Code Kracker Network

CS 4390.001

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**Network Design Document**

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**Overview**

This Document will describe the implementation of our Network Protocol. The Document will also list the steps our group took with the different Milestones we completed to reach our final product. We will also briefly explain how the network works under the hood and the strategy we took.

**Milestones with our projected End Dates**

Research and learn Python - 10/20

Further research and understand network protocols - 10/22

Research how to create network applications via Python - 10/24

Create the network protocol - 11/2

Document the network protocol - 11/2

Start Implementing the network application - 11/5

Create Controller - 11/5

Create Renderer - 11/10

Create Server - 11/15

Establish the Connection/Communication Between Network Entity - 11/18

Document the entire process in the project report - 11/20

Create the video demo of the project - 11/30

**Current Solution / Product**

Our Current iteration of the Network. Contains a Controller, Renderer and a Server all running on a different Host. The Network is first created through the use of the command Sudo mn —switch ovs—controller ref—topo tree,depth=2,fanout=2 . This command will create four hosts but for our network, we only utilized 3 of them. We then ran the corresponding scripts to a different host that would encapsulate the Controller, Renderer, and Server independently. After running the scripts and the connection has been made, The server would list out the different media files it has to the controller. The controller will then be able to select a media file that would then be sent to the renderer by the server. The Renderer would then wait for the controller to send commands to either Stop/play/restart the media file if necessary. And that concludes the capabilities of the Network.

However, We were not able to follow the protocol and our guidelines. We had to leave out some functionalities/capabilities of our network due to time constraints. Our group was unable to implement the rendering of media files (Movies/video clips) but was only able to render text files.