

# Distributed Polling System Test Specification

Version 1.0

## Table of Contents

<b>1. PURPOSE</b>	<b>3</b>
<b>2. OVERALL TESTING STRUCTURE</b>	<b>3</b>
<b>3. ENVIRONMENTAL NEEDS</b>	<b>3</b>
<b>4. TEST PROCEDURE</b>	<b>3</b>
4.1 TEST CASE SPECIFICATIONS	3
4.1.1 <i>Web tier Non Admin testing – WEBNA</i>	4
4.1.1.1 Testing Use case "login" – WENA01	4
4.1.1.2 Testing Use case "Request for Password" – WENA02	4
4.1.1.3 Testing Use case "Create a New Poll" – WENA03	5
4.1.1.4 Testing Use case "View Poll" – WEBNA04	5
4.1.1.5 Testing Use case "Show Poll List" – WEBNA05	5
4.1.1.6 Testing Use case "Edit personal Information" – WEBNA06	6
4.1.1.7 Testing the option "Adding members to a poll" – WEBNA07	6
4.1.1.8 Testing Use case "Change Password" – WEBNA08	6
4.1.1.9 Testing Use case "Close Poll" – WEBNA09	6
4.1.1.10 Testing Use case "View Poll result" – WEBNA10	7
4.1.2 <i>Web tier Administrator testing – WEBA</i>	7
4.1.2.1 Testing Use case "Create a New User" – WEA01	7
4.1.2.2 Testing Use case "Add/Edit Members Information" – WEBA02	7
4.1.2.3 Testing Use case "View Received Votes" – WEBA03	8
4.1.3 <i>Business tier testing –BT</i>	8
4.1.3.1 Testing Use case "Intimate Poll by Email" – BT01	8
4.1.3.2 Testing Use case "Intimate Poll by SMS" – BT02	8
4.1.3.3 Testing Use case "Send PDF file by Email" – BT03	9
4.1.3.4 Testing Use case "Receive Email response" – BT04	9
4.1.3.5 Testing Use case "Announce Poll Result" – BT05	9
4.1.4 <i>Detailed Test Cases for Login and Create Poll</i>	9
4.2 PERFORMANCE TESTING	11

## 1. Purpose

The purpose of the test case document is to indicate which of the Distributed Polling System (DPS) functions meet the desired system functionalities. This report describes the level to which the system meets the test objectives.

## 2. Overall Testing Structure

The development team was divided into four main groups and each of them performed testing in their respective modules and finally the system was also tested after integration.

- **User Interface Team** responsible for testing of all Graphical User Interface (GUI) related functionalities
- **Database Team** responsible for testing of the database and the related scripts
- **Middleware Team** responsible for testing of the different components
- **Business Logic Team** responsible for testing all the data exchange between database and the GUI

## 3. Environmental Needs

- System administrator as well as the predefined group of members can create/edit/delete poll.
- Members can participate in decision making only between the poll start time and poll end time. The opinions received at any other time are considered as invalid.
- Every poll that is created should have a valid poll name and a poll question.

## 4. Test procedure

### 4.1 Test case specifications

TEST CASE ID	TEST TARGET	EXPECTED RESULT	ACTUAL RESULT
WEBNA01	Login	Login to use the DPS application	Is working
WEBNA02	Request for Password	To generate a password	Is working
WEBNA03	Create a New Poll	Check validity of all specified parts and Possibility to add, then add poll and show related message (successful or error reason)	Is working
WEBNA04	View Poll	Show selected poll information	Is working
WEBNA05	Show Poll List	Show List of Polls	Is working
WEBNA06	Edit personal Information	To edit the personal details	Is working
WEBNA07	Adding members to a poll	To add members who are eligible for decision making in a particular poll	Is working
WEBNA08	Change his/her Password	To change password	Is working
WEBNA09	Close Poll, which is created by himself/herself	Close selected Poll	Is working
WEBNA10	View Poll Result	View Poll Result and the percentages of each option	Is working
WEBNA01	Create a new User	Check validity of entered	Is working

<b>WEBA02</b>	Add/Edit Members Information	data and create user	Is working
<b>WEBA03</b>	View Received Votes	To work and show related success or fail message	Is working
<b>BT01</b>	Send Email to members of each poll at start time of the poll, if the poll intimation should be done by email	Show members of the selected poll and view received votes	Is working
<b>BT02</b>	Send SMS to poll members in start date and time in start's time	Send Email to all related members	Is working
<b>BT03</b>	Send PDF in attachment of email while sending email, if the poll has attachment	Send SMS to related members	Is working
<b>BT04</b>	Get received email and save sent data	To send a pdf as attachment	Is working
<b>BT05</b>	Announce Poll Result	To work	Is working
		To declare the results of poll	Is working

#### 4.1.1 Web tier Non Admin testing – WEBNA

##### 4.1.1.1 Testing Use case "login" – WENA01

**Description:** Testing is login valid

**Test type:** Successful

**Preconditions:**

- User previously defined for the system

**Input definition:**

1. Web server with Tomcat is up and running
2. The user enter URL in browser
3. Enter username and Password
4. Click on Login

**Output definition:**

DPS user successfully logged on. Browser hoes to home page of DPS application.



##### 4.1.1.2 Testing Use case "Request for Password" – WENA02

**Description:** Testing of reporting forgotten password

**Test type:** Successful

**Preconditions:**

- User previously defined for the system

**Input definition:**

1. Web server with Tomcat is up and running
2. The user enter URL in browser
3. Enter username and Password
4. Click on 'Request Password' link
5. New page to enter user id and email address



6. After filling data, Secret question is asked

**Output definition:**

After successful answer mail with new password has been sent to known users email address.

4.1.1.3 Testing Use case "Create a New Poll" – WENA03

**Description:** Adding new poll

**Test type:** Successful

**Input definition:**

1. Web server with Tomcat is up and running
2. The user successfully do login to the DPS web part
3. Click on 'Create a new Poll'
4. Fill out all data in the Create form page
5. Click on Submit

**Output definition:**

Poll added successfully is displayed. It should be visible when adding a new poll.

4.1.1.4 Testing Use case "View Poll" – WEBNA04

**Description:** View detail information of a poll pre defined poll

**Test type:** Successful

**Input definition:**

1. Web server with Tomcat is up and running
2. The user successfully do login to the DPS web part
3. Click on 'View Poll' link in the right menu
4. Select Poll from the polls list
5. Click on 'Show Poll' button

**Output definition:**

Details of the selected poll will be shown in the same page.

4.1.1.5 Testing Use case "Show Poll List" – WEBNA05

**Description:** Viewing most recently created polls in one page and the others in next pages

**Test type:** Successful

**Input definition:**

1. Web server with Tomcat is up and running
2. The user successfully do login to the DPS web part
3. In the first page list will be shown

**Output definition:**

List of all defined polls is shown in the current page and next pages.

Distributed Polling System				
Poll List				
Name	Poll Question	Created on	Closed on	Status
Business	should we have this business decision?	2009-01-14	2009-03-14	CLOSE
Exam time	What should be the exam date?	2009-01-14	2009-03-14	CLOSE
DPS	What should be the presentation time?	2009-01-14	2009-03-14	CLOSE
DPS POLL	what is the duration of DSD course?	2009-01-15	2009-03-15	CLOSE
DEMO POLL	What is the most imp learning of DSD Course?	2009-01-15	2009-03-15	OPEN
DPS deadline	when will be the deadline?	2009-01-18	2009-03-20	OPEN

#### 4.1.1.6 Testing Use case "Edit personal Information" – WEBNA06

**Description:** Set new users information

**Test type:** Successful

**Input definition:**

1. Web server with Tomcat is up and running
2. The user successfully do login to the DPS web part
3. Click on 'Edit Personal Details' link in the right menu
4. Change data in the page
5. Click on 'Save' button

**Output definition:**

Message of editing is done, should be shown and browser remains in that page.

#### 4.1.1.7 Testing the option "Adding members to a poll" – WEBNA07

**Description:** Adding members to a poll

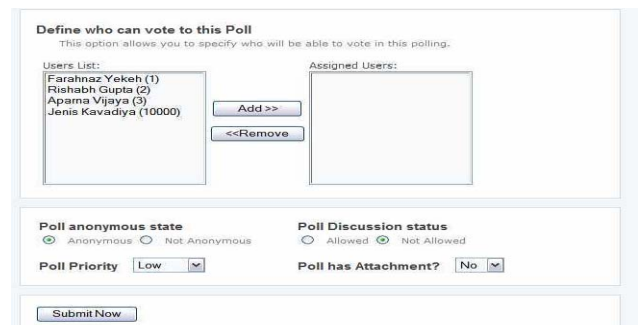
**Test type:** Successful

**Preconditions:**

- User who login to the system should be administrator.

**Input definition:**

1. Web server with Tomcat is up and running
2. The user successfully do add members
3. Click on add/remove button to add or remove members respectively
4. Click on submit now button



**Output definition:**

For a particular poll, user should be able to add people who can vote for that poll

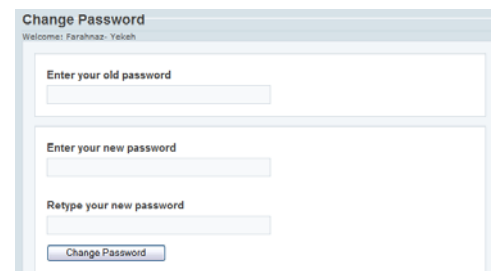
#### 4.1.1.8 Testing Use case "Change Password" – WEBNA08

**Description:** Change Password

**Test type:** Successful

**Input definition:**

1. Web server with Tomcat is up and running
2. The user successfully do login to the DPS web part
3. Click on 'Change Password' link
4. Enter old and new passwords
5. Click on 'Change Password' button



**Output definition:**

Message of changing password is done successfully shows in the current page.

#### 4.1.1.9 Testing Use case "Close Poll" – WEBNA09

**Description:** Close Poll, which is created by himself/herself

**Test type:** Successful

**Input definition:**

1. The user successfully do login to the DPS web part
2. Click on 'View Poll' link in the right menu
3. Select Poll from the polls list
4. Click on 'Show Poll' button
5. Click on 'Close Poll' button, if it was enabled

**Output definition:**

Status of the poll will be changed to Close and this new information will be updated in the existence data in the current page.

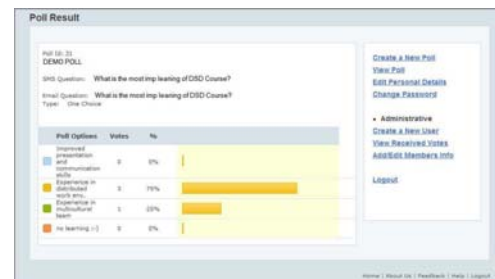
4.1.1.10 Testing Use case "View Poll result" – WEBNA10

**Description:** View Poll result of selected poll

**Test type:** Successful

**Input definition:**

1. The user successfully do login to the DPS web part
2. Click on 'View Poll' link in the right menu
3. Select Poll from the polls list
4. Click on 'Show Poll' button
5. Click on 'View Result' button, if it was enabled



**Output definition:**

The result of poll and the percentages of each option should be shown in another page.

4.1.2 Web tier Administrator testing – WEBA

4.1.2.1 Testing Use case "Create a New User" – WEA01

**Description:** Adding a new user for using the system or sending polls info to him/her.

**Test type:** Successful

**Preconditions:**

- User who login to the system should be administrator.

**Input definition:**

1. Web server with Tomcat is up and running
2. The user successfully do login to the DPS web part
3. Click on 'Create a new User'
4. Fill out all data in the Create User page
5. Click on Submit

**Create User**

**Enter User Information**

First Name

Middle Name

Last Name

Personal Email

Security Question

Security Answer

**Corporate Information**

Phone Number

SDM Number (DNSS)

Email Address

User Type

**Enter Password**

Password

Confirm Password

**Output definition:**

User added successfully is displayed. It should be visible when adding a new user.

4.1.2.2 Testing Use case "Add/Edit Members Information" – WEBA02

**Description:** Add or editing information of a pre defined user

**Test type:** Successful

**Preconditions:**

- User who login to the system should be administrator.

**Input definition:**

1. Web server with Tomcat is up and running
2. The user successfully do login to the DPS web part
3. Click on 'Add/Edit Members Information' link
4. Enter user id of the member that his/her data should be edited
5. Click on 'Submit'
6. Change data in the page
7. Click on 'Save' button

**Output definition:**

Message of editing is done shown and browser remains in that page.

4.1.2.3 Testing Use case "View Received Votes" – WEBA03

**Description:** Show members of the selected poll and view received votes

**Test type:** Successful

**Preconditions:**

- User who login to the system should be administrator.

**Input definition:**

1. Web server with Tomcat is up and running
2. The user successfully do login to the DPS web part
3. Click on 'View Received Votes' link
4. Select the poll
5. Click on 'Show Info' button

**Output definition:**

List of all defined members for this poll and their voting status will be shown in that page.

4.1.3 Business tier testing –BT

4.1.3.1 Testing Use case "Intimate Poll by Email" – BT01

**Description:** Send Email to members of each poll at start time of the poll, if the poll intimation should be done by email

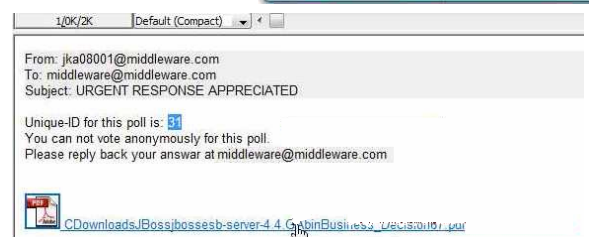
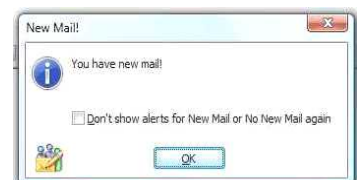
**Test type:** Successful

**Preconditions:**

- Services of sending email should be up.
- Service of checking the event times should be active.

**Output definition:**

At the time of starting a poll, emails should be sent to all members, if in the time of poll creation intimating by email had been specified.



4.1.3.2 Testing Use case "Intimate Poll by SMS" – BT02

**Description:** Send SMS to poll members at start time of the poll, if the intimating poll should be done by email

**Test type:** Successful





**Preconditions:**

- Service of sending sms should be up.
- Service of checking the event times should be active.

**Output definition:**

At the time of starting a poll, sms should be sent to all members, if in the time of poll creation intimating bysms had been specified.

4.1.3.3 Testing Use case "Send PDF file by Email" – BT03

**Description:** Send PDF in attachment of email while sending email, if the poll has attachment.

**Test type:** Successful

**Preconditions:**

- Intimate Poll by Email is called
- Poll has attachment (It is specified while poll is created)

Topic ID: 31	Date:
Sender: jka08001@middleware.com	Receiver: [middleware@middleware.com]

Q: What is the most imp leaning of DSD Course?

Improved presentation and communication skills  
 Experience in distributed work env.  
 Experience in multicultural team  
 no learning :-)

**Output definition:**

Poll information will be send with an attachment PDF with will need a password to be opened.

4.1.3.4 Testing Use case "Receive Email response" – BT04

**Description:** Get received email and save sent data.

**Test type:** Successful

**Preconditions:**

- Service of receiving emails should be up

**Output definition:**

Information from received email should be extracted and be saved in the system.

4.1.3.5 Testing Use case "Announce Poll Result" – BT05

**Description:** Announcing Poll Result

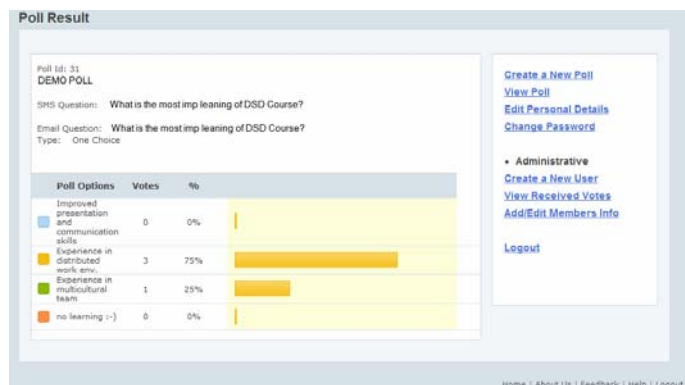
**Test type:** Successful

**Preconditions:**

- Service of announcing poll result should be up

**Output definition:**

At the correct time, the result should be announced to all members of the poll.



4.1.4 Detailed Test Cases for Login and Create Poll

Test case ID	Test Data	Test Description	Expected Result	Actual Result
L-001	Username="", password="Abc"	Logging into the system with empty username field	The user is displayed a pop up that username field is empty	'Please Enter Username!' message appeared
L-002	Username="786", password=""	Logging into the system with empty password	The user is displayed a pop up that password field is	'Please Enter Password!' message appeared

		field	empty	
L-003	Username="", password=" "	Logging into the system with empty username and password field	A pop up window appears telling that username and password fields are empty	'Please Enter Username!' message appeared
L-004	Username="786", password="bcd "	Logging into the system with username and incorrect password	A pop up window appears telling that username and password fields are not matching	'Invalid Username or Password !' message, appeared in the login page
L-005	Username="#@\$ %*", password= "bcd "	Logging into the system with invalid username	A pop up window appears telling to enter a valid username	'Invalid Username or Password !' message, appeared in the login page
L-006	Username="786", password="##@"	Logging into the system with invalid password	A pop up window appears telling to enter correct password	'Invalid Username or Password !' message, appeared in the login page
L-007	Username="786", password="abd"	Logging into the system with username and password	User is able to login to the system	Login successfully and went to home page
P-001	Poll name="1234#% "	Creating a poll with a invalid poll name	User is asked to enter a valid poll name	It asks to enter a valid poll name
P-002	Poll name="meeting "	Creating a new poll with a poll name	User is able to create a new poll with the name as specified	The poll is created if any other open poll with this name not existed
P-003	Poll question= "12356@#%"	Creating a poll with a invalid poll question	User is asked to enter a valid poll question	It creates the poll with this name
P-004	Poll question=" "	Creating a poll with a without a poll question	A pop up appears asking the user to enter the poll question	'Please Enter Poll Question' message appeared
P-005	Poll uestion="Can we have a team meeting on Friday?"	Creating a new poll with a poll question	User is able to create a new poll with the question as specified	It creates the poll with this name
P-006	Poll start date=" "	Creating a new poll without a poll starting date	A pop up appears asking the user to enter the poll start date	It created with the default shown date
P-007	Poll start date= "01/01/1998 "	Creating a new poll with a starting date which was over	A pop up appears asking the user to select a valid poll start date	It worked
P-008	Poll start date= "01/01/2009 "	Creating a new poll with a poll starting date	User able to create a new poll with starting date as specified	Poll created successfully
P-009	Poll end date=" "	Creating a new poll without a poll end date	A pop up appears asking the user to enter the poll end date	It worked
P-010	Poll end date= "01/01/1998 "	Creating a new poll with a closing date which was over	A pop up appears asking the user to select a valid poll end date	It worked
P-011	Poll end date= "01/01/2009 "	Creating a new poll with a poll end date	User able to create a new poll with end date as specified	Poll created successfully
P-012	Poll type=" "	Creating a poll with empty poll type	A pop up appears asking the user to enter the poll type	By default one is selected, this case won't happen
P-013	Poll type="123 "	Creating a poll with invalid poll type	A pop up appears asking the user to enter the valid poll type	By default one is selected, this case won't happen
P-014	Poll type="Yes/No "	Creating a poll with a poll type	User able to create a new poll with poll type as specified	Poll created successfully
....				

## 4.2 Performance testing

For performance testing of our DPS website we used tool Mercury Load Runner 9.10 trial version from HP. The graph output when the Create Poll transaction is tested under load of 10 users with HP Load-runner:

