

Deploying CCRC, ClearQuest With or without ClearCase MultiSite

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Abstract

This session focuses on deploying the ClearCase Remote Client (CCRC) and integrating it with a centralised ClearQuest environment. A hybrid environment that removes the need for replicated repositories** and taking advantage of the http based client server communication. Allows developers to access and work on their source controlled artefacts irrespective of their physical location (local, global and remote)

** Will also discuss how CCRC can be deployed if you have are already using ClearCase MultiSite to further extend an organisations development capability

Agenda

- Quick overview of CCRC
 - Flavours of CCRC
- Why CCRC
- Access ClearCase *Anywhere!! (well almost)*
- Integrations
- Deployment models
 - CCRC Only
 - CCRC + ClearQuest / ClearQuest Web / UCM
 - CCRC – ClearCase MultiSite - ClearQuest Web / UCM
 - UCM or Base ClearCase?
 - Caveats (*Has to be some* 😊)
- Strengthening the story
 - What does the future hold



Quick overview of CCRC

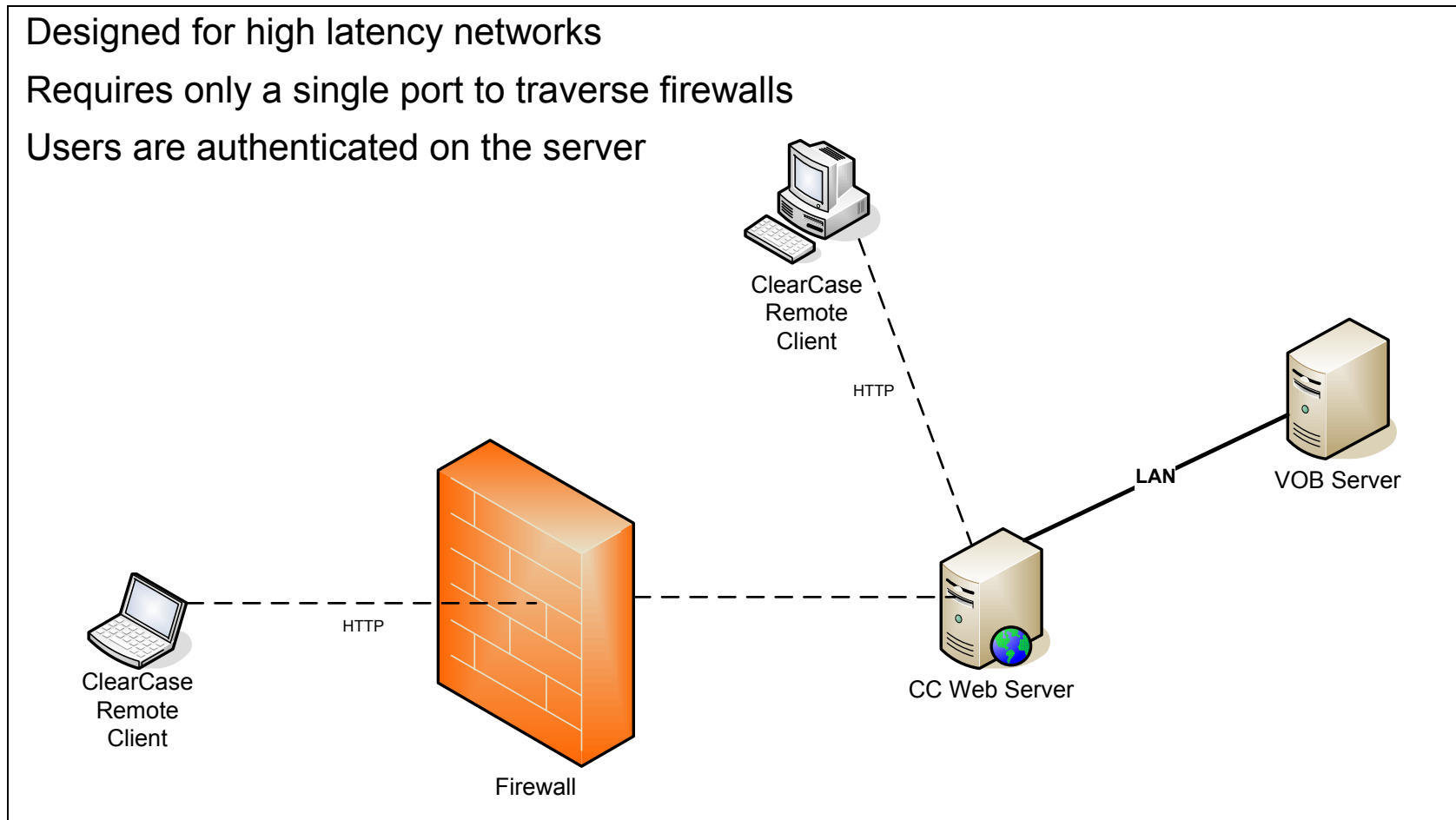
- Available since v2003.06.14 (SR4)!
- *Will become basis for the “first class client”*
 - *Including support for LAN (Dynamic/Snapshot)views, CCRC*
 - *Remote “Dynamic” like views*
- Rich client interface for ClearCase that provides....
 - Improved WAN performance
 - Designed for high latency networks
 - Full lifecycle application development support
 - Enhanced Team integrations with Eclipse and the Rational Software Development Platform
 - Consistent UI for Windows and Unix/Linux platforms
 - Based on Java/Eclipse technology
 - Ease of deployment and security
 - Lightweight client install
 - Server does all authentication and authorization
 - Communications protected by SSL (optional)

Quick overview of CCRC?

Designed for high latency networks

Requires only a single port to traverse firewalls

Users are authenticated on the server



Flavours of CCRC

- *ClearCase Remote Client (“Standalone”)*
 - Meant to serve as an application
 - Good for non (or new to) Eclipse users
 - Provides an install mechanism
 - Available on Windows and Linux
- *ClearCase Remote Client for Eclipse (“plug-in”)*
 - Eclipse 3.0.x/3.1.x compatible
 - Eclipse SDK or Rational IDE (RSA, RAD etc.)
 - Good for Eclipse shops or customers considering Eclipse.
 - Faster install mechanism (Eclipse Base & JRE is already in place)
- ClearCase Client for Visual Studio .NET
 - Snapshot, dynamic, and **Web views**
- WAN feature of the ClearCase Remote Client is compatible with either UCM or base ClearCase
- Supports Windows, Linux/GTK, Sun Solaris/GTK, HP-UX/Motif and IBM-AIX/Motif

Why CCRC ?

- Flexible client configurations – *connect to multiple versions of ClearCase*
- Lower cost of ownership
- Ease of install and deployment
- *Automated update mechanism*
- No dependency of OS login ID to match with CC ID on client
 - No server processes locally (i.e. ALBD etc)
- Same look and feel – Windows, UNIX & Linux
- Overcome Remote usage of “Standard” ClearCase (involves 3 hurdles)
 - Network latency
 - ClearCase operations involve many RPCs and the roundtrip time of those RPCs are sensitive to network latency
 - Firewalls
 - ClearCase uses port 371 for the albd_server but also various ports assigned by the bind(2) system call
 - Authentication
 - ClearCase uses OS authentication for element ownership which requires the client to have access to the directory service

Access ClearCase *Anywhere!!*

- **Home**
 - Broadband, VPN
 - Dial up ?
- **Office**
 - Local Network, centralised servers i.e. in a data centre
- **Offsite**
 - Remote office locations
 - Contractors
 - Third Party vendor
- **Controlling Access**
 - Limit the access or isolate VOB's for some users
- **Interoperability**
 - Can I bring on Linux developers if we are a Windows shop?
 - Can I avoid using Samba or other NFS interop solutions ?

Integrations

- ClearQuest
 - Thick client
 - Web interface
 - administrator must set the **-cqweb_url** parameter in the ccweb.conf file on CCRC server
- SDP Tools
 - Plug-in to RSA, RSM, RAD
 - Client plug-in only
 - Solaris®, HP-UX®, AIX®

CCRC Server Version	CCRC Plug-In Version (Windows, Linux & UNIX)										
	2003.06.14		7.0 & 7.0.0.1				7.0.1				
Compatible CCRC Client Version	6.14.0 -	6.14.6 +	7.0	7.0.1	7.0.1.CU2	7.0.1.CU3	7.0.1.CU4	7.0.1.D061004	7.0.1.D070930	7.0.1.D071219	7.0.1.D080229
Eclipse 3.0.x	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Eclipse 3.1.x	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Eclipse 3.2.x	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Eclipse 3.3	No	No	No	No	No	No	No	No	Yes	Yes	Yes
JVM	IBM 1.4.2 with all Eclipse versions IBM 5.0 with Eclipse 3.1.x, 3.2.x and 3.3.x Sun Java 1.5 Refer to eclipse.org for other reference platforms (see links below)										

- Visual Studio – support for VS 2008, 2005
 - http://www-1.ibm.com/support/docview.wss?rs=984&context=SSSH27&dc=D400&uid=swg24017991&loc=en_US&cs=UTF-8&lang=en&rss=ct984rational
- Eclipse editors
 - As of 7.0.1 ClearCase perspective is now integrated with the Eclipse editors. Previously, opening a Java file or a text file, for example, in the ClearCase perspective launched an external editor.

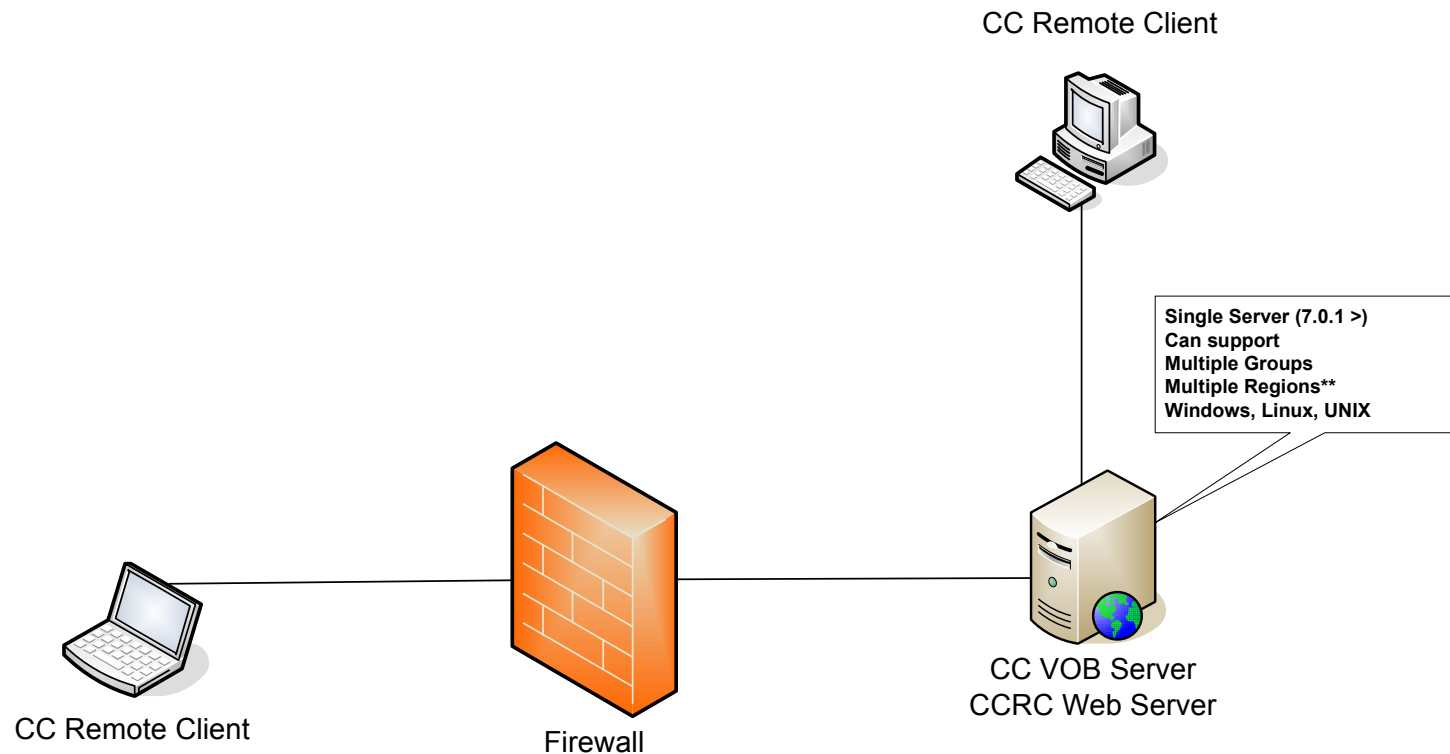
Deployment Models

- Covering basic to complex scenarios
 - Build a deployment pattern if deploying to several sites
 - Common OS, Server build, security settings
- Need to clearly understand the organisational requirements & drivers
- Licensing
 - Especially when dealing with off shore, third party
 - Who owns them !!
 - Supporting the environment
- Detailed understanding of your network
 - Security
- User management
 - LDAP? – common user accounts??
 - How and who manages users
 - How do you treat “external” third party employees
 - Same as your own staff or not

Deployment Models cont...

- Single, two or three machine deployment configuration (CC, CQ & UCM)
 - Single – CC, CQ, + Web components all on one machine
 - Two machine
 - In a two-machine configuration, the Rational® ClearCase® Web server and the Rational ClearQuest® Web server run on one machine, and the Rational ClearQuest server runs on a different machine.
 - Three machine
 - In a three-machine configuration, the Rational® ClearCase® Web server, the Rational ClearQuest® Web server, and the Rational ClearQuest server each run on their own machine
 - *ClearQuest Server is where the URL points to*
 - *to improve performance you can run the Rational ClearQuest Web application on one computer and the Rational ClearQuest server on another*
 - Detailed guidance in the ClearCase Admin manual
- Writing triggers for the ClearCase Remote Client
 - supports interactive triggers that use clearprompt to interact with users.
 - <http://www-1.ibm.com/support/docview.wss?uid=swg21207634>

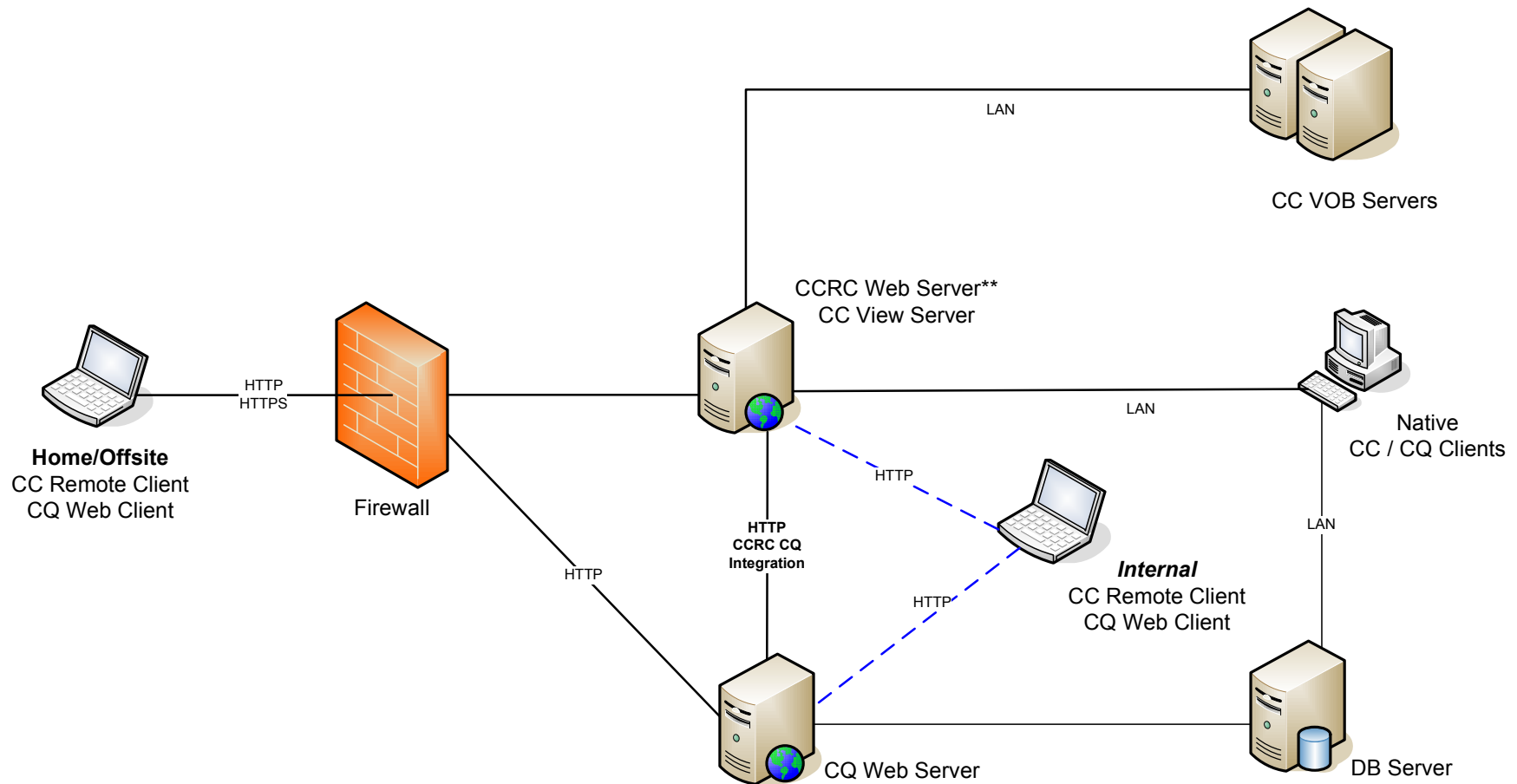
Deployment model – CCRC Only



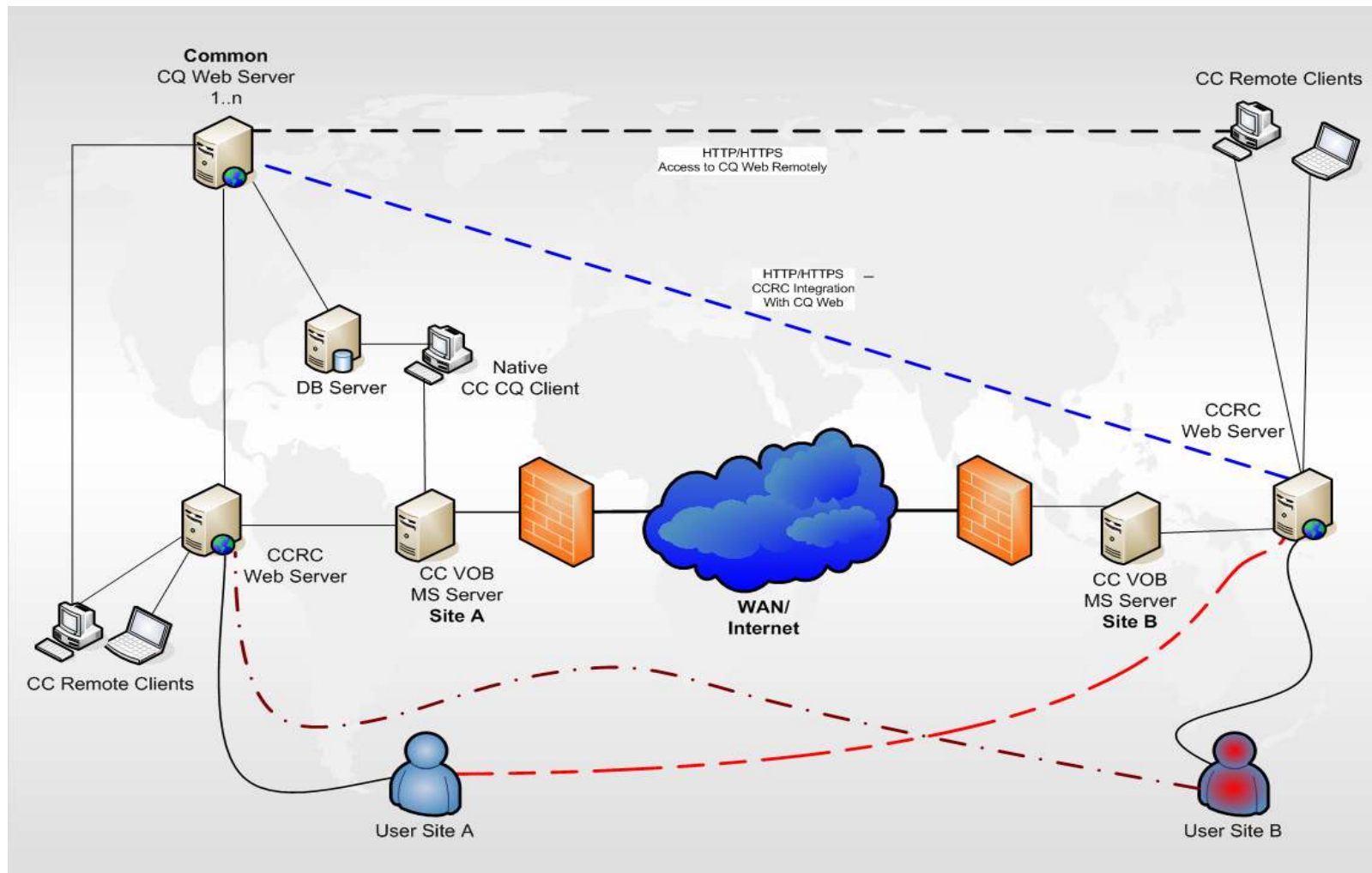
**Multiple region support

http://www-1.ibm.com/support/docview.wss?rs=984&context=SSSH27&context=SSSTWP&context=SSSTY3&context=SSCSNZN&context=SSCGQ7B&context=SSCGQ7D&context=SSCSP7T&context=SSDV2W&context=SSLLVC&q1=remote+client+regions&uid=swg21264782&loc=en_US&cs=utf-8&lang=en

Deployment model – CCRC + CQ/ CQ Web / UCM



Deployment model - CCRC – ClearCase MultiSite - ClearQuest Web / UCM

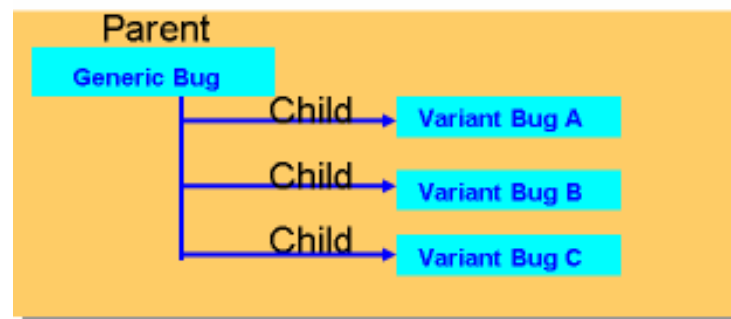


UCM or Base?

- Latest version's of CC / CQ support (7.0.1 >)
 - Base, several usage scenarios (CCRC only, CCRC UCM)
 - UCM web based integration
- Deeper integration using UCM (CC / CQ)
- CCRC supports a lot of common UCM use cases
 - More being added in 7.1
- Usually like to recommend UCM for new clients
 - Less scripting, project based
 - Remote delivers using CC MS
 - Can overcome using CCRC, but requires access to remote site

Caveats (*Has to be some* 😊)

- Requires some careful ClearQuest schema design & testing
- Management of user id's – common with CC/CQ – MS environment
- How do you share large pieces of work (CC/CQ & UCM)
 - Can't share UCM activities
 - Once they have been started you can't give them to another user using another view
 - Can use the CQ Parent Child relationship
 - Large parent activity i.e. Defect, Enhancement
 - Small light weight Child “Base CM activities”



Strengthening the story v7.1

Common Team Infrastructure – CM Server

- A high performing server based deployment model that easily managed, administered and upgraded
 - Single technology stack for CQ and CC servers
 - Provide infrastructure for WAN based clients
 - CCRC
 - CQ web
 - Provide WAS based servers
 - Highly scalable – scales horizontally & vertically
 - WAS support
 - 2.5X improved scalability

2008 – ClearCase Remote Client

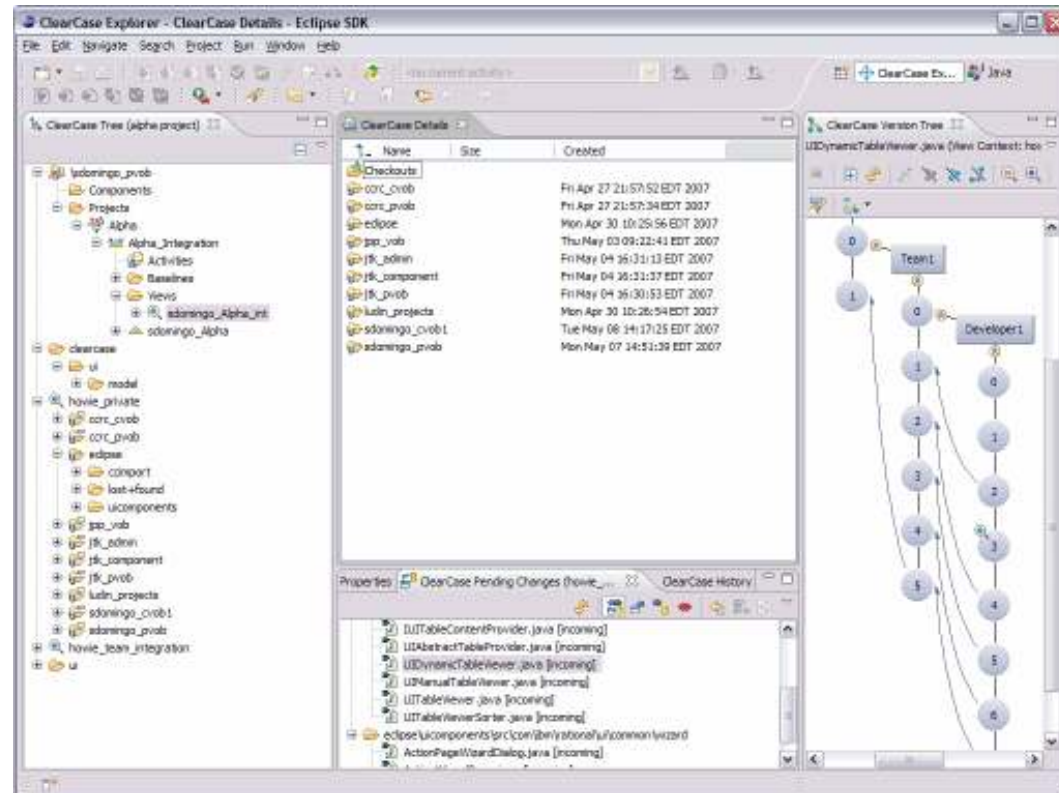
Customizable GUI Framework

CQ WAN Forms

GUI extension point

Agile Process support

CCRC (RCP) Unix



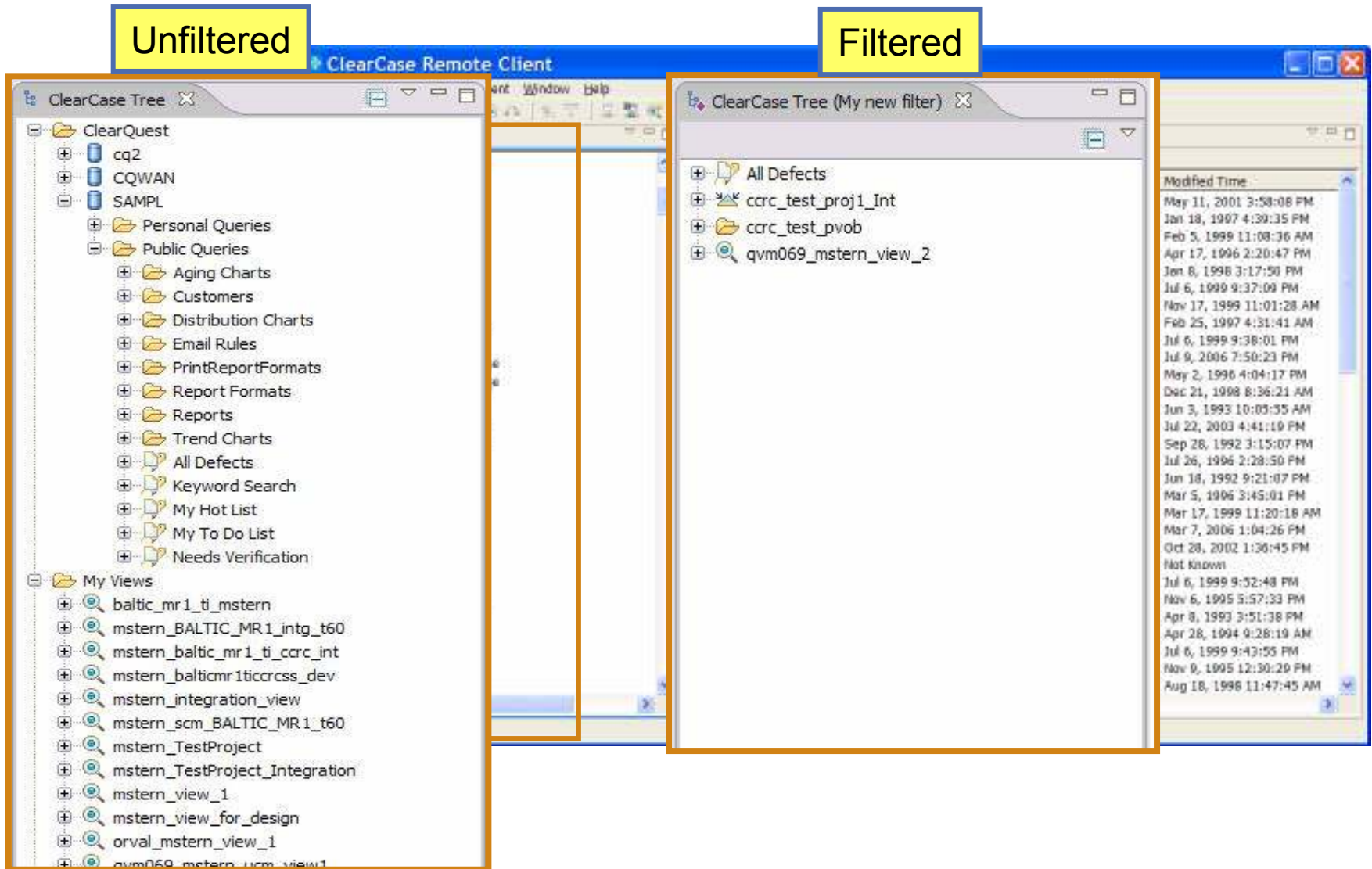
2008- ClearCase CCRC Usability

- New and improved (use cases)
 - Project, Stream, Component, VOB creation
 - Create View and Join Project
 - Configuring and loading views
 - Complete preference control for common operations
 - Consolidated explorer views, including ClearQuest Wan Forms
 - Revised menu structure – true context menus
 - Support for Eclipse Diff/Merge tools, possibly third party tools
 - Improved comparison support
 - Activity Toolbar
 - Others as opportunities, requests arise
 - Addressing a significant number of customer requests

2008- ClearCase CCRC Usability

- Filtering
 - Easily and quickly create filters that bring you directly to the objects you want
 - Avoid repetitive navigation deep into the directory structure
 - Named, persistent across sessions
 - Work disconnected with loaded resources
 - Add and remove elements from existing filters as needs change
 - Rules using logical expressions for additional customization
 - Import and Export filters for sharing between installations, users

ClearCase CCRC Filtering

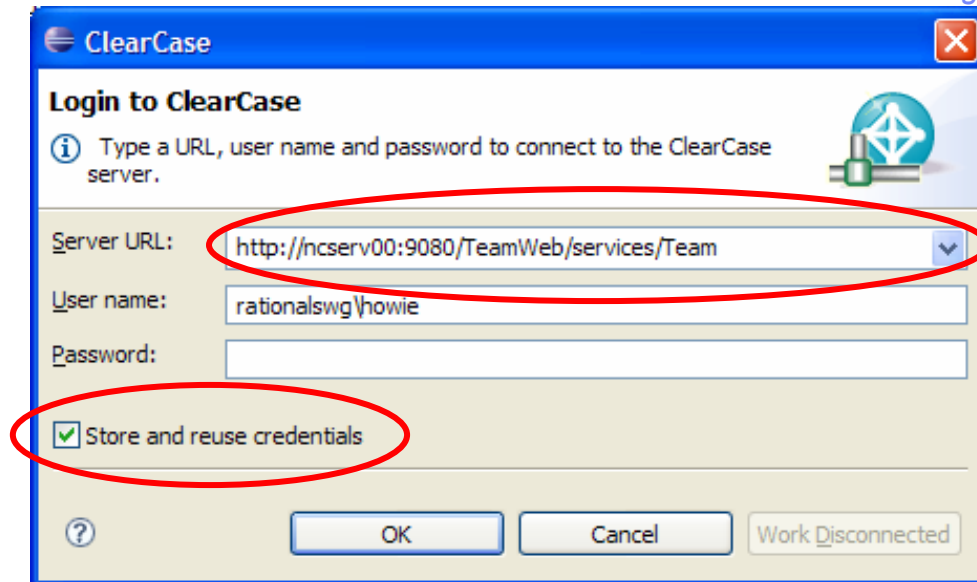


Summary of New Features in 7.1

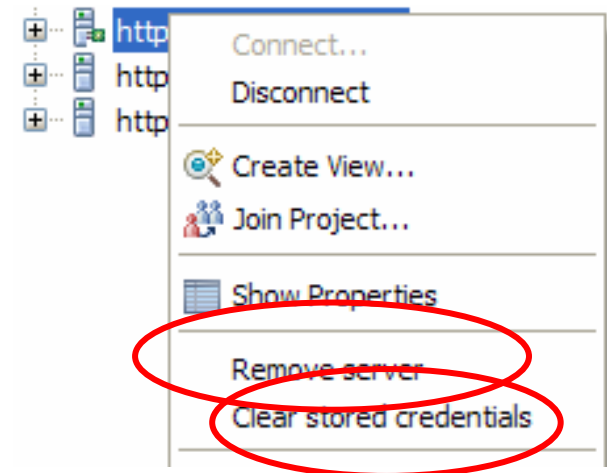
- CMServer - Scalable architecture, performance improvements
- CMAPI - Java API, used in GUI implementation
- Pending Changes View
- Deliver/Rebase
 - ▶ Preview includes Checkout/Hijack List
 - ▶ Additional choices for baseline selection in Rebase
 - ▶ Streamlined “default” operations for agile
 - ▶ Rebase Reset
- Scheduled operations
 - ▶ Notifications for view updates
 - ▶ Notifications for new baselines
 - ▶ Refresh of pending changes view
- Single sign-on (with matching passwords)
- New Common Dialogs
 - ▶ Simple, Detailed versions
 - ▶ Customization
 - ▶ Preferences
 - ▶ Recursive support within view namespace
 - ▶ Filtering support for recursive operations
- Aggregated change indicator
- New Preferences
 - ▶ Identical Checkin handling
- New Wizards
 - ▶ Join Project, Create View, Create Stream
 - ▶ Apply Label
- True context menus
- New Edit Configuration (load rules) dialog
- Contextual operations
 - ▶ Create Stream in stream context
 - ▶ Create View in stream context
 - ▶ Join Project in stream context
- New Change Set View
 - ▶ Drag and drop versions between change sets, activities
- Integrated CQ
 - ▶ New CQ (SQUID) integration
- UCM Toolbar
 - ▶ Deliver/Rebase, Activity Selection/Creation, Join Project
 - ▶ Activity caching (performance)
- Explorer enhancements
 - ▶ Address Bar
 - ▶ Working Sets
 - ▶ Integrated View, Metadata, CQ
 - ▶ New Eclipse properties view (no dialogs)
 - ▶ Disconnected mode support
 - ▶ Add/Remove Server
 - ▶ Improved SymLink support
- Differencing and Merging
 - ▶ New Eclipse-native diff/merge with UTF-8 Support
 - ▶ Support for Eclipse provided diff/merge
- Find posted deliveries (MultiSite)
- Mac Support
- Eclipse 3.3.x Support

Usability: Single Sign-on, Work Disconnected

Authentication Dialog

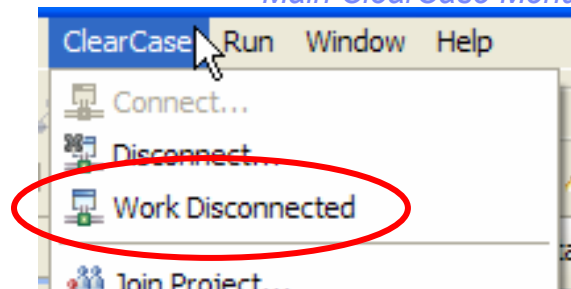


Server Context Menu



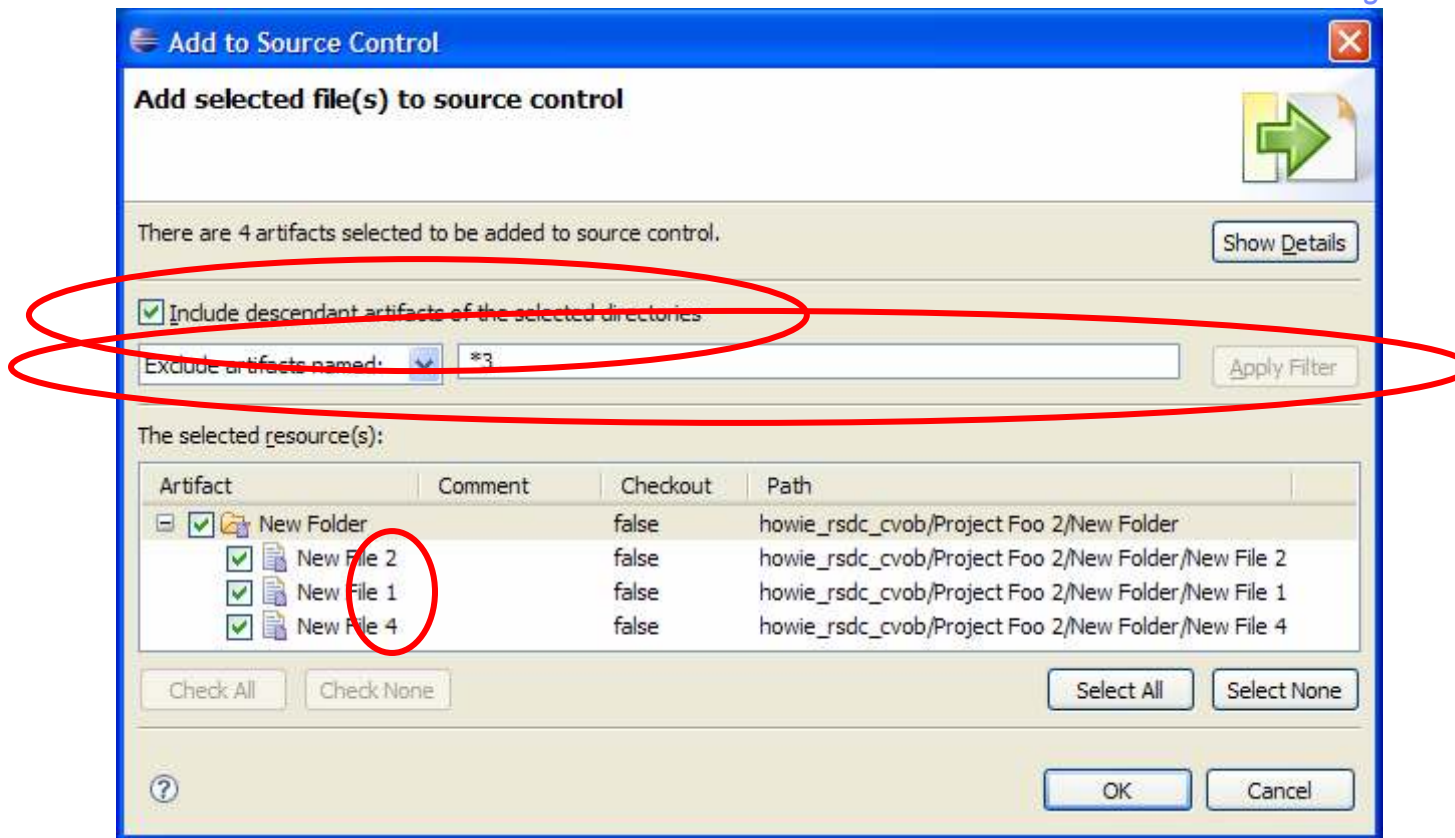
- Remembered servers
- Single sign-on
- Remove unwanted objects
- Disconnected mode

Main ClearCase Menu



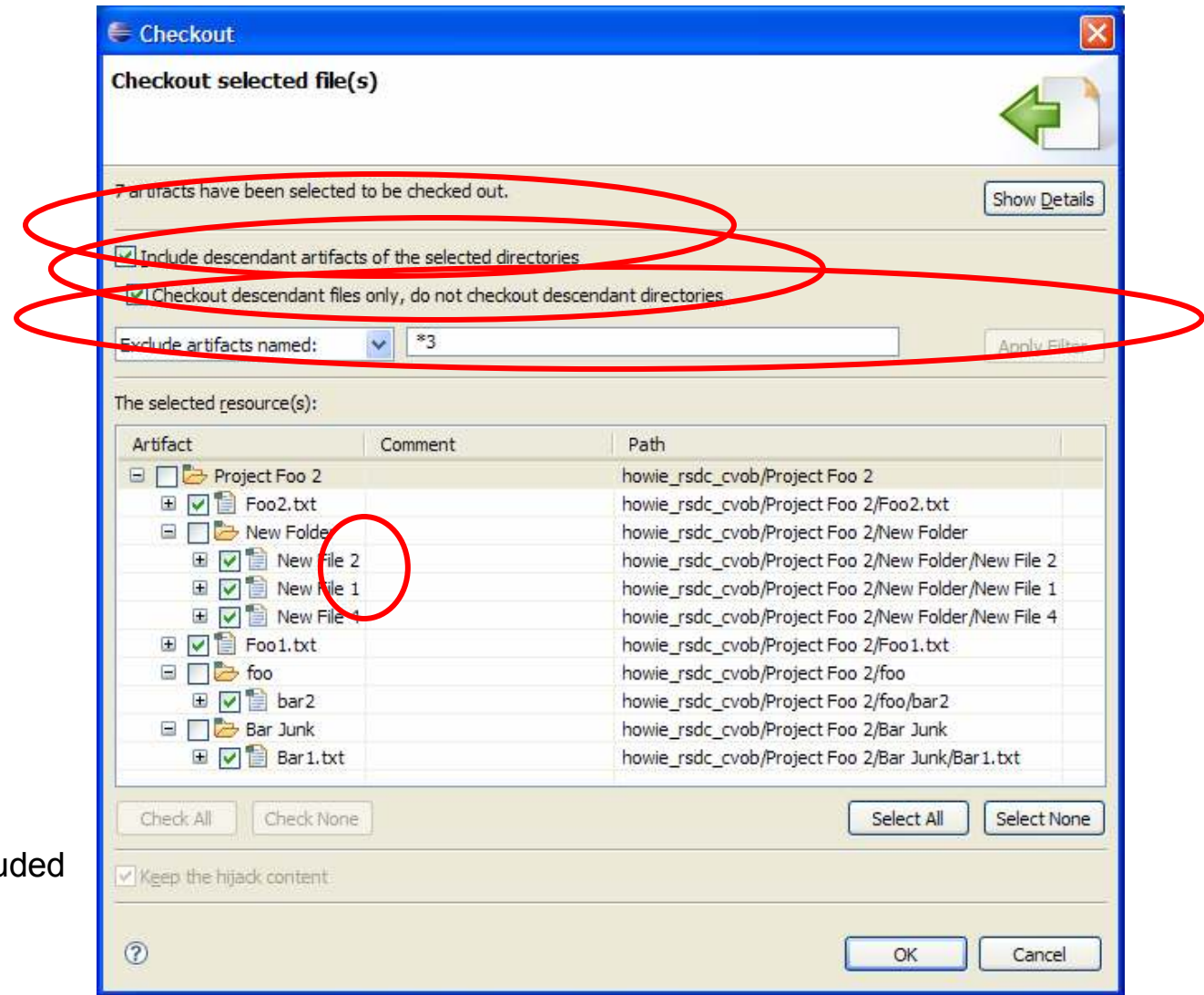
Usability: Recursive Add to Source Control

Add to Source Control Dialog



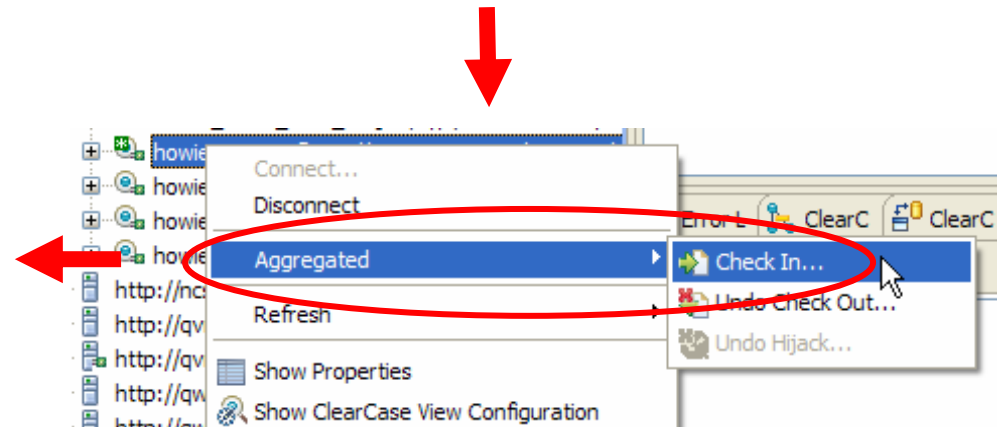
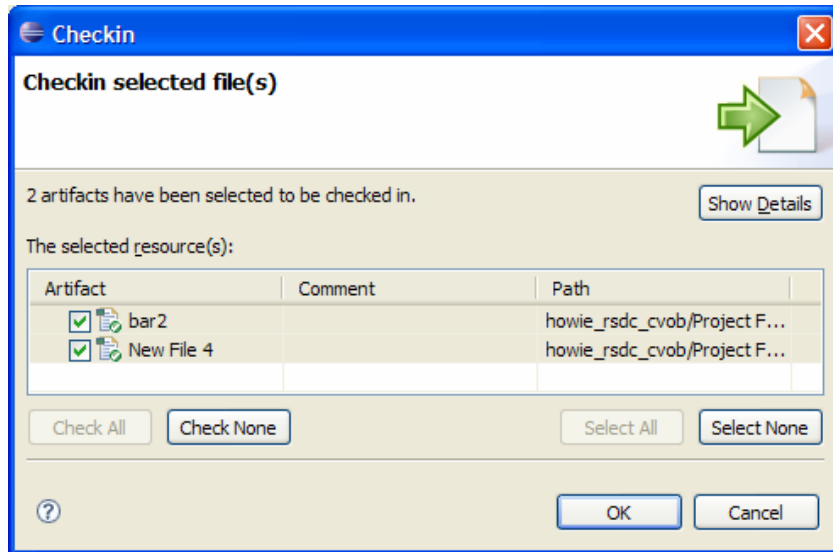
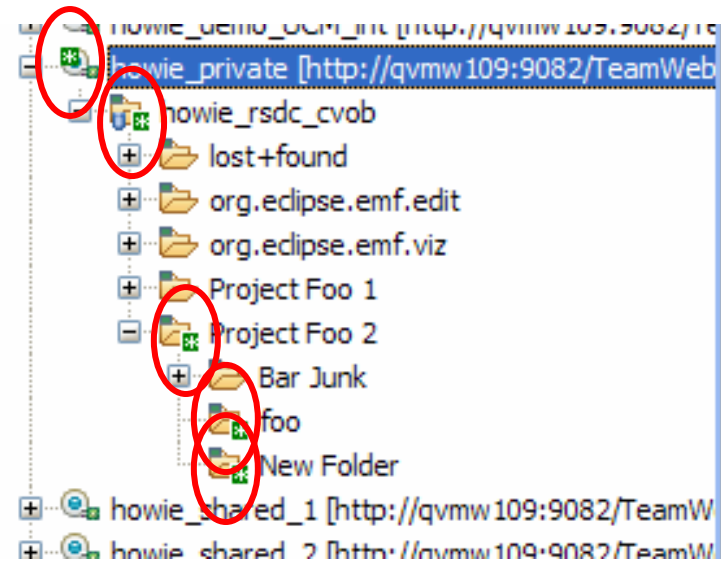
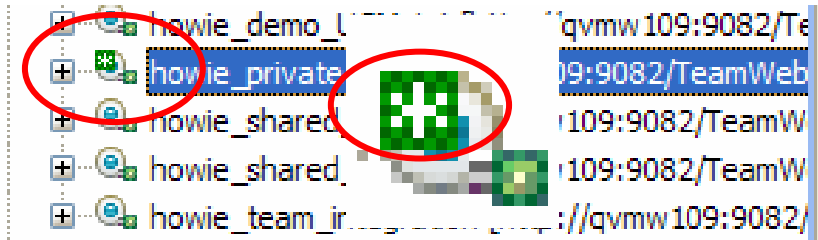
Recursive add to source control
Filtering

Usability: Recursive Checkout

Checkout Dialog

- Recursive checkout
- Directories normally not included
- Filtering

Usability: Aggregated Indicators/Operations



- Aggregated change indicator and operations
- Checkin, Undo Checkout, Undo Hijack

Thank
YOU

