

Git for EDA Tool Flows

Online Live

Workshop

Applicable Technologies	Requirements	Contact
Git, SmartGit, GitLab	Basic knowledge of using a shell and shell scripting Basic knowledge of using Vivado® block designs	Michael Schwarz P. +49 7664 91313-15 E. info@plc2.de
Fee (net per person)	Inclusive	Duration
OL € 1,900	Training material	3 days
WO € 2,300	Plus beverages during breaks Lunch	3 days

Workshop

Agile and collaborative software development flows are gaining popularity as they result in more builds, tests, and integrations as well as faster delivery and deployment. Hence, the code is in a »release-at-anytime« state, the scratch- or issue-to-production time is drastically reduced.

Hardware and embedded system designers who also have a software background understand the need for such development style in the area of electronics hardware design. However, agile development is not available in EDA environments due to the lack of software support. In this workshop, a complete set-up to create agile and collaborative workflow for small and midsized hardware and/or embedded system design teams is presented.

There are three fundamental objectives of the workshop: Firstly, it is aimed that the attendees will have

an understanding and an ability to use a version control system (Git) at the end of the course. Secondly, they will be capable of creating an agile and collaborative workflow in GitLab. Finally, the attendees will comprehend how to increase the code quality with the use of code reviews.

All tools and services used in this workshop, such as cloud services, are well known and well tested. They enable ubiquitous access to the users. Moreover, these tools and services can be installed in a protected intranet environment to provide full security control to the IT department, while utilizing state-of-the-art tools to the development teams.

Due to accompanying exercises, the course offers in-depth and practice-oriented training.

Agenda

- | | |
|--|---|
| <p>01. Git basics
Introduction to version control systems
Basic Git operations via CLI and GUI
Git references: branches, tags, remotes
Branching, merging</p> <p>02. GitLab
Introduction to GitLab
Issues, tags, milestones, issue boards
Merge requests (pull requests)
Code review
GitLab integrations (extensions)</p> <p>03. Advanced Git
Branching models and workflows
Submodules
Scripting for Git</p> | <p>04. Continuous workflows
Continuous building
Continuous integration
Continuous delivery/deployment
Continuous documentation</p> <p>05. Git and EDA tools
Xilinx® ISE, Vivado®
Aldec Active-HDL, Riviera-PRO
Mentor Graphics ModelSim,
QuestaSim</p> <p>Exercises:
01. Git with CLI and GUI
02. Teamwork in GitLab
03. Scripting for Git</p> |
|--|---|