

Creating A New Remote ClearCase Site

From CSEL Wiki

These instructions can be used for installing a brand new server as a new remote site, or for "peeling off" an existing server from a current site to create a new remote site. Unless otherwise stated, it is assumed you are logged in as *root*.

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Remove ClearCase

The first step in creating a new ClearCase/MultiSite remote site is to remove existing dependencies with the current master (Cyril if you're at APL). If this is a new box that has never run ClearCase, you can skip this section.

Follow the Remove ClearCase Software instructions displayed below:

These instructions are for de-installing ClearCase / MultiSite software from a Linux system. This should only be done on a "slave" system (not a VOB or View server) or a "server" that has had all of its VOBs and Views permanently removed. Unless otherwise directed, all operations should be done as the *osiadm* user.

- Unmount VOBs
 - All users must pclr and log out completely from the system to be de-installed
 - As any user, run "cleartool umount -a"
 - If any VOBs fail to unmount, you should use "ps -ef" to figure out what you forgot to kill. If you still can't get them to unmount, you will probably have to reboot the system in the next step.
- Shut down ClearCase
 - /etc/init.d/clearcase stop
 - /etc/init.d/ibmrational stop
 - If you see any errors (about VOBs not unmounting or mvfs not unloading) you will have to reboot the system and then start these instructions over. *Do not continue until ClearCase is completely shut down.*
- Unmount the old vob & view storage directories
 - umount /vobstore* /viewstore*
 - Edit /etc/fstab to comment out the NFS mounts for them.
- De-install the old ClearCase & MultiSite (as root)
 - sudo /opt/IBM/InstallationManager/eclipse/IBMIM

- Click "Uninstall"
- Select IBM Rational SDLC (which is ClearCase) and RLKS (which is the license server)
- Click "Next>" and follow the prompts to complete the installation.
- It should complete with no errors.

Create CM Partitions

Follow the Create ClearCase / CM Partitions (for a new VOB / View server) instructions below to create view/VOB storage and ClearCase Release partitions.

These instructions are for creating partitions for a new VOB / View server.

- Create the following new partitions (or directories if adding clearcase to an existing disk)
 - /vobstore
 - Make it approx 400GB (empty, owned by user *root* and group *root*, permissions 755)
 - chown root.root /vobstore
 - chmod 755 /vobstore
 - Create a project subdirectory (currently "bfp", owned by user *bfpadm* and group *bfpadm*, permissions 775)
 - mkdir -p /vobstore/bfp
 - chown bfpadm.bfpadm /vobstore/bfp
 - chmod 775 /vobstore/bfp
 - /viewstore
 - Make it 500GB - 750GB, or as low as 300G for mobile or limited use server (empty, owned by user *root* and group *root*, permissions 755)
 - chown root.root /viewstore
 - chmod 755 /viewstore
 - Make a /viewstore/viewstore-system subdirectory (empty, owned by user *bfpadm* and group *bfpadm*, permissions 775)
 - chown bfpadm.bfpadm /viewstore/viewstore-system
 - chmod 775 /viewstore/viewstore-system
 - Make a /viewstore/viewstore-dev subdirectory (empty, owned by user *osi* and group *osidev*, permissions 775)
 - chown bfpadm.osidev /viewstore/viewstore-dev
 - chmod 775 /viewstore/viewstore-dev
 - ln -s /viewstore/viewstore-system /viewstore-system
 - ln -s /viewstore/viewstore-dev /viewstore1
 - /clearcase_release
 - For dev client system, NFS mount /clearcase_release (at APL, this is on dustin)
 - VOB servers should have their own copy, at least 50GB - 100GB (optionally put in /data1 with sym link /clearcase_release)
 - Copy from dustin:/clearcase_release

Install ClearCase and MultiSite From New Release Area

Follow the Install ClearCase and MultiSite instructions below to install ClearCase and MultiSite.

Pre-Install Instructions

- **IMPORTANT:** If this is a locked down machine, be sure to do a "umask 022" before installing!
 - You should probably also change the default back to 022 from 027 in the following files:
/etc/profile /etc/bashrc /etc/csh.cshrc
- For Minotaur ISO'ed machine
 - `rm -rf /usr/atria` (Remove fake clearcase)
 - `rm -rf /view` (Remove fake view)
- For RHEL7+ systems not built from Minotaur ISO
 - Need to install kernel headers & devel packages. Make sure the version you install matches what is already installed. Yum will not take care of this for you. Check your kernel version with "`rpm -q kernel`". If it says, for example, "kernel-3.10.0-957.21.3.el7.x86_64" then your yum command would be:
 - `yum install kernel-devel-3.10.0-957.21.3.el7.x86_64 kernel-headers-3.10.0-957.21.3.el7.x86_64`
 - Need packages for rebuilding the kernel and supporting ClearCase X/Motif applications (adjust java version based on OS--in most cases this should be OpenJDK-11).
 - `yum install java-1.8.0-openjdk.x86_64 ncurses-devel make gcc bc bison flex elfutils-libelf-devel openssl-devel grub2 motif libXp libXdmcp`
- Needed if you will run 32-bit ClearCase on 64-bit Operating Systems
 - `yum install ncurses-libs.i686 libacl.i686 libattr.i686 pam.i686 sssd-client.i686`

Mount The ClearCase Release Area

Mount /clearcase_release (see Install_IBM_Installation_Manager if it has not been configured in the fstab file)

```
sudo mount /clearcase_release
```

Install the IBM Installation Manager

If not already installed and configured, Install IBM Installation Manager on the system first.

Install the IBM Rational License Key Server

If not already installed and configured, Install Rational License Key Server on the system.

Install ClearCase / MultiSite

- Start Installation Manager
 - If you are not already in it, run `/opt/IBM/InstallationManager/eclipse/IBMIM`
- Install ClearCase
 - Click "Install" in the Installation Manager

- Select the latest version of IBM Rational ClearCase Linux x86 64-bit and click "Next"
 - Install Packages / Prerequisite screen
 - Review notes. The ones about User Credentials, WebSphere, and IBM WAS SDK can be ignored. Click "Next".
 - Install Packages / Licenses screen
 - Accept license agreements and click "Next"
 - Install Packages / Location screen
 - Use default package groups and install directories and click "Next"
 - Install Packages / Features screen
 - Default language should already be selected. Click "Next"
 - Select "ClearCase Full Function Installation" and "Multisite Full Function Installation" and nothing else (no Minimal Install or Automatic views). Click "Next".
 - Install Packages / Configuration screen -- go down the list and check each item. You can also click "Next" between items.
 - Use default Temporary directory.
 - Use default Java install directory.
 - For Common Licensing, paste the license server information. For APL Dev, it comes from `cyril:/var/adm/atria/config/flexlm_host` (e.g. "27000@cyril:27000@astrom7:27000@astrom6:27000@astrom5:27000@astrom4"). DO NOT select "Use Atria Licensing".
 - For "Registry and Mail Servers" fill in:
 - Registry server host name (the host name, e.g. "astrom8", "cyril", etc.)
 - Registry region (e.g. "bfp_astrom8", "bfp_apl", etc.)
 - SMTP Mail server host (if present): "localhost"
 - If present, click MVFS Module and select "Yes, rebuild MVFS..."
 - Click Next and it will Prepare to install
 - Review installation options and click "Install"
 - Check for errors and click "Finish" when it completes.
 - If there are errors rebuilding the mvfs module, you will have to do it by hand (`Rebuild_MVFS_Kernel_Module`)
 - ClearCase should start automatically.
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- RedHat 6.3+ Note
 - If this is a client system and you are mounting the VOB Store and View Store from a master ClearCase server, there is a bug in NFSv4. The work around is to use NFSv3. IBM is aware of the problem and has been "working on a fix" for years.
 - `cyril:/vobstore /vobstore nfs defaults,nfsvers=3 0 0`
 - `cyril:/viewstore /viewstore nfs defaults,nfsvers=3 0 0`

Post-Installation Instructions

- Check the `/var/adm/rational/clearcase/config/rgy_svr.conf` file.
 - If this is to be a Registry Server, it should contain one word: master
 - If this is to be a client, it should contain the name of the registry server host (e.g. `cyril`, `cyril2`, etc).
- Run the `/opt/rational/clearcase/etc/rgy_passwd` command and set registry password (normally this is set to match the VOB administrator password or the ISO root password).
- `/bin/cp /clearcase_release/bldserver.control /var/adm/rational/clearcase/config/bldserver.control`
 - Or create a new file `/var/adm/rational/clearcase/config/bldserver.control` containing just one line: `-power 1000`

- Make sure that the numeric UID and GID of bfpadm and osiadm (and the other users) match exactly. Also, bfpadm must be a member of exactly the same groups as on the source machine.
 - If this is a fresh ISO, also make sure that bfp is in all the groups that osi is in, and likewise for bfpadm. Also add all four users to the "osi" group.
- As bfpadm, run *cleartool setsite view_shareable_dos=FALSE* to disable stinkin' winkin'.
- If you do not have a working *setup_dev_env* script on the system, you will need to manually set ClearCase make compatibility to GNU mode so the Makefiles will be interpreted correctly. Note, your *.cshrc* sources that file, and it usually needs to be able to both find the script and db/dyn to work.
 - *setenv CCASE_MAKE_COMPAT gnu*
- If not already done by the Minotaur/dev ISO, replace /osi/db/local/ship_config symbolic link with a real copy.
 - On a flat machine, this should be a link, on a clearcase machine this should be a real copy.
- If it doesn't already exist, create a new file */opt/rational/clearcase/config/rcl/RCL_Log_Config.txt* containing the following:

```
Location =
Product =
Version =
Size =
LogLevel =
TraceLevel =
MaxFiles =
EnableLogging = 0
EnableTracing = 0
```

- Copy the license manager options file from /clearcase_release.
 - Customize it as desired to adjust license timeout and list of users forbidden from using ClearCase.

```
cp /clearcase_release/ibmratl.opt /opt/rational/common/ibmratl.opt
```

- It should look similar to this:

```
#
# File: /opt/rational/common/ibmratl.opt
#
# Forbid the following users from getting a license
GROUP ForbiddenUsers root osi bfp
EXCLUDE ClearCase GROUP ForbiddenUsers
EXCLUDE MultiSite GROUP ForbiddenUsers

# Time out all licenses after being idle for 15 minutes.
# Oh well--30 min seems like the minimum it will accept.
TIMEOUTALL 900
```

- Run */osi/cm/lag/conf/clearcase.pl* and use the information to update the ClearCase VOB Servers wiki page.
- Create shipping server symbolic links in bfpadm's home directory
 - *sudo -i -u bfpadm*
 - *cd ~bfpadm && ln -s /var/adm/rational/clearcase/shipping/ms_ship/* .*

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