DEVOPS ASSIGNMENT 2

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CCVT B1

SUBVERSION

Subversion (SVN)

Apache Subversion (often referred to as SVN) is a version control system that allows you to manage and track changes to your files and directories over time. Below is a step-by-step guide to install and use Subversion.

1. Install Apache Subversion

On Windows

1. Download VisualSVN Server (recommended):

- Download from [VisualSVN Server](#).

- Run the installer and follow the setup wizard to configure the server, repository location, and users.

2. Command-line SVN Client:

- Install TortoiseSVN from [TortoiseSVN](#) to get a graphical client and command-line tools.

On Linux

1. Update your package index:

sudo apt update # For Debian/Ubuntu

sudo yum update # For CentOS/RHEL

Linux

1. Setting Up SVN Server with svnserve

Step 1: Install Subversion

On a Linux system, install Subversion using your package manager:

sudo apt update

sudo apt install subversion

Step 2: Create a Repository

Create a directory for your repositories and initialize a new repository:

sudo mkdir -p /var/svn/repos

sudo svnadmin create /var/svn/repos/myrepo

Step 3: Configure svnserve

Edit the svnserve.conf file to configure access:

sudo nano /var/svn/repos/myrepo/conf/svnserve.conf

Make the following changes:

[general]

anon-access = none   # Disable anonymous access

auth-access = write   # Allow authenticated users to write

password-db = passwd   # Use the passwd file for authentication

Step 4: Set Up Users

Edit the passwd file to add users:

sudo nano /var/svn/repos/myrepo/conf/passwd

Add a user:

[users]

alice = alicepassword

bob = bobpassword

Step 5: Start svnserve

Start the svnserve daemon:

sudo svnserve -d -r /var/svn/repos

The -d flag runs it in daemon mode, and -r specifies the root directory for repositories.

2. Common SVN Commands

Task 1: Check Out a Repository

To check out the repository to your local machine:

svn checkout svn://localhost/myrepo --username alice

You'll be prompted for the password.

Task 2: Add Files to the Repository

Create a new file and add it to the repository:

cd myrepo

echo "Hello, SVN!" > file.txt

svn add file.txt

svn commit -m "Added file.txt"

Task 3: Update Your Working Copy

To update your working copy with the latest changes:

svn update

Task 4: View Repository Status

Check the status of your working copy:

svn status

Task 5: View Change History

View the commit history of the repository:

svn log

Task 6: Create a Branch (before that create trunk as shown in next slide)

Create a branch for new development:

svn copy svn://localhost/myrepo/trunk svn://localhost/myrepo/branches/feature-branch -m "Creating feature branch"

Task 7: Switch to a Branch

Switch your working copy to the new branch:

svn switch svn://localhost/myrepo/branches/feature-branch

Task 8: Merge Changes

Merge changes from the branch back to the trunk:

svn merge svn://localhost/myrepo/branches/feature-branch

svn commit -m "Merged feature-branch into trunk"

Task 9: Resolve Conflicts

If there are conflicts during an update or merge, resolve them:

svn resolve --accept working file.txt

Task 10: Delete a File

Delete a file and commit the change:

svn delete file.txt

svn commit -m "Deleted file.txt"

```
nabvm@Arnabvm:~$ sudo apt update
[sudo] password for nabvm:
Hit:1 http://in.archive.ubuntu.com/ubuntu jammy InRelease
Get:2 http://in.archive.ubuntu.com/ubuntu jammy-updates InRelease [128 kB]
Get:3 http://in.archive.ubuntu.com/ubuntu jammy-backports InRelease [127 kB]
Get:4 http://in.archive.ubuntu.com/ubuntu jammy-updates/main i386 Packages [752
kB]
Get:5 http://in.archive.ubuntu.com/ubuntu jammy-updates/main amd64 Packages [2,
16 kB]
Get:6 http://in.archive.ubuntu.com/ubuntu jammy-updates/main Translation-en [38
 kB]
Get:7 http://in.archive.ubuntu.com/ubuntu jammy-updates/main amd64 DEP-11 Metad
ta [103 kB]
Get:8 http://in.archive.ubuntu.com/ubuntu jammy-updates/restricted amd64 Packag
s [2,944 kB]
Get:9 http://in.archive.ubuntu.com/ubuntu jammy-updates/restricted Translation-
n [515 kB]
Get:10 http://in.archive.ubuntu.com/ubuntu jammy-updates/restricted amd64 DEP-1
 Metadata [212 B]
Get:11 http://in.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 Package
 [1,187 kB]
Get:12 http://in.archive.ubuntu.com/ubuntu jammy-updates/universe i386 Packages
[757 kB]
Get:13 http://in.archive.ubuntu.com/ubuntu jammy-updates/universe Translation-e
```

```
550 kB]
Get:34 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 Packages
[961 kB]
Get:35 http://security.ubuntu.com/ubuntu jammy-security/universe Translation-en
[205 kB]
Get:36 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 DEP-11 Me
tadata [125 kB]
Get:37 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 DEP-11
Metadata [208 B]
Fetched 19.1 MB in 15s (1,233 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
286 packages can be upgraded. Run 'apt list --upgradable' to see them.
nabvm@Arnabvm:~$ sudo apt install subversion
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
subversion is already the newest version (1.14.1-3ubuntu0.22.04.1).
0 upgraded, 0 newly installed, 0 to remove and 286 not upgraded.
nabvm@Arnabvm:~$ sudo mkdir -p /var/svn/repos
nabvm@Arnabvm:~$ sudo svnadmin create /var/svn/repos/myrepo
svnadmin: E165002: '/var/svn/repos/myrepo' is an existing repository
nabvm@Arnabvm:~$ S
```

```
Building dependency tree... Done
Reading state information... Done
286 packages can be upgraded. Run 'apt list --upgradable' to see them.
nabvm@Arnabvm:~$ sudo apt install subversion
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
subversion is already the newest version (1.14.1-3ubuntu0.22.04.1).
0 upgraded, 0 newly installed, 0 to remove and 286 not upgraded.
nabvm@Arnabvm:~$ sudo mkdir -p /var/svn/repos
nabvm@Arnabvm:~$ sudo svnadmin create /var/svn/repos/myrepo
svnadmin: E165002: '/var/svn/repos/myrepo' is an existing repository
nabvm@Arnabvm:~$ Ssudo nano /var/svn/repos/myrepo/conf/svnserve.conf
Command 'Ssudo' not found, did you mean:
  command 'sudo' from deb sudo (1.9.9-1ubuntu2.4)
  command 'sudo' from deb sudo-ldap (1.9.9-1ubuntu2.4)
Try: sudo apt install <deb name>
nabvm@Arnabvm:~$ ^C
nabvm@Arnabvm:~$ sudo apt install <deb name>
bash: syntax error near unexpected token `newline'
nabvm@Arnabvm:~$ sudo nano /var/svn/repos/myrepo/conf/svnserve.conf
nabvm@Arnabvm:~$ sudo nano /var/svn/repos/myrepo/conf/svnserve.conf
nabvm@Arnabvm:~$ sudo nano /var/svn/repos/myrepo/conf/passwd
```

```
nabvm@Arnabvm:~$ sudo nano /var/svn/repos/myrepo/conf/svnserve.conf
nabvm@Arnabvm:~$ sudo nano /var/svn/repos/myrepo/conf/svnserve.conf
nabvm@Arnabvm:~$ sudo nano /var/svn/repos/myrepo/conf/passwd
nabvm@Arnabvm:~$ sudo svnserve -d -r /var/svn/repos
nabvm@Arnabvm:~$ svn checkout svn://localhost/myrepo --username alice
Checked out revision 0.
nabvm@Arnabvm:~$ cd myrepo
nabvm@Arnabvm:~/myrepo$ echo "Hello, SVN!" > file.txt
nabvm@Arnabvm:~/myrepo$ svn add file.txt
A         file.txt
nabvm@Arnabvm:~/myrepo$ svn commit -m "Added file.txt"
svn: E170001: Commit failed (details follow):
svn: E170001: Authorization failed
nabvm@Arnabvm:~/myrepo$ svn update
Updating '.':
At revision 0.
nabvm@Arnabvm:~/myrepo$ svn status
A       file.txt
nabvm@Arnabvm:~/myrepo$ svn log
-----------------------------------------------------------------------
nabvm@Arnabvm:~/myrepo$ svn copy svn://localhost/myrepo/trunk svn://localhost/my
repo/branches/feature-branch -m "Creating feature branch"
```

```
nabvm@Arnabvm:~/myrepo$ svn switch svn://localhost/myrepo/branches/feature-branc
h
```

```
nabvm@Arnabvm:~/myrepo$ svn commit -m "Merged feature-branch into trunk"
```

```
nabvm@Arnabvm:~/myrepo$ svn merge svn://localhost/myrepo/branches/feature-branch
```

```
nabvm@Arnabvm:~/myrepo$ svn commit -m "Merged feature-branch into trunk"
```

```
nabvm@Arnabvm:~/myrepo$ svn resolve --accept working file.txt
nabvm@Arnabvm:~/myrepo$ svn delete file.txt
```

```
nabvm@Arnabvm:~/myrepo$ svn commit -m "Deleted file.txt"
```