**ELEC 477**

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# Test 1: Testing Integrated DNS System

***“For testing the integrated system, you should test two different kv servers running as different service names, and that theclients correctly find them by service name.”***

The test results for Test 1 are shown in the “Test1.txt” file in the repository. In this file it showcases the system logs of the DNS program. In main.cpp file the test case illustrates a DNS server being configured with the following setttings:

A black screen with colorful text

Description automatically generated

Additionally, two servers being instantiated with different service names, server names, Ip addresses and port numbers: A screen shot of a computer code

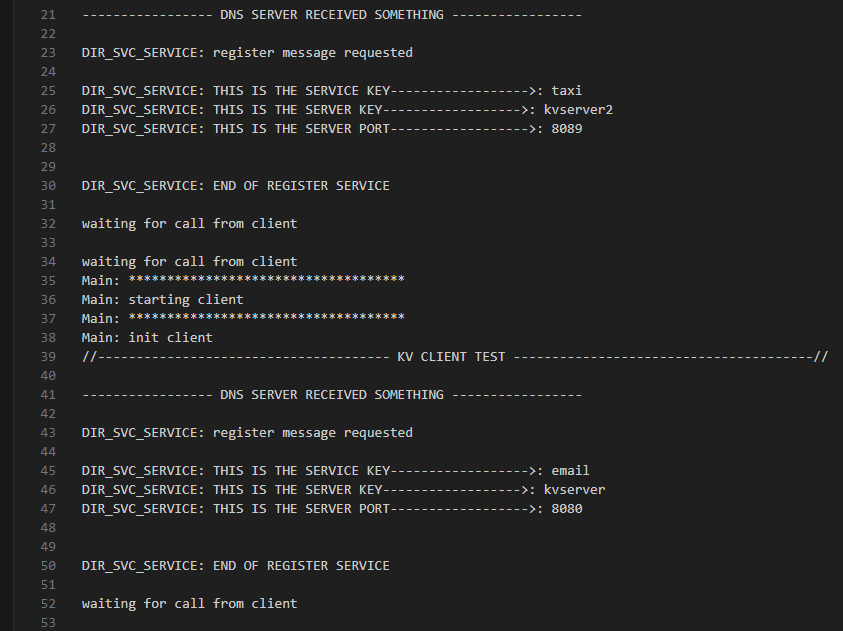
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Lastly, two clients were instantiated to talk to one of these two servers by utilizing the directory service name stub which would talk to the DNS server and DNS stub:A computer screen shot of a program code

Description automatically generatedA screen shot of a computer program

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From the system logs in “Test.txt” we can see that the servers registered their services with the DNS server:



After the servers registered their services, the clients can then use the DNS service to lookup the server address information based on the corresponding choosen service name:A screenshot of a computer program

Description automatically generated

Finally, we can see the KVRPC function properly as each client is able to put and get corresponding values from each server:A screenshot of a computer program

Description automatically generated

# Test 2: Deleting Service from Service Server

***“You should check that when a kv server exits, that the name of the service is no longer in the service server.”***

Using the same test results shown in “Test.txt” and the same main.cpp class we can see what happens when a service is shutdown and deleted from the service server. In the system logs every time we shutdown/delete a service we iterate through the remaining services left in the server: A screenshot of a computer

Description automatically generated

Line 127 showcases the remaining services stored on the service server. Once the last service is deleted the following is shown:  
A screenshot of a computer error

Description automatically generated

We can see that our system logs show that there are no more services registered in the DNS server. Therefore when a kv server exits, the name of the service is no longer in the service server.