SmartAT instruction

This document provides detailed instructions on how to deploy SmartAT and start it, please follow the steps one by one and make sure every last step get a positive response before moving on.

**Deploy SmartAT**

**Requirement list,**

1, PC with Ubuntu 12.04 LTS or 12.10 release

* 64 bit release required
* The OS is up to date(apt-get upgrade)

2, Functional python 2.7.X environment.

3, Download the source code of SmartAT from Github or FTP server.

**Step 1,**

Install required runtime libraries.

Execute following commands in terminal.

sudo apt-get install libssl-dev python-dev libevent-dev

**Step 2,**

Install pip in order to install more python libraries.

Execute following commands in terminal,

sudo apt-get install python-pip

**Step 3,**

Install needed python libraries

Since there are a bunch of them, we developed a script to do this, find requirements.txt under the root folder of SmartAT source code then execute following commands in terminal,

sudo pip install -r requirements.txt --use-mirrors

In the coming three steps, you are going to install three databases needed by SmartAT, please be noticed that you can either install them on other PC or all on one as you wish, since you know SmartAT just needs theirs IP address.

**Step 4,**

Install mongodb,

Execute following commands in terminal,

sudo apt-get install mongodb

After mongodb is installed successfully, we need to modify its configuration(/etc/mongodb.conf),

* Locate “bind\_ip = 127.0.0.1” and replace it with “#bind\_ip = 127.0.0.1”
* Locate “#port = 27017” and replace it with “port = 27017”

Execute following commands to restart mongodb,

sudo service mongodb restart

**Step 5,**

Install redis,

Execute following commands in terminal,

sudo apt-get install redis-server

After redis-server is installed successfully, modify its configuration(/etc/redis/redis.conf),

Locate “bind 127.0.0.1” and replace it with “#bind 127.0.0.1”

Execute following commands to restart redis-server

sudo service redis-server restart

**Step 6,**

Install memcached,

We strongly recommend you to install memcached on the PC which SmartAT will be running on for the sake of performance.

Execute following commands in terminal,

sudo apt-get install memcached

After memcached is installed successfully, modify its configuration (/etc/memcached.conf),

* Locate “-l 127.0.0.1” and replace it with “#-l 127.0.0.1”

Execute following commands to restart memcached,

sudo service memcached restart

**Start SmartAT**

Note: before any step in this chapter, please make sure that you have executed all the 6 steps in the last chapter successfully

**Step 1,**

Start web server,

We provide two ways to start web server of SmartAT, find app.py under the root folder of SmartAT source code and

For testing and internal use purpose,

execute following commands in terminal,

MONGODB\_URI=mongodb://localhost:27017 REDIS\_URI=redis://localhost:6379 MEMCACHED\_URI=localhost:11211 WEB\_PORT=8080 python app.py

For end users,

execute following commands in terminal,

MONGODB\_URI=mongodb://localhost:27017 REDIS\_URI=redis://localhost:6379/0 MEMCACHED\_URI=localhost:11211 gunicorn -k "geventwebsocket.gunicorn.workers.GeventWebSocketWorker" --workers=2 --bind=:8080 app:app --pid /tmp/smart-web.pid --daemon --log-syslog --access-logfile ./server.log

**Step 2,**

Start worker server,

There are 2 ways to start worker server, execute following commands in terminal,

Single node server,

MONGODB\_URI=mongodb://localhost:27017 REDIS\_URI=redis://localhost:6379/0 MEMCACHED\_URI=localhost:11211 celery worker --app=smartserver.v1.worker:worker --logfile ./worker.log &

Multi nodes server(4 in this example if CPU of the host PC has 4 cores),

MONGODB\_URI=mongodb://localhost:27017 REDIS\_URI=redis://localhost:6379/0 MEMCACHED\_URI=localhost:11211 celery multi start 4 --app=smartserver.v1.worker:worker -P gevent -l info -c:1-4 1000 --logfile ./worker.log

**Step 3,**

Start regular tasks,

execute following commands in terminal,

MONGODB\_URI=mongodb://localhost:27017 REDIS\_URI=redis://localhost:6379/0 MEMCACHED\_URI=localhost:11211 celery beat --app=smartserver.v1.worker:worker --pid=/tmp/periodic\_task.pid --detach --logfile ./beat.log

If you have installed the 3 databases in different PCs, please replace "localhost" in the commands with corresponding IP address.

If you know these servers, you are welcomed to customize the starting commands and configurations but please be sure you know what you are doing.