

Test Plan
Organizational Alert System

For
CS 895 MSE Project
Department of Computer Science
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Introduction

This document provides the test plan for the Organization-Wide Silent Alert System. Each module of the system will be tested with respect to the enumerated requirements specified in the Vision Document. The tests will be conducted by manually setting the states specified in the following test cases. Following initial testing by myself, two peers will review the system using the provided checklist and relay any deficiencies back to me.

Silent Alert System Critical Requirements

Web API Requirements


- CR1. Each alarm button will trigger an alarm state
- CR2. One button will stop all alarms
- CR3. Users can customize alarm messages
- CR4. Users can see a log of all alarm activity
- CR5. Rest API provides all active alarms

Client Requirements

- CR6. Client retrieves all active alarms
- CR7. Client displays all active alarms
- CR8. Users can change and store settings

Test Plan

System Tray Icon

TC1a	System Tray Icon correctly renders
Test Type	Manual
Pre-Condition	.jar file is not currently running
Test Steps	Execute client .jar file
Expected Results	A single instance of the system tray icon  will appear near the system clock
TC1b	System Tray Icon displays correct menu items
Test Type	Manual
PreCondition	

Test Steps	Right click on system tray icon and observe menu items
Expected Results	The system tray icon menu will pop up when right-clicked, and all menu items will load and update correctly
TC1c	Trigger alarm from System Tray Icon
Test Type	Manual
Pre-Condition	Alarm is not active;
Test Steps	Right click on System tray icon, left click on menu item corresponding to alarm.
Expected Results	Alarm windows will pop up with correct color and message Alarm status in DB will change from 0 to 1
TC1d	Settings window can be launched from System Tray Icon
Test Type	Manual
Pre-Condition	Settings window is not currently instantiated
Test Steps	Right click on System Tray Icon. Left click on Settings
Expected Results	Settings window will appear on the left side of screen.
TC1e	User can exit program from System Tray Icon
Test Type	Manual
Pre-Condition	Program is running
Test Steps	Right click on System Tray Icon, Left click on exit
Expected Results	Program will terminate correctly

Alert Window

TC2a	Alert Window will pop up when alarm is triggered
Test Type	Manual
Pre-Condition	Alert is not currently active

Test Steps	For each alarm, trigger alarm, observe window
Expected Results	Window becomes visible, color will be correct color, message will be correct message
TC2b	Alarm windows will “stack”
Test Type	Manual
Pre-Condition	none
Test Steps	User will trigger all alarms
Expected Results	First window will be at y offset of 130. Second window will be directly above that, third window will be directly above second, etc. All windows will be the correct colors to correspond with their alerts. All windows line up vertically
TC2c	Alert window will be always-on-top
Test Type	Manual
Pre-Condition	none
Test Steps	Activate alarm. Attempt to switch focus to other programs
Expected Results	Alert Window will not go to background if other applications are being used

Settings

TC3a	Settings will create config file if one is not present
Test Type	Manual
Pre-Condition	Local folder doesn't have config file
Test Steps	Launch program
Expected Results	Config file will be created
TC3b	Write button will update existing config file
Test Type	Manual
Pre-Condition	none
Test Steps	Change settings, press save button, check config file was updated

Expected Results	Changes made in the settings window will be reflected in config file after the write button in settings is pressed
TC3c	Read config file into textfields of settings windows
Test Type	Manual
Pre-Condition	Config file has settings in it
Test Steps	Make changes and save settings. Close and reopen program. Observe changes have been correctly imported from file.
Expected Results	Changes made to settings will reload from config file when program is closed and reopened
TC3d	Password will encrypt before writing Config File
Test Type	Manual
Pre-Condition	none
Test Steps	Type password into text field in settings window. Save. Open config file and observe the password is encrypted
Expected Results	The password stored in the config file will not be plane text

Web GUI

TC4a	At the login screen a good password will allow user to access send alarm page
Test Type	Manual
Pre-Condition	User is not logged in
Test Steps	At login page, provide good credentials
Expected Results	SendAlarm page will load and user will have access
TC4b	At the login screen, using a bad password, users will not be able to access any of the other pages
Test Type	Manual
Pre-Condition	User is not logged in
Test Steps	At login screen, provide bad credentials
Expected Results	Sendalarm page won't load and user will be redirected to Invalid Login

	page
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Trigger Alarms

TC5a	Orange Alarm button triggers Alarm 0
Test Type	Manual
Pre-Condition	Alarm is not active
Test Steps	Click orange alarm button
Expected Results	Alarm's status will be changed to 1 in the database. Client will register Alarm is active and display alert window RestAPI resource will display alarm in active alarms list
TC5b	Red Alarm button triggers Alarm 1
Test Type	Manual
Pre-Condition	Alarm is not active
Test Steps	Click red alarm button
Expected Results	Alarm's status will be changed to 1 in the database. Client will register Alarm is active and display alert window RestAPI resource will display alarm in active alarms list
TC5c	Yellow Alarm button triggers Alarm 2
Test Type	Manual
Pre-Condition	Alarm is not active
Test Steps	Click yellow alarm button
Expected Results	Alarm's status will be changed to 1 in the database. Client will register Alarm is active and display alert window RestAPI resource will display alarm in active alarms list
TC5d	Violet alarm button triggers alarm 3

Test Type	Manual
Pre-Condition	Alarm is not active
Test Steps	Click red alarm button
Expected Results	Alarm's status will be changed to 1 in the database. Client will register Alarm is active and display alert window RestAPI resource will display alarm in active alarms list

Customize Application

TC6a	Changes made to the Alarm Titles will propagate across system when saved
Test Type	Manual
Pre-Condition	none
Test Steps	On customize page, change alarm titles, save
Expected Results	Changes made to alarm titles on the Customize Application page will be immediately reflected on the SendAlarm Page, and also in the Systray Icon of the Java Client on all PCs
TC6b	Users Added in the AddUsers section will be added
Test Type	Manual
Pre-Condition	User is not already in database
Test Steps	Create new user on customize page
Expected Results	Users will appear in the Edit Users table Users will Appear in the database User passwords will be encrypted in database Using new Username and Password on login screen will result in successful login Using new username and password in the client settings will result in successful authentication.

TC6c	Password reset link beside username will result in password reset for given user
Test Type	Manual
Pre-Condition	none
Test Steps	Change user's password on the customize application page
Expected Results	User will be able to use new password to log into website User will be able to use new password to authenticate with the Java client
TC6d	Delete user link beside username will remove user from the system
Test Type	Manual
Pre-Condition	User is in database
Test Steps	Delete user using Customize Application page
Expected Results	User will be deleted from database User will not be able to log into the system with deleted username User will not be able to authenticate from the client with given username

Notifications Table

TC7a	Notifications table will display correct time, user, ip, and message
Test Type	Manual
Pre-Condition	none
Test Steps	Trigger alarms, verify notification table values are correct
Expected Results	When alarm is triggered from client notifications table will display correct alarm, computer name, and IP When alarm is triggered from server notifications table will not display IP and will say that alarm was triggered from server
TC7b	Notifications Table will paginate correctly
Test Type	Manual

Pre-Condition	There are more than 20 notifications in table
Test Steps	Click pagination buttons
Expected Results	20 results will show on each page. Pagination buttons will display the preceding or next 20 results.

Get Alarms

TC8a	Get Alarms resource will respond to all correctly formed calls with a list of currently active alarms
Test Type	Manual
Pre-Condition	none
Test Steps	Create get request using CURL or Browser for resource
Expected Results	Browser and CURL will show XML formatted list of active alarms

Get Titles

TC9a	Get Titles resource will respond to all correctly formed calls with a list of all current alarm titles
Test Type	Manual
Pre-Condition	none
Test Steps	Create get request using CURL or Browser for resource
Expected Results	Browser and CURL will show XML formatted list of current titles

Trigger Alarm with Get

TC10a	Trigger alarm with Get
Test Type	Manual
Pre-Condition	GET request must contain username and encrypted password in header
Test Steps	Create GET request with JMeter, query resource

Expected Results	Using JMeter to create GET call with username and password headers added, when activateAlarm resource is called alarm status in database will change to 1 and client will register change and display alert window
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Stop Alarms

TC11a	Stop alarms with GET call to Rest API resource
Test Type	Manual
Pre-Condition	Alarms are active
Test Steps	Use JMeter to create an authenticated GET call to the Stop Alarms resource
Expected Results	Using JMeter to create GET call with username and password headers added, when StopAlarms resource is called, alarms status in database will change to 0 and client will register change and stop displaying alert window

Database

TC12	Computers Table is updated when new computer joins the system
Test Type	Manual
Pre-Condition	Computer is not already in table
Test Steps	Install program on new computer and enter server information
Expected Results	Computers table will show the hostname and IP of the new computer