Neovim Plugin Demo Script

Prerequisites

- Servers running: `make dev-all`

- Browser open to: `http://localhost:8080/`

- Neovim ready in terminal

Demo Steps

1. Setup Browser Document

1. Open browser to http://localhost:8080/
2. Type some initial content (5-10 lines)
3. Note the document ID in the URL
4. Leave browser visible on screen

2. Connect Neovim

```vim
" Open vim
vim

" Load plugin
:set runtimepath+=~/lab/collab-editor/nvim
:lua require('collab-editor').setup({ debug = false })

" Connect to servers
:CollabConnect

" Open the same document (use ID from browser URL)
:CollabOpen <document-id>
```

3. Demonstrate Vim to Browser Sync

```vim
" In vim, press 'i' for insert mode
" Type: "This line added from Neovim"
" Press Esc


" Show audience: Line appears in browser instantly
```

4. Demonstrate Browser to Vim

```
" In browser, type: "This line added from browser"
" Show audience: Line appears in vim with "Jennifer" cursor indicator
```

5. Demonstrate Simultaneous Editing

```
" Type in vim: "Vim edit on line X"
" Immediately switch to browser and type: "Browser edit on line Y"
" Show: Both edits appear in both places - no conflicts, no overwrites
```

6. Show Remote Cursor Indicator

```
" Move cursor in browser
" Point out: Yellow "Jennifer" marker follows in vim
" Shows real-time awareness of collaborator position
```

7. Show Document Info

```vim
:CollabInfo
" Displays: Connected status, document ID, user info
```

8. Clean Disconnect

```vim
:CollabDisconnect
:q
```

Key Talking Points

- **Real-time sync**: Changes appear instantly, faster than window switching

- **CRDT merging**: Concurrent edits merge automatically without conflicts

- **Remote cursors**: See where collaborators are editing

- **Simple commands**: Only 5 commands needed for full functionality

- **Works with browser**: Vim and web users collaborate seamlessly

- **No conflicts**: Automerge CRDT handles all merge logic

Common Commands Reference

```vim
:CollabConnect        " Connect to collaboration servers
:CollabOpen <id>      " Open existing document
:CollabCreate       " Create new document
:CollabInfo       " Show connection status
:CollabDisconnect       " Disconnect from servers
```

Troubleshooting During Demo

If vim shows empty buffer

- Wait 5-10 seconds for initial sync

- Check browser still has content

- Verify document ID matches

If "cursor" errors appear

- Ignore - cosmetic only, doesn't affect functionality

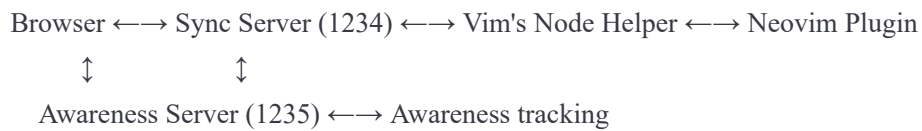- Core sync still works perfectly

If changes don't sync

- Check servers are running: `lsof -i:1234` and `lsof -i:1235`

- Verify both vim and browser have same document ID

- Try disconnecting and reconnecting

Demo Flow Summary

1. Start with browser content visible

2. Open vim and connect (3 commands)

3. Show bidirectional sync (type in both)

4. Highlight remote cursor awareness

5. Demo simultaneous edits merging

6. Show status info

7. Clean disconnect

Total demo time: 3-5 minutes

Technical Architecture (Optional)

```
Browser ←→ Sync Server (1234) ←→ Vim's Node Helper ←→ Neovim Plugin
    ↕              ↕
  Awareness Server (1235) ←→ Awareness tracking
```

- **Sync Server**: Automerge CRDT document synchronization

- **Awareness Server**: User presence and cursor positions

- **Node Helper**: Bridges Automerge protocol to vim

- **Plugin**: Lua code managing vim buffer and commands