

Problem Statement/Introduction

Introduction:

- Regression
 - Setup and management is a huge part of ensuring the quality of Design Verification
 - Must be run often on daily/weekly basis
 - Enables early bug catching and improves coverage

Problem Statement:

- Database management - making sure that regression picks up the latest tag
- Manual effort in running regression on daily/weekly basis
- Scripting effort to create the automation
- Regression status report broadcasting

Proposed Methodology/Advantages

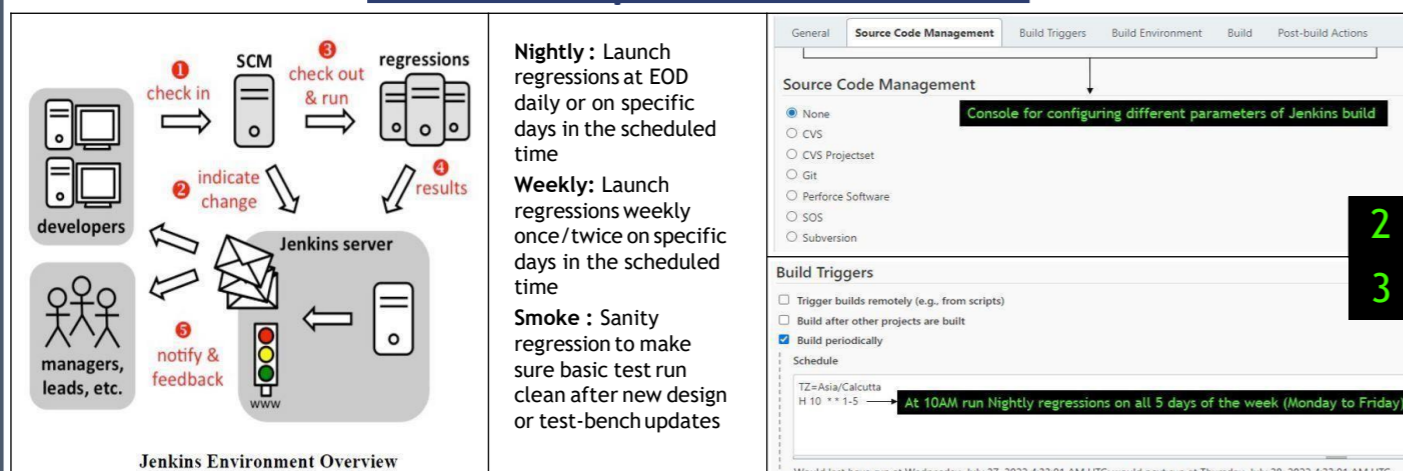
Proposed Methodology:

- vManager is a tool that provides a robust and interactive GUI by launching regressions using a distributed resource manager and get coverage metrics.
- Jenkins with vManager executes remotely, extract runs information and generate/send status, summary and coverage report.

Advantages of using Jenkins :

- Allows data base management by using GIT or CVS, so whenever there is changed code or new commits it will pick the tag and run the tests.
- Launch the regressions in weekly and daily, based on the time settings enabled in the configuration.
- Send the email report about the build success and build fails status
- Re-usability of different settings can be used among different projects, and it can launch regression for all subsystems within the project in same job

Jenkins Setup Details /Flow Chart



Jenkins Setup Details

Results Table

No.	Session Status	Name	Total Runs	#Passed	#Failed	#Running	#Waiting	#Other
1	completed	nightly_regress_asic5127_07262022_02_28_49	106	106	0	0	0	0
2	completed	nightly_regress_asic5127_07262022_02_28_49	132	131	1	0	0	0
3	completed	nightly_regress_asic5127_07262022_02_28_49	58	58	0	0	0	0
4	completed	nightly_regress_asic5127_07262022_02_28_49	108	0	108	0	0	0
5	completed	nightly_regress_asic5127_07262022_02_28_49	345	345	0	0	0	0
6	failed	nightly_regress_asic5127_07262022_02_28_49	256	243	2	11	0	0

Conclusion

- Jenkins along with GIT and vManager enabled automated regression flow without spending human hours on running regression and collecting the results.
- There are features and plugins in Jenkins to make reports from the MDV regressions available to developers, where detailed analysis is required.
- We could leverage usage of few Jenkins plug-ins as per our project requirement, there are more to explore and exploit from this app

REFERENCES

- <https://support.cadence.com/apex/ArticleAttachmentPortal?id=a100V000009ETMQUA4&pageName=ArticleContent>
- <https://plugins.jenkins.io/vmanager-plugin/>
- <https://www.jenkins.io/doc/book/managing/plugins/>
- https://www.tutorialspoint.com/jenkins/jenkins_managing_plugins.html