

# ReleaseManagement ReleaseVerification

## Verifying Rave Releases

As with all Apache release, Rave binaries are signed (the .asc file), and have MD5 and SHA512 message digest files. These are described in more detail [here](#). You can verify your release using GPG with the following steps.

### Setting Up

The following steps are a one-time setup.

1. Download and install GPG from <http://www.gnupg.org/download/>
2. Import the Rave signing keys. These are available from <https://svn.apache.org/repos/asf/rave/KEYS>. Download the key file and import with the command **gpg --import KEYS**
3. You may also want to sign and upload the key with your own key pair to a public key server. Again, see [here](#) for more information.

### Verifying a Binary Release

1. With the binary `apache-rave-X.Y.Z-bin.zip` and the signature file `apache-rave-X.Y.Z-bin.zip.asc` in the same directory, verify the binary release signature with **gpg *apache-rave-X.Y.Z-bin.zip.asc***.
  - a. For untrusted keys, you can verify the fingerprint with **gpg --fingerprint *ABCD1234***, replacing ***ABCD1234*** with the fingerprint of the key used to sign the release.
2. Verify the SHA message digest with **gpg --print-md SHA1 *apache-rave-X.Y.Z-bin.zip*** and compare to the contents of `apache-rave-0.10.1-bin.zip.sha`.
  - a. You can use UNIX's *diff* for this: **gpg --print-md SHA512 *apache-rave-X.Y.Z-bin.zip* | diff - *apache-rave-X.Y.Z-bin.zip.sha***. If the digest matches correctly, you will get no output.
3. Verify the MD5 digest with the command **gpg --print-md md5 *apache-rave-X.Y.Z-bin.zip*** and compare to the contents of `apache-rave-X.Y.Z-bin.zip.md5`.
  - a. You can again use *diff* for this: **gpg --print-md md5 *apache-rave-X.Y.Z-bin.zip* | diff - *apache-rave-X.Y.Z-bin.zip.md5***. If the digest matches correctly, you will get no output.