# Experiment 1

## Specific Topic;

Does utilising Edge Computing reduce the latency of requests for the Client Device?

## Setup;

* Switch connecting all Pi’s to router through 100mbit powerline adapter
* Run the Caching Application on the Client Device
* Deploy the Caching Service and the Redis Instance to the Edge Device
* Publish the Data Centre WebAPI

## Isolate Variables;

Constants:

* Internet speed
* The web page being loaded
* The background processing being used on the Pi

Variables

* Whether a webpage is cached or not

The variable in this experiment is whether the webpage is cached when I request the data.

## Method;

Measurements recorded will be the time between when the WebView element in the Client Application starts a request and ends a request.

After the single Caching Application and single Redis server has been deployed 10 warmup requests will performed without wiping the cache. The experiment will be performed with 10 iterations and an average will be taken.

An iteration will consist of an initial request to “http://www.bbc.co.uk” and then a subsequent request when the information is already cached on the edge node. The two times will then be recorded in seconds and the cache will be cleared ready for the next request

## Hypothesis;

The hypothesis is that the cached request should take less time to execute than the initial request.

## Analyse;

## Conclusion;

# Experiment 2

## Specific Topic;

## Setup;

## Isolate Variables;

## Method;

## Hypothesis;

## Analyse;

## Conclusion;

# Experiment 3

## Specific Topic;

## Setup;

## Isolate Variables;

## Method;

## Hypothesis;

## Analyse;

## Conclusion;