

Write Up: asgn4

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1 Testing

This assignment was pretty straightforward. Most of the testing I had to do was related to different types of cases with updating an already known alias and making sure whatever I was updating it was valid. I just followed a logical order of when creating an alias, first check if it exists, if not check to see if the key already exists, if not check if the key is an httpname. I had to make sure some of my global variables were protected by locks.

2 Question 1

Fully resolving a name when a name is created requires an additional loop in the PATCH dispatch portion. A way to store what alias resolves to watch httpname would be the use of another persistent hashtable. By doing this, GET would run a lot faster since it would not have to worry about resolves. Checking resolution would allow us to catch errors before we do any requesting of files. This would be useful when theres lot's of keys that you dont want to deal with during GET time resolution. An example of this are hard link in the linux file system.

3 Question 2

Yes. This assignment felt like half of what assignment 3 was since we only had to deal with reading and writing structs. Also modifying my previous code for a new structure made it really easy.

4 Question 3

From this class I learned how to use modularity to break up the functions in my system easier such as a dispatch function, handle request function etc. Abstraction helped me make my functions simpler by making them interact with each other as black boxes so I don't have to handle an unnecessary amount of complexity. Layering helped me simplify my design when thinking about how the dispatch function interacts with the cache and the cache interacts with the kvs store. I thought a lot about hierarchy when creating helper functions to carry out specific tasks for my system¹ which helped simplify my design ever more.