Cps 706 Final Project

A simple content distribution network.

Group #30 Members

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Usage

Compiling

- To compile the project, simply run `javac -d PROJECT_ROOT *.java` on the src directory, where `PROJECT_ROOT` can be an explicit, or relative path to the project root folder. This is so that the correct configuration assets are available at runtime.

Running

The application contains multiple sub-commands for each component of the project. After compiling, you can run each sub-application as follows:

- `java Main client LOCAL_DNS_IP`

  > Where `LOCAL_DNS_IP` is the IP address of the local DNS server

- `java Main dns config_dns.txt`

  > Where `config_dns.txt` is a file describing the initial DNS records for the server

- `java Main web [index.txt[F1.mp4[...]]]`

  > Where the passed in files make up the available content (index.txt is used for all requests to `/`)

NOTE: Default port configurations are loaded from `config.txt`. All outgoing requests are sent to the default ports.

To Run The demo, Run These Commands

- *machine 1 (hercdn.ca)*

  - `java Main web F1.mp4 F2.mp4 F3.mp4 F4.mp4 F5.mp4`
  - `java Main dns herdns.txt`

- *machine 2 (hiscdn.ca)*

  - `java Main web index.txt`
  - `java Main dns hisdns.txt`

- *machine 3 (local DNS)*

  - `java Main dns localdns.txt`

- *machine 4 (client)*

  - `java Main client LOCAL_DNS_IP`

  > where `LOCAL_DNS_IP` is the IP of the local DNS machine

Configuration Files

Pre-configured files for the demo:

- `config.txt` *must be consistent across all connected instances - this defines the protocol ports*

```
1  web 40295
2  dns 40296
```

- `localdns.txt`

```
1  hiscinema.com A 141.117.232.30
2  www.hiscinema.com CNAME hiscinema.com
3  hercdn.ca A 141.117.232.29
4  www.hercdn.ca CNAME hercdn.ca
5  hiscinema.com NS 141.117.232.30
6  hercdn.ca NS 141.117.232.29
```

- `hisdns.txt`

```
1 | video.hercdn.ca V hercdn.ca
```

- `herdns.txt`

```
1 | video.hercdn.ca V hercdn.ca
```