MEMMON

Introduction

Memmon is a memory leak monitor designed to used the “ps -el” command and a base line file to track the memory usage of processes executing on an Unix/Linux platform. There are two versions of memmon available as part of this archive. They are memmon.bash and memmon.ksh. Both of these files are shell scripts, one is written for the bash shell, the other is for the korn shell. The file extension is used to distinguish which shell the file is to be executed in.

Download and installation instructions are provided in the README file.

Usage:

memmon [-c category] [-f filter-file] [-p priority] [-g growth-rate]

This script checks the output from a 'ps -el' command against previouse ps -el commands. If the memory used continues to increase over time the process is flagged as one that may have a memory leak. This monitor works on the assumption that processes will use a stable amount of memory over time.

Options

-c Override default category (default – 'memmon.bash')

The category field can be used to filter warning messages.

-f Override default filter file (default - ./memfilt)

The filter file is used to specify system processes that should be ignored, i.e. a process listed in this file will not be flagged as having a possible memory leak. The format of this file is a list of process names, one process per line, with the name starting in the first column of each line. This file is not required, but if it is used the default behavior is to search for it in the same directory as the memmon shell script file. The default behavior can be modified with the -f option.

-p Override default priority (default – 3)

The priority field can be used to filter warning messages

-g Override default growth count (default – 10)

A process that has reached or exceeded the growth count will be flagged as having a possible memory leak.

Details

When a process is flagged as having a possible memory leak a warning message is written to stdout. The format of the warning message is as follows:

> -p <priority> -c <catagory> -m “process <process_pid process_name> has grown <growth_count> times, from <base_line_size> pages to <current_size> pages, this process has a possible memory leak”

Where the values inside the <> delimiters are defined as follows:

> Priority – a value of 0 to 9, this value can be used to filter warning messages. The default value is 3
>
> category – a string that can be used as a category description for filtering purposes. The default string is the output of the `basename $0` shell command.
>
> Process_pid – The process ID from the ps -el command
>
> Process_name – The name of the process from the ps -el command
>
> Growth_count – The number of times the process has grown, the default behavior is to flag processes that have grown 10 times or more.
>
> Base_line_size – Base line process memory usage which was recorded the first time memmon was executed. This information is saved in the baseline file /tmp/psdata_<hostname>, where hostname is the output of the shell command `uname -n`.
>
> Current_size – Current memory usage by the process.

It is recommended that CRON be used to schedule memmon, the recommended run interval is 10 minutes.