



# Features and Architecture

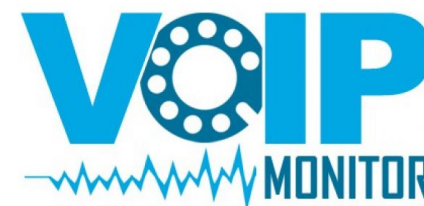
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# Agenda

- **Introduction**
- **Architecture**
- **Features**
- **License costing**

# What is VoIPmonitor?



VoIPmonitor is open source network packet sniffer with commercial frontend for SIP RTP RTCP SKINNY(SCCP) MGCP WebRTC VoIP protocols running on linux.

VoIPmonitor is designed to analyze quality of VoIP call based on network parameters - delay variation and packet loss according to ITU-T G.107 E-model which predicts quality on MOS scale.

Calls with all relevant statistics are saved to MySQL database.

Optionally each call can be saved to pcap file with either only SIP protocol or SIP/RTP/RTCP/T.38/udptl protocols.

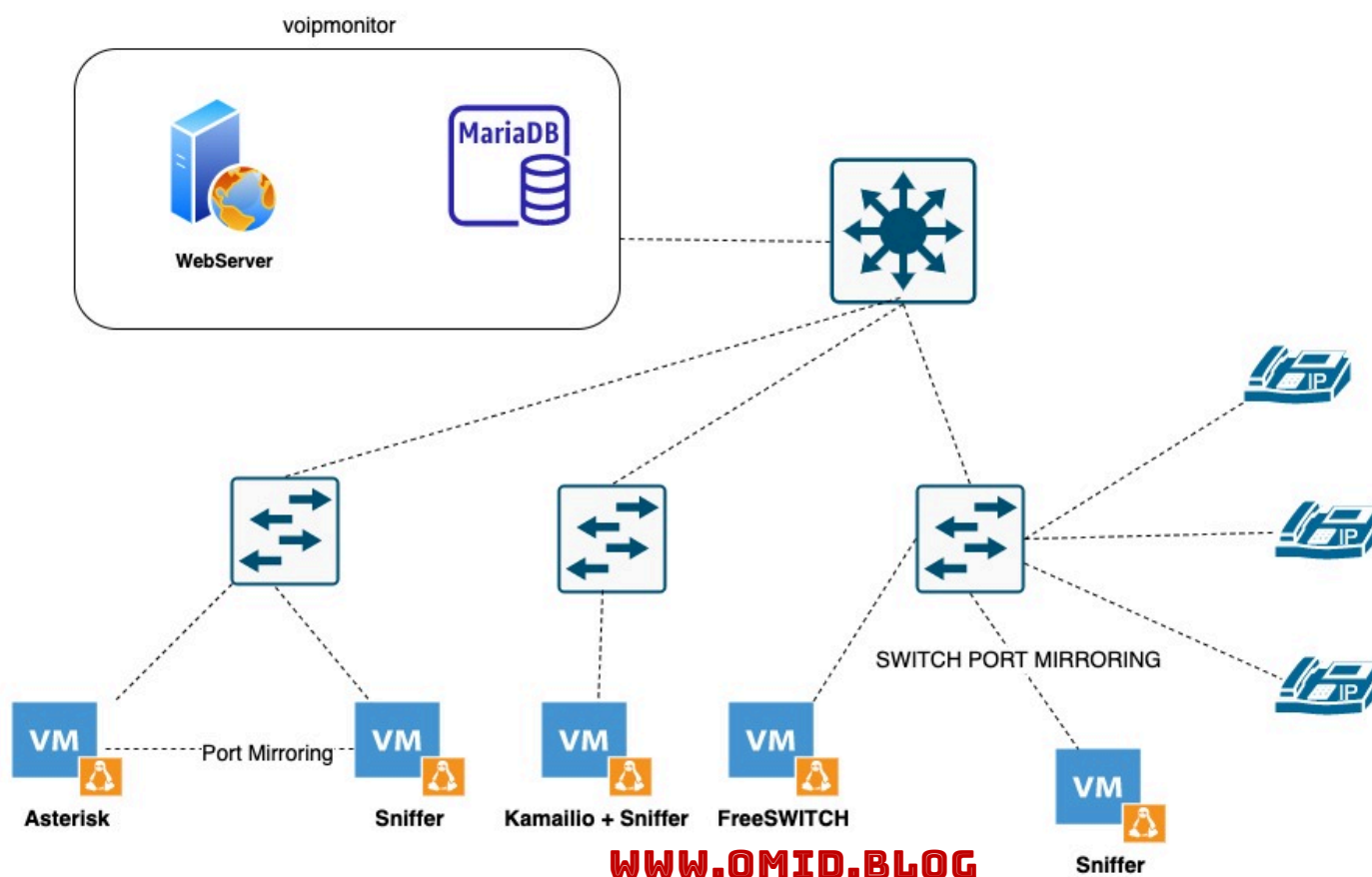
VoIPmonitor can also decode speech and play it over the commercial WEB GUI or save it to disk as WAV.

Supported codecs are G.711 alaw/ulaw and commercial plugins supports G.726 G.722 G.729a G.723 iLBC Speex GSM Silk iSAC OPUS AMR.

VoIPmonitor is also able to convert T.38 FAX to PDF.

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## Architecture





# Main Features

- Supported protocols: SIP RTP RTCP SKINNY(SCCP) MGCP SS7 SCTP WebRTC TCP SSL TLS
- Supported transports: UDP TCP

Register - Active												
Filter Form   Reset filter   user name: <input type="text"/> Page 1 of 1												
ID sensor id	Datetime	User name / R	Source IP	Destination IP	From number (name)	To number / doma	Contact number /	Expires / at	State	User agent	Commands	
9	2013-05-13 15:31:21	17 lam	10.229.0.38	10.229.3.138	17 10.229.3.138	17 10.229.3.138	17 10.229.0.1	3600 s 16:31:21	REGISTER	Linphone/3...	PCAP	
7	2013-05-13 15:31:21		10.229.0.38	10.229.0.1	432 10.229.0.1	432 10.229.0.1	432 10.229.0.38	3600 s 16:31:21	REGISTER	Linphone/3...	PCAP	



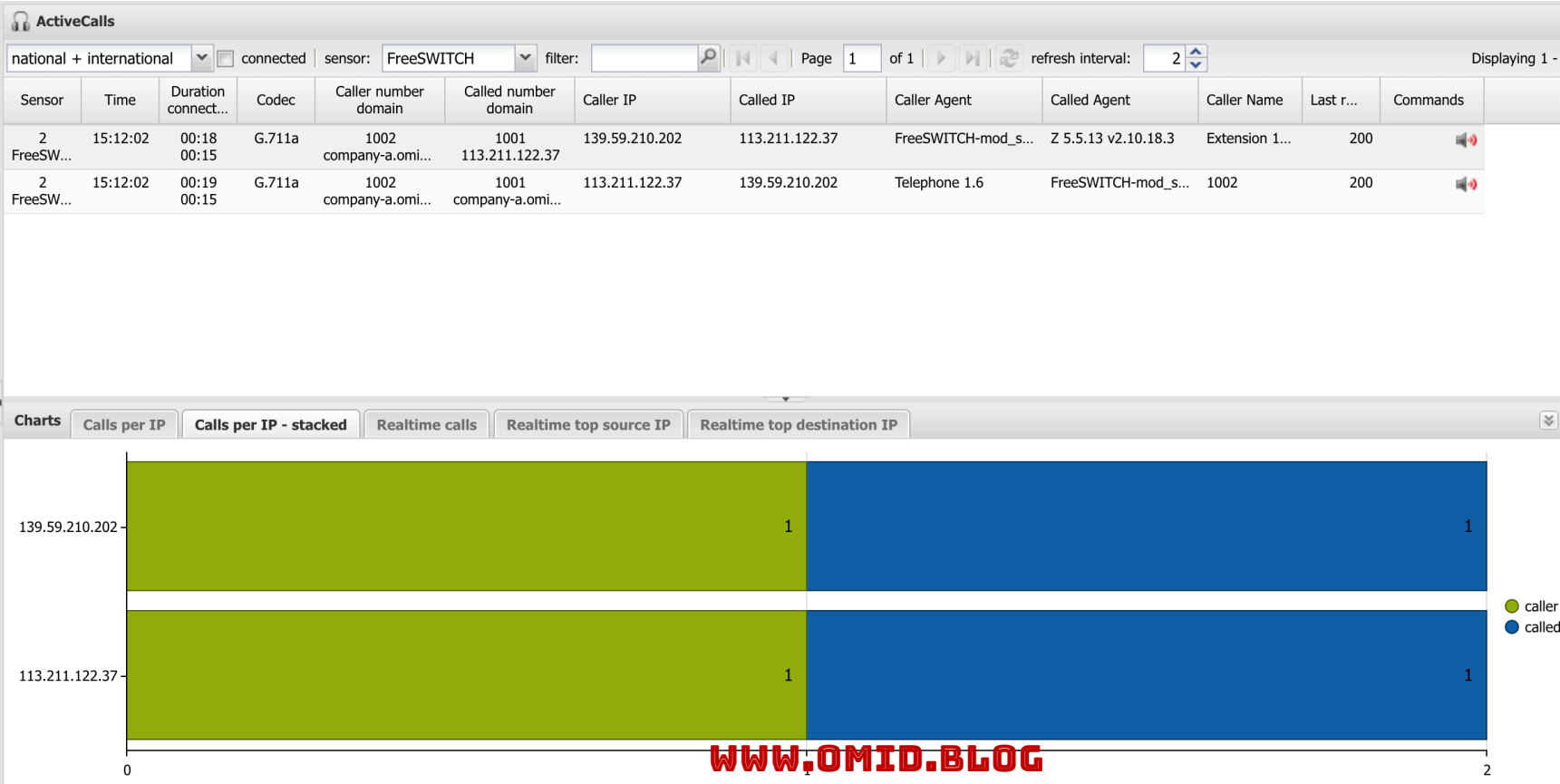
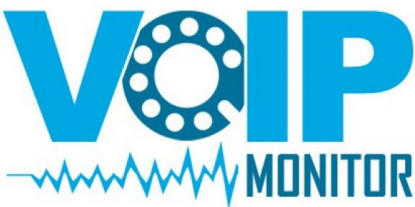
# Main Features

- Output: CDR, full SIP/RTP pcap, WAV OGG audio, T.38 PDF FAX

CDR - from date 2012-09-25 to date									
Filter Form Quick Filters Reset filter Menu Charts Page 1 of 5551 Displaying 1 - 30 of 166509									
ID	Datetime	Duration (PDD) codec	Caller num/name SIP source IP SIP agent	Called num SIP source IP SIP agent	Last response	Caller src RTP MOS delay distribution loss distribution	Called src RTP MOS delay distribution loss distribution	Commands	
1115...	2012-09-25 17:22:08	00:06 (0) G.711a	233575463430@194.1.20... 233573588443 194.20.164.93 user agent fw:123	43822821094@... 194.20.164.31 user agent fw:1...	200 200 OK	194.20.164.93 4.5 4.5 4.5 J:2   0:0:0:0:0:0:0 0:0:0:0:0:0:0:0:0:0	194.20.164.27 4.5 4.5 4.5 0:0:0:0:0:0:0 0:0:0:0:0:0:0:0:0:0	PCAP WAV	Charts
1115...	2012-09-25 17:22:08	00:06 (0) G.711a	233575463430@194.1.20... 233573588443 194.20.164.27 user agent fw:123	43822821094@... 87.137.43.194 user agent fw:1...	200 200 OK	194.20.164.27 4.5 4.5 4.5 J:1   0:0:0:0:0:0:0 0:0:0:0:0:0:0:0:0:0	87.137.43.194 4.5 4.5 4.5 J:12   0:0:0:0:0:0:0 0:0:0:0:0:0:0:0:0:0	PCAP WAV	Charts

# Main Features

Active Calls and Call Spy





# Main Features

- Comprehensive statistics / charts / dashboards

chart configuration ? help

base chart data filters - common filters - RTP filters - DSCP filters - combination

templates: number of calls

date range

time interval: [x] from: 2022-08-28 to: [ ] interval offset: 0 [min]

time axis: quarter

series

series	param	axis side	type	line	color	primary	trend	fill	markers	smooth	percent	filters	tools
# of calls	total	right	auto	solid									
# of concurrent calls	max	left	line	solid	red								
# of concurrent calls	avg	left	line	solid	blue								
# of concurrent calls	min	left	line	solid	green								

description

title:

left axis title: concurrent calls - max, avg, min min. legend width: [ ]

mark line value: [ ] color: #E92424

percent.line trend: [x] perc.95: [ ] perc.99: [ ]

right axis title: total calls min. legend width: [ ]

apply cancel

number of calls

number of calls

calls per sec.

minutes

MOS - intervals

MOS min(both)

MOS Caller - intervals

MOS Caller

MOS Called - intervals

MOS Called

MOS XR avg - intervals

MOS XR avg

MOS XR avg Caller

MOS XR avg Called

MOS XR min - intervals

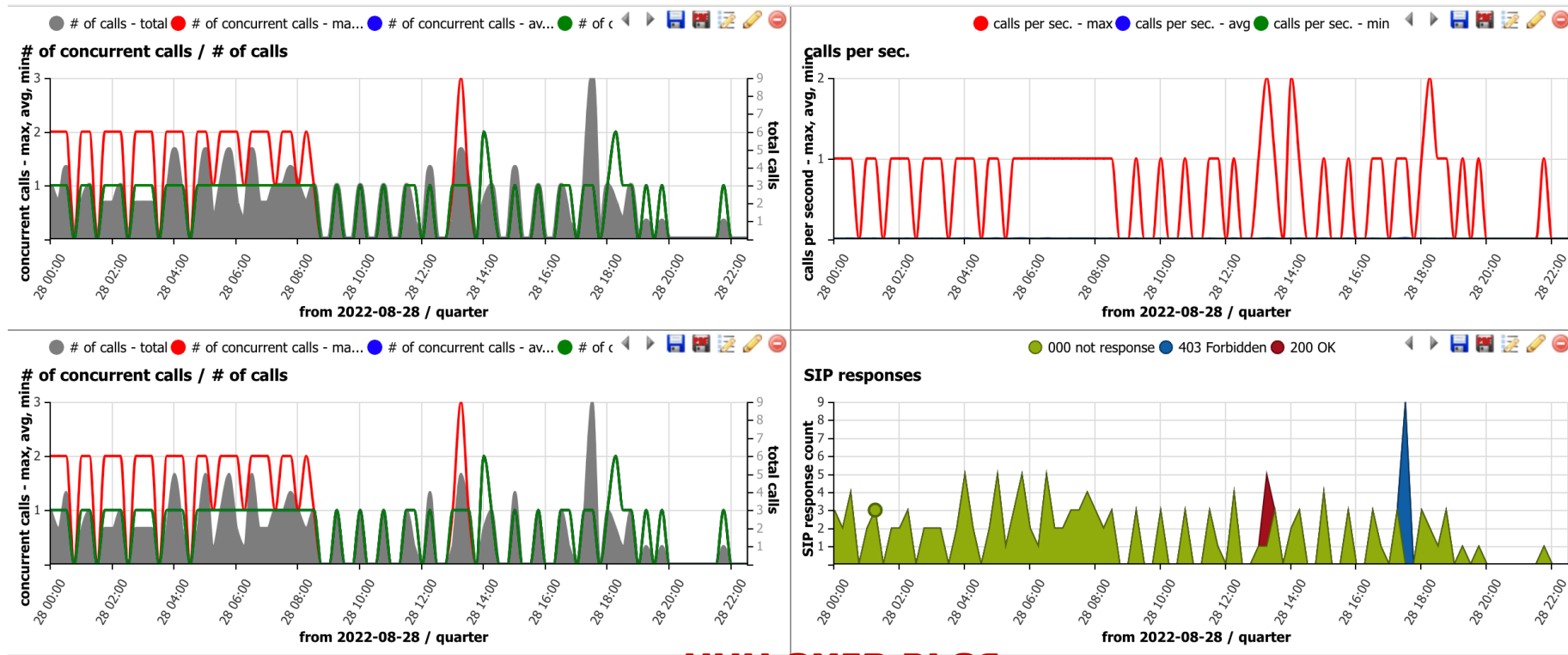
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# Main Features

- Comprehensive statistics / charts / dashboards



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# Main Features

## Alerting & Antifraud



**New alert**

**basic data** | other settings

Description:

Enabled: ☒

day of week:  x v

hour of day:  -

Alert Type:

select sensors:  x v ☐ aggreg.

Concurrent calls limit:

By:

By IP:

Numbers: include caller numbers  x v

exclude caller numbers  x v

Enable hyperlinks: ☒

E-mails:

Note:

Add Note into email: ☐

IP Addresses: include source IP addresses  x v

exclude source IP addresses  x v

Alert Type:

select sensors:

Concurrent calls limit:

By:

By IP:

Numbers:

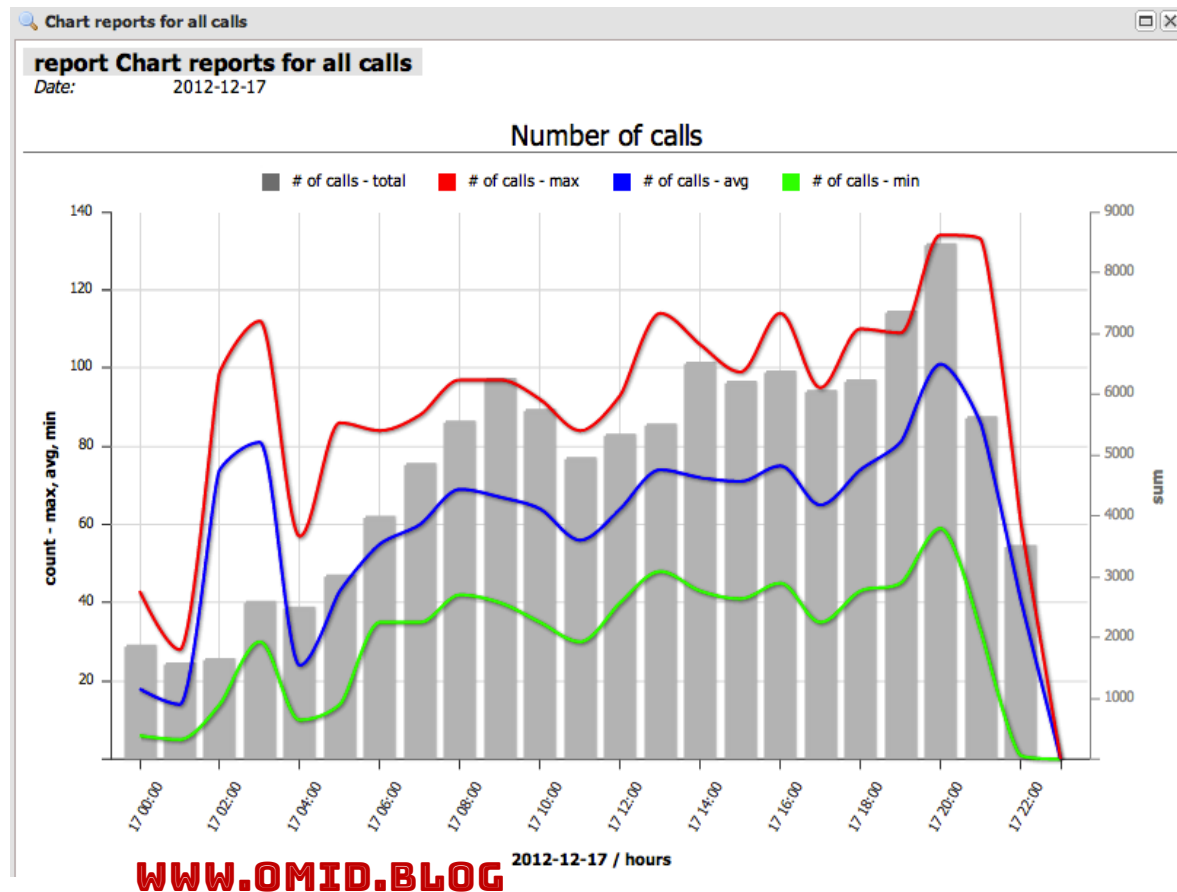
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# Main Features

## Reports



- Reports
  - Configure Daily Reports
  - Sent Reports
  - Report generator
  - Call problems
  - CDR Trends
  - Call summary**
  - QOS report
  - Call Detail Records
  - CSV Export



# Main Features

Multi-user Multi-role access



**New group**

**basic data** | secure users | users restriction

Name:

Is administrator: ☐

**CDR**

Enable CDR: ☐ Can delete CDR: ☐ Simple CDR: ☐

Hide CDR / Messages groups: ☐ Show only connected calls: ☐

**messages**

Enable Messages: ☐ Can view content message: ☐ Can view message URL: ☐

**registers / sip options, subscribe, notify / SS7**

Enable register: ☐ Enable sip opt., subsc., notify: ☐ Enable SS7: ☐

**pcap (download / upload)**

Can download PCAP: ☐ Remove RTP from PCAP: ☐ Can upload PCAP: ☐

**audio & fax**

Can play CDR: ☐ Can download WAV/OGG: ☐ Can show fax: ☐

**active calls**

Enable active calls: ☐ Enable active calls map: ☐ Can listen active call: ☐

**dashboard & charts**

Enable dashboard: ☐ Read only dashboard: ☐ Can graphs: ☐

**alerts & reports**

Enable edit alerts: ☐ Create only private alerts: ☐ Enable show sent alerts: ☐

Enable edit reports: ☐ Create only private reports: ☐ Enable show sent reports: ☐

Enable report functions: ☐

**share**

Enable local public share: ☐ Enable local private share: ☐ Enable share.voipmonitor.org: ☐

**others**

**New user**

**basic data** | secure users | users restriction | enabled sensors

Login name:

Name:

Password:

☐ Require 2FA authentication

Group:

E-mail:

Is administrator: ☐

**CDR**

Enable CDR: ☐ Can delete CDR: ☐ Simple CDR: ☐

Hide CDR / Messages groups: ☐ Show only connected calls: ☐

**messages**

Enable Messages: ☐ Can view content message: ☐ Can view message URL: ☐

**registers / sip options, subscribe, notify / SS7**

Enable register: ☐ Enable sip opt., subsc., notify: ☐ Enable SS7: ☐

**pcap (download / upload)**

Can download PCAP: ☐ Remove RTP from PCAP: ☐ Can upload PCAP: ☐

**audio & fax**

Can play CDR: ☐ Can download WAV/OGG: ☐ Can show fax: ☐

**active calls**

Enable active calls: ☐ Enable active calls map: ☐ Can listen active call: ☐

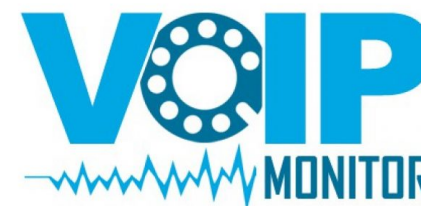
**dashboard & charts**

Enable dashboard: ☐ Read only dashboard: ☐ Can graphs: ☐

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# Main Features

## Issue Tracker



**Tracker - Tickets**

[+ New ticket](#) [Edit](#) [Delete](#)

created by:  status:  from:

assigned to:  priority:  to:

open only: ☒ category:  quick search:

priority	created at	ID	title	status	category	assigned to	created by
normal	2022-08-28	1	Registration Problem	open	main	admin	admin

**Registration Problem**

*description:* Registration Problem in Malaysia Site

*assigned to:* admin

*priority:* normal

*category:* main

*status:* open

*created at:* 2022-08-28 15:04:01

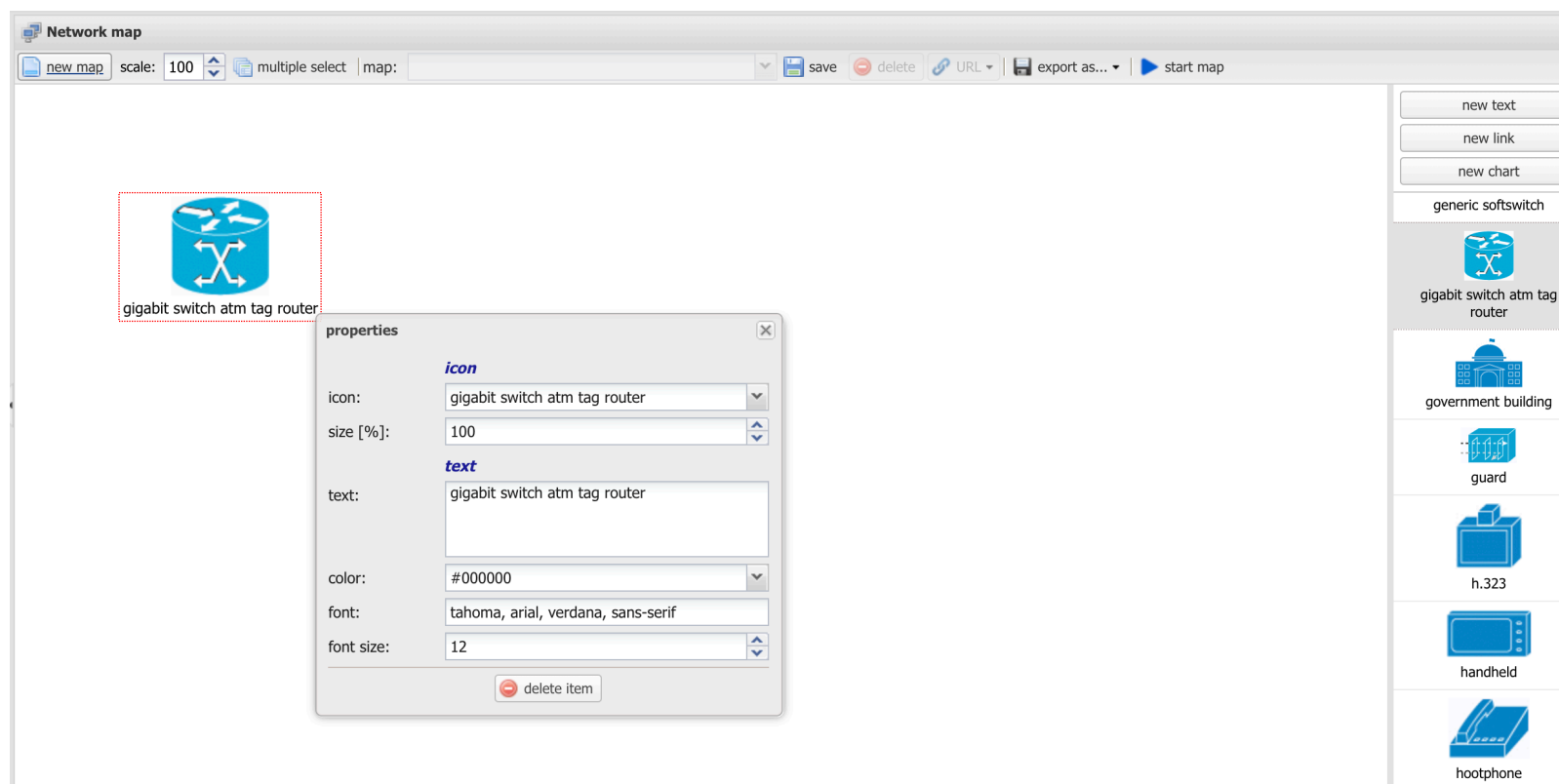
**comments**

[+ New record](#) [Edit](#) [Delete](#)

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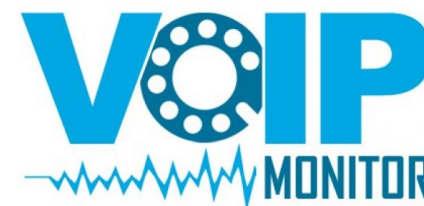
# Main Features

## network Map



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# Compatibility



- VoIPmonitor is a passive analyser which can decode any software and hardware based SIP
- VoIPmonitor is tested and used to monitor all major opensource SIP platforms (Kamailio Opensips Freeswitch Asterisk SipXecs OpenUC)
- VoIPmonitor is tested and used by major proprietar SIP PBX/SBC
- VoIPmonitor can run on any hardware running linux including all virtual and cloud platforms
- VoIPmonitor sniffer can run directly on the linux SIP host or as a dedicated virtual or physical hardware listening to mirrored packets (Switch mirroring / TAP)



# License Cost

30 days trial	10 channels	350 channels	500 channels
\$0.00 USD Monthly	\$42.00 USD Monthly	\$209.00 USD Monthly	\$250.00 USD Monthly
<a href="#">Order Now</a>	<a href="#">Order Now</a>	<a href="#">Order Now</a>	<a href="#">Order Now</a>
35 channels	50 channels	750 channels	1000 channels
\$63.00 USD Monthly	\$84.00 USD Monthly	\$334.00 USD Monthly	\$417.00 USD Monthly
<a href="#">Order Now</a>	<a href="#">Order Now</a>	<a href="#">Order Now</a>	<a href="#">Order Now</a>
100 channels	200 channels	1500 channels	2000 channels
\$125.00 USD Monthly	\$167.00 USD Monthly	\$500.00 USD Monthly	\$583.00 USD Monthly
<a href="#">Order Now</a>	<a href="#">Order Now</a>	<a href="#">Order Now</a>	<a href="#">Order Now</a>

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