

```
1  #! /bin/sh
2  timeroundtomins () {
3      H=`echo $1 | sed 's/\([0-9]*\)::*/\1/'`
4      M=`echo $1 | sed 's/[0-9]*:\([0-9]*\)::*/\1/'`
5      S=`echo $1 | sed 's/[0-9]*:[0-9]*:\([0-9]*\)::*/\1/'`
6      APM=`echo $1 | sed 's/[0-9]*:[0-9]*:[0-9]* \([AP]M\)::*/\1/'`
7      if [ $S -ge 30 ]
8      then
9          M=`expr $M + 1`
10     fi
11     if [ $M -ge 60 ]
12     then
13         M=00
14         H=`expr $H + 1`
15     fi
16     if [ $H -eq 13 ]
17     then
18         H=01
19         APM=PM
20     elif [ $H -eq 24 ]
21     then
22         H=00
23         APM=AM
24     elif [ $H -lt 10 ]
25     then
26         H=0$H
27     fi
28     echo $H:$M:$APM
29 }
30 durroundtomins () {
31     H=`echo $1 | sed 's/\([0-9]*\)::*/\1/'`
32     M=`echo $1 | sed 's/[0-9]*:\([0-9]*\)::*/\1/'`
33     S=`echo $1 | sed 's/[0-9]*:[0-9]*:\([0-9]*\)::*/\1/'`
34     if [ $S -ge 30 ]
35     then
36         M=`expr $M + 1`
37     fi
38     if [ $M -ge 60 ]
39     then
40         M=00
41         H=`expr $H + 1`
```

```
42     fi
43     echo $H:$M$APM
44 }
45
46 IFS=,
47 COUNT=0
48 while read CONN DATE TIME DURATION PROTO SRCPORT DESTPORT SRCIP DESTIP ATTACK TYPE
49 do
50     if [ $COUNT -ne 0 ]
51     then
52         TIMEMIN="`timeroundtomins $TIME`"
53         DURMIN="`durroundtomins $DURATION`"
54     else
55         TIMEMIN='TIME (MINUTES)'
56         DURMIN='DURATION (MINUTES)'
57     fi
58     echo
... "$CONN,$DATE,$TIME,$TIMEMIN,$DURATION,$DURMIN,$PROTO,$SRCPORT,$DESTPORT,$SRCIP,$
... DESTIP,$ATTACK,$TYPE"
59     COUNT=`expr $COUNT + 1`
60 done < connect.csv
61
```