Infiniti KMT Prototype Run and Installation Instructions

This document includes instructions on how to run and install the Infiniti KMT prototype.

Run Instructions:

To run the Infiniti KMT, go to this link:
http://kmt.infiniticloud.com/infiniti/logon.do?.page=home.do

Login with one of the following sets of user credentials-

Login as a Tax Auditor:

Username: asmith

Password: Password1!

Login as a Tax Specialist:

Username: pparker

Password: Password1!

Login as a Protest Hearing Officer:

Username: pwise

Password: Password1!

Login as an Administrator:

Username: bjensen

Password: Password1!

Installation Instructions:

Pre-requisites for Infiniti KMT Software.

- A PostgreSQL (Version 9+) database with a user account that has full privileges on it, in order to create all necessary tables.
- A Docker container platform (such as AWS Elastic Container Service or similar)
- The application Docker image
- The initial reference Institution, to be loaded during the install

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Resource Requirements:

- Memory: The application requires a minimum of 512MB, 2GB is ideal.
- Disk: A minimum of 20GB is recommended to handle database growth, log files and document storage. As the number of documents increase, Disk space will have to scale as well.

Security Requirements:

- If the web server running the application will be placed on the public internet, you will require an SSL Certificate, if it will be for internal use only, then a self-signed certificate will suffice.

Installation procedure:

- The host, port and required credentials
- The Docker image already contains the required startup sequence to load the application. So, all that is required is to do a `docker run` command with the image and expose port 8080 of the container.

Docker Image Build Instructions:

Dockerfile is provided with the source code (https://github.com/infinitiicg/Infiniti-KMT/tree/master/docker) and it can be used to build a docker image and push it to your image repository. If Amazon ECS is preferred, cross-account to container registry can be provided.

Recommended steps Amazon ECS Users:

- Setup a PostgreSQL database using AWS RDS Service and note the access parameters
    - Security groups
    - Credentials
    - Host and Port Information
- Launch an Ubuntu EC2 Server
- Install Git and Docker, using apt-get

- Clone the repository (https://github.com/infiniticg/Infiniti-KMT)
- Edit the file docker/defaults.xml where you'll specify your RDS Database parameters
- In the main folder of the repo, execute dockerbuild.sh
- At this time, you should have a working docker image that you can push to AWS ECS!

Once image is ready, below is the run command:

```
docker run -p 8080:8080 <image name>
```

- Once loaded, the application will ask you to setup credentials and database initialization parameters.
- Please note: the default super-user account is: `TLE_ADMINISTRATOR` and the password for it is setup during the install.

KMT Recommender (Machine Learning Model) Install Instructions:

1. Unzip kit_recommender.tar.gz

2. Setup Virtual Environment for Python

    # Install python-dev

    sudo apt-get install python-dev

    # Create Virtual Environment

    mkdir ~/virtualenv

    cd ~/virtualenv

    # Copy requirements.txt from kmt_recommender folder

    virtualenv kmt_rec -p /usr/bin/python2.7

    # Jump into virtualenv

    source kmt_rec/bin/activate

    # Install additional packages

    pip install -r requirements.txt

3. Calling script

    cd <kmt_recommender> path

    python recsys.py —all_users

    # Output data all_users_recs.json in output/ directory

Post Install:

- Post Installation it is recommended to load the reference institution. For this, you can import the file: **6.4VanillaReferenceInstitution.tgz** which can be downloaded from our Github repository here**:** https://github.com/infinitiicg/Infiniti-KMT

Note: This above step is critical to finish the setup and to avoid starting from scratch and saves you some time.