

## 4. Upgrading a NiFi cluster

1. [Download](#) the latest NiFi release.
2. Install the new release in /opt. Your directory structure should look similar to:

```
/
|--> opt/
|   |--> nifi-existing_version
|   |   |--> LICENSE
|   |   |--> NOTICE
|   |   |--> README
|   |   |--> bin/
|   |   |--> conf/
|   |   |--> docs/
|   |   |--> lib/
|   |   |--> work/
|   |--> nifi-1.0.0
|   |   |--> LICENSE
|   |   |--> NOTICE
|   |   |--> README
|   |   |--> bin/
|   |   |--> conf/
|   |   |--> docs/
|   |   |--> lib/
|   |   |--> work/
|   |--> Configuration_resources/
|   |   |--> authorized-users.xml
|   |   |--> flow.xml.gz
|   |   |--> templates/
|   |   |--> custom_lib/
|
|--> database_repository/
|--> content_repository_1/
|--> content_repository_N/
|--> flowfile_repository/
|--> NiFi-logs/
|--> provenance_repository_1/
|--> provenance_repository_N/
```

3. Save the `authorized-users.xml` from your older NiFi version, so that NiFi 1.0.0 can use it to populate the values of the `authorizations.xml` and `users.xml` files.
4. Using the values already configured in the following files inside the previous NiFi `conf` directory, update the corresponding lines in the same files under target NiFi directory (`nifi-1.0.0`):

- `bootstrap.conf`
- `logback.xml`
- `nifi.properties`

**Note:**

- Ensure that you make no typos when you are configuring the various paths to your existing repos and the path to the `flow.xml.gz` file in the `nifi.properties` file in the newer release.
- Ensure that you have the same Run As user configured in the `bootstrap.conf` file.
- If no new lines were added to these files, you can copy them directly from an older version to a newer. If you do copy the `nifi.properties` file, update the `nifi.version` number.

5. Verify that all file and directory ownerships for your target NiFi directory match what you set on the existing version.
6. Stop the NCM and all nodes running in the existing NiFi instance.

**Note:**

- NiFi 1.0.0 implements zero-master clustering and there is no NCM in NiFi 1.0.0. Ensure that you have the same Run As user configured in the `bootstrap.conf` file.
- It is important to stop everything. You cannot upgrade and restart one node at a time. You could end up with mismatched versions of NiFi connected to your cluster NCM.
- It is OK to stop your NiFi cluster while files still exist in your dataflows.

7. Before you start the upgraded NiFi nodes, add the location of your `authorized-users.xml` file to `authorizations.xml`, if you want to map your previous authorized users to the new NiFi authentication model.

```
<authorizer>
<identifier>file-provider</identifier>
<class>org.apache.nifi.authorization.FileAuthorizer</class>
<property name="Authorizations File">./conf/authorizations.xml</property>
<property name="Users File">./conf/users.xml</property>
<property name="Initial Admin Identity"></property>
<property name="Legacy Authorized Users File"></property>
```

8. To support NiFi's new zero-master clustering model, ensure that the following properties are set on each node in your cluster:

- `nifi.web.http.port=<node port>`
- `nifi.cluster.is.node=true`
- `nifi.cluster.node.address=<fully qualified hostname of the node>`
- `nifi.cluster.node.protocol.port=<node protocol port>`
- `nifi.state.management.embedded.zookeeper.start=true`
- `nifi.state.management.provider.cluster=zk-provider`
- `nifi.state.management.embedded.zookeeper.properties=./conf/zookeeper.properties`
- `nifi.zookeeper.connect.string=<A comma-separated list of host:port pairs to connect to ZooKeeper. For example, my-zk-server1:2181,my-zk-server2:2181,my-zk-server3:2183>`

Configuration details can be found in the [Clustering Configuration](#), the [Cluster Common Properties](#), the [Cluster Node Properties](#), and the [ZooKeeper Properties](#) sections of the System Administrator's Guide.

9. Set the following NiFi properties to ensure that the cluster coordinator and other nodes have time to select the correct dataflow:

- `nifi.cluster.flow.election.max.wait.time=5 mins`
- `nifi.cluster.flow.election.max.candidates=<number of NiFi nodes in the cluster>`

10. Start the upgraded NiFi nodes.

**Note:** Check the `nifi-app.log` for errors and for any nodes that fail to join the upgraded cluster.

11. If you configured NiFi to run as a service, ensure that any path or links for that service are updated to point at the newly installed version executables.
12. Configure the `state-management.xml` and `zookeeper.properties` file on every node with the following information:
  - Specify whether you want to use an embedded or external ZooKeeper server.
  - If you are using an embedded server, identify the nodes on which you want to run the Zookeeper server. For these nodes, be sure to also edit the state management portion of the `nifi.properties` file.

See the [System Administrator's Guide](#) for additional information on state management and using the ZooKeeper server.

13. If you want to start using LDAP user authentication, configure the `login-identity-providers.xml` file, and update the `nifi.properties` file.
14. If you want to setup NiFi JVM lifecycle event notifications, configure the `bootstrap-notification.services.xml` file and update the relevant settings in the `bootstrap.conf` file.
15. Once you have verified that the new version has started, is processing data, and can be accessed via the UI, you can delete the older version.