System Installation Guide

Centralized Test Automation System for Web Applications

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CTAS consist with two parts

1. **Testing Tool** (deploy in each of user's machines, testing tools are needed to connect to the Centralized Database)
2. **Centralized Database** (deploy in a common database server, all testing tool are connected to Centralized Database)

Follow relevant installation instructions for each parts

Installation and configuration steps for database server

1. Install a MySQL database server (Server version: 5.7.11 MySQL Community Server (GPL) or higher) in a remote server where users can be able to connect to the database server remotely using the testing tool.
2. To enable remote access for the MySQL server, do the below things in the MySQL database server

    - Use these MySQL quarries to create a MySQL user with all privileges for ctas_db database.

      CREATE USER 'newuser'@'%' IDENTIFIED BY 'password';

      FLUSH PRIVILEGES;

      Eg:- CREATE USER 'ctas_user'@'%' IDENTIFIED BY '123';

      FLUSH PRIVILEGES;

      GRANT ALL PRIVILEGES ON database_name.* TO 'username'@'%';

      FLUSH PRIVILEGES;

      Eg:- GRANT ALL PRIVILEGES ON ctas_db.* TO 'ctas_user'@'%';

      FLUSH PRIVILEGES;

- Should enable MySQL Remote Access because by default remote access is not enable (if want to deploy testing tool and centralized database in same machine, no need to carry out steps regarding the remote access allow steps)

  Put below entry in my.cnf file under the [mysqld] section

  bind-address = 0.0.0.0

  Restart the MySQL server

- To check whether the remote access for the MySQL server was enabled or not ,use telnet command

  telnet 192.168.1.6 3306 (in Linux terminal)

Installation and configuration steps for testing tool

CTAS's testing tool should be deployed in each and every user's machines. Testing tool is a platform independent (ubuntu, windows, macOS) tool and deployment can be possible within java supported web servers like apache tomcat, Glassfish, JOnAS, JBoss , Wildfly etc.

1. install a web server
2. put the provided ctas.war file in to the web server

3. start the web server

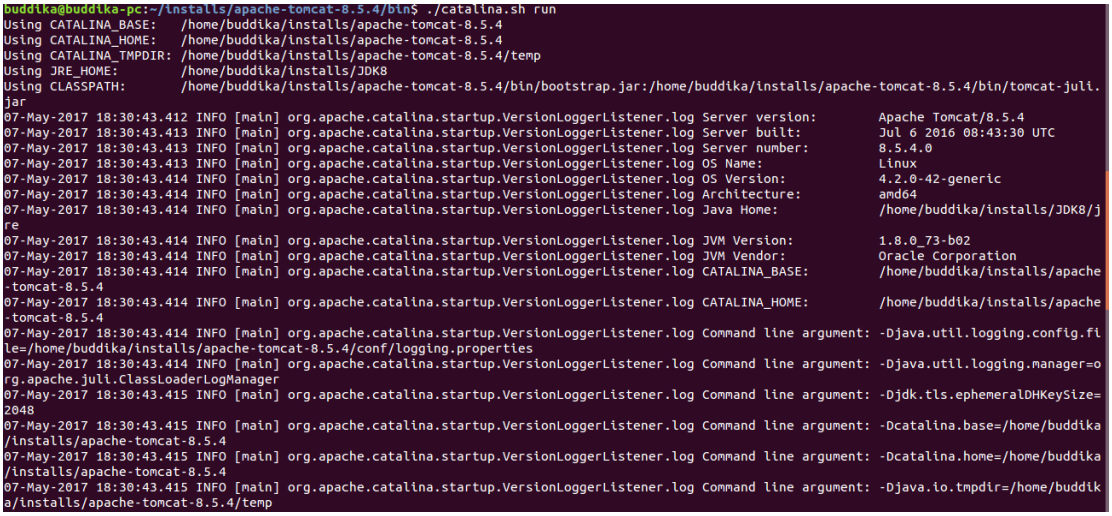

Figure 1 Apache tomcat server start in Ubuntu

4. access the testing tool using this URL on the browser (http://<IP_ADDRESS_OF_WEB_SERVER>:<WEB_SERVER_PORT>/ctas/Login.jsp--> eg:- http://192.168.1.6:8080/ctas/Login.jsp)
5. for the first time user will be redirected to the "DBSettings.jsp" page due to database settings cookies are not existed (check user guide for comprehensive details)
6. Fill the database settings including by putting a tick for "Create Database". Put a tick for "Create Database" should be done only the ctas_db is not existed in database server. (check user guide for comprehensive details)
7. If anything goes wrong, "Database Create Error, Please Contact System Admin" message will be displayed. (check user guide for comprehensive details)
8. If entered details are correct "Successfully database created, default Username=defadmin@gmail.com and Password=adminadmin1" message will be displayed for the user. (this password need to be changed by the admin user, using the default password is not recommended) (check user guide for comprehensive details)

After deploy the testing tool and centralized database, testing tool users need to focus on below configurations also.

Other configurations

1. testing browser configuration and supported browser version with configurations

   User have to use two browsers. One browser for open the testing tool (not requiring special browser types or browser versions). Second browser for testing browser. This mean user need to open the web application from this browser which going to test. Currently CTAS can do the testing in limited browsers versions and browsers only. So recommend to use below browser versions as testing browser.

   ==========Browser Versions==========

   windows - Firefox 47 (recommend) or older

   Firefox 47 download location

   https://ftp.mozilla.org/pub/firefox/releases/47.0/win64/en-GB/

   *** Ubuntu - Firefox 46 (recommend) or older***

   Firefox 46 download location
   https://ftp.mozilla.org/pub/firefox/releases/46.0/linux-x86_64-EME-free/en-GB/

   ========== Profile Creation for Browser (Optional) ==========

   *** Windows ***

   Open “RUN”

   Type this in “RUN” 'firefox.exe -p' for go to profile manager

   Create a browser profile

   *** Ubuntu ***

   Open Terminal

   Type this in Terminal 'firefox -p' for go to profile manager

   Create a browser profile

After correct browser installed as testing browser, user have to do the below configurations in "browserconf.properties" file according to the browser version and path. Configuration details are available in inside the "browserconf.properties" file. "browserconf.properties" file located in ctas folder of extracted war file

"browserconf.properties" location: -

ctas/WEB-INF/classes/browserconf.properties

Restart the apache tomcat server once did a change in property file.

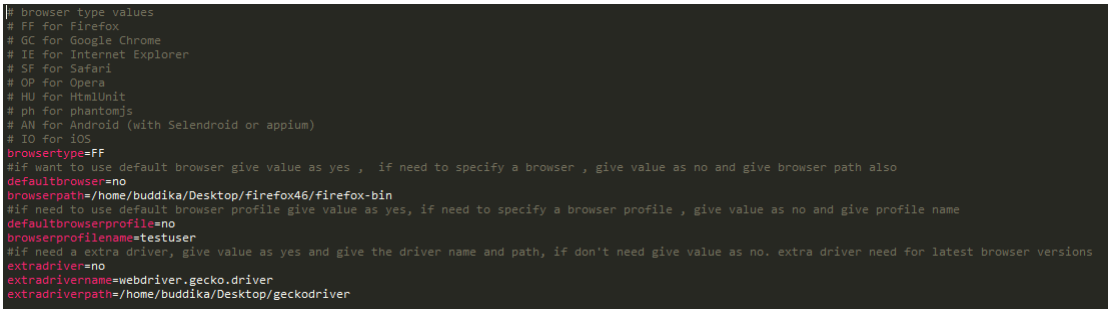

Figure 2 browserconf.properties file

2. testing tool's logs configurations

If need to report issues about the testing tool, user can send this log file to the developer. "log4j.properties" file located in ctas folder of extracted war file. Change the "log4j.appender.file.File" property is a mandatory one. Provide log file creation path for this ("log4j.appender.file.File") property.

"log4j.properties" location:-

ctas/WEB-INF/classes/log4j.properties

Restart the apache tomcat server once did a change in property file

```
# Root logger option
log4j.rootLogger=INFO, stdout, file
# Redirect log messages to console
log4j.appender.stdout=org.apache.log4j.ConsoleAppender
log4j.appender.stdout.Target=System.out
log4j.appender.stdout.layout=org.apache.log4j.PatternLayout
log4j.appender.stdout.layout.ConversionPattern=%d{yyyy-MM-dd HH:mm:ss} %-5p %c{1}:%L - %m%n
# Redirect log messages to a log file, support file rolling.
log4j.appender.file=org.apache.log4j.RollingFileAppender
log4j.appender.file.File=/home/buddika/Desktop/ctas-error.log
log4j.appender.file.MaxFileSize=5MB
log4j.appender.file.MaxBackupIndex=10
log4j.appender.file.layout=org.apache.log4j.PatternLayout
log4j.appender.file.layout.ConversionPattern=%d{yyyy-MM-dd HH:mm:ss} %-5p %c{1}:%L - %m%n
```

Figure 3 log4j.properties file

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