

# An Introduction to Subversion

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## Introduction

What is Subversion?

How to get Subversion?

Create a repository

## Concepts

Centralized version control

Repository structure

Local copy

## Workflow

The terminal

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- ▶ It's free



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- ▶ Quick reference guide at <http://www2.vrdc.cornell.edu/news/documentation/subversion/>

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- ▶ TeamForge:
  - ▶ Create an account at <https://forge.cornell.edu>
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- ▶ GitHub at <https://github.com/>
- ▶ Use *svnserve* as a lightweight custom server
- ▶ Test repository at <http://repository.vrdc.cornell.edu/public/test>  
(When prompted for a login, use 'testuser'/'testuser')

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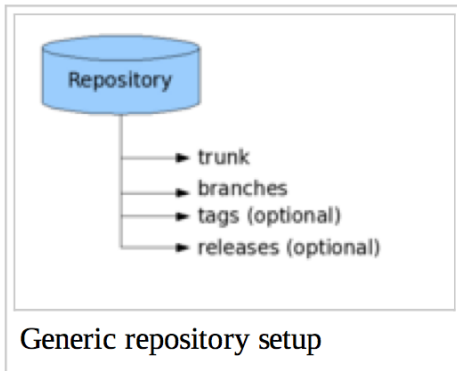


# Centralized version control

- ▶ Server-client approach
  - ▶ The repository is located in the server
  - ▶ No version control over local copies
- ▶ Version merging:
  - ▶ Multiple editors can check out any given file
  - ▶ Discrepancies are handled upon checkin

# Generic setup

- ▶ Trunk: contains all the clean code
- ▶ Branches: where all initial work occurs
- ▶ Tags and releases (optional)



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- ▶ Instead, check out a local copy of the repository (or of its subelements)
- ▶ Make changes to the local copy
  - ▶ Important: use Subversion commands to do this, so that every change is registered
- ▶ Commit the changes back into the repository
  - ▶ Add a commit (log) message
  - ▶ Every commit is registered with a revision number

# Local copy

- ▶ Note: direct changes to the repository are immediately applied  
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- ▶ Note: direct changes to the repository are immediately applied ... while changes to the local copy are applied to the repository upon commit
- ▶ Hence, commit frequently!

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- ▶ Advantages:
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  - ▶ It's not so complicated
- ▶ Every command must be preceded by *svn*

```
server> svn co repository:trunk /programs/production/prod/current
```

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6. Publish changes
  - ▶ Command: *ci* (commit)

# Common tasks

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  - ▶ Commands: *copy*, *export*, with option *-r*
- ▶ Identifying changes
- ▶ Merging a branch back into the trunk

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- ▶ Calling *help* alone will print a summary of the commands and their usage
- ▶ Calling *help* followed by the name of a command will print a short description of the command and its options
- ▶ Options are often useful (and sometimes necessary), but it's hard to remember them all: use *help*!