Identification

EPL Compilations on CTSS FIB
EPLFIB SAVED
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Purpose

EPLFIB SAVED is a collection of programs which allows the user
to batch-compile his EPL procedures and obtain off-line ASCII
listings of the results.

Introduction

Since execution times for EPL compilations are more likely to
be of the order of magnitude of minutes rather than seconds,
the interactive properties of CTSS lose their desirability and
make absentee-user (FIB) jobs look more attractive. At the
same time, the lengthy execution times make it extremely
risky to attempt the compilation of more than one or two EPL
files per FIB job, given the current time limit of 5 minutes
per job. Certain users have worked out the mechanics of
chaining from one FIB job to the next, but the process is
both tedious and error prone.

A special purpose set of programs has been written which allows
the user to compile an indefinite number of EPL programs
under FIB (Shift 5), one compilation per FIB job, until a list
is exhausted, and request ASCII editor output of any of the
resulting files.

The procedure to be described below assumes that the user is
compiling his EPL programs using Art Evans' EPL SAVED (BN.3.01)
and has in his own directory the links obtained by issuing the
command RUNCOM EPLGET. If off-line output is requested, the
user must also have the requisite link, ASCII RQUEST, for
requesting ASCII output off-line. (BE.5.11)

Acknowledgements go to Don Widrig and Noel Morris for their
contributions to the logic of the programs.

Usage

To obtain deferred EPL compilations on his FIB time quota,
the user issues the command

        R EPLFIB NAME1 NAME2 ...

where the NAMEi are the primary names of the EPL files to be
compiled.

The NAMEi are added to a list in a file for later processing;
the NAMEi may also be any of the following special arguments:

'(LIST)' - for subsequent NAMEi in the argument list, after
each compilation, a request will be made for off-
line ASCII output of the source program (second
name EPL), and the resultant SOURCE, MACROS, and
EPLBSA files. N.B. If listings are to be requested
for all programs compiled from one invocation of
EPLFIB, the '(LIST)' argument must occur before any
of the file names.

'(RQAS)' - same as '(LIST)', except request will be made
for SOURCE, MACROS, and EPLBSA files only; request
for EPL file printing will not be entered.

'(NLST)' - for subsequent NAMEi, no requests for off-line
listings will be entered. This is the normal
mode of operation.

'(FIB)' - request that the command

   FIB EPLRUN

be issued for this user after making all entries
to the list, after which the command chain is
continued. This command is normally issued auto-
matically if the list was empty at the beginning
of the EPLFIB command.

'(NFIB)' - after making all entries in the deferral list,
proceed with the user's command chain, if any.
This is the normal situation if the list was not
originally empty, but would be used if the user
wished to issue the following command at some later
time:

   FIB EPLRUN -LIMIT- -TIME- -DAY-

where LIMIT, TIME, and DAY are as defined in
the CTSS Programmer's Guide, section AH.1.03, to
postpone the compilations until a specified time.
(Note that the optional parameters apply only to
the initial FIB job of a deferred series.)

Method

EPLFIB appends the user's compilation requests to a file
named EPL STACK in the user's directory. When the user logs
out (and TIME and DAY have been reached, if applicable), his
FIB job is logged in, the first entry is removed from EPL
STACK, and the EPL compiler is invoked.

After normal termination of the compilation, a "windup" phase is entered which issues the ASCII print request command (if the user desired listings) and a new FIB command, and then logs out.

This process is repeated until EPL STACK is empty, or until one search through EPL STACK reveals no entry for which a corresponding, non-zero-length EPL file exists.

At the successful completion of a chain of FIB jobs, all the text which EPL normally prints on the user's console will have been collected in a 12-bit line-marked file named EPL OUTPUT. The LOGIN-LOGOUT messages and other text will be in $$$FIB OUTPUT, which is the normal "stream-name" for the FIB-user's console.

...001 SAVED will remain in the user's directory, but is generally useless and should probably be deleted.

Errors

The following diagnostics may appear when using EPLFIB:

> Output from the PRNTER command: miscellaneous file system errors;
> correct condition, check contents of EPL STACK and re-try.
>
> blah EPL NOT FOUND, SHALL I SET IT UP ANYWAY,:
>
> The user responds with "yes" to insert compilation request.
>
> 'xyzabc' PARAMETER ILLEGAL, IGNORED:
>
> Illegal file name was given in the command, the rest of the command arguments are processed.
>
> EXECUTION OF YOUR JOB DEFERRED UNTIL tttt.t:
>
> This comment is printed by the FIB command, and refers to the restriction that a user must space his FIB jobs at least an hour apart. The user may issue the PRFIB command to determine if any conflicts exist. If more than one instance of the job-name EPLRUN is printed, this is an error; they should all be deleted by successive applications of the DELFIB command. The user must then re-issue the FIB command, either by
>
>   FIB EPLRUN -LIMIT- -TIME- -DAY-

or alternatively, by

R EPLFIB '(FIB)'

(The DELFIB command will always delete the first job of
a given name for the user, hence the user must delete all
jobs of a given name if the desired job is not the last
one printed by PRFIB).

The portions of this sequence which run unattended under FIB
are sensitive to minor indications of trouble, such as
record-quota-overflow (which condition itself cannot be
recorded in $$$FIB OUTPUT); as a result, strangely-named files
may appear from time to time. In particular, the non-EPL
output may be in a file temporarily named ...FIB OUTPUT,
while the current record of EPL compilations could be in the
file named $$$FIB OUTPUT. The user may examine these at his
leisure. A series of compilations which has been aborted
for any reason will not automatically restart itself under
FIB.

Format of EPL STACK

EPL STACK is a card-image file (14 words/line) containing the
following items for each EPL compilation, in the order the
requests were received (one compilation request/line):

Cols 1 - 6   NAMEi (right justified)
      7 -12   (LIST) or (RQAS) if off-line printouts
              are to be requested
              (NLST) otherwise

Users may also use the ED command to modify the file, at
their own peril.

Obtaining the Links

The user may obtain the necessary links by issuing the
following two commands:

LINK FIBGET BCD T234 CMFL01

RUNCOM FIBGET

At the conclusion of the RUNCOM, the following links will
remain:

EPLFIB SAVED

RUNFIB SAVED

EPLEND SAVED

EPLRUN BCD

and the link to FIBGET BCD will have disappeared.

The SAVED links are all links to the same file, which is entered under three different guises.

Restrictions

None of the names of files and links mentioned herein is variable; the only variable part is the list of names which makes its way into EPL STACK. ...FIB OUTPUT should not be in the user's directory when his first FIB job logs itself in, and old versions of EPL OUTPUT and $$$FIB OUTPUT will be appended to.