Subject: Re: Multiple journal files on linux
Posted by Paul Van Delst[1] on Wed, 19 Jun 2002 16:21:19 GMT
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Ken Mankoff wrote:

>
> On 19 Jun 2002, Mark McGrath wrote:
>> This routine makes an `almost' unique file. An example:
>> Running IDL on a linux cluster, as we do here, if the machine clocks
>> are a litle out of sync it would be possible to over write the file
>> that had been opened already, no? (Not much info lost there though,
>> but the more serious case of the clocks being a lot out of sync then
>> large amounts of info in the journal file could be lost.)
>>
>> Any ideas, anyone?
>
> I ran into the problem of making a unique directory on a
> multiprocessor machine, where a timestamp may not suffice...
>
> Use the unique process ID. Each IDL session will have a unique PID, no
> matter how many processors and what the time is on each machine... I
> use a combination, the time (in msec), then a "_", then the PID.
>
> I believe you can still have multiple processes assigned the same time
> and PID if you are using networked computers (as opposed to 1 computer
> with multiple processors), but the chances, especially when using msec
> and not sec, drop to VERY low.

I do the following for multiple job submissions on a multi CPU machine in a shell script.
I didn't want the PID to be involved and just use a simple counter suffix. I've only got
access to 8 CPUS at once so I've never exceeded the (arbitrary) max value of 10
directories/files created at the same time.

Works quite well.


```
  # --------------------------
  # Get the start date and time
  # --------------------------

  LBLRUN_DATE=`date '+%Y%m%d'`
  LBLRUN_TIME=`date '+%H%M%S%Z'`


  # ----------------------------------------------------
  # Create a root definition for the LBLRUN_TAG variable
  # ----------------------------------------------------
```

```
ROOT_LBLRUN_TAG='_'`whoami`'_'${LBLRUN_DATE}'_'${LBLRUN_TIME }


  # -------------------------------------------------------- ----
  # Make sure the directory doesn't already exist by suffixing
  # the name with an _ and an integer identifier.
  # Need to check this just in case the time and dates were assigned
  # at the same time.
  # -------------------------------------------------------- ----

  LBLRUN_SUFFIX=0
  while :
  do

    # -- Suffix the directory with a number
    LBLRUN_SUFFIX=`expr ${LBLRUN_SUFFIX} + 1`
    LBLRUN_TAG=${ROOT_LBLRUN_TAG}'_'${LBLRUN_SUFFIX}
    LBL_WORK=${LBL_RUN_ROOT}'/.lblrtm'${LBLRUN_TAG}

    # -- Create the work directory
    mkdir ${LBL_WORK}

    # -- If successful, exit this loop
    if [ $? -eq 0 ]; then
      break
    fi

    # -- Otherwise keep trying to create a work directory (assuming
    # -- the creation failed since it already exists).
    # -- If we have reached a nesting of 10, maybe something is wrong?
    if [ ${LBLRUN_SUFFIX} -gt 10 ]; then
      echo "Error occurred creating work directory (based on .lblrtm${ROOT_LBLRUN_TAG})"
      date
      echo "${LBL_RUN_ROOT} directory listing follows:"
      ls -laF ${LBL_RUN_ROOT}
      exit 2
    fi

  done


--
Paul van Delst
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```