BENCHMARK

EMAS 2900 [redacted] NOTE

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Date: 4/10/78

Facilities for Running a Test of Many Users without the Interactive Network

This note describes a mechanism incorporated in the Edinburgh Subsystem and utilising a program in MANAGR to run many processes. It does not use ERTE (the remote terminal emulator); it does not even require an interactive network. It is useful for running tests on mainframes without interactive networks, and for running hardware or software confidence tests.

The method is to create a number of user processes with the generic name "TEST" and to start these. This particular name is detected by the Subsystem and instead of requesting input from the interactive terminal it executes the following commands:

```
OBEY(MANAGR.TESTOBEY,.LP)
STOP
```

The file MANAGR.TESTOBEY can contain any sequence of commands - e.g. compilation of a file and running a program. It is important that MANAGR.TESTOBEY, and any other files required, be permitted to the TEST process.

To simplify the creation and starting up of the user processes the following command is available in MANAGR:

```
CREATETESTUSERS
```

This prompts for file system, first user number and number of users. Thus if one wanted to create 10 users starting from TEST01 on file system 2, the replies would be as follows:

```
FSYS: 2
FROM "TEST" NO:1
HOW MANY? 10
```

There is an equivalent command DELETETESTUSERS.

The command STARTTESTUSERS is used to start some of the TESTUSERS. It prompts for the first user and number of users, and then sends start requests to the process "DIRECT".

R.R. McLeod

EMAS 2900 BENCHMARK NOTE

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Benchmark Utilities

This note describes some utilities involved in the initialisation and use of the F1 benchmark. It is intended as a record rather than a working document, and anyone wishing to make use of any of the utilities described should first contact the author.

The routines are contained as separate object-file members of ERCC28.BENCH.

1. BECKON(from,to)

   This routine causes all the files in an ECSB process on the 4-75 to be copied into a pdfile (of the same name as the process) and then transferred to process ERCC28 on the 2970.

   The parameter defines the range of ECSB processes to be operated upon.

2. UPDATEPD(pdfile)

   This routine overwrites pd members in files named ECSBnn with similarly named members in file "pdfile"; thus new versions of files can be placed in the pdfiles corresponding to each benchmark process.

   The reply to the prompt "process nos:" is two integers defining the range of ECSB pdfiles to be updated.

3. MAKEVCON(file)

   This routine creates a character file which can be OBEYed to write a Volumes TRANSFER tape to create ECSxnn processes, where x and nn are specified as ranges of values. x can be B, E, F or G.

   A prompt is given asking for the range of processes for which the tape is to be written; e.g. 11 48 indicates processes ECSx11 - ECSx48.

   The next prompt asks for the number of sets of processes to be created:

   The reply 1 will create entries for processes ECSBnn
   The reply 2 will create entries for processes ECSBnn and ECSEnn
   The reply 3 will create entries for processes ECSBnn, ECSEnn and ECSFnn
   The reply 4 will create entries for processes ECSBnn, ECSEnn, ECSFnn and ECSGnn

   The vol label of the tape to be written is then prompted for.

   The tape is written to by issuing the command OBEY(file) and can then be used to create (or overwrite) files in ECSx processes by the OPER command V/TRANSFER <vol label>

The remaining routines must be run in MANAGR and are used to manage F1 processes.

4. CREATE F1 PROCESSES

Command:INSERT(ERCC28.BENCH_F1PROCY) may be required.

The following prompts are issued:

process range:	p1 p2	where 0 <= p1 <= p2 <= 99 (corresponding to ECSx00-99)
set range:	s1 s2	where 1 <= s1 <= s2 <= 4 (corresponding to ECSB,ECSE,ECSF,ECSG)
no of disks:	d	where 1 <= d <= 16
fsys nos:	list	where 0 <= list item <= 99

The program relays NEWUSER commands to DIRECT to create the processes. Successive user numbers are generated with process number within set number, e.g. ECSB11, ECSB12, ECSB13, ECSB14..., ECSE11, ECSE12, ECSE13 ...., etc. and assigned cyclicly to the nominated disks.

5. DELETE F1 PROCESSES

This issues prompts for process range and set range. In this case, DELUSER commands are relayed to DIRECT to delete the processes. Each process is deleted from the first disk pack on which it is found.

6. START F1 PROCESSES

Prompts are issued for process range and set range. The program then relays START commands to DIRECT for each process.

A. Shaw

Setting up Processes for the F1 Benchmark

This note describes a procedure for creating and initialising the EMAS 2900 processes required for running the F1 benchmark.

Two magnetic tapes are required:

F1PROC, which contains all the files required by the F1 processes.

F1UTIL, which contains the contents of process ERCC28; this comprises the following:
- a pdfile for each F1 process containing all the files required by the process.
- a group of utility programs in file BENCH.

Proceed as follows:

1. Create process ERCC28 by the OPER command:

```
D/NEWUSER ERCC28 n 4      where n is the disk-pack number
```

2. Load ERCC28 from tape. First mount F1UTIL, then issue the OPER Command:

```
V/TRANSFER F1UTIL
```

3. Log on to ERCC28 and perform various initialisations:

```
Command:INSERT(BENCH_UPDATY)
Command:INSERT(BENCH_MAKEY)
Command:INSERT(BENCH_MTSUPPY)
Command:INSERT(BENCH_VTAPE01Y)
Command:PERMIT(BENCH,MANAGR)
```

4. Create the benchmark processes:

```
Log on to MANAGR
Command:INSERT(ERCC28.BENCH_F1PROCY)
Command:CREATEF1PROCESSES
PROCESS RANGE:11 48
SET RANGE:4
NO OF DISKS:      [reply as
FSYS NOS:          appropriate]
```

5. Load the processes with their files; first mount F1PROC, then give the OPER command:

```
V/TRANSFER F1PROC
```

6. The processes are now ready for use.

Three other utility programs, held as members of pd file ERCC28.BENCH, may be of interest:

a) DELETE F1 PROCESSES

To redistribute the F1 processes or change the number of disks used, first delete them using this program. Then repeat from the middle of step 4 onwards.

b) Two other programs are used to modify the files used by the F1 processes. Rather than amending files in the processes themselves, it is preferable to amend the copies held in the pdfiles in ERCC28. Since some files are used by more than one process, UPDATEPD is provided to ensure that all copies of a file (held in various pdfiles) are updated at once.

The method is to gather all amended files into a new pdfile, then call UPDATEPD with this pdfile as parameter.

The next step is to run MAKEVCON which generates a file containing the information required to write a new F1PROC tape. The tape is written by OBEYing the file produced.

The OPER command V/TRANSFER <tape> completes the operation.

The benchmark utility programs are described in Benchmark note no. 2.

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