Capgemini

UNIX

Lesson 19 : Source code control system

Lesson Objectives

- In this lesson you will learn :
- SVN

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19.1: SVN - Subversion
What is SVN?

Subversion (SVN):

- Software versioning and revision control system.
- Tool that help in to control various program versions.
- Only incremental changes to the program are stored. Multiple copies are not stored.
- Particularly useful when programs are enhanced but the original version is still needed.

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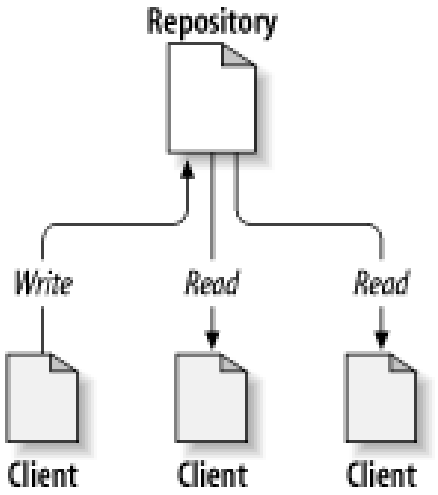
19.1: SVN - Subversion
What is SVN?

Repository is the central store of that system's data.

The repository usually stores information in the form of a file system tree (a hierarchy of files and directories)

Any number of clients connect to the repository, and then read or write to these files.

A typical client/server



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19.1: SVN - Subversion
Initial Project Setup

If the project is not yet started , then create the basic directories required for project directly on repository.

If the project is already in place and the directory structure has been already defined then import the directory structure (along with the all latest files) to the SVN repository.

After importing now delete local copy as files are now successfully stored in SVN repository.

Command for creating , Removing Directory and Checking log

svn mkdir file:///*repository_path/directory_name* -m "*Message*"
svn rm file:///*repository_path/directory_name* -m "*Message*"
svn log file:///*repository_path*

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19.1: SVN - Checkout
The Working Copy (Check-Out)

An ordinary directory tree on local system, containing a collection of files is called working copy.

Owner’s private work area (edit , compile, change any files/code)

- Complete Checkout

```
svn checkout file:///repository_path
```

- Partial Checkout

```
svn checkout file:///repository_path/Directory_Path
```

Changes in working copy needs explicit commit to update the changed version in repository

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19.1: SVN – Lock, Modify, Unlock
The Problem of File-Sharing

The challenge is :

- How we can make sure that only one person at a time should modify the file

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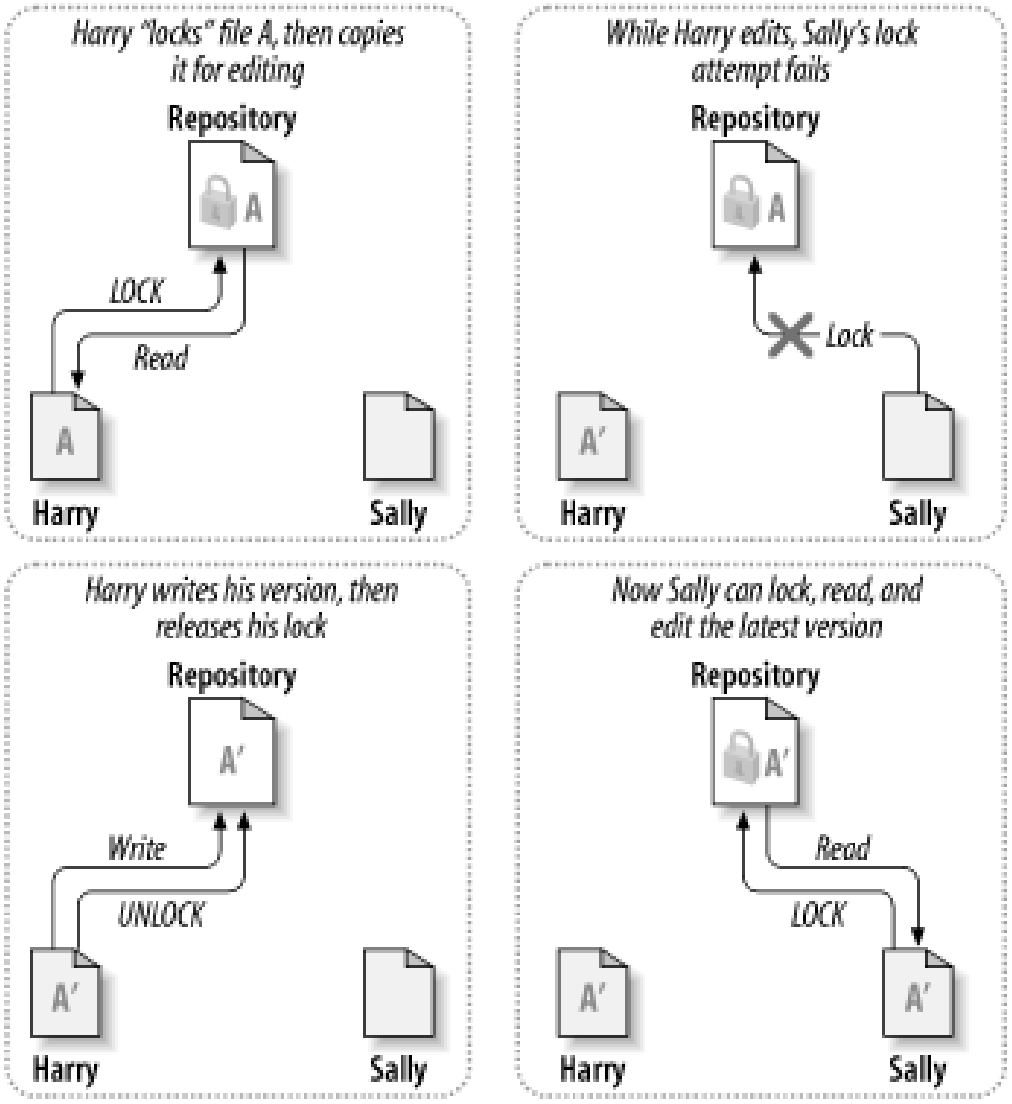
19.1: SVN – Lock, Modify, Unlock
The lock-modify-unlock solution



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SUMMARY

- SVN

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Review Questions

- In _____ multiple copies are not stored only changes are stored.
- List any 3 commands used in SVN?

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REFERENCE BOOKS

- The Unix Programming Environment
  - Kerningham & Pike, Prentice Hall
- Unix System V.4 Concepts and Applications
  - Sumitabha Das, Tata McGraw-Hill
- Advanced Unix Programmer's Guide
  - Stephen Prata, BPB
- Introducing Unix System V
  - Vijay Mukhi, Tata McGrawHill

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