

[TEMPLATE] NJL SCM Task/Machine Matrix for ClearCase Maintenance

Thursday, December 00, 2000

The master of this Task Matrix is a Word-for-Windows template (.dot) file. I create a copy for the work being done on NJL ClearCase servers on a particular date, to customize the "A-Z" tasks. So, structural changes must be done to the template file itself (e.g., new machines and new sub-tasks in the numeric task groups). Numeric task groups are generic/frequent for each downtime, and have subtasks enumerated on the reverse of this sheet. "A-Z" task groups are unique to each downtime evening.

NOTE: See page 2 for how to do each Task Group and comments about each one. Note that the "pre-x" ones can be done in the hour before users are disabled.

Task #	pre-1	pre-2	pre-3	pre-4	1	2	3	4	5	6	A	B	1'	2'	3'	4'	5'
Task Groups & Machines	disable MultiSite and FPK cron scripts	comment out the NFS mounts that get in the way of rebooting machines	disable MultiSite cron jobs on hub machines	disable users from logging in	stop ClearCase (use my STOP script) (lock VOBs 1st?)	unmount NFS mounts that are problems if reboots occur	reboot the machine to clear users	install jazz update	install UXSCM MultiSite Toolkit update	install UXSCM per.1 update	install HP-UX patches	<depends on needs on day of downtime>	uncomment /etc/fstab entries and mount tricky NFS mounts	start ClearCase (use my START script) (unlock VOBs?)	enable MultiSite and FPK cron scripts	check health of ClearCase and MultiSite	enable users
<i>Task Owner</i>	SCM	SCM	SCM	either	SCM	SCM	SCM	SCM	SCM	SCM	ES	?	SCM	SCM	SCM	SCM	either
njlsrc1		NA	NA	NA	3									1			NA
njlsrc2		NA	NA	NA	2			NA						2			NA
njlsrc3		NA	NA	NA	2			NA						2			NA
nonuxsrc		NA	NA	NA	2			NA						2			NA
njlmshub	NA			NA	1			NA			NA			1			NA
balboa	NA	NA	NA	NA	1			NA							NA		NA
build1	NA	NA	NA	NA	1									3	NA		
scm1	NA	NA	NA	NA	1									3	NA		
view1	NA	NA	NA		1									3	NA		
view2	NA	NA	NA		1									3	NA		
view3	NA	NA	NA		1									3	NA		
view4	NA	NA	NA		1									3	NA		
view5	NA	NA	NA		1									3	NA		
necvob1		NA	NA	NA	3									1			NA
necvob2		NA	NA	NA	2			NA						2			NA
necmshub	NA			NA	1			NA			NA			1			NA
necview1	NA	NA	NA		1									3	NA		
necview2	NA	NA	NA		1									3	NA		
necview3	NA	NA	NA		1									3	NA		
htcvob1		NA	NA	NA	2									1			NA
htcmshub	NA			NA	1			NA			NA			1			NA
htcview1	NA	NA	NA		1									2	NA		
htctools	NA	NA	NA	NA	1									2	NA		

Sub-tasks needed for each “generic” Task Group on page 1 of this matrix:

Note that all scripts mentioned here are in the local EIAL SCM admin bin directory, /ClearCase/njl/adm/bin, and that they must be done on partner regions too!

**** Note that Louie said in Sep 99 not to ever reboot his build server (now view5) when other servers are still running ClearCase.**

- ☆ **pre-1: Disable MultiSite and FPK cron scripts:** this step is optional, depending on work at hand; it reduces the amount of useless mail from cron to vobadm:
 - a) On each VOB machine, put in an exit statement on line 2 of /MultiSite/admin/sync/hourly script, to stop MultiSite from doing any outbound packets, or change the symlink used in that directory, if I need to continue partner regions when HP region is down, or vice versa.
 - b) Use an exit statement to disable the CC-NJL.hourly and CC-NJL.every-20-minutes scripts in /ClearCase/njl/adm/cron/bin; these generate the most mail if ClearCase is down.
- ☆ **pre-2: Comment out the NFS mounts that are troublesome:** home directories on sneezy & VOB mounts on view servers, and /ClearCase/njl/adm/bin on all machines, cause trouble if rebooting all machines during the downtime. These must be commented out before the 1st reboots happen or else machines hang, waiting for each other.
- ☆ **pre-3: Disable MultiSite cron jobs on hub machines:** this step is also optional, but does ensure MultiSite is really quiet if you need to be 100% sure:
 - a) Use the edit_crons root script to edit the root cron job to suspend the ms_poll.sh script on the hub workstations.
- ☆ **pre-4: Disable users from logging in after reboot:**
 - a) Use wall to let them know machine is coming down, 20 and then 10 minutes in advance, on each view server.
 - b) Disable ability of non-admin users to login to any machine
- ☆ **1: stop ClearCase:** do these steps first for view servers, then non-primary VOB servers, then the primary VOB server (the ordering 1-2-3 in the matrix), to generate fewer ClearCase errors:
 - a) Use the FPK script STOP, which 1) uses /usr/local/scm/bin/z.rc.jazz_stop on jazz machines and /usr/atria/etc/atria_start_stop otherwise; then 2) renames /sbin/init.d/{atria,jazz} to <xxx>.suspended to ensure ClearCase & jazz do not start when HP-UX is rebooted because of a new version of ClearCase or HP-UX patches.
- ☆ **2: Unmount NFS mounts:** unmount the NFS file systems commented out in step pre-2, in case some machines reboot before others.
- ☆ **3: Reboot the machine:** if you do not, users can still do some work and sometimes a ClearCase install will not work because of view being mounted.
- ☆ To “install jazz update”, it depends on the version of jazz, since some versions requires data conversion:
 - a) Do any required data conversions.
 - b) Install jazz from Cupertino using install_jazz script.
- ☆ To “install MultiSite Toolkit or perl if needed”, use local NJ wrapper scripts to do slightly locally customized ninstall from Cupertino:
 - a) The MultiSite Toolkit gets updated fairly often, even though Doug does not always tell us. Update when you can! Use install_MultiSite_admin_tools and install_standard_UXSCM_perl in our local bin directory.
- ☆ To “install HP-UX patches” (do this every chance you can, to keep us up-to-date and to reduce the number of patches done each time):
 - a) Chris H. maintains a local copy of this Tier1 depot on the njldepot/necdepot/htcdepot machines in NJL.
 - b) Be careful of the order in which this is done with respect to other tasks, since the patches often reboot the machine. Also, ensure /var has enough space!
- ☆ To “install ClearCase” (this was told to me as required in 1997 by Atria, for after HP-UX patch installation... Doug says no):
 - a) If the HP-UX patches changed the kernel, it is safest to simply reinstall ClearCase to ensure that its MVFS kernel changes are done again as needed.
 - b) Make UXSCM parameter changes required each time (i.e., the lockmgr parameters in atria_start and the vobrpc parameters in albd_conf).
 - c) If ClearCase refuses to re-install, then muck around with the /var/atria/cdf directory and fake out the ClearCase installer to think it has to re-install; or rename the /sbin/init.d/{atria,jazz} startup files as mentioned above, or reboot first and try the install again!
 - d) Must re-edit the root cron job after ClearCase is installed, to make the ccase_cron.wk (and ccase_cron.day) jobs use run_cron_job.
- ☆ To “restart ClearCase” use the same steps but opposite order (and opposite machine order) as in generic step 2 above. But be sure to double check that any new VOBs recently installed have proper hourly script entries!
- ☆ To “enable MultiSite & cron scripts and cron job”, reverse the actions done in the two ★’d or “pre-x” task groups done 1st.
- ☆ To “check health of ClearCase and MultiSite”:
 - a) Wait to ensure that the MultiSite processes have run on each VOB server (use ccc7 script to check).
 - b) Run the grand-daddy checking script, CCC and inspect the output for problems.
 - c) Check that you can enter a view and look at kernel files (ccc testview).
 - d) Ask Frank (build-meister) to ensure that a build can be done without problems (this is not necessary for the more routine downtimes).
- ☆ To “enable users”:
 - a) [ES] Enable ability of non-admin users to login to any machine, via NIS.
 - b) [SCM] Make the jazz bin directory readable.
 - c) [SCM] Send mail to developers to tell them maintenance period is over, and to describe the things that were done (e.g., what jazz patches fix).