



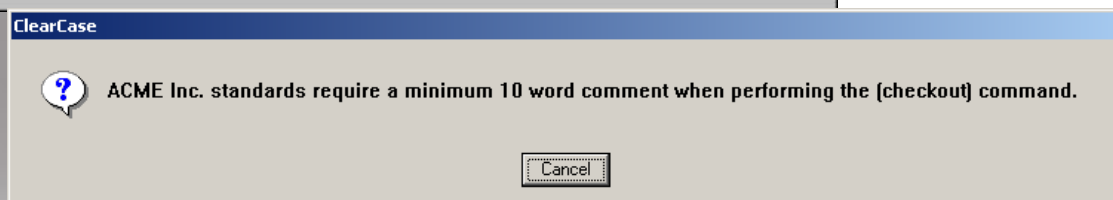
## ClearTrigger 14.1 is here!

ClearTrigger is a custom add-on to the IBM ClearCase product. It serves to simplify the task of maintaining triggers and policy for your ClearCase installation. It is flexible in that it allows the user to enforce separate sets of triggers across different projects, teams or operating systems. ClearTrigger enables organizations to add triggers for specialized processing requests. It conveniently integrates with your current ClearCase installation and does not require moving VOBs to new machines or reorganizing your network. ClearTrigger is an efficient way to manage current and existing triggers for the enterprise. Though, it does not stop there! ClearTrigger also provides policy so you do not have to create it. Functionality bits are provided to ensure that the most used and requested policy by ClearCase administrators around the world are already coded into ClearTrigger. Simply turn the bit on. **ClearTrigger even allows for real-time mobile phone enabled process triggers.**

ClearTrigger makes use of basic, straightforward instructions to apply triggers. **The triggers you define are by default associated with ALL VOBs in the ClearTrigger region, but you can limit any trigger such that it fires only for certain VOBs, replicas, elements, users, groups, views, times, ClearCase regions, ClearCase hosts or even Environmental Variable values; patterns and aliases can also be used or oft-needed groupings.** Additional variables like “Current VOB Owner”, “Replica Name” and “is Replicated” are defined for you to use in trigger definitions or use in your scripts without having to write code to calculate the values.

ClearTrigger’s simple method of implementation is accomplished through the use of configuration files called *clearbits\_file*. The *clearbits\_file* file allows you to define up to two different policy depots. The policy depot contains all of the trigger code to be managed by ClearTrigger. You may setup policy depots for UNIX and Windows if your site requires. There is no limit to the amount of *clearbits\_files* that your organization can have. You may create multiple configuration files to divide your policy depot among multiple teams or departments. Thereby creating *ClearTrigger regions*. Suppose you wanted specific VOB groups to have a specialized high security policy versus the entire organization. This, too, can be easily done with ClearTrigger.

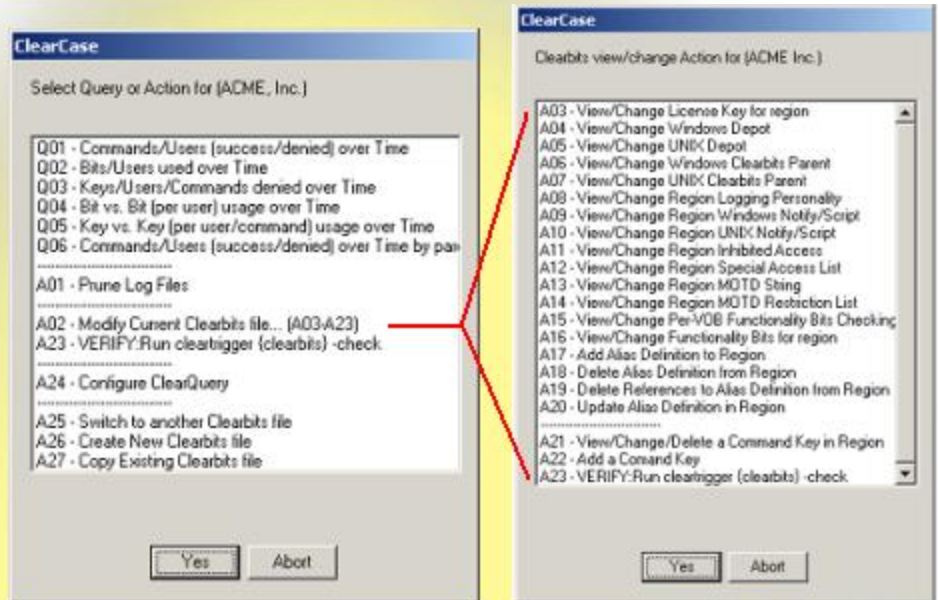
Using ClearTrigger is faster and simpler than going to each of your organizations VOBs to redefine triggers to restrict certain users or groups (as done when using the *-users* option on the *mktrtype* command). It also eliminates the need to update multiple script files to prohibit individual users belonging to UNIX or Windows groups allowed to access the VOBs. VOBs do not have to be moved to new machines or networks reorganized. Simply install and configure ClearTrigger and get started! ClearTrigger, many of the most common ClearCase policies are already coded for you, just turn the feature on to get consistent policy in all of your VOBs with consistent dialogs for your users like those below:





# ClearQuery

ClearQuery is a ClearTrigger add-on that performs two (2) main functions. First ClearQuery can be used to create and modify the ClearTrigger clearbits\_file. Secondly, ClearQuery provides methods to test the usefulness of ClearTrigger policy by providing a query mechanism for allowing you to track successes and failures of triggers and how often they fire and by whom (something ClearCase does not do). You can query by commands, users, functionality bits, command keys or all the above. The queries return easy to read graphs that allow you to quickly decide if a policy is working for your organization or someone may need extra help/training.... Examples of a few of the reports are below:



## ClearCase Comand Key usage for: (all) Keys for (all) users for (all) commands for the last 120 days.

Key#	Description	Usage from: Tue Jan 22 2002 - Wed May 22 2002
00#	pre midtype,R;Ibtype<REL# #>0;-10;	314
01#	post checkin,R;0;0;0;D; ;N; ;0; ; ;0;E; ; ;	433
02#	pre checkin,R;0;0;0;D; ;N; ;0; ; ;0;E; ; ;	369
03#	pre MODIFY_ELEM,R;0;-10;	324
04#	pre checkin,R;0;0;0;D; ;N; ;0; ; ;0;E; ; ;	323
05#	pre rmelem,R;0;0;0;D; ;--example alias ;	340

Key #3 was invoked 324 times during this period

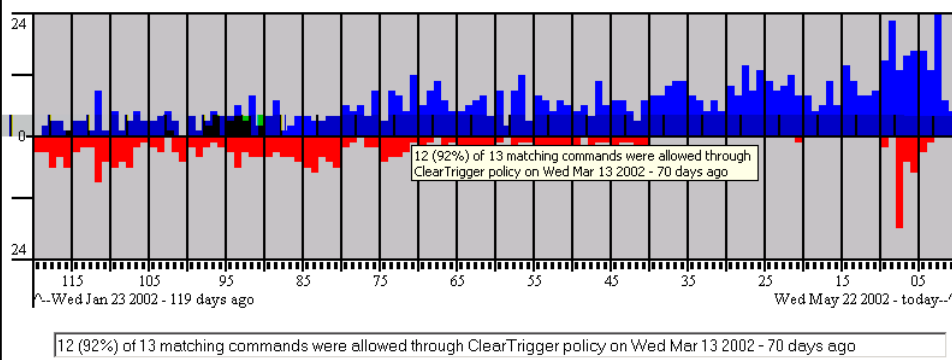
## ClearCase Functionality Bit usage for: (all) bits for (all) users for the last 120 days.

Bit#	Bit Description	Usage from: Thu Aug 15 2002 - Thu Dec 12 2002
00#	BIT AUTO BRANCH REMOVAL	486
01#	BIT CHOWN_VOB_OWNER	509
02#	BIT EVIL TWIN	473
03#	BIT ONE_CO_PER_BRANCH	503
04#	BIT CHECK_BRANCH_LABEL_NAMES	467
05#	BIT_VOB_OWNER_CI_MAIN	460
06#	BIT RECURSIVE_CI_CO_UNCO	555
07#	BIT_CHECK_MAGIC_PATH	554
08#	BIT NO_SPACES_IN_ELEMENT_NAMES	510
09#	BIT_NO_MULTIPLE_MERGES	542
10#	BIT SMART_CHECKIN	498
11#	BIT CASE CHECKING	517
12#	BIT ATOMIC CHANGE	499
13#	BIT REQUIRE_EXTENSION	513
14#	BIT NOTIFY_PARENT_CHANGE_ON_CO	485
15#	BIT NOTIFY_PARENT_CHANGE_ON_CI	473
16#	BIT PREVENT_DATA_LOSS	479
17#	BIT_AUTO_EXEC_BIT	516
18#	BIT PREVENT_CORE_ELEMENTS	
19#	BIT AUTO_DIRECTORY_PROTECT	

The BIT\_\_PREVENT\_DATA\_LOSS bit was invoked 479 times during this period

The BIT\_\_PREVENT\_DATA\_LOSS bit was invoked 479 times during this period

## ClearCase command success/denied usage for: the (checkin) command for (all) users for the last 120 days.



## ClearTrigger Lite 14.1 is here!

ClearTrigger Lite is a custom add-on to the IBM Rational ClearCase product. ClearTrigger Lite has many of the features of Fully Functional ClearTrigger and also makes use of even simpler CPD to create a user/command allow/disallow matrix that applies to all VOBs in your ClearCase region or a group of regions... all without having to visit every VOB in your region. Implementing ClearTrigger Lite is so basic and straightforward that administrators of all experience levels can use it. It conveniently integrates with your current ClearCase installation and doesn't require moving VOBs to new machines or reorganizing your network. Just install and configure ClearTrigger Lite and get started. Once applied to your VOBs, ClearTrigger Lite allows you to define and/or change the permission matrix without having to visit the VOBs. All features of both ClearTrigger and ClearTrigger Lite are embedded in the same executable so when you are ready to upgrade to fully functional ClearTrigger, just change the key in the clearbits file. When users attempt to perform a command that they are not allowed to perform they are shown a consistent dialog that explains that they cannot perform the command because of company policy.



ClearTrigger Lite allow the administrator to take advantage of many of the Region-wide ClearTrigger features and ClearTrigger Functionality Bits and also allows the administrator to create simple Command Permission Definitions (CPDs) to define who can perform which cleartool sub-commands in the ClearTrigger Region. A ClearTrigger Lite Region can include a portion of a ClearCase Region or even many ClearCase Regions. The CPDs serve to limit who can perform a command or group of commands within the ClearTrigger Region.

Within the CPD the administrator define either “who can perform the command group” or “who cannot perform the command group” within the region.

Examples of simple Command Permission Definitions (CPDs) below. The CPD applies to ALL VOBs in the ClearTrigger Lite Region (any number of VOBs).

<snip>

```
D: .* ramesh fred jaun # Prevents Fred and Juan from doing anything in the region
D: .checkout sally tom # Prevents Sally and Tom from performing checkout in the region
D: .checkout .checkin tom bob # tom and bob can't do checkouts or checkins in the region
D: .chevent * # No one can perform a chevent in the region
A: .rmelem charles scott # Only Charles and Scott can perform rmelem in the region
A: .mktype .rmtype robert david # Only Robert and David can make/remove types in the region
```

<snip>

To download this software  
visit: <http://www.abs-consulting.com>

Example CPDs

## ClearTrigger & ClearTrigger Lite Introduction

**ClearTrigger** is a custom add-on to the IBM ClearCase product. It serves to simplify the task of maintaining triggers and policy for your ClearCase installation. It is flexible in that it allows you to enforce separate sets of triggers across different projects, teams or operating systems. ClearTrigger enables organizations to add triggers for specialized processing requests. It conveniently integrates with your current ClearCase installation and does not require moving VOBs to new machines or reorganizing your network. Once you install and configure ClearTrigger, it's ready for use. ClearTrigger is an efficient way to manage your current and existing triggers for the enterprise, but it does not stop there. ClearTrigger **also provides policy**, so you don't have to create it. Functionality bits are provided so that the most often used and requested policy by ClearCase administrators around the world area already coded into ClearTrigger, you just turn the bit on.

ClearTrigger makes use of basic, straightforward instructions to apply triggers. The dilemma of creating triggers using *cleartool mktrtype* is circumvented. Additional features were also added and some restrictions that existed with native ClearCase trigger definitions were either removed or relaxed.

ClearTrigger's simple method of implementation is accomplished through the use of configuration files called *clearbits\_file*. The *clearbits\_file* does not have to be named *clearbits\_file* or any other name, but throughout this document we will refer to all configuration files as "***clearbits\_file***" for the sake of simplicity. The *clearbits\_file* allows you to define up to two different policy depots. The policy depot contains all of the trigger code to be managed by ClearTrigger. You may set up policy depots for UNIX and Windows if your site needs to. There is no limit to the number of *clearbits\_files* that your organization can have. You may create any number of configuration files to divide your policy depot among multiple teams or departments. Such subdivision would create **ClearTrigger regions**. Suppose you wanted specific VOB groups to have a specialized high security policy as opposed to the whole organization. Not a problem with ClearTrigger.

Using ClearTrigger is both faster and simpler than going to each of your organizations VOBs to redefine triggers to restrict certain users or groups (as you do when using the *-nurses* option on the *mktrtype* command). It also eliminates the need to update multiple script files to prohibit individual users because they belong to UNIX or Windows groups that are allowed to access the VOBs. And the best part is it doesn't require moving VOBs to new machines or reorganizing your network. Just install and configure ClearTrigger and get started!

**ClearTrigger Lite** is a custom add-on to the IBM Rational ClearCase product. It provides about 1 half of the Functionality of ClearTrigger including the highly popular functionality bits, region-wide inhibit features as well as simple CPDs which allow a region wide command/user availability matrix.

**ClearQuery** is a ClearTrigger add-on and provides methods to see if you ClearTrigger implemented policy is useful by providing a query mechanism that allows you see how often the policy "saved" you, it tracks success and failures (something ClearCase does not do). You can query by commands, users, functionality bits, command keys (that you create) or all of the above. The queries return easy to read graphs that allow you to quickly decide if a policy is working for your organization or who might need extra help/training.

ClearQuery also serves a build in interface to ClearTrigger clearbits file so that changes are easier and less error prone. ClearQuery comes with ClearTrigger and operates on the same license key.



## ClearTrigger & ClearTrigger Lite Facts

**ClearTrigger** was developed to minimize the administration duties of the ClearCase policy implementer. ClearTrigger attacks complexity on two fronts: Trigger avoidance and trigger centralization. Now policy can be implemented at either the VOB level, region level, as high as the enterprise level, or as low as the element level. The operator can create any number of policy depots to create different ClearTrigger regions. However, most companies that wish to have enterprise-wide policy will just need 1 or 2 licenses of ClearTrigger (A license for the Windows side and one for the UNIX side). A license in general is needed for each unique path to the policy depot. ClearTrigger is flexible in that it allows you to enforce separate sets of triggers across different projects, teams or operating systems. ClearTrigger enables organizations to add triggers for specialized processing requests. It conveniently integrates with your current ClearCase installation and does not require moving VOBs to new machines or reorganizing your network. Once you install and configure ClearTrigger, it's ready for use.

**ClearTrigger Lite** was developed as a lower cost of entry for ClearTrigger. It has many of the features of ClearTrigger and a few additional ones that make enterprise management of ClearCase policy simple and elegant. All of this at a fraction of the cost of ClearTrigger.

System Requirements	
Supported Operating Systems	ClearCase Supported Operating Systems
Required Software	ClearCase 3.2.1 or higher
Minimum Configuration	All minimal ClearCase configurations are sufficient to run ClearTrigger or ClearTrigger Lite

License Requirements	
Minimum License Requirements	Most companies will need only 1-2 licenses for the whole organization. One for UNIX (if ClearCase is accessed from UNIX) and one for Windows (if ClearCase is accessed from Windows).
License Fee	For ClearTrigger and ClearTrigger Lite: Refer to <a href="#">A Better Solution, Inc. – ClearTrigger Pricing</a>

Feature Matrix	Supported in ClearTrigger	Supported in ClearTrigger Lite	Supported in native ClearCase
Pre-written functionality bits for the most common trigger needs	X	X	
Ability to control trigger firing order	X		
Ad-hock user grouping aliases	X	X	
Ad-hock group grouping aliases	X	X	
Ad-hock VOB grouping aliases	X	X	
Ad-hock element grouping aliases	X	X	
Ad-hock replica grouping aliases	X	X	
Ad-hock time grouping aliases	X	X	
Ad-hock ClearCase region grouping aliases	X	X	

Ad-hock metadata grouping aliases	X		
Ad-hock user/group/VOB/element/replica/time/region/host grouping aliases	X	X	
Element level Trigger/Policy	X		X
Command level Trigger/Policy	X	X	X
Pattern matching for Element/Trigger associations	X		limited
Directory level Trigger/Policy	X		X
Pattern matching for Directory/Trigger associations	X		limited
VOB level Triggers/Policy	X	X	X
Pattern matching for VOB/Trigger associations	X		limited
Replica level Triggers/Policy	X		
Pattern matching for Replica/Trigger associations	X		
Environmental variable sensitive Trigger/Policy	X	limited	
ClearCase Region sensitive Trigger/Policy	X	limited	
ClearCase Host sensitive Trigger/Policy	X	limited	
Time sensitive Triggers/Policy	X	limited	
Pattern matching for Time/Trigger associations	X	limited	
View sensitive Triggers/Policy	X	limited	
Pattern matching for View/Trigger associations	X	limited	
UCM “activity” Trigger conditionals	X		
UCM “component” Trigger conditionals	X		X
UCM “folder” Trigger conditionals	X		
UCM “project” Trigger conditionals	X		X
UCM “stream” Trigger conditionals	X		X
Region level Triggers/Policy	X	X	
Enterprise level Triggers/Policy	X	X	
Centralized Trigger Control	X	X	
Web-interface for Trigger/Policy creation	X	X	
GUI-interface for Trigger/Policy creation	X	X	
Extended Environmental Variables	X		
Dynamic Variables	X	X	
Trigger inclusion list	X		X
Pattern matching for inclusion list	X		
Trigger restriction list	X		X
Pattern matching for restriction list	X		
Trigger negation list	X		
Pattern matching for negation list	X		X
Trigger –nuser list	X		X
Pattern matching for -nuser list	X		
Trigger –only list	X		
Pattern matching for - only list	X		
Command/user allow/disallow lists	X	X	
special user/group/VOB/element/replica/time/region/host list	X		



Inhibited user/group/VOB/element/replica/time/region list	X		
Region/enterprise mail notification	X	X	X
VOB wide Command User Matrix	X	X	
Region wide Command User Matrix	X	X	
Enterprise wide Command User Matrix	X	X	
Trigger-less element matching comment restrictions	X		
Trigger-less user matching comment restrictions	X		
Trigger-less group matching comment restrictions	X		
Trigger-less VOB matching comment restrictions	X		
Trigger-less Region matching comment restrictions	X		
Trigger-less Host matching comment restrictions	X		
Trigger-less Enterprise matching comment restrictions	X		
Ignore-Key Processing	X		
Stop-Key processing	X		
Ability to apply companies policy in one command	X	X	
Simplified GUI Dialogs	X		
GUI application of Triggers/Policy	X		
Trigger-less Series start/end control	X		
Region-wide command logging	X	X	
VOB-specific/command matrix	X	X	
Denied command reporting	X	X	
Trigger by Trigger comparisons graphs	X	X	
User/command usage graphs	X	X	
User/Trigger usage graphs	X	X	
ClearCase Region-wide user restrictions	X	X	
ClearTrigger Region-wide user restrictions	X	X	
VOB wide user restrictions	X	X	
Message-of-the-day Functionality	X	X	
Integration to ClearWeb	X	X	X
Parent/Child region-wide policy hierarchy	X	X	
ClearReplica integration	X	X	
iApproveIt mobile phone integration	X		
Real-time Mobile phone enabled triggers	X		

To read more about ClearTrigger or ClearTrigger Lite, visit [https://abs-consulting.com/\\_products/products.shtml](https://abs-consulting.com/_products/products.shtml)