

## Getting Started with Apache NiFi Registry

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## Who is This Guide For?

This guide is written for users who have basic experience with NiFi but have little familiarity with the NiFi Registry. This guide is not intended to be an exhaustive instruction manual or a reference guide. The [NiFi Registry User Guide](#) and [NiFi User Guide](#) provide a great deal more information about using the Registry and integrating it with NiFi. This guide, in comparison, is intended to provide users with just the information needed in order to understand how to configure NiFi Registry, connect with NiFi and start using versioned NiFi dataflows.

## 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

You can download NiFi and NiFi Registry from the CFM repository. Review *Download from the CFM Repository* to identify the download link suitable for your operating system and operational objectives.

## 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

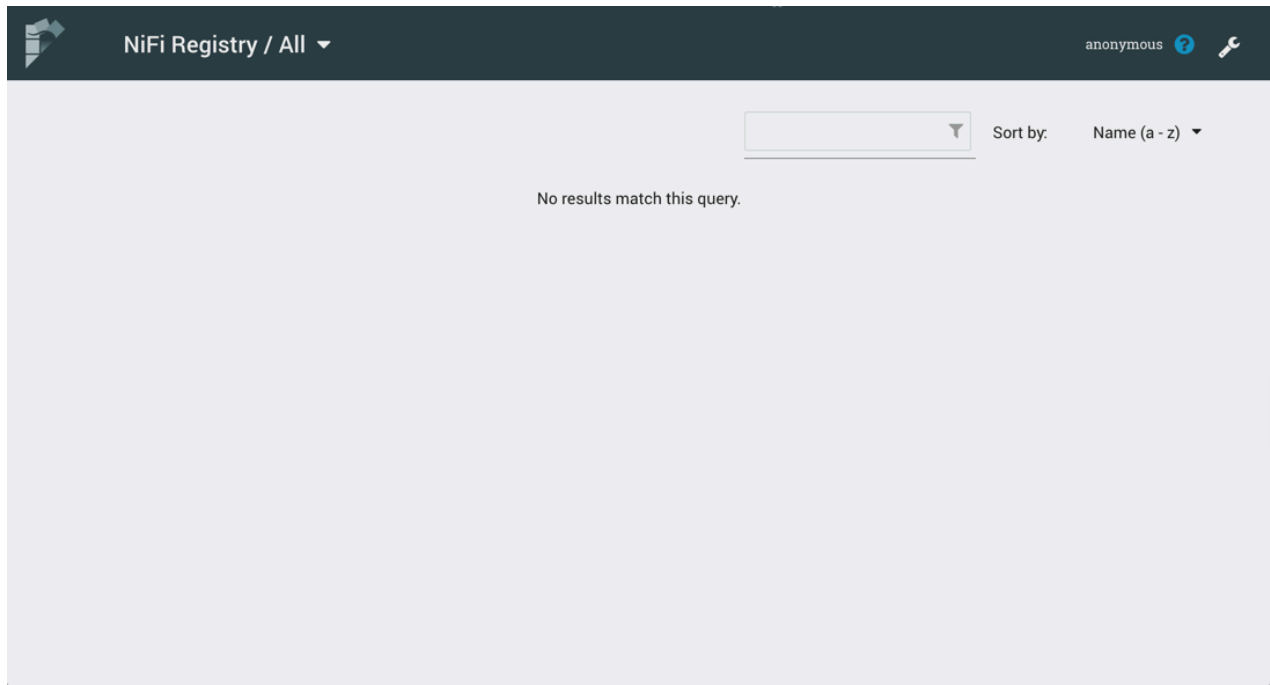
To install the application as a service, navigate to the installation directory in a Terminal window and execute the command `bin/nifi-registry.sh install` to install the service with the default name `nifi-registry`. To specify a custom name for the service, execute the command with an optional second 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?

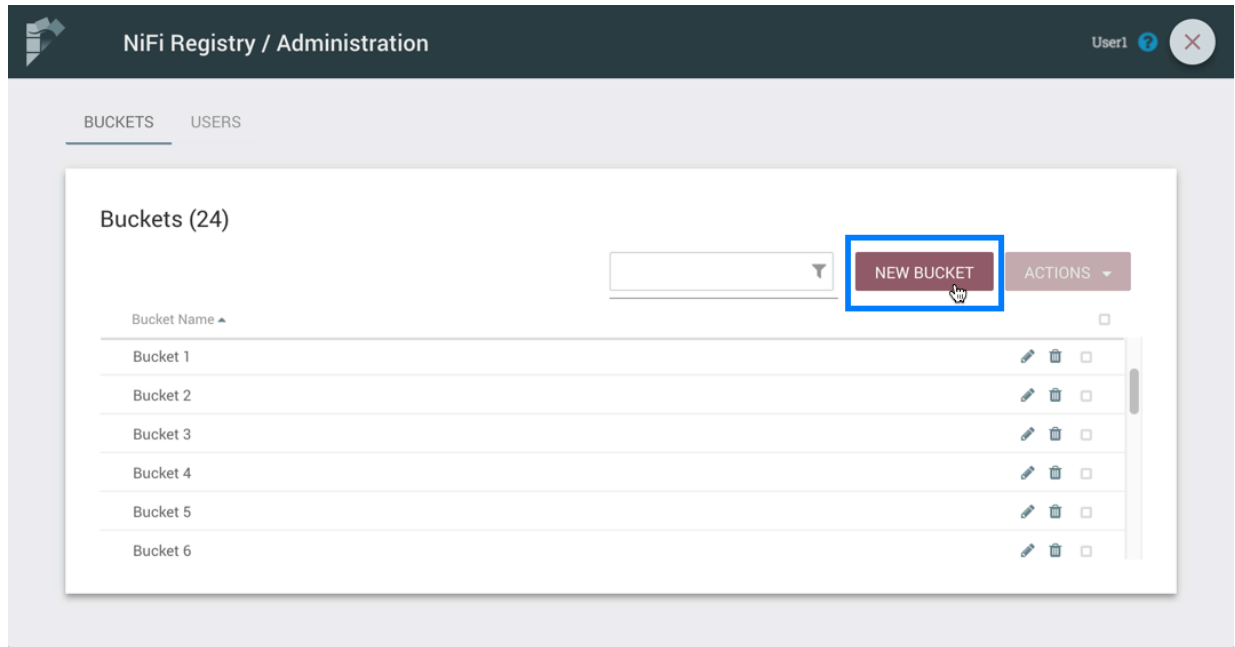
Now that NiFi Registry has been started, we can bring up the User Interface (UI). To get started, open a web browser and navigate to `http://localhost:18080/nifi-registry`. The port can be changed by editing the `nifi-registry.properties` file in the NiFi Registry conf directory, but the default port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

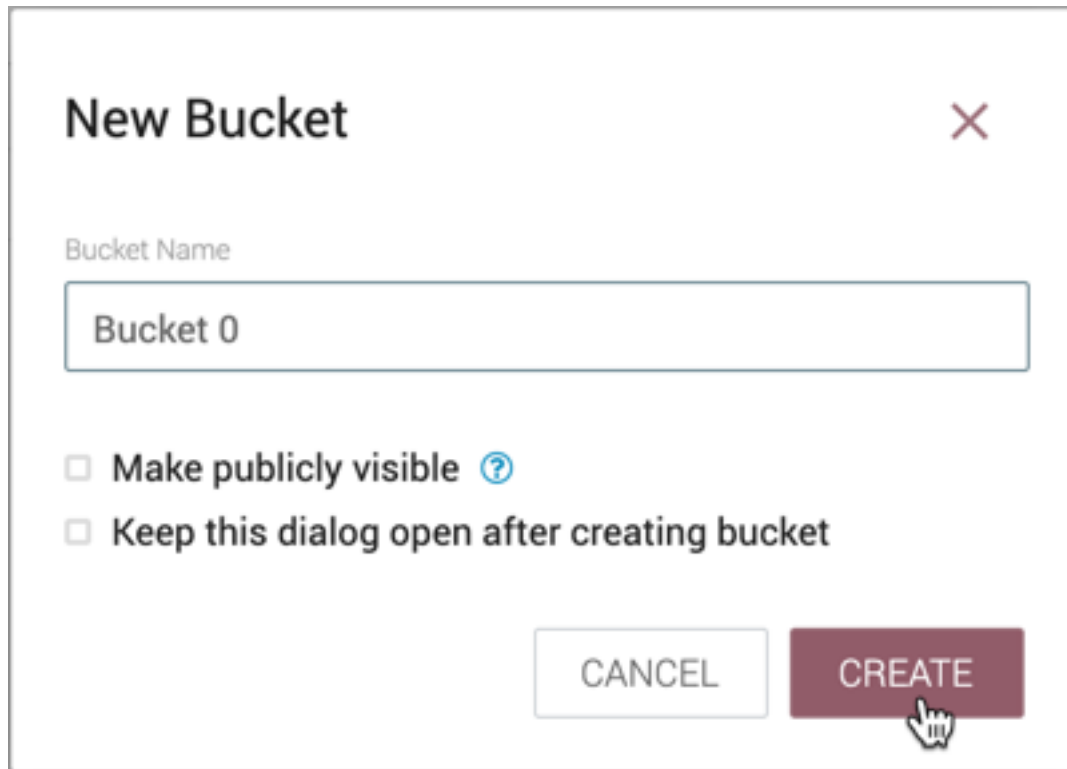


## Create a Bucket

1. Select the "New Bucket" button.



2. Enter the desired bucket name and select the "Create" button.



**Note:** Check "Make publicly available" to allow read access to items in the bucket by unauthenticated users. This will override any specific [bucket policies](#) granting read access.

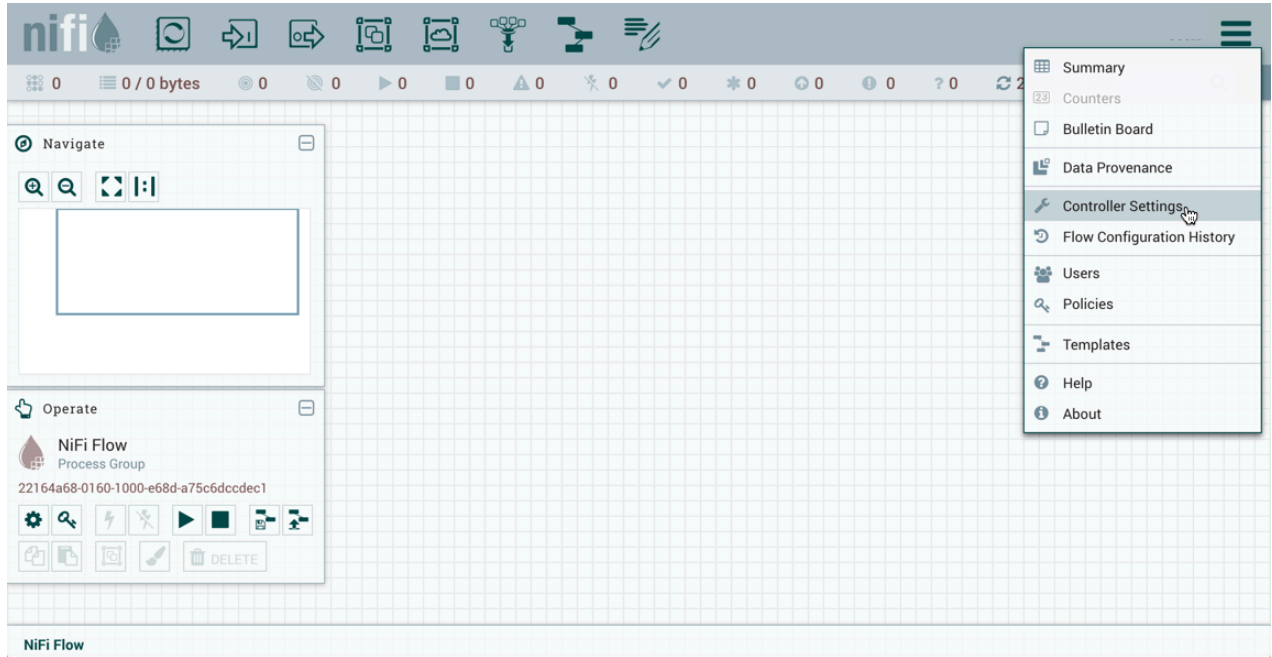


**Note:** To quickly create multiple buckets, check "Keep this dialog open after creating bucket".

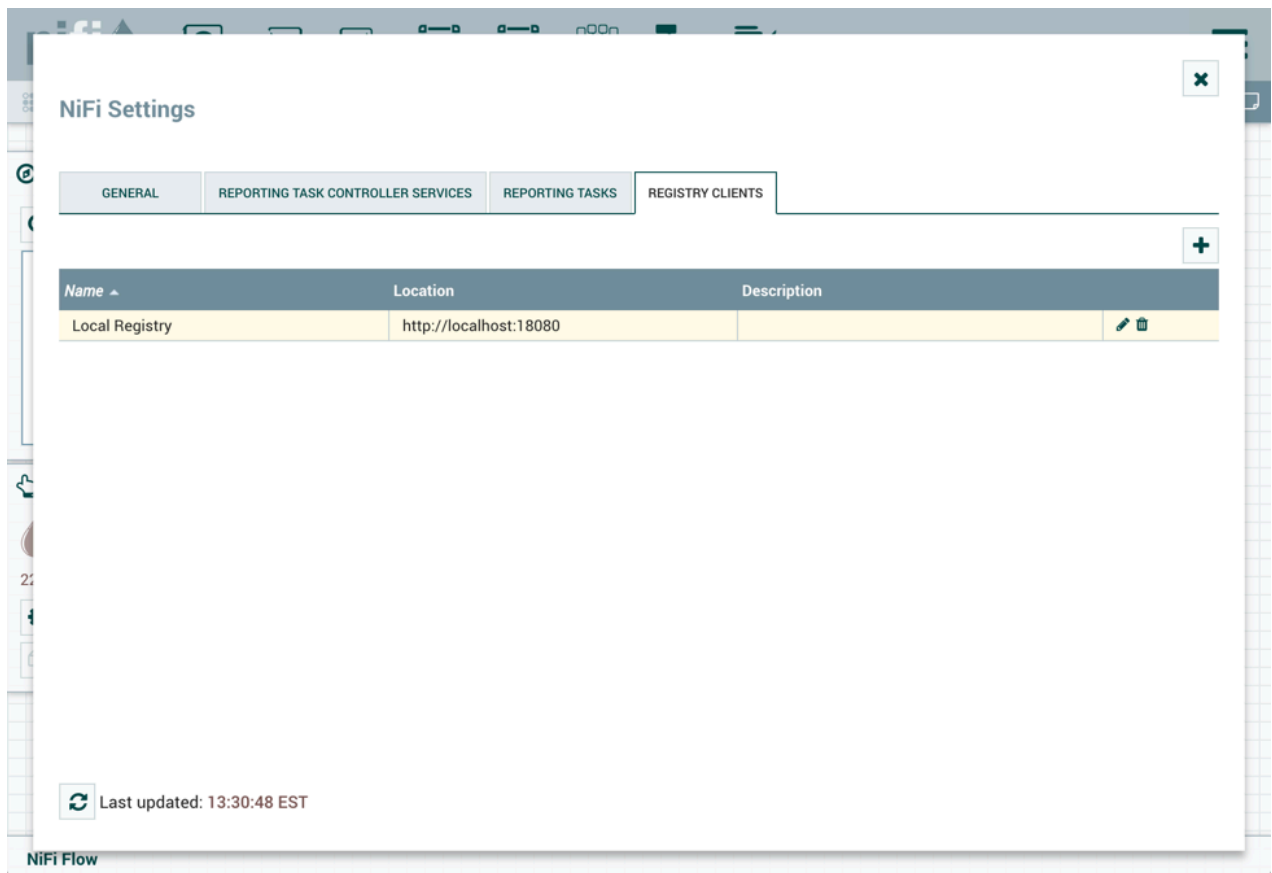
## Connect NiFi to the Registry

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`

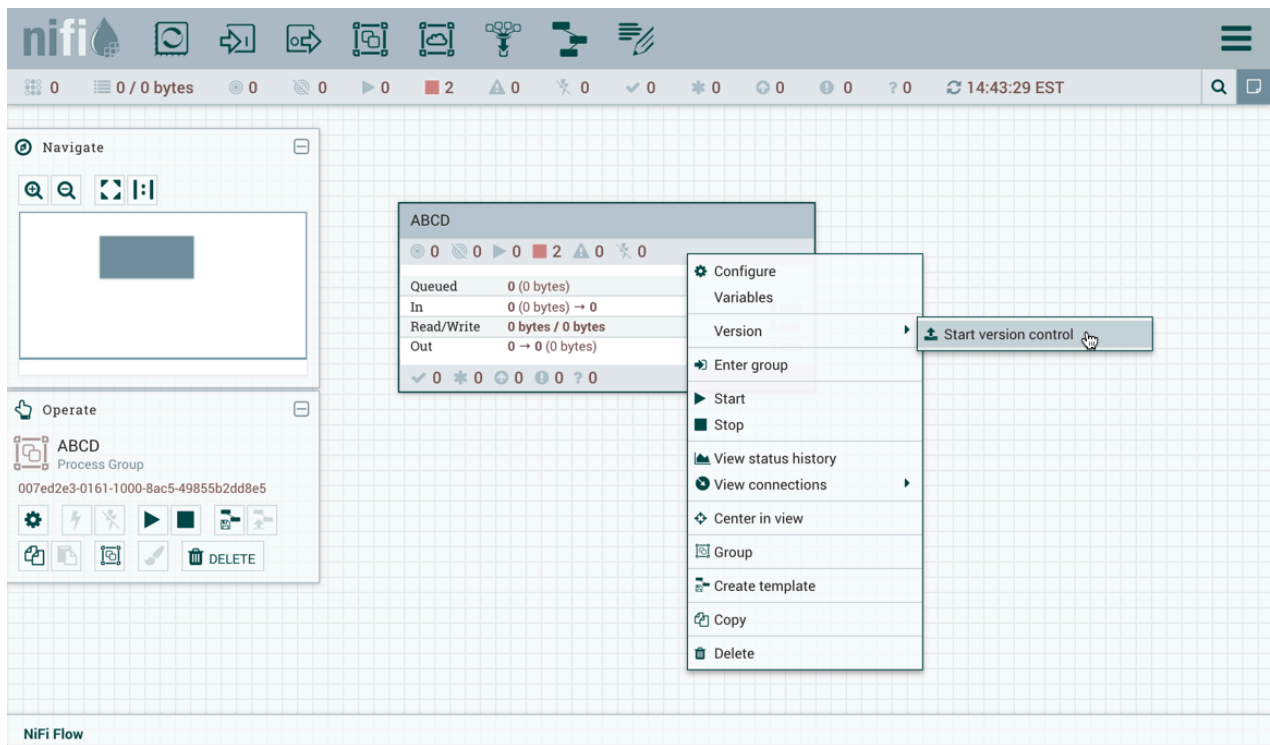


## Start Version Control on a Process Group

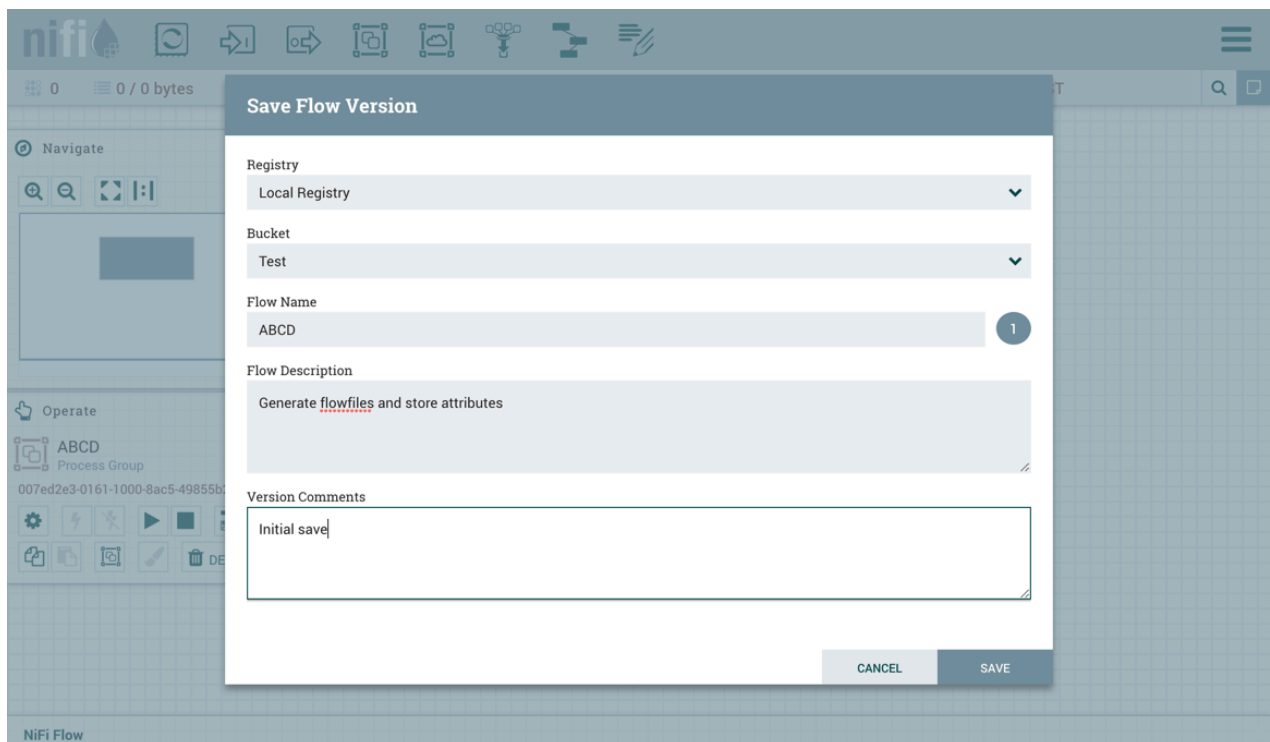
With NiFi connected to a NiFi Registry, dataflows can be version controlled on the process group level.


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

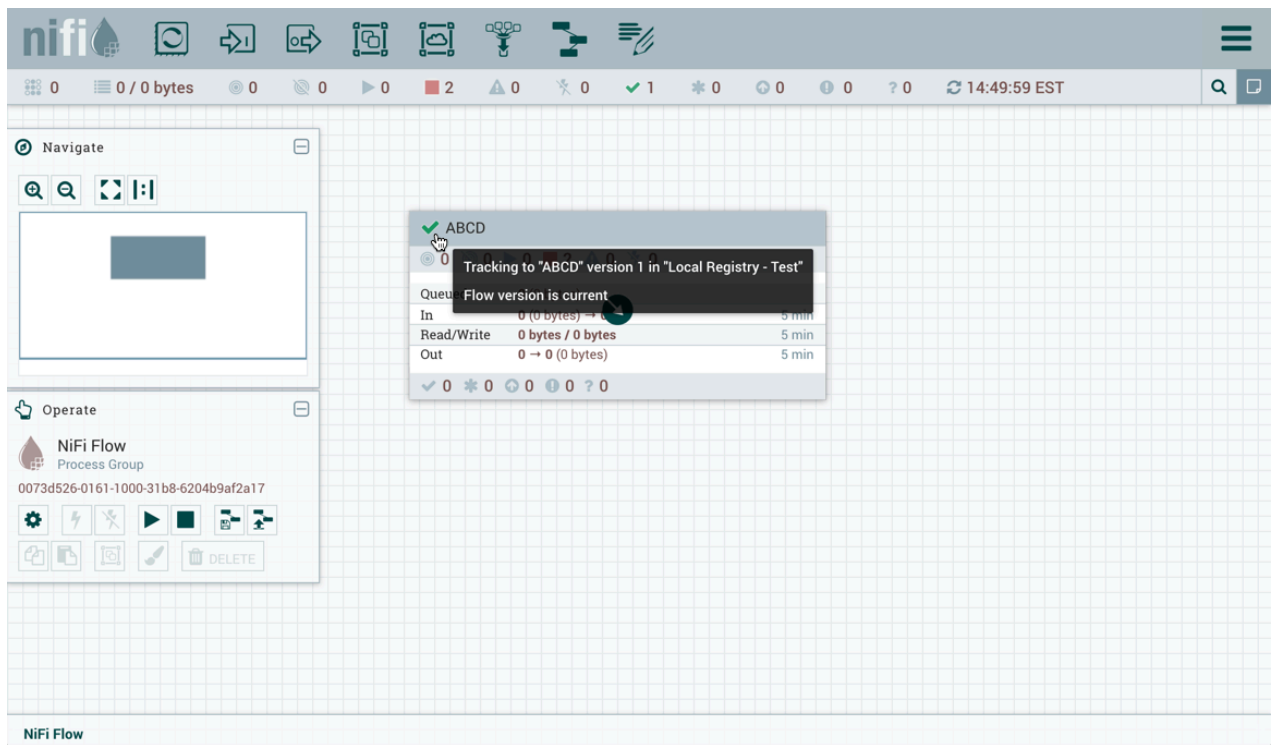




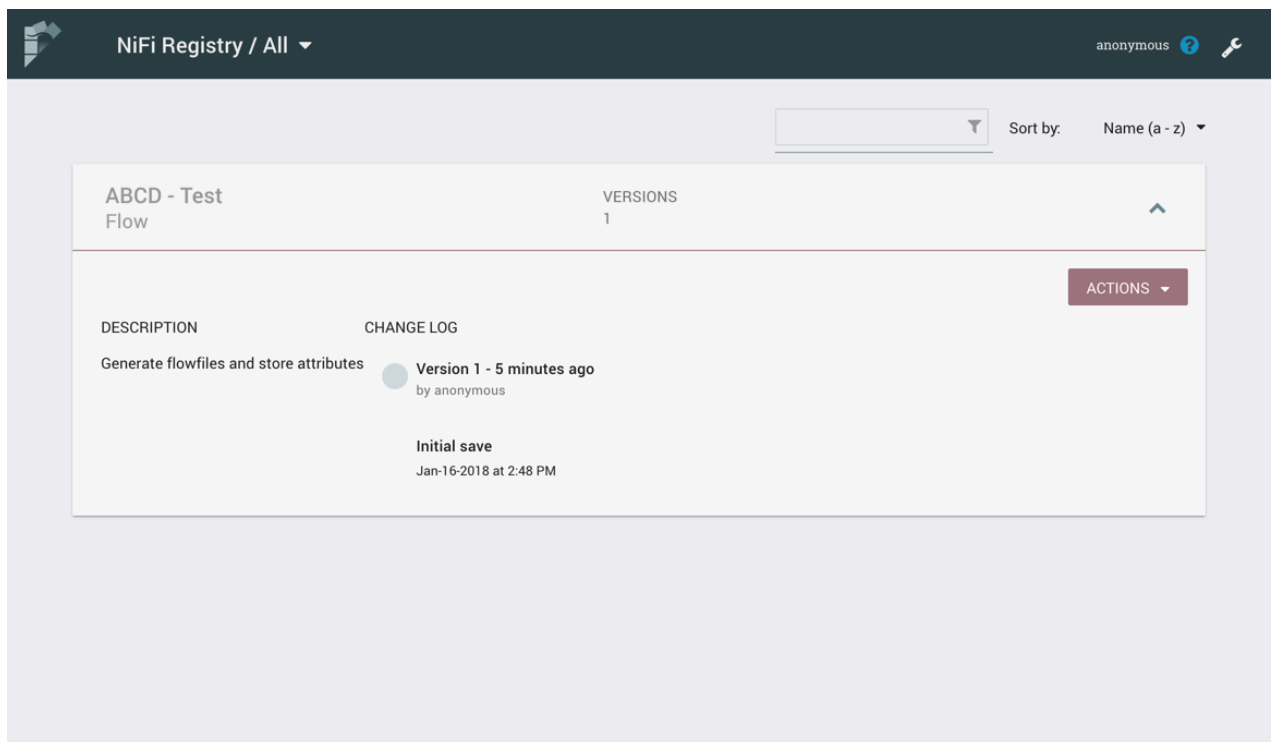
The local registry instance and "Test" bucket are chosen by default to store your flow since they are the only registry connected and bucket available. Enter a flow name, flow description, comments and select "Save":



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.




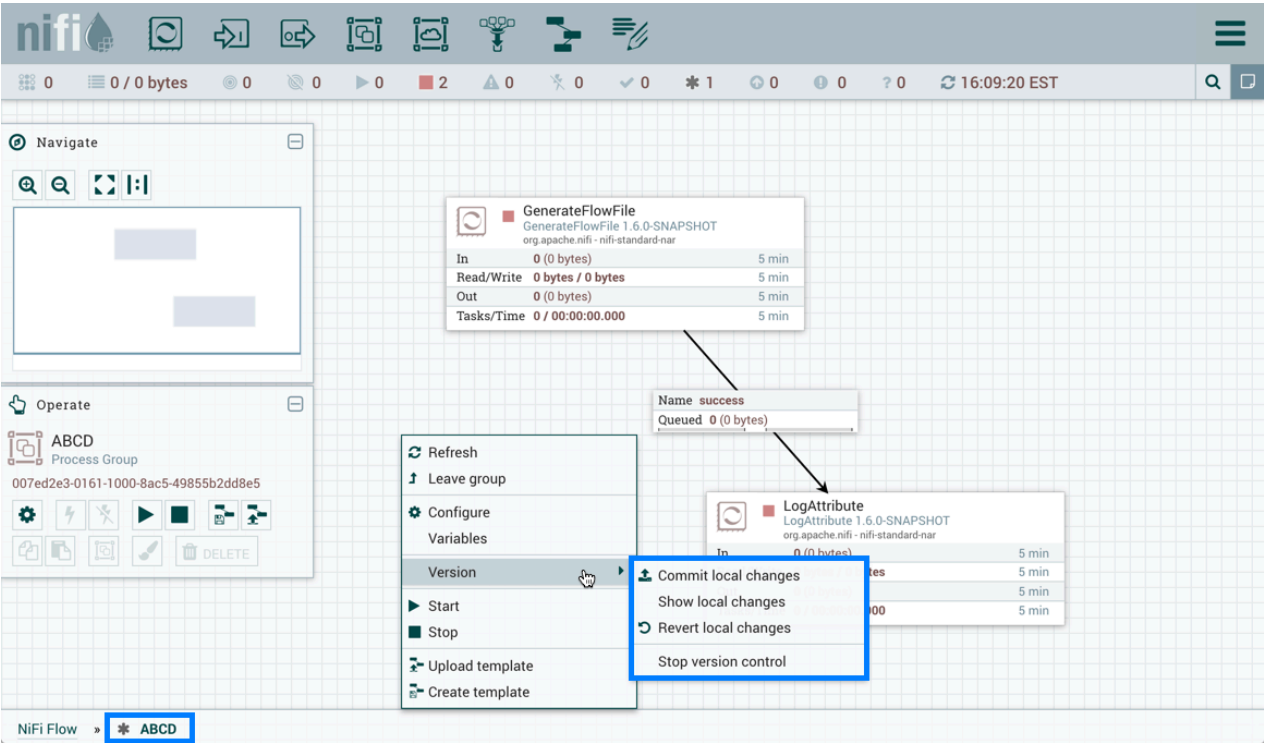
Go back to the Registry UI and return to the main page to see the versioned flow you just saved (a refresh may be required):



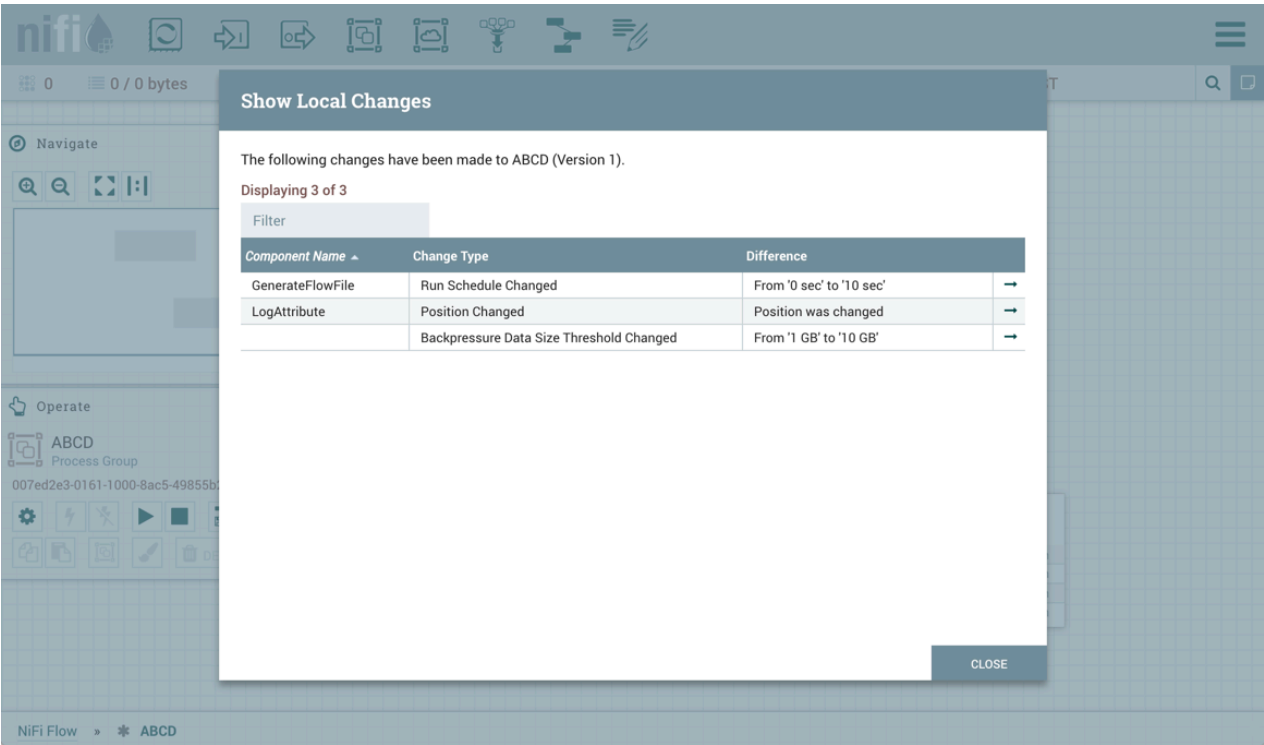
## Save Changes to a Versioned Flow

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

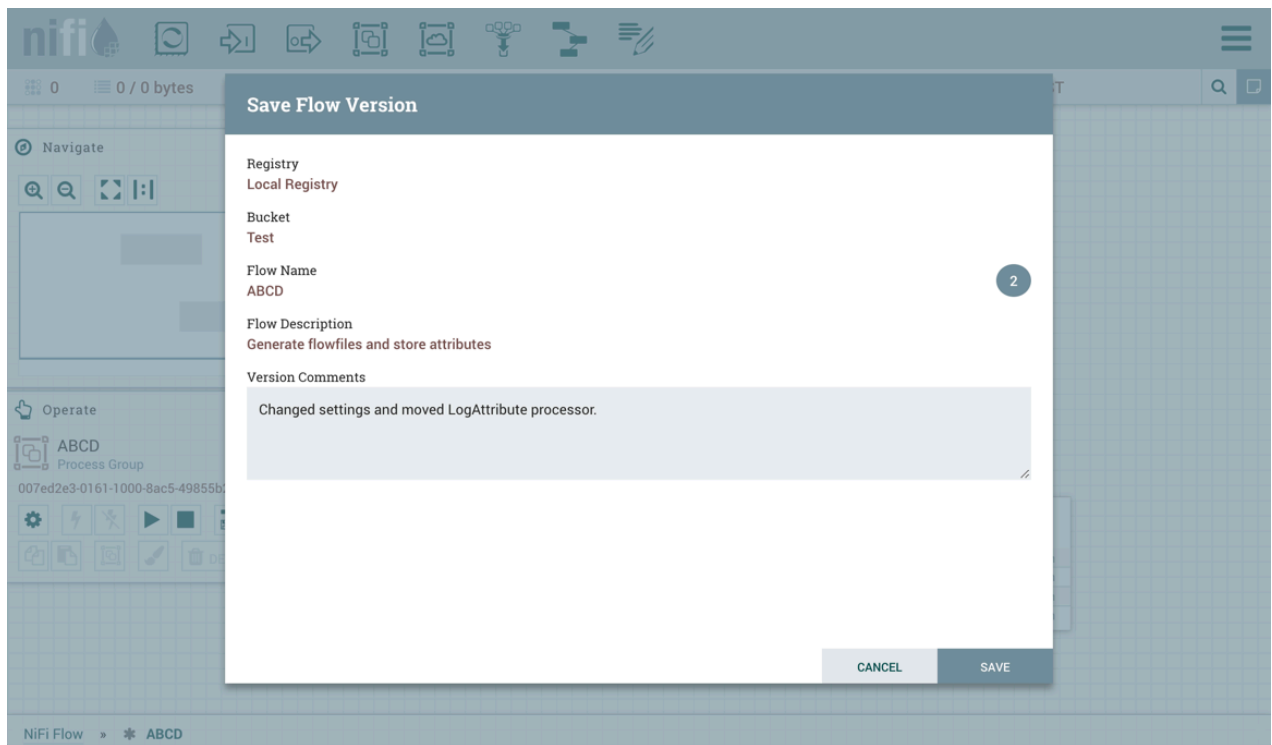
For example, if changes are made to the ABCD flow, the Version State changes to "Locally modified" (  ). The right-click menu will now show the options "Commit local changes", "Show local changes" or "Revert local changes":



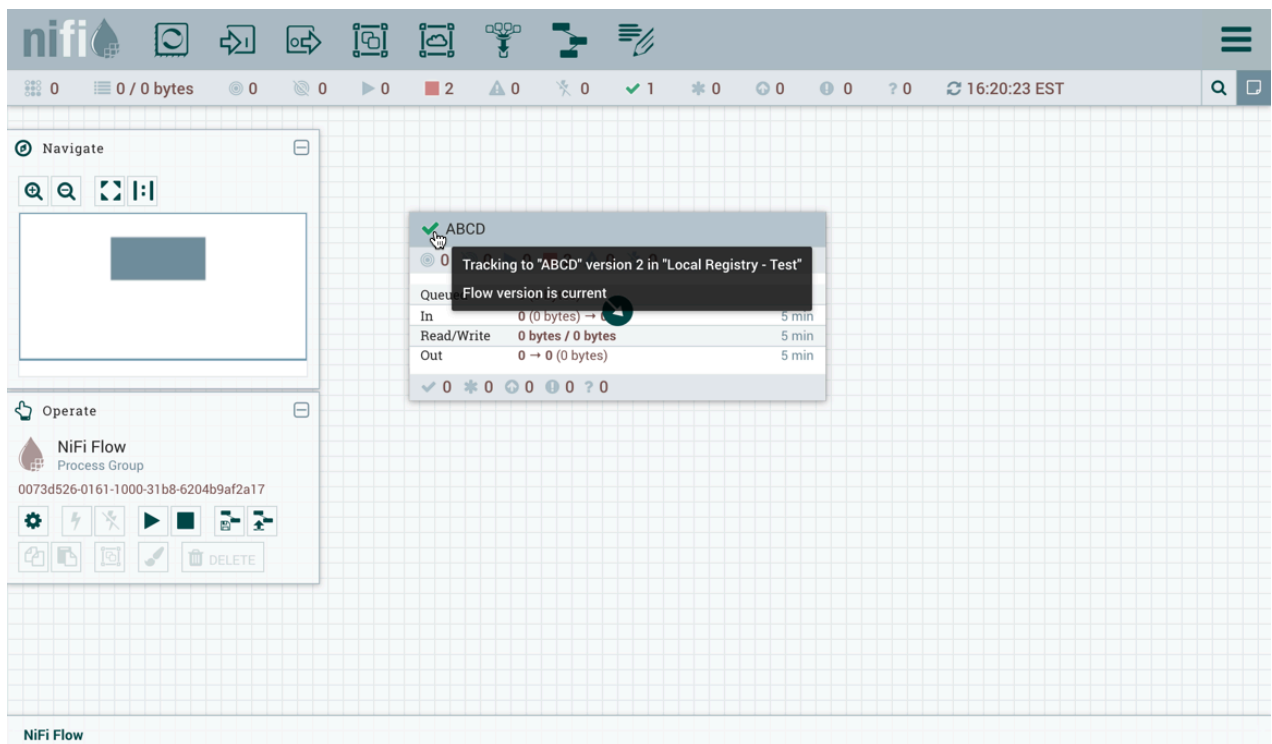
Select "Show local changes" to see the details of the changes made:



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



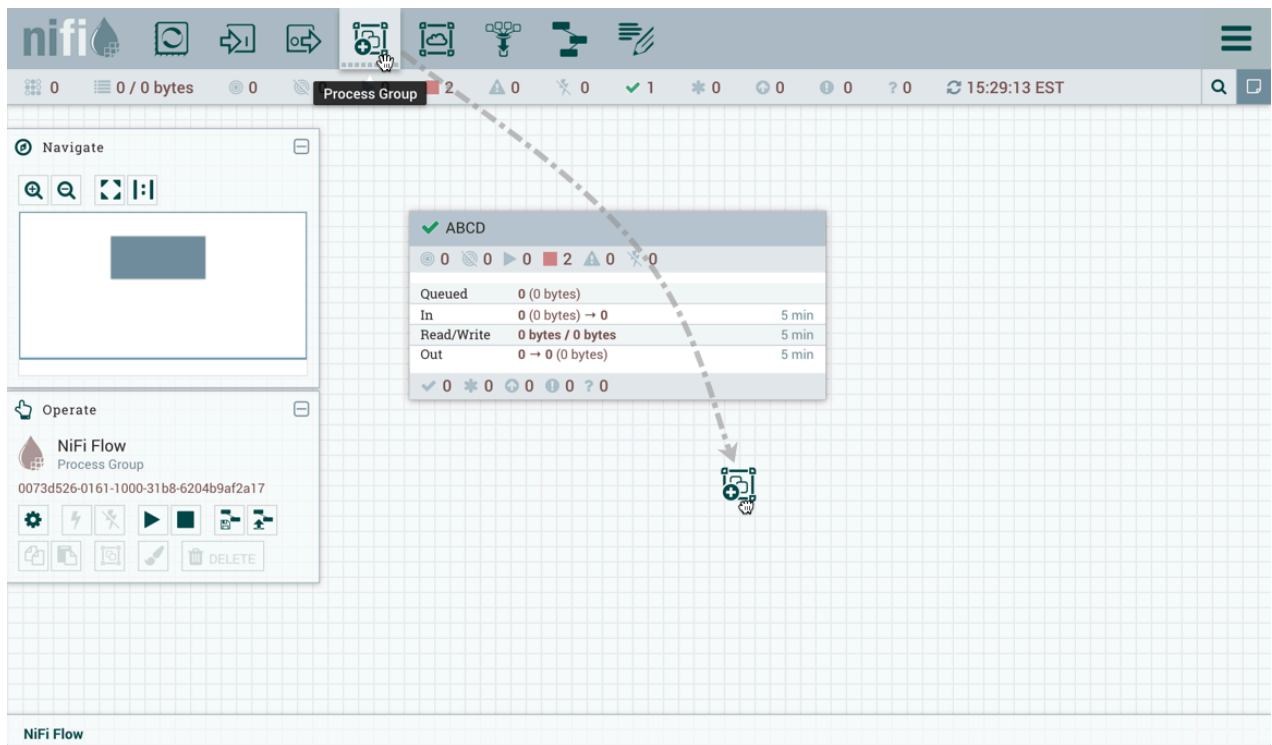
Version 2 of the flow is saved:



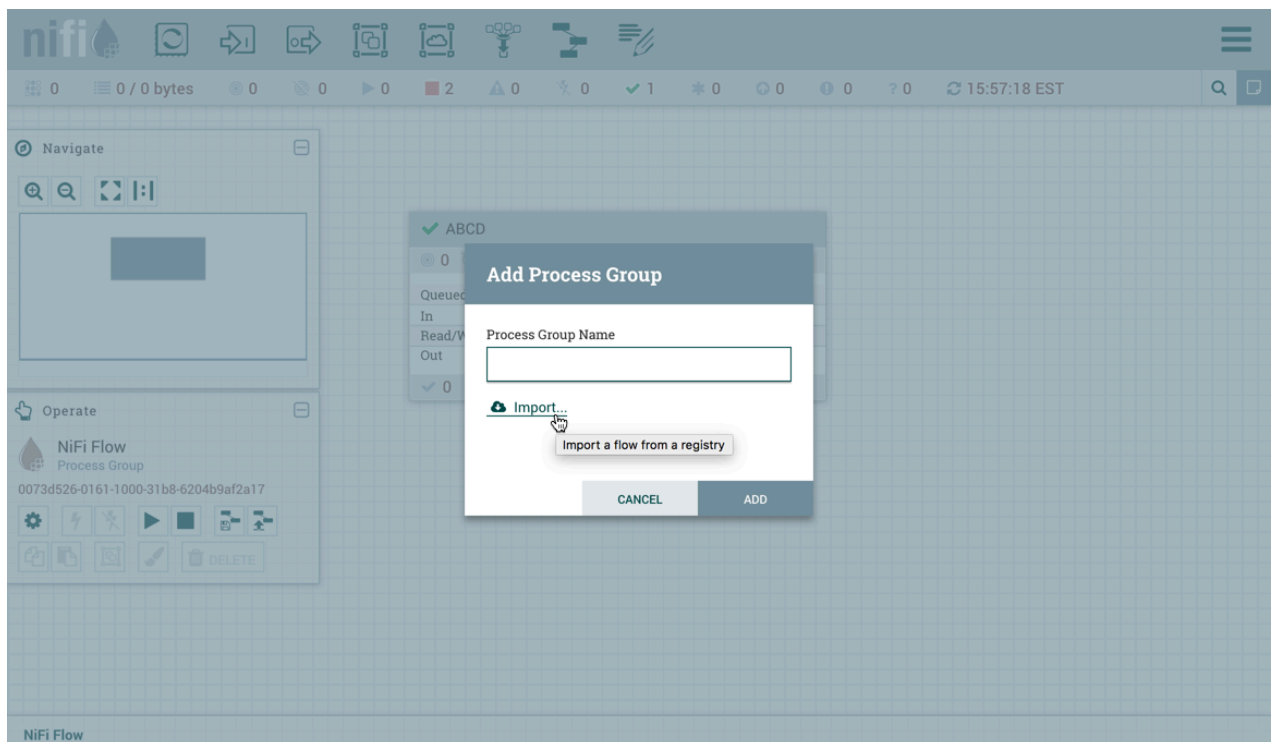
## Import a Versioned Flow

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

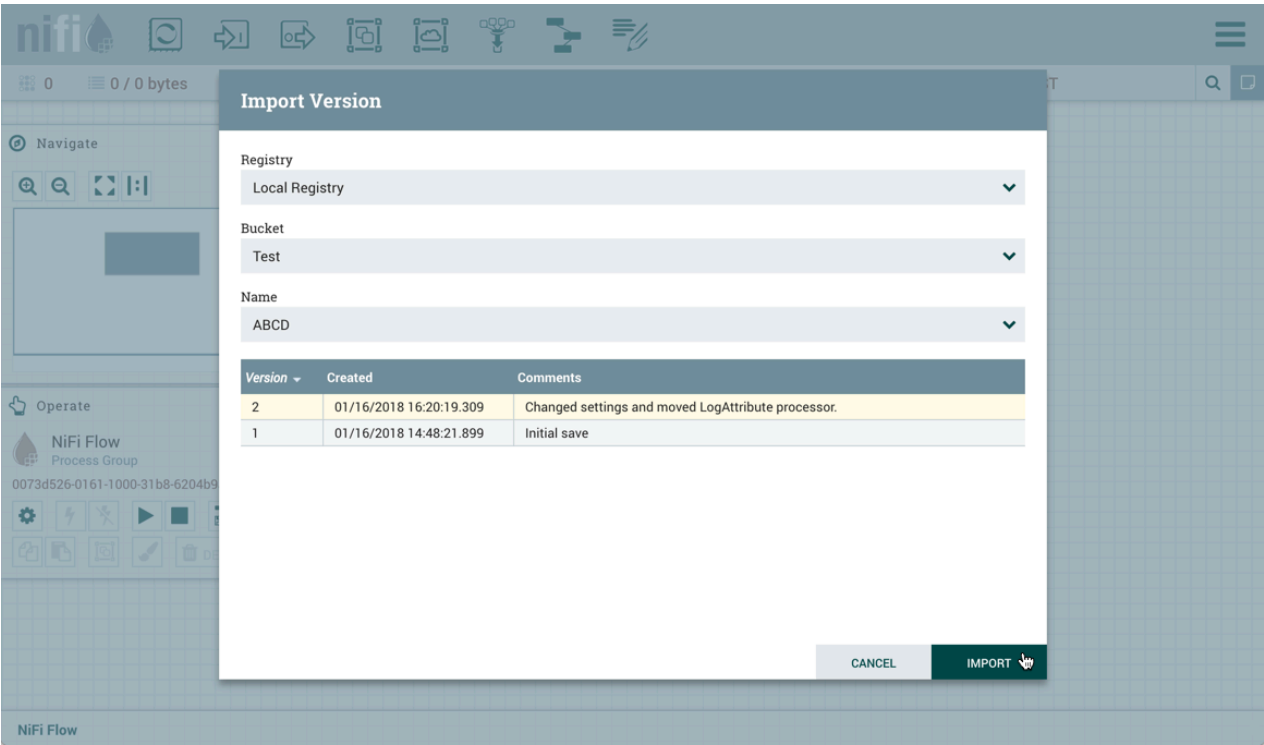
In NiFi, select Process Group from the Components toolbar and drag it onto the canvas:



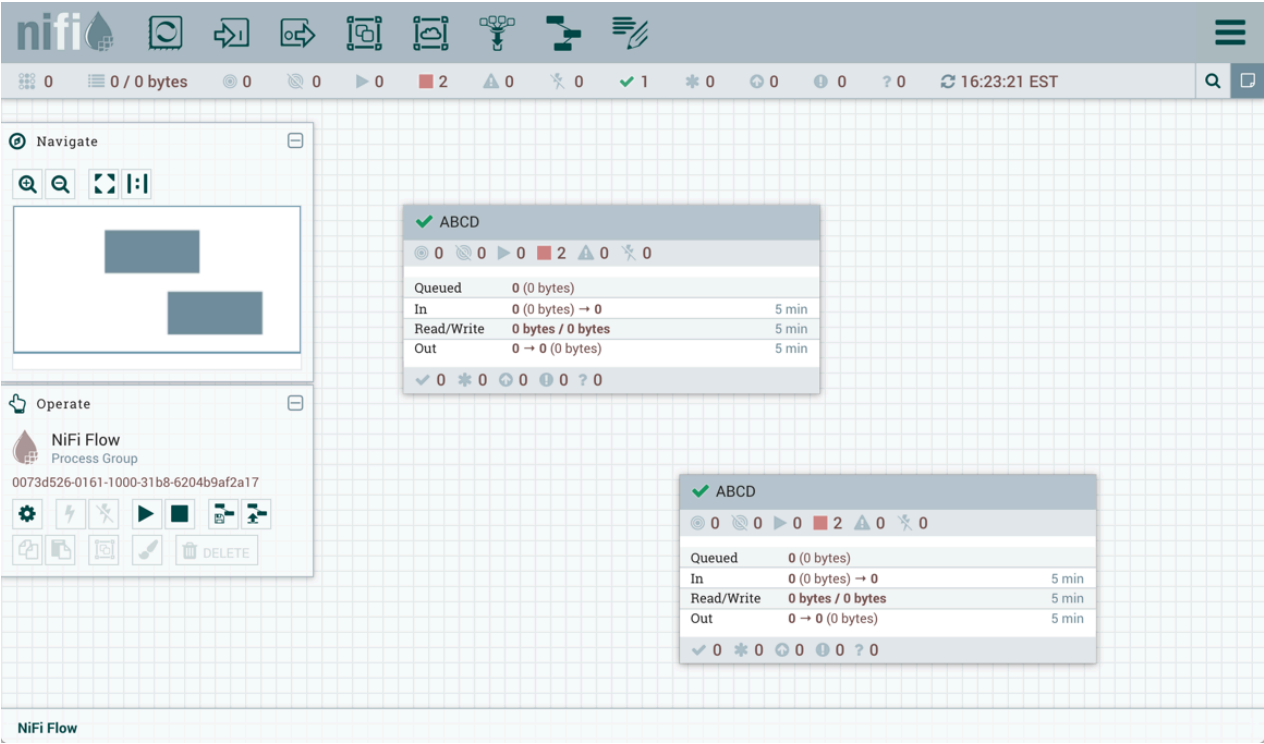
Instead of entering a name, click the Import link:



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



A second identical PG is now added:



# Where To Go For More Information

In addition to this Getting Started Guide, more information about NiFi Registry and related features in NiFi can be found in the following guides:

- [Apache NiFi Registry User Guide](#) - This guide provides information on how to navigate the Registry UI and explains in detail how to manage flows/policies/special privileges and configure users/groups when the Registry is secured.
- [Apache NiFi Registry System Administrator's Guide](#) - A guide for setting up and administering Apache NiFi Registry. Topics covered include: system requirements, security configuration, user authentication, authorization, proxy configuration and details about the different system-level settings.
- [Apache NiFi User Guide](#) - A fairly extensive guide that is often used more as a Reference Guide, as it provides information on each of the different components available in NiFi and explains how to use the different features provided by the application. It includes the section [Versioning a Dataflow](#) which covers the integration of NiFi with NiFi Registry. Topics covered include: connecting to a registry, version states, importing a versioned flow and managing local changes.
- [Contributor's Guide](#) - A guide for explaining how to contribute work back to the Apache NiFi community so that others can make use of it.

In addition to the guides provided here, you can browse the different [NiFi Mailing Lists](#) or send an e-mail to one of the mailing lists at [users@nifi.apache.org](mailto:users@nifi.apache.org) or [dev@nifi.apache.org](mailto:dev@nifi.apache.org).

Many of the members of the NiFi community are also available on Twitter and actively monitor for tweets that mention [@apachenifi](#).