Svn

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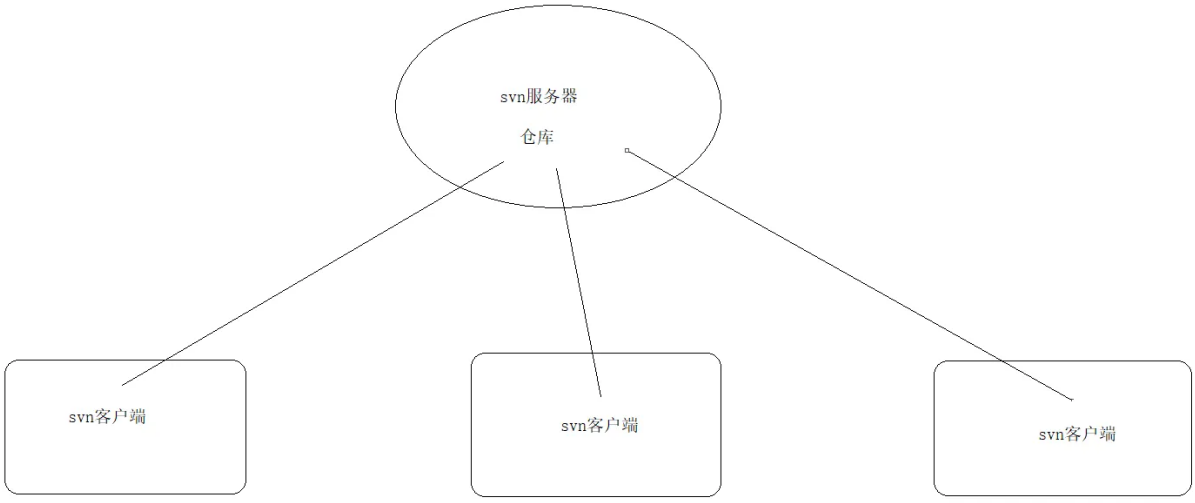
1.Svn入门

1.1 Svn是什么

Apache Subversion 通常被缩写成 SVN，是一个开放源代码的版本控制系统，Subversion 在 2000 年由 CollabNet Inc 开发，现在发展成为 Apache 软件基金会的一个项目，同样是一个丰富的开发者和用户社区的一部分。

SVN相对于的RCS、CVS，采用了分支管理系统，它的设计目标就是取代CVS。互联网上免费的版本控制服务多基于Subversion。

集中式代码管理的核心是SVN服务器：



集中式的版本控制的代表 svn

分布式版本控制的代表 git

1.学习svn是学习git的基础

2.有部分公司在使用svn

常用的版本控制工具：

由CollabNet公司创建，集中式的版本控制系统、现是Apache软件基金会的一个开源项目

由 Linus Torvalds为了帮助管理linux内核开发而开发的一个开放源码的分布式版本控制系统

是由IBM Rational 提供的集中式版本控制系统，属于高端软件，功能强大，价格昂贵

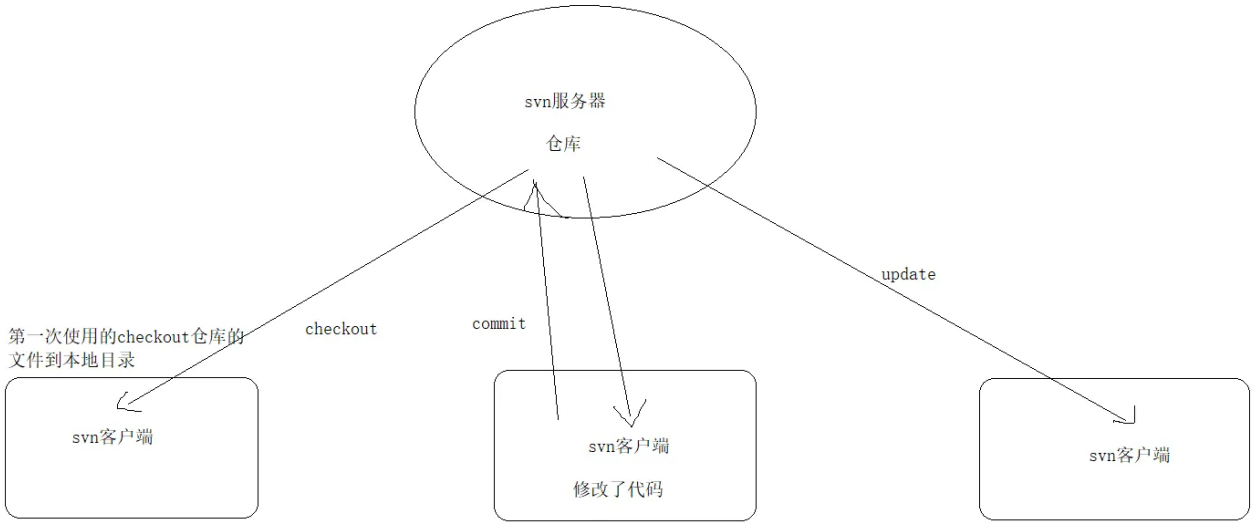
由BitMover公司提供的，BitKeeper自称是“分布式”可扩缩SCM系统，为收费软件

官网: https://subversion.apache.org/

1.2 Svn概念

- **repository（源代码库）:**源代码统一存放的地方
- **Checkout（提取）:**当你手上没有源代码的时候，你需要从repository checkout一份
- **Commit（提交）:**当你已经修改了代码，你就需要Commit到repository
- **Update (更新):**当你已经Checkout了一份源代码， Update一下你就可以和Repository上的源代码同步，你手上的

代码就会有最新的变更



1.3 Svn客户端

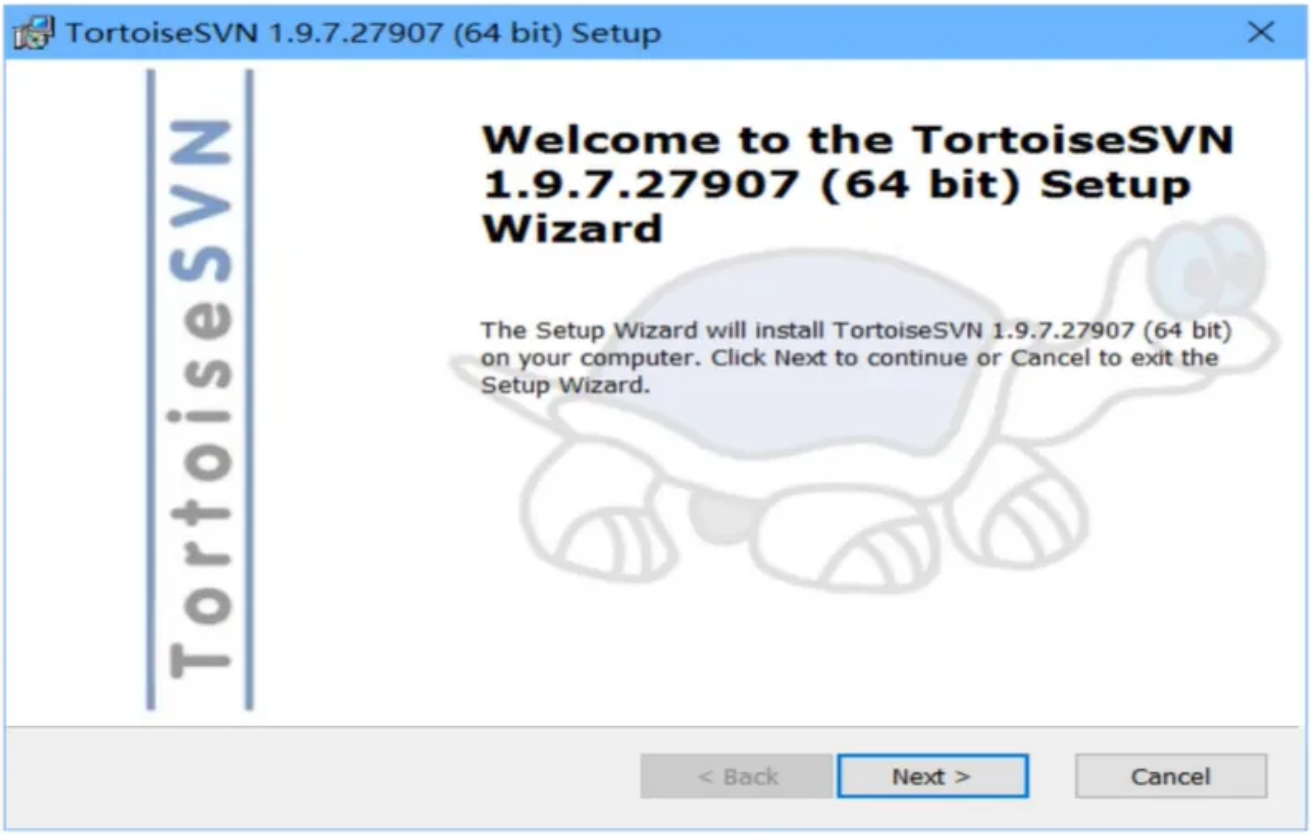
1.3.1 svn客户端安装

TortoiseSVN是Subversion版本控制系统的一个优秀的免费开源客户端。

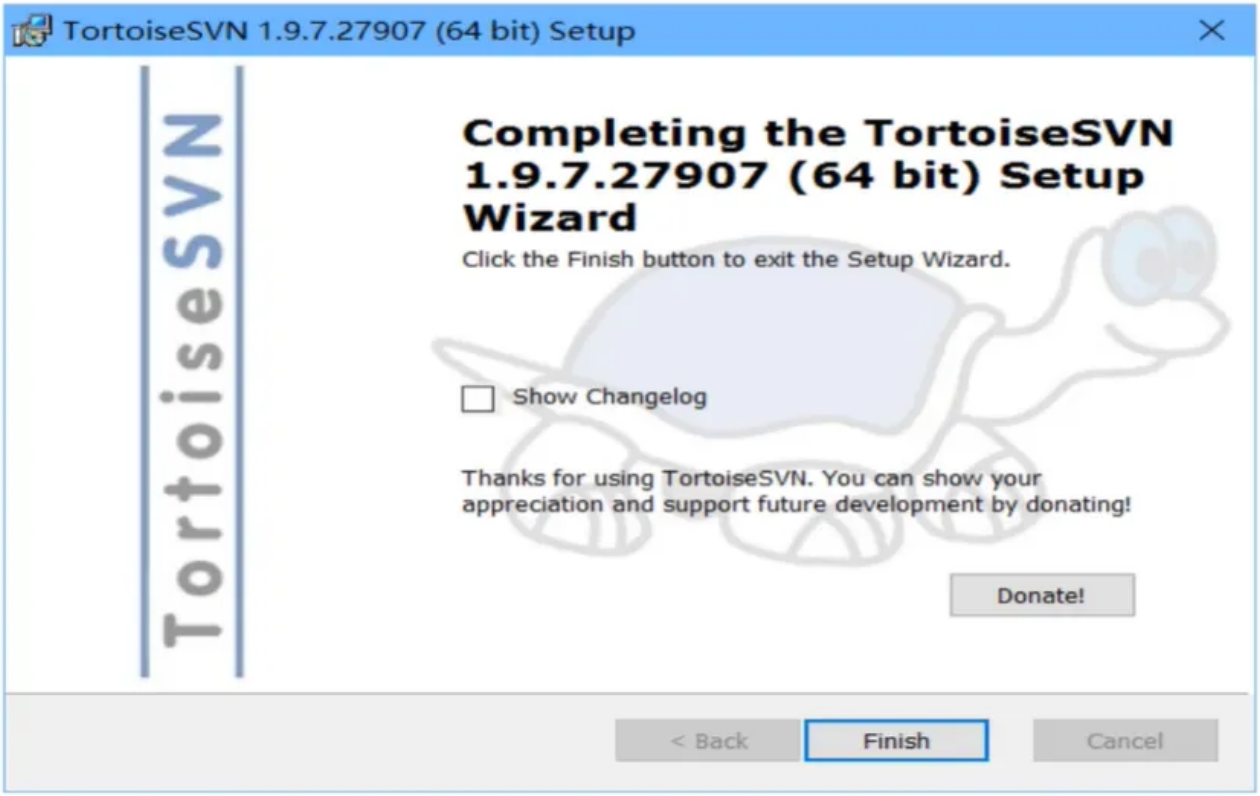
TortoiseSVN自带了一个文件协议的可以在本机使用的服务器端

https://tortoisesvn.net/

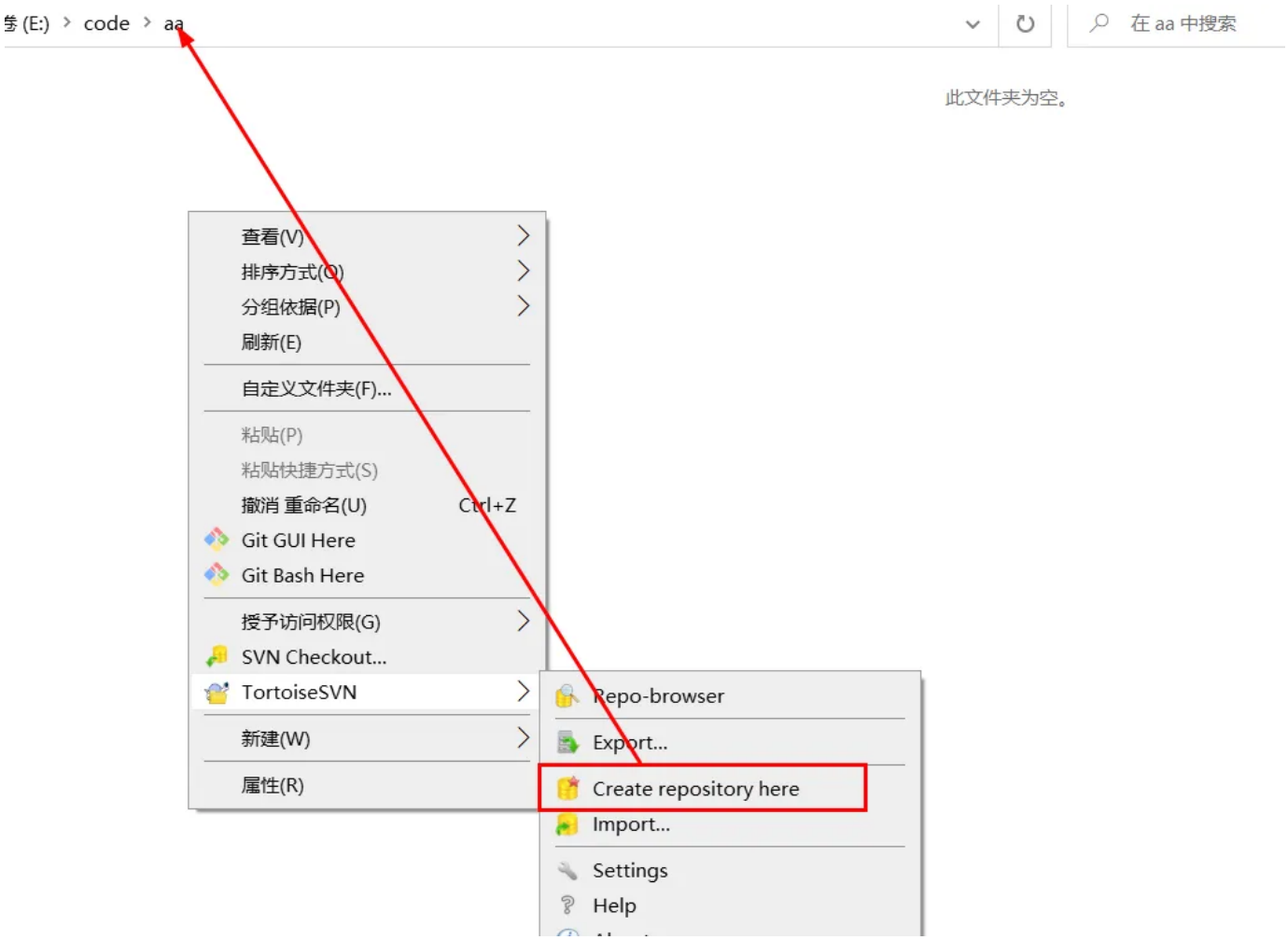
安装图解：

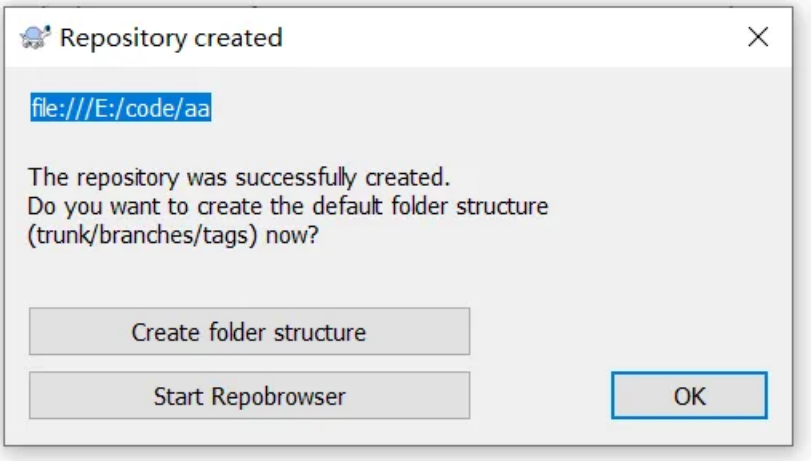

TortoiseSVN 1.9.7.27907 (64 bit) Setup
TortoiseSVN
Welcome to the TortoiseSVN 1.9.7.27907 (64 bit) Setup Wizard
The Setup Wizard will install TortoiseSVN 1.9.7.27907 (64 bit) on your computer. Click Next to continue or Cancel to exit the Setup Wizard.
< Back
Next >
Cancel

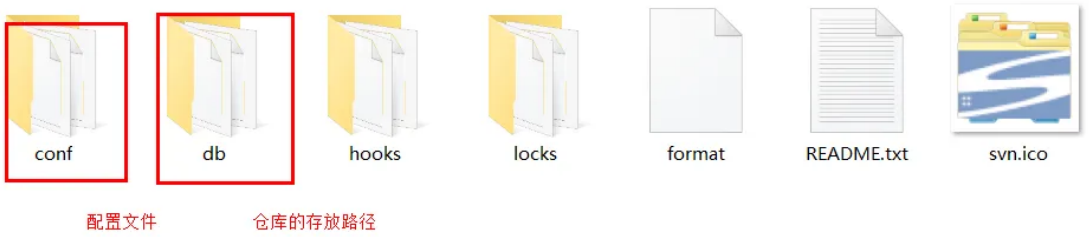
一路next：


TortoiseSVN 1.9.7.27907 (64 bit) Setup
TortoiseSVN
Completing the TortoiseSVN 1.9.7.27907 (64 bit) Setup Wizard
Click the Finish button to exit the Setup Wizard.
Show Changelog
Thanks for using TortoiseSVN. You can show your appreciation and support future development by donating!
Donate!
< Back
Finish
Cancel

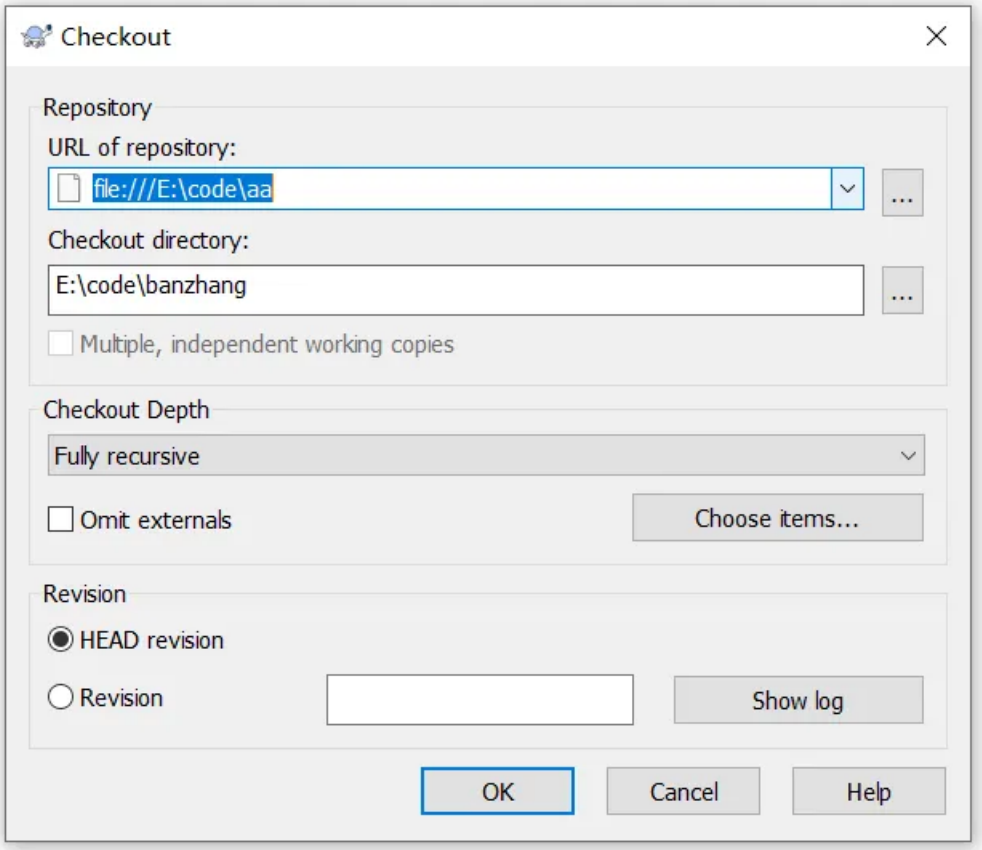
1.3.2 使用小乌龟新建仓库







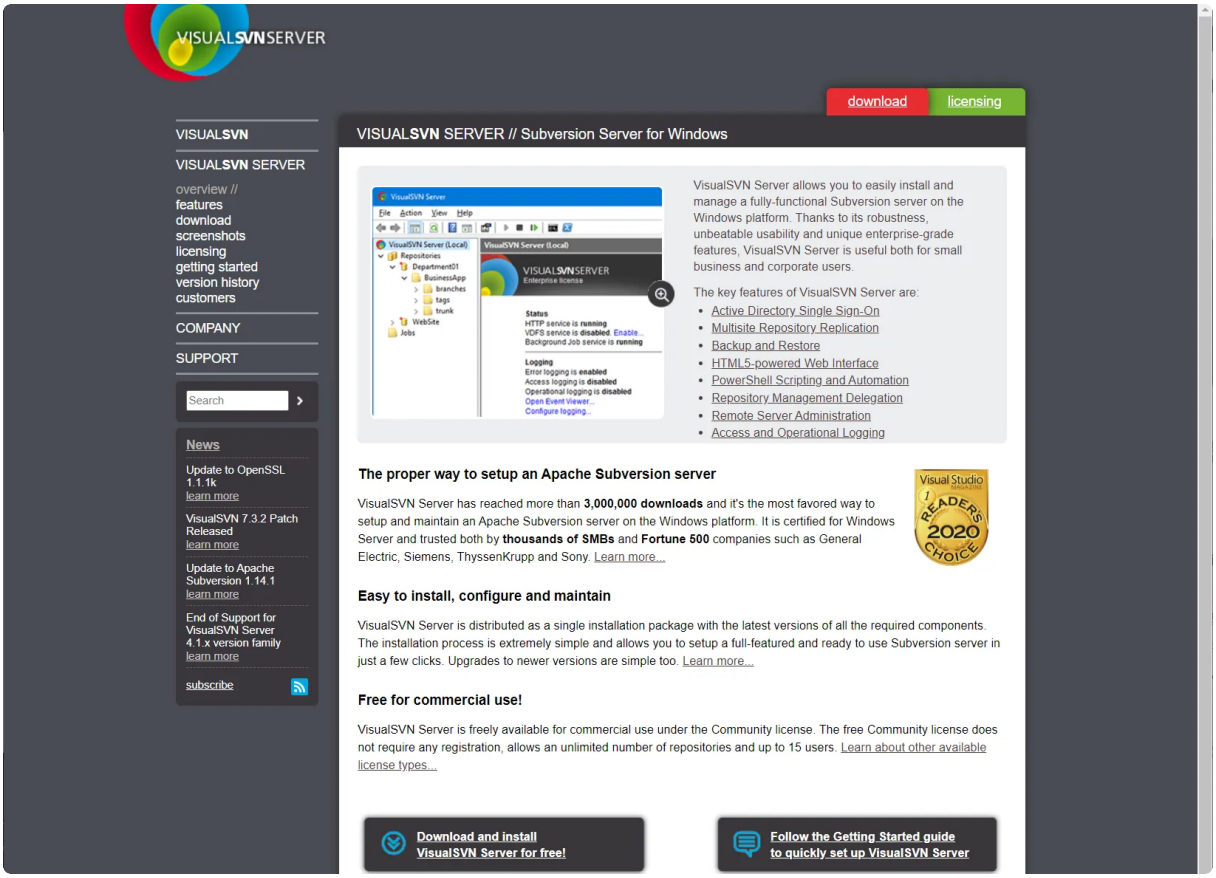
检出仓库 checout



1.4 VisualSVN Server

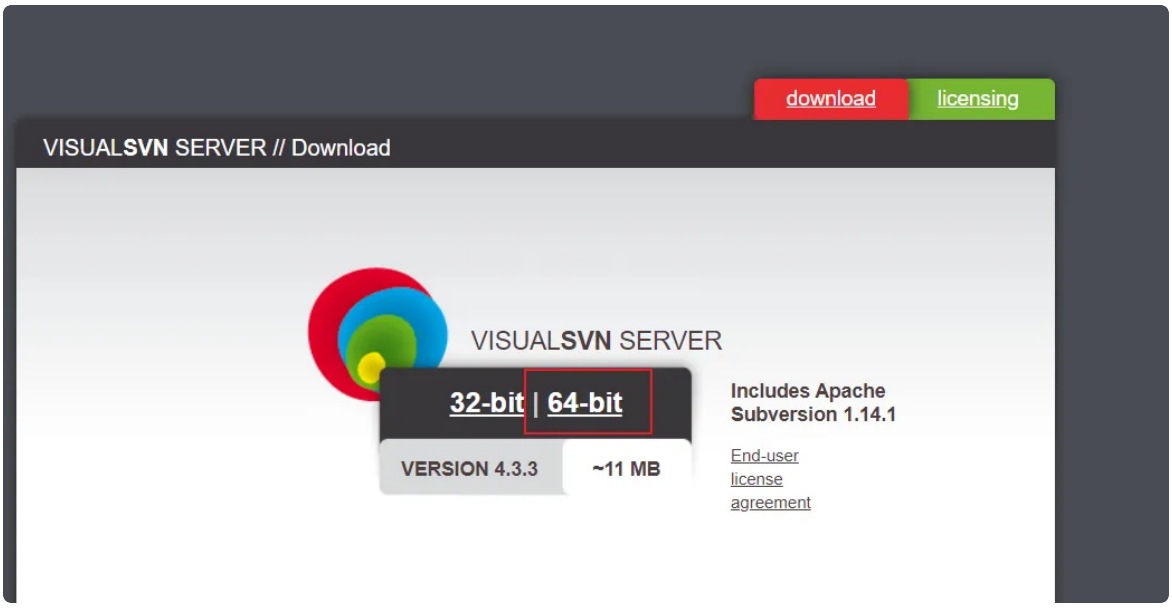
1.4.1 安装

https://www.visualsvn.com/server/

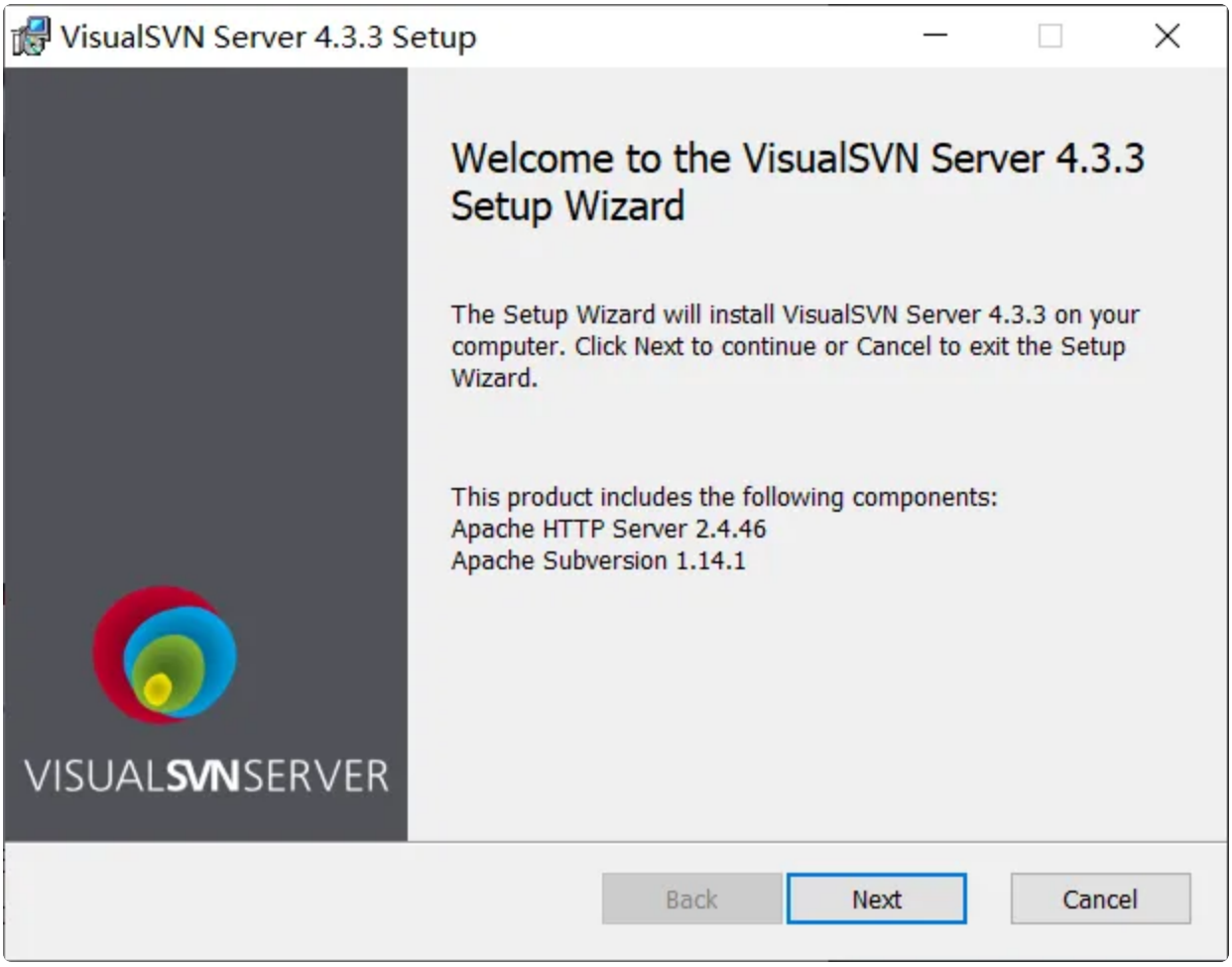

VISUALSVNSERVER
download
licensing
VISUALSVN
VISUALSVN SERVER
overview //
features
download
screenshots
licensing
getting started
version history
customers
COMPANY
SUPPORT
Search
News
Update to OpenSSL 1.1.1k
learn more
VisualSVN 7.3.2 Patch Released
learn more
Update to Apache Subversion 1.14.1
learn more
End of Support for VisualSVN Server 4.1.x version family
learn more
subscribe
VISUALSVN SERVER // Subversion Server for Windows
VisualSVN Server allows you to easily install and manage a fully-functional Subversion server on the Windows platform. Thanks to its robustness, unbeatable usability and unique enterprise-grade features, VisualSVN Server is useful both for small business and corporate users.
The key features of VisualSVN Server are:
Active Directory Single Sign-On
Multisite Repository Replication
Backup and Restore
HTML5-powered Web Interface
PowerShell Scripting and Automation
Repository Management Delegation
Remote Server Administration
Access and Operational Logging
The proper way to setup an Apache Subversion server
VisualSVN Server has reached more than 3,000,000 downloads and it's the most favored way to setup and maintain an Apache Subversion server on the Windows platform. It is certified for Windows Server and trusted both by thousands of SMBs and Fortune 500 companies such as General Electric, Siemens, ThyssenKrupp and Sony. Learn more...
Visual Studio Magazine READERS CHOICE 2020
Easy to install, configure and maintain
VisualSVN Server is distributed as a single installation package with the latest versions of all the required components. The installation process is extremely simple and allows you to setup a full-featured and ready to use Subversion server in just a few clicks. Upgrades to newer versions are simple too. Learn more...
Free for commercial use!
VisualSVN Server is freely available for commercial use under the Community license. The free Community license does not require any registration, allows an unlimited number of repositories and up to 15 users. Learn about other available license types...
Download and install VisualSVN Server for free!
Follow the Getting Started guide to quickly set up VisualSVN Server

安装图解：

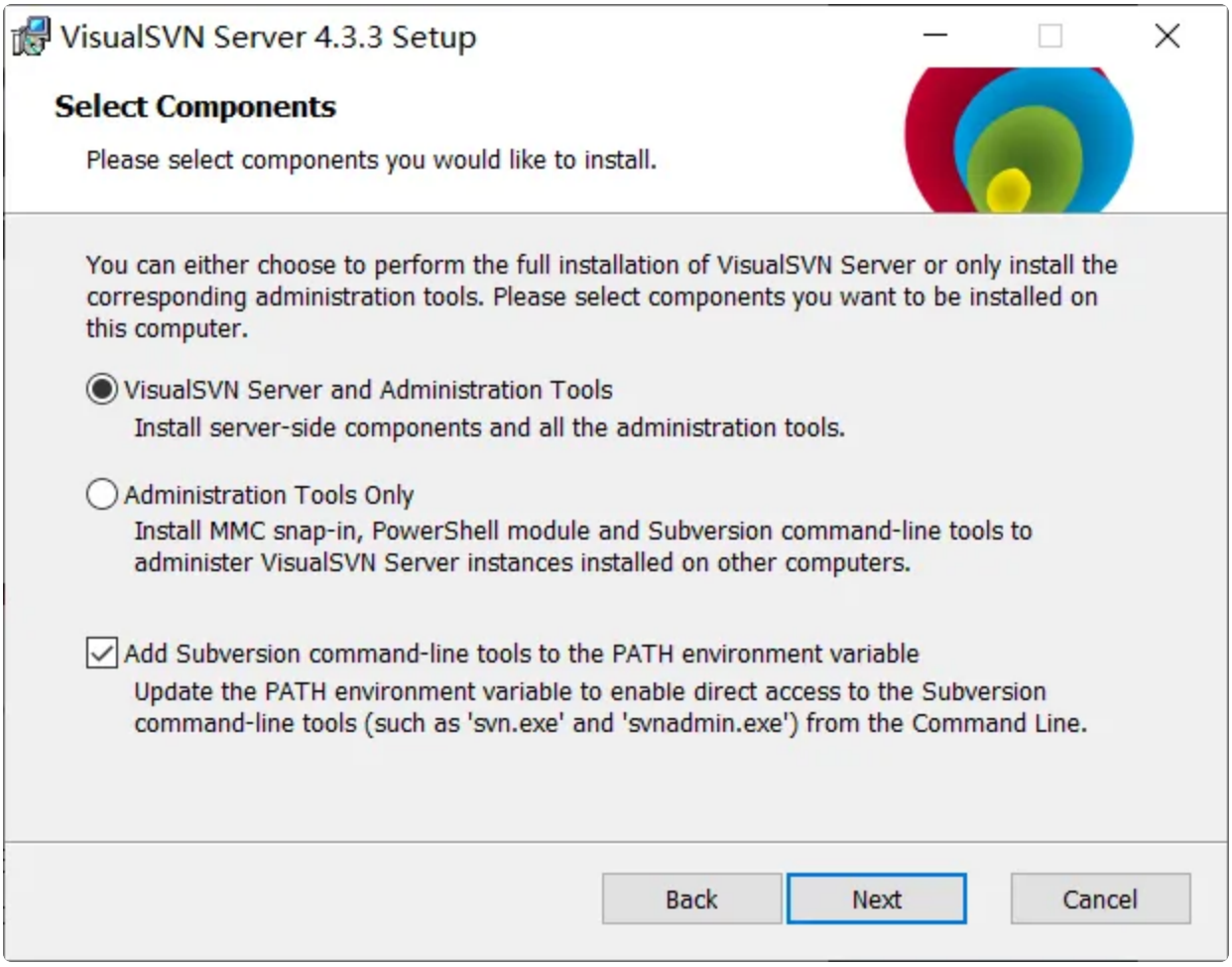
- 下载


download
licensing
VISUALSVN SERVER // Download
VISUALSVN SERVER
32-bit | 64-bit
VERSION 4.3.3
~11 MB
Includes Apache Subversion 1.14.1
End-user license agreement

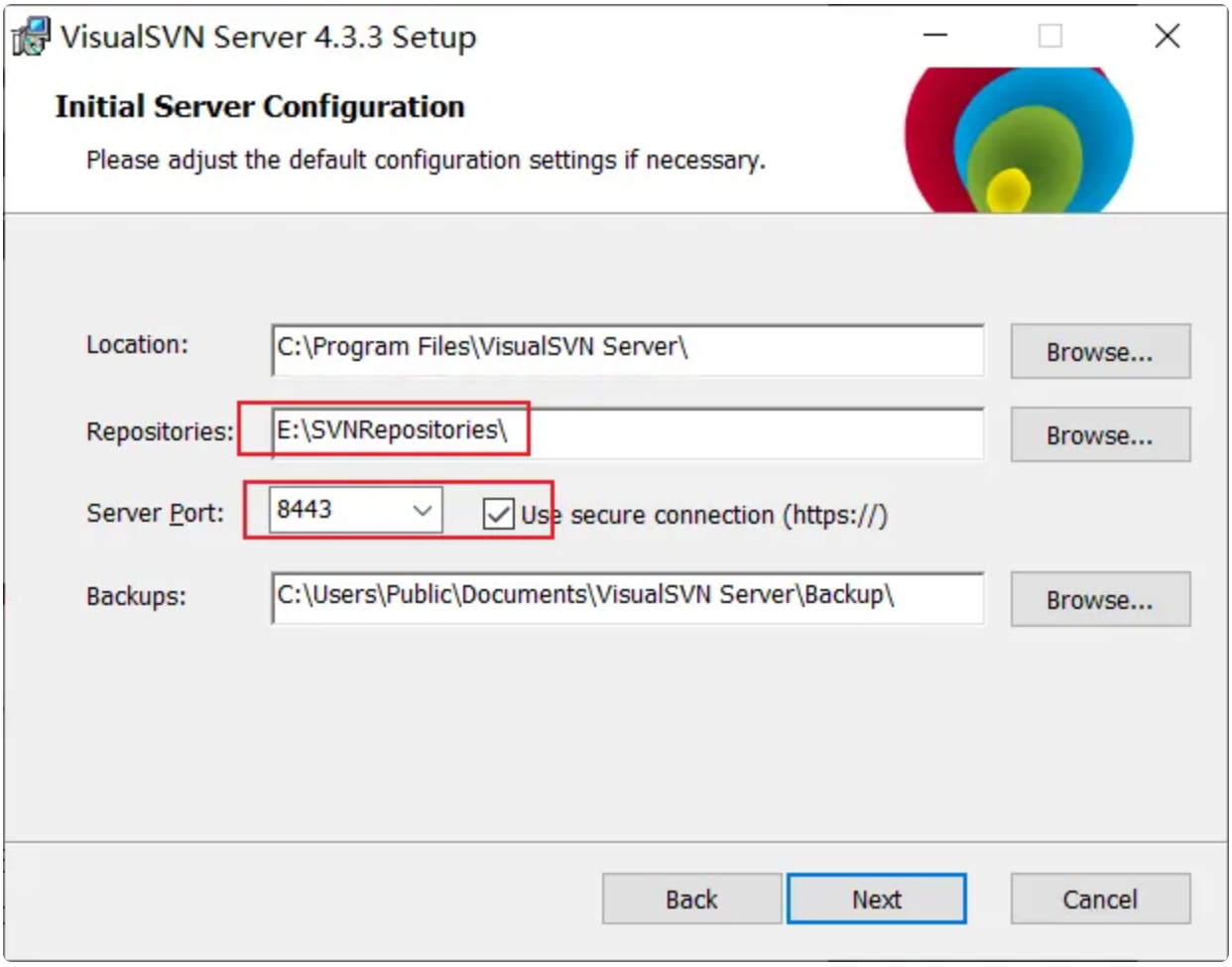
- 双击安装：

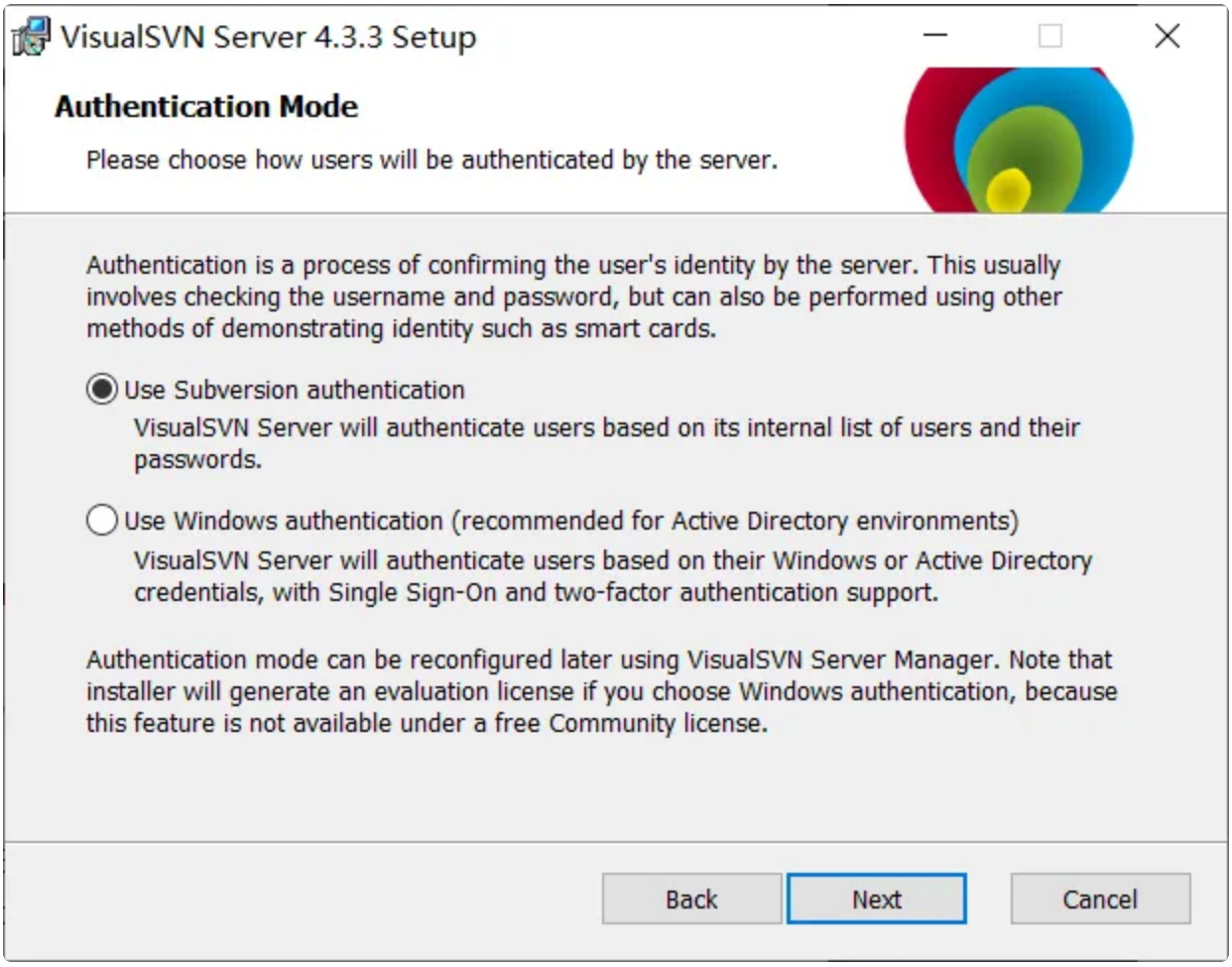

VisualSVN Server 4.3.3 Setup
Welcome to the VisualSVN Server 4.3.3 Setup Wizard
The Setup Wizard will install VisualSVN Server 4.3.3 on your computer. Click Next to continue or Cancel to exit the Setup Wizard.
This product includes the following components:
Apache HTTP Server 2.4.46
Apache Subversion 1.14.1
VISUALSVNSERVER
Back
Next
Cancel


VisualSVN Server 4.3.3 Setup
End-User License Agreement
Please read the following license agreement carefully
License Agreement for VisualSVN Server
IMPORTANT! READ CAREFULLY: THIS IS A LEGAL AGREEMENT. BY DOWNLOADING, INSTALLING, COPYING, SAVING ON YOUR COMPUTER, OR OTHERWISE USING THIS SOFTWARE, YOU (LICENSEE, AS DEFINED BELOW) ARE BECOMING A PARTY TO THIS AGREEMENT AND YOU ARE CONSENTING TO BE BOUND BY ALL THE TERMS AND CONDITIONS OF THIS AGREEMENT. IF YOU DO NOT AGREE TO THE TERMS AND CONDITIONS OF THIS AGREEMENT, YOU SHOULD NOT DOWNLOAD, INSTALL AND USE THE SOFTWARE.
I accept the terms in the License Agreement
Back
Next
Cancel

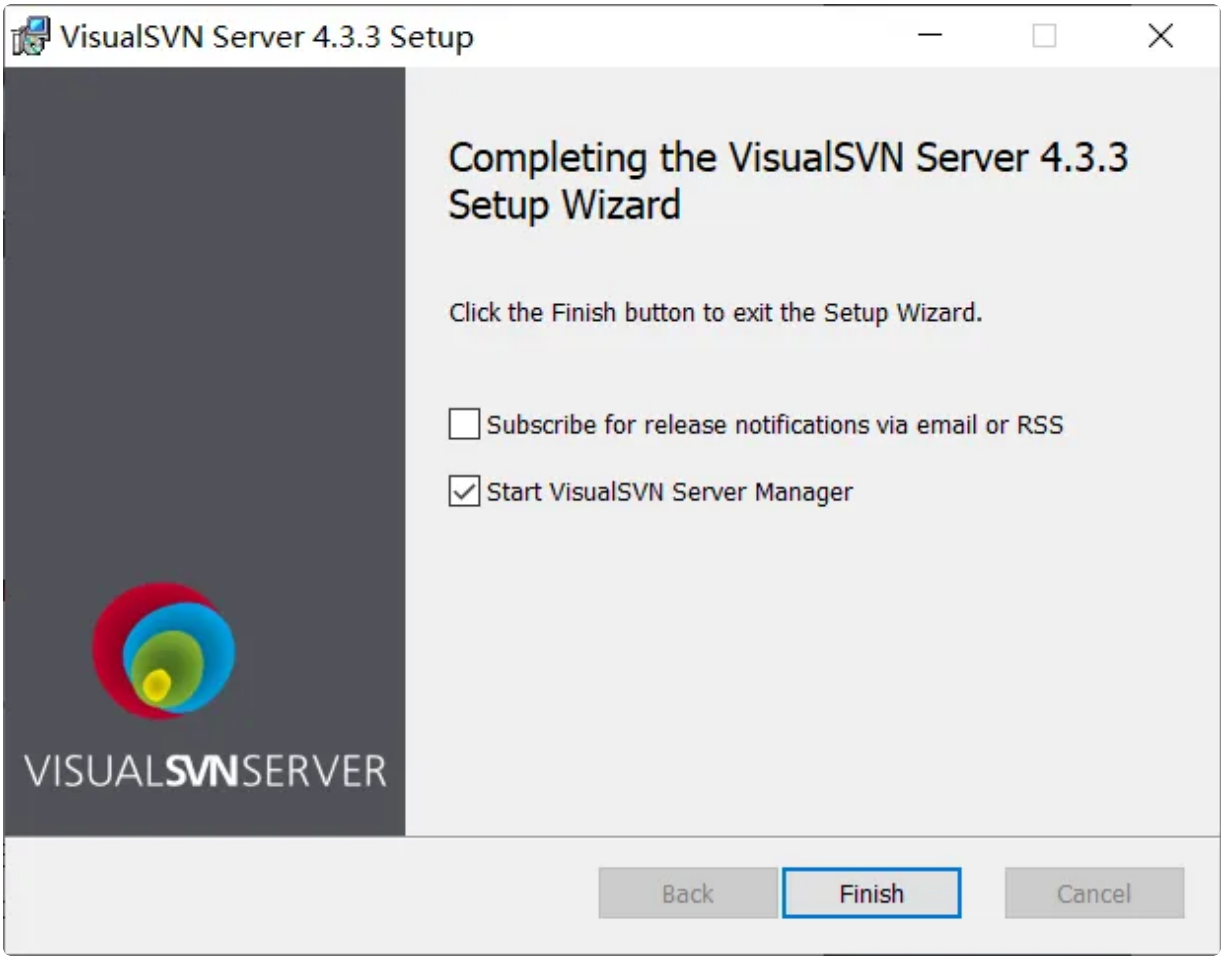

VisualSVN Server 4.3.3 Setup
Select Components
Please select components you would like to install.
You can either choose to perform the full installation of VisualSVN Server or only install the corresponding administration tools. Please select components you want to be installed on this computer.
VisualSVN Server and Administration Tools
Install server-side components and all the administration tools.
Administration Tools Only
Install MMC snap-in, PowerShell module and Subversion command-line tools to administer VisualSVN Server instances installed on other computers.
Add Subversion command-line tools to the PATH environment variable
Update the PATH environment variable to enable direct access to the Subversion command-line tools (such as 'svn.exe' and 'svnadmin.exe') from the Command Line.
Back
Next
Cancel

- 设置仓库地址、端口


VisualSVN Server 4.3.3 Setup
Initial Server Configuration
Please adjust the default configuration settings if necessary.
Location:
C:\Program Files\VisualSVN Server\
Browse...
Repositories:
E:\SVNRepositories\
Browse...
Server Port:
8443
Use secure connection (https://)
Backups:
C:\Users\Public\Documents\VisualSVN Server\Backup\
Browse...
Back
Next
Cancel

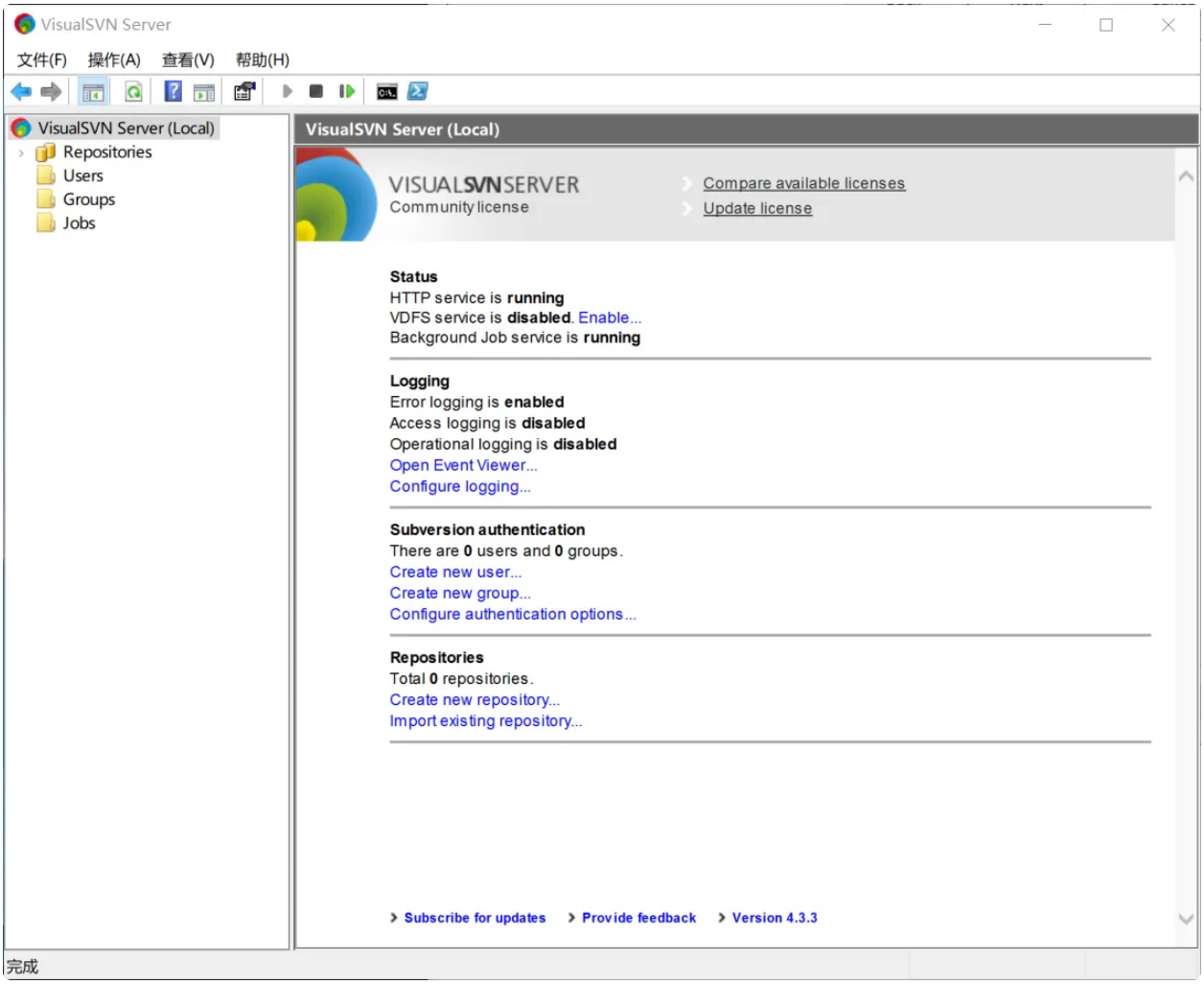

VisualSVN Server 4.3.3 Setup
Authentication Mode
Please choose how users will be authenticated by the server.
Authentication is a process of confirming the user's identity by the server. This usually involves checking the username and password, but can also be performed using other methods of demonstrating identity such as smart cards.
Use Subversion authentication
VisualSVN Server will authenticate users based on its internal list of users and their passwords.
Use Windows authentication (recommended for Active Directory environments)
VisualSVN Server will authenticate users based on their Windows or Active Directory credentials, with Single Sign-On and two-factor authentication support.
Authentication mode can be reconfigured later using VisualSVN Server Manager. Note that installer will generate an evaluation license if you choose Windows authentication, because this feature is not available under a free Community license.
Back
Next
Cancel

- 安装完成

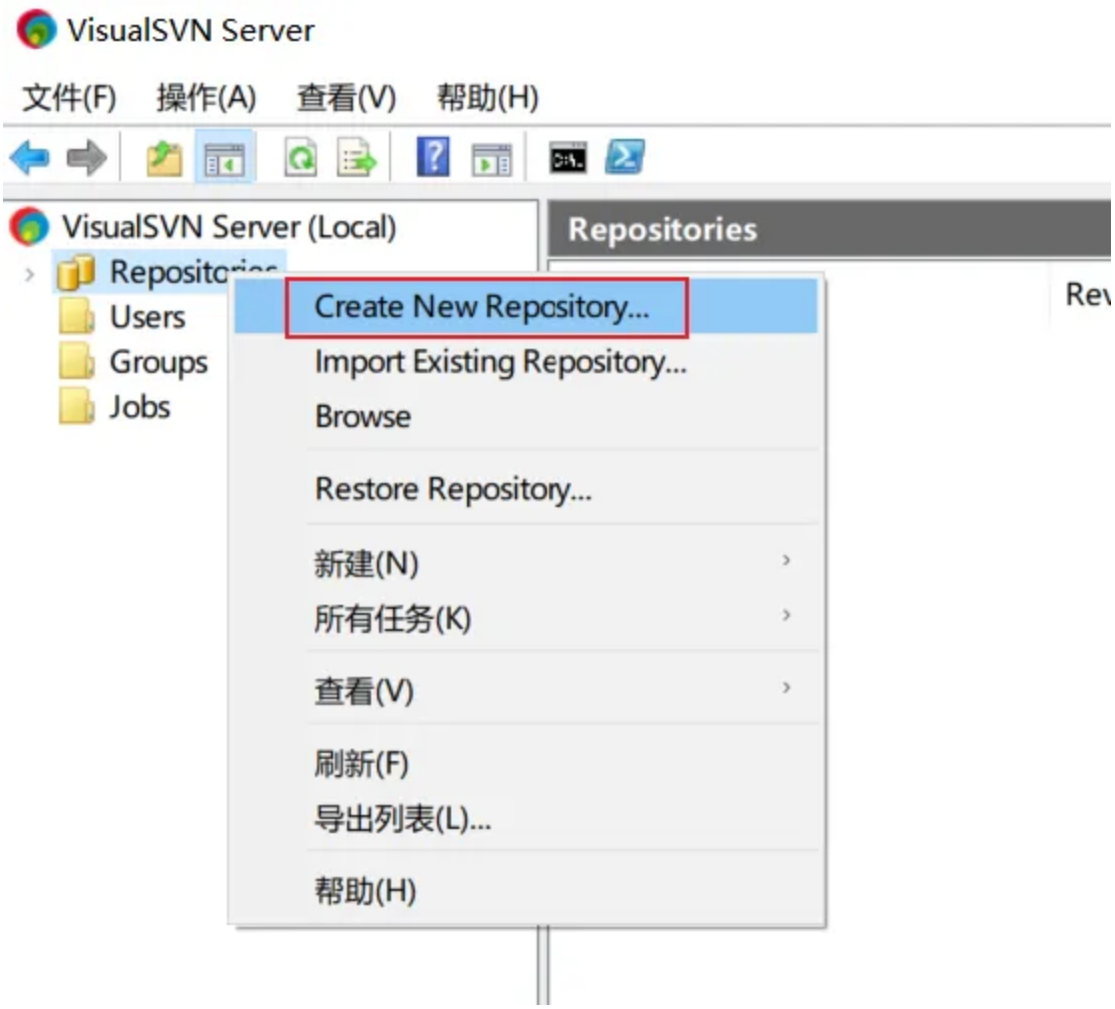


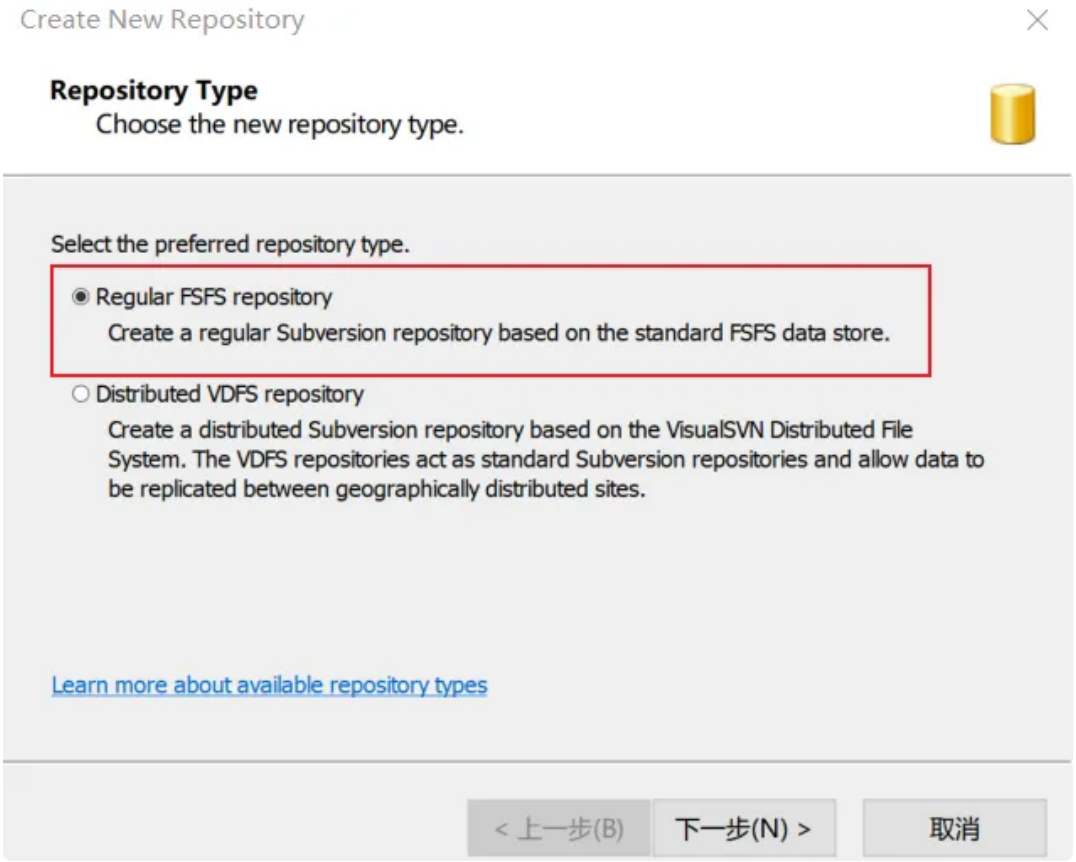
1.4.2 SVN服务器创建仓库与用户

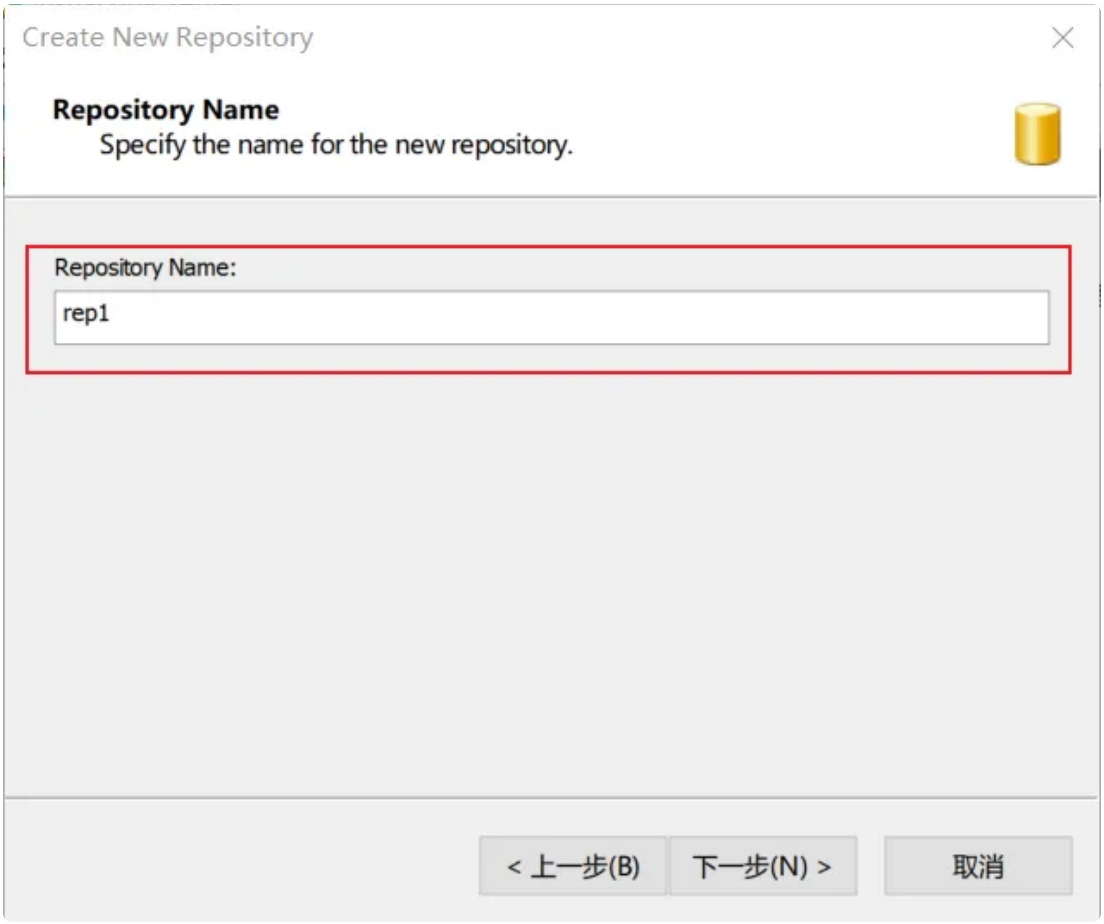
- VisualSVN Server Manager 主界面


VisualSVN Server
文件(F) 操作(A) 查看(V) 帮助(H)
VisualSVN Server (Local)
Repositories
Users
Groups
Jobs
VisualSVN Server (Local)
VISUALSVNSERVER
Community license
Compare available licenses
Update license
Status
HTTP service is running
VDFS service is disabled. Enable...
Background Job service is running
Logging
Error logging is enabled
Access logging is disabled
Operational logging is disabled
Open Event Viewer...
Configure logging...
Subversion authentication
There are 0 users and 0 groups.
Create new user...
Create new group...
Configure authentication options...
Repositories
Total 0 repositories.
Create new repository...
Import existing repository...
Subscribe for updates
Provide feedback
Version 4.3.3
完成

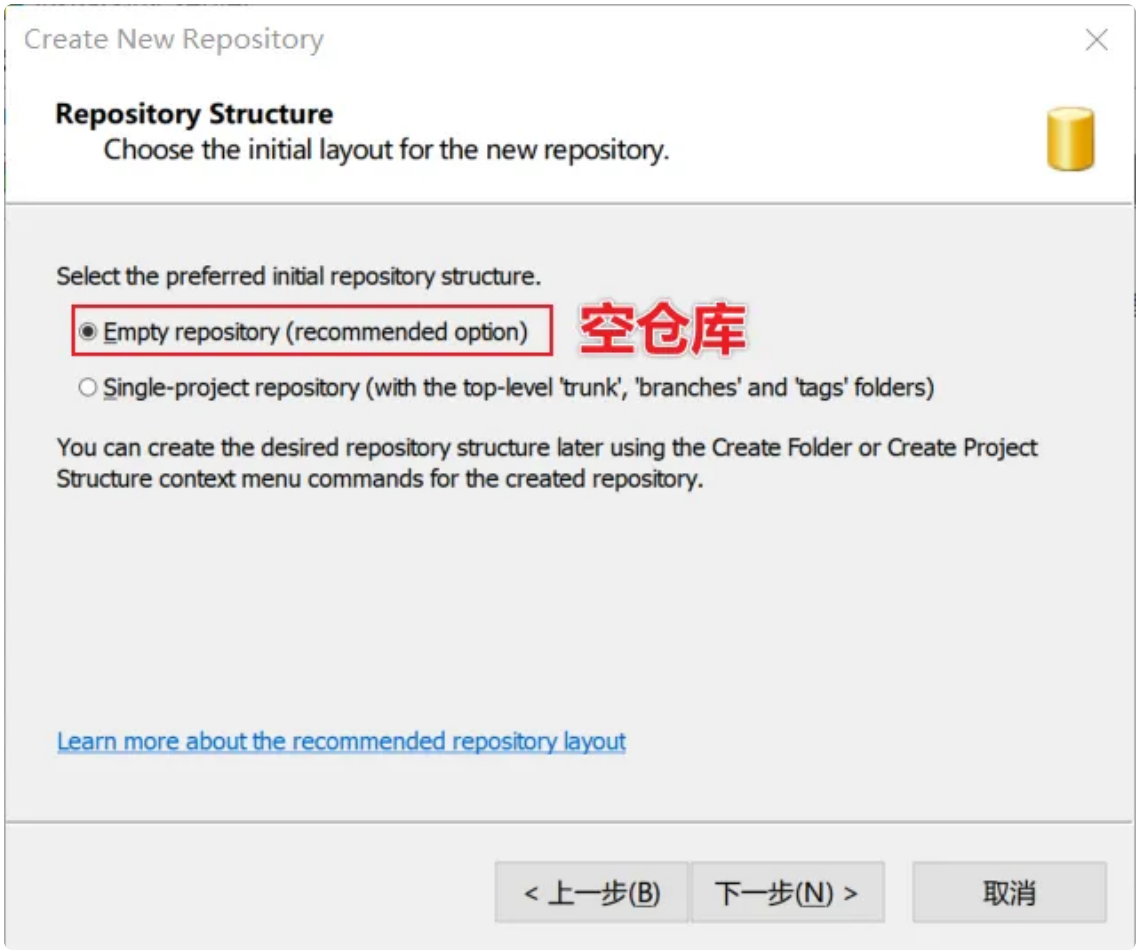
创建仓库


VisualSVN Server
文件(F) 操作(A) 查看(V) 帮助(H)
VisualSVN Server (Local)
Repositories
Users
Groups
Jobs
Create New Repository...
Import Existing Repository...
Browse
Restore Repository...
新建(N)
所有任务(K)
查看(V)
刷新(F)
导出列表(L)...
帮助(H)

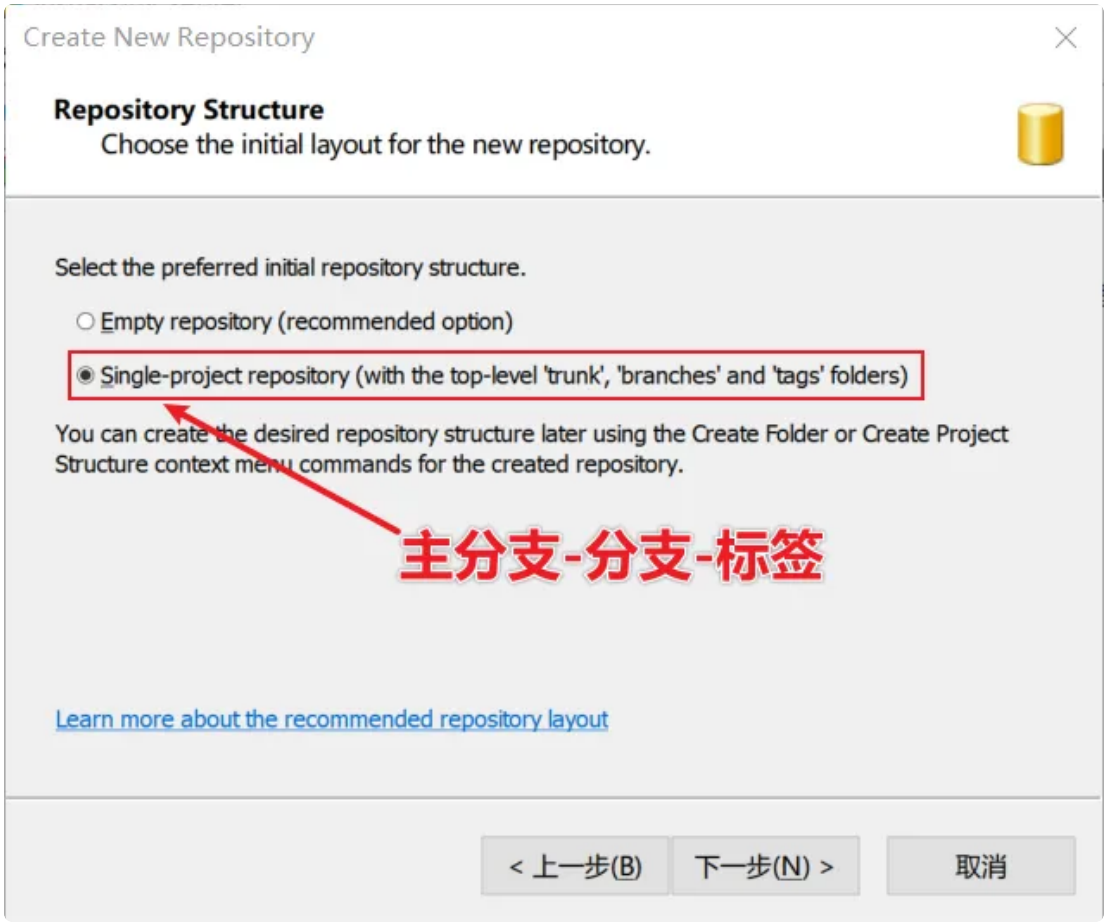

Create New Repository
Repository Type
Choose the new repository type.
Select the preferred repository type.
Regular FSFS repository
Create a regular Subversion repository based on the standard FSFS data store.
Distributed VDFS repository
Create a distributed Subversion repository based on the VisualSVN Distributed File System. The VDFS repositories act as standard Subversion repositories and allow data to be replicated between geographically distributed sites.
Learn more about available repository types
< 上一步(B)
下一步(N) >
取消



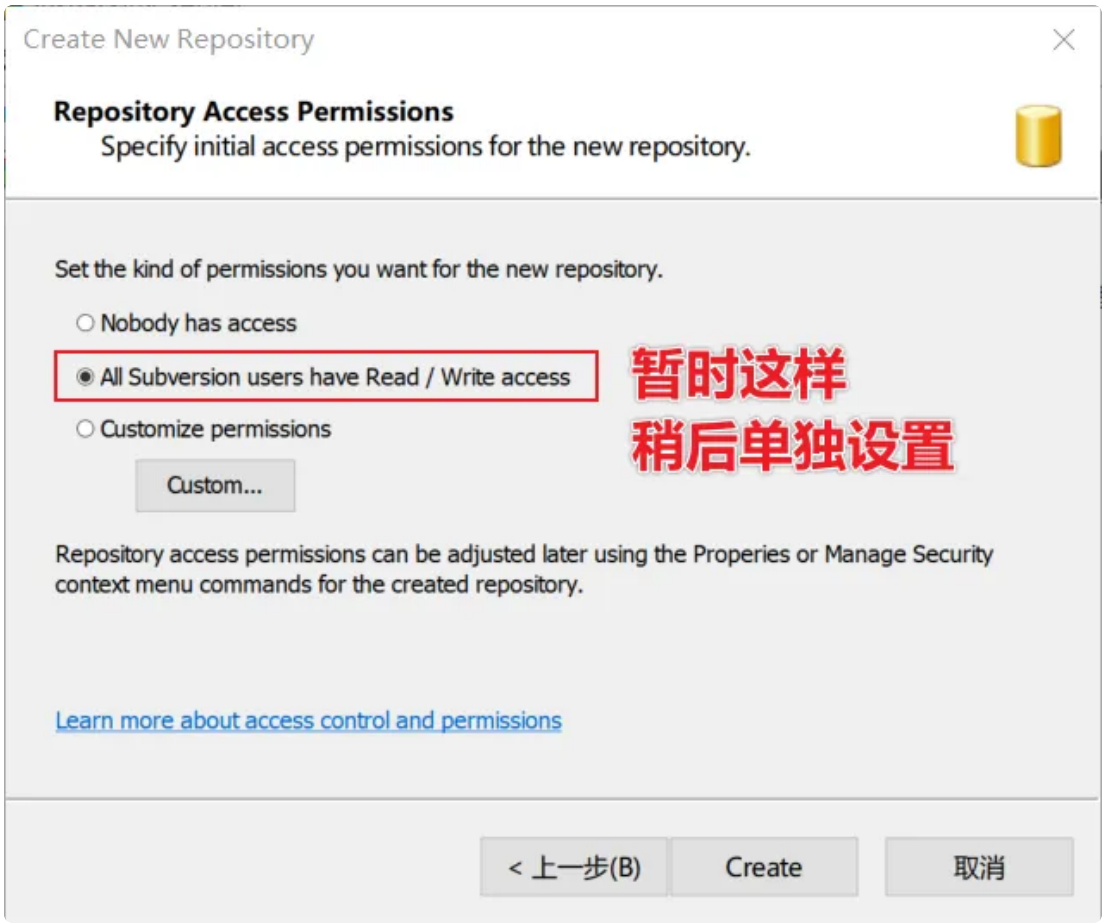
- 这里选择仓库类型
  - 类型1：空仓库

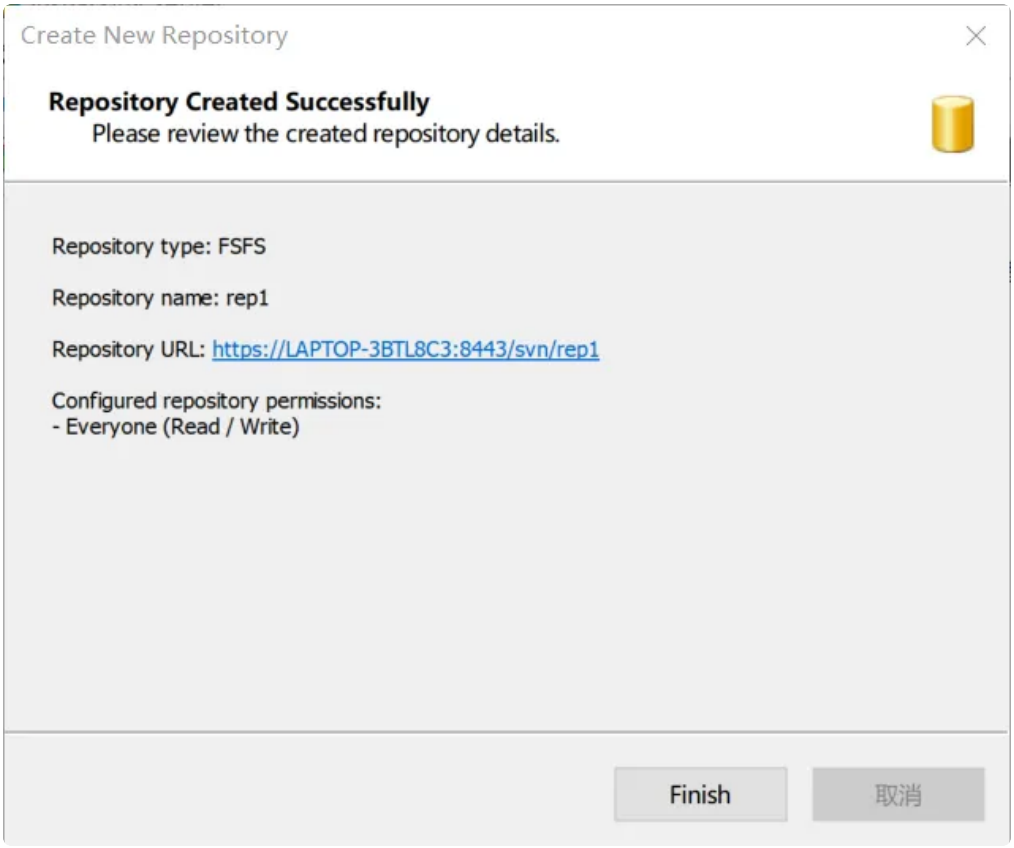

Create New Repository
Repository Structure
Choose the initial layout for the new repository.
Select the preferred initial repository structure.
Empty repository (recommended option)
空仓库
Single-project repository (with the top-level 'trunk', 'branches' and 'tags' folders)
You can create the desired repository structure later using the Create Folder or Create Project Structure context menu commands for the created repository.
Learn more about the recommended repository layout
< 上一步(B)
下一步(N) >
取消

- 类型2：主分支–分支–标签

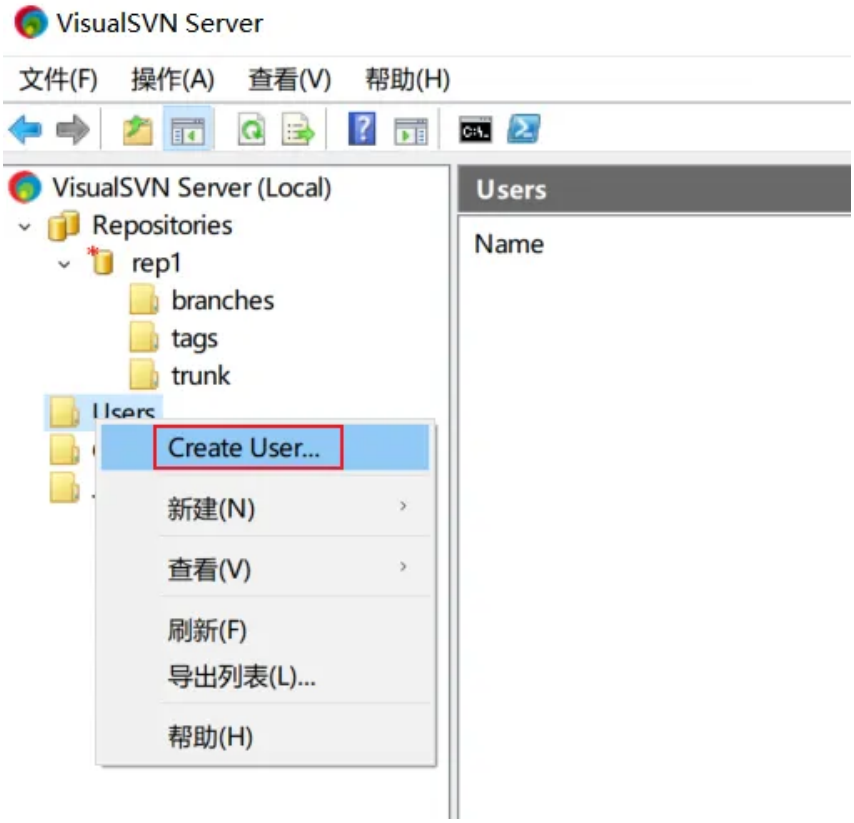

Create New Repository
Repository Structure
Choose the initial layout for the new repository.
Select the preferred initial repository structure.
Empty repository (recommended option)
Single-project repository (with the top-level 'trunk', 'branches' and 'tags' folders)
You can create the desired repository structure later using the Create Folder or Create Project Structure context menu commands for the created repository.
主分支-分支-标签
Learn more about the recommended repository layout
< 上一步(B)
下一步(N) >
取消

- 访问权限设置


Create New Repository
Repository Access Permissions
Specify initial access permissions for the new repository.
Set the kind of permissions you want for the new repository.
Nobody has access
All Subversion users have Read / Write access
Customize permissions
Custom...
暂时这样
稍后单独设置
Repository access permissions can be adjusted later using the Properies or Manage Security context menu commands for the created repository.
Learn more about access control and permissions
< 上一步(B)
Create
取消

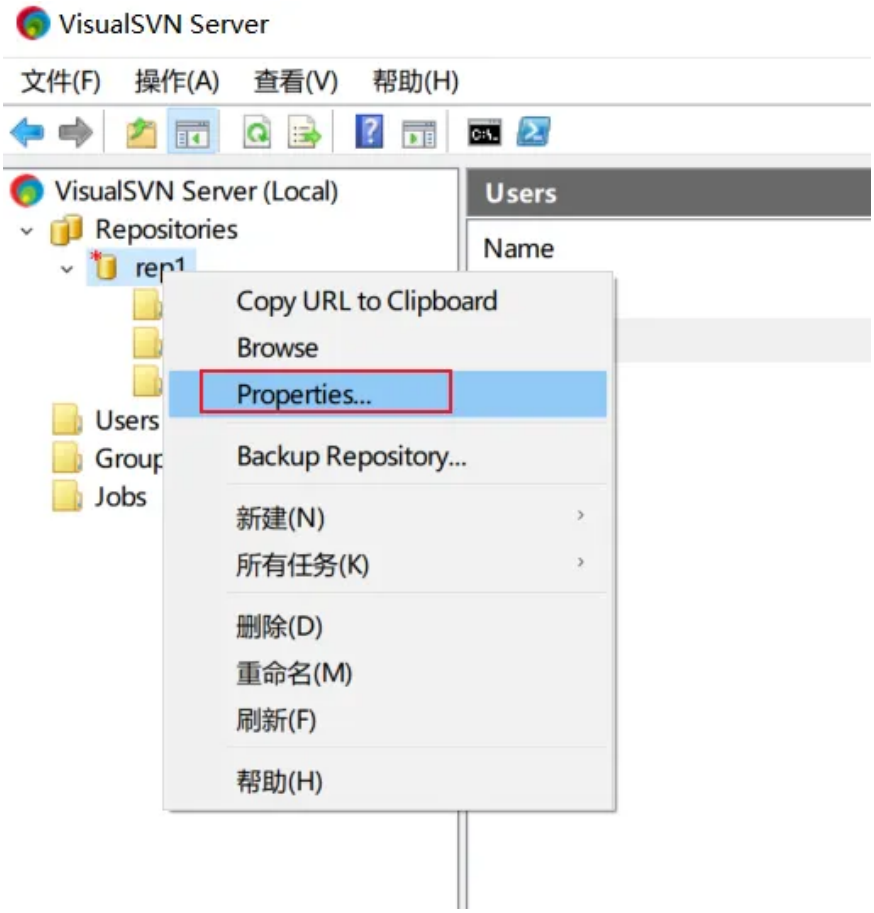

Create New Repository
Repository Created Successfully
Please review the created repository details.
Repository type: FSFS
Repository name: rep1
Repository URL: https://LAPTOP-3BTL8C3:8443/svn/rep1
Configured repository permissions:
- Everyone (Read / Write)
Finish
取消

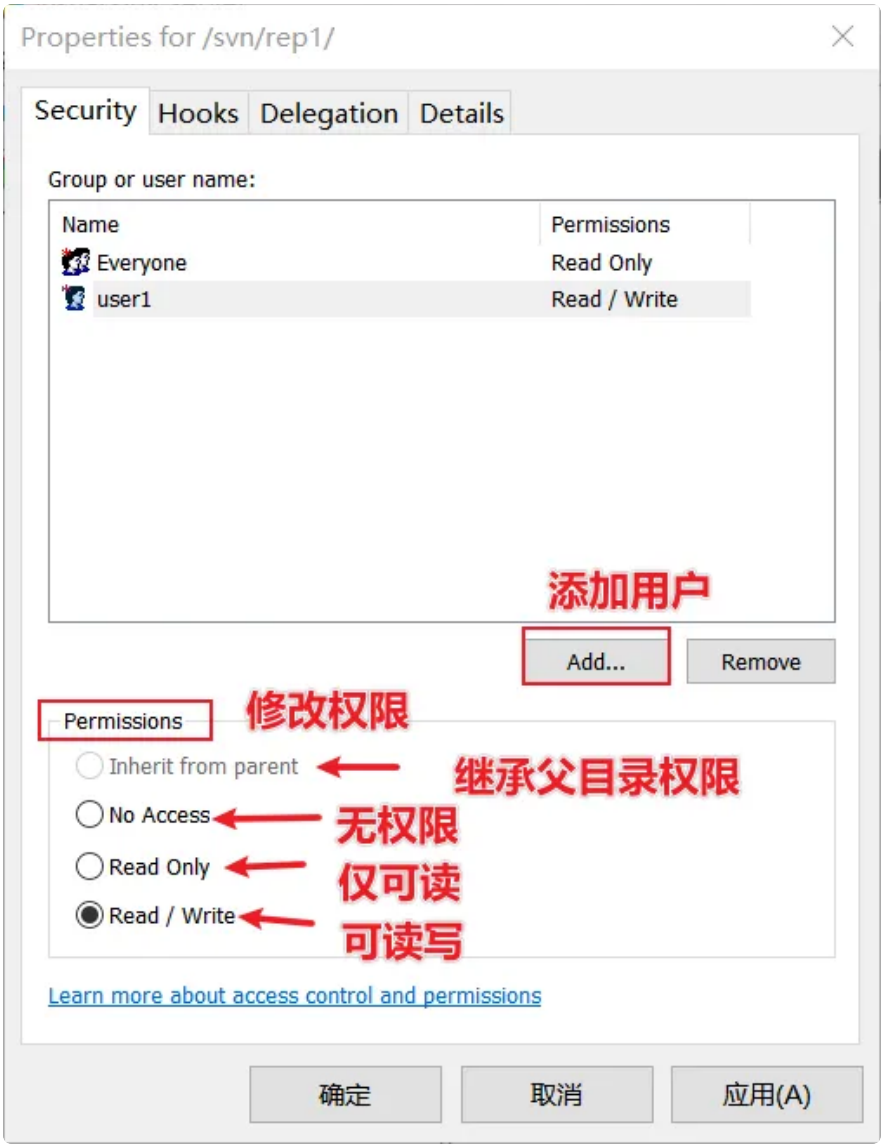
1.4.3 创建用户



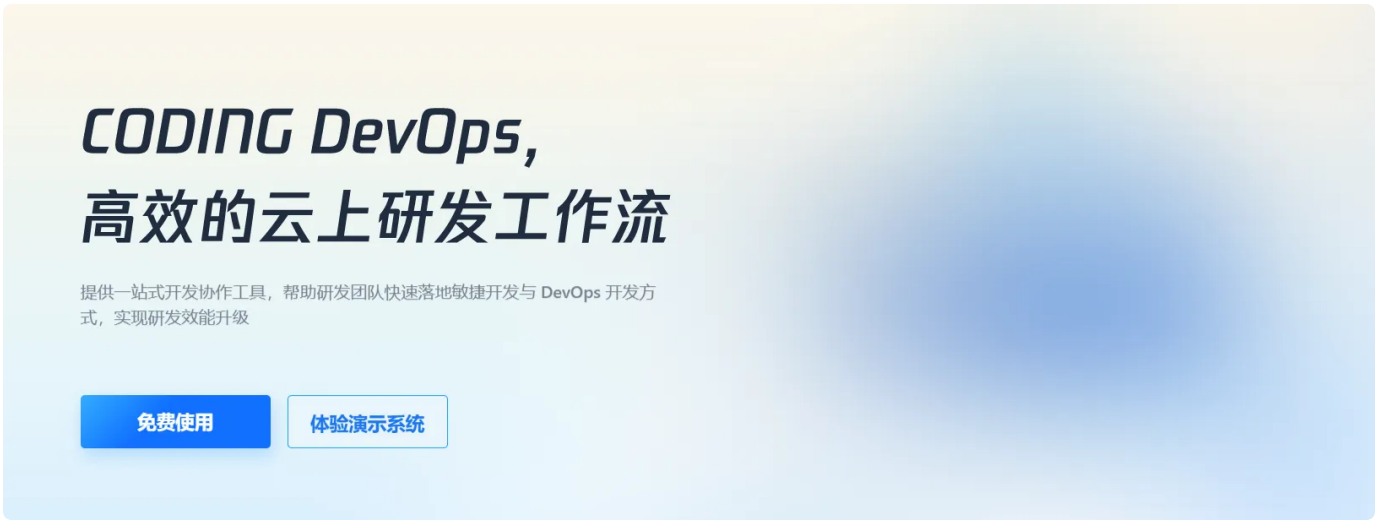
1.4.4 修改权限

- 右键仓库，属性


VisualSVN Server
文件(F)
操作(A)
查看(V)
帮助(H)
VisualSVN Server (Local)
Repositories
rep1
Users
Group
Jobs
Users
Name
Copy URL to Clipboard
Browse
Properties...
Backup Repository...
新建(N)
所有任务(K)
删除(D)
重命名(M)
刷新(F)
帮助(H)

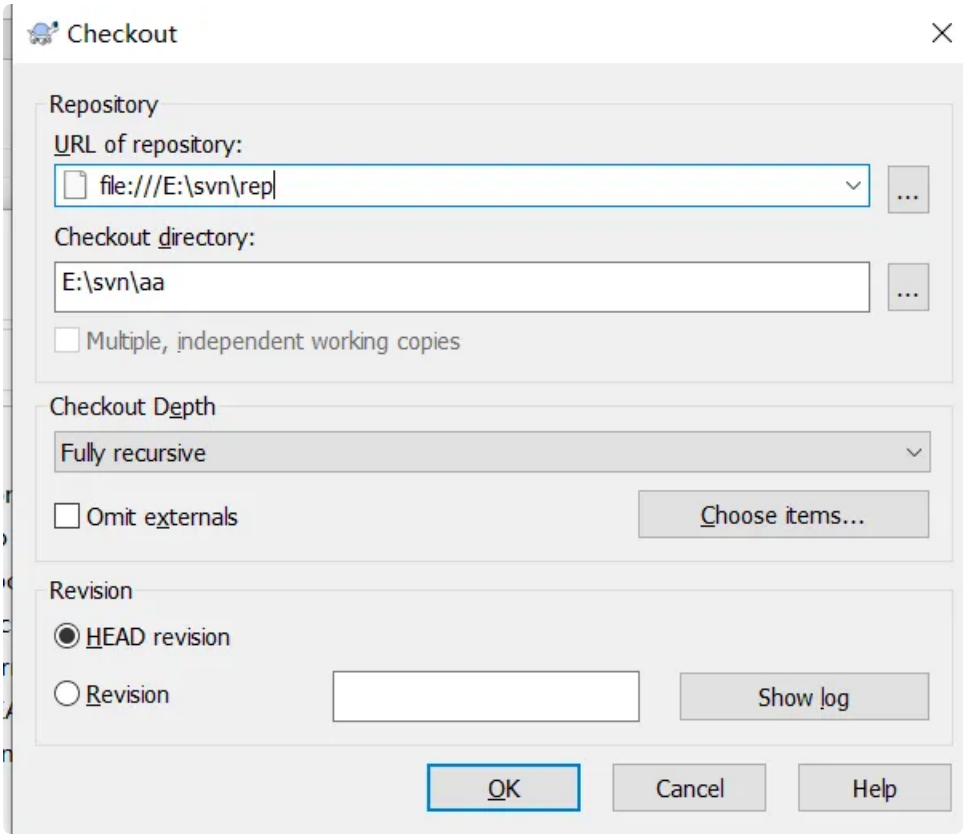

Properties for /svn/rep1/
Security
Hooks
Delegation
Details
Group or user name:
Name
Permissions
Everyone
Read Only
user1
Read / Write
添加用户
Add...
Remove
Permissions
修改权限
Inherit from parent
继承父目录权限
No Access
无权限
Read Only
仅可读
Read / Write
可读写
Learn more about access control and permissions
确定
取消
应用(A)

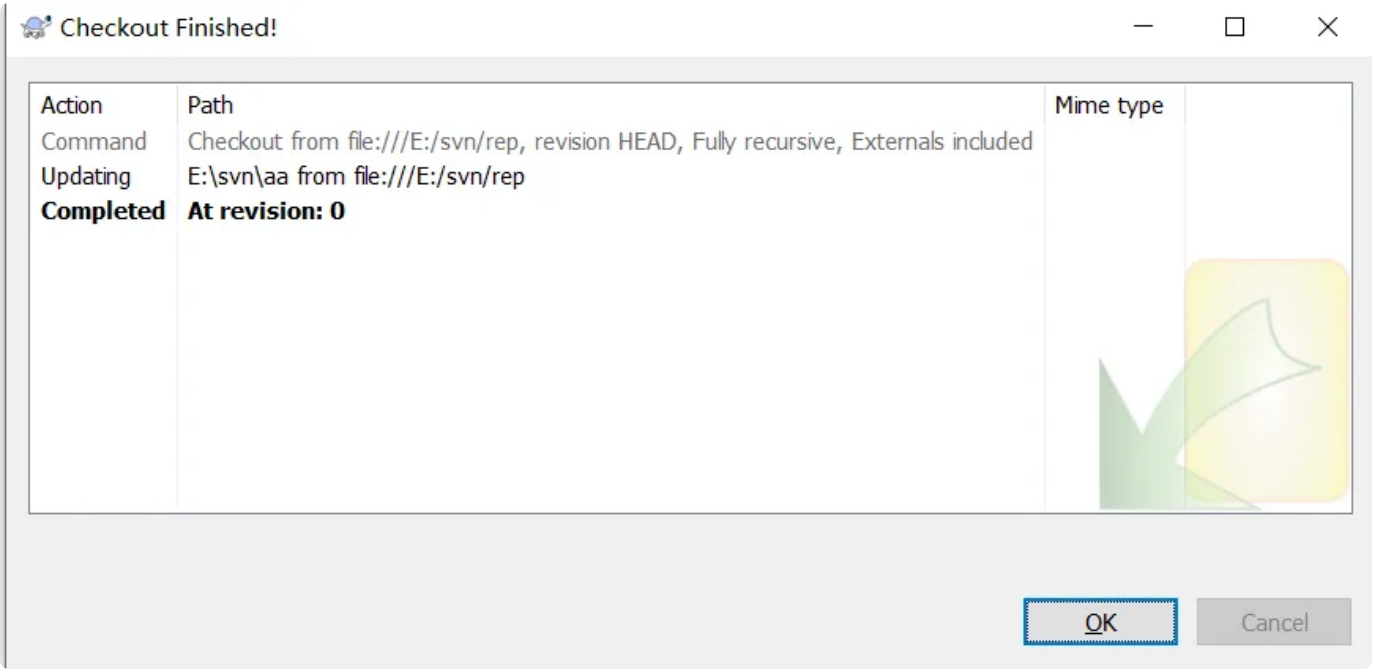
1.5 coding

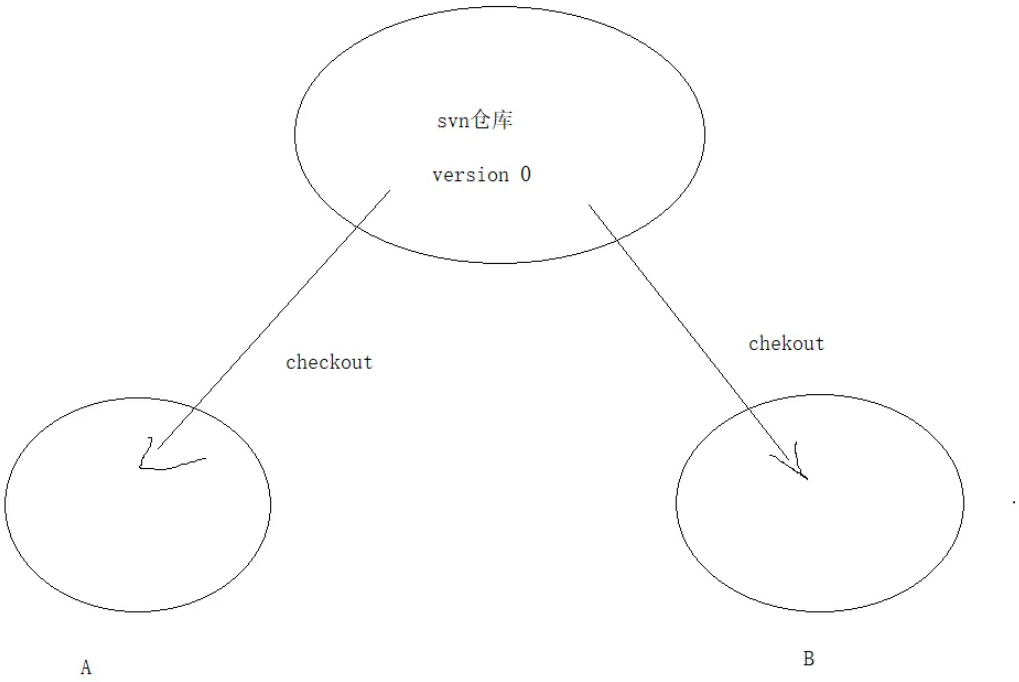


1.6 svn相关使用

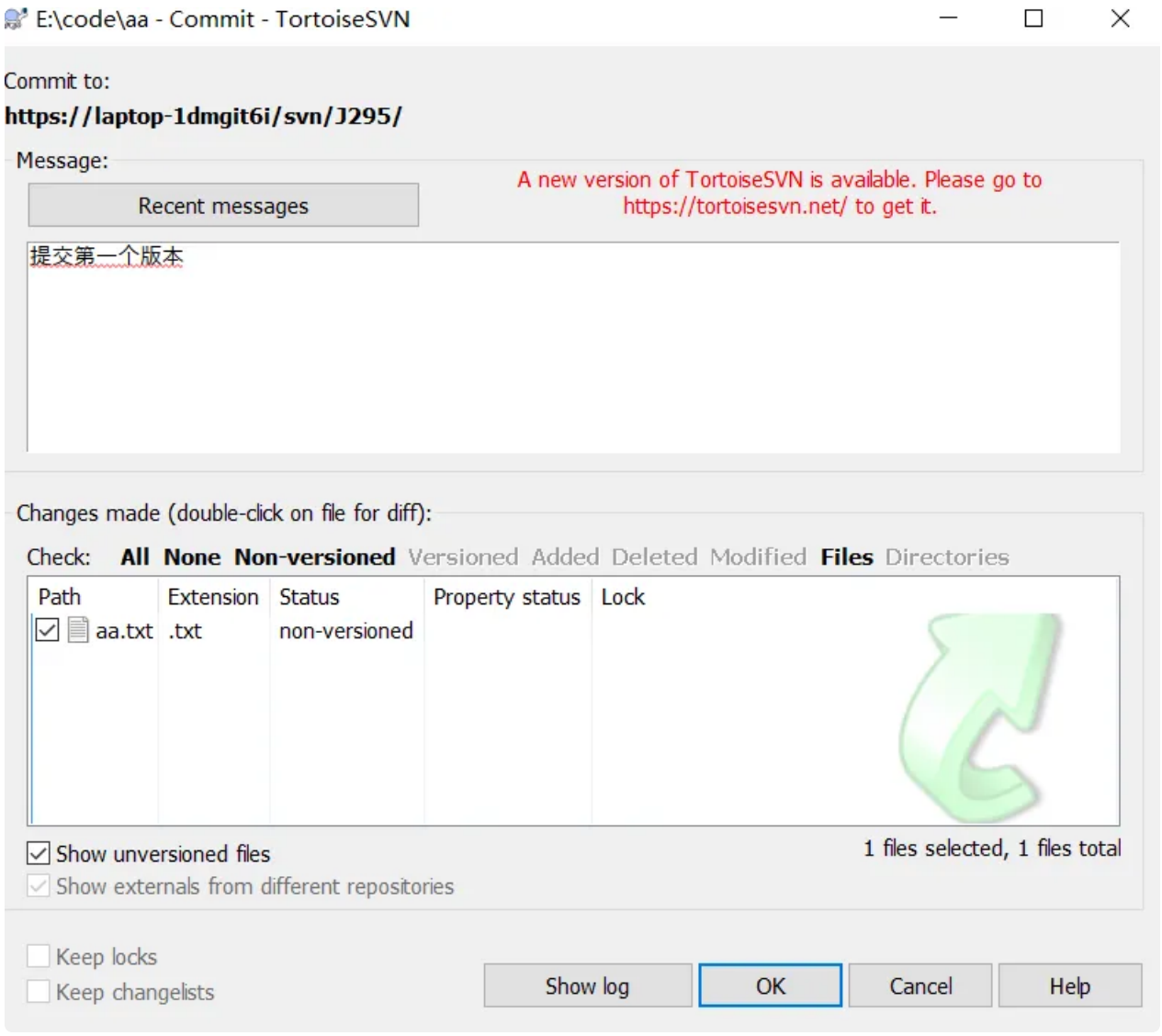
1.6.1 检出仓库的代码到本地文件夹

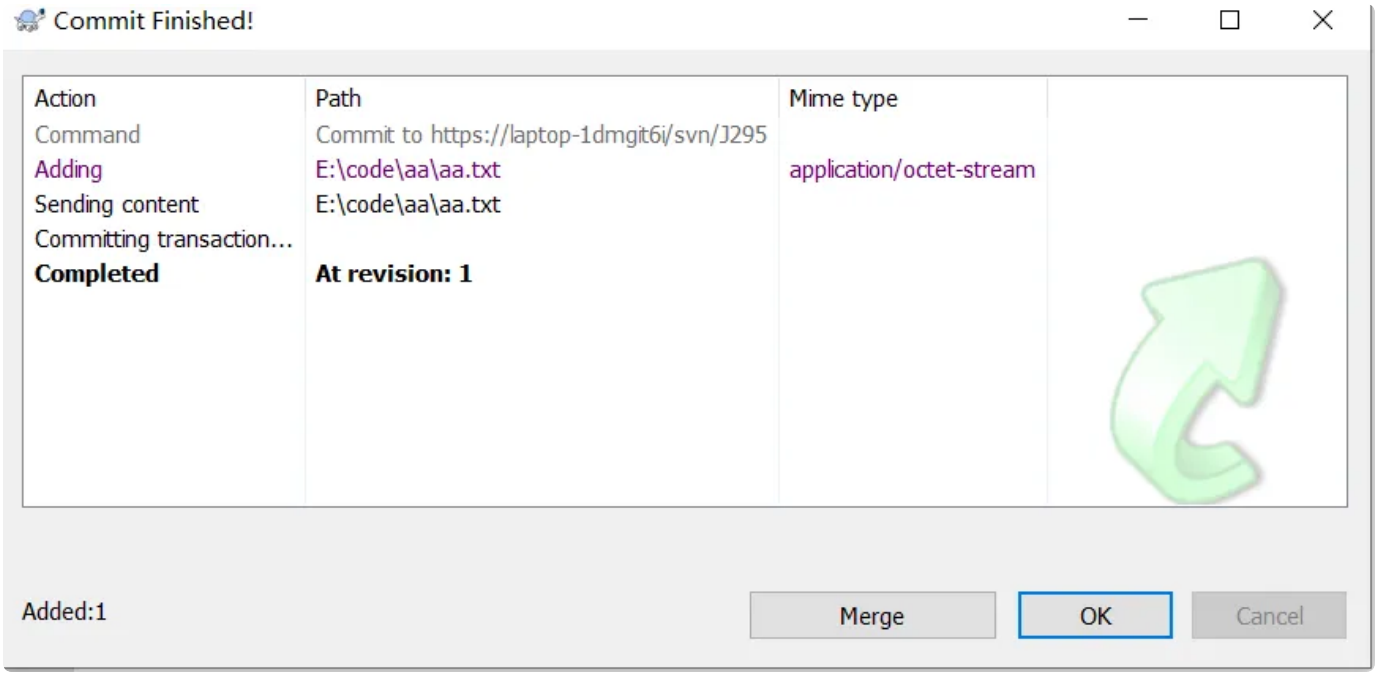

Checkout
Repository
URL of repository:
file:///E:\svn\rep
Checkout directory:
E:\svn\aa
Multiple, independent working copies
Checkout Depth
Fully recursive
Omit externals
Choose items...
Revision
HEAD revision
Revision
Show log
OK
Cancel
Help


Checkout Finished!
Action
Path
Mime type
Command
Checkout from file:///E:/svn/rep, revision HEAD, Fully recursive, Externals included
Updating
E:\svn\aa from file:///E:/svn/rep
Completed
At revision: 0
OK
Cancel



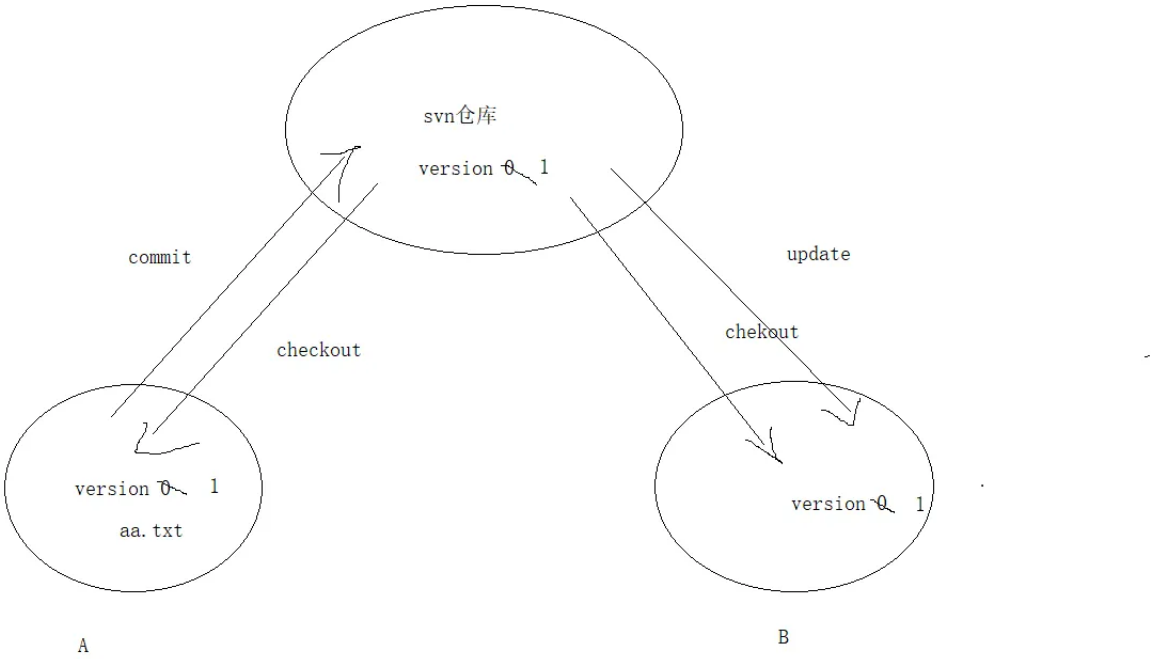
1.6.2 A提交代码到仓库


E:\code\aa - Commit - TortoiseSVN
Commit to:
https://laptop-1dmgit6i/svn/J295/
Message:
Recent messages
A new version of TortoiseSVN is available. Please go to https://tortoisesvn.net/ to get it.
提交第一个版本
Changes made (double-click on file for diff):
Check: All None Non-versioned Versioned Added Deleted Modified Files Directories
Path
Extension
Status
Property status
Lock
aa.txt
.txt
non-versioned
Show unversioned files
Show externals from different repositories
1 files selected, 1 files total
Keep locks
Keep changelists
Show log
OK
Cancel
Help



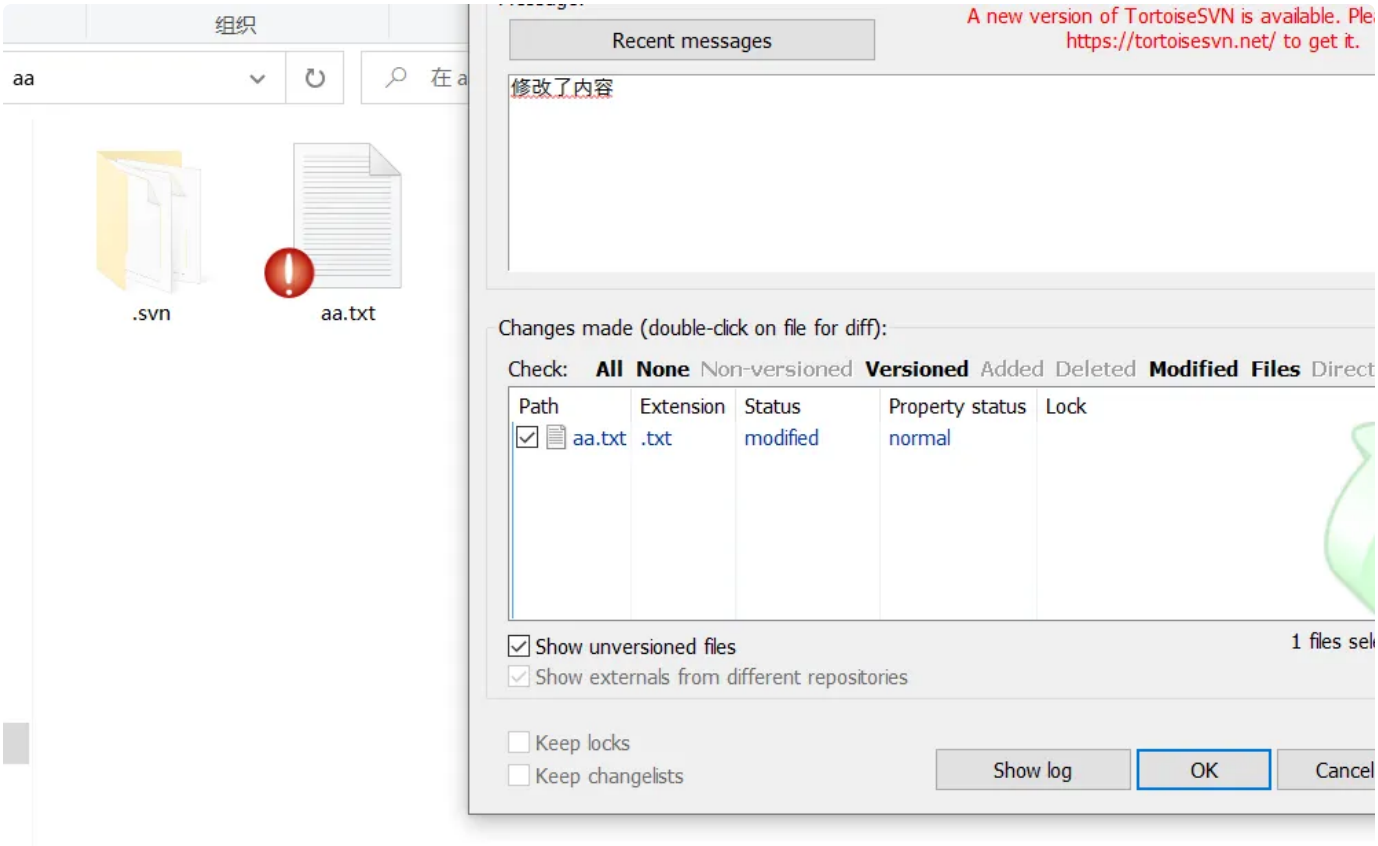
1.6.3 B update操作

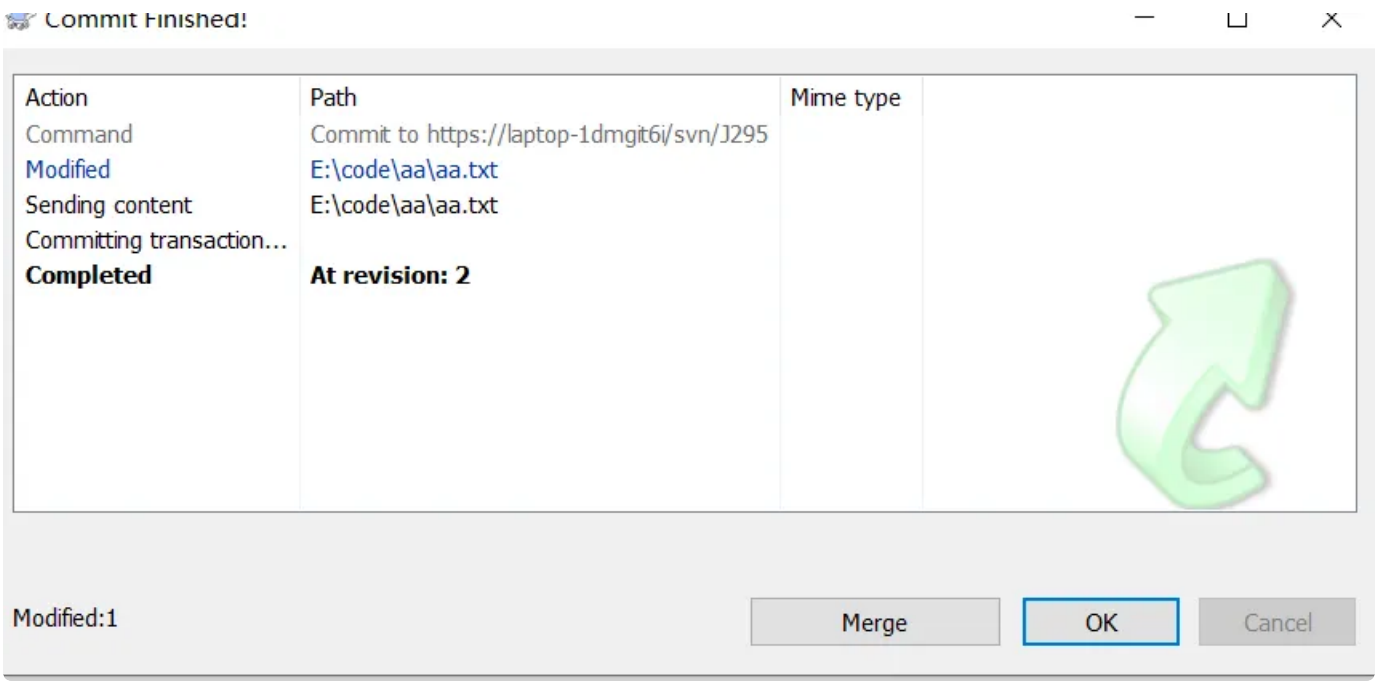
svn



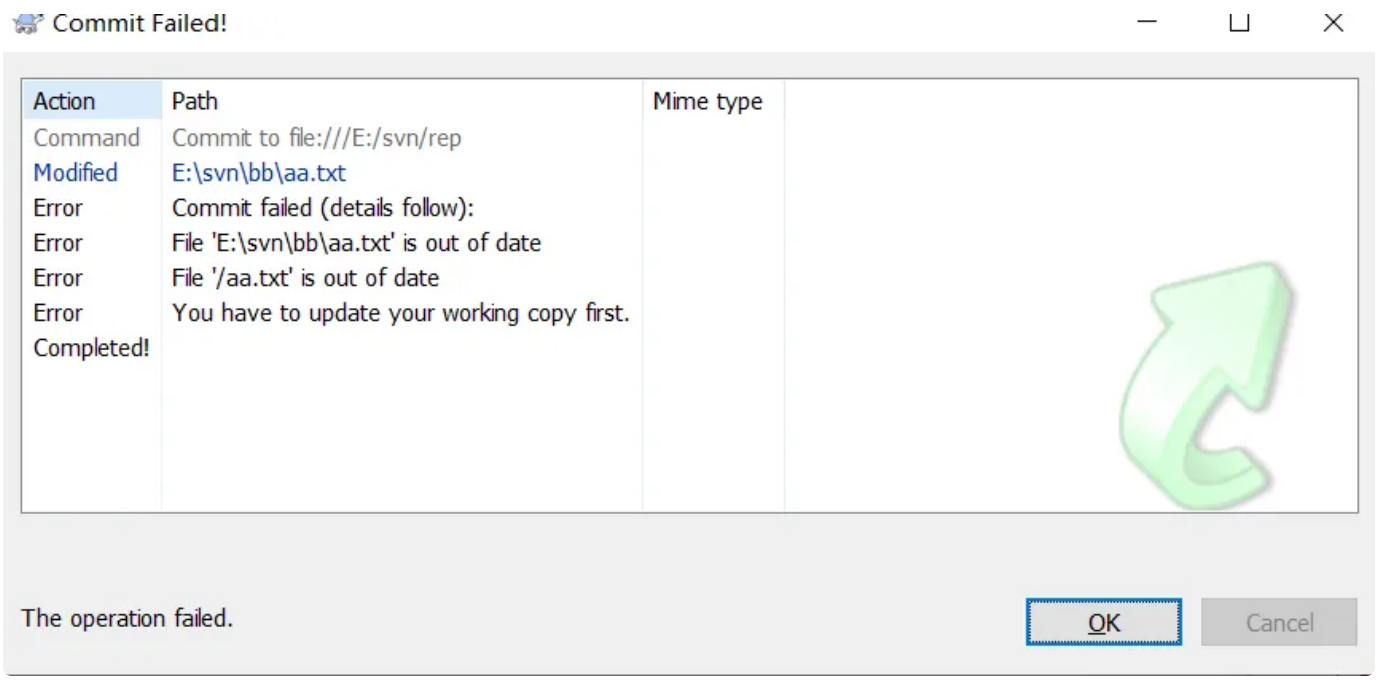
1.6.4 Svn解决冲突

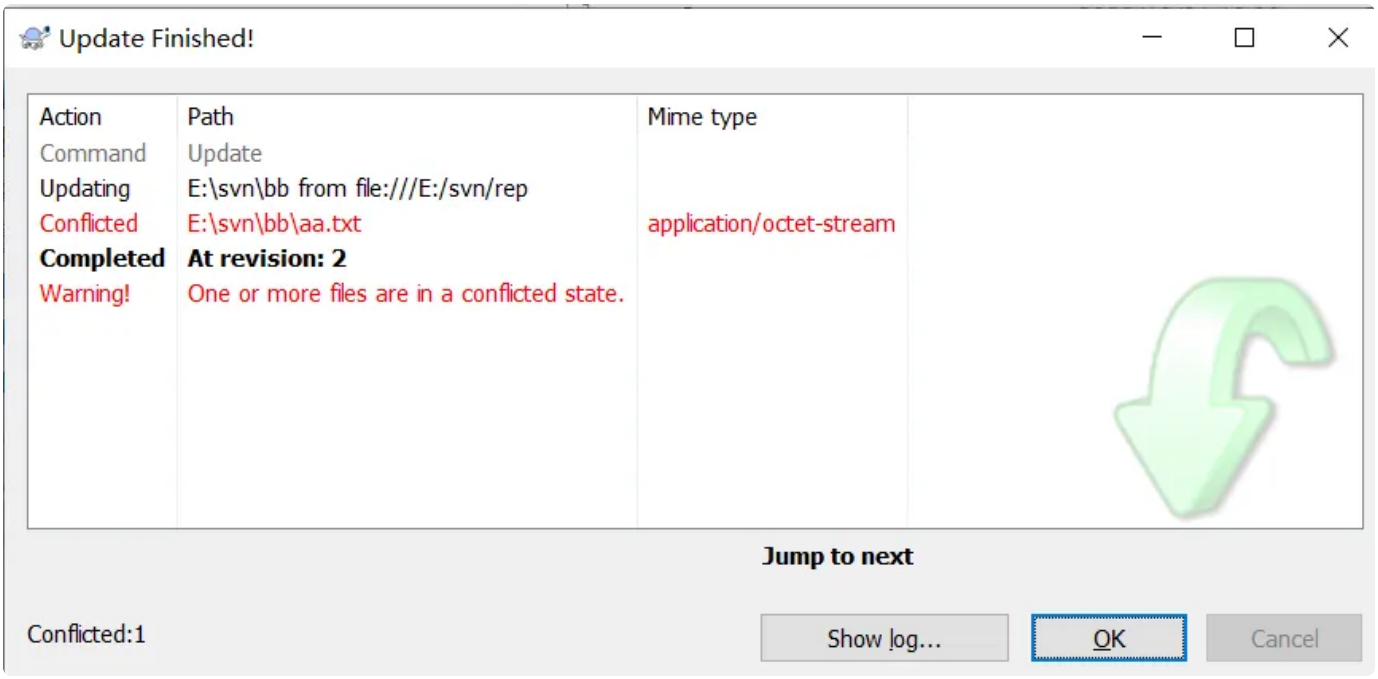
修改了内容也要提交

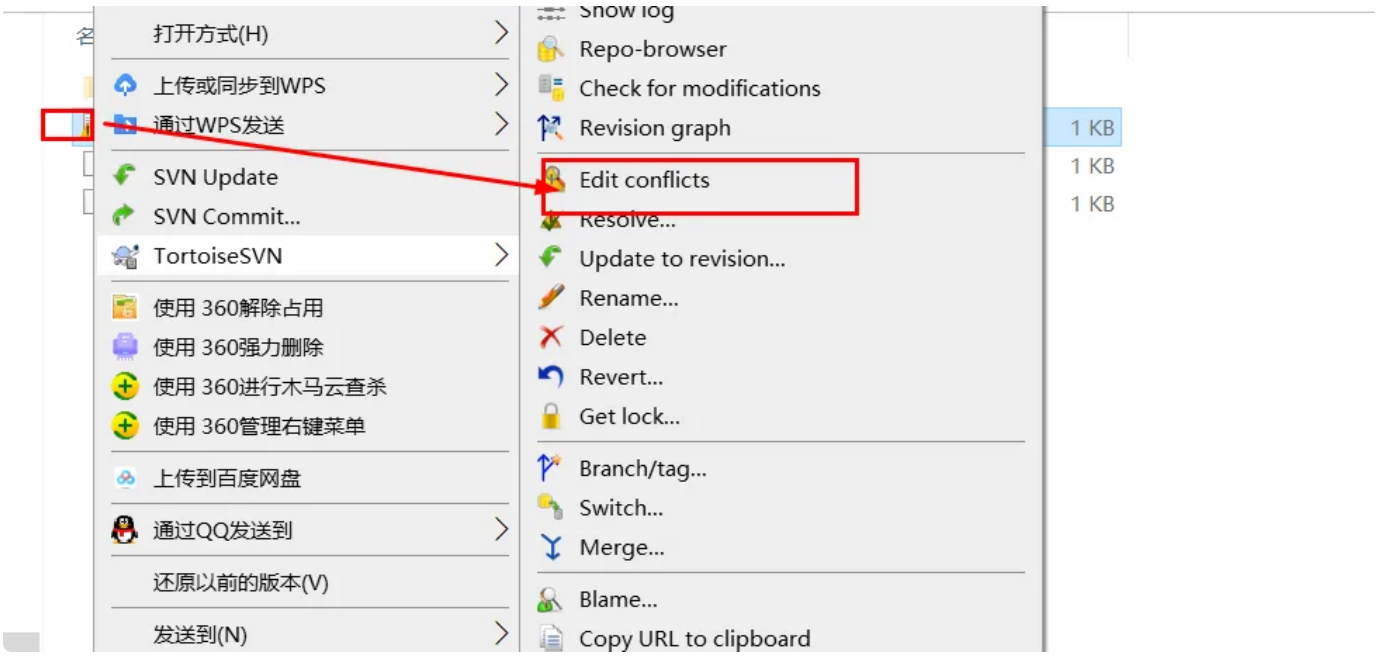


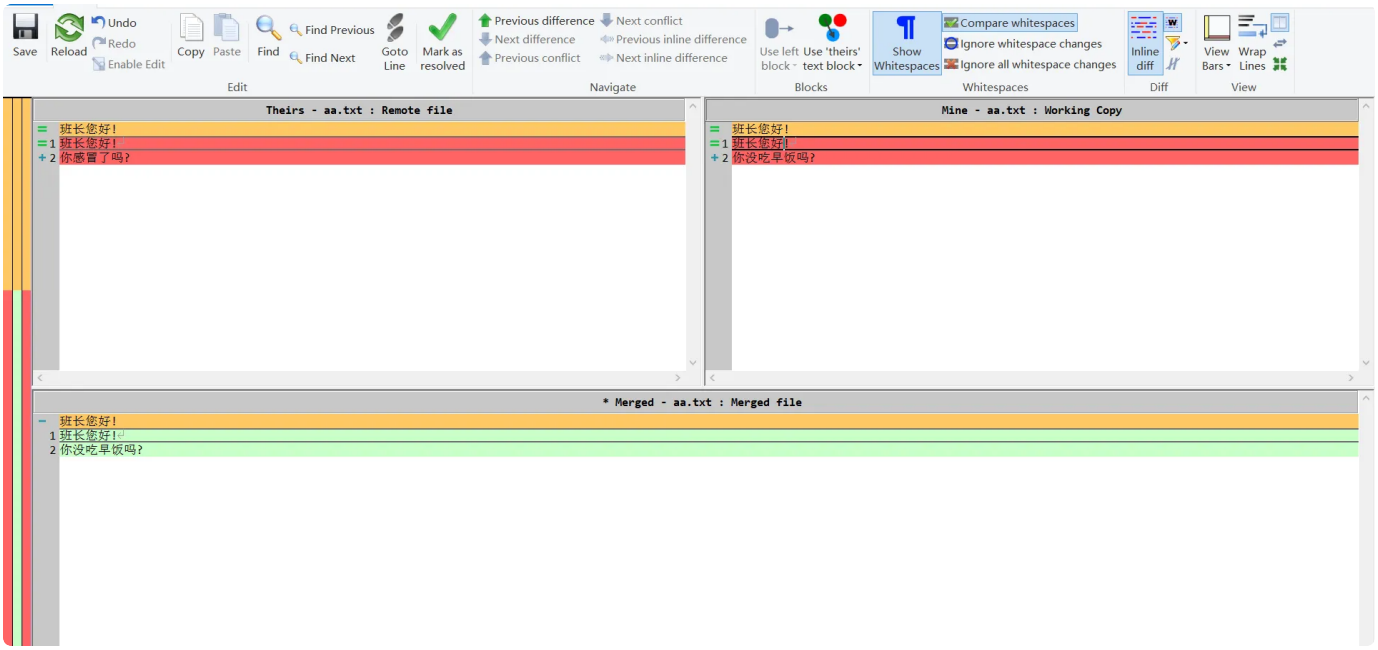

Commit Finished!
Action
Path
Mime type
Command
Commit to https://laptop-1dmgit6i/svn/J295
Modified
E:\code\aa\aa.txt
Sending content
E:\code\aa\aa.txt
Committing transaction...
Completed
At revision: 2
Modified:1
Merge
OK
Cancel

BB也修改了第二行


Commit Failed!
Action
Path
Mime type
Command
Commit to file:///E:/svn/rep
Modified
E:\svn\bb\aa.txt
Error
Commit failed (details follow):
Error
File 'E:\svn\bb\aa.txt' is out of date
Error
File '/aa.txt' is out of date
Error
You have to update your working copy first.
Completed!
The operation failed.
OK
Cancel


Update Finished!
Action
Path
Mime type
Command
Update
Updating
E:\svn\bb from file:///E:/svn/rep
Conflicted
E:\svn\bb\aa.txt
application/octet-stream
Completed
At revision: 2
Warning!
One or more files are in a conflicted state.
Jump to next
Conflicted:1
Show log...
OK
Cancel


打开方式(H)
上传或同步到WPS
通过WPS发送
SVN Update
SVN Commit...
TortoiseSVN
使用 360解除占用
使用 360强力删除
使用 360进行木马云查杀
使用 360管理右键菜单
上传到百度网盘
通过QQ发送到
还原以前的版本(V)
发送到(N)
Show log
Repo-browser
Check for modifications
Revision graph
Edit conflicts
Resolve...
Update to revision...
Rename...
Delete
Revert...
Get lock...
Branch/tag...
Switch...
Merge...
Blame...
Copy URL to clipboard
1 KB
1 KB
1 KB



怎么减少冲突?

模块开发

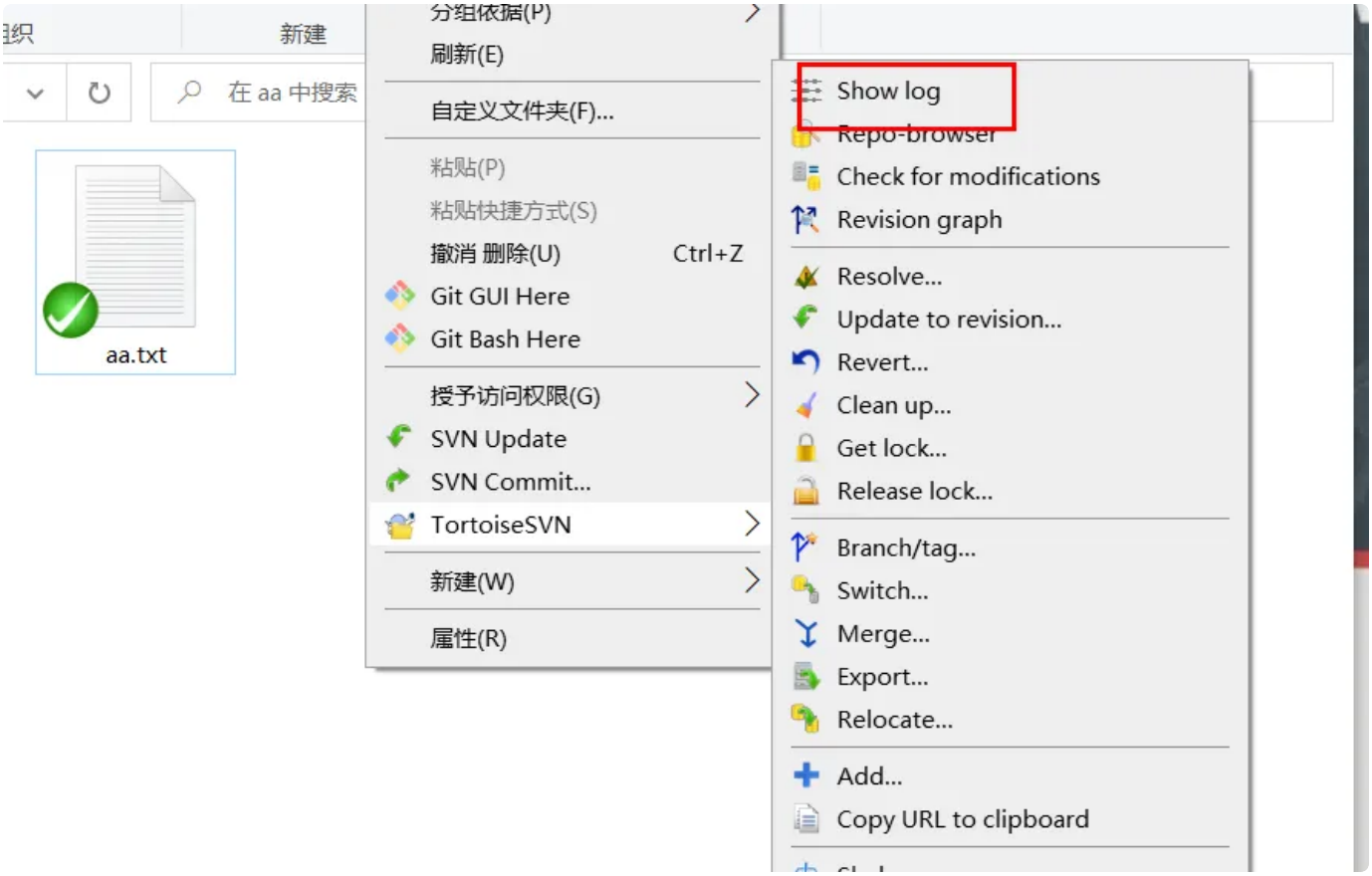
不能去修改别人的代码

用户模块

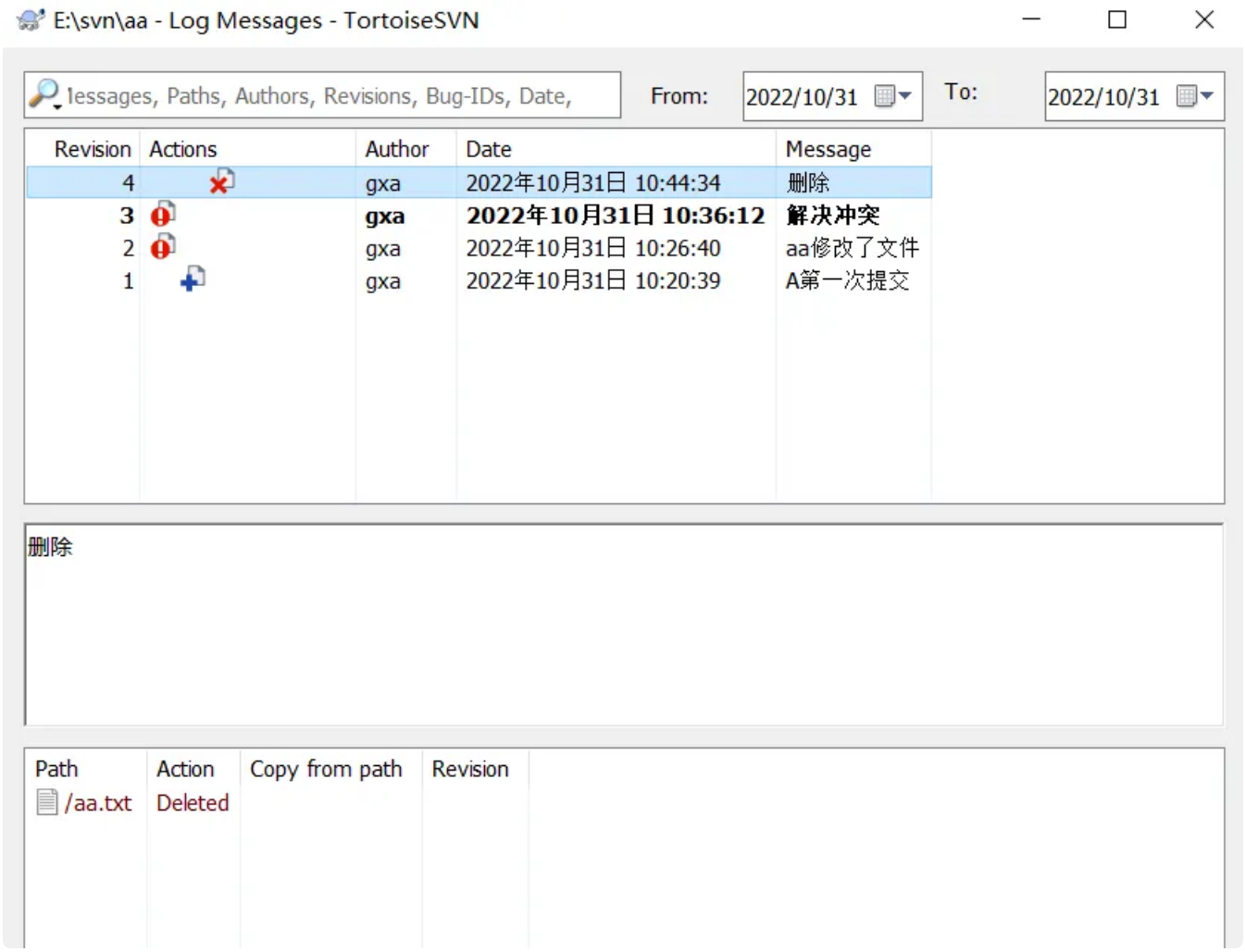
部门模块

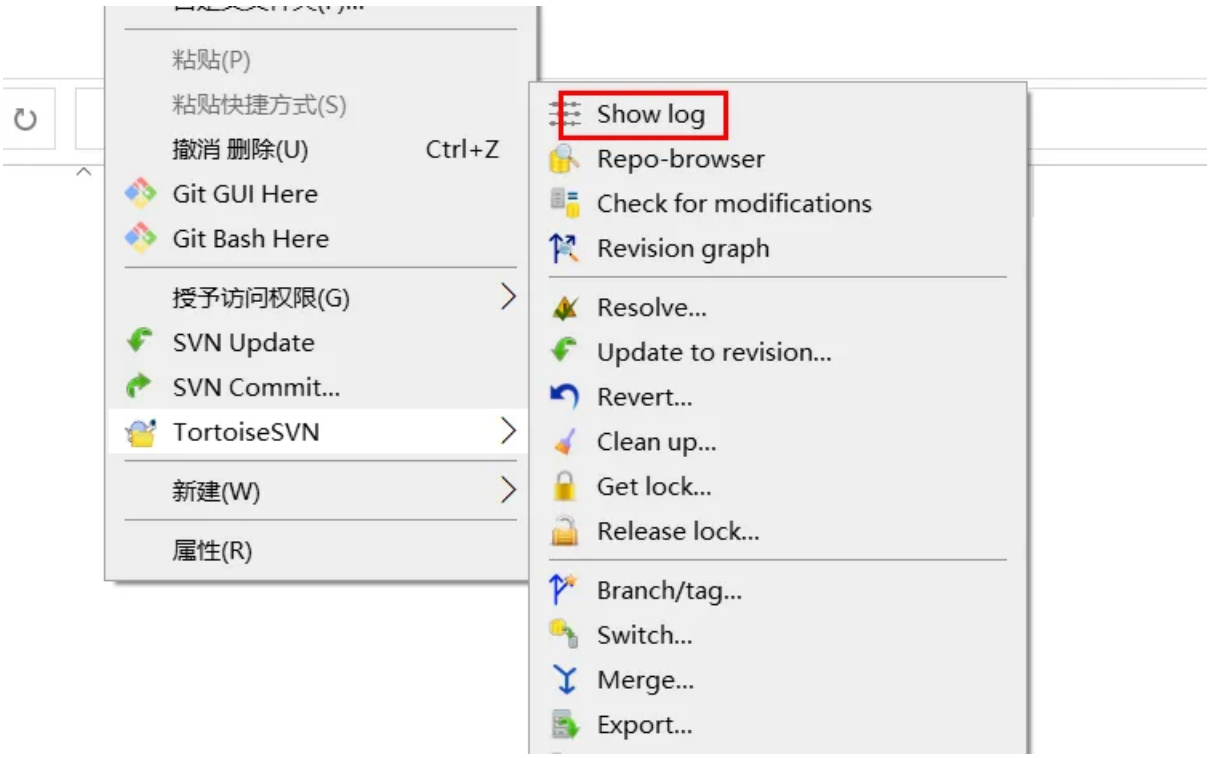
1.6.5 svn历史记录

删除文件

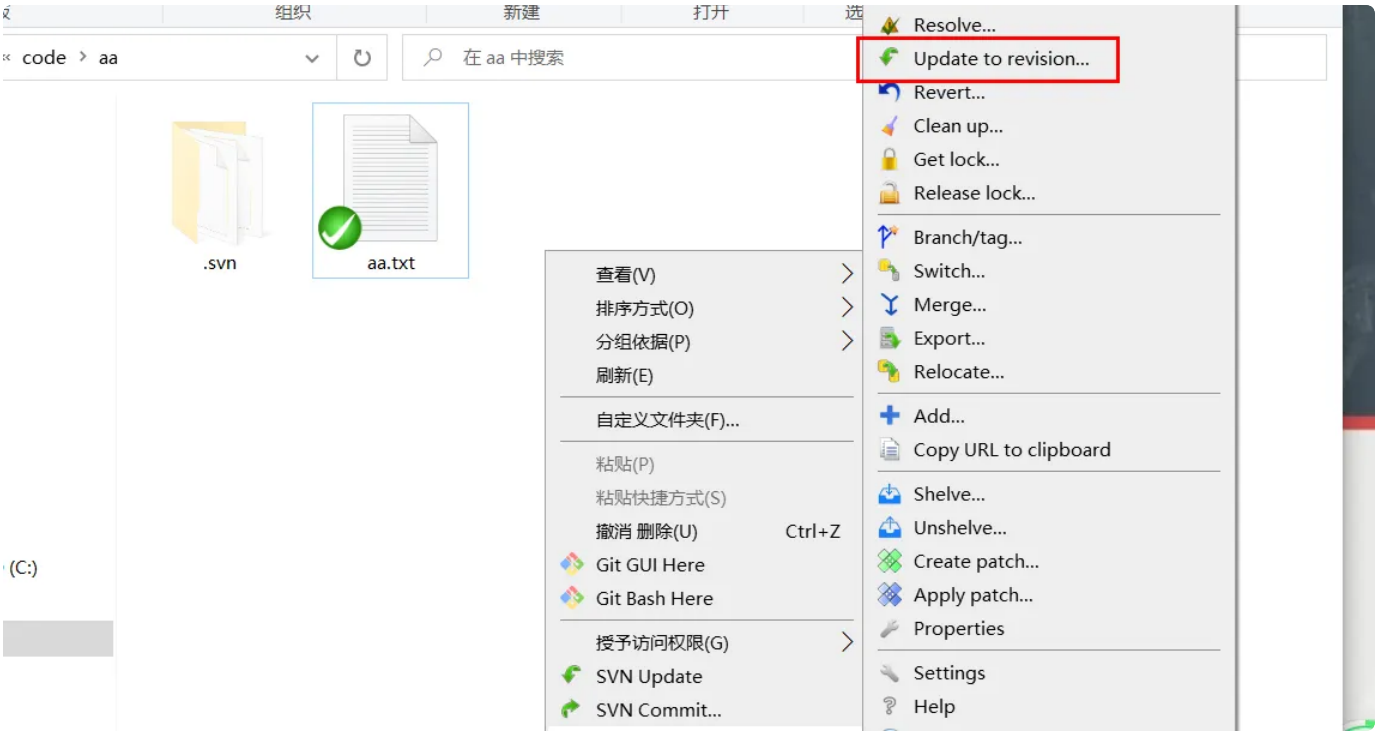

新建
在 aa 中搜索
aa.txt
刷新(E)
自定义文件夹(F)...
粘贴(P)
粘贴快捷方式(S)
撤消 删除(U) Ctrl+Z
Git GUI Here
Git Bash Here
授予访问权限(G)
SVN Update
SVN Commit...
TortoiseSVN
新建(W)
属性(R)
Show log
Repo-browser
Check for modifications
Revision graph
Resolve...
Update to revision...
Revert...
Clean up...
Get lock...
Release lock...
Branch/tag...
Switch...
Merge...
Export...
Relocate...
Add...
Copy URL to clipboard

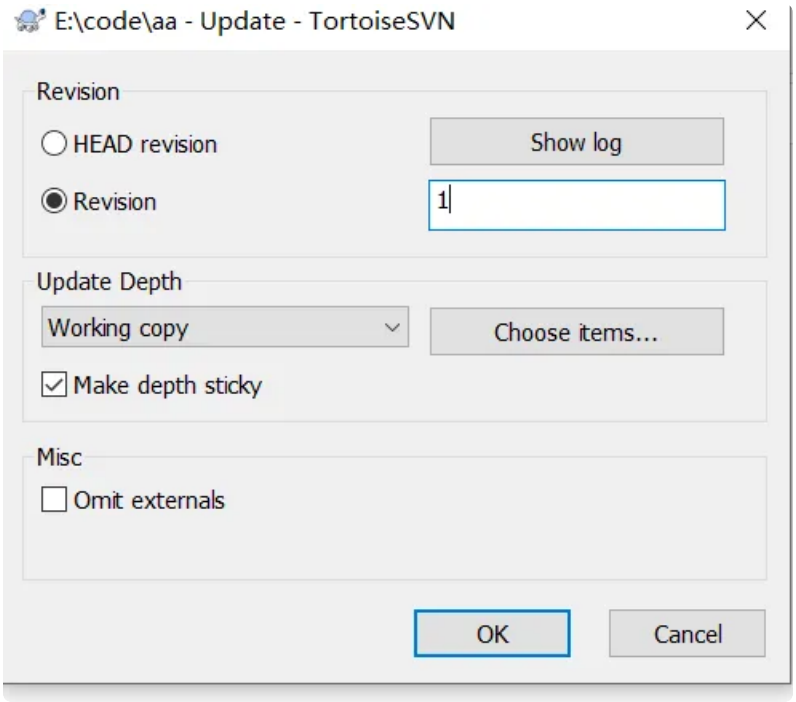
查询历史记录


E:\svn\aa - Log Messages - TortoiseSVN
1essages, Paths, Authors, Revisions, Bug-IDs, Date,
From:
2022/10/31
To:
2022/10/31
Revision
Actions
Author
Date
Message
4
gxa
2022年10月31日 10:44:34
删除
3
gxa
2022年10月31日 10:36:12
解决冲突
2
gxa
2022年10月31日 10:26:40
aa修改了文件
1
gxa
2022年10月31日 10:20:39
A第一次提交
删除
Path
Action
Copy from path
Revision
/aa.txt
Deleted


粘贴(P)
粘贴快捷方式(S)
撤消 删除(U)
Ctrl+Z
Git GUI Here
Git Bash Here
授予访问权限(G)
SVN Update
SVN Commit...
TortoiseSVN
新建(W)
属性(R)
Show log
Repo-browser
Check for modifications
Revision graph
Resolve...
Update to revision...
Revert...
Clean up...
Get lock...
Release lock...
Branch/tag...
Switch...
Merge...
Export...

1.6.6 版本恢复


组织
新建
打开
选
code › aa
在 aa 中搜索
.svn
aa.txt
(C:)
查看(V)
排序方式(O)
分组依据(P)
刷新(E)
自定义文件夹(F)...
粘贴(P)
粘贴快捷方式(S)
撤消 删除(U) Ctrl+Z
Git GUI Here
Git Bash Here
授予访问权限(G)
SVN Update
SVN Commit...
Resolve...
Update to revision...
Revert...
Clean up...
Get lock...
Release lock...
Branch/tag...
Switch...
Merge...
Export...
Relocate...
Add...
Copy URL to clipboard
Shelve...
Unshelve...
Create patch...
Apply patch...
Properties
Settings
Help


E:\code\aa - Update - TortoiseSVN
Revision
HEAD revision
Show log
Revision
1
Update Depth
Working copy
Choose items...
Make depth sticky
Misc
Omit externals
OK
Cancel