Administration Manual for ArgoNotes

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# 1 Introduction

ArgoNotes is a work-in-progress. Being built with extension and scalability in mind makes this architecture easy to maintain from the start. The platform can be as distributed, or as consolidated as you wish, requiring only minor adjustments to scale the current product.

# 2 Service Scaling

For instructions regarding how to implement service scaling, please refer to the ‘Setup and Deployment Manual’ that came with the project.

## 2.1 Drawbacks

As with any network scaling problem, RTT optimization is the priority. Equally distributing the nodes to serve a region is the best, but not always the most cost-effective means to solving the RTT optimization. Of course, to effectively reduce RTT in this manner, a domain name is required. The other option available is a vertical scaling. If there is a problem with latency over a wide or metropolitan network the first solution should be an update to the machinery that’s hosting your server.

## 2.2 Horizontal Scaling

The solution to a wide-spread network latency problem for a wide area network is to add more nodes at semi-regular intervals along a network chain. The idea is to create a mesh network where a parent node is hosted at the headquarters site, and child/worker nodes are applied at regular intervals in a network.

Allocating a server in this case is a difficult problem, you have to own the worker hardware. Or maintain a rapport with the company that is hosting a service that hosts your node. It’s for these reasons that this is not the most cost-effective method for a long-term solution.

Using a pay-as-you-use computing service is a good choice. Amazon and Google offer these services. They would allow for dynamic scalability and accommodate an agile development process.

# 3 Features

The current state of the project lacks some features which we initially intended to include in the release. This section encounters those features which are currently implemented and those that we hoped to include

## 3.1 Currently Implemented at All Levels

* Accounting
  + Log In
  + Log Out
  + Register
* Note Taking
  + Create
  + Edit
  + Delete
  + Load
  + Save

## 3.2 Future

* User Classing
  + Teacher Homepage
  + Student Homepage
  + User Clustering on Class
* Clustering
  + Teacher as cluster host
  + Students as population of cluster
  + Teacher can manage their clusters
  + Students can create clusters of other students
* Clustered Notes
  + Teacher creates notes as individual assignment for students
  + Teacher allocates notes to sets of students (Collaborative)
  + Students can collaborate on notes