IOT BASED ALERT SYSTEM TO HIGHLIGHT PROCESS FAILED

Use case Specification

Votary Softech Solutions Pvt. Ltd.

Plot No: 76, Lumbini layout,

Near Euro school,

Gachibowli-I (V), Hyderabad,

Telangana - 500032,

India.

Date: 18th July 2017

Sign-off Sheet

Name	Title	Signature	Date

Revision History

Template Information:

Document Control Number   : Version   :   1.0 Date   :   20-July-2017

Revision History:

Revision #	Date	Author	Reviewed By	Description
1.0	21th July 2017	Rathhod Raja V		
		Srinivas		
		Rahul		
		Deepika		

Table of Contents

1. Executive Summary

1.1 Project Overview

When ever Developer Pushes New Build to Version Control, Build & Integration tool like Jenkins will detect and build, on build FAIL it sends e-mail to Client(Remote Device) through pre-configured e-mail id. Here client is raspberry pi, which is pre-configured with IMAP e-mail client to read received e-mail's, upon receiving Build FAIL e-mail from B&I Tool should trigger alarm/flash on screen.

1.2 Purpose and Scope of this Specification

The purpose of this document is to provide system architecture and design details of IoT Based Alert System To Highlight Process Failed. The main objective is Build and Integration tool should detect new Check in from version control and remote client device should able to receive and read e-mail from same tool of Build Failed.

2. Use Cases

The following table describe the use cases of IoT Based Alert System To Highlight Process Failed solution.

Table 2.1 : Use Cases

	Use Case ID	IOT_AS_UC_01
1	Use Case Name	Jenkins
	Functionality	Setup
	Actors	IoT Based Alart System To Higlight Process Failed
	Description	To check whether the Jenkins installed properly or not.
	Trigger	1. Jenkins login page should be opened. 2. Display message as unable to connect.
	Preconditions	1. Internet Access 2. Linux environment
	Limitations	Jenkins can't access secured email account.

2	**Use Case ID**	IOT_AS_UC_02
	Use Case Name	Source Code Management
	Functionality	Accessing GIT Server
	Actors	IoT Based Alart System To Higlight Process Failed
	Description	1. To check whether the Jenkins is able to access git server. 2. To check whether the Jenkins is able to access Invalid git server.
	Trigger	1. Jenkins should access Git Server. 2. Jenkins should flash message as failed to connect repository.
	Preconditions	1. Internet Access 2. Valid GIT Server
	Limitations	Jenkins can't access secured email account.
3	**Use Case ID**	IOT_AS_UC_03
	Use Case Name	Manage Jenkins
	Functionality	Email setup
	Actors	IoT Based Alart System To Higlight Process Failed
	Description	To check Email configuration is valid or not.
	Trigger	Jenkins should send test email to the respective email.
	Preconditions	1. Internet Access 2. Valid Jenkin login credentials 3. Less secured access enable email account
	Limitations	Jenkins can't access secured email account.
4	**Use Case ID**	IOT_AS_UC_04
	Use Case Name	Source Code Management
	Functionality	Clone
	Actors	IoT Based Alart System To Higlight Process Failed
	Description	To check whether the Jenkins tool is able to clone the Source code from Git Server.
	Trigger	Source code should be present in Jenkins work space.
	Preconditions	1. Internet Access 2. Jenkins tool must be present 3. Valid Git Server 4. Code should be present in Git Server
	Limitations	Jenkins can't access secured email account.
5	**Use Case ID**	IOT_AS_UC_05

	Use Case Name	Source Code Management
	Functionality	Git Monitering
	Actors	IoT Based Alart System To Higlight Process Failed
	Description	To check whether the Jenkins tool is able to detect the checkin's from Git Server.
	Trigger	Jenkins must detect the modifications in the code.
	Preconditions	1. Internet Access 2. Jenkins tool must be present 3. Valid Git Server 4. Code should be present in Git Server
	Limitations	Jenkins can't access secured email account.
6	**Use Case ID**	IOT_AS_UC_06
	Use Case Name	Build
	Functionality	Building
	Actors	IoT Based Alart System To Higlight Process Failed
	Description	To check whether the Jenkins tool is able to build.
	Trigger	Jenkins must build the Source code.
	Preconditions	1. Internet Access 2. Jenkins tool must be present 3. Valid Git Server 4. Code should be present in Git Server
7	**Use Case ID**	IOT_AS_UC_07
	Use Case Name:	Build
	Functionality	Build Status
	Actors	IoT Based Alart System To Higlight Process Failed
	Description	To Check Build status.
	Trigger	1. Status of the build should be success 2. Status of the build should be fail
	Preconditions	1. Internet Access 2. Jenkins tool must be present 3. Valid Git Server 4. Code should be present in Git Server 5. Build must be completed
	Limitations	Jenkins can't access secured email account.

8	**Use Case ID**	IOT_AS_UC_08
	Use Case Name	Post-build Actions
	Functionality	Email Notification
	Actors	IoT Based Alart System To Higlight Process Failed
	Description	1. To check whether the Jenkins is able to send the Build fail Notification email to remote client. 2. To check whether the Jenkins is able to send the Build success 3. Notification email to remote client. 4. To check whether the Jenkins is able to send the email to secured email account.
	Trigger	1. Jenkins must send Build fail email to remote client. 2. Jenkins must send Build success email to remote client. 3. Jenkins should display message as unable to trigger email for valid email id.
	Preconditions	1. Internet Access 2. Jenkins tool must be present 3. Valid Git Server 4. Code should be present in Git Server 5. Build must be completed 6. Less secured access enable email account
	Limitations	Jenkins can't access secured email account.
9	**Use Case ID**	IOT_AS_UC_9
	Use Case Name	Post-build Actions
	Functionality	Automation script
	Actors	IoT Based Alart System To Higlight Process Failed
	Description	To Run automation script.
	Trigger	Jenkins must run automation script.
	Preconditions	1. Internet Access 2. Jenkins tool must be present 3. Valid Git Server 4. Code should be present in Git Server 5. Build must be completed 6. Less secured access enable email account

	Limitations	Jenkins can't access secured email account.
10	**Use Case ID**	IOT_AS_UC_10
	Use Case Name	Post-build Actions
	Functionality	Report
	Actors	IoT Based Alart System To Higlight Process Failed
	Description	To verify whether the report is sent to the configured email.
	Trigger	Jenkins should send the report with log file to the configured email.
	Preconditions	1. Internet Access 2. Jenkins tool must be present 3. Valid Git Server 4. Code should be present in Git Server 5. Build must be completed 6. Less secured access enable email account
	Limitations	Jenkins can't access secured email account.
11	**Use Case ID**	IOT_AS_UC_11
	Use Case Name	Raspberry pi
	Functionality	Configuration setup
	Actors	IoT Based Alart System To Higlight Process Failed
	Description	To check whether the client is configured with IMAP email.
	Trigger	Remote Client should be pre-configured with IMAP e-mail client.
	Preconditions	1. Internet Access. 2. Less secured access enable email account 3. Raspberry pi should be Power on 4. Internet Message Access Protocol
	Limitations	Remote client support single notification at a time.
12	**Use Case ID**	IOT_AS_UC_12
	Use Case Name	Raspberry pi
	Functionality	Reading Email
	Actors	IoT Based Alart System To Higlight Process Failed
	Description	1. To check whether the client is able to search for unseen email. 2. To check whether the client is able to read received email. 3. To check whether the client is able to read received email from secured email account.

	Trigger	1. Client should search unseen email. 2. Client should read received email. 3. Client should display message as invalid user name or password.
	Preconditions	1. Internet Access. 2. Secured access enable email account. 3. Raspberry pi should be Power on. 4. Internet Message Access Protocol.
	Limitations	Remote client support single notification at a time.
13	**Use Case ID**	IOT_AS_UC_13
	Use Case Name	Speaker
	Functionality	Alarm
	Actors	IoT Based Alart System To Higlight Process Failed
	Description	1. To check whether the client is able to trigger alarm when received mail is build fails. 2. To check whether the user is able to stop alarm. 3. To Check whether alarm is stopping after predefined time.
	Trigger	1. Client should trigger alarm when received mail is build fails. 2. User should be able to stop alarm. 3. Alarm should be stopped after predefined time.
	Preconditions	1. Internet Access 2. Less secured access enable email account 3. Raspberry pi should be Power on 4. Internet Message Access Protocol 5. Unread email should be present in inbox with subject jenkins build fail status 6. Speaker must be conected with Raspberrypi
	Limitations	Remote client support single notification at a time.
14	**Use Case ID**	IOT_AS_UC_14
	Use Case Name	LCD
	Functionality	Display
	Actors	IoT Based Alart System To Higlight Process Failed
	Description	1. To check whether the client is able to flash message on display

		when received mail is build fails.
		2. To check whether the user is able to stop flash message.
	Trigger	1. Client should flash message on display as build fails.
		2. User should be able to stop flash message.
	Preconditions	1. Internet Access.
		2. Less secured access enable email account
		3. Raspberry pi should be Power on
		4. Internet Message Access Protocol
		5. Unread email should be present in inbox with subject jenkins build fail status
		6. LCD must be conected with Raspberrypi
	Limitations	Remote client support single notification at a time.

3. Abbreviation

Term	Definition
IOT_AS_UC	IOT Based Alert System Use Case
IMAP	Internet Message Access Protocol
GIT	Distributed Version Control System
Jenkins	Build and Integration Tool
Raspberry Pi	Development board