Release Process: Step by step guide

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Preliminaries

Apache Release Documentation

- Apache Release Guide
- Apache Release Policy

Code Signing Key

Create a code signing gpg key for release signing; use <your Apache ID>@apache.org for your primary ID for the code signing key. See the Apache Release Signing documentation for further information.

- Add your code signing key to your Apache ID here
- Publish it to a public key server such as the MIT key server.
- Add it to the HAWQ KEYS files in the dev and release subversion repositories:
  - dev: https://dist.apache.org/repos/dist/dev/hawq/KEYS
  - release: https://dist.apache.org/repos/dist/dev/hawq/KEYS

Ensure JIRA Issues are Appropriately Tagged for the Release

Ensure that all HAWQ JIRA issues that are addressed in this release are marked with the release version in the 'FixVersion' field of the issue.

Create the Release Candidate

Prepare Tarballs

1. Branch your release:
   ```
   git checkout -b <your release name> <commit sha1>
   push to origin:
   git push origin <your release name>
   ```

2. Apply signed tag on release branch and push to origin
   Example:
   ```
   git tag -u <GPG KEY ID> --sign <your release name>-rc# -m "Apache HAWQ <your release name> RC#" <SHA of HEAD of branch>
   git push origin <your release name>-rc#
   ```

3. Make a tarball and gzip:
   ```
   git archive -o ../apache-hawq-src-<your release name>.tar --prefix=apache-hawq-src-<your release name>/.tar
   gzip ../apache-hawq-src-<your release name>.tar
   ```
Prepare SHA256 and ASC files from the source tarball:

```
shasum -a 256 apache-hawq-src-<your release name>.tar.gz > apache-hawq-src-<your release name>.tar.gz.sha256
sha256
```

```
$ shasum -a 256 apache-hawq-src-2.1.0.0-incubating.tar.gz > apache-hawq-src-2.1.0.0-incubating.tar.gz.sha256
```

You need a passphrase to unlock the secret key for user: "Edward Bartolo Espino (CODE SIGNING KEY) <espino@apache.org>"

```
4096-bit RSA key, ID 57325522, created 2017-01-09
```

```
$ ls -al apache-hawq-src-2.4.0.0*
-rw-r--r-- 1 espino staff 35214063 Jan 10 11:04 apache-hawq-src-2.1.0.0-incubating.tar.gz
-rw-r--r-- 1 espino staff 819 Jan 10 11:09 apache-hawq-src-2.1.0.0-incubating.tar.gz.asc
-rw-r--r-- 1 espino staff 83 Jan 10 11:10 apache-hawq-src-2.1.0.0-incubating.tar.gz.md5
-rw-r--r-- 1 espino staff 84 Jan 10 11:10 apache-hawq-src-2.1.0.0-incubating.tar.gz.sha256
```

Retrieve the subversion dev hawq repo

```
Example: svn checkout https://dist.apache.org/repos/dist/dev/hawq/ --username=<your apache user>
```

Create a local folder for the release (e.g. 2.4.0.0-RC1) in svn. We use apache's distribution repo: https://dist.apache.org/repos/dist/dev/hawq/

```
Move the files into the release folder on local disk.
```

```
svn add <release folder>
```

Commit artifacts:

```
Example: svn commit -m 'adding 2.4.0.0 RC1 candidate release artifacts' --username=<your apache user id>
```

Validate the Release Candidate

As per the Apache documentation, verify that the release candidate artifacts satisfy the following:

- PGP signatures and SHA256 checksum verification

Example (performed on a Macbook Pro: brew install gpg2 coreutils):

```
$ brew install gpg coreutils
brew install gpg coreutils
Warning: gnupg 2.2.9 is already installed
Warning: coreutils 8.30 is already installed
$ which gpg gsha256sum gmd5sum
/usr/local/bin/gpg
/usr/local/bin/gsha256sum
/usr/local/bin/gmd5sum
$ gpg --import ../KEYS
```

```
gpg: key 60E8C5A6D0D6D44A: "Caleb Welton <cwelton@apache.org>" not changed
gpg: key 0C2F24469AF9C0EE: "Ting (Goden) Yao (CODE SIGNING KEY) <godenyao@apache.org>" not changed
gpg: key 13971DA9475BD5D: 7 signatures not checked due to missing keys
```

```
```
gpg: Total number processed: 9
```
```
gpg: import ./KEYS
```
```
gpg: key FC0662F257325522: "Edward Bartolo Espino (CODE SIGNING KEY) <espino@apache.org>" not changed
gpg: key 8FECDA881BB8672: "Ruilong Huo (CODE SIGNING KEY) <huor@apache.org>" not changed
gpg: key 280B695FCA7FAEB2: "Radar Lei <rlei@apache.org>" not changed
gpg: Total number processed: 9
```
```
gpg: ununchanged: 9
```
```
```
gpg: assuming signed data in 'apache-hawq-src-2.4.0.0.tar.gz'
gpg: Signature made Tue Sep 11 15:54:29 2018 CST
```
```
gpg: using RSA key 31136E4DB96401A6D46D269280B695FCA7FAEB2
```
```
gpg: Good signature from "Radar Lei <rlei@apache.org>" [ultimate]
```
```
```
$ gsha256sum --check apache-hawq-src-2.4.0.0.tar.gz.sha256
apache-hawq-src-2.4.0.0.tar.gz: OK

- Build is successful (Refer to Build and Install for build instructions)
- DISCLAIMER is correct
- LICENSE and NOTICE files are correct and dependency licenses are acceptable
  - LICENSE and NOTICE files at the root of the artifact directory must only reflect the contents of the artifact in which they are contained.
  - See:
    - LICENSE file requirements
    - LICENSE requirements for distribution artifacts with multiple licenses
    - NOTICE file requirements (Check Copyright year)
    - Apache Legal
    - Acceptable and Unacceptable Dependency Licenses
- All source files have license headers where appropriate, RAT checks pass
  - Additional check:
    - pom.xml (For artifactId “hawq”, verify version is consistent with the version specified in getversion file in the root directory).
- The provenance of all source files is clear (ASF or software grants)

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**Vote on the Release**

Release voting must successfully pass within the Apache HAWQ community via the dev@hawq.apache.org mail list.

General information regarding the Apache voting process can be found [here](#).

**Apache HAWQ Community Vote**

To vote on a candidate release, send an email to the dev list with subject: [VOTE]: Apache HAWQ <release version> Release and a body similar to the template below. Use a Text Editor without formatting when composing the email.

```
This is the vote for <release name> of Apache HAWQ. This is a Source only release.
The vote will run for at least 72 hours and will close on <vote closing date>.

Release Notes (Jira generated):
<JIRA Release Notes URL>

Release verification steps can be found at:
Stepbystepguide-ValidatetheReleaseCandidate

Git branch for the release:
https://github.com/apache/hawq/tree/<release name>

Sources for the release:
https://dist.apache.org/repos/dist/dev/hawq/<release name>.RC#/apache-hawq-src-<release name>.tar.gz
Source release verification:
https://dist.apache.org/repos/dist/dev/hawq/<release name>.RC#/apache-hawq-src-<release name>.tar.gz.asc
MD5/SHA256 Hash:
Keys to verify the signature of the release artifact are available at:
https://dist.apache.org/repos/dist/dev/hawq/KEYS

Please vote accordingly:
[ ] +1 approve
[ ] +0 no opinion
[ ] -1 disapprove (and reason why)
```

If any -1 (binding) votes are entered, then address them such that the voter changes their vote to a +1 (binding) or cancel the vote, fix the issues, and start over with Prepare Tarballs.

Once 72 hours has passed (which is generally preferred) and/or at least three +1 (binding) votes have been cast with no -1 (binding) votes, send an email closing the vote and pronouncing the release candidate a success. Please use the subject: [RESULT] [VOTE]: Apache HAWQ <release version>

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The Apache HAWQ <release version> vote is now closed and has passed as follows:

[number] +1 (binding) votes
[number] -1 (binding) votes

A vote Apache HAWQ <release version> will now be called on general@incubator.apache.org.

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Publishing and Distributing Release

1. Finalizing your tag
   switching to master branch
   
   git tag -s rel/v{version} <commit SHA> -m "Apache HAWQ {version} release (<other comments>)"

   Sign your release tag
   
   You need to configure your git user signing key first before you can sign a tag.
   
   git config --global user.signingkey <Your secret key SHA>

2. Push your tag to remote (origin)
   
   git push origin rel/v{version}

3. Move tarballs from staging (dev) folder to release location:
   

   Commit Message
   
   As if you put https URL in svn commands, it'll commit automatically. A text editor will popup for you to edit commit message, put something like: “Release Apache HAWQ {{version}}”

4. Add download link on hawq website: http://hawq.apache.org/
   Use mirror for latest download, e.g. http://apache.org/dyn/closer.cgi/hawq/2.4.0.0/apache-hawq-rpm-2.4.0.0.tar.gz
   Use dist server links for binary signatures and hashes, e.g. https://www.apache.org/dist/hawq/2.4.0.0/apache-hawq-rpm-2.4.0.0.tar.gz.asc
   Use archive server links for archives downloads. e.g. https://archive.apache.org/dist/hawq/

5. Go to http://issues.apache.org/jira/browse/hawq to release the specific version (need admin permission, under "Version")

6. Add the document for the version into the hawq website and modify the link if needed. (https://github.com/apache/hawq-site)

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Announce the Release

After doing the above change, wait for at least 24 hours and then announce the release by send an email to announce@apache.org, user@hawq.apache.org and dev@hawq.apache.org with the subject: [ANNOUNCE] Apache HAWQ <release number> Release and a body along the lines of:
Apache HAWQ Project Team is proud to announce Apache HAWQ <release version> has been released.

Apache HAWQ combines exceptional MPP-based analytics performance, robust ANSI SQL compliance, Hadoop ecosystem integration and manageability, and flexible data-store format support, all natively in Hadoop, no connectors required. Built from a decade’s worth of massively parallel processing (MPP) expertise developed through the creation of the Pivotal Greenplum® enterprise database and open source PostgreSQL, HAWQ enables you to swiftly and interactively query Hadoop data, natively via HDFS.

*Download Link*: http://hawq.apache.org/#download

*About this release*
This is a release having both source code and binary. All changes: https://cwiki.apache.org/confluence/display/HAWQ/HAWQ+Release+2.4.0.0-Release

*HAWQ Resources:*
- JIRA: https://issues.apache.org/jira/browse/HAWQ
- Wiki: https://cwiki.apache.org/confluence/display/HAWQ
- Mailing list(s): dev@hawq.apache.org, user@hawq.apache.org

*Know more about HAWQ:*
http://hawq.apache.org

- Apache HAWQ Team

General Apache information regarding announcing a release may be found here.