3CheersCable Application Deployment Guide

Learning Objectives

After completing this document, you will be able to:

* Learn tools required for deployment of 3CheersCable mobile app and its enterprise components
* Set up the enterprise database for 3CheersCable app
* Configure Eclipse IDE and Apache Tomcat server.
* Set up the Web Service component of 3CheersCable app.
* Deploy the 3CheersCable enterprise and mobile app.
  1. About 3CheersCable application

The 3CheersCable application, as discussed in Chapter 3, has two components:

1. **3CheersCable mobile app - Enterprise component**: The enterprise application that exposes web services required by the 3CheersCable mobile app.
2. **3CheersCable mobile app**: The 3CheersCable mobile/client side app that is being built incrementally over the course of the book.
   1. List of Software required

This section lists the software required to configure the build and deployment of both the enterprise and mobile app. The source from where these software can be procured are also specified here.

* + 1. 3CheersCable Mobile App - Enterprise Component

1. **Java Development Kit (JDK) 7** :Available at <http://www.oracle.com/technetwork/java/javase/downloads/java-se-jre-7-download-432155.html>
2. **Apache Tomcat v7.0**: The web server that will host the 3CheersCable enterprise application. Available at <http://tomcat.apache.org/download-70.cgi>
3. **XAMPP v3.0.12**: This host the enterprise backend MySQL database. MySQL database and a browser based interface to interact with it is provided with XAMPP[[1]](#footnote-1). Available at <http://sourceforge.net/projects/xampp/>
4. **Eclipse 3.5 Ganymede J2EE**: The development environment for the 3CheersCable enterprise application. Available at <https://www.eclipse.org/ganymede/>
   * 1. 3CheersCable Mobile App
5. **Android Developer Tools (ADT) Bundle:** The development environment for the 3CheersCable mobile app. Available at <http://developer.android.com/sdk/index.html>. Once downloaded, use the Android SDK manager to download Android Jelly Bean (API level 18)
   1. App Configuration and Setup

In order to setup the 3CheersCable enterprise app and the 3CheersCable mobile app, we have to configure three components

1. 3CheersCable Mobile App - Enterprise Component – Database
2. 3CheersCable Mobile App - Enterprise Component
3. 3CheersCable Mobile App
   * 1. Setting up 3CheersCable Mobile App - Enterprise Component – Database

We shall use XAMPP v3.0.12 to host our MySQL database as it gives the user the flexibility and easy access to database manipulations such as creating, updating and inserting tables as compared to the stand-alone MySQL database.

Assuming that XAMP has been installed, steps to configure database is as follows:

*Step1:* Double click on the *xampp-control.exe* icon present in the installed folder to open the XAMPP control panel

*Step2:* Click on the *Start* button next to the MySQL module to start MySQL database.

*Step3:* Click on the *Start* button next to Apache module, to start the Apache server.

*Step4:* Open any web browser on your PC, and type- “<http://localhost/phpmyadmin>” in the address bar to start the phpMyAdmin[[2]](#footnote-2) tool within your system

*Step5:* Click on the *Databases* tab and create a new database named “threecheerscable”

*Step6:* Click on the newly created database (on the left side of the screen), and click on *Import* option (on the top right of the screen)

*Step7:* Click *Browse* and select the *threecheerscable.sql* file (provided with this CD in *3CheersCable Mobile App - Enterprise Component - DB Script* folder) and click *Go* to create the required tables and populate it with data.

The database is now ready for use with the enterprise server[[3]](#footnote-3).

* + 1. 3CheersCable Mobile App – Enterprise Component

The 3CheersCable enterprise component is responsible for fetching data from the database and exposing it to the mobile/client app through a web service. We are going to make use of Eclipse 3.5 Ganymede J2EE (mentioned in 1.2.1.), to import the enterprise application and run on Tomcat v7.0

The Eclipse IDE is to be configured as follows:

*Step* 1:Setup workspace for the app.

*Step* 2: Open Java perspective and select *File -> Import -> General -> Existing Projects into Workspace*.

*Step* 3: Browse to the *3CheersCable App\3CheersCable Mobile App - Enterprise Component\ThreeCheersCableServer* folder of the CD, check the *Copy projects into workspace* option and click *OK*.

*Step* 4: The project explorer now shows “3CheersCableServer” folder.

*Step* 5: Select *Window -> Show View -> Other*. Choose *Server > Servers*.

*Step* 6: In Servers View, right click and select *New -> Server*. Select *Apache - >Tomcat v7.0* Server and browse the location of Apache Tomcat v7.0.

*Step* 7: The Servers View now shows Tomcat v7.0 Server at localhost.

*Step 8:* Double click on the Tomcat v7.0 and change the *http port* to *8080*

*Step 9:* Right click on the *3CheersCableServer* project and select *Build Path -> Configure Build Path*.

*Step 10:* Under Libraries tab, select *Add External JARs* and browse the location of mysql-connector-java-5.1.6.jar[[4]](#footnote-4).

*Step 11:* Select *Add Library > JRE System Library > Workspace default JRE (jre7)*.

*Step 12:* Select *Add Library > Server Runtime > Apache Tomcat v7.0*.

The enterprise server is now configured.

* + 1. 3CheersCable Mobile App

We shall use the Android bundle, mentioned in section 1.2.2, to import the mobile app from *3CheersCable Mobile App* folder into the workspace and run it on an Android emulator. Assuming that ADT bundle has been downloaded, steps to configure the 3CheersCable in to Eclipse is as follows:

*Step 1:* Select *File -> Import -> General -> Existing Projects into Workspace*.

*Step 2:* Browse to the *3CheersCable App\3CheersCable Mobile App* in the CD

*Step3:* Select any one or all of the projects present in *3CheersCable Mobile App* folder

*Step4:* Check the *Copy projects into workspace* option and click *OK*.

The project explorer on Eclipse workbench now shows imported 3CheersCable app with project name *Letsapply < Section Number>.*

* 1. Deployment Procedure

1.4.1. 3CheersCable Mobile App – Enterprise Component deployment:

Right click on the *ThreeCheersCableServer* enterprise project present within the project explorer of Eclipse workbench and select *Run As -> Run on Server*.

1.4.2. 3CheersCable Mobile App deployment[[5]](#footnote-5):

*Step* 1: Right click on *Letsapply <Section Number>* project in Eclipse workbench and select *Run As -> Run as Android application*.

*Step 2:* Choose an existing emulator (or create a new one) with target as Android 4.3 (API Level 18).

*Step 3:* Click on *Start*.

The app should now be running on the emulator.

1. XAMPP is a free and open source cross-platform web server solution stack package, consisting mainly of the Apache HTTP Server, MySQL database, and interpreters for scripts written in the PHP and Perl programming languages [↑](#footnote-ref-1)
2. phpMyAdmin is a free and open source tool written in PHP intended to handle the administration of MySQL using a browser interface [↑](#footnote-ref-2)
3. Keep MySQL up and running whenever you are running the 3CheersCable app (both server and client app) [↑](#footnote-ref-3)
4. This is the JDBC driver that is required by the enterprise application to connect to MySQL database. It can be downloaded from : <http://dev.mysql.com/downloads/connector/j/> [↑](#footnote-ref-4)
5. Before you proceed with this make sure that MySQL database is up and running and is configured with 3CheersCable database. [↑](#footnote-ref-5)