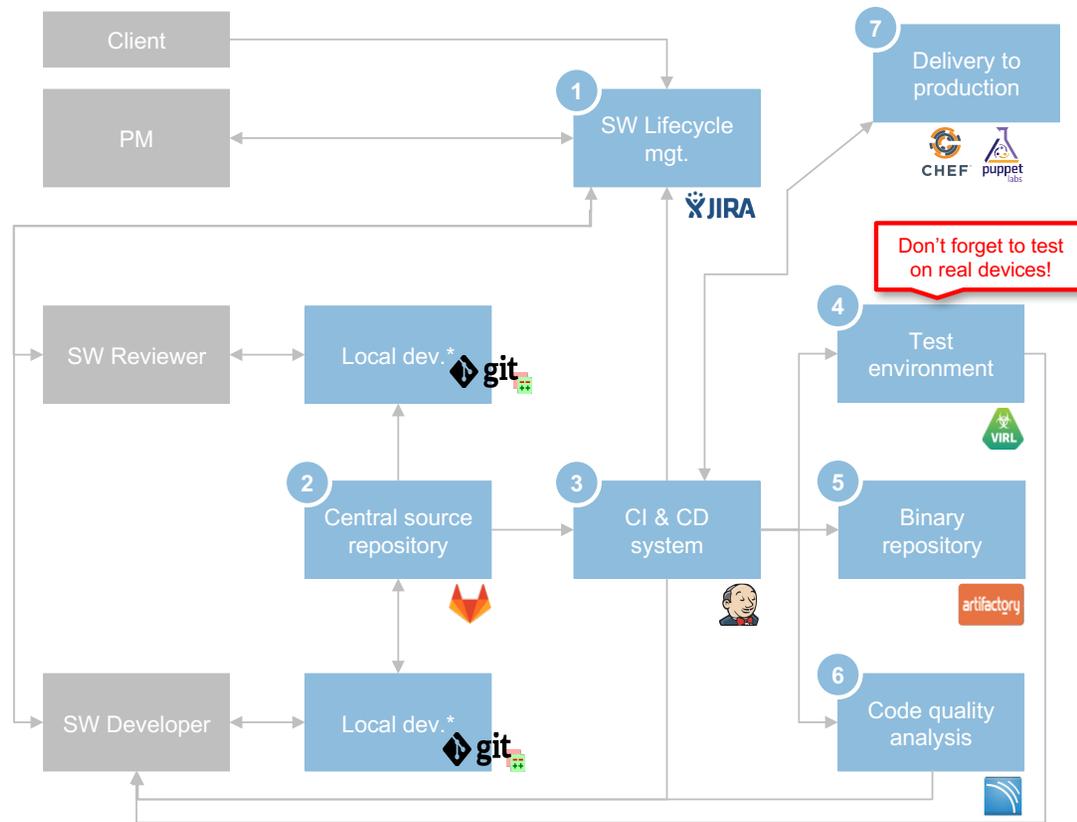




# Application Development Lifecycle Guidance

# Key delivery tools for DevOps



\*Local development tools, environment and library to be used. Remember to take into account automated testing in selection of tools (e.g. Netsim).

ID	What & Why
1	<b>Jira Kanban</b> Useful for managing the agile project sprints as well as seeing project progress and performance
2	<b>GITLAB / GIT (Stash) Pull Request</b> Graphical front end. Makes it possible to review and test code before it reaches the code base. Here, tests also reside as service branches in a directory.
3	<b>Jenkins and LUX</b> Continuous Integration and Automation of testing. These tools will tie into your code base and continuously test your commits against the code base. It helps catch errors early and often!
4	<b>Netsim or VIRL (and real devices)</b> Testing in simulated environments for fast and cheap regression testing. However, for full deployment quality you must test on real devices!
5	<b>Artifactory</b> To ensure delivery of software dependencies and artefacts. Avoids version management with large files.
6	<b>Sonarqube</b> (If applicable) If you have a lot of code it can be useful to achieve better control over the code. You can also enforce coding standards across dev teams.
7	<b>Puppet/Chef</b> Deliver quality code packages to your production or staging environments after QA is complete.

# Learning Resource Links

ID	Link to Learning Resource
1	<b>Jira Kanban</b> <a href="https://www.youtube.com/watch?v=R8dYLBjITUE">https://www.youtube.com/watch?v=R8dYLBjITUE</a> ← Basic 5-minute intro to Scrum and Kanban <a href="https://read.amazon.com/kp/embed?asin=B007474YMC&amp;preview=newtab&amp;linkCode=kpe&amp;ref_=cm_sw_r_kb_dp_chxWybDMNR2DE">https://read.amazon.com/kp/embed?asin=B007474YMC&amp;preview=newtab&amp;linkCode=kpe&amp;ref_=cm_sw_r_kb_dp_chxWybDMNR2DE</a> ←good book on learning how to work in Scrum teams and manage an Agile Project. <a href="https://www.youtube.com/watch?v=HIPuFMAYr-U">https://www.youtube.com/watch?v=HIPuFMAYr-U</a> ←Kanban examples and suggested Online tools
2	<b>GITLAB / GIT (Stash) Pull Request</b> <a href="https://learninglabs.cisco.com/labs/tags/Git/page/1">https://learninglabs.cisco.com/labs/tags/Git/page/1</a> ←Git training <a href="https://communities.cisco.com/docs/DOC-73577">https://communities.cisco.com/docs/DOC-73577</a> ← Tutorial on getting started with GITLAB
3	<b>Jenkins and LUX</b> <a href="https://www.tutorialspoint.com/jenkins/jenkins_overview.htm">https://www.tutorialspoint.com/jenkins/jenkins_overview.htm</a> ←getting to know jenkins <a href="https://jenkins.io">https://jenkins.io</a> ←download it <a href="https://github.com/hawk/lux">https://github.com/hawk/lux</a> ←- Informative README file on LUX
4	<b>Netsim or VIRT (and real devices)</b> <a href="https://communities.cisco.com/docs/DOC-73662">https://communities.cisco.com/docs/DOC-73662</a> ← NetSim Lab Guide Coming Soon ← NETSIM video introduction <a href="https://communities.cisco.com/docs/DOC-73663">https://communities.cisco.com/docs/DOC-73663</a> ← VIRT how-to Lab Guide
5	<b>Artifactory</b> <a href="https://www.youtube.com/watch?v=051LQzmYPkI">https://www.youtube.com/watch?v=051LQzmYPkI</a> ←- great introduction to Artifactory
6	<b>Sonarqube (If applicable)</b> <a href="https://www.youtube.com/watch?v=z2paQm_BfKU">https://www.youtube.com/watch?v=z2paQm_BfKU</a> ← 5-minute intro to architecture <a href="https://www.youtube.com/watch?v=ixQWWSRjp98">https://www.youtube.com/watch?v=ixQWWSRjp98</a> ← 5-minute video on how it's used to enforce code quality and practices
7	<b>Puppet/Chef</b> <a href="https://www.youtube.com/watch?v=yh9osPQA_-k&amp;list=PLrmstJpuczWkt1eWLV88ZFY4R1jW8amR">https://www.youtube.com/watch?v=yh9osPQA_-k&amp;list=PLrmstJpuczWkt1eWLV88ZFY4R1jW8amR</a> ←- Entire Webinar series on Chef

