

# Mercurial

## Course Description

### *Audience*

This course introduces the distributed version control system (DVCS) Mercurial. No programming experience is strictly necessary, though some experience with version management is an asset (either source code or documentation.)

**Note:** Though the material is appropriate for many contexts, this course is an introduction to Mercurial from a Carmen system implementation perspective (CARMUSR).

### *Prerequisites*

None

### *Duration*

1 day

### *Course goals*

The course gives you a functional understanding of source code management using Mercurial. After completing the course you will be able to:

- Create and manage Mercurial Repositories
- Collaborate in a multi-user/multi-development project
- understand the difference between a Centralized and a Distributed VCS
- use the Mercurial User Guide (redbook)

### *Course topics*

- Brief History of Version Control Systems
  - Centralized Systems
  - Distributed Systems
  - Mercurial (HG) vs. CVS
  - Brief Command Cross-Reference: HG vs. CVS
- Mercurial Concepts
  - Repository
  - Clone
  - Changeset
  - Basic Metafiles (.hgrc, .hgignore)

Each topic includes discussions on common and best practices.

- Single Developer Repository Management

- Basic HG Commands (add, commit, init, remove, rename, revert, status, tag, tags, update)
- Multi-Developer Environment
  - Shared Repository commands (annotate, clone, heads, incoming, merge, outgoing, pull, push, resolve, tip)
  - Intermediate commands (serve)
- Multi-Site Development Environment
  - Additional Commands (branch, branches)
- Advanced Repository Management (Service Mode)
  - Advanced Commands (import, export)
- Extensions and Utilities
  - transplant, hgk, convert, extdiff
  - tortoise
  - MercurialEclipse

All exercises are done using generic flight data and rule set (Carmen Airlines).