Server-Side Source Control

It really can work!

Charlie Arehart
SysteManage
Carehart@systemanage.com

Topics

- Why Source Code Control (SCC)?
- Challenge: remote developer access
- Allaire's attempted solution
- Solving problem for Visual SourceSafe (VSS) users: SourceOffSite (SOS)
- Getting, Using SOS
- Challenges to the SOS
- Coming improvements to SOS

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Systemanage.com

Questions for you

- How many are using some form of source code control?
- How many of those have problems allowing remote developers to access the SCC repository?
- How many have tried to get Allaire's "Server Side Source Code Control" to work?
- How many using SCC are using Visual Source Safe?
- How many are using SourceOffSite?

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Audience

- Primarily VSS users, needing remote access to SCC repository (will explain)
    - There are other SCC programs (MKS, Starbase, PVCS, etc.)
    - Solution offered here applies only to VSS
- If not using SCC at all (whether with VSS or other)
    - You need to learn about SCC
    - It's great, powerful, and more than can be discussed today in detail.

Previous talk on SCC

- For those not familiar with SCC at all
    - I presented a talk here at MD CFUG 3 years ago
        - "Version Control and ColdFusion"
    - Still available on my site at:
        - www.systemanage.com/presentations
        - Also offered associated paper with more details
        - Focus was more on "Starbase" product offered free to CF users by Allaire, prior to CF 3.1
        - Still a useful talk/paper for basics of SCC and setup in Studio
    - Today's presentation is also offered on my site

Why Source Code Control (SCC)?

- Team development challenges
- Problems solved by SCC
- Challenges to using it
    - Cultural
    - Organizational/technical
    - Remote developer access
- Saving your bacon when …

Challenge: remote developer access

- SCC tools came out of client/server world
  - Designed with teams of *LAN-connected* developers in mind
  - Provide means to share repository on a LAN
- CF Developers are often spread out geographically
  - Or simply want to work from home, or on the road
- They are *Internet-connected*, not LAN-connected
  - Need to share repository over the internet

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Allaire's attempt to solve the problem

- ColdFusion Studio has long supported SCC products
  - Can associate a "project" with a SCC provider
  - Can then do check-in/check-out, etc.
- But expects to connect to SCC client on workstation
  - If SCC client can't connect over internet, neither can Studio

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Systemanage.com

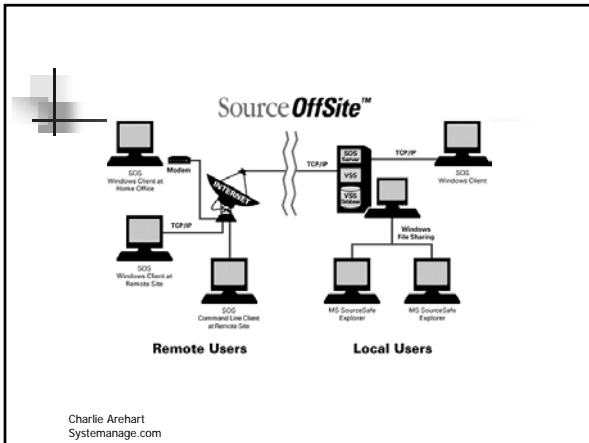# Allaire's attempt to solve the problem (cont.)

- CF4 introduced "server side source code control"
  - Option in administrator, under miscellaneous>source control
  - Relies on CF acting as client to VSS on same server
    - Users connecting to server via Studio RDS would be able to check in/check out
  - Just hasn't proven to work

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Solving the problem for VSS users with a third party tool

- Problem of needing remote access to VSS is not a CF problem, really
- Third-party company created SourceOffSite as solution
  - Provides access to VSS repository for remote clients
  - Also provides client interface for managing
    - Can also connect to it via CF Studio

Benefits

- Allows remote developers to check-out/check-in and all other SCC tasks
  - Remotely, just as if connected to LAN repository
- Secure
  - "Pro" version uses 128 bit encryption

Benefits (cont)

- Fast
  - Not much different than working on LAN (except for transfer of files over network, whose speed will depend on your network connection)
- Robust
  - Written in java (transparent to users, but good to know that it's based on it
  - Though it runs only on windows (95/98/NT/2000)
    - Uses an automation component of VSS

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Getting it, using it

- Available for free 30 day, 10 user trial at sourcegear.com
  - Comes with good doc and trial support
- Has two components
  - Server - to be installed on web server
  - Client – to be installed on machine of remote user

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Server setup

- Presumes you already have VSS installed
  - SOS will provide connection via web to VSS
- Install SOS server component on web server
  - Should either have VSS installed there
    - or be LAN connected to the VSS server
  - Configure for any firewall or proxy, if needed
  - Need also to install VSS client software on the server
    - SOS acts like a VSS client on behalf of remote users
- Generate keys for each user who will use SOS
  - Distribute those to the SOS users

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Client setup

- Install and execute SOS client component
- Provide IP address/host name and port
- Import encryption key provided by server administrator (see previous page)
- Retrieve VSS project tree (done automatically, first time)
  - Doesn't get files, just project tree hierarchy

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Client Interface

- SOS client mimics most of VSS interface
  - Let's look at it
- Can also access from within Studio
  - Need to make configuration in Studio project interface
- There are also Unix and command line interfaces
  - in addition to the Windows client

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Some basic capabilities

- Set working folder
- Get latest version (1 or all in project)
- Check out/in
- Undo checkout
- Show differences
- Show history (get and diff within history)

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Getting/setting up a Diff Utility

- SOS offers no DIFF utility
- But lets you use any you'd like
- Site offers links to such tools
- Can easily configure SOS to use it
  - Options>external programs

Doing basic ops in Studio

- Can do nearly all those basic operations in Studio
- Generally done through "projects" interface in Studio
  - Right-click file, choose source-control
- Can also just double-click file to open it, will be prompted to checkout
  - Checks out even in files tab (no need to use projects tab)
  - But DO need to use projects tab or SOS to checkin

Other SOS capabilities

- Can also use SOS to do typical VSS activities:
  - Add, delete, view, edit, rename files
  - Create projects
  - Share, branch, cloak
- Most of these are supported only via SOS, not within Studio

Getting Code onto Web Server

- The check-in process puts files into VSS
- And they reside, of course, on the developer's machine
- How does the code get onto the web server to be viewed by all developers
  - And users, if desired
- Use VSS Shadow Folders
  - Tells VSS to move copy on check-in to another location.
  - Can be another dir on server, or another server

Developer Testing

- Another question is, where should the developer test their code?
  - Could make them check-in and test on remote server
    - That forces check-in even if code is not working (shadowed to web server)
    - Really bad if other developers then looking at that "shadowed" code
    - Also leads to LOTS of little check-ins, even for minor changes, correction of typos, etc.

Developer Testing (cont.)

- Would be far better for each developer to run their own web server and CF
  - Web servers are free (see Allaire knowledge base article 1374)
  - ColdFusion single-user version included in CF Studio
    - Or could use CF Express, though not with full functionality of CF Professional or Enterprise
- Test locally, then check-in to server

SourceSurf for Reporting

- Sourcesurf is a web service
- Offers reports on SCC activities
- Available as bundle with SOS
  - Installed on server
  - Viewed via browser
- Useful for both admins and developers

Cost

- Costs under $200
  - Licensed per client
    - If only 1 developer needing remote access, you need only 1 license
    - Multiple developers need own licenses
      - Developers can't "share" a license
    - Developers are supposed to have VSS client installed
      - But technically, they don't need to
  - License includes server and client component
    - Need only one install of server component

Challenges with Studio/SOS

- Using Studio and SOS together
  - Check in/out made in one not reflected in the other unless you refresh
- If Studio loses connection to SOS as provider
  - look at the .apf file for the project (an XML file)
  - ensure that scmapping is set correctly

Challenges with Studio/SOS (cont)

- If file is already opened in Studio
    - Double-clicking on files won't prompt to check out

Enhanced capabilities coming in 3.5 of SOS

- Branch, share projects; branch after share
- Pin support
- Support for dialogues before SCC operations
    - VSS offers some things via prompt during operation
    - SOS doesn't currently offer all those dialogs
- Known issue: problem with SOS server and Windows 2000
    - May be fixed in that next release
    - Though it works for us, even in current release

Learning More

- Sourcegear.com site offers lots of info
- There is a mailing list for SOS
- Can learn more about VSS at msdn.microsoft.com/ssafe
    - VSS docs (including Getting Started), support, web casts, faqs, etc
    - No trial, sadly
- Book: Web Mgt w/ VSS
- My previous talk and paper (systemanage.com/presentations/)

Enjoy!