

DISCONNECTED TOOLS

CI (continuous integration), MDV (metric driven verification)

CI (Jenkins)

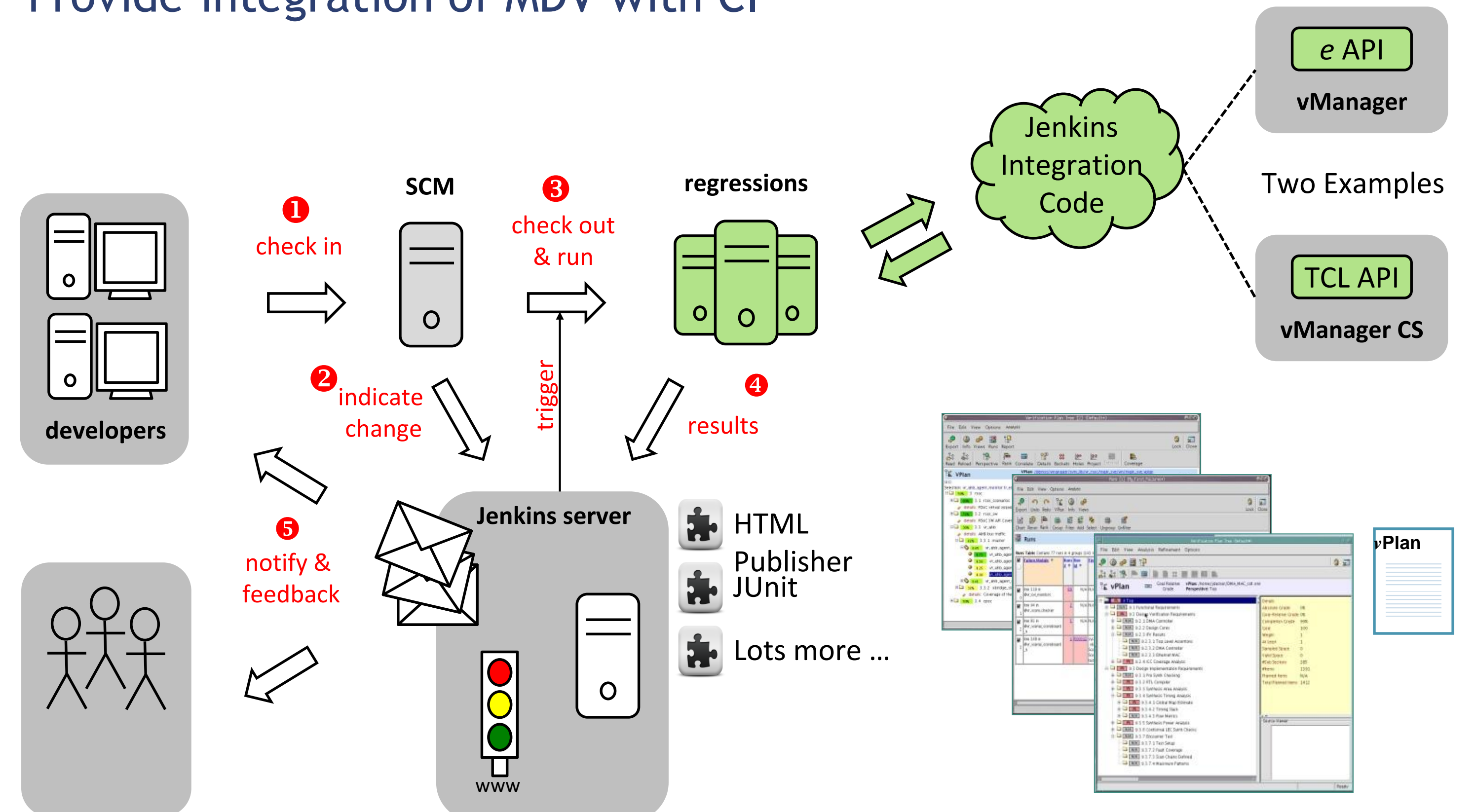
- Code health
- Keep main branch passing
- Release early & often
- Quickly spot and fix issues
- Integrated with SCM
- Automates test execution
- Communicates status
- PASS/FAIL dashboards

MDV (e.g. vManager)

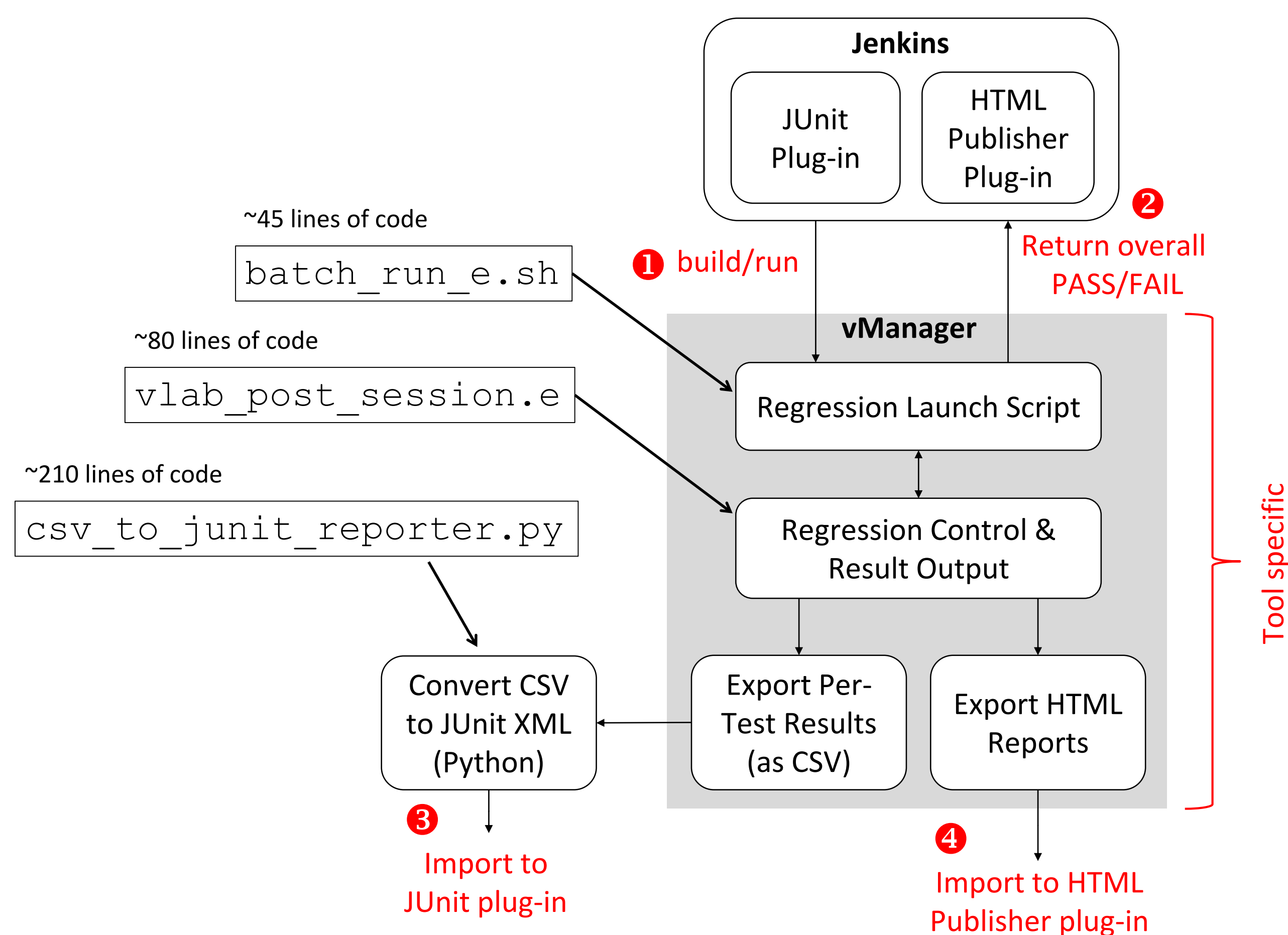
- Finding RTL bugs
- Managing complexity
- Integrated with verification language features
- Verification closure
- Integrates with vplan
- Verification specific results
- Specialized analysis tools

OBJECTIVES

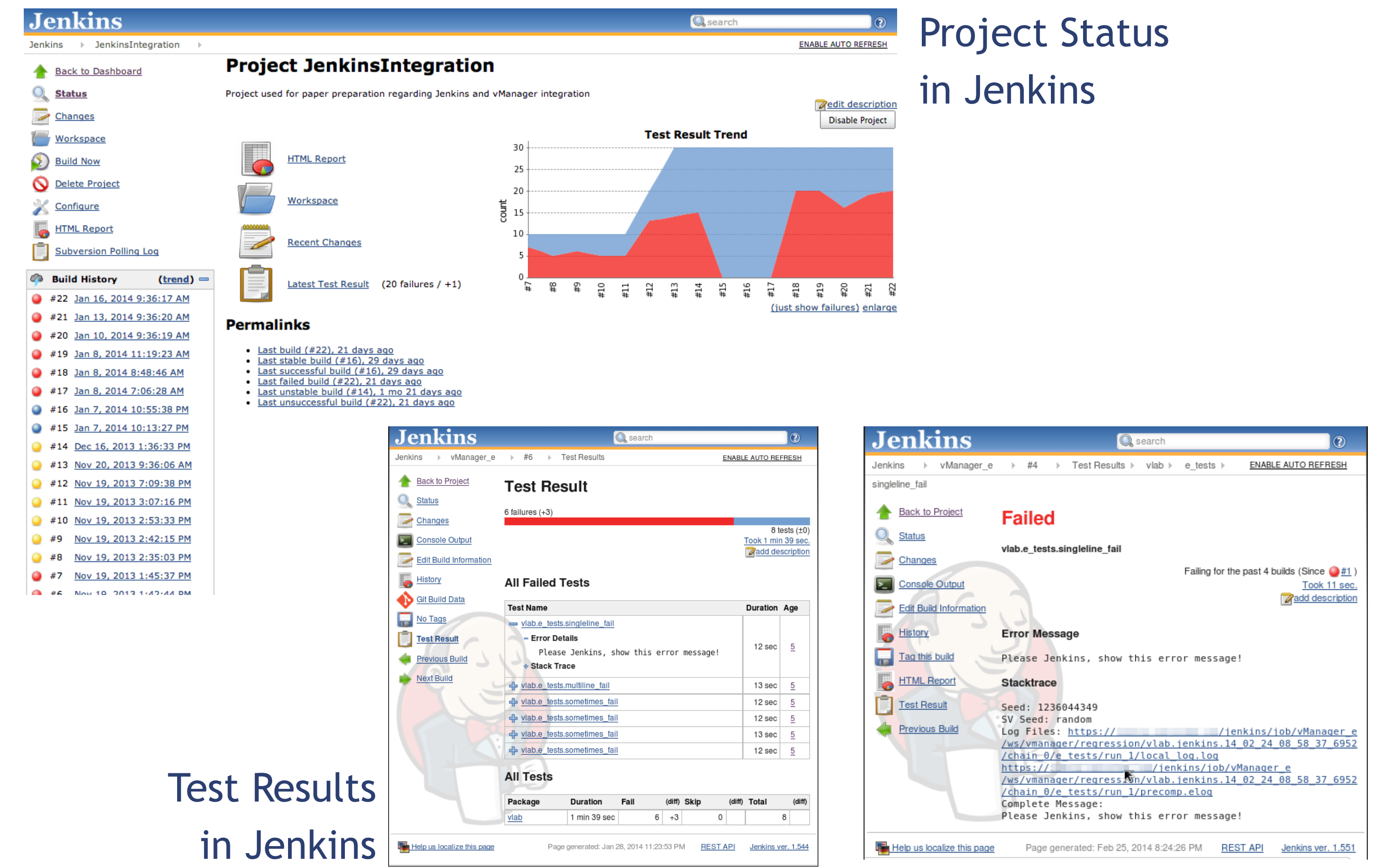
Provide integration of MDV with CI



IMPLEMENTATION



RESULTS



CONCLUSIONS

- CI and MDV are complementary
- Two Jenkins integration examples shown
 - Reusable: csv_to_junit_reporter.py
 - Ex. 1 (vManager) using a e-language API
 - Specific: initial launch script
 - Specific: e code to control exit and export results
 - Ex 2 (vManager CS) using TCL API
 - Specific: initial launch script
 - Specific: TCL to control exit and export results
- There are some integration requirements
 - Same results on Jenkins as standalone sims
 - Regression must run in batch mode
 - No return until all simulations complete
- We can leverage standard Jenkins plug-ins

REFERENCES

vmanager/batch_run_e.sh

```
46 vm_launch.pl \
47 -vsif ../e_tests.vsim \
48 -batch \
49 -command "load scripts/vlab_post_session.e; sys.vlab_post_session_analysis();" \
50 -output_mode log_only \
51 -regnr_report \
52 \
53 python ../scripts/csv_to_junit_reporter.py regression_tests.csv junit.xml
```

vmanagercs/batch_run_e.sh

```
45 vmanager -cs -profile ${MY_VMANAGER_CS_PROFILE} -exec scripts/run.tcl
46 \
47 python ../scripts/csv_to_junit_reporter.py regression_tests.csv junit.xml
```

vmanagercs/scripts/run.tcl

```
1 launch -wait -load -vsif $:env(VLAB_TESTS)
2 csv_export -runs -view $:env(MY_VMANAGER_CS_VIEW) -out regression_tests.csv -overwrite
3 report_tests -out tests_report -overwrite
```

Getting the code

<https://bitbucket.org/verilab/jenkinsintegration>

Full paper

http://www.verilab.com/files/DVCon2014_CI_and_MDV_finalpaper.pdf

