NAME

sarplot − plot statistics gathered by sar

SYNOPSIS

sarplot −V

sarplot [**−verb** *level*] [**−show**] [**−x11** | **−ps**] [{ **−hr** | **−hrs** } [*count*]] [{ **−day** | **−days** } [*count*]] [{ **−week** | **−weeks** } [*count*]] [**−from** *timestamp*] [**−to** *timestamp*] [**−u** [*factor*]] [**−upu** [*factor*]] [**−ups** [*factor*]] [**−upw** [*factor*]] [**−upi** [*factor*]] [**−b** [*factor*]] [**−brd** [*factor*]] [**−brc** [*factor*]] [**−brh** [*factor*]] [**−brp** [*factor*]] [**−bwd** [*factor*]] [**−bwc** [*factor*]] [**−bwh** [*factor*]] [**−bwp** [*factor*]] [**−d** [*factor*]] [**−dpb** [*factor*]] [**−dlq** [*factor*]] [**−dxc** [*factor*]] [**−dxb** [*factor*]] [**−dtw** [*factor*]] [**−dts** [*factor*]] [**−y** [*factor*]] [**−yrc** [*factor*]] [**−ycc** [*factor*]] [**−ywc** [*factor*]] [**−yri** [*factor*]] [**−ywi** [*factor*]] [**−ymi** [*factor*]] [**−c** [*factor*]] [**−cca** [*factor*]] [**−ccr** [*factor*]] [**−ccw** [*factor*]] [**−ccf** [*factor*]] [**−cce** [*factor*]] [**−crc** [*factor*]] [**−cwc** [*factor*]] [**−w** [*factor*]] [**−wrs** [*factor*]] [**−wrb** [*factor*]] [**−wws** [*factor*]] [**−wwb** [*factor*]] [**−wxc** [*factor*]] [**−a** [*factor*]] [**−aci** [*factor*]] [**−acl** [*factor*]] [**−arb** [*factor*]] [**−q** [*factor*]] [**−qlr** [*factor*]] [**−qpr** [*factor*]] [**−qls** [*factor*]] [**−qps** [*factor*]] [**−v** [*factor*]] [**−vpt** [*factor*]] [**−vot** [*factor*]] [**−vpp** [*factor*]] [**−vop** [*factor*]] [**−vpi** [*factor*]] [**−voi** [*factor*]] [**−vpf** [*factor*]] [**−vof** [*factor*]] [**−m** [*factor*]] [**−mcm** [*factor*]] [**−mcs** [*factor*]] { *sarfile* | *compressed_sarfile* | *gnuzipped_sarfile* } ...

DESCRIPTION

This man page documents *sarplot* version "Fri Jun 30 11:38:42 BST 1995".

Sarplot is a Perl (see *perl*(1)) script which invokes *sar*(1), tidies the resulting stream of data and feeds it, together with several formatting instructions, to *gnuplot*(1).

Graphs can be plotted directly into an X window or outputted in postscript format suitable for piping to *lp*(1).

Data selection options are compatible with *sar*(1), with the exception of *sar*(1)'s **−A** option which is not supported. See WARNINGS for an explanation of this. In addition there are options for plotting individual columns of *sar*(1) data.

Sarplot will process raw sarfiles, or sarfiles compressed with *compress*(1) or *gzip*(1). Temporary raw sarfiles are created in these latter cases, without actually uncompressing the original files; which means that the sarfiles and the directories they are stored in do not have to be writable by the user invoking *sarplot*.

In addtion to the options specifying which graphs are to be plotted, a scaling factor may also be supplied. This is primarily intended to help locate a new maximum value for a particular *sar*(1) column. See WARNINGS for more information.

OPTIONS

−V Print the version number and exit.

−verb *level* Sets the verbosity level. If *level* is set to 0, then not even error messages will be reported. If *level* is set to 1, then only error messages will be reported. If *level* is set to 2, which is the default, then error and warning messages will be reported. If *level* is set to 3, then additional informational messages will also be reported. If *level* is set to 4 or greater then additional debugging messages are reported.

−show Commands will not be fed to *gnuplot*(1), but will be sent to standard output. This is really only useful for debugging.

−x11 Specifies that graphs should be displayed in an X window (see *X*(1)). This is the default. As with and *X Windows application access to the destination display* must be authorised (see *xhost*(1)). *sa*

−ps Specifies that Postscript output, suitable for piping to *lp*(1), should be sent to the standard output. *Sarplot* will not pause between pages if this option is used.

–hr, **–hrs** [*count*] Specifies that each page of the graph should cover a period of *count* hours. If *count* is missing, then a value of 1 is assumed.

–day, **–days** [*count*] Specifies that each page of the graph should cover a period of *count* days. If *count* is missing, then a value of 1 is assumed. 1 day per page is the default.

–week, **–weeks** [*count*] Specifies that each page of the graph should cover a period of *count* weeks. If *count* is missing, then a value of 1 is assumed. Pages of this type show Monday as the first day of the week.

–from *timestamp* Specifies that the graph should begin at the date and time specified by *timestamp*, which should be in the format **YYMMDDhhmm**. This will result in the graph being either shortened or lengthened according to the relationship between *timestamp* and the actual earliest timestamp in the *sar*(1) data.

–to *timestamp* Specifies that the graph should end at the date and time specified by *timestamp*, which should be in the format **YYMMDDhhmm**. This will result in the graph being either shortened or lengthened according to the relationship between *timestamp* and the actual latest timestamp in the *sar*(1) data.

–u This option shows the graphs associated with the *sar*(1) option **–u**.

–upu, **–ups**, **–upw**, **–upi** These options show individual graphs associated with the *sar*(1) option **–u**. The first letter is derived from the equivalent option in *sar*(1), the second letter stands for *processor*, and the third letters stand for *user*, *system*, *waiting* and *idle*.

–b This option shows the graphs associated with the *sar*(1) option **–b**.

–brd, **–brc**, **–brh**, **–brp**, **–bwd**, **–bwc**, **–bwh**, **–bwp**
These options show individual graphs associated with the *sar*(1) option **–b**. The first letter is derived from the equivalent option in *sar*(1), the second letters stand for *read* and *write* and the third letters stand for *device*, *cache*, *hits* and *physical*.

–d This option shows the graphs associated with the *sar*(1) option **–d**.

–dpb, **–dlq**, **–dxc**, **–dxb**, **–dtw**, **–dts**
These options show individual graphs associated with the *sar*(1) option **–d**. The first letter is derived from the equivalent option in *sar*(1), the second letters stand for *percentage, length, transfer* and *time* and the third letters stand for *busy*, *queue*, *count*, *blocks*, *wait* and *serve*.

–y This option shows the graphs associated with the *sar*(1) option **–y**.

–yrc, **–ycc**, **–ywc**, **–yri**, **–ywi**, **–ymi**
These options show individual graphs associated with the *sar*(1) option **–y**. The first letter is derived from the equivalent option in *sar*(1), the second letters stand for *read, call, write* and *modem* and the third letters stand for *characters*, *canon()* and *interrupts*.

–c This option shows the graphs associated with the *sar*(1) option **–c**.

–cca, **–ccr**, **–ccw**, **–ccf**, **–cce**, **–crc**, **–cwc**
These options show individual graphs associated with the *sar*(1) option **–c**. The first letter is derived from the equivalent option in *sar*(1), the second letters stand for *call, read* and *write* and the third letters stand for *all*, *read()*, *write()*, *fork()*, *exec()* and *count*.

–w This option shows the graphs associated with the *sar*(1) option **–w**.

–wrp, **–wrb**, **–wwp**, **–wwb**, **–wxc**
These options show individual graphs associated with the *sar*(1) option **–w**. The first letter is derived from the equivalent option in *sar*(1), the second

letters stand for *read, write* and *switch* and the third letters stand for *processes*, *blocks* and *context*.

−a This option shows the graphs associated with the *sar*(1) option **−a**.

−aci, **−acl**, **−arb** These options show individual graphs associated with the *sar*(1) option **−a**. The first letter is derived from the equivalent option in *sar*(1), the second letters stand for *call* and *read* and the third letters stand for *iget()*, *lookuppn()* and *blocks*.

−q This option shows the graphs associated with the *sar*(1) option **−q**.

−qlr, **−qpr**, **−qls**, **−qps** These options show individual graphs associated with the *sar*(1) option **−q**. The first letter is derived from the equivalent option in *sar*(1), the second letters stand for *length*, and *percentage* and the third letters stand for *run* and *swap*.

−v This option shows the graphs associated with the *sar*(1) option **−v**.

−vpt, **−vot**, **−vpp**, **−vop**, **−vpi**, **−voi**, **−vpf**, **−vof**
These options show individual graphs associated with the *sar*(1) option **−v**. The first letter is derived from the equivalent option in *sar*(1), the second letters stand for *percentage* and *overflow* and the third letters stand for *text*, *process*, *inode* and *file*.

−m This option shows the graphs associated with the *sar*(1) option **−m**.

−mcm, **−mcs** These options show individual graphs associated with the *sar*(1) option **−m**. The first letter is derived from the equivalent option in *sar*(1), the second letter stands for *call* and the third letters stand for *msgrcv()* and *semop()*.

DIAGNOSTICS

Most of the messages produced by *sarplot* are self-explanatory, those that are not are described here:

sarplot: INTERNAL ERROR: no code yet for x axis with graph factor > 604800
sarplot currently will plot a maximum of 1 week per page, i.e. 604800 seconds. If longer periods are required on a single page then the *sarplot* program must be modified.

WARNINGS

There is a limit of eight graphs lines per page, this is a limit imposed by *gnuplot*(1). For this reason, *sarplot* does not have a **−A** option as does *sar*(1).

Sarplot is quite slow loading data; setting the verbosity level to 4 may provide assurances that the program is actually doing something.

The maximum values for any graph have only been very roughly set by the author. It is envisaged that these will be adjusted over time. Probably the best method is to set them to the maximum values ever encountered on a functional system. If a new maximum is encountered then the maximum value with *sarplot* should be adjusted. If a smaller value is encountered, no matter if it is the norm or not, then the maximum value defined in *sarplot* should not be adjusted.

FILES

/tmp/sarplot*PID***.unzsarfile** Temporary copy of uncompressed *sar*(1) files, if the original was compressed.

/tmp/sarplot*PID***.plotdata.***GRAPHID*
Temporary file used to store numeric data for a particular graph; this will be fed to *gnuplot*(1) and then deleted.

/usr/adm/sa/sa[0-9][0-9] usual place for *sar*(1) files, although *sarplot* requires that any pathnames supplied on the command line are explicit.

ENVIRONMENT VARIABLES

PATH	Used to locate various external programs.
DISPLAY	Used to direct *gnuplot*(1) where to display its graphs.

SEE ALSO

compress(1), gnuplot(1), gzip(1), lp(1), sar(1), xhost(1), X(1), exec(2), fork(2), iget(2), lookuppn(2), msgrcv(2), read(2), write(2), semop(2), canon(3)

STATUS

Very unstable!

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BUGS

Doubtlessly numerous; this program has not been properly tested.

FUTURE DEVELOPMENT

Support should be added for devices other than X windows and Postscript printers. This would be trivial, since *sarplot* only instructs *gnuplot*(1) to produce output for a specific device and *gnuplot*(1) already supports many devices.

In reality, most of the time the user will want to display specific combinations of graphs. Options could be added to produce these specific combinations.

Those sections of *sarplot* which pertain to specific operating systems should be abstracted, to facilitate easy porting. The same is true for those sections of the code that deal with specific versions of *sar*(1) and *gnuplot*(1).

The execution speed could be improved, primarily be increasing the data file load speed.

The maximum values that the top of the graph represents for each graph plotted are not displayed on the graph. These should ideally be included in the graph key. Actually labeling the Y axis would result in the the labels overwriting each other.

The text of the graph titles only roughly correlates with the column headings produced by *sar*(1).