For example, if changes are made to the ABCD flow, the Version State changes to "Locally

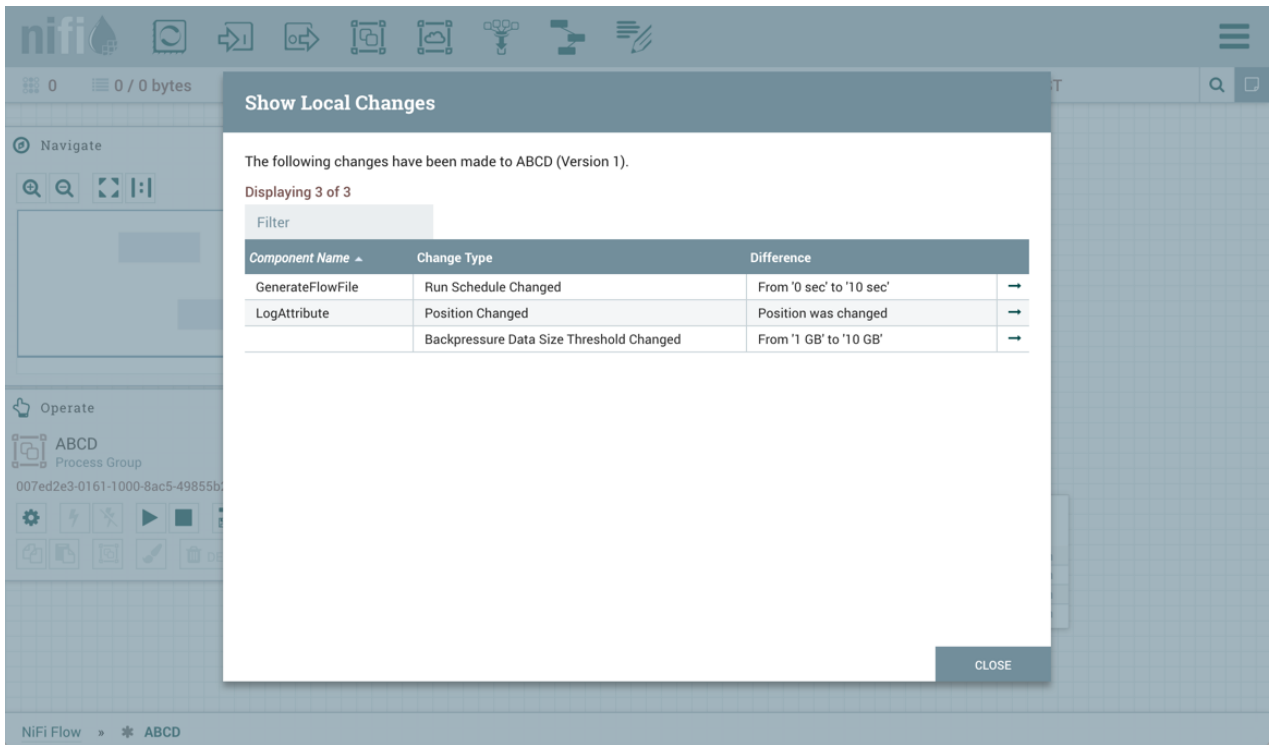
modified" (



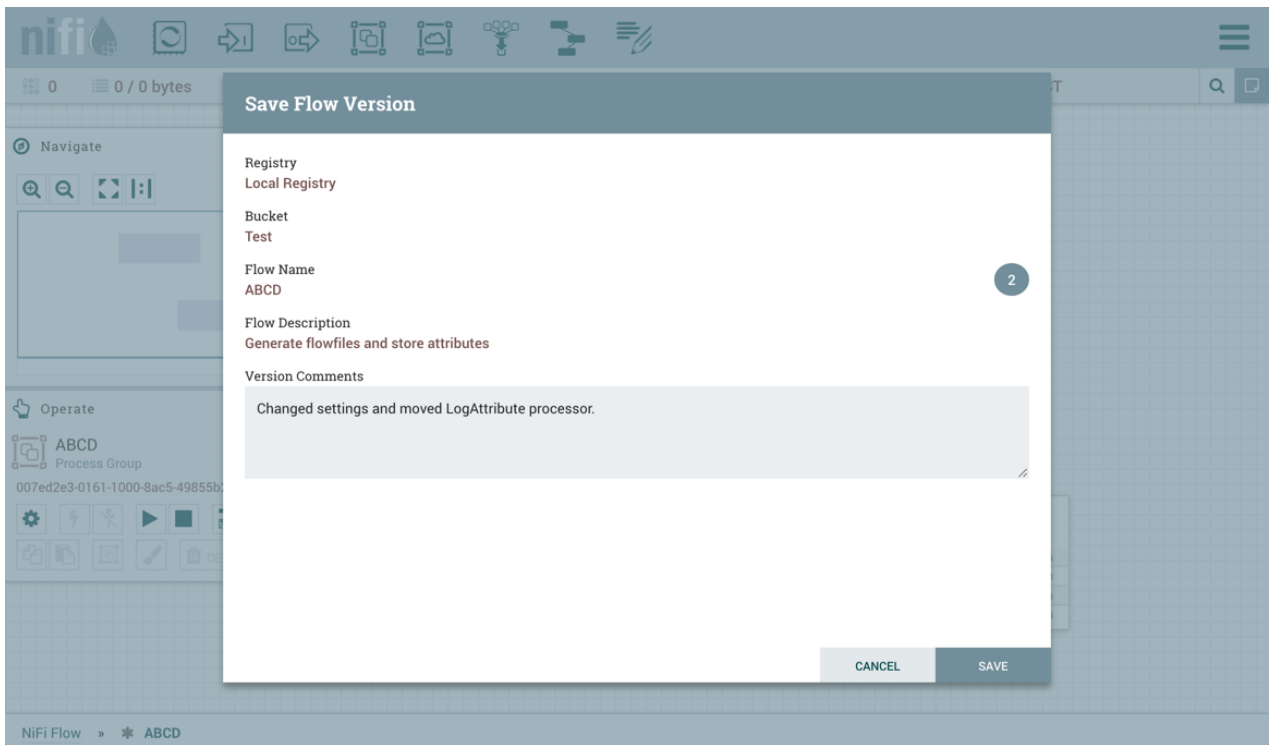
The right-click menu will now show the options "Commit local changes", "Show local changes" or "Revert local changes":



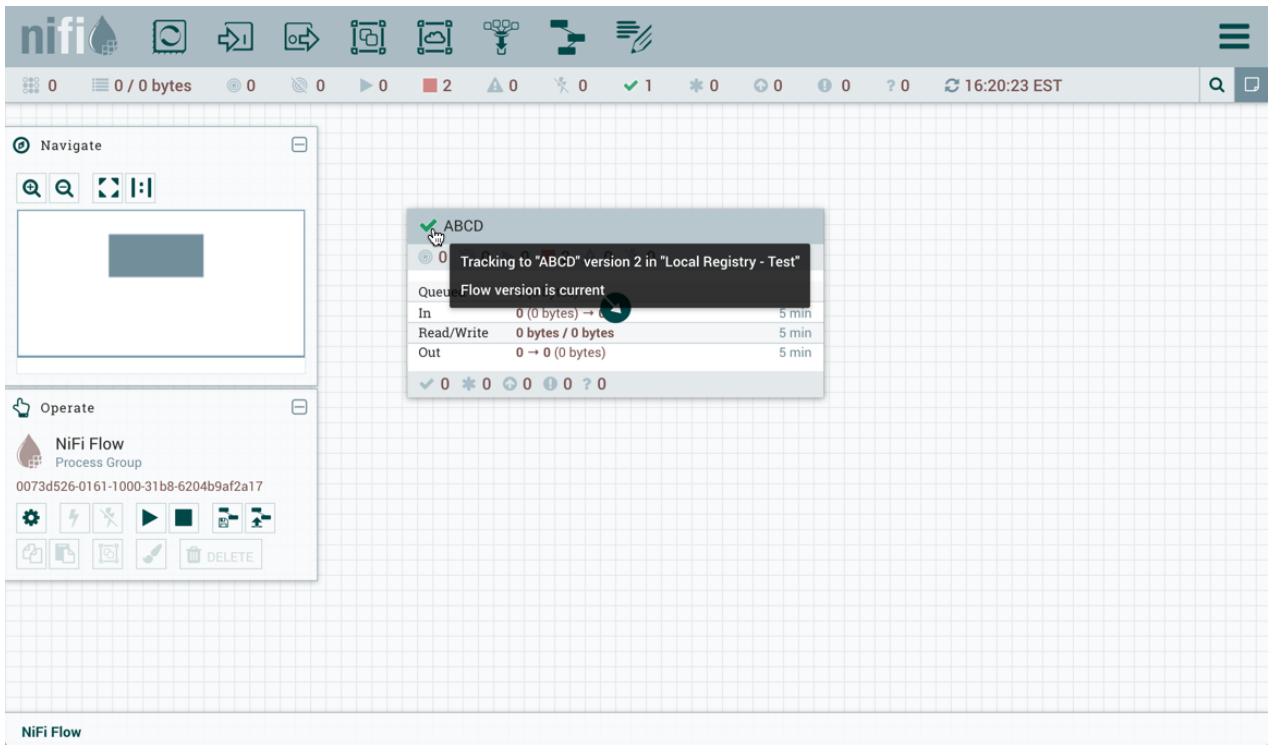
Select "Show local changes" to see the details of the changes made:



Select "Commit local changes", enter comments and select "Save" to save the changes:



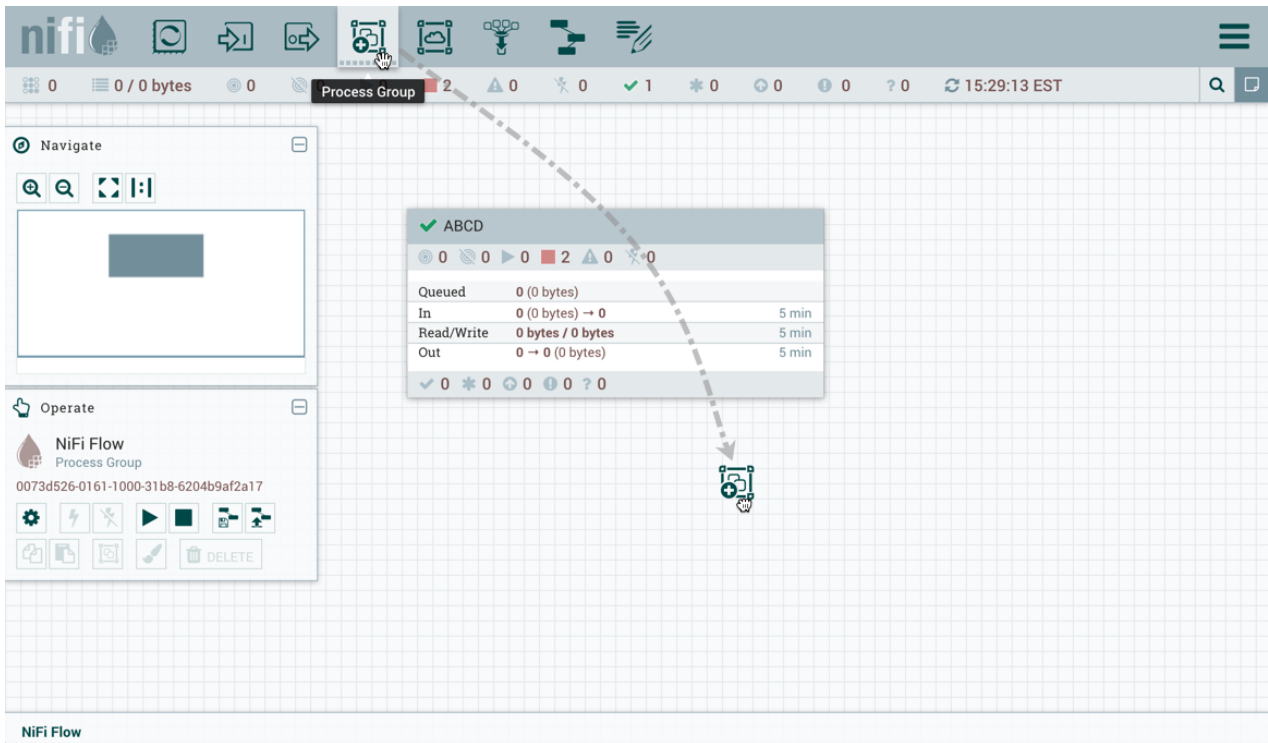
Version 2 of the flow is saved:



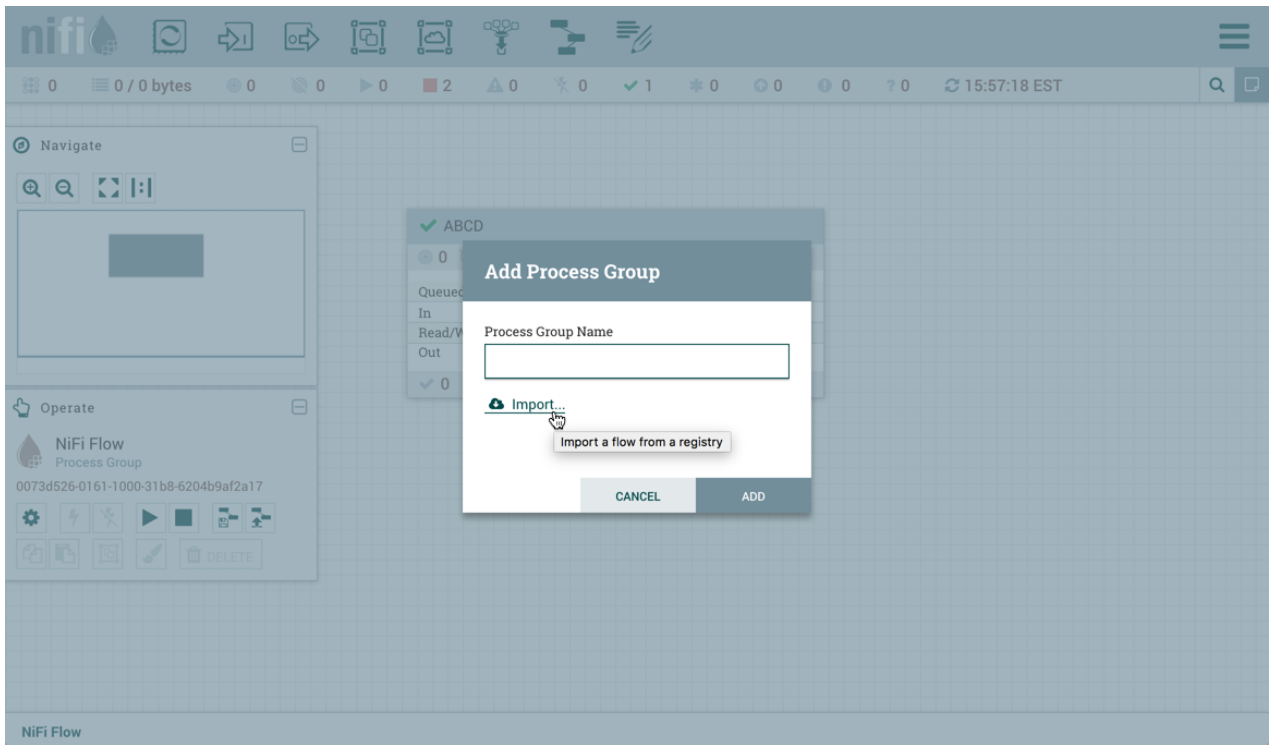
### Import a Versioned Flow

With a flow existing in the registry, we can use it to illustrate how to import a versioned process group.

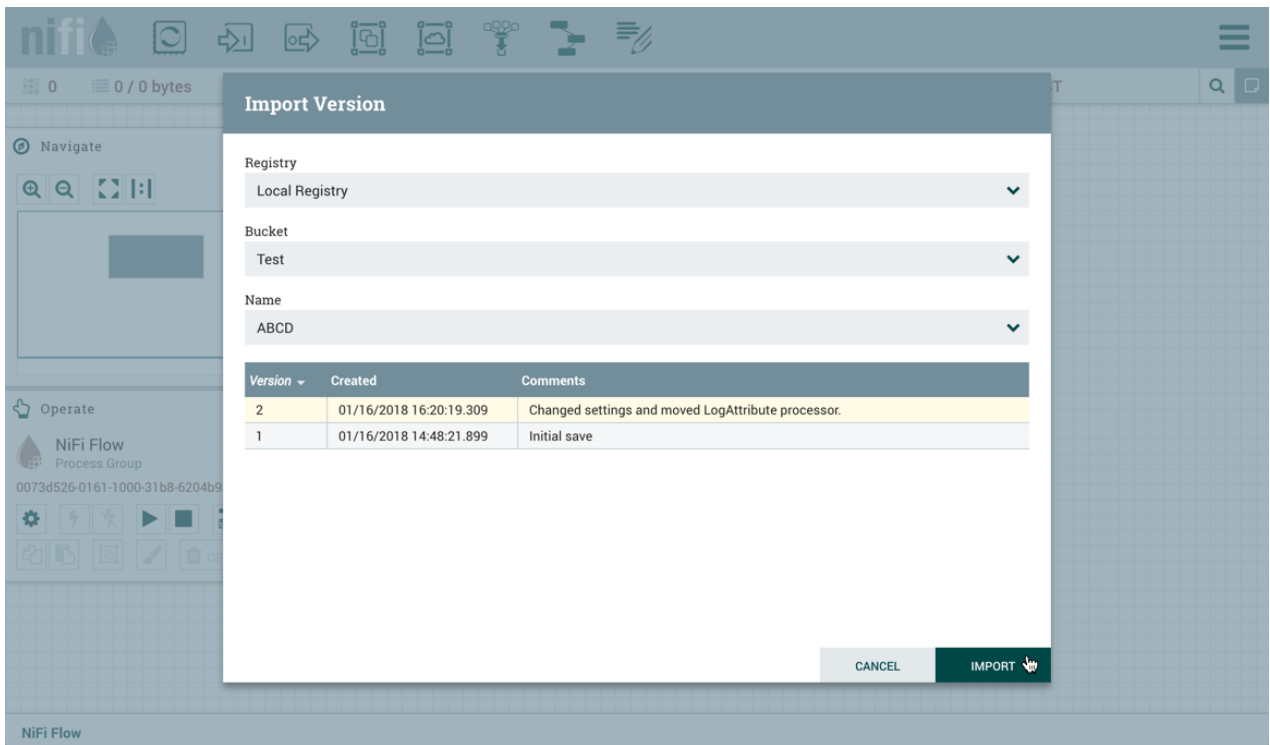
In NiFi, select Process Group from the Components toolbar and drag it onto the canvas:



Instead of entering a name, click the Import link:



Choose the version of the flow you want imported and select "Import":



A second identical PG is now added:

The screenshot shows the Apache NiFi Registry interface. At the top, there is a navigation bar with the 'nifi' logo and various icons. Below the navigation bar is a status bar displaying '0 / 0 bytes', '0', '0', '2', '0', '0', '1', '0', '0', '0', '0', '0', '0', and the time '16:23:21 EST'. On the left side, there is a 'Navigate' panel with search and view icons, and an 'Operate' panel for the 'NiFi Flow' process group with ID '0073d526-0161-1000-31b8-6204b9af2a17'. The main area displays a flow named 'ABCD' with a status of '2' (red square). Below the flow name is a table of metrics:

Metric	Value	Unit	Time
Queued	0	(0 bytes)	
In	0	(0 bytes) → 0	5 min
Read/Write	0	bytes / 0 bytes	5 min
Out	0	→ 0 (0 bytes)	5 min

Below the table, there are icons for flow control: a checkmark, a star, a play button, a stop button, a refresh button, and a help button, followed by the values '0', '0', '0', '0', '0', '0'.