

Sipp - ??? Asterisk Server ?????????

?????<http://sipp.sourceforge.net/>

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Asterisk Server)

H/W: VMWare Guest OS(vCPU 2.33GHZ Intel-Xeon x1, RAM x512MB)

OS: Elastix 1.5.2-2

IP: 10.10.10.102

Ubuntu Client)

H/W: VMWare Guest OS(vCPU 2.33GHz Intel-Xeon x1, RAM x1024MB)

OS: Ubuntu 9.04

Software: SIPp v2.0.1

IP: 10.10.10.151

? Server ?(Elastix)

PBX -> PBX Configuration -> Trunk

Trunk Name : sipp

PEER Details:

host=dynamic

type=friend

user=sipp

canreinvite=no

disallow=all

allow=ulaw

context=custom-sipp

PBX -> Tools-> File Editor -> extensions_custom.conf

; for sipp testing

[custom-sipp]

exten => 2005,1,Answer

exten => 2005,2,Background(tt-monkeys)

exten => 2005,3,Goto(2)

PBX -> Tools -> Asterisk Cli

Command: dialplan reload

AGI ???

[custom-sipp]

exten => 2005,1,NoOp(Sipp Stress Testing)

exten => 2005,n,AGI(sipp-test.agi)

exten => 2005,n,Hangup

????(Ubuntu)

// ??????

```
#>apt-get install sip-tester
```

// ??????????

```
#>sipp -sn uac -d 60000 -i 10.10.10.151 -s 2005 10.10.10.102 -l 30
```

```
-sn ????????uac-?? SipStone UAC
```

-d ??????? 60000ms(60?)

-S ??????

10.10.10.102 Asterisk ??? IP ??

10.10.10.151 ?? sipp ??? IP ??

-1 ???????

~~PS. ?????????????????????????????????????? 30???????? 20 ????????????????? 2005 ?? Music on Hold ??? 20 ?????
??~~

Perf_Test ????

Perf_Test ?? AskoziaPBX ? Sipp ??? Asterisk ???? perl script????????????????

????????????????

```
svn co https://wush.net/svn/askozia/trunk/testsuite/ testsuite
```

??????????

- two-parties tests : 1:1
- conference room tests
- conference participants tests

??????which: no gnuplot in (/usr/kerberos/sbin:/usr/kerberos/bin:/usr/local/sbin:/usr/local/bin:/sbin:/bin:/usr/sbin:/usr/bin:/root/bin)

Ans: ?? gnuplot ????? yum install gnuplot?

???????which: no sipp in (/usr/kerberos/sbin:/usr/kerberos/bin:/usr/local/sbin:/usr/local/bin:/sbin:/bin:/usr/sbin:/usr/bin:/root/bin)

Ans: ??? Sipp?

??????

??????? 30

```
// SIPp
```

```

----- Scenario Screen ----- [1-9]: Change Screen --
  Call-rate(length)    Port    Total-time  Total-calls  Remote-host
10.0(20000 ms)/1.000s  5060      19.04 s       30  10.10.10.102:5060(UDP)

  0 new calls during 1.000 s period      1 ms scheduler resolution
  30 calls (limit 30)                    Peak was 30 calls, after 3 s
  0 Running, 30 Paused, 0 Woken up
  0 out-of-call msg (discarded)
  1 open sockets

      Messages  Retrans  Timeout  Unexpected-Msg
INVITE ----->      30      150      0
  100 <-----      0          0          0
  180 <-----      0          0          0
  183 <-----      0          0          0
  200 <-----      0          0          0
      ACK ----->      0          0
Pause [      0ms]      0          0
      BYE ----->      0          0      0
  200 <-----      0          0          0

----- [+|-|*|/]: Adjust rate ---- [q]: Soft exit ---- [p]: Pause traffic -----

```

```

----- Statistics Screen ----- [1-9]: Change Screen --
Start Time      | 2009-09-12 17:36:20
Last Reset Time | 2009-09-12 17:38:07
Current Time    | 2009-09-12 17:38:08
-----+-----+-----
Counter Name    | Periodic value      | Cumulative value
-----+-----+-----
Elapsed Time    | 00:00:00:999        | 00:01:48:046
Call Rate       | 0.000 cps            | 1.111 cps
-----+-----+-----
Incoming call created | 0                    | 0
OutGoing call created | 0                    | 120
Total Call created  |                       | 120
Current Call       | 30                    |
-----+-----+-----
Successful call    | 0                    | 0
Failed call        | 0                    | 90
-----+-----+-----
Response Time 1    | 00:00:00:000        | 00:00:00:000
Call Length       | 00:00:00:000        | 00:00:31:512
----- [+|-|*|/]: Adjust rate ---- [q]: Soft exit ---- [p]: Pause traffic -----

```

```

----- Repartition Screen ----- [1-9]: Change Screen --
Average Response Time Repartition
  0 ms <= n < 10 ms : 0
 10 ms <= n < 20 ms : 0
 20 ms <= n < 30 ms : 0
 30 ms <= n < 40 ms : 0
 40 ms <= n < 50 ms : 0
 50 ms <= n < 100 ms : 0
100 ms <= n < 150 ms : 0
150 ms <= n < 200 ms : 0
  n >= 200 ms : 0
Average Call Length Repartition
  0 ms <= n < 10 ms : 0
 10 ms <= n < 50 ms : 0
 50 ms <= n < 100 ms : 0
100 ms <= n < 500 ms : 0
 500 ms <= n < 1000 ms : 0
1000 ms <= n < 5000 ms : 0
 5000 ms <= n < 10000 ms : 0
  n >= 10000 ms : 96
----- [+|-|*|/]: Adjust rate ---- [q]: Soft exit ---- [p]: Pause traffic -----

```

// Asterisk Debug

```

-- Started music on hold, class 'default', on SIP/sipp-b7b6fb90
-- Executing [2005@custom-sipp:1] Answer("SIP/sipp-b7b74900", "") in new stack
-- Executing [2005@custom-sipp:2] SetMusicOnHold("SIP/sipp-b7b74900", "default") in new stack
ck
-- Executing [2005@custom-sipp:3] WaitMusicOnHold("SIP/sipp-b7b74900", "20") in new stack
-- Started music on hold, class 'default', on SIP/sipp-b7b74900
-- Executing [2005@custom-sipp:1] Answer("SIP/sipp-b7b79680", "") in new stack
-- Executing [2005@custom-sipp:2] SetMusicOnHold("SIP/sipp-b7b79680", "default") in new stack
ck
-- Executing [2005@custom-sipp:3] WaitMusicOnHold("SIP/sipp-b7b79680", "20") in new stack
-- Started music on hold, class 'default', on SIP/sipp-b7b79680
-- Executing [2005@custom-sipp:1] Answer("SIP/sipp-b7b7e518", "") in new stack
-- Executing [2005@custom-sipp:2] SetMusicOnHold("SIP/sipp-b7b7e518", "default") in new stack
ck
-- Executing [2005@custom-sipp:3] WaitMusicOnHold("SIP/sipp-b7b7e518", "20") in new stack
-- Started music on hold, class 'default', on SIP/sipp-b7b7e518
-- Executing [2005@custom-sipp:1] Answer("SIP/sipp-b7b83188", "") in new stack
-- Executing [2005@custom-sipp:2] SetMusicOnHold("SIP/sipp-b7b83188", "default") in new stack
ck
-- Executing [2005@custom-sipp:3] WaitMusicOnHold("SIP/sipp-b7b83188", "20") in new stack
-- Started music on hold, class 'default', on SIP/sipp-b7b83188
-- Executing [2005@custom-sipp:1] Answer("SIP/sipp-b7b88020", "") in new stack
-- Executing [2005@custom-sipp:2] SetMusicOnHold("SIP/sipp-b7b88020", "default") in new stack
ck
-- Executing [2005@custom-sipp:3] WaitMusicOnHold("SIP/sipp-b7b88020", "20") in new stack
-- Started music on hold, class 'default', on SIP/sipp-b7b88020
-- Executing [2005@custom-sipp:1] Answer("SIP/sipp-b7b8cda8", "") in new stack
-- Executing [2005@custom-sipp:2] SetMusicOnHold("SIP/sipp-b7b8cda8", "default") in new stack
ck
-- Executing [2005@custom-sipp:3] WaitMusicOnHold("SIP/sipp-b7b8cda8", "20") in new stack
-- Started music on hold, class 'default', on SIP/sipp-b7b8cda8
elastix*CLI>

```

```

127.0.1.1      sipp      225-1189701 00101/00001 0x4 (ulaw)    No      Rx: INVITE
127.0.1.1      sipp      224-1189701 00101/00001 0x4 (ulaw)    No      Rx: INVITE
127.0.1.1      sipp      223-1189701 00101/00001 0x4 (ulaw)    No      Rx: INVITE
127.0.1.1      sipp      222-1189701 00101/00001 0x4 (ulaw)    No      Rx: INVITE
127.0.1.1      sipp      221-1189701 00101/00001 0x4 (ulaw)    No      Rx: INVITE
127.0.1.1      sipp      220-1189701 00101/00001 0x4 (ulaw)    No      Rx: INVITE
127.0.1.1      sipp      219-1189701 00101/00001 0x4 (ulaw)    No      Rx: INVITE
127.0.1.1      sipp      218-1189701 00101/00001 0x4 (ulaw)    No      Rx: INVITE
127.0.1.1      sipp      217-1189701 00101/00001 0x4 (ulaw)    No      Rx: INVITE
127.0.1.1      sipp      216-1189701 00101/00001 0x4 (ulaw)    No      Rx: INVITE
127.0.1.1      sipp      215-1189701 00101/00001 0x4 (ulaw)    No      Rx: INVITE
127.0.1.1      sipp      214-1189701 00101/00001 0x4 (ulaw)    No      Rx: INVITE
127.0.1.1      sipp      213-1189701 00101/00001 0x4 (ulaw)    No      Rx: INVITE
127.0.1.1      sipp      212-1189701 00101/00001 0x4 (ulaw)    No      Rx: INVITE
127.0.1.1      sipp      211-1189701 00101/00001 0x4 (ulaw)    No      Rx: INVITE
30 active SIP channels
[root@elastix ~]#

```

// Linux Top

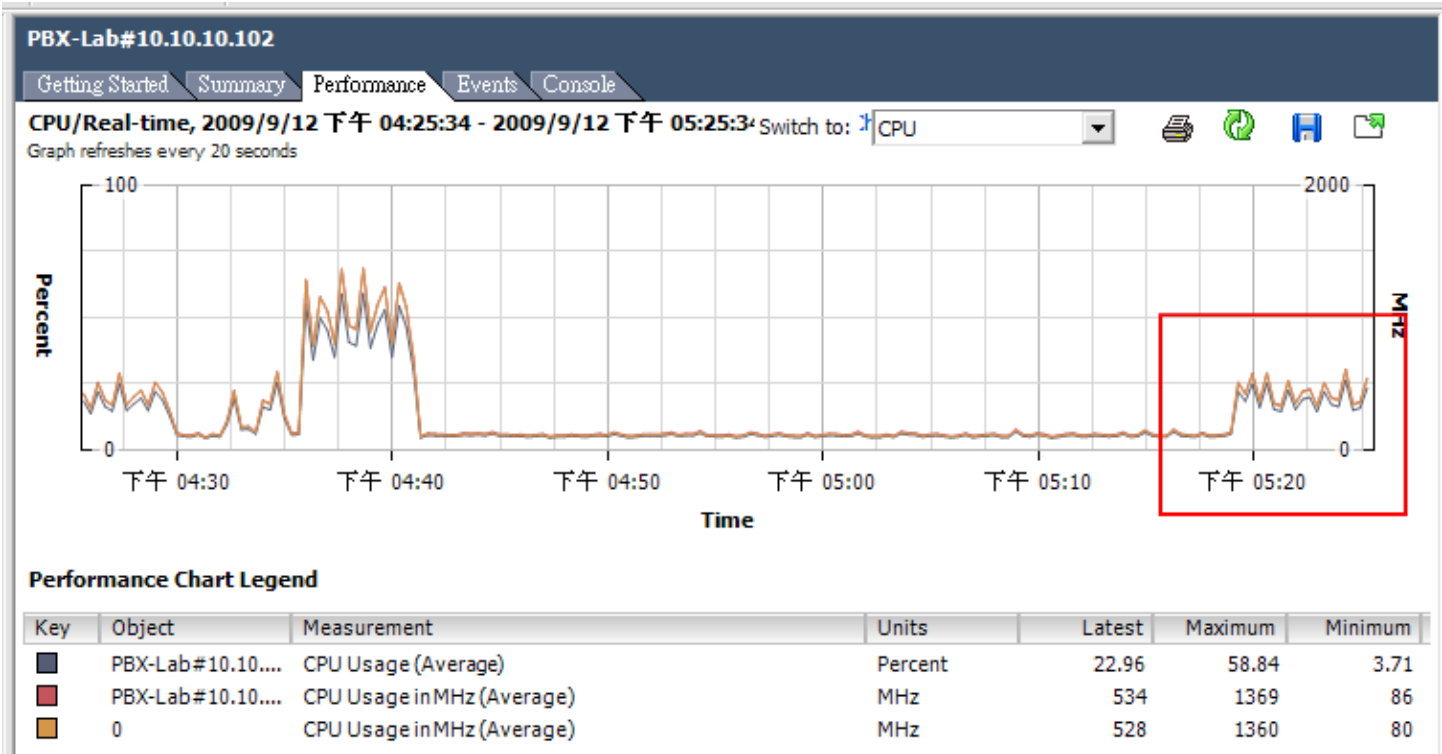
```

top - 17:33:14 up 70 days, 16:24, 1 user, load average: 1.08, 0.99, 0.56
Tasks: 108 total, 3 running, 105 sleeping, 0 stopped, 0 zombie
Cpu(s): 8.3%us, 23.8%sy, 0.0%ni, 66.2%id, 0.0%wa, 0.3%hi, 1.3%si, 0.0%st
Mem: 515488k total, 506304k used, 9184k free, 103420k buffers
Swap: 1048568k total, 32588k used, 1015980k free, 212248k cached

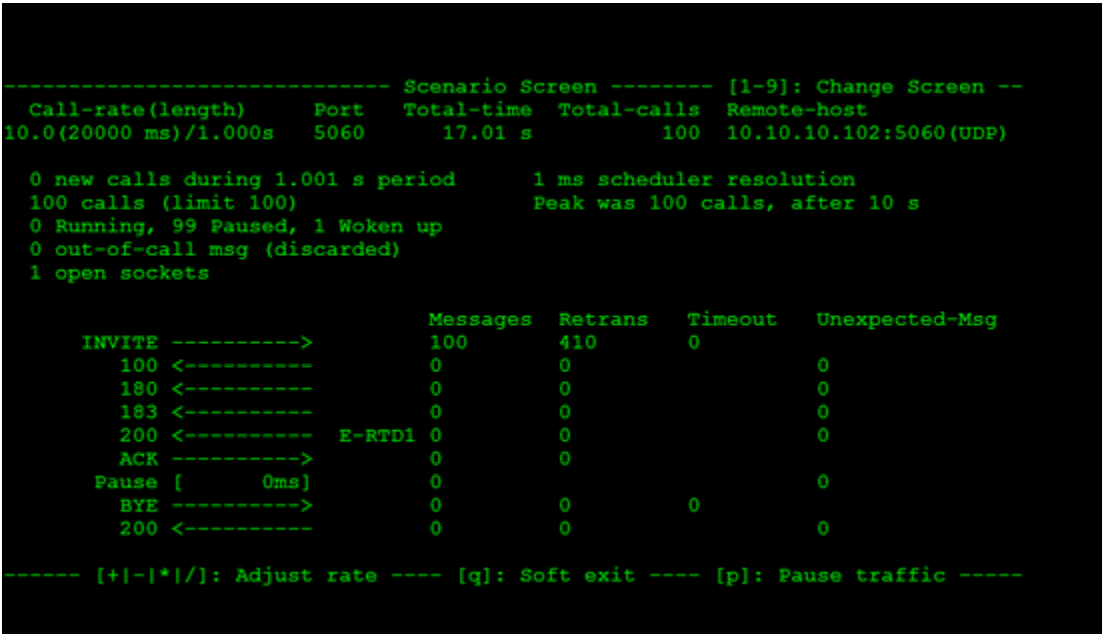
  PID USER      PR  NI  VIRT  RES  SHR  S %CPU  %MEM    TIME+  COMMAND
 14642 asterisk  15   0 86128  28m 9220 S 24.9   5.6   52:33.08 asterisk
 22343 root       15   0 2772 1060  528 R  7.3   0.2    0:56.31 dhcpcd
 14503 asterisk  15   0 16716 5304   0 S  0.7   1.0    1:08.20 19
   136 root       16   0   0     0   0 S  0.3   0.0    3:44.99 pdflush
   340 root       10  -5   0     0   0 S  0.3   0.0   21:47.77 kjournald
  2495 root       15   0 1960  424  400 S  0.3   0.1   10:48.82 hald-addon-stor
20864 root       15   0 2196 1028  816 R  0.3   0.2    0:00.39 top
    1 root       15   0 2072  620  592 S  0.0   0.1    0:03.60 init
    2 root       RT  -5   0     0   0 S  0.0   0.0    0:00.00 migration/0
    3 root       34  19   0     0   0 S  0.0   0.0    0:00.01 ksoftirqd/0
    4 root       RT  -5   0     0   0 S  0.0   0.0    0:00.06 watchdog/0
    5 root       10  -5   0     0   0 S  0.0   0.0    0:32.43 events/0
    6 root       10  -5   0     0   0 S  0.0   0.0    0:00.00 khelper
    7 root       10  -5   0     0   0 S  0.0   0.0    0:00.00 kthread
   10 root       10  -5   0     0   0 S  0.0   0.0    0:17.01 kblockd/0
   11 root       20  -5   0     0   0 S  0.0   0.0    0:00.00 kacpid
   67 root       20  -5   0     0   0 S  0.0   0.0    0:00.00 cqueue/0
   70 root       20  -5   0     0   0 S  0.0   0.0    0:00.00 khubd
   72 root       10  -5   0     0   0 S  0.0   0.0    0:00.00 kseriod
  137 root       15   0   0     0   0 S  0.0   0.0    0:13.33 pdflush
  138 root       10  -5   0     0   0 S  0.0   0.0    0:10.74 kswapd0
  139 root       20  -5   0     0   0 S  0.0   0.0    0:00.00 aio/0
  292 root       11  -5   0     0   0 S  0.0   0.0    0:00.00 kpsmouse
  322 root       20  -5   0     0   0 S  0.0   0.0    0:00.00 scsi_eh_0
  325 root       20  -5   0     0   0 S  0.0   0.0    0:00.00 ata/0

```

// VMware Performance



?????? 100
// SIPp



```

----- Statistics Screen ----- [1-9]: Change Screen --
Start Time      | 2009-09-12 17:38:54
Last Reset Time | 2009-09-12 17:39:42
Current Time    | 2009-09-12 17:39:43
-----+-----+-----
Counter Name    | Periodic value      | Cumulative value
-----+-----+-----
Elapsed Time    | 00:00:00:999        | 00:00:49:029
Call Rate       | 0.000 cps           | 4.079 cps
-----+-----+-----
Incoming call created | 0                  | 0
OutGoing call created | 0                  | 200
Total Call created  |                    | 200
Current Call       | 100                 |
-----+-----+-----
Successful call    | 0                   | 0
Failed call        | 0                   | 100
-----+-----+-----
Response Time 1    | 00:00:00:000        | 00:00:00:000
Call Length       | 00:00:00:000        | 00:00:31:511
----- [+-|*|/]: Adjust rate ---- [q]: Soft exit ---- [p]: Pause traffic -----

```

```

----- Repartition Screen ----- [1-9]: Change Screen --
Average Response Time Repartition
  0 ms <= n < 10 ms : 0
 10 ms <= n < 20 ms : 0
 20 ms <= n < 30 ms : 0
 30 ms <= n < 40 ms : 0
 40 ms <= n < 50 ms : 0
 50 ms <= n < 100 ms : 0
100 ms <= n < 150 ms : 0
150 ms <= n < 200 ms : 0
      n >= 200 ms : 0
Average Call Length Repartition
  0 ms <= n < 10 ms : 0
 10 ms <= n < 50 ms : 0
 50 ms <= n < 100 ms : 0
100 ms <= n < 500 ms : 0
 500 ms <= n < 1000 ms : 0
1000 ms <= n < 5000 ms : 0
 5000 ms <= n < 10000 ms : 0
      n >= 10000 ms : 200
----- [+-|*|/]: Adjust rate ---- [q]: Soft exit ---- [p]: Pause traffic -----

```

// Asterisk Debug

```
-- Started music on hold, class 'default', on SIP/sipp-b79c5100
-- Executing [2005@custom-sipp:1] Answer("SIP/sipp-b79c9d70", "") in new stack
-- Executing [2005@custom-sipp:2] SetMusicOnHold("SIP/sipp-b79c9d70", "default") in new sta
ck
-- Executing [2005@custom-sipp:3] WaitMusicOnHold("SIP/sipp-b79c9d70", "20") in new stack
-- Started music on hold, class 'default', on SIP/sipp-b79c9d70
-- Executing [2005@custom-sipp:1] Answer("SIP/sipp-b79ceaf0", "") in new stack
-- Executing [2005@custom-sipp:2] SetMusicOnHold("SIP/sipp-b79ceaf0", "default") in new sta
ck
-- Executing [2005@custom-sipp:3] WaitMusicOnHold("SIP/sipp-b79ceaf0", "20") in new stack
-- Started music on hold, class 'default', on SIP/sipp-b79ceaf0
-- Executing [2005@custom-sipp:1] Answer("SIP/sipp-b79d3870", "") in new stack
-- Executing [2005@custom-sipp:2] SetMusicOnHold("SIP/sipp-b79d3870", "default") in new sta
ck
-- Executing [2005@custom-sipp:3] WaitMusicOnHold("SIP/sipp-b79d3870", "20") in new stack
-- Started music on hold, class 'default', on SIP/sipp-b79d3870
-- Executing [2005@custom-sipp:1] Answer("SIP/sipp-b79d85f0", "") in new stack
-- Executing [2005@custom-sipp:2] SetMusicOnHold("SIP/sipp-b79d85f0", "default") in new sta
ck
-- Executing [2005@custom-sipp:3] WaitMusicOnHold("SIP/sipp-b79d85f0", "20") in new stack
-- Started music on hold, class 'default', on SIP/sipp-b79d85f0
-- Executing [2005@custom-sipp:1] Answer("SIP/sipp-b79dd370", "") in new stack
-- Executing [2005@custom-sipp:2] SetMusicOnHold("SIP/sipp-b79dd370", "default") in new sta
ck
-- Executing [2005@custom-sipp:3] WaitMusicOnHold("SIP/sipp-b79dd370", "20") in new stack
-- Started music on hold, class 'default', on SIP/sipp-b79dd370
-- Executing [2005@custom-sipp:1] Answer("SIP/sipp-b79e20f0", "") in new stack
-- Executing [2005@custom-sipp:2] SetMusicOnHold("SIP/sipp-b79e20f0", "default") in new sta
ck
-- Executing [2005@custom-sipp:3] WaitMusicOnHold("SIP/sipp-b79e20f0", "20") in new stack
-- Started music on hold, class 'default', on SIP/sipp-b79e20f0
elastix*CLI>
```

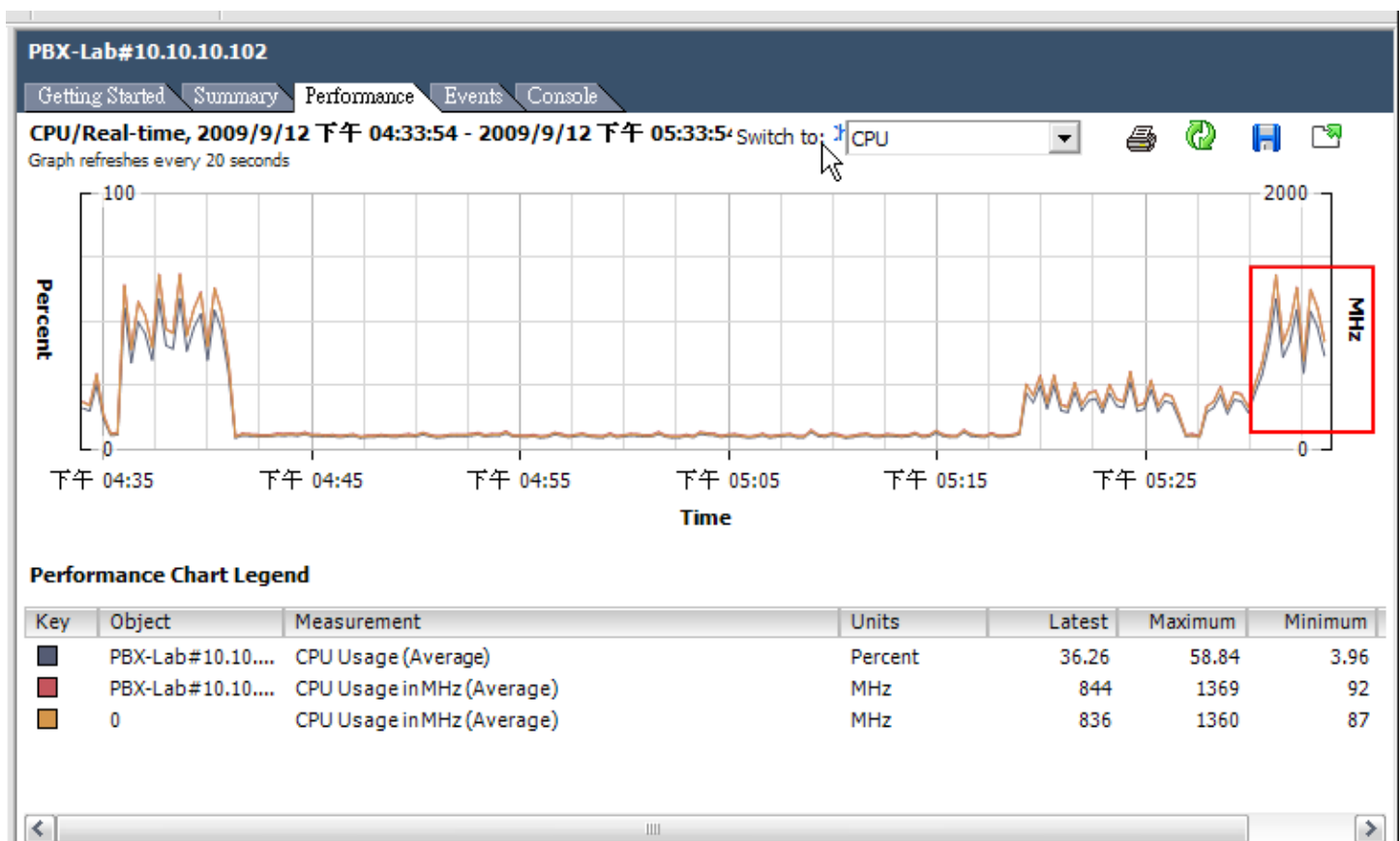
```
127.0.1.1 sipp 15-12100@127 00101/00001 0x4 (ulaw) No Rx: INVITE
127.0.1.1 sipp 14-12100@127 00101/00001 0x4 (ulaw) No Rx: INVITE
127.0.1.1 sipp 13-12100@127 00101/00001 0x4 (ulaw) No Rx: INVITE
127.0.1.1 sipp 12-12100@127 00101/00001 0x4 (ulaw) No Rx: INVITE
127.0.1.1 sipp 11-12100@127 00101/00001 0x4 (ulaw) No Rx: INVITE
127.0.1.1 sipp 10-12100@127 00101/00001 0x4 (ulaw) No Rx: INVITE
127.0.1.1 sipp 9-12100@127 00101/00001 0x4 (ulaw) No Rx: INVITE
127.0.1.1 sipp 8-12100@127 00101/00001 0x4 (ulaw) No Rx: INVITE
127.0.1.1 sipp 7-12100@127 00101/00001 0x4 (ulaw) No Rx: INVITE
127.0.1.1 sipp 6-12100@127 00101/00001 0x4 (ulaw) No Rx: INVITE
127.0.1.1 sipp 5-12100@127 00101/00001 0x4 (ulaw) No Rx: INVITE
127.0.1.1 sipp 4-12100@127 00101/00001 0x4 (ulaw) No Rx: INVITE
127.0.1.1 sipp 3-12100@127 00101/00001 0x4 (ulaw) No Rx: INVITE
127.0.1.1 sipp 2-12100@127 00101/00001 0x4 (ulaw) No Rx: INVITE
127.0.1.1 sipp 1-12100@127 00101/00001 0x4 (ulaw) No Rx: INVITE
100 active SIP channels
[root@elastix ~]#
```

// Linux Top

```
top - 17:41:14 up 70 days, 16:32, 1 user, load average: 6.86, 4.51, 2.10
Tasks: 108 total, 2 running, 106 sleeping, 0 stopped, 0 zombie
Cpu(s): 13.2%us, 45.4%sy, 0.0%ni, 39.1%id, 0.0%wa, 0.3%hi, 2.0%si, 0.0%st
Mem: 515488k total, 506828k used, 8660k free, 103300k buffers
Swap: 1048568k total, 32588k used, 1015980k free, 210640k cached

  PID USER      PR  NI  VIRT  RES  SHR S %CPU  %MEM    TIME+  COMMAND
 14642 asterisk   15   0 88528 29m  9220 S 54.1   5.9   54:11.18 asterisk
 22343 root        15   0 2772 1060  528 S  4.6   0.2    1:11.45 dhcpcd
 14694 asterisk   15   0 12384 8504 1860 S  1.3   1.6   11:31.86 op_server.pl
 14742 root        15   0 101m 5504 1404 S  0.3   1.1    1:31.47 monast
   1 root        15   0 2072  620  592 S  0.0   0.1    0:03.61 init
   2 root        RT  -5     0     0     0 S  0.0   0.0    0:00.00 migration/0
   3 root        34  19     0     0     0 S  0.0   0.0    0:00.01 ksoftirqd/0
   4 root        RT  -5     0     0     0 S  0.0   0.0    0:00.06 watchdog/0
   5 root        10  -5     0     0     0 S  0.0   0.0    0:32.44 events/0
   6 root        10  -5     0     0     0 S  0.0   0.0    0:00.00 khelper
   7 root        10  -5     0     0     0 S  0.0   0.0    0:00.00 kthread
  10 root        19  -5     0     0     0 S  0.0   0.0    0:17.01 kblockd/0
  11 root        20  -5     0     0     0 S  0.0   0.0    0:00.00 kacpid
  67 root        20  -5     0     0     0 S  0.0   0.0    0:00.00 cqueue/0
  70 root        20  -5     0     0     0 S  0.0   0.0    0:00.00 khubd
  72 root        10  -5     0     0     0 S  0.0   0.0    0:00.00 kseriod
 136 root        15   0     0     0     0 S  0.0   0.0    3:45.02 pdflush
 137 root        15   0     0     0     0 S  0.0   0.0    0:13.33 pdflush
 138 root        10  -5     0     0     0 S  0.0   0.0    0:10.81 kswapd0
 139 root        20  -5     0     0     0 S  0.0   0.0    0:00.00 aio/0
 292 root        11  -5     0     0     0 S  0.0   0.0    0:00.00 kpsmouse
 322 root        20  -5     0     0     0 S  0.0   0.0    0:00.00 scsi_eh_0
 325 root        20  -5     0     0     0 S  0.0   0.0    0:00.00 ata/0
 326 root        20  -5     0     0     0 S  0.0   0.0    0:00.00 ata_aux
 337 root        20  -5     0     0     0 S  0.0   0.0    0:00.00 ksnapi
```

// VMware Performance



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- http://wiki.kolmisoft.com/index.php/...rformance_test
- <http://sipp.sourceforge.net/doc/reference.html>
- ??????? WinSIP

- [Digium] [Measuring SIP Channel Performance](#)