Design sec:design

We designed so that the interface between the Docker clients and the registry remains unchanged. As such, no modifications to the Docker clients are needed. Below we describe how handles layer pushes and pulls at the registry side.

Push handles push requests asynchronously. After receiving a layer from a client, it does not immediately unpack the layer. Instead, it reliably stores the layer's compressed tarball in a persistent staging area. A separate off-line deduplication process iterates over the layers in the staging area and performs the following steps for every layer: compactenumerate

d ecompress and unpack the layer's tarball into individual files;

c ompute a fingerprint for every file in the layer;

c heck all file fingerprints against the file index to identify if identical files are already stored in ;

s tore non-deduplicated files in 's storage;

c reate and store a layer recipe that includes the path, metadata, and fingerprint of every file in the layer;

r emove the layer's tarball from the staging area.