**Delete - Private Docker Registry**

**\*** **Soft deletes of manifests and blobs through the Registry HTTP API.**

* Add REGISTRY\_STORAGE\_DELETE\_ENABLED : "true" in docker-compose.yml (in registry service)
* Push an image to private registry :
  + docker tag centos:latest jeavioregistry.jisto.net:5043/centos:latest
  + docker push jeavioregistry.jisto.net:5043/centos:latest
* Get the digest for mentioned tag of the image from Docker-Content-Digest :
  + curl -k -v --silent -H "Accept: application/vnd.docker.distribution.manifest.v2+json" -X GET [https://jeavioregistry.jisto.net:5043/v2/centos/manifests/latest](https://jeavioregistry.jisto.net:5043/v2/debian/manifests/jessie) 2>&1 | grep Docker-Content-Digest | awk '{print ($3)}'
    - >sha256:aab4571d32a9ecd5b4b25e3a4843773be32c78d5fd09aa10a1db97b8511e89de
* Delete Manifest References – i.e. link files that contain the hash code of the image that is linked (Untags the image , but blob layers remain intact)
  + curl -k -v --silent -X DELETE [https://jeavioregistry.jisto.net:5043/v2/centos/manifests/sha256:9c7d6bef1e91ed762731d87542d26ccc9400ed8ba6dd4ad42bf1f2e7d0c0cdd0](https://jeavioregistry.jisto.net:5043/v2/debian/manifests/sha256:aab4571d32a9ecd5b4b25e3a4843773be32c78d5fd09aa10a1db97b8511e89de)
  + >> HTTP/1.1 202 Accepted
  + Impact at the backend File system layers saved on mounted volume :

\* Deletes the content of tag folder : /data/docker/registry/v2/repositories/centos/\_manifests/tag

\* Deletes thelink file within the revision sha folder : /data/docker/registry/v2/repositories/centos/\_manifests/revisions/sha256/9c7d6bef1e91ed762731d8

* Get the blob layer digests :
  + curl -k -v --silent -H "Accept: application/vnd.docker.distribution.manifest.v2+json" -X GET <https://jeavioregistry.jisto.net:5043/v2/centos/manifests/latest>
    - fslayers :
    - sha256 : 980e0e4c79ec933406e467a296ce3b86685e6b42eed2f873745e6a91d718e37a
    - sha256:8d30e94188e7f13642d975e70c484e48c33867f3ede3277df1145803fa996ac1
* Delete All Blob References – i.e. link files that contain the hash code of the image that is linked (Untags the link references for blobs , but blob layers remain intact)
  + curl -k -v --silent -X DELETE https://jeavioregistry.jisto.net:5043/v2/centos/blobs/sha256:980e0e4c79ec933406e467a296ce3b86685e6b42eed2f873745e6a91d718e37a
  + >> HTTP/1.1 202 Accepted
  + curl -k -v --silent -X DELETE <https://jeavioregistry.jisto.net:5043/v2/centos/blobs/sha256:8d30e94188e7f13642d975e70c484e48c33867f3ede3277df1145803fa996ac1>
  + >> HTTP/1.1 202 Accepted
  + Impact at the backend File system layers saved on mounted volume :

\* Deletes the link file within the revision sha folder: /data/docker/registry/v2/repositories/centos/\_layers/sha256/980e0e4c79ec933406e467a296ce3b86685e6b42eed2f873745e6a91d718e37a/link

\* Deletes the link file within the revision sha folder: /data/docker/registry/v2/repositories/centos/\_layers/sha256/980e0e4c79ec933406e467a296ce3b86685e6b42eed2f873745e6a91d718e37a/link

* Run Garbage collection inside the registry container
  + docker exec -it jisto\_registry bin/registry garbage-collect /etc/docker/registry/config.yml
* Try to pull the same image:
  + docker pull jeavioregistry.jisto.net:5043/centos:latest
    - >> Pulling repository jeavioregistry.jisto.net:5043/centos
    - >> Error: image centos:latest not found
* Push the same image again to the private registry :
  + docker push jeavioregistry.jisto.net:5043/centos:latest
    - >> The push refers to a repository [jeavioregistry.jisto.net:5043/centos]
    - >> 0aeb287b1ba9: Pushed

 >>  latest: digest: sha256:9c7d6bef1e91ed762731d87542d26ccc9400ed8ba6dd4ad42bf1f2e7d0c0cdd0 size: 529

**\*** **Asynchronous cleanup of unreferenced blob data. (Actual hard delete of unreferenced blobs and links – Garbage Collection)**

* Run Garbage collection inside the registry container
  + docker exec -it jisto\_registry bin/registry garbage-collect /etc/docker/registry/config.yml

**References:**

* Registry ignores re-push of GC'd blobs unless restarted
  + https://github.com/docker/distribution/issues/1803
* <https://github.com/docker/distribution/issues/1183>
* [https://github.com/docker/distribution/blob/master/ROADMAP.md#deletes](https://github.com/docker/distribution/blob/master/ROADMAP.md" \l "deletes)
* <https://github.com/docker/distribution/issues/1505>
  + DELETE registry blob returns BLOB\_UNKNOWN
* ***Maintenance – Upload purge***
* https://github.com/docker/distribution/blob/cd7d977fe6a3d376c5530dbbd3e3ca93060f3e1b/docs/configuration.md#maintenance
  + Currently the registry can perform one maintenance function: upload purging
  + Upload purging is a background process that periodically removes orphaned files from the upload directories of the registry. Upload purging is enabled by default.
* https://github.com/docker/distribution/issues/510 --Readonly mode
* https://github.com/docker/distribution/pull/827 --Readonly mode