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A MAGYARORSZÁGI **DIGITALIZÁCIÓ** SZOLGÁLATÁBAN

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show/watch/dispay/view/diff executed on “sho interface xxx full”

Bonus: table mode xxx...

Summary: everything is a table, cli is useful….
Soon: more | filters like uniq, sort, etc….

http://freertr.nop.hu/

Show interface eth1

Session Manager

local | safe | nas

```
nas#
nas#
nas#
nas#
nas#
nas#
nas#
nas#
nas#
nas#
nas#
nas#
nas#
nas#
nas#
nas#
nas#
nas#
nas#
nas#terminal timestamps
2018-07-29 09:33:46
nas#terminal width 130
2018-07-29 09:33:47
nas#terminal length 35
2018-07-29 09:33:49
nas#show interfaces ethernet1.186
2018-07-29 09:34:31
ethernet1.186 is up (since 2d2h, 1 changes)
 description: nop
 type is ethernet, hwaddr=0000.a5a5.fa52, mtu=1496, bw=100mbps, vrf=inet
 ip4 address=10.1.1.122/30, netmask=255.255.255.252, ifcid=10014
 ip6 address=2001:db8:43::2/64, netmask=ffff:ffff:ffff:ffff::, ifcid=10014
 received 11230115 packets (4572698177 bytes) dropped 18 packets (6317 bytes)
 transmitted 14636322 packets (15851189012 bytes) promisc=false macsec=true

nas#
```

Sho int eth1.186 ?

Session Manager

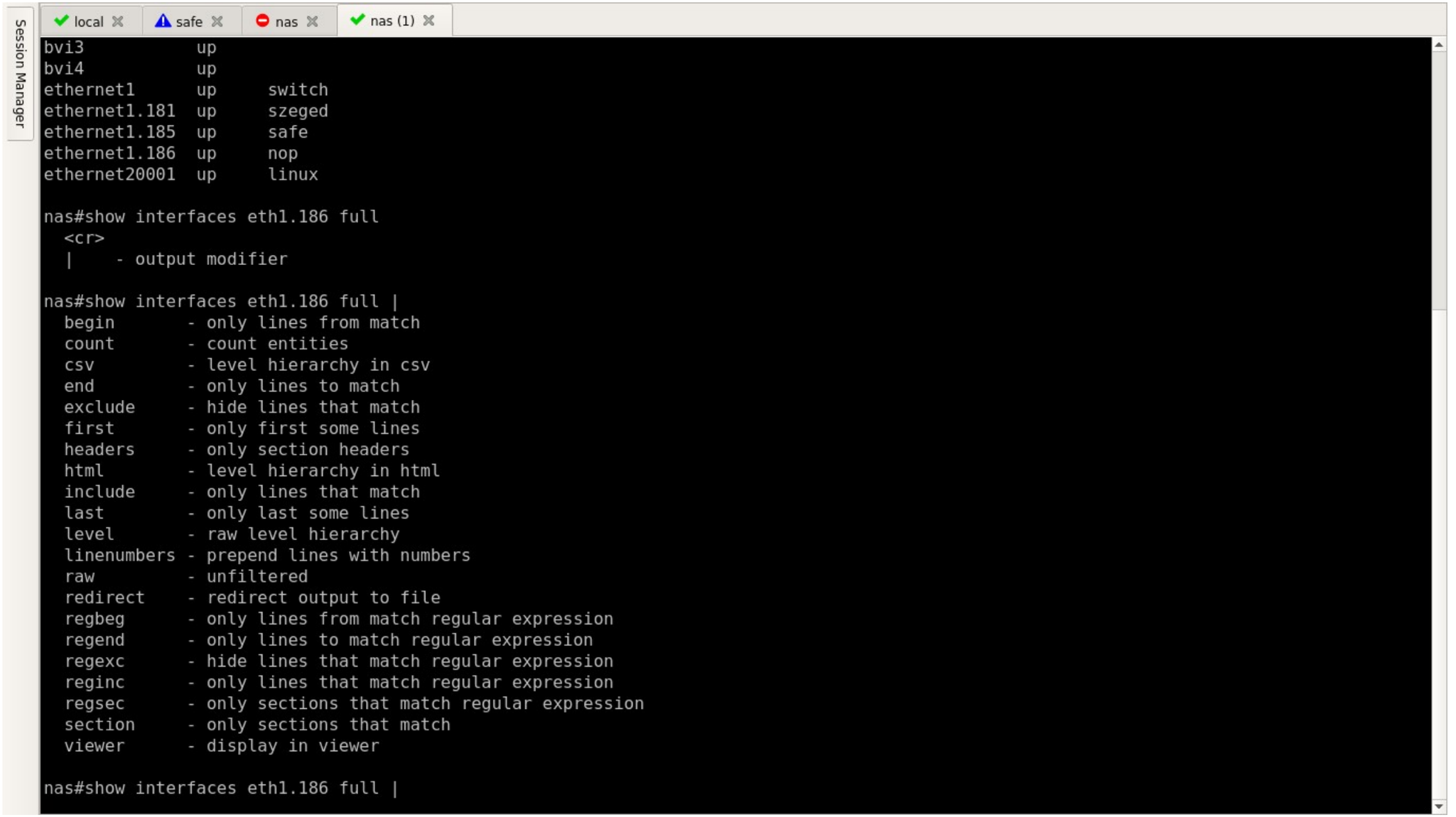
local | safe | nas

```
nas#show interfaces ethernet1.186
ethernet1.186 is up (since 2d2h, 1 changes)
 description: nop
 type is ethernet, hwaddr=0000.a5a5.fa52, mtu=1496, bw=100mbps, vrf=inet
 ip4 address=10.1.1.122/30, netmask=255.255.255.252, ifcid=10014
 ip6 address=2001:db8:43::2/64, netmask=ffff:ffff:ffff:ffff::, ifcid=10014
 received 11230323 packets (4572744545 bytes) dropped 18 packets (6317 bytes)
 transmitted 14636555 packets (15851232320 bytes) promisc=false macsec=true

nas#watch interfaces ethernet1.186
  <cr>
  counters       - counters
  drhistory      - historic drop byte counters
  drphistory     - historic drop packet counters
  ethertypes     - ethernet types
  full           - full listing
  history        - historic byte counters
  numhist        - numeric historic byte counters
  numphist       - numeric historic packet counters
  packetsizes    - packet sizes
  phistory       - historic packet counters
  protocols      - protocol numbers
  rates          - traffic rates
  realtime       - realtime counters
  rxhistory      - historic rx byte counters
  rxphistory     - historic rx packet counters
  trafficclasses - traffic classes
  txhistory      - historic tx byte counters
  txphistory     - historic tx packet counters

nas#watch interfaces ethernet1.186 a
```

Sho int eth1.186 | ?



Sho int eth1.186 ?

Session Manager

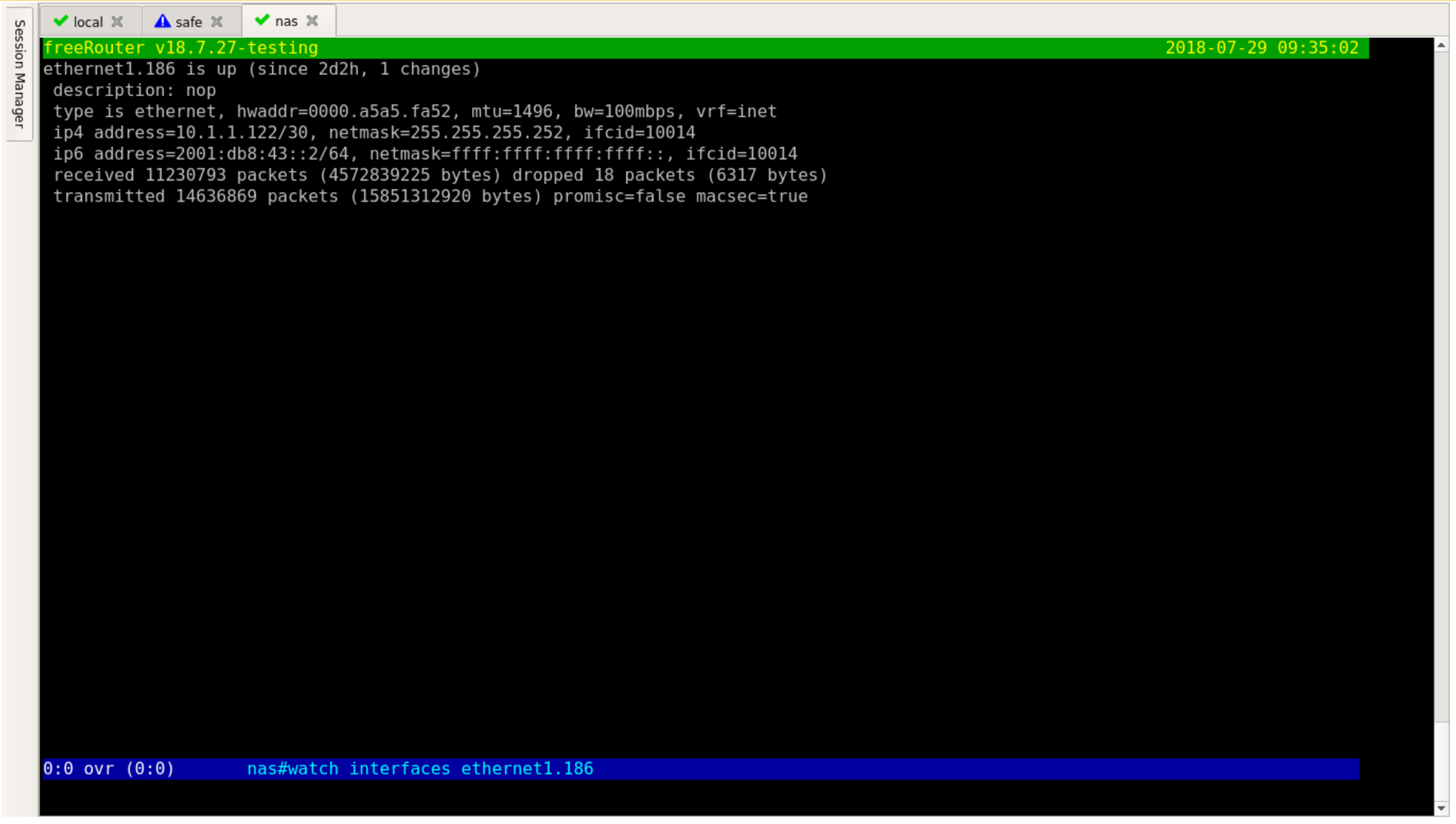
local | safe | nas

```
  history         - historic byte counters
  numhist         - numeric historic byte counters
  numphist        - numeric historic packet counters
  packetsizes     - packet sizes
  phistory        - historic packet counters
  protocols       - protocol numbers
  rates           - traffic rates
  realtime        - realtime counters
  rxhistory       - historic rx byte counters
  rxphistory      - historic rx packet counters
  trafficclasses - traffic classes
  txhistory       - historic tx byte counters
  txphistory      - historic tx packet counters

nas#display interfaces ethernet1.186
  <cr>
  counters        - counters
  drhistory       - historic drop byte counters
  drphistory      - historic drop packet counters
  ethertypes      - ethernet types
  full            - full listing
  history         - historic byte counters
  numhist         - numeric historic byte counters
  numphist        - numeric historic packet counters
  packetsizes     - packet sizes
  phistory        - historic packet counters
  protocols       - protocol numbers
  rates           - traffic rates
  realtime        - realtime counters
  rxhistory       - historic rx byte counters
  rxphistory      - historic rx packet counters
  trafficclasses - traffic classes
  txhistory       - historic tx byte counters
  txphistory      - historic tx packet counters

nas#display interfaces ethernet1.186
```

Display int eth1.186 – updated/sec @ cli



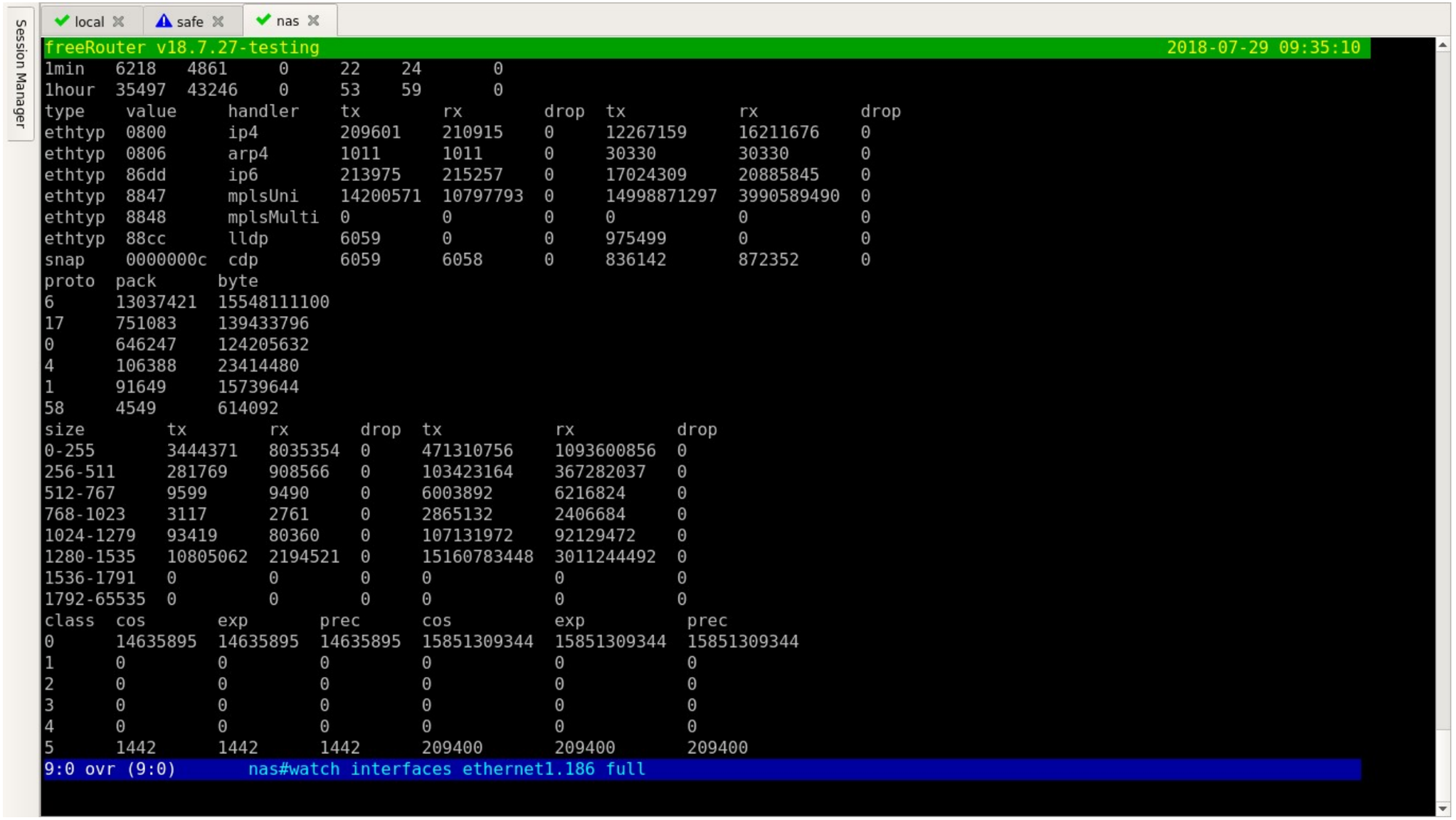
Display int eth1.186 full

Session Manager

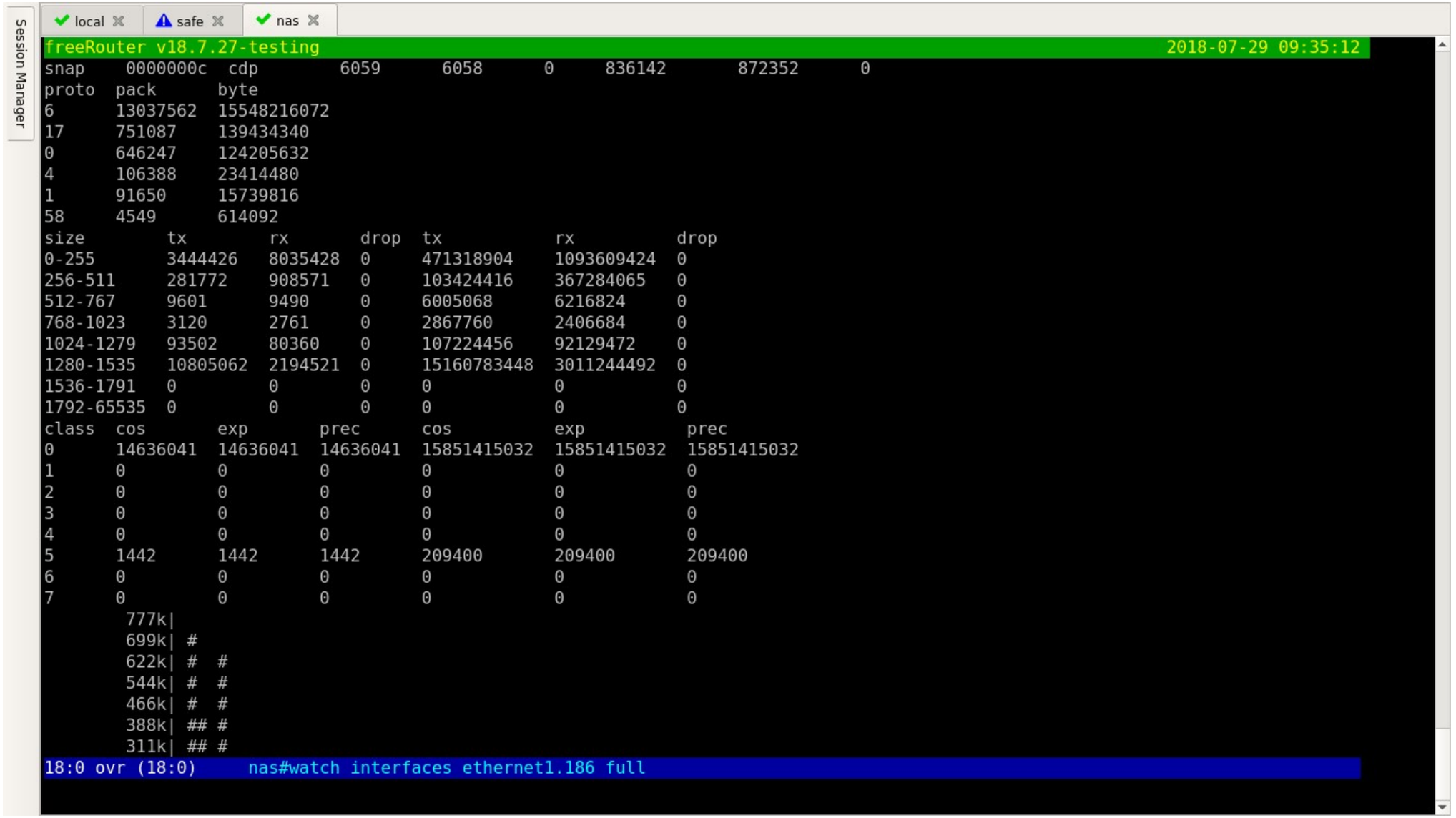
local | safe | nas

```
freeRouter v18.7.27-testing                                                    2018-07-29 09:35:07
ethernet1.186 is up (since 2d2h, 1 changes)
 description: nop
 type is ethernet, hwaddr=0000.a5a5.fa52, mtu=1496, bw=100mbps, vrf=inet
 ip4 address=10.1.1.122/30, netmask=255.255.255.252, ifcid=10014
 ip6 address=2001:db8:43::2/64, netmask=ffff:ffff:ffff:ffff::, ifcid=10014
 received 11230924 packets (4572861373 bytes) dropped 18 packets (6317 bytes)
 transmitted 14636988 packets (15851340204 bytes) promisc=false macsec=true
time   send   receive  drop  send  receive  drop
1sec   10508  6484     0     25    35       0
1min   6218   4861     0     22    24       0
1hour  35497  43246    0     53    59       0
type    value     handler    tx        rx        drop  tx           rx          drop
ethtyp  0800      ip4        209596    210910    0     12266908     16211425    0
ethtyp  0806      arp4       1010      1011      0     30300        30330       0
ethtyp  86dd      ip6        213971    215249    0     17024020     20885240    0
ethtyp  8847      mplsUni    14200234  10797679  0     14998710580  3990577644  0
ethtyp  8848      mplsMulti  0         0         0     0            0           0
ethtyp  88cc      lldp       6058      0         0     975338       0           0
snap    0000000c  cdp        6058      6057      0     836004       872208      0
proto  pack      byte
6      13037207  15547957476
17     751071    139432116
0      646140    124185164
4      106374    23412056
1      91647     15739300
58     4549      614092
size        tx        rx       drop  tx           rx          drop
0-255       3444154   8035242  0     471272872    1093588120  0
256-511     281761    908550   0     103419964    367275781   0
512-767     9598      9490     0     6003144      6216824     0
768-1023    3114      2761     0     2862312      2406684     0
1024-1279   93299     80360    0     106998084    92129472    0
1280-1535   10805062  2194521  0     15160783448  3011244492  0
0:0 ovr (0:0)       nas#watch interfaces ethernet1.186 full
```

Display int eth1.186 full – pgdn



Display int eth1.186 full – pgdn



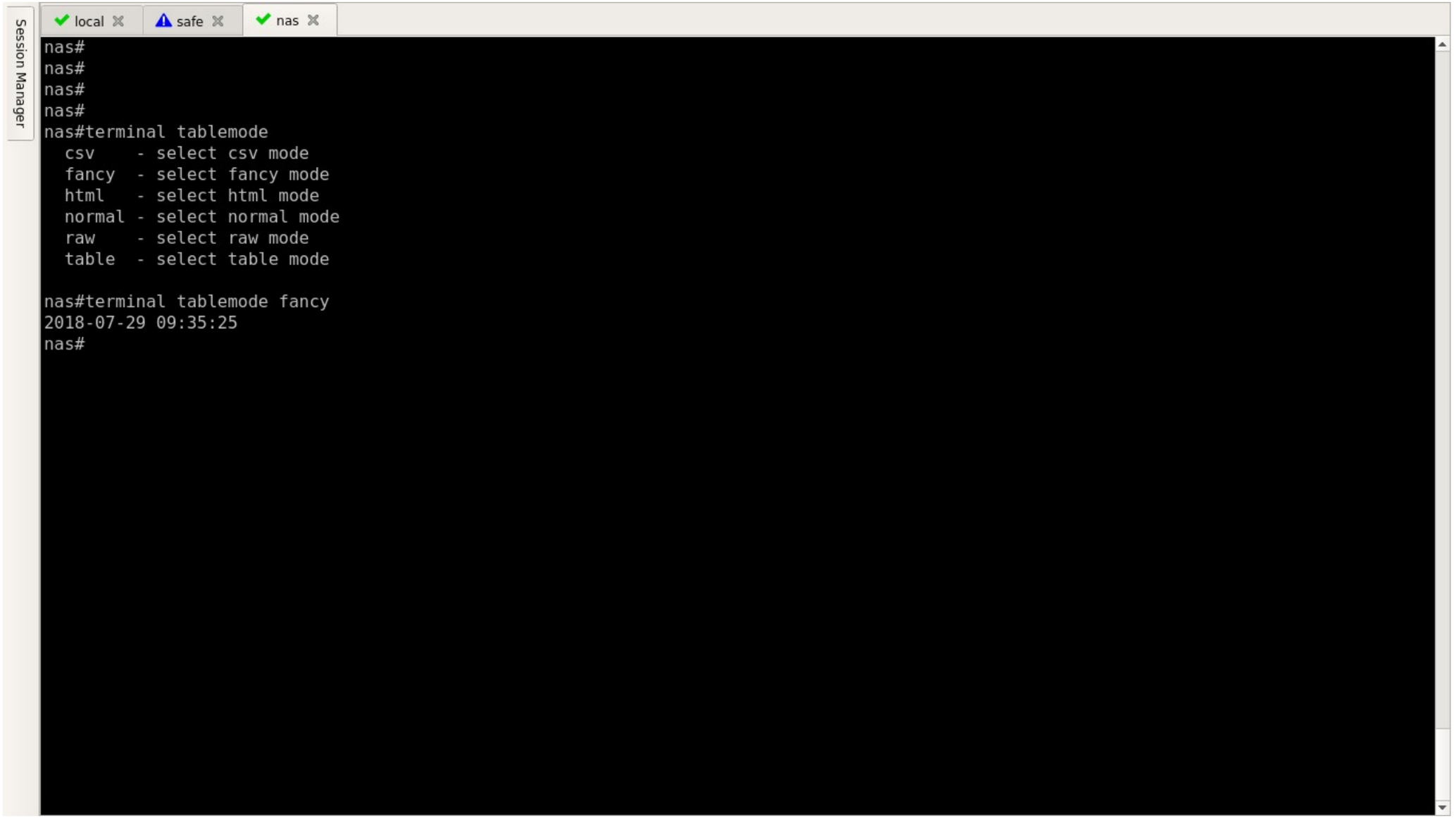
Display int eth1.186 full – live traffic monitoring @ cli

Session Manager

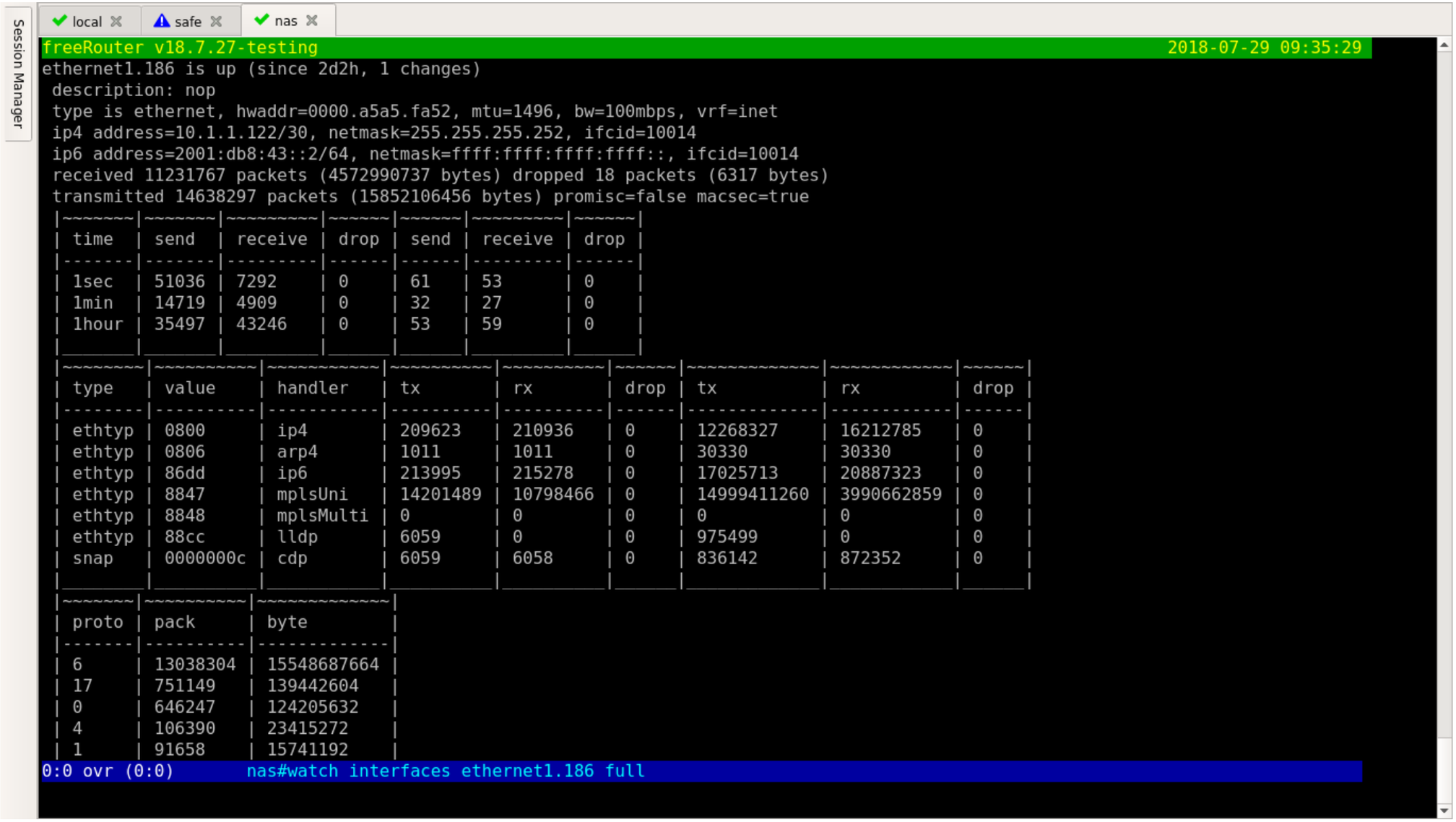
local | safe | nas

```
freeRouter v18.7.27-testing                                                    2018-07-29 09:35:15
768-1023    3129      2761     0     2876044      2406684     0
1024-1279   93644     80360    0     107382736    92129472    0
1280-1535   10805062  2194521  0     15160783448  3011244492  0
1536-1791   0         0        0     0            0           0
1792-65535  0         0        0     0            0           0
class  cos       exp       prec      cos          exp          prec
0      14636309  14636309  14636309  15851602904  15851602904  15851602904
1      0         0         0         0            0            0
2      0         0         0         0            0            0
3      0         0         0         0            0            0
4      0         0         0         0            0            0
5      1442      1442      1442      209400       209400       209400
6      0         0         0         0            0            0
7      0         0         0         0            0            0
       835k|
       752k|  # #
       668k|# # #  #
       584k|# # #  #
       501k|# # #  #
       417k|# # ## #
       334k|# # ## #
       250k|# # ## #
       167k|# #### #    ##                  #
        83k|########   ##  #                ##          #
          0|############################################################
       bps|0---------10--------20--------30--------40--------50-------- seconds
       50m|
       45m|                              *
       40m|                              *   *
       35m|                              *   *
       30m|                              *   *           *
       25m|                              *   *          **
       20m|                              *   *          **
30:0 ovr (30:0)     nas#watch interfaces ethernet1.186 full
```

Term table ?


Session Manager
local
safe
nas
nas#
nas#
nas#
nas#
nas#terminal tablemode
csv - select csv mode
fancy - select fancy mode
html - select html mode
normal - select normal mode
raw - select raw mode
table - select table mode
nas#terminal tablemode fancy
2018-07-29 09:35:25
nas#

Term tabl fancy // display int eth1.186 full



Display int eth1.186 full – fancy live traffic monitoring @ cli

Session Manager

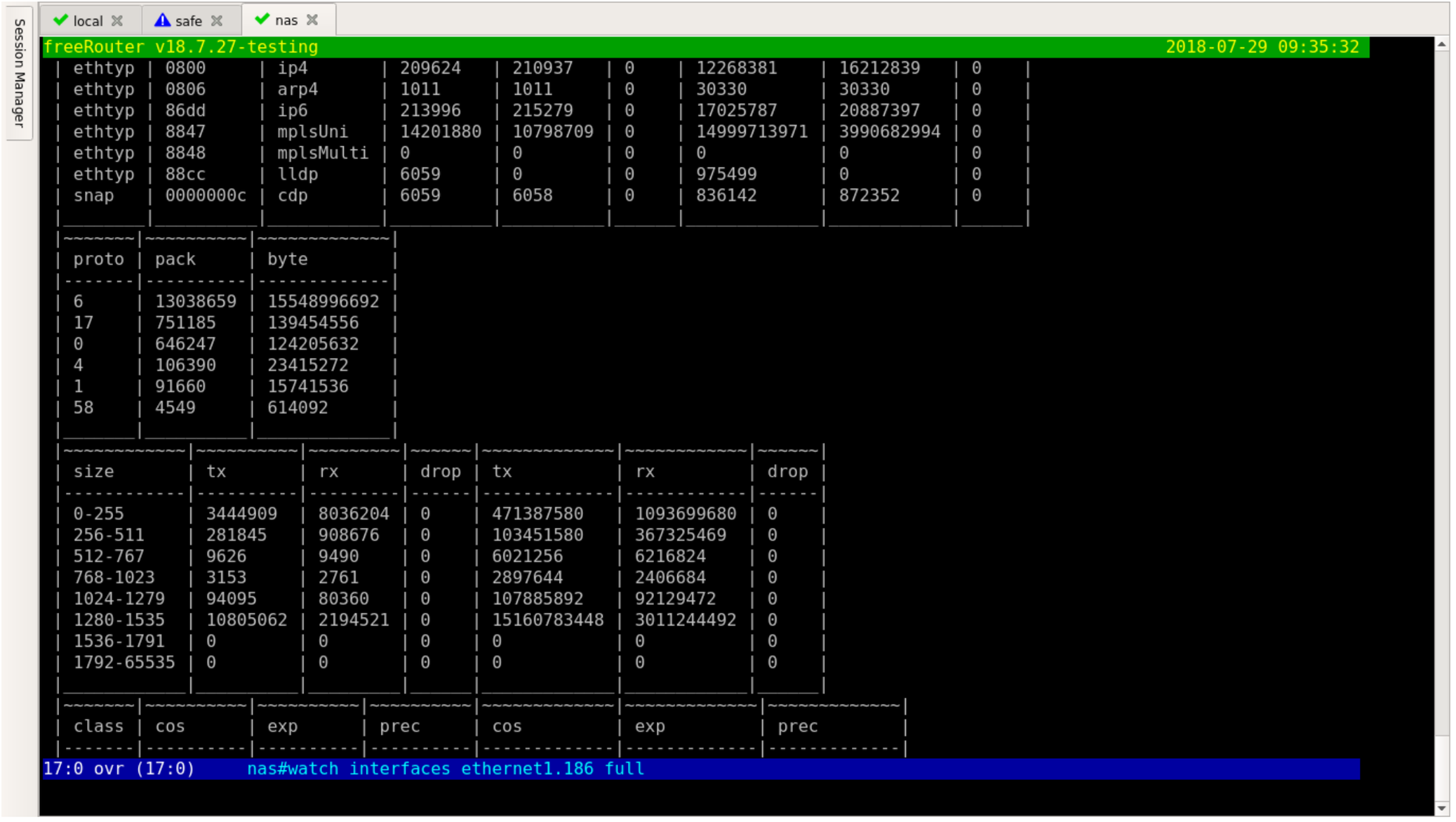
local | safe | nas

```
freeRouter v18.7.27-testing                                                    2018-07-29 09:35:36
|------------|----------|---------|------|-------------|------------|------|
| 0-255      | 3445029  | 8036503 | 0    | 471405196   | 1093732516 | 0    |
| 256-511    | 281872   | 908695  | 0    | 103462080   | 367333025  | 0    |
| 512-767    | 9651     | 9490    | 0    | 6037188     | 6216824    | 0    |
| 768-1023   | 3168     | 2761    | 0    | 2911456     | 2406684    | 0    |
| 1024-1279  | 94394    | 80360   | 0    | 108219480   | 92129472   | 0    |
| 1280-1535  | 10805062 | 2194521 | 0    | 15160783448 | 3011244492 | 0    |
| 1536-1791  | 0        | 0       | 0    | 0           | 0          | 0    |
| 1792-65535 | 0        | 0       | 0    | 0           | 0          | 0    |
|____________|__________|_________|______|_____________|____________|______|

|~~~~~~~|~~~~~~~~~~|~~~~~~~~~~|~~~~~~~~~~|~~~~~~~~~~~~~~|~~~~~~~~~~~~~~|~~~~~~~~~~~~~~|
| class | cos      | exp      | prec     | cos          | exp          | prec         |
|-------|----------|----------|----------|--------------|--------------|--------------|
| 0     | 14637734 | 14637734 | 14637734 | 15852609828  | 15852609828  | 15852609828  |
| 1     | 0        | 0        | 0        | 0            | 0            | 0            |
| 2     | 0        | 0        | 0        | 0            | 0            | 0            |
| 3     | 0        | 0        | 0        | 0            | 0            | 0            |
| 4     | 0        | 0        | 0        | 0            | 0            | 0            |
| 5     | 1442     | 1442     | 1442     | 209400       | 209400       | 209400       |
| 6     | 0        | 0        | 0        | 0            | 0            | 0            |
| 7     | 0        | 0        | 0        | 0            | 0            | 0            |
|_______|__________|__________|__________|______________|______________|______________|

      1428k|
      1285k| #  ##
      1143k| #  ##
      1000k|##  ##
       857k|##  ##
       714k|### ##                # #
       571k|### ##              #  # # #  #
       428k|### ##  #         ### ## # ## #
       285k|### ##  #         ### ## # ## #
       142k|######  #      # ### ## #### #    ##  #
          0|#########################################################
37:0 ovr (37:0)      nas#watch interfaces ethernet1.186 full
```

fancy // display int eth1.186 full – pgup



Term table csv

Session Manager

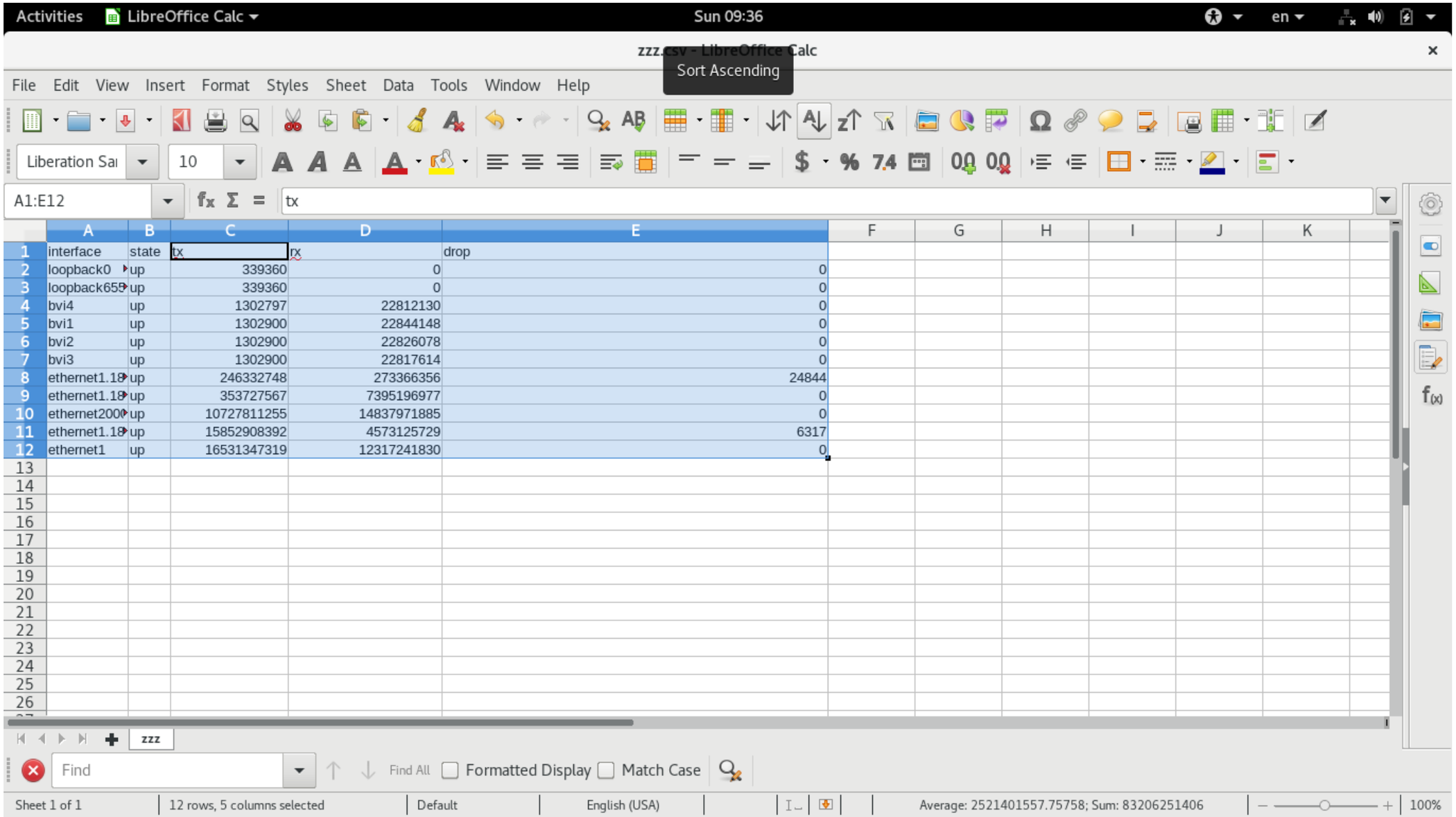
local | safe | nas

```
nas#
nas#
nas#
nas#
nas#
nas#
nas#terminal tablemode
  csv    - select csv mode
  fancy  - select fancy mode
  html   - select html mode
  normal - select normal mode
  raw    - select raw mode
  table  - select table mode

nas#terminal tablemode csv
2018-07-29 09:35:43
nas#show interfaces summary
2018-07-29 09:35:50
interface    ;state;tx          ;rx          ;drop
loopback0    ;up   ;339360      ;0           ;0
loopback65535;up   ;339360      ;0           ;0
bvi1         ;up   ;1302900     ;22844148    ;0
bvi2         ;up   ;1302900     ;22826078    ;0
bvi3         ;up   ;1302900     ;22817614    ;0
bvi4         ;up   ;1302797     ;22812130    ;0
ethernet1    ;up   ;16531347319;12317241830;0
ethernet1.181;up   ;353727567   ;7395196977  ;0
ethernet1.185;up   ;246332748   ;273366356   ;24844
ethernet1.186;up   ;15852908392;4573125729  ;6317
ethernet20001;up   ;10727811255;14837971885;0

nas#
```

Csv imported & sorted in 3 clicks… :)



	A	B	C	D	E	F	G	H	I	J	K
1	interface	state	tx	rx	drop						
2	loopback0	up	339360	0	0						
3	loopback655	up	339360	0	0						
4	bvi4	up	1302797	22812130	0						
5	bvi1	up	1302900	22844148	0						
6	bvi2	up	1302900	22826078	0						
7	bvi3	up	1302900	22817614	0						
8	ethernet1.18	up	246332748	273366356	24844						
9	ethernet1.18	up	353727567	7395196977	0						
10	ethernet200	up	10727811255	14837971885	0						
11	ethernet1.18	up	15852908392	4573125729	6317						
12	ethernet1	up	16531347319	12317241830	0						
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
24											
25											
26											

Live demo

Interactive (*) live demo at http://wwwin.nop.hu/iface.tcl with term tab html….

Example recording showing some of telephony features with display inspect and interface in action: https://files.fm/u/vetm335c (if link expires, ask for DSCN1401.MOV from summer of 2018)

More slideshows soon…. :)

Feel free to ask for narration if needed...:)

*: feel free to look around…. :) mostly online, if not, try again later…..:)))

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Köszönöm a figyelmet!

www.kifu.gov.hu

Thanks for watching!

Questions?

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