

**What's the Latest?**

It is **Time To Upgrade** to the latest release of Change Action! See the caption box on page 2 of this newsletter. **Also note that if you are migrating your operating system to OS/390 R2.10 or any z/OS, Change Action must be at 6.04 or above.**

The current release of Change Action is 6.09 (released June 2003). For a complete list of all of the new features and enhancements included in Change Action contact Action Software and ask for the "What's New in Change Action?" summary document. Also for the latest information check our web site ([www.actionsoftware.com](http://www.actionsoftware.com)).

**USS Action production release – Early 2004**

Are you implementing UNIX System Services? Do you want to know 'What's Changed' in HFS and zFS files?

**USS Action** automatically and transparently tracks changes and references in OS/390 & z/OS UNIX.

USS Action delivers the same superior functionality as Change Action for Hierarchical File System (HFS) and zSeries File System (zFS) files under the OS/390 and z/OS UNIX System Services (USS) system environment. It looks similar to Change Action, except that dataset and member are replaced by directory and file name.

USS Action includes automatic tracking, control, compare, reporting, and backup / restore of HFS & zFS files.

USS Action currently provides the following functions in the OS/390 or z/OS UNIX environment:

- > Automatic change and reference tracking for USS directories and files
- > Specify change tracking and control options down to the file level
- > Automatic backup of changed files
- > Back out changes with minimal effort
- > Create and approve Change Requests
- > Side by side compare facility for comparing USS files and backups of files
- > Reference tracking at the Directory and file level
- > Batch report of change tracking statistics for USS directories and files
- > Online reporting of change tracking statistics for USS directories and files
- > Template support for selection criteria to be used with batch and online reporting

For further information contact Action Software or visit our web site.

Many of our clients have implemented front-line business

applications that web-enable their legacy data to improve customer service. These systems that are implemented on OS/390 UNIX are high profile business critical applications that require the qualities of service and systems management environment for which OS/390 is renowned. As part of this implementation **USS Action** has been installed to track changes to the OS/390 UNIX operating environment.

Some of the application areas tracked include Domino, Lotus-Notes excluding email, NFS file sharing, CICS front ends, and other Web based applications; specifically directories and files such as configuration and system files in /etc directory, binaries & executables in /bin, and HTML, Java, and LDAP file directories.

**What's New Highlights**

Some of the new features / enhancements included since release 6.06 are:

- > The Product Execution Control feature was introduced, refer to article below.
- > Since there is no facility in USS to write to programmer (WTP), all USS Action control events are logged to the database. The log can be viewed from the USS external logging panel. An option is also available at the OID level to notify via email the user who was making the change.
- > Extensive email support is available within Change Action. Refer to the articles below for some additional examples.
- > With the external logging feature, updates to options (oid, usrgpr, exclude, etc) in Change Action are recorded to the database. In addition a detailed email message can be sent when such a change is made. As well, whenever messages from Change Action Controls (i.e., Change Request, Blackout, etc.) are sent to a user, the event will be recorded to the database (also with the email option).

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- > Global Administrators can now be defined through RACF
- > When a group of data sets on one volume is compared to a group of data sets on another volume, symbolic parameters are available which allow you to equate different qualifiers so that a group of data sets with one set of names may be compared to an equivalent group of data sets.
- > You may now get notification messages from the automatic scheduler in email form. If you have the email support enabled in the global options, then each user may direct certain messages to either TSO, email, both or none.
- > You may now select multiple individual hours during the day when you want the job to be submitted. Also now available is a Minute Range option which allows you to indicate at which minute past the hour the job is to be submitted.
- > An alert is issued if the Daily job has not run successfully in the last 10 days.

### What's in a Name

Early in the new year Action Software will be releasing version 7.0 of Change Action. With version 7.0, the product will be renamed to **eventACTION**.

Originally designed as a product that manages, tracks, and controls all system changes in an MVS computing environment, over the years **eventACTION** has evolved into more than just a change management tool. It is now a comprehensive event tracking tool. The following events are tracked:

- > program & product execution
- > references to datasets & members
- > changes to datasets & members
- > references & changes to USS files
- > operator commands
- > updates to SVC table

**eventACTION** also includes extensive usage of email messages; a powerful side-by-side compare facility which provides the capability of comparing almost any two files; and an extensive report capability.

A key component of **eventACTION** is the Unix System Services (USS) interface, known as USS Action. Version 7.0 will be the production release of **USS Action**.

### Make Sure

Since support for Change Action releases up to and including 6.05 will be withdrawn effective June 30, 2004, all installations must ensure that the migration process for the 'Batch Functions and Selection Templates' enhancement that was originally distributed in Change Action version 6.01 has been successfully run.

With version 6.01 all job definitions (including Reports, Batch Jobs, ELI jobs and LULU batch jobs) were enhanced to support Selection Templates. This enabled the same selection criteria to be used to obtain information online via the ISPF panels and in the background under the various batch functions. This allows you to create a selection template for searching the database for information and use

these exact same criteria in both the online and background modes. Whenever a template is changed, that change is reflected to all definitions that reference the template. This enhancement required a conversion of some records in the Change Action database. Installations that are not certain if the Change Action database records have been converted for this facility can enter the appropriate option command (for Reports, Batch, ELI or LULU) from the primary selection panel and note the headings on the first panel.

As an example, for the ELI option, the heading on the first panel previously said 'List of External Interface Jobs'. After the database conversion the heading on the first panel will be 'Batch Functions: List of Functions' and an extra column Function is displayed that for ELI will contain ELI.

If in doubt contact Action Software

for assistance.

### Product Execution Control (PXC)

As a result of a client request, Action Software has developed the Product Execution Control (PXC) feature within Change Action. The PXC feature has been developed for sites with multiple CPUs or LPARs where some products may be licensed only to select CPUs. In addition, there may be select LPARs where the site does not want their users to run certain products (or programs). A product can be defined to Change Action either by program name and/or dataset name along with the Smfids of the appropriate CPUs / LPARs on which the product / program is licensed or is allowed to run. For each product, you specify what action to take when an attempt is made to run the product on an Smfid that has not been defined on the Product Execution Control panel. This is referred to as the MODE of operation (NOTIFY, WARN or FAIL).

If a defined product attempts to run on an undefined Smfid, then appropriate action will be taken based on the value specified for MODE for the product. The event will be logged to the Change Action database. There is also an option to send Email for every event. The log can be viewed from the External Logging option or by using the primary command LG from the Product Execution Control panel. If you want to remove a product completely from your site and see who is still using the product, then you can define the product to the PXC feature, without any SMFID defined. This would be useful even if you only have just one CPU.

For further information contact Action Software or review the documentation in the Administration Guide.

### FTP Data to Action Software

For a number of years, Action Software has had available an FTP server so that clients could send data to our Technical Support team for problem diagnosis.

In early 2001, the PRT command was enhanced to automate this process. Entering /PRT on any panel, or PRT from most table display panels, displays the FTP send panel, 'Send Data to Action Software' (see the extensive HELP once you're there).

**TIME TO UPGRADE**

Support for Change Action releases up to and including 6.05 will be withdrawn effective June 30, 2004.

To upgrade to the current release of Change Action, and to take advantage of all of the new features and enhancements that are included in Change Action release 6.06 to 6.09, contact your Action Software representative to order your tape. See **What's New Highlights** article.

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**PRT** puts the table display into a temporary dataset, while **PRT dataset /FTP** puts the output into a permanent dataset before entering the FTP panel. /PRT from any panel allows you to send any type of data set(s), eg SVC dumps, system messages, etc.

From the 'Send Data' panel, you can send any data in ASCII, BINARY, or TSO/E XMIT format in the foreground or background. XMIT allows you to send any data or an entire PDS. BINARY should only be used for very large fixed block datasets, eg SVC dump. Use of this facility requires that OS/390 or z/OS FTP be installed and configured. FTP must be able to send data via the Internet. For additional information review the HELP or contact Action Software.

Since the beginning of 2003 (release 6.07), the 'GO Email' primary command from the 'Send Data' panel allows text / table data to be sent to Action Software via Email (SMTP must be installed). The data to be sent can be from a panel display, a data set or member, or the output of a job.

To use the Email option, the JES nodename and SMTP information must be setup.

## Email Messages

Now IT support staff don't have to log onto TSO to determine the status of their changes or their scheduled batch jobs, Change Action's Email Message feature can provide the information directly to their desktop via their 'in box'. Since July 2000 Change Action has supported using Email for messages in addition to the TSO Send command. (The Email feature makes use of the SMTP feature of OS/390 TCP/IP.) Over the last three years most features of Change Action have integrated this Email support.

Support staff can receive critical information in their email account from: change tracking & control including change request processes, command tracking & control, automated scheduler, product execution tracking & control, and batch job output. Change administrators can be notified when Change Action options are changed, including information on what was changed! In addition, significant errors or warnings within Change Action can be sent to administrators or system programmers using the global email alert parameter. This can highlight when potential maintenance activities are required. Refer to the Email Messages chapter of the Administration guide for detailed information to set up this feature.

## Email of Batch Sysout

You can now have sysout files from batch jobs sent out via email using Change Action's scheduler or reporting feature.

On any scheduled batch job listed on the "Batch Function: List of Functions" panel, the line command EM can be used to define email options. At this level, the emailing facility depends on the automatic scheduler; the emailing of a job's sysout files is initiated in the completion step of the scheduled batch job.

For report jobs only, once you have selected a report job and are on the "Report Steps Within Job" panel, the primary command EM can be used to define email options. Only the sysout for report jobs can be set up for email independent of the automatic scheduler since such email is initiated by the Change Action reporting program. A job can only be defined

for email in one of the facilities, either via the scheduler or through reporting.

The "EMail Options" panel allows you to specify recipients, a reply id and subject. For recipients, you can specify either userids and/or usergroups as defined in Change Action with email options, or actual email addresses. You also can indicate what type of output to send i.e. JCL, REPORTS, or a list of DDNames; other sysout options are also available. Please refer to the help panels for a further description of the email options.

## Email thru SMTP

The Email feature of Change Action makes use of the SMTP feature of OS/390 TCP/IP. As originally implemented SMTP needed to be active on the system that Change Action was executing in order for the email to be delivered. Change Action now supports delivery of email messages via NJE in sites with multiple images that do not run SMTP on all images.

For email delivery to occur: a) SMTP must be running on at least one of your MVS systems; b) if SMTP is to send email received from other NJE nodes, its configuration file must include the GATEWAY statement, and sysout from other NJE nodes must be able to reach the system running SMTP; and c) SMTP must have a working connection to the network used by the intended recipients.

Once your SMTP environment has been verified, a global administrator defines the SMTP setup to Change Action using global option "H" (list of hosts). In particular the JES Node Name specifies the node name of the system on which SMTP is running.

To complete the setup user email addresses must be defined. A user provides their own Email address on the User Information panel (option U from the primary selection panel). A Global Administrator can add new users by using the User List panel (option UL from the primary selection panel). In some cases, these users may not use Change Action, but wish to receive certain messages or output. A userid (in a User Group or the User List) does not have to be a TSO or RACF userid, so emails can be sent to non TSO users.

## RTM Option Performance

One of the features of Reference Tracking by Members (RTM) is to provide information for the usage of a product or program execution. The tracked data indicates if the program is used at all, how often it is used, who is using it, and who are the most frequent users. If there are multiple copies of a member in different libraries, then the dataset names of every library are recorded.

To track the usage of a specific product, e.g. COBOL, only the primary program name needs to be added to RTM. Clients are advised against adding all member names from a load library to RTM. It is better to include a few hundred distinctive program names to RTM rather than a few thousand potentially meaningless ones.

With thousands of entries in RTM unnecessary overhead is incurred. As well, there will be an excessive amount of data generated that could get in the way of effective analysis.

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As an example, we may want to track the usage of the COBOL compiler and some subroutines. To collect the most relevant data for the compiler just add the name IGYCRCTL to RTM. For specific optional subroutines that you want to track, add their names to RTM also, e.g. EQA14001, EQA00DYN, etc.

## Tips & Techniques

### Use of the Find command within Change Action

Change Action has a number of common primary commands. One of the potentially most useful is the 'Find' command. The Find command is available on most of the primary table panels. The Find command is also available within the online Compare utility to assist in locating data anywhere in the output results of the comparison of two files.

This article will review some of the Find command options and provide some examples.

The Find command has many of the same options as the ISPF Edit find command.

The general format is:

```
Find 'string' <col1 col2> <First/Last/Prev/ALL> <Word/PREFix/Suffix>
```

The Find command includes the options:

- > character or hexadecimal string of data, in quotes if using imbedded blanks, an asterisk (\*) implies the same string as last entered. A hex string is a quoted string that is preceded or followed by the letter "X". A hex string must contain only hexadecimal digits (0-9, A-F) and there must be an even number of digits.

- > FIRST, LAST, PREVIOUS or All occurrence(s) of the string the default which does not have to be entered is NEXT.

- > ALL - the search returns a revised table where only table entries with an occurrence of the string remain. To go back to the original list of entries use the Reset primary command.

- > single column number to indicate that the string must start in this specific column, or two column numbers to indicate that the string must be found within this range of columns. To view the column numbers for fields on a panel enter the line command COLS. The default is to search entire records. Normally the FIND command will find any occurrence of the entire character string. You can control the portion of the string to be matched by entering one of the following optional parameters, thus limiting the strings that are found.

- > A Word is defined as being preceded and followed by a non-alphanumeric character.

- > A PREFIX is defined as being preceded by a non-alphanumeric character and followed by an alphanumeric character. The prefix parameter could be used, for example, to find all labels or words beginning with "er", without finding words ending in "er".

- > A Suffix is defined as being preceded by an alphanumeric character and followed by a non-alphanumeric character. The suffix parameter could be used, for example, to find all labels or words ending with "do", without finding all occurrences of the character string "do".

The only required option is the data string to be found; all other parameters are optional. All operands to the Find command may be specified in any order.

To repeat the last Find command with all of its associated

operands, use the Repeat FIND PFkey. As with ISPF, when Bottom or Top of Data are reached, the search may be continued automatically in a wrap-around mode. Also, if the cursor is positioned on a record within a table/file when any form of the Find command is issued, then the search will start or resume at the byte just passed the cursor.

Selection Fields are provided on most of the panels which display data in tables. The Selection Fields can be used to shrink the table to display the entries that are of interest to you. For example, on the Datasets Changed panel, there may be hundreds of datasets listed. You may specify a masked dataset name for selection or select a specific OID. At times you may want to shrink the table by selecting a field that is not a 'selection field'. You can do this with the **Find 'string' All** command. A good example would be if you wanted to clean up the changed data set statistics for deleted data sets. Select option **D**. Enter **COLS** line command on the first line of table to determine the column for 'status'. Enter **F deleted 79 all**. The table will now contain only data set statistics for data sets that have been deleted! At this point you could enter the primary command **DO DELETE** to delete all of these records. Or alternatively enter **DO Size** to determine how many database blocks each data set is using.

Another interesting example. If one of your departments were changing its name and wanted to change the prefix on their userids you could use the Find command to help in the migration. One of the things that you would want to do is replace all of the old userids with the new ones in specific User Groups. If the old prefix for userids is ODEP, on the List of User Groups panel enter **Find ODEP prefix all**. This will return a list of user groups that contain userids beginning with ODEP or any user group beginning with those letters or any user group created by an ODEP userid.

The Find command in the Compare utility is even more powerful, we will cover this topic in the next newsletter.

## Contact Information

If you require more detailed information about Change Action, TestAction, or USS Action, we can be reached at:

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