

OpenTUSK Installation

OpenTUSK Training
University of Nairobi

Mike Prentice

michael.prentice@tufts.edu

Tufts University

Technology for Learning in the Health Sciences

July 2013



Outline

- 1 OpenTUSK
- 2 Config
- 3 Data
- 4 SSL
- 5 MySQL
- 6 Apache
- 7 Crontab



Resources

- Official website:
<http://opentusk.org/>
- Wiki documentation:
<https://wikis.uit.tufts.edu/confluence/display/TUSKpub/Home>
- Source code:
<https://github.com/opentusk/Opentusk>



Coming Up...

- 1 OpenTUSK
- 2 Config
- 3 Data
- 4 SSL
- 5 MySQL
- 6 Apache
- 7 Crontab



OpenTUSK Repository

Download OpenTUSK source:

```
# cd /usr/local/tusk

# git clone
  https://github.com/opentusk/Opentusk.git
  opentusk-4_0_0

# ln -s opentusk-4_0_0 current
```



Coming Up...

- 1 OpenTUSK
- 2 Config**
- 3 Data
- 4 SSL
- 5 MySQL
- 6 Apache
- 7 Crontab



tusk.conf

OpenTUSK uses configuration parameters set in the `tusk.conf` file. Copy the template to the configuration directory:

```
# mkdir /usr/local/tusk/conf
# cd /usr/local/tusk
# cp
  current/install/templates/conf/tusk/tusk.conf
  conf/tusk.conf
# vi /usr/local/tusk/conf/tusk.conf
```



tusk.conf

- tusk.conf is in JSON format
- Customize for your site
- SiteWide
 - Domain
- Authorization
 - DatabaseUsers
 - ContentManager
- Middleware
 - Servers
 - MYFQDN
- More customizations to come later



tusk.conf Example

```
                                /usr/local/tusk/conf/tusk.conf
{
  "SiteWide" : {
    "Domain" : "myserver.mydomain",
    ...
  "Authorization" : {
    "DatabaseUsers" : {
      "ContentManager" : {
        "readusername" : "content_mgr",
        "readpassword" : "opentusksupersecret",
        "writeusername" : "content_mgr",
        "writepassword" : "opentusksupersecret"
      }
    }
  },
  ...
}
```



tusk.conf Example

`/usr/local/tusk/conf/tusk.conf`

```
...
"Middleware" : {
  "Servers" : {
    "myserver.mydomain" : {
      "ReadHost" : "localhost",
      "WriteHost" : "localhost",
      "SearchHost" : "localhost",
      "VideoHost" : "http://localhost:8087",
      "AudioHost" : "http://localhost:8087",
      "FlashPixHost" : "http://localhost:8087"
    }
  }
},
...
```



Coming Up...

- 1 OpenTUSK
- 2 Config
- 3 Data**
- 4 SSL
- 5 MySQL
- 6 Apache
- 7 Crontab



Create OpenTUSK Data Directories

```
# cd /usr/local/tusk/current/install/scripts  
  
# bash create_directories.sh
```



Coming Up...

- 1 OpenTUSK
- 2 Config
- 3 Data
- 4 SSL**
- 5 MySQL
- 6 Apache
- 7 Crontab



Create SSL Certificate

Here we create a self-signed SSL certificate. Your university may already have a certificate.

```
# mkdir /usr/local/tusk/ssl_certificate

# cd /usr/local/tusk/ssl_certificate

# openssl req -new
  -newkey rsa:4096
  -days 365
  -nodes
  -x509
  -subj "/C=KE/L=Nairobi/O=Uni of Nairobi/CN=`hostname`"
  -keyout "server.key"
  -out "server.crt"
```



Coming Up...

- 1 OpenTUSK
- 2 Config
- 3 Data
- 4 SSL
- 5 MySQL**
- 6 Apache
- 7 Crontab



MySQL Accounts

- content_mgr account for web application
- tusk admin account for cron jobs
- Replace \langle password \rangle with your own passwords and remember them

```
# mysql -u root
```

```
mysql> grant all on *.* to 'content_mgr'@'localhost '  
-> identified by '<password>';
```

```
mysql> grant all on *.* to 'tusk'@'localhost '  
-> identified by '<password>' with grant option;
```

```
mysql> flush privileges;
```



.my.cnf

Setup `/usr/local/tusk/.my.cnf` for the `tusk` user:

```
# cd /usr/local/tusk
# vi .my.cnf
# chown tusk:tusk .my.cnf
# chmod 600 .my.cnf
```

`/usr/local/tusk/.my.cnf`

```
[client]
user=tusk
password=<password>
```



Setup Databases

```
# cd /usr/local/tusk/current/bin/db

# perl baseline.pl
  --create-admin
  --create-school
  --dbuser=tusk
  --dbpw=<password>
  --verbose

# perl upgrade.pl
  --verbose
  --all
  --dbuser=tusk
  --dbpw=<password>
```

Tip: Run any command with `--help` to get help information.



Initialize Cron Table

- Initialize `tusk.cron_job_variable` to ensure that content indexing will work properly
- Replace `<hostname>` with system hostname

```
# mysql -u tusk -p
... Enter password ...

mysql> use tusk;

mysql> insert into cron_job_variable values
  -> (1, 'fts_index', '<hostname>', 'LastRun', now(),
  -> 'tusk', now(), 'tusk', now());
```



Coming Up...

- 1 OpenTUSK
- 2 Config
- 3 Data
- 4 SSL
- 5 MySQL
- 6 Apache**
- 7 Crontab



Disable MIME Magic

Disable the MIME magic module in Apache:

```
# sed -i
  's/^LoadModule mime_magic_module/#LoadModule
    mime_magic_module/g'
/etc/httpd/conf/httpd.conf
```



Disable Default SSL

Disable the default SSL configuration in Apache:

```
# cp /etc/httpd/conf.d/ssl.conf /tmp

# sed -n '/<VirtualHost _default_:443>/q;p'
    /tmp/ssl.conf
    > /etc/httpd/conf.d/ssl.conf
```



OpenTUSK Apache Conf Templates

Configure Apache to run OpenTUSK:

```
# cd /usr/local/tusk/current/install/templates/conf/apache2
# cp tusk_* /etc/httpd/conf.d
# cd /etc/httpd/conf.d
# find . -name "*.conf" -exec
    sed -i "s/MYFQDN/`hostname`/g" {} \;
# find . -name "*.conf" -exec
    sed -i "s/TUSKFQDN/`hostname`/g" {} \;
```



Start Apache

Start Apache and set to run on startup:

```
# /sbin/service httpd restart
```

```
# /sbin/chkconfig httpd on
```



Coming Up...

- 1 OpenTUSK
- 2 Config
- 3 Data
- 4 SSL
- 5 MySQL
- 6 Apache
- 7 Crontab**



OpenTUSK Crontab File

Edit the crontab for the `tusk` user:

```
# crontab -u tusk -e
```



OpenTUSK Crontab File

Session tracking:

crontab

```
### Session Tracking
```

```
1 1 * * * /usr/local/tusk/current/bin/clean_session_table
2>&1 | /usr/local/tusk/current/bin/mail_cron_error "Old
Session Cleaner"

0 3 * * * /usr/local/tusk/current/bin/update_tracking 2>&1 |
/usr/local/tusk/current/bin/mail_cron_error "Daily
Tracking updater"
```



OpenTUSK Crontab File

File cleanup:

crontab

```
### Misc cleanup
```

```
25 4 * * * /usr/bin/find /data/temp/ -type f -ctime +2 -exec  
    /bin/rm {} \; 2>&1 | /usr/local/tusk/current/bin/  
    mail_cron_error "Temp file cleanup"
```



OpenTUSK Crontab File

OpenTUSK forums:

crontab

```
### Forum Crons
```

```
10 3 * * * /usr/local/tusk/current/code/forum/cron_jobs.pl  
2>&1 | /usr/local/tusk/current/bin/mail_cron_error "  
Forums: cron_jobs"
```

```
20 3 * * * /usr/local/tusk/current/code/forum/  
cron_subscriptions.pl 2>&1 | /usr/local/tusk/current/bin  
/mail_cron_error "Forums: cron_subscriptions"
```

```
30 * * * * /usr/local/tusk/current/code/forum/cron_rss.pl  
2>&1 | /usr/local/tusk/current/bin/mail_cron_error "  
Forums: cron_rss"
```



OpenTUSK Crontab File

Text indexing for search:

crontab

```
### Eval fts index
```

```
5 2 * * 1-5 /usr/local/tusk/current/bin/eval_fts_index --
changes_update --school=all 2>&1 | /usr/local/tusk/
current/bin/mail_cron_error "Eval FTS Indexer"
```

```
### fts index
```

```
0,15,30,45 * * * * TZ="Africa/Nairobi";export TZ;/usr/local/
tusk/current/bin/fts_index --recent --noprint 2>&1 | /
usr/local/tusk/current/bin/mail_cron_error "FTS Indexer"
```

Replace TZ=Africa/Nairobi with the appropriate timezone for your university.



Resources

- Official website:
<http://opentusk.org/>
- Wiki documentation:
<https://wikis.uit.tufts.edu/confluence/display/TUSKpub/Home>
- Source code:
<https://github.com/opentusk/Opentusk>

