Course Outline

Advanced Git

Course Summary

Description

This course provides an understanding of advanced Git concepts and looks at configuration and functionality. In addition, the course will discuss strategies for effectively using Git, including the trade-offs from one strategy over another. It explores the internals of the Git file structure and how to track down changes and recover from unwanted changes. It explains when and how to do a three-way merge. It also explains how to choose the correct merge strategy in different scenarios.

Topics

- Git Internals
- Git Configuration
- Git Collaboration

Audience

This course is designed for technical professionals who will be advanced users or Git administrators.

Prerequisites

Before taking this course, the Introduction to Git and GitHub course (PT10686) or knowledge equivalent is recommended.

Duration

One day

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I. Git Internals

A. Centralized Version Control Systems
B. Git
C. Distributed vs. Centralized
D. Versions
E. Git Operations
F. Git Filesystem
G. Discussion
H. Git Directory Structure
I. Poll
J. Internal Plumbing Commands
K. Create Content Demo
L. Objects
M. Objects after Commit
N. packfiles Demo
O. Garbage Collection
P. Git Blobs
Q. References
R. Tags
S. Remote References
T. Data Recovery

Lab: Git Internals

U. Summary

II. Git Configuration

A. Git Configuration
B. Config File Syntax
C. Eclipse Configuration Screen
D. Config Example
E. Values
F. Common Settings
G. Poll
H. Additional Setting
I. Controlling Text/Binary Options
J. Filtering
K. Finding Content
L. Searching Git
M. Debugging
N. Poll
O. Client Hooks
P. Server Hooks

Lab: Git Configuration

Q. Summary

III. Git Collaboration

A. Synching with Remote
B. Workflow
C. Poll
D. Archiving
E. Activity: Patching
F. Patching
G. Submodules
H. Working with Submodules
I. Poll
J. Rebase
K. Rebase Changes
L. Interactive Rebase
M. Discussion
N. Dry Runs
O. Cherry Picking
P. Cherry Pick vs. Merge

Lab: Git Sharing

Q. Summary