System Test Plan

(Version-1.0)

Team-5

Contents

1. TEST PLAN IDENTIFIER

Test Plan No. – 01

System under Test – SMS Notification for Webmail

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Date- 15/2/2011

Type of Test Plan- System Test Plan

2. REFERENCES

- SRS Document of SMS Notification for Webmail
- Design Document of SMS Notification for Webmail
- User manual of SMS Notification for Webmail
- Project plan of SMS Notification for Webmail
- This document follows the TEST PLAN OUTLINE as provided by IEEE 829 Format http://online.gerrardconsulting.com/iseb/otherdocs/ieee829mtp.pdf

3. INTRODUCTION

Testing is an investigation conducted to provide stakeholders with information about the quality of the product or service under test. Testing also provides an objective, independent view of the software to allow the business to appreciate and understand the risks of software implementation. Test techniques include, but are not limited to, the process of executing a program or application with the intent of finding software bugs (errors or other defects).

This test plan has been devised to test the functionality of the product/version listed above. The plan summary describes the general information about the scope, approach, resources and schedule of all testing activities. The plan identifies the item to be tested, the features to be tested and the type of testing to be performed.

The primary objective of this document is to establish a plan to verify and validate 'SMS Notification for Webmail' as a high quality product that meets the need of the DA-IICT community.

4. TEST ITEMS

The following are the items or modules that will be tested:

1) XML Parser Module

   The XML Parser will parse the xml file which contains whole information about the mail history. The Parser will parse the file to obtain message id, subject, sender's e-mail id, the priority flags attached with it, date, time, information whether message is read or unread and filters (if any) enabled by the user.

2) Database Module

   The database module will contain all the information for authentication of users like Username, password, confirmation code. It will also contain information about the filters enabled, time period in which user wants notification, priority, important date (if any) which has any event or task.

3) User Interface Module

   UI module will deal with how user is going to interact with the system. It will provide different features like Change of password, Scheduling tasks and events, Enabling or disabling of SMS Notification, Enabling filters, Setting of time period in which he/she wants to receive notification and Setting priority of the message to the user.

4) Message Scheduler Module

   The message scheduler will store the data coming from different module and store them in the queue and give this data to different modules like SMS sending module and Auto generated System mail module.

5) Message sending Module

   Message sending module will send the data from the queue to the user via SMS gateway.

6) Auto-generated system mail Module
   This module will take data from Scheduler module and will send the data via email to the user account.

5. SOFTWARE RISK ISSUE

The software risk associated with this system is as follows:

- Zimbra withdraws support for REST APIs
- There is delay in SMS delivery
- Software compatibility on various web browsers and OS.
- Risk due to third party deliverable such as gateway.
- Risk due to increase in number of users.

6. FEATURES TO BE TESTED

According to the features mentioned in the SRS Document of 'SMS Notification for Webmail', the following modules will be tested for their respective features. They are stated below:

1) Database Module
   - Registration
   - Login information
   - Confirmation code

2) User Interface Module
   - Change of password
   - Enabling or disabling of SMS Notification
   - Enabling filters
   - New registration

7. FEATURES NOT TO BE TESTED

The following features will not be tested:-

- Contacts

- Calendar
- Reply
- Forward
- Spam
- Views
- Searching a particular mail
- Saving drafts
- Chats etc…

Reasons for not testing:-

These features are already present in the current DAIICT webmail. We are not changing any of the exiting features; we are adding some new features to make it easier for the users to keep track of their important mails.

8. APPROACH

Test goals: To complete the project with all the functionality specified in SRS.

Unit Testing: Unit testing is a method by which individual units of source code are tested to determine if they are fit for use. A unit is the smallest testable part of an application. Unit testing focuses verification effort on the smallest unit of software design-the software component or model.
The following are the example areas of the project must be unit-tested:
Databases, XML parser, message sending module, message scheduler, user interface module.

Integration testing: It is a testing method in which individual software modules are combined and tested as a group. Integration testing takes as its input modules that have been unit tested, groups them in larger aggregates, applies testsand delivers as its output the integrated system ready for system testing. All the five modules namely database module, XML parser, message scheduler, user interface and message sending module are integrated in a bottom up fashion. The aggregate formed by the integration is tested and the final product is ready for system testing.

System testing: System testing of software or hardware is testing conducted on a complete, integrated system to evaluate the system's compliance with its specified requirement. System testing is performed on the entire system in the context of a System RequirementSpecification (SRS). System testing tests not only the design,

but also the behavior and even the believed expectations of the customer. It is also intended to test up to and beyond the bounds defined in the software/hardware requirements specification(s). The intension is to verify that the product is ready for distribution to the customer and iron out potential operational issues.

The milestone target of testing phase is to establish that the application under test has reached a level of stability, appropriate for its usage, that it can be released to the end user.

9. ITEM PASS/FAIL CRITERIA

The items will pass or fail depending upon the result of testing phase. An item passes if the actual output from the action is same as the expected output specified by a test case. If any action within a test case fails, the entire feature or sub-feature fails.

If a test case fails, it is not assumed that the code is defective. A failure can only be interpreted as a difference between expected results and actual results. There is always the possibility that expected results can be in error because of misinterpretation, incomplete, or inaccurate project documentation.

Pass criteria:

a. All processes will execute with no unexpected errors
b. All processes will finish update/execution in an acceptable amount of time based on benchmarks provided by the business analysts and documented by the development team.

10. SUSPENSION CRITERIA AND RESUMPTION REQUIREMENTS

Suspension Criteria

The test team may suspend partial or full testing activity if any of the following occurs:

a. The development team cannot install the new build or a component.
b. The development team cannot configure the build or a component.
c. There is a fault with a feature that prevents its testing.
d. There are lot of bugs which should have been caught during unit testing are found during the most advanced testing phase.
e. Developers have not corrected the problems that previously suspended testing.

Resumption Requirements

The steps necessary to resume testing:

- Clean previous code from machines.
- Re-install the item.
- The problem encountered resulting in suspension is corrected.

Resumption of testing will begin when the following is delivered to the system test team:

- A new build of the product from Microsoft Visual Studio 2008.
- A list of all bugs fixed in the new version.
- A list of all the changes to the modules in the new version and what functionality they affect.

11.TEST DELIVERABLES

The following documents are to be delivered by the end of the test phase:

a. System Test Plan
b. Test Cases
c. Test Case report

12.ENVIRONMENTAL NEED

The following elements are required to support the overall testing effort at all levels within the project:

- Access to database
- Access to both the client side and server side.
- Access on a computer which has the complete system installed successfully.
- Access to gateway.
- Access to a mobile phone which does not have DND activated.

13.RESPONSIBILITIES

Name	Role	Responsibility

Malav Bhavsar	Test Lead	System testing Complete test phase report Summary
Sonu Ladia	Test planner	System test plan Test case design
Server and UI team	Tester	Integration / system testing

14. PLANNING RISK AND CONTINGENCIES

The risk stated above may cause delay in the delivery of final product. We need to plan for the risks and contingencies ahead of time. Below is the list of risk and the probable planning that can be done in order to avoid them.

- Zimbra might not support REST APIs
  We can use other APIs such as pop3 or imap.

- Delay in SMS delivery
  Delay in SMS service can be due poor service provided by the gateway vendor. So we can use better gateway vendor. Also there can be delay due to internal working of the algorithm used to poll the unread messages. In this case we can improve the algorithm to minimize the time delay.

- Delivery of gateway
  There can be delay due non-availability of gateway on time. We can purchase the gateway ahead of time.

- Increase in number of users.
  Dedicated server can be used to overcome this problem.

15. Test-cases

Glossary:-

- Test No.: Signifies the serial number of the test case in a particular test module.
- Pre-condition: The condition which must be satisfied before the execution of the test case.

- Description: Briefly describes the test case.
- Test Data: Data which is processed during the execution of the test case.
- Test Procedure: Steps that need to be followed to accomplish the associated test case.
- Expected Output: The output that should be achieved.

Register

Test no.1

Pre-condition:- user must have daiict webmail account

Description: - credentials are being tested

Test data: - credentials required by registration on site

Test procedure: - 1) Person clicks on registration.
2) He enters username and password.
3) The username and password are verified and then the user enters mobile number.
4) Press on send mobile number.
5) Enter confirmation code and the press on submit

Expected output: - Credentials are verified and user is registered by being provided a mail on their user account of being registered.

Login

Test no.1

Pre-condition:- user must be logged in daiict webmail and must be registered for message notification

Description: - username and password is verified

Test data: - username and password entered by the user

Test procedure: - user enters username and password and it goes to server database for verification

Expected output: - username and password are verified with the entry in the database and hence the user is logged on to the system.

Change of password

Test no.1

Pre-condition:- User must be logged in.

Description: Password is changed

Test data: - Enter username, old password and new password.

Test procedure: - The old password is verified with the entry in the database for verification and a new password is stored.

Expected output: - The mail is sent to the user which contains the new password. And hence password is changed.

Change of Mobile Number

Test no.1

Pre-condition:- user must be registered

Description: - user wants to change his/her mobile number.

Test data: - the time range provided by the user

Test procedure: - 1) User has to unregister the account and then reregister with new mobile number.

Expected output: - an auto-generated mail will be sent to the user confirming the new creation of account.

Setting filters

a) Filter by sender

Test no.1

Pre-condition:- user must be registered

Description: - user wants to disable SMS notification from particular users

Test data: - username of the people to whom the user wants to block

Test procedure: - 1) user goes to the setting page. 2) User provides username of the people he/she wants to block.

Expected output: - The username of the blocked person will start appearing in a blank corner to the left of the screen. The SMS notification will be disabled from those particular users.

b) Filter by keyword of the subject

Test no.1

Pre- condition: - user must be registered

Description: - user does not want to receive SMS notification of the mails whose subject contains some specific keyword.

Test data: - user will provide the keyword

Test procedure: - 1) user goes to the setting page. 2) User provides keyword. 3) user than clicks on add button.

Expected output: - The keyword will start appearing in the blank white box which is on the left of the screen. User will not receive notification if the subject of the mail contains that specific keyword.

16. GLOSSARY

API – Application programming interface
IMAP- Internet message access protocol
POP3- Post office protocol, version 3
REST - Representational State Transfer
SMS- Short message service
SRS- software requirement specification