Introduction to SVN

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About this Course

- **Basic introduction to SVN**
- **Windows based with Tortoise SVN**
- **Working knowledge vs details**

Course Outline

- **Introduction to SVN**
- **Setting up SVN**
- **Basic Commands**
- **Branching and Merging**
- **Best Practices**

Outline

- **What is Source Control?**
- **About SVN**
- **Architecture**
- **Repository Structure**

What is Source Control?

- **Code storage**
- **Versioned**
- **Facilitates multiple developers**

Types of Source Control

- **Locking**
- **Merging**
- **Distributed**

History of SVN

- **Created by CollabNet in 2000**
  - Designed to be like CVS but better
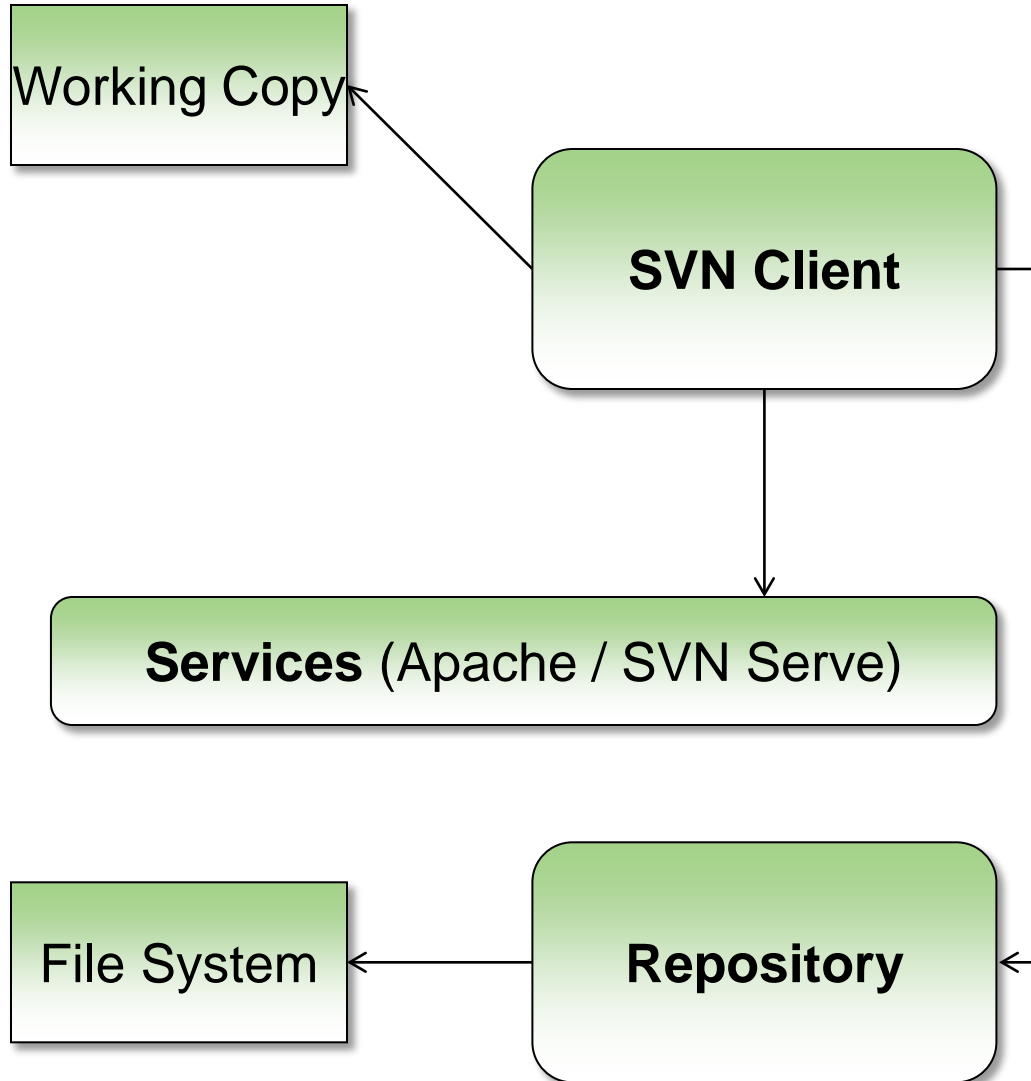- **Became a top-level Apache project in Feb 2010**

About SVN

- **Merge based**
  - Developers check out local copies of code
  - Changes to the same file are 'merged'
- **Commits are atomic**
- **Uses properties for metadata**
- **Branching and tagging are copies**
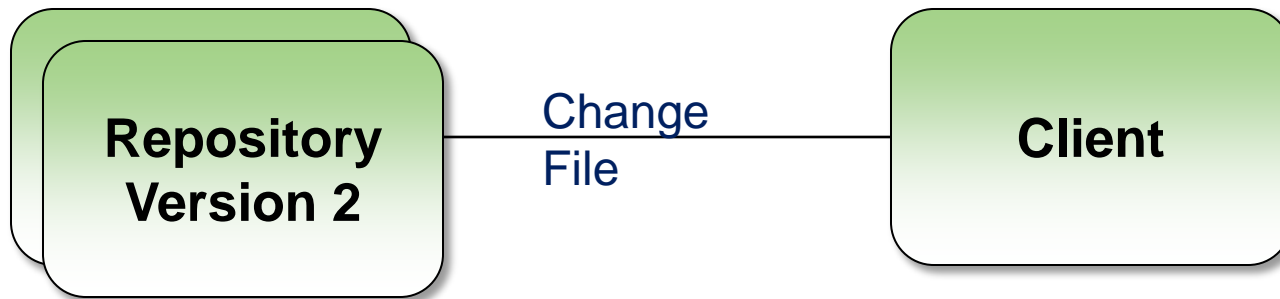- **Different implementations**
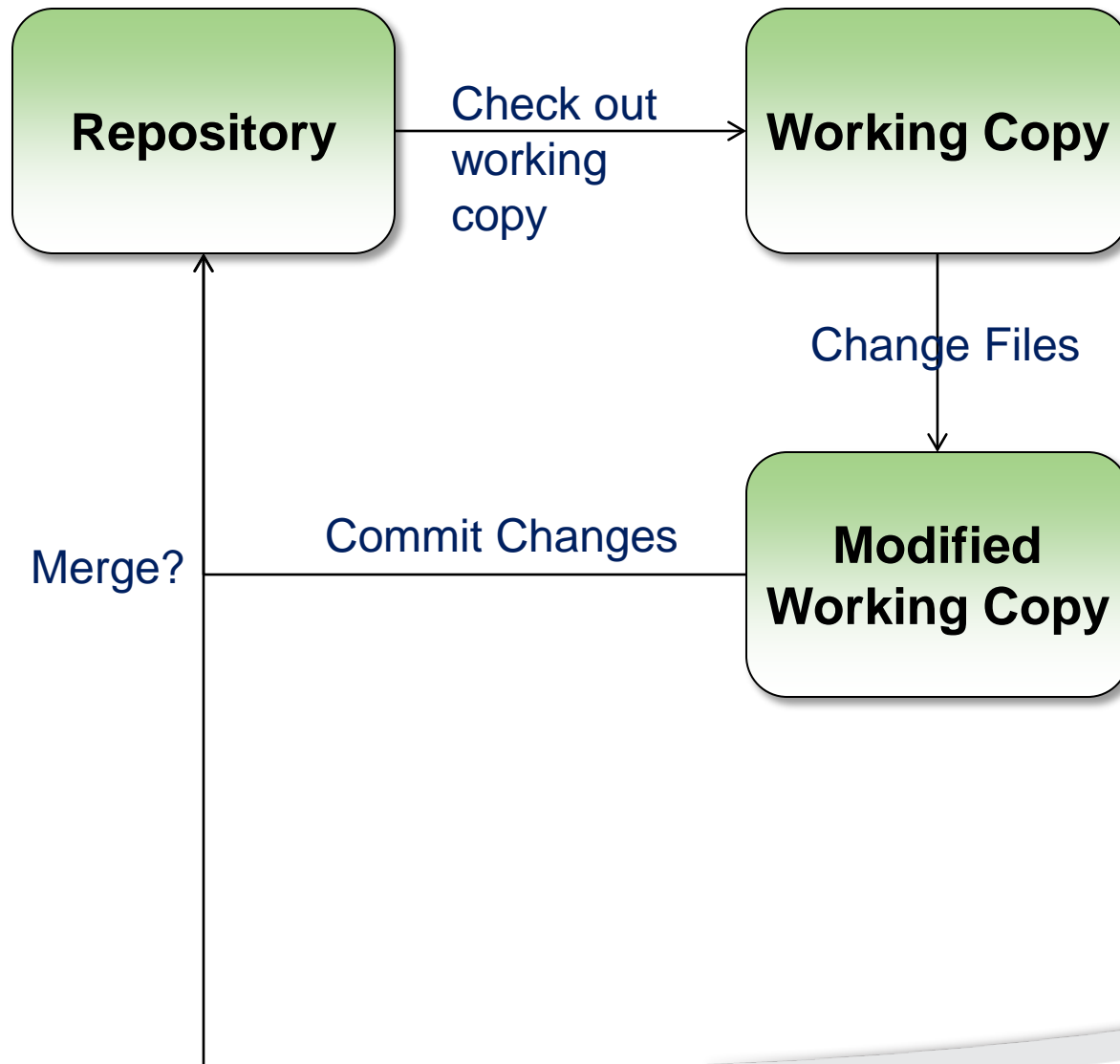
Basic Architecture

Working Copy

SVN Client

Services (Apache / SVN Serve)

File System

Repository

Basic Architecture

- **Like a shared file system**
  - But versioned!

```
┌──────────────┐                      ┌──────────────┐
│  Repository  │      Change          │              │
│  Version 2   │──────File────────────│    Client    │
│              │                      │              │
└──────────────┘                      └──────────────┘
```
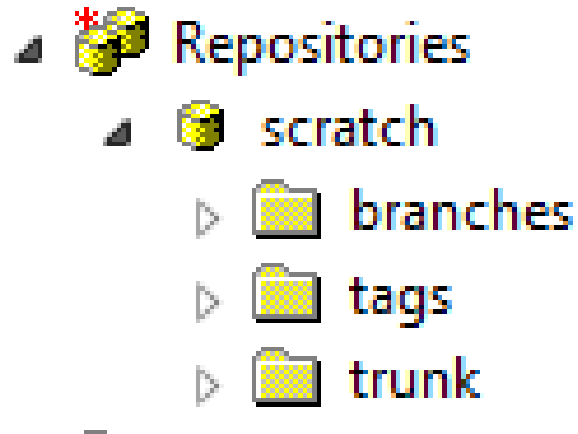
Using SVN

Repository Structure

- **A repository is a big tree!**

Branches

- **Branched code goes here**
- **Uses a copy to be efficient**
  - Only differences
- **Can branch any part of code**
- **Branches are like new trees**

Tags

- **Just a name for a revision**
- **Also is a copy, but read only**
  - Doesn't take up additional space

Trunk

- **Main code line**
- **Active development happens on trunk**

Summary

- **What is Source Control?**
- **About SVN**
- **Architecture**
- **Repository Structure**