## Overview

IIM v1.0 can be divided into two parts, document management (box.net related) and other generic information management. IIM backend provides the service for the second part.

* Document management – fetch files from box.net storage to iPad local storage
* Generic information
  + User – register/login/authorization
  + Note – add note/fetch note
  + Public Email process – daemon process to fetch email from a public email account and decode the email body, then save the attachment
  + Attachment management

## Topological



* IIM Web Server uses LAMP architecture to provide RESTFul API services to IIM App, translate information through HTTP request/response, and the data format is JSON to save the bandwidth
  + Use MySQL as the database storage
    - User information, account, email, and etc.
    - Notes information, content, author, timestamp, creator
    - Folders of MY IIM
    - File information, Email Fetching Process will insert the file information for each file it extracted from POP3 Server
  + Use PHP to implement the RESTFul API
    - Use Smarty framework to setup the portal
    - Use Zend engine to speed up the response
  + A simple portal for IIM
    - Manage the user, block/add/modify
    - Allow users export their Notes and download files
  + Email Fetching Process
    - Use fetchmail/procmail to get the email content from POP3 Server through SSL connection
    - Develop a Python/Perl module to decode the email content
      * Extract the MIME type of attachment
      * Save the attachment to certain folder structure
      * Log the information to MySQL
    - Schedule the job with Crontab
* POP3 Server
  + Shall need to setup a separate Email Server? Or just setup an special account in current mail server?

## Software Packages

* Linux (RHEL 5)
* Apache 2 or Nginx
* MySQL 5.0
* PHP 5.0+ and Zend
* Python 2.4+

## Web Service Design

* User Registration
  + User must use Email Address and the Password to login
  + Additional information users should provide(TBD)
    - Name
    - Gender
    - Company
    - Occupation
    - Position/Title
    - Location
* Folder
  + To store the folders created by users on IIM App
  + Folder name and user id are primary key (same folder name is not allowed for one certain user)
* Notes
  + Associate with folder name and user
  + Title and content
* Files
  + The information collected by “Email Fetching Process”
  + Attribute such as, name, type, download path

## Security

(\*\*Optional methods to improve the security)

* Avoid the standard 110 port for POP3, use security connection
* Use SSL connection between iPad and RESTFul API
* Assign each IIM user a security Key, which we be validated when process API call