****

Telkomsel CMS

**Operation and Maintenance Manual**

Version [1.0.0]

[Nov. 20, 2014]

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**Revision History**

|  |  |  |
| --- | --- | --- |
| **Date** | **Reasons For Change** | **Version** |
| 20 Nov, 2014 | Initial version | 1.0 |
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# **About this document**

The Operation and Maintenance Manual is created for Telkomsel Mobile Coupon Management System project. The help text for requested information will indicate if the information is specifically applicable to only one type of development project: Telkomsel Mobile Coupon Management System

The Operation and Maintenance Manual is the Telkomsel CMS system operation document that introduces a project to the relevant parties for the project. The Operation and Maintenance Manual also contains information to be used in an architectural review of this software.

The Operation and Maintenance Manual is a living document that is updated for every change request. For each section where the new release changes something in the old release, the changes are noted.

## Purpose

The purpose of this document is to provide details of the Operation and Maintenance manual for the Telkomsel Mobile Coupon Management System operation and assist all the relevant stakeholders with better understanding of how to use Telkomsel Mobile Coupon Management System efficiently.

## Scope

This document establishes the Operation and Maintenance manual for the Telkomsel CMS project. Scope of this document is only limited to requirements of Phase 1.

## Target Audience

Target Audience of this Operation and Maintenance manual document is all the relevant stakeholders of the Telkomsel CMS project.

# System Architecture

The main components of the system’s architecture include:

* The webserver (using mWallet Server) running in the DMZ. The web server communicates with the application server in a protected environment.
* The application server runs in active/active mode which is maintained throughout the session replication.

An Oracle database server, in the protected environment, maintains the application data.

## Network Architecture View for Production Environment

The following is network architecture with Hardware Load Balancers at the Web Servers (using mWallet Server) and Application Servers Layers.

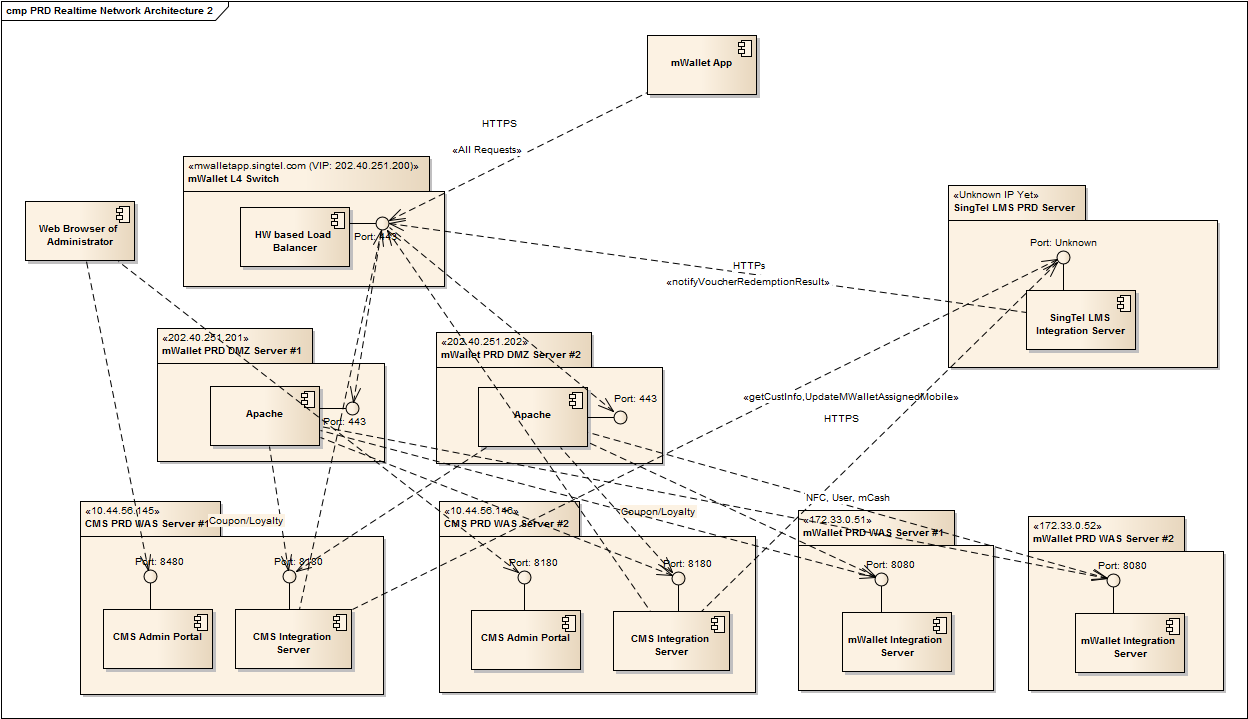


Figure 1 Network Architecture Diagram for Production Environment

### Hostname and IP Address for production environment

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| VMWare  Virtual Server | Host Name | OS Version | Software | IP | Port |
| DB Server 1 | cmsprdodbl001 | - | Oracle for RAC | 10.44.56.131 | - |
| DB Server 2 | cmsprdodbl002 | Redhat 6.5 | Oracle for RAC | 10.44.56.132 | - |
| WAS 1 | cmsprdappl001 | Redhat 6.5 | JBOSS 5 | 10.44.58.145 | Admin portal : 8480  Integration Sever: 8180 |
| WAS 2 | cmsprdappl002 | Redhat 6.5 | JBOSS 5 | 10.44.58.145 | Admin portal : 8480  Integration Sever: 8180 |
| mWallet Web 1 (DMZ) | - | Redhat 6.4 | Apache | 202.40.251.201 | 443 |
| mWallet Web 2 (DMZ) | - | Redhat 6.4 | Apache | 202.40.251.202 | 443 |
| mWallet WAS 1 | - | Redhat 6.4 | JBOSS 5 | - | - |
| mWallet WAS 2 | - | Redhat 6.4 | JBOSS 5 | - | - |
| LMS | - | - | - | 10.54.34.189 | 443 |

## Network Architecture View for Staging Server

The following is network architecture with the Web Server (using mWallet Server) and Application Servers Layers.

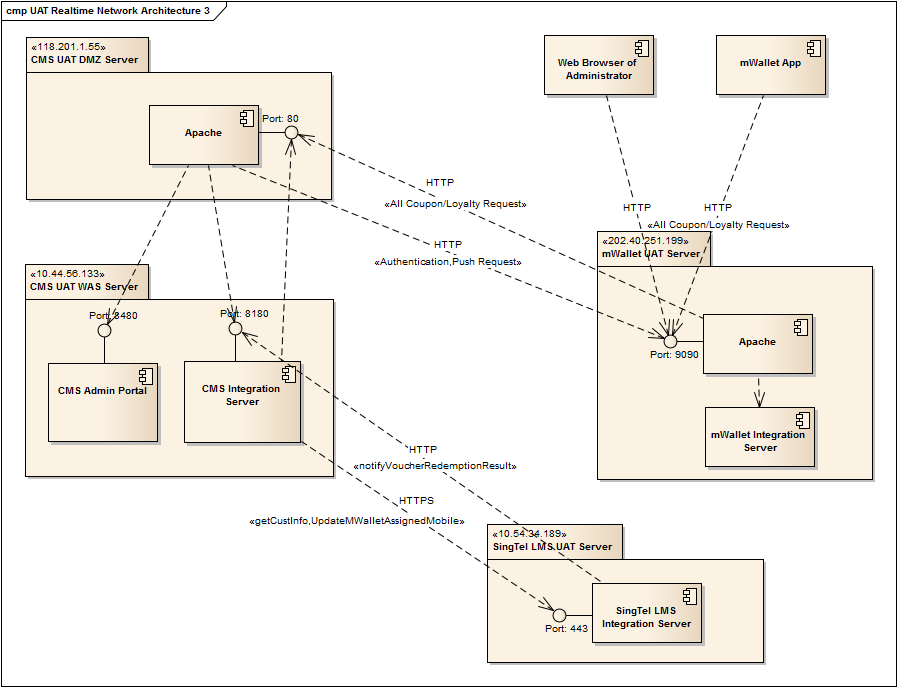


Figure 2 Network Architecture Diagram for UAT

### Hostname and IP Address for UAT environment

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| VMWare  Virtual Server | Host Name | OS Version | Software | IP | Port |
| Web (DMZ) | - | - | Apache | 118.201.1.55 | 80 |
| WAS | cmsdevappl001 | Redhat 6.5 | JBOSS 5 | 10.44.56.133 | Admin portal : 8480  Integration Sever: 8180 |
| DB Server | cmsdevodbl001 | Redhat 6.5 | Oracle | 10.44.56.134 | 1831 |
| mWallet UAT Server (Web) | - | Redhat 6.4 | Apache | 202.40.251.199 | 9090 |
| LMS | - | - | - | 10.54.34.189 | 443 |

## Web Server

The web server is responsible for parsing requests to the application server and sending responses to the client applications through a secured communications channel. Traffic is managed based on priority by load balancers in the DMZ.

### Apache

Apache is an open‑source web server application that uses the Java servlet and Java Server pages.

## Application Server

CMS functions are carried out on the application server.

### JBoss

The CMS environment utilizes JBoss, which is open‑source Java application server software.

### CMS Admin Server

CMS admin portal server is for the merchants and MNO administrators. Admin portal server provides merchant management, coupon management and reports.

### CMS Integration Server

CMS integration server provides the connection from the client’s mobile device to the coupon management system. Client requests various services related to coupon via the CMS integration server, and receives the responses for the service requests.

# Web and Application Server Setup (PRD)

This section provides detailed instructions for installing and configuring the web and application server components for the CMS environment.

## Web Server Setup

The following instructions describe how to set up the Apache ‘mod proxy’. If there are prepared load balancer and reverse proxy solution, it would be replaced with the own configuration. The instructions in this section are to be used to install and configure Apache on the web server machine for the CMS environment.

### Before begin

Ensure the Web server servers are prepared according to the prerequisites on the following Web sites:

* <http://httpd.apache.org/docs/2.2/install.html>

### Apache proxy configuration

Apache proxy is configured by editing the file httpd.conf.

Example configuration:

|  |
| --- |
| …  # Date: 2014-06-05  # mWallet p4B and CMS p1 cut-over  #<Proxy balancer://corpay>  #BalancerMember http://172.33.0.51:9090/corpay route=corpay1  #BalancerMember http://172.33.0.52:9090/corpay route=corpay2  #</Proxy>  #<Proxy balancer://corpay\_p3>  #BalancerMember http://172.33.0.51:9090/corpay route=corpay1  #BalancerMember http://172.33.0.52:9090/corpay route=corpay2  #</Proxy>  #<Proxy balancer://corpay\_p3B>  #BalancerMember http://172.33.0.51:9190/corpay route=corpay1  #BalancerMember http://172.33.0.52:9190/corpay route=corpay2  #</Proxy>  <Proxy balancer://corpay\_p4>  BalancerMember http://172.33.0.51:8080/corpay route=corpay1  BalancerMember http://172.33.0.52:8080/corpay route=corpay2  </Proxy>  <Proxy balancer://corpay\_p4B>  BalancerMember http://172.33.0.51:9090/corpay route=corpay1  BalancerMember http://172.33.0.52:9090/corpay route=corpay2  </Proxy>  <Proxy balancer://stcms\_ci\_p1>  BalancerMember http://10.44.56.145:8180/stcms route=stcms\_ci1  BalancerMember http://10.44.56.146:8180/stcms route=stcms\_ci2  </Proxy>  #<Proxy balancer://oma>  #BalancerMember http://172.33.0.51:7080/oma route=oma1  #BalancerMember http://172.33.0.51:7080/oma route=oma1  #</Proxy>  ProxyPass /corpay balancer://corpay\_p4 lbmethod=byrequests stickysession=JSESSIONID|jsessionid  ProxyPass /corpay\_p3 balancer://corpay\_p4 lbmethod=byrequests stickysession=JSESSIONID|jsessionid  ProxyPass /corpay\_p3B balancer://corpay\_p4 lbmethod=byrequests stickysession=JSESSIONID|jsessionid  ProxyPass /corpay\_p4 balancer://corpay\_p4 lbmethod=byrequests stickysession=JSESSIONID|jsessionid  ProxyPass /corpay\_p4B balancer://corpay\_p4B lbmethod=byrequests stickysession=JSESSIONID|jsessionid  ProxyPass /stcms\_p1 balancer://stcms\_ci\_p1 lbmethod=byrequests stickysession=JSESSIONID|jsessionid  #ProxyPass /oma balancer://oma lbmethod=byrequests stickysession=JSESSIONID|jsessionid  # no load balance  #ProxyPass /corpay http://172.33.0.51:8080/corpay  #ProxyPassReverse /corpay http://172.33.0.51:8080/corpay  # for temp oma  ProxyPass /oma http://172.33.0.51:7080/oma  ProxyPassReverse /oma http://172.33.0.51:7080/oma  ProxyPass /st http://202.40.251.199:8080/corpay  ProxyPassReverse /st http://202.40.251.199:8080/corpay  ProxyPass /stoma http://202.40.251.199:7080/stoma  ProxyPassReverse /stoma http://202.40.251.199:7080/stoma  # to do disable server header without compiling  ProxyPass / http://localhost:12345/  ProxyPassReverse / http://localhost:12345/  … |

## Application Server Setup

The application server for CMS resides in a protected environment behind a firewall. Use the instructions in this section to install and configure JBoss on the application server machine for the CMS environment.

### Install and Configure Java

1. Access the application server using SSH
2. Change directory to /home/cmsadmin/local and execute jdk-6u37-linux-x64.bin to install Java

|  |
| --- |
| $ cd /home/cmsadmin/local  $ /home/cmsadmin/download/jdk-6u37-linux-x64.bin |

1. Run “java -version” command and check the expected output

|  |
| --- |
| $ java –version  java version "1.6.0\_37"  Java(TM) SE Runtime Environment (build 1.6.0\_37-b06)  Java HotSpot(TM) 64-Bit Server VM (build 20.12-b01, mixed mode) |

1. Change security library and add security provider library

|  |
| --- |
| $ cd /home/cmsadmin/local/jdk1.6.0\_37/jre/lib/security  $ cp /home/cmsadmin/download/for-jdk/local\_policy.jar ./  $ cp /home/cmsadmin/download/for-jdk/US\_export\_policy.jar ./  $ cd /home/cmsadmin/local/jdk1.6.0\_37/jre/lib/ext  $ cp /home/cmsadmin/download/for-jdk/bcprov-jdk16-140.jar ./ |

1. Add security provider

|  |
| --- |
| $ cd /home/cmsadmin/local/jdk1.6.0\_37/jre/lib/security  $ vi java.security  ---------------------  …  #  # List of providers and their preference orders (see above):  #  security.provider.1=sun.security.provider.Sun  security.provider.2=sun.security.rsa.SunRsaSign  security.provider.3=com.sun.net.ssl.internal.ssl.Provider  security.provider.4=com.sun.crypto.provider.SunJCE  security.provider.5=sun.security.jgss.SunProvider  security.provider.6=com.sun.security.sasl.Provider  security.provider.7=org.jcp.xml.dsig.internal.dom.XMLDSigRI  security.provider.8=sun.security.smartcardio.SunPCSC  security.provider.9=org.bouncycastle.jce.provider.BouncyCastleProvider  … |

1. Modify .bash\_profile of cmsadmin to add JAVA PATH

|  |
| --- |
| #vi ~/.bash\_profile  JAVA\_HOME=/home/cmsadmin/local/jdk1.6.0\_37  PATH=$PATH:$HOME/bin:$JAVA\_HOME/bin  export PATH JAVA\_HOME |

### Install and Configure JBoss

1. Access the application server using SSH
2. Change directory to /home/cmsadmin/local and execute ‘tar xf /home/cmsadmin/download/jboss5-as.tar’ to install :

|  |
| --- |
| $ cd /home/cmsadmin/local  $ tar xf /home/cmsadmin/download/jboss5-as.tar |

### JBoss library update

1. Change SLF4J library and add some libraries.

|  |
| --- |
| $ cd /home/cmsadmin/local/jboss5-as/common/lib  $ cp /home/cmsadmin/download/for-jboss/slf4j-api-1.7.5.jar ./  $ cp /home/cmsadmin/download/for-jboss/jcl-over-slf4j-1.7.5.jar ./  $ cp /home/cmsadmin/download/for-jboss/jul-to-slf4j-1.7.5.jar ./  $ rm slf4j-api.jar |

1. Change QUARTZ library

|  |
| --- |
| $ cd /home/cmsadmin/local/jboss5-as/common/lib  $ cp /home/cmsadmin/download/for-jboss/quartz-2.1.7.jar ./  $ rm quartz.jar |

1. Add LOGBACK library and change SLF4J binder

|  |
| --- |
| $ cd /home/cmsadmin/local/jboss5-as/common/lib  $ cp /home/cmsadmin/download/for-jboss/logback-core-1.0.13.jar ./  $ cp /home/cmsadmin/download/for-jboss/logback-classic-1.0.13.jar ./  $ cp /home/cmsadmin/download/for-jboss/mcs-logger-support-logback-3.2.1-RELEASE.jar ./  $ rm slf4j-jboss-logging.jar |

1. Add oracle JDBC library

|  |
| --- |
| $ cd /home/cmsadmin/local/jboss5-as/common/lib  $ cp /home/cmsadmin/download/for-jboss/ojdbc6-11.2.0.1.0.jar ./ |

### Set JBoss admin password

1. create password

|  |
| --- |
| $ cd /home/cmsadmin/local/jboss5-as/password  $ ./adminpass.sh  Please enter the password to be encrypted: password  Encoded password: X03MO1qnZdYdgyfeuILPmQ== |

1. Set password configuration and add password algorithm

|  |
| --- |
| $ cd /home/cmsadmin/local/jboss5-as/server/{server instance}/conf/props  $ vi jmx-console-users.properties  --------------  # A sample users.properties file for use with the UsersRolesLoginModule  admin= X03MO1qnZdYdgyfeuILPmQ==  $ cd /home/cmsadmin/local/jboss5-as/server/{server instance}/conf  $ vi login-config.xml  -------------  <application-policy name="jmx-console">  <authentication>  <login-module code="org.jboss.security.auth.spi.UsersRolesLoginModule"  flag="required">  <module-option name="usersProperties">props/jmx-console-users.properties</module-option>  <module-option name="rolesProperties">props/jmx-console-roles.properties</module-option>  <module-option name="hashAlgorithm">MD5</module-option>  <module-option name="hashEncoding">base64</module-option>  </login-module>  </authentication>  </application-policy> |

### Set JBoss datasource

1. create datasource XML – JNDI configuration

|  |
| --- |
| $ cd /home/cmsadmin/local/jboss5-as/server/{server instance}/deploy  $ vi {server instance}-ds.xml  ----------------------  <?xml version="1.0" encoding="UTF-8"?>  <datasources>  <local-tx-datasource>  <jndi-name>stcms/jdbc/OracleDS</jndi-name>  <connection-url>jdbc:oracle:thin:@(DESCRIPTION=(ADDRESS=(PROTOCOL=TCP)(HOST=cmsprd-scan.app.vic)(PORT=1831))(CONNECT\_DATA=(SERVER=DEDICATED)(SERVICE\_NAME = CMS1P)))</connection-url>  <driver-class>oracle.jdbc.OracleDriver</driver-class>  <security-domain>CMSEncryptDBPassword</security-domain>  <transaction-isolation>TRANSACTION\_READ\_COMMITTED</transaction-isolation>  <min-pool-size>5</min-pool-size>  <max-pool-size>20</max-pool-size>  <blocking-timeout-millis>5000</blocking-timeout-millis>  <idle-timeout-minutes>15</idle-timeout-minutes>  <prepared-statement-cache-size>100</prepared-statement-cache-size>  <track-statements>false</track-statements>  <valid-connection-checker-class-name>org.jboss.resource.adapter.jdbc.vendor.OracleValidConnectionChecker</valid-connection-checker-class-name>  <exception-sorter-class-name>org.jboss.resource.adapter.jdbc.vendor.OracleExceptionSorter</exception-sorter-class-name>  <check-valid-connection-sql>SELECT 1 FROM DUAL</check-valid-connection-sql>  <background-validation>true</background-validation>  <background-validation-minutes>10</background-validation-minutes>  <metadata>  <type-mapping>Oracle11g</type-mapping>  </metadata>  </local-tx-datasource>  </datasources> |

1. create password for datasource

|  |
| --- |
| $ cd /home/cmsadmin/local/jboss5-as/password  $ ./datasourcepass.sh  Please enter the password to be encrypted: password  Encoded password: 5dfc52b51bd35553df8592078de921bc |

1. add datasource username/password

|  |
| --- |
| $ cd /home/cmsadmin/local/jboss5-as/server/{server instance}/conf  $ vi login-config.xml  --------------------  <application-policy name="CMSEncryptDBPassword">  <authentication>  <login-module code="org.jboss.resource.security.SecureIdentityLoginModule" flag="required">  <module-option name="username">CMS\_OWNER</module-option>  <module-option name="password">5dfc52b51bd35553df8592078de921bc </module-option>  <module-option name="managedConnectionFactoryName">jboss.jca:service=LocalTxCM,name=stcms/jdbc/OracleDS</module-option>  </login-module>  </authentication>  </application-policy> |

## Account (username: cmsadmin) Configuration

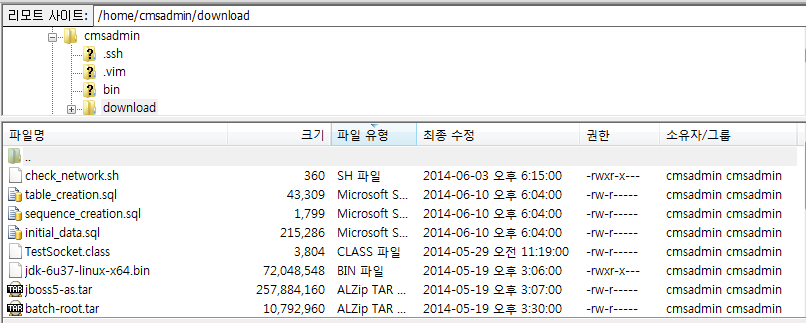
### Configure bash.profile

1. Configure bash shell variables and add some aliases

|  |
| --- |
| $ vi ~/.bash\_profile  -------------------  JAVA\_HOME=/home/cmsadmin/local/jdk1.6.0\_37  PATH=$PATH:$HOME/bin:$JAVA\_HOME/bin  export PATH JAVA\_HOME  JBOSS\_HOME="/home/cmsadmin/local/jboss5-as"  PORTAL\_HOME="$JBOSS\_HOME/server/stcms\_portal"  CI\_HOME="$JBOSS\_HOME/server/stcms\_ci"  alias go\_portal='cd $PORTAL\_HOME'  alias go\_ci='cd $CI\_HOME'  alias start\_portal='$PORTAL\_HOME/startup.sh; touch $PORTAL\_HOME/log/server.log; tail -f $PORTAL\_HOME/log/server.log'  alias start\_ci='$CI\_HOME/startup.sh; touch $CI\_HOME/log/server.log; tail -f $CI\_HOME/log/server.log'  alias stop\_portal='$PORTAL\_HOME/shutdown.sh; touch $PORTAL\_HOME/log/server.log; tail -f $PORTAL\_HOME/log/server.log'  alias stop\_ci='$CI\_HOME/shutdown.sh; touch $CI\_HOME/log/server.log; tail -f $CI\_HOME/log/server.log'  alias log\_portal='tail -f $PORTAL\_HOME/log/server.log'  alias log\_ci='tail -f $CI\_HOME/log/server.log' |

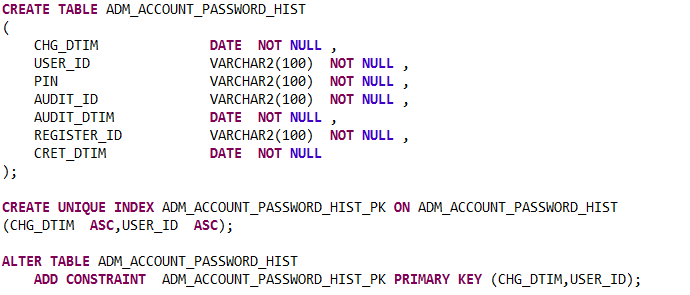
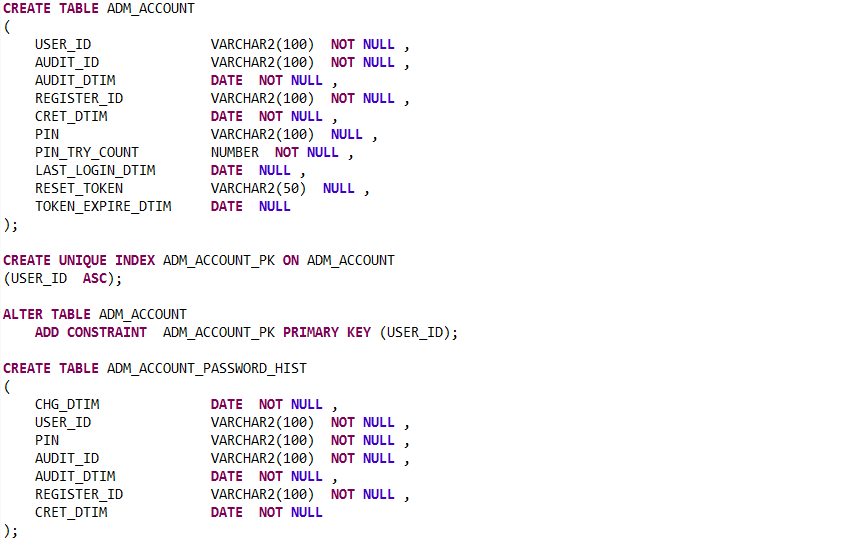
# Database Setup

## Create DB tables



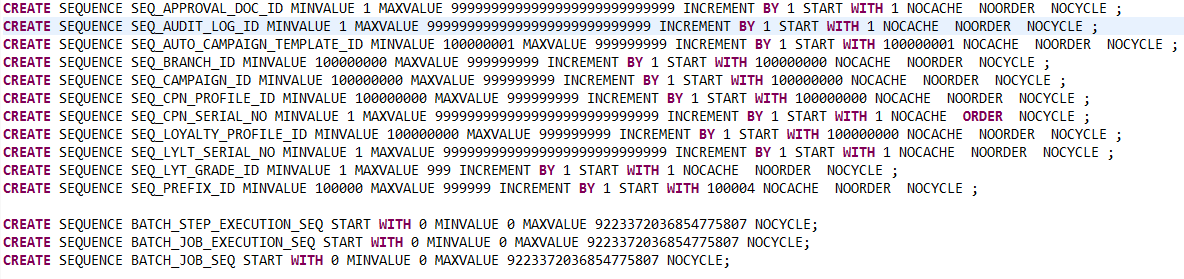
### Location path for table creation script

1. Path : /home/cmsadmin/download
2. File Name : table\_creation.sql



### Location path for sequence creation script

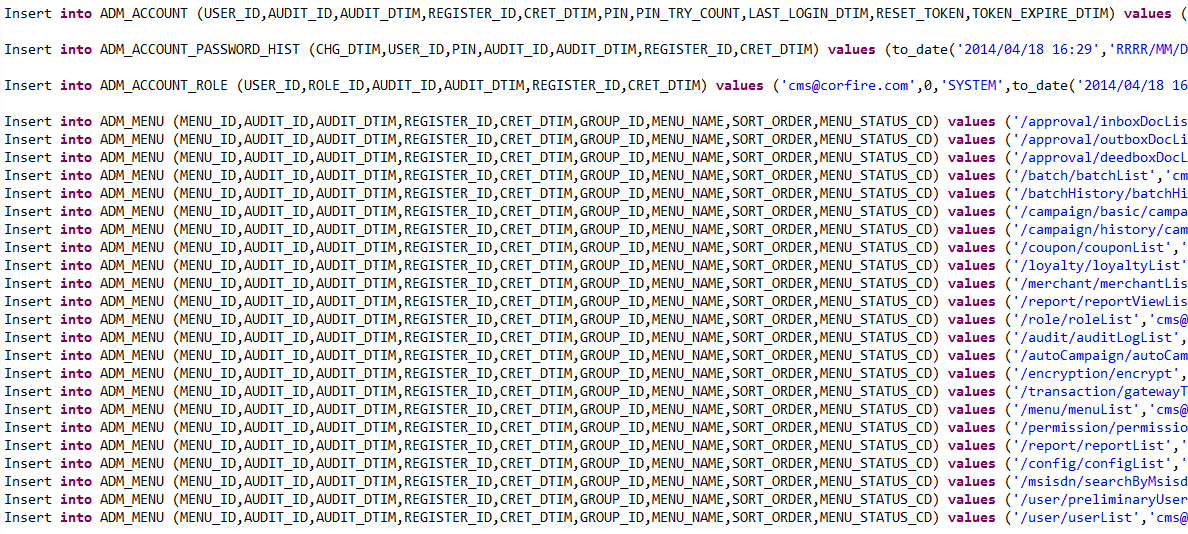
1. Path : /home/cmsadmin/download
2. File Name : sequence\_creation.sql



## Create initial data

### Location path for initial data creation script

1. Path : /home/cmsadmin/download
2. File Name : initial\_data.sql



# Installation of CMS

CMS has two web archives:

1. The CMS Admin Web application
2. The CMS Integration (CMS gateway) application.

The installation also comes with three shell scripts: start, stop and uncompress.

**{jbossdir} = /home/cmsadmin/local/jboss5-as**

## Deployment path

|  |  |  |  |
| --- | --- | --- | --- |
| **Path** | **Type** | **Filename** | **Description** |
| {jbossdir}/server/stcms\_portal/deploy | WAR | stcms\_portal\_{version}.war | CMS administration web application archive. |
| {jbossdir}/server/stcms\_ci/deploy | WAR | stcms\_ci\_{version}.war | CMS integration (CMS gateway) application archive. |
| {jbossdir}/server/stcms\_portal | shell | startup.sh | Server Starting shell script |
| {jbossdir}/server/stcms\_ci | shell | startup.sh | Server Starting shell script |
| {jbossdir}/server/stcms\_portal | shell | shutdown.sh | Server Stopping shell script |
| {jbossdir}/server/stcms\_ci | shell | shutdown.sh | Server Stopping shell script |

1. uncompressing stcms\_portal.war

|  |
| --- |
| $ mkdir /home/cmsadmin/local/jboss5-as/server/stcms\_portal/deploy/stcms\_portal.war  $ cd /home/cmsadmin/local/jboss5-as/server/stcms\_portal/deploy/stcms\_portal.war  $ tar xf /home/cmsadmin/download/stcms\_portal.war |

1. uncompressing stcms\_ci.war

|  |
| --- |
| $ mkdir /home/cmsadmin/local/jboss5-as/server/stcms\_portal/deploy/stcms\_ci.war  $ cd /home/cmsadmin/local/jboss5-as/server/stcms\_portal/deploy/stcms\_ci.war  $ tar xf /home/cmsadmin/download/stcms\_ci.war |

## Environment Setup

### Create server instance

1. Change to jboss server directory and create server instances, namely admin portal and C.I.

|  |
| --- |
| $ cd /home/cmsadmin/local/jboss5-as/server  $ cp -R default stcms\_portal  $ cp -R default stcms\_ci |

1. Create a Jboss startup script

|  |
| --- |
| $ vi /home/cmsadmin/local/jboss5-as/server/stcms\_portal/startup.sh  #!/bin/sh  JAVA\_HOME=/home/cmsadmin/local/jdk1.6.0\_37  JBOSS\_HOME=/home/cmsadmin/local/jboss5-as  JAVA\_OPTS="-D[CMS\_PORTAL] -Xms1024m -Xmx1024m -XX:MaxPermSize=512m -Dorg.jboss.resolver.warning=true -Dsun.rmi.dgc.client.gcInterval=3600000 -Dsun.rmi.dgc.server.gcInterval=3600000 -XX:+HeapDumpOnOutOfMemoryError -XX:HeapDumpPath=$JBOSS\_HOME/tmp/stcms\_portal.dump"  export JAVA\_HOME JAVA\_OPTS JBOSS\_HOME  nohup $JBOSS\_HOME/bin/run.sh -c stcms\_portal -Djboss.as.deployment.ondemand=false -Djboss.bind.address=0.0.0.0 -Djboss.service.binding.set=ports-04 > /dev/null 2>&1 &  -----------------  $ vi /home/cmsadmin/local/jboss5-as/server/stcms\_ci/startup.sh  #!/bin/sh  JAVA\_HOME=/home/cmsadmin/local/jdk1.6.0\_37  JBOSS\_HOME=/home/cmsadmin/local/jboss5-as  JAVA\_OPTS="-D[CMS\_CI] -Xms1024m -Xmx1024m -XX:MaxPermSize=512m -Dorg.jboss.resolver.warning=true -Dsun.rmi.dgc.client.gcInterval=3600000 -Dsun.rmi.dgc.server.gcInterval=3600000 -XX:+HeapDumpOnOutOfMemoryError -XX:HeapDumpPath=$JBOSS\_HOME/tmp/stcms\_ci.dump"  export JAVA\_HOME JAVA\_OPTS JBOSS\_HOME  nohup $JBOSS\_HOME/bin/run.sh -c stcms\_ci -Djboss.bind.address=0.0.0.0 -Djboss.service.binding.set=ports-01 > /dev/null 2>&1 & |

1. Change to jboss server directory and create server instances, namely admin portal and C.I.

|  |
| --- |
| $ vi /home/cmsadmin/local/jboss5-as/server/stcms\_portal/shutdown.sh  #!/bin/sh  JAVA\_HOME=/home/cmsadmin/local/jdk1.6.0\_37  JBOSS\_HOME=/home/cmsadmin/local/jboss5-as  $JBOSS\_HOME/bin/shutdown.sh -s 0.0.0.0:1499 -S -u admin  -----------------  $ vi /home/cmsadmin/local/jboss5-as/server/stcms\_ci/shutdown.sh  #!/bin/sh  JAVA\_HOME=/home/cmsadmin/local/jdk1.6.0\_37  JBOSS\_HOME=/home/cmsadmin/local/jboss5-as  $JBOSS\_HOME/bin/shutdown.sh -s 0.0.0.0:1199 -u admin –S |

### Port Configuration

1. Port Change

‘8480’ is the usually port for admin portal and ‘8180’ is for CMS Integration server. (NOTE: You may change them according to the server environment.) Here are the ports setting steps:

1. Go to bindingservice.beans directory

|  |
| --- |
| $ cd /home/cmsadmin/local/jboss5-as/server/stcms\_portal/conf/bindingservice.beans/META-INF |

1. Open bindings-jboss-beans.xml

|  |
| --- |
| $ vi bindings-jboss-beans.xml |

1. Add port binding

Add the highlighted port binding as below:

|  |
| --- |
| <!-- The binding sets -->  <parameter>  <set>  <inject bean="PortsDefaultBindings"/>  <inject bean="Ports01Bindings"/>  <inject bean="Ports02Bindings"/>  <inject bean="Ports03Bindings"/>  <inject bean="Ports04Bindings"/>  </set>  </parameter>  .  .  .  <!-- The ports-04 bindings are obtained by taking ports-default and adding 400 to each port value -->  <bean name="Ports04Bindings" class="org.jboss.services.binding.impl.ServiceBindingSet">  <constructor>  <!-- The name of the set -->  <parameter>ports-04</parameter>  <!-- Default host name -->  <parameter>${jboss.bind.address}</parameter>  <!-- The port offset -->  <parameter>400</parameter>  <!-- Set of bindings to which the "offset by X" approach can't be applied -->  <parameter><null/></parameter>  </constructor>  </bean> |

### Environment Property Configuration

It is necessary to set environmental properties after deployment.

1. Admin portal

Configuration files are in ‘WEB-INF/classes’ directory.

|  |
| --- |
| $ cd /home/cmsadmin/local/jboss5-as/server/stcms\_portal/deploy/stcms\_portal.war/WEB-INF/classes/  $ ls  com ESAPI.properties security-validation.properties  environment.properties META-INF validation.properties |

**environment.properties** : general options including server’s IP, file path, etc.

Opening ‘environment.properties’ using ‘vi’ you can see the below:

|  |
| --- |
| # Server URL  stcms.url=http://10.44.56.145:8480  stcms.deployed.classes.path = /home/cmsadmin/local/jboss5-as/server/stcms\_portal/deploy/stcms\_portal.war/WEB-INF/classes  # CMS interface address  cms.interface.service.address = http://127.0.0.1:8180/stcms/ws  # when campaign approve ( approvalDialog.jsp )  approve.cms.merchantId = MCT100003  approve.cms.roleId = 5  # Timezone config  iso.language.code = zh  iso.country.code = SG  time.zone.id = Asia/Singapore  # DateFormat – for Jquery Data Format  datePicker.dateFormat = yy-mm-dd  jqgrid.dateFormat = Y-m-d  parse.dateFormat = yyyy-MM-dd  # password configuration  password.maxPinTryCnt = 3  password.validPeriod = 90  # account configuration (Day)  account.token.expiry.period = 3  #  # E-Mail Configuration  #  email.default.subject = Telkomsel CMS mail  email.default.replyto = mwallet@Telkomsel.com  email.host = 127.0.0.1  email.port = 25  email.encoding = utf-8  email.username =  email.password =  email.auth = false  email.tls = false  email.debug = false  # Password reset url  password.reset.url = ${stcms.url}/portal/auth/password/newPassword?resetToken=  # User registration url  user.registration.url = ${stcms.url}/portal/auth/signup?token=  # CMS Admin Portal url  admin.portal.url = ${stcms.url}/portal  # Location of Batch Job files for spring batch.  batch.job.configuration.file.dir = ${stcms.deployed.classes.path}/META-INF/batch-jobs  # in the case of multi instance, the option of file sync configures.  file.sync.enabled = true  # command for file sync.  file.sync.copy.command = /home/cmsadmin/bin/copy\_file.sh  #  # Image URL  #  file.upload.base.dir = /var/cmsadmin/cmsfiles  file.upload.path = ${file.upload.base.dir}/image  tnc.upload.path= ${file.upload.base.dir}/file  file.download.url = ${stcms.url}/portal/data  coupon.image.upload.path = ${file.upload.path}/coupon/  coupon.image.download.url = ${file.download.url}/coupon/couponImageDownload/  merchant.image.upload.path = ${file.upload.path}/merchant/  merchant.image.download.url = ${file.download.url}/merchant/merchantImageDownload/  loyalty.image.upload.path = ${file.upload.path}/loyalty/  loyalty.image.download.url = ${file.download.url}/loyalty/loyaltyImageDownload/  pushcampaign.image.upload.path = ${file.upload.path}/campaign/  pushcampaign.image.download.url = ${file.download.url}/campaign/pushcampaignImageDownload/  campaign.tnc.upload.path = ${tnc.upload.path}/campaign/  campaign.tnc.download.url = ${file.download.url}/campaign/campaignTncDownload/  loyalty.tnc.upload.path = ${tnc.upload.path}/loyalty/  loyalty.tnc.download.url = ${stcms.url}/portal/data/loyalty/loyaltyTncDownload/  # the location of files for push campaign batch  campaign.base.working.dir = /var/cmsadmin/batch-root  # the location of files to load the list of CUSTOMER for campaign.  campaign.customer.working.dir = ${campaign.base.working.dir}/ftpin  campaign.customer.backup.dir = ${campaign.base.working.dir}/processed  # the location of files to load the list of Coupon Serial Number for campaign.  campaign.coupon.working.dir = ${campaign.base.working.dir}/ftpin  campaign.coupon.backup.dir = ${campaign.base.working.dir}/processed  # the location of files to load the list of MSISDN and Coupon Serial Number for auto campaign.  campaign.auto.working.dir = ${campaign.base.working.dir}/ftpin  campaign.auto.backup.dir = ${campaign.base.working.dir}/processed  # the hours for push campaign load customer batch before campaign start date.  campaign.load.customer.limit.hours = 4  # Alarming email addresses for batch error.  batch.error.emails = mwallet@Telkomsel.com |

* E-Mail Configuration part: Check mail server information to system administrator.

1. C.I.

Configuration files are in ‘WEB-INF/classes’ directory.

|  |
| --- |
| $ cd /home/cmsadmin/local/jboss5-as/server/stcms\_portal/deploy/stcms.war/WEB-INF/classes/  $ ls  com ESAPI.properties security-validation.properties  environment.properties META-INF validation.properties |

**environment.properties** : general options including server’s IP, file path, etc.

|  |
| --- |
| # Server Info  ip.port.public = mwalletapp.Telkomsel.com  ip.port.inner = 10.44.56.145:8180  stcms.path = https://${ip.port.public}/stcms\_p1/ci  stcms.image.path = https://${ip.port.public}/stcms\_p1/image  stcms.folder.path = /var/cmsadmin/cmsfiles  mwallet.rs.url = https://mwalletapp.Telkomsel.com/corpay\_p4B/rs/mwallet  # Server Info for COM\_TRANSACTION  cms.was.ip = ${ip.port.inner} ST-PRD1  forTransaction.lms.endpoint = https://10.44.36.197/lms\_webservice.asmx  forTransaction.stcms.ws.url = stcms/ws  # Config  config.loyalty.redPrestige.merchant.id = MCT100003  config.operation.email = mwallet@Telkomsel.com  config.alert.receiver.email = corfirecms@gmail.com  # DateFormat  datePicker.dateFormat = yy-mm-dd  jqgrid.dateFormat = Y-m-d  parse.dateFormat = yyyy-MM-dd  # Timezone config  iso.language.code = zh  iso.country.code = SG  time.zone.id = Asia/Singapore  alert.exception.receiver.email = ${config.alert.receiver.email}  #  # E-Mail Configuration  #  email.default.subject = Telkomsel CMS mail  email.default.replyto = ${config.operation.email}  email.host = 127.0.0.1  email.port = 25  email.encoding = utf-8  email.username =  email.password =  email.auth = false  email.tls = false  email.debug = false  stcms.coupon.uploadURL = ${stcms.folder.path}/image/coupon/  stcms.loyalty.uploadURL = ${stcms.folder.path}/image/loyalty/  stcms.campaign.uploadTnc = ${stcms.folder.path}/file/campaign/  stcms.loyalty.uploadTnc = ${stcms.folder.path}/file/loyalty/  #  # Server End Point  #  mwallet.push.endpoint = ${mwallet.rs.url}/push  mwallet.auth.endpoint = ${mwallet.rs.url}/auth  mwallet.mcash.endpoint = ${mwallet.rs.url}/mcash  #  # Loyalty Red Prestige Config ( LmsClient )  # - context-loyalty-service.xml  loyalty.redPrestige.merchant.id = ${config.loyalty.redPrestige.merchant.id}  loyalty.redPrestige.getCustInfo.header.requestChannel = 14  #loyalty.redPrestige.getCustInfo.header.sourceRequestId = null  loyalty.redPrestige.getCustInfo.custIDType.nric = 2  loyalty.redPrestige.getCustInfo.custIDType.fin = 6  loyalty.redPrestige.getCustInfo.custIDType.membershipNo = 10  loyalty.redPrestige.getCustInfo.custIDType.passport = 536  #  # Batch Coupon Redemption  #  batch.coupon.redemption.working.dir = ${stcms.folder.path}/batch  batch.coupon.redemption.working.file.prefix = vr  batch.error.email.receivers = ${config.alert.receiver.email}  #  # Email Campaign  #  stcms.emailCampaign.image.path = ${stcms.image.path}/emailCampaign  stcms.emailCampaign.unsubscribeEmail.address = g-unsubscrib@Telkomsel.com |

### Crypto Configuration

1. Admin portal

Configuration files are in ‘WEB-INF/classes/META-INF’ directory.

|  |
| --- |
| $ cd /home/cmsadmin/local/jboss5-as/server/stcms\_portal/deploy/stcms\_portal.war/WEB-INF/classes/META-INF  $ ls  batch-jobs cxf encryption-config.properties message services  config ehcache mail-template mybatis spring |

**encryption-config.properties** : crypto key algorithm and key size.

Opening ‘encryption-config.properties’ using ‘vi’ you can see the below:

|  |
| --- |
| crypto.key = 844aed8d9f4d6608dbee098b994886b8eb6c6f34d036f2f6ba0dc589871b9178  crypto.algorithm = AES  crypto.keysize = 256 |

1. C.I

Configuration files are in ‘WEB-INF/classes/META-INF’ directory.

|  |
| --- |
| $ cd /home/cmsadmin/local/jboss5-as/server/stcms\_portal/deploy/stcms.war/WEB-INF/classes/META-INF  $ ls  batch-jobs cxf encryption-config.properties message services  config ehcache mail-template mybatis spring |

**encryption-config.properties** : crypto key algorithm and key size.

Opening ‘encryption-config.properties’ using ‘vi’ you can see the below:

|  |
| --- |
| crypto.key = 844aed8d9f4d6608dbee098b994886b8eb6c6f34d036f2f6ba0dc589871b9178  crypto.algorithm = AES  crypto.keysize = 256 |

### Logging Configuration

See logback.xml from your server instance’s configuration.

1. Admin portal

|  |
| --- |
| Location: /home/cmsadmin/local/jboss5-as/server/stcms\_portal/conf/logback.xml |

|  |
| --- |
| <?xml version="1.0" encoding="UTF-8"?>  <configuration scan="true" scanPeriod="20 seconds">  <appender name="CONSOLE" class="ch.qos.logback.core.ConsoleAppender">  <encoder>  <pattern>  [APP] %d{HH:mm:ss.SSS} %-5level %msg - %logger{20}%n  </pattern>  </encoder>  </appender>  <appender name="FILE" class="ch.qos.logback.core.rolling.RollingFileAppender">  <file>${jboss.server.log.dir}/stcms\_portal.log</file>  <append>true</append>  <rollingPolicy class="ch.qos.logback.core.rolling.TimeBasedRollingPolicy">  <!-- daily rollover -->  <fileNamePattern>${jboss.server.log.dir}/stcms\_portal.log.%d{yyyy-MM-dd}</fileNamePattern>  </rollingPolicy>  <layout class="ch.qos.logback.classic.PatternLayout">  <pattern>  %d{HH:mm:ss.SSS} %-5level %msg - %logger{20}%n  </pattern>  </layout>  </appender>  <!-- #### LOGGER #### -->  <!-- STCMS Log -->  <logger name="com.skcc.stcms" additivity="false">  <level value="DEBUG" />  <appender-ref ref="CONSOLE" />  </logger>  <logger name="com.skcc.mcs" additivity="false">  <level value="INFO" />  <appender-ref ref="CONSOLE" />  </logger>  <!-- Web Service Log -->  <logger name="org.apache.cxf" additivity="false">  <level value="INFO" />  <appender-ref ref="CONSOLE" />  </logger>  <logger name="org.springframework" additivity="false">  <level value="INFO" />  <appender-ref ref="CONSOLE" />  </logger>  <root level="INFO">  <appender-ref ref="CONSOLE" />  </root>  </configuration> |

Change the yellow highlight configuration ‘DEBUG’ to ‘INFO’ for production environment.

1. C.I

|  |
| --- |
| Location: /home/cmsadmin/local/jboss5-as/server/stcms\_ci/conf/logback.xml |

|  |
| --- |
| <?xml version="1.0" encoding="UTF-8"?>  <configuration scan="true" scanPeriod="20 seconds">  <conversionRule conversionWord="trans"  converterClass="com.skcc.mcs.logger.logback.converter.ReviseCompositeConverter" />  <appender name="CONSOLE" class="ch.qos.logback.core.ConsoleAppender">  <encoder>  <pattern>  [APP] %d{HH:mm:ss.SSS} %-5level %trans(%msg) - %logger{20} [%thread]%n  </pattern>  </encoder>  </appender>  <!-- #### LOGGER #### -->  <!-- STCMS Log -->  <logger name="com.skcc.stcms" additivity="false">  <level value="DEBUG" />  <appender-ref ref="CONSOLE" />  </logger>  <logger name="com.skcc.mcs" additivity="false">  <level value="DEBUG" />  <appender-ref ref="CONSOLE" />  </logger>  <logger name="com.skcc.mcs.common.persistence" additivity="false">  <level value="INFO" />  <appender-ref ref="CONSOLE" />  </logger>  <logger name="com.skcc.mcs.common.logging.tracer" additivity="false">  <level value="TRACE" />  <appender-ref ref="CONSOLE" />  </logger>  <!-- Web Service Log -->  <logger name="org.apache.cxf" additivity="false">  <level value="INFO" />  <appender-ref ref="CONSOLE" />  </logger>  <logger name="org.springframework" additivity="false">  <level value="INFO" />  <appender-ref ref="CONSOLE" />  </logger>  <root level="INFO">  <appender-ref ref="CONSOLE" />  </root>  </configuration> |

Change the yellow highlight configuration ‘DEBUG’ to ‘INFO’ for production environment.

# Batch Configuration

## Batch Configuration

### Installation and Configuration

1. Access the application server using SSH
2. Change directory to /var/cmsadmin and uncompress batch-root.tar to install Batch

|  |
| --- |
| $ cd /var/cmsadmin  $ tar xf /home/cmsadmin/download/for-batch/batch-root.tar  $ ls  batch-root |

1. Set Batch configuration

|  |
| --- |
| $ cd /var/cmsadmin/conf  $ vi batch.conf  ---------------------------------------------------  #  # Batch client configuration.  #  batch.url = http://localhost:8480/portal/ws/batchExecutor/executeBatchJob  security.salt = cc0ed1cba75e8f184266e1d604d31b743e16dbddef9da8422752a5d23f17dffc  security.timeout = 10 |

### Directory Structure

1. Change directory to /var/cmsadmin/batch-root

|  |
| --- |
| $ cd /var/cmsadmin/batch-root  $ ls -l  drwxr-x---. 2 cmsadmin cmsadmin 4096 Jun 2 15:40 bin  drwxr-x---. 2 cmsadmin cmsadmin 4096 Jun 2 13:10 conf  drwxr-x---. 2 cmsadmin cmsadmin 4096 May 9 15:16 ftpin  drwxr-x---. 2 cmsadmin cmsadmin 4096 Apr 30 10:23 jps  drwxr-x---. 2 cmsadmin cmsadmin 4096 Jun 2 15:22 log  drwxr-x---. 2 cmsadmin cmsadmin 4096 Apr 30 10:23 other  drwxr-x---. 2 cmsadmin cmsadmin 4096 Jun 2 14:46 param  drwxr-x---. 2 cmsadmin cmsadmin 4096 May 9 15:16 processed  -rw-r-----. 1 cmsadmin cmsadmin 1130 May 9 14:06 readme.txt  drwxr-x---. 2 cmsadmin cmsadmin 4096 Apr 30 10:23 reject  drwxr-x---. 2 cmsadmin cmsadmin 4096 Apr 30 10:23 result  drwxr-x---. 2 cmsadmin cmsadmin 4096 Jun 2 15:24 script  ----------------------------------  bin - for predefined shell scripts  conf - for configurations  ftpin - for in-coming files from other systems  jps - job process spec, description about the job the run time, instruction, etc. refer to attached for example  log - job log file  param - parameter files for jobs (if any)  processed - "backup" directory for files processed  reject - to store rejection records from files processed  result - to restore outgoing files / files generated / extracted and ftp to other systems  script - all the job scripts  other - other types of files not in above |

### Job Naming

1. Naming Rule: **CMS**[*Prefix*]+xxxx+**X**[*Suffix*] ex) CMS0001D
2. Prefix with "CMS" for script and control-m job name is to easy identify the job is under which system
3. Suffix ‘X’ is

- "D" for Daily,

- "M" for Monthly,

- "W" for weekly,

- "Y" for yearly (e.g. for housekeeping job?),

- "O" for adhoc (e.g. data patch purpose or migration script),

- "R" for recursive (e.g. need to run few times a day, with fix interval timing e.g. every 2 hrs)

### Integration Control-M

1. Install control-m agent.
2. Control-M agent calls the batch job shell(/var/cmsadmin/script/CMSnnnnX.sh)

### Example Job

1. Job Name: CMS0001D
2. Files for Batch Job
   * CMS0001D.sh : Shell to execute Job
   * CMS0001D.param : Parameter for Job
3. Create shell file

|  |
| --- |
| $ cd /var/cmsadmin/script  $ vi CMS0001D.sh  ---------------------------------------------------  #!/bin/sh  #=================================================================  #  # File Name : CMS0001D.sh  # Shell Type : Normal Shell Script  # Creation Date : 2014/04/16  # Creator : Kwangsoon, Im  # Description : Voucher campaign  # Usage : CMS0001D.sh [arg1 ... argn]  #  #-----------------------------------------------------------------  BATCH\_RUNNER="/var/cmsadmin/batch-root/bin/batch\_runner.sh"  PARAMS="CMS0001D"  #-----------------------------------------------------------------  # Executes batch runner shell  #-----------------------------------------------------------------  $BATCH\_RUNNER $PARAMS  RESULT\_CODE=$?  #-----------------------------------------------------------------  # Returns Exit Code  #-----------------------------------------------------------------  exit $RESULT\_CODE |

1. Create Parameter file

|  |
| --- |
| $ cd /var/cmsadmin/param  $ vi CMS0001D.param  ---------------------------------------------------  # Batch Job Name  batch.name = AutoCampaign  # Parameters  param.autoCampaignId=100000001 |

## Batch Execution

### Running Job

1. Access the application server using SSH
2. Change directory to /var/cmsadmin/script and execute CMS0001D.sh shell

|  |
| --- |
| $ cd /var/cmsadmin/script  $ ./CMS0001D.sh |

1. Change directory to /var/cmsadmin/log and view log

|  |
| --- |
| $ cd /var/cmsadmin/log  $ vi CMS0001D.2014-06-03  ----------------  START BATCH =====================================================  Started Date: [ Mon 02 Jun 2014 03:42:02 PM SGT ]  Batch Shell : [ /var/cmsadmin/batch-root/script/batch\_command\_runner.sh ]  Batch Params: [ /var/cmsadmin/batch-root/bin/java\_runner.sh CMS0001D ]  Command : [ /var/cmsadmin/batch-root/bin/java\_runner.sh ]  Command Params: [ CMS0001D ]  Command Log: ----------------------------------------------------  Java Runner Shell : [ /var/cmsadmin/batch-root/bin/java\_runner.sh ]  Java Runner Params: [ CMS0001D ]  Program Command: [ /home/cmsadmin/local/jdk1.6.0\_37/jre/bin/java -jar batch-client.jar CMS0001D ]  Program Params : [ CMS0001D ]  Program Log: ----------------------------------------------------  15:42:02.850 INFO [BatchClient] Job Name: CMS0001D - c.s.s.p.b.c.BatchClient  15:42:02.882 INFO [BatchClient] Job URL: http://localhost:8480/portal/ws/batchExecutor/executeBatchJob - c.s.s.p.b.c.BatchClient  15:42:02.908 INFO [BatchClient] Request Body: {batchName=AutoCampaign, param.autoCampaignId=100000001} - c.s.s.p.b.c.BatchClient  15:42:02.909 DEBUG [BatchClient] HTTP Entity: <{batchName=AutoCampaign, param.autoCampaignId=100000001},{Content-Type=[application/json], Accept=[text/plain], Security-Authentication=[f56aa9e4a1555af5e3e5b55b57ffc9fd07ac0df0b26ec2d740c6b9309c5347e0], Security-Token=[4d9887c2-3155-4faa-8010-9165bcde1a5a], Security-Nonce=[8], Security-Timestamp=[1401694922890], Security-Timeout=[10]}> - c.s.s.p.b.c.BatchClient  15:42:03.284 ERROR [BatchClient] Http Status : 500 Internal Server Error - c.s.s.p.b.c.BatchClient  15:42:03.284 ERROR [BatchClient] Response Text: 99999:An unexpected error occurred. Please contact system administrator., Auto Campaign Target File not found. - c.s.s.p.b.c.BatchClient  15:42:03.285 INFO [BatchClient] Exit Code: 1 - c.s.s.p.b.c.BatchClient  Program Log: ----------------------------------------------------  Command Log: ----------------------------------------------------  Exit Code : [ 1 ]  Ended Date: [ Mon 02 Jun 2014 03:42:03 PM SGT ]  END BATCH ======================================================= |

# Start/Stop the Server

## Starting up the server

### Admin Portal

To start the server, start-up shell scripts are offered.

1. Display alias list.

|  |
| --- |
| $ alias  alias con\_cmsdevwebl001='ssh cmsadmin@118.201.1.55'  alias go\_batch='cd $BATCH\_HOME'  alias go\_ci='cd $CI\_HOME'  alias go\_portal='cd $PORTAL\_HOME'  alias l.='ls -d .\* --color=auto'  alias ll='ls -l --color=auto'  alias log\_ci='tail -f $CI\_HOME/log/server.log'  alias log\_portal='tail -f $PORTAL\_HOME/log/server.log'  alias ls='ls --color=auto'  alias start\_ci='$CI\_HOME/startup.sh; touch $CI\_HOME/log/server.log; tail -f $CI\_HOME/log/server.log'  alias start\_portal='$PORTAL\_HOME/startup.sh; touch $PORTAL\_HOME/log/server.log; tail -f $PORTAL\_HOME/log/server.log'  alias stop\_ci='$CI\_HOME/shutdown.sh'  alias stop\_portal='$PORTAL\_HOME/shutdown.sh'  alias vi='vim'  alias which='alias | /usr/bin/which --tty-only --read-alias --show-dot --show-tilde' |

1. Run the start shell.

|  |
| --- |
| $ start\_portal |

### C.I

To start the server, start-up shell scripts are offered.

1. Display alias list.

|  |
| --- |
| $ alias  alias con\_cmsdevwebl001='ssh cmsadmin@118.201.1.55'  alias go\_batch='cd $BATCH\_HOME'  alias go\_ci='cd $CI\_HOME'  alias go\_portal='cd $PORTAL\_HOME'  alias l.='ls -d .\* --color=auto'  alias ll='ls -l --color=auto'  alias log\_ci='tail -f $CI\_HOME/log/server.log'  alias log\_portal='tail -f $PORTAL\_HOME/log/server.log'  alias ls='ls --color=auto'  alias start\_ci='$CI\_HOME/startup.sh; touch $CI\_HOME/log/server.log; tail -f $CI\_HOME/log/server.log'  alias start\_portal='$PORTAL\_HOME/startup.sh; touch $PORTAL\_HOME/log/server.log; tail -f $PORTAL\_HOME/log/server.log'  alias stop\_ci='$CI\_HOME/shutdown.sh'  alias stop\_portal='$PORTAL\_HOME/shutdown.sh'  alias vi='vim'  alias which='alias | /usr/bin/which --tty-only --read-alias --show-dot --show-tilde' |

1. Run the start shell.

|  |
| --- |
| $ start\_ci |

## Shutdown the server

### Admin Portal

To stop the server, shutdown shell scripts are offered.

1. Display alias list.

|  |
| --- |
| $ alias  alias con\_cmsdevwebl001='ssh cmsadmin@118.201.1.55'  alias go\_batch='cd $BATCH\_HOME'  alias go\_ci='cd $CI\_HOME'  alias go\_portal='cd $PORTAL\_HOME'  alias l.='ls -d .\* --color=auto'  alias ll='ls -l --color=auto'  alias log\_ci='tail -f $CI\_HOME/log/server.log'  alias log\_portal='tail -f $PORTAL\_HOME/log/server.log'  alias ls='ls --color=auto'  alias start\_ci='$CI\_HOME/startup.sh; touch $CI\_HOME/log/server.log; tail -f $CI\_HOME/log/server.log'  alias start\_portal='$PORTAL\_HOME/startup.sh; touch $PORTAL\_HOME/log/server.log; tail -f $PORTAL\_HOME/log/server.log'  alias stop\_ci='$CI\_HOME/shutdown.sh'  alias stop\_portal='$PORTAL\_HOME/shutdown.sh'  alias vi='vim'  alias which='alias | /usr/bin/which --tty-only --read-alias --show-dot --show-tilde' |

1. Run the start shell.

|  |
| --- |
| $ stop\_portal |

### C.I

To start the server, start-up shell scripts are offered.

1. Display alias list.

|  |
| --- |
| $ alias  alias con\_cmsdevwebl001='ssh cmsadmin@118.201.1.55'  alias go\_batch='cd $BATCH\_HOME'  alias go\_ci='cd $CI\_HOME'  alias go\_portal='cd $PORTAL\_HOME'  alias l.='ls -d .\* --color=auto'  alias ll='ls -l --color=auto'  alias log\_ci='tail -f $CI\_HOME/log/server.log'  alias log\_portal='tail -f $PORTAL\_HOME/log/server.log'  alias ls='ls --color=auto'  alias start\_ci='$CI\_HOME/startup.sh; touch $CI\_HOME/log/server.log; tail -f $CI\_HOME/log/server.log'  alias start\_portal='$PORTAL\_HOME/startup.sh; touch $PORTAL\_HOME/log/server.log; tail -f $PORTAL\_HOME/log/server.log'  alias stop\_ci='$CI\_HOME/shutdown.sh'  alias stop\_portal='$PORTAL\_HOME/shutdown.sh'  alias vi='vim'  alias which='alias | /usr/bin/which --tty-only --read-alias --show-dot --show-tilde' |

1. Run the start shell.

|  |
| --- |
| $ stop\_ci |

# Monitoring log and exception codes

This section provides instructions to check CMS logs and how to check the errors. In addition, the error code is described.

## Log and interpretation

The location of CMS admin portal log is ‘/home/cmsadmin/local/jboss5-as/server/{server instance}/log’.

1. Log file naming rule : server.log[.YYYY-MM-DD]
2. Current log file : server.log

|  |
| --- |
| $ ls  boot.log server.log.2014-05-11 server.log.2014-05-19 server.log.2014-05-27 server.log.2014-06-04  server.log server.log.2014-05-12 server.log.2014-05-20 server.log.2014-05-28 server.log.2014-06-05  server.log.2014-04-29 server.log.2014-05-13 server.log.2014-05-21 server.log.2014-05-29 server.log.2014-06-06 |

1. View server.log with vi

|  |
| --- |
| $ vi server.log  2014-06-11 10:33:11,772 INFO [STDOUT] (http-0.0.0.0-8480-3) 10:33:11.772 INFO START TRANSACTION: Entry Point=[/portal/data/code/codeList.json] - c.s.m.c.w.t.f.SimpleTraceFilter  2014-06-11 10:33:11,773 INFO [STDOUT] (http-0.0.0.0-8480-3) 10:33:11.773 INFO [URL] /portal/data/code/codeList.json - c.s.s.w.i.LoggingInterceptor  2014-06-11 10:33:11,776 INFO [STDOUT] (http-0.0.0.0-8480-3) 10:33:11.776 DEBUG User Name: cms@corfire.com, Event Time: Wed Jun 11 10:33:11 SGT 2014 - c.s.s.p.e.l.AuditLoggingServletRequestHandledEventListener  2014-06-11 10:33:11,776 INFO [STDOUT] (http-0.0.0.0-8480-3) 10:33:11.776 INFO END TRANSACTION - c.s.m.c.w.t.f.SimpleTraceFilter  2014-06-11 10:33:11,891 INFO [STDOUT] (http-0.0.0.0-8480-3) 10:33:11.891 INFO START TRANSACTION: Entry Point=[/portal/data/code/codeList.json] - c.s.m.c.w.t.f.SimpleTraceFilter  2014-06-11 10:33:11,892 INFO [STDOUT] (http-0.0.0.0-8480-3) 10:33:11.892 INFO [URL] /portal/data/code/codeList.json - c.s.s.w.i.LoggingInterceptor  2014-06-11 10:33:11,895 INFO [STDOUT] (http-0.0.0.0-8480-3) 10:33:11.895 DEBUG User Name: cms@corfire.com, Event Time: Wed Jun 11 10:33:11 SGT 2014 - c.s.s.p.e.l.AuditLoggingServletRequestHandledEventListener  2014-06-11 10:33:11,895 INFO [STDOUT] (http-0.0.0.0-8480-3) 10:33:11.895 INFO END TRANSACTION - c.s.m.c.w.t.f.SimpleTraceFilter |

1. Example – Exception case

|  |
| --- |
| $ vi server.log  2014-06-09 12:54:52,241 INFO [STDOUT] (http-0.0.0.0-8480-7) 12:54:52.241 WARN [ConsecutivePasswordValidator] 3 consecutive characters validation detected: 333 - c.s.s.p.s.p.v.ConsecutivePasswordValidator  2014-06-09 12:54:52,247 INFO [STDOUT] (http-0.0.0.0-8480-7) 12:54:52.247 ERROR 95000 - c.s.s.c.t.DefaultTransactionExecutor  com.skcc.stcms.core.exception.AppException: 95000  at com.skcc.stcms.util.ExceptionUtils.createException(ExceptionUtils.java:39) ~[stcms-common-core-1.0.0-SNAPSHOT.jar!/:na]  at com.skcc.stcms.util.ExceptionUtils.createException(ExceptionUtils.java:31) ~[stcms-common-core-1.0.0-SNAPSHOT.jar!/:na]  at com.skcc.stcms.portal.security.password.validator.ConsecutivePasswordValidator.doValidate(ConsecutivePasswordValidator.java:42) ~[stcms-portal-security-1.0.0-SNAPSHOT.jar!/:na]INFO [URL] /portal/data/code/codeList.json - c.s.s.w.i.LoggingInterceptor  2014-06-11 10:33:11,895 INFO [STDOUT] (http-0.0.0.0-8480-3) 10:33:11.895 DEBUG User Name: cms@corfire.com, Event Time: Wed Jun 11 10:33:11 SGT 2014 - c.s.s.p.e.l.AuditLoggingServletRequestHandledEventListener  2014-06-11 10:33:11,895 INFO [STDOUT] (http-0.0.0.0-8480-3) 10:33:11.895 INFO END TRANSACTION - c.s.m.c.w.t.f.SimpleTraceFilter |

## Exception codes list

### Admin portal

The exception codes for admin portal are divided into 10 sections.

➀batch-error.properties, ➁coupon-error.properties, ➂merchant-error.properties, ➃user-error.properties, ➄campaign-error.properties, ➅loyalty-error.properties, ➆password-error.properties, ➇common-error.properties, ➈management-error.properties, ➉report-error.properties

1. Location :

/home/cmsadmin/local/jboss5-as/server/stcms\_portal/deploy/stcms\_portal.war/WEB-INF/classes/META-INF/message/error

1. Error code file list :

|  |
| --- |
| $ ls  batch-error.properties coupon-error.properties merchant-error.properties user-error.properties  campaign-error.properties loyalty-error.properties password-error.properties  common-error.properties management-error.properties report-error.properties |

1. Error Code List - **batch -error.properties**

|  |
| --- |
| # code = message  # batch error  71101 = An unexpected scheduler error occurred. Please contact system administrator.  # campaign loading batch error  72101 = An file format error occurred. In the case of email channel type, row format must be "<msisdn>,<email>". |

1. Error Code List - **coupon-error.properties**

|  |
| --- |
| # code = message  # coupon error  21001 = An unexpected error occurred. Please contact system administrator.  21002 = The size/format of your image file is not matched. please check your image size/format. </br> &nbsp; - File Format : PNG or JPEG </br> &nbsp; - Image Size: width(315 ~ 555) \* height(235 ~ 350) pixel  21003 = Coupon was not found.  21004 = Coupon was updated too many times.  21011 = Campaign(s) of this coupon exist. Please delete campaign(s). |

1. Error Code List - **merchant-error.properties**

|  |
| --- |
| # code = message  # batch error  71101 = An unexpected scheduler error occurred. Please contact system administrator.  # campaign loading batch error  72101 = An file format error occurred. In the case of email channel type, row format must be "<msisdn>,<email>".  [cmsadmin@cmsdevappl001 error]$ cat coupon-error.properties  # code = message  # coupon error  21001 = An unexpected error occurred. Please contact system administrator.  21002 = The size/format of your image file is not matched. please check your image size/format. </br> &nbsp; - File Format : PNG or JPEG </br> &nbsp; - Image Size: width(315 ~ 555) \* height(235 ~ 350) pixel  21003 = Coupon was not found.  21004 = Coupon was updated too many times.  21011 = Campaign(s) of this coupon exist. Please delete campaign(s).[cmsadmin@cmsdevappl001 error]$ ^C  [cmsadmin@cmsdevappl001 error]$ cat merchant-error.properties  # code = message  # merchant error  23001 = There is not merchant information.  23002 = The size/format of your image file is not matched. please check your image size/format. </br> &nbsp; - File Format : PNG or JPEG </br> &nbsp; - Image Size: width(315 ~ 555) \* height(235 ~ 350) pixel  23003 = This merchant's user has a pending approval document or document to be approving.  23004 = This merchant's user has a document to be approving.  23005 = Campaign(s) of this merchant exist. Please delete campaign(s). |

1. Error Code List - **user-error.properties**

|  |
| --- |
| # code = message  # user error  81001 = User was not founded.  81002 = Too many rows of user are tried to update.  81003 = The state of user was not founded.  81004 = The state of user for approval are wrong value. Required values are 'approved' or 'rejected'.  81005 = User's status is not activated.  81006 = User is already existed.  81007 = User was not found.  81008 = User was not found.  81009 = User has a pending approval document. {0}  81010 = User has a document to be approving. {0}  # Preliminary user error  81051 = Preliminary User was not founded.  81052 = Too many rows of preliminary user are tried to update.  81053 = The token of preliminary user was expired.  81054 = During preliminary user''s token notifies, an error occurred. <br><pre>{0}</pre>  81055 = A preliminary user does not match a signup user. |

1. Error Code List - **campaign-error.properties**

|  |
| --- |
| # code = message  # campaign error  24001 = An unexpected error occurred. Please contact system administrator.  24002 = Exist coupon serial number.  24003 = Campaign was not found.  24004 = Campaign was updated too many times.  24005 = The size/format of your image file is not matched. please check your image size/format.  24006 = Excess number of extension.  24007 = Check number of total coupons.  # auto campaign error  24901 = Auto campaign was not found. autoCampaignId={0}  24902 = Auto campaign was updated too many times. |

1. Error Code List - **loyalty-error.properties**

|  |
| --- |
| # code = message  # loyalty error  22001 = An unexpected error occurred. Please contact system administrator.  22002 = The size/format of your image file is not matched. please check your image size/format. </br> &nbsp; - File Format : PNG or JPEG </br> &nbsp; - Image Size: width(315 ~ 555) \* height(235 ~ 350) pixel  22003 = Loyalty was not found.  22004 = Loyalty was updated too many times |

1. Error Code List - **password-error.properties**

|  |
| --- |
| # code = message  95000 = You can NOT use repeatedly more than {0} identical characters.  95001 = The length of password must be between {0} and {1}.  95002 = You can NOT use sequential password.  95003 = You can NOT use password that contains personal information.  95004 = You can NOT reuse the password already used.  95011 = The password must contain at least 1 numeric character.  95012 = The password must contain at least 1 upper-case characters.  95013 = The password must contain at least 1 lower-case characters.  95014 = The password must contain at least 1 special characters.  95015 = The password must NOT contain leading or trailing blanks.  95999 = The password in use is wrong. |

1. Error Code List - **common-error.properties**

|  |
| --- |
| # code = message  # common error  99999 = An unexpected error occurred. Please contact system administrator.  99998 = Configuration error occurred. ''{0}'' key was not founded.  99997 = ''{0}'' must be required.  99996 = File was not founded. (file={0})  99995 = Access denied error occurred.  99994 = An error has occurred during the operation.  99993 = An invalid parameter error occurred. Please contact system administrator.  99992 = Unsupported Operation.  99991 = Not implemented operation.  99990 = File upload is failed.  99989 = A data handling error occurred. Please contact system administrator.  # CSRF token error  90002 = Unknown ErrorType. request type = {0}.  90003 = [CSRF Token Error] Your access is abnormal. Please login to use again.  # Permssion Errors  99101 = Your access is forbidden. Please contact system administrator.  99102 = Permission was not founded.  99103 = Too many rows of permissions are tried to update.  99104 = {0} is assigned to {1}. |

1. Error Code List - **management-error.properties**

|  |
| --- |
| # code = message  # Account errors  81101 = Account was not founded.  81102 = Too many rows of account are tried to update.  81103 = Account was not founded. Or Token was expired.  81104 = Password must be matched with the confirm password.  # Role errors  81201 = Role was not founded.  81202 = Too many rows of role are tried to update.  81203 = The system cannot delete the "{0}" role. The role is allocated to the active users. Please change the allocated users'' role first.  # Menu errors  81301 = Menu was not founded.  81302 = Too many rows of menu are tried to update.  81303 = This menu has sub menus.  # MenuGroup errors  81401 = Menu group was not founded.  81402 = Too many rows of menu group are tried to update.  # ApprovalDoc errors  81501 = Approval document was not founded.  81502 = Too many rows of Approval document are tried to update.  81503 = The state of approval document was not founded.  81504 = The approver of approval document was not founded.  81505 = The approver of approval document was not matched.  # Configuration errors  81601 = Configuration was not founded.  81602 = Too many rows of configuration are tried to update. |

1. Error Code List - **report-error.properties**

|  |
| --- |
| # code = message  # report error  71001 = Report was not found.  71002 = Report was updated too many times.  71003 = Report category was not matched. |

### C.I

The CMS Integration related error code is described in server-error.properties.

1. Location :

/home/cmsadmin/local/jboss5-as/server/stcms\_ci/deploy/stcms.war/WEB-INF/classes/META-INF/message/error

1. Error code file list : ‘server-error.properties’
2. Error Code List

|  |
| --- |
| ######################  ##### Coupon Errors  ######################  10000 = This coupon cannot be deleted. Please try again later  10001 = This coupon is out-of-stock. Please select another coupon  10002 = Failed to redeem because the coupon is not valid  10003 = Telkomsel mWallet is currently busy. Please try again later  10004 = This coupon is unavailable. Please try again later  10005 = Invalid download requested  10006 = Cannot find campaign info  10007 = This coupon is already saved. Please check my coupons menu  10008 = This coupon is unavailable. Please try again later  10009 = This coupon is out-of-stock. Please select another coupon  10010 = This coupon is unavailable. Please try again later  10011 = This coupon is out-of-stock. Please select another coupon  10012 = This coupon is allowed to be redeemed on every {0} only  10013 = This coupon is allowed to be redeemed from {0} to {1} only  10014 = You have entered an invalid PIN. Please try again  10015 = Telkomsel mWallet is currently busy. Please try again later  10016 = Failed to notify expired campaigns via mwallet app  10017 = Telkomsel mWallet is currently busy. Please try again later  10018 = Telkomsel mWallet is currently busy. Please try again later  10019 = There is not information of current user distance  10020 = Not found coupon instance for update  10021 = Too many coupon instance is updated  10022 = Failed to get coupons  10023 = This coupon is already redeemed  10024 = This coupon is already expired  10025 = This coupon is not available for NFC tap redemption here.\nPlease ensure the right coupon is used  ######################  ####### Loyalty Errors  ######################  20000 = Loyalty convert error  20001 = This card is unavailable. Please try again later  20002 = Telkomsel mWallet is currently busy. Please try again later  20003 = Your request is unsuccessful. Only Telkomsel Prestige customer is eligible for card. For further assistance, please call 1688  20004 = No merchant found  20005 = Not found Loyalty Instance  20006 = To many Loyalty Instance is updated  20007 = Failed to save auth field(hash error)  20008 = This card has been previously downloaded. For further assistance, please call 1688.  20009 = Telkomsel mWallet is currently busy. Please try again later  20010 = This card cannot be deleted. Please try again later  ######################  ####### Internal Error  ######################  70000 = Telkomsel mWallet is currently busy. Please try again later  70001 = Telkomsel mWallet is currently busy. Please try again later  70002 = Failed to get mcash account id from mWallet Server  ######################  ####### External Errors  ######################  80000 = Telkomsel mWallet is currently busy. Please try again later  ######################  ####### Common Server Errors  ######################  90000 = Unknown DB error  98001 = Parameter Binding error  99999 = Unknown server error |