

9713 - GIT training - 4 hour workshop

- **Distributed Version Control Systems**
 - Difference to centralized version control system like cvs, svn
 - Advantages
 - Usage of Git
 - Popular projects using Git
 - Overview about Alternatives: Mercurial, Bazaar
- **Introduction into Git**
 - Git history
 - Staging area
 - Git setup (gitignore, user, etc.)
- **Git basics**
 - git init, add, commit, log and diff
- **Git repositories**
 - Internal structure
 - Remote (bare) repositories
 - Repositories
- **Branches and Tags**
 - Local branches
 - Remote branches
 - Tagging
 - git branch
 - git tag
 - Pushing branches
- **Dropping and saving local changes**
 - git checkout
 - Checking out older commits
 - git stash
- **Merging Changes**
 - git merge
 - git cherry-pick
 - git rebase
- **Online remote repositories**
 - git clone, fetch, pull and push
- **Case studies**
 - Checking out the Eclipse source code
 - Checking out the Android source code with repo

- **Creating Patches and Pull Requests**
 - git format-patch, apply-patch and pull requests
- **Change analysis**
 - Differences between two commits
 - See the changed files between two commits
 - git bisect for error search
- **Git hosting provider**
 - Github
 - Bitbucket
 - Own Git Server
- **Team organization and best practices**
 - Avoiding merge conflicts
 - Best practices
- **Using Eclipse and EGit**
 - EGit history
 - Installation of EGit
 - Cloning online repositories
 - Git operations with EGit
 - Git blame
 - EGit merge conflict resolution
- **Gerrit for code review**
 - Gerrit history
 - Gerrit installation
 - Gerrit setup
 - Gerrit workflow
 - Gerrit code review
 - Outlook: Continuous build integration with Gerrit