



RELEASE NOTES

# **sipPROT 5.4.0**

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Please note: sipPROT 5.4 Standalone is only available for PBXware versions 7.5 and higher.

# SIP INVITEs Rate Limiter

In an effort to enable administrators to have more control over incoming SIP traffic, sipPROT supports rate limiting SIP INVITE requests sent to the system. This could act as a good tool for managing spam invites, that even though are rejected, still end up showing up on various logs and monitoring dashboards.

The rate limiter functionality allows the administrator to define the exact number of INVITE requests that can be received from a single IP address based on the frequency of the requests: per second, per minute or per hour.

To account for specific situations where a burst of invites is sent (for example a large conference call), sipPROT lets the administrator define the allowed number of requests in that burst.



Dashboard

Attack Logs

Allowlist

Denylist

Dynamic Denylist

Settings

SIP Ports:

x 5060

x

SIP Blocking Rule:

10

bad registrations per minute

SIP Invite Rate Limit:

☒ Enabled

SIP Invite Rate Limit Value:

20

SIP Invite Rate Limit Unit:

per minute

SIP Invite Burst Limit:

10

Dynamic Block Time:

1 Hour

Block Threshold:

3

Permanent Block SIP Attacks

Block SIP Register Attacks:

☒ Enabled

Block SIP Invite Attacks:

☐ Enabled

Blocked User Agents:

x friendly-scanner

x sipsak

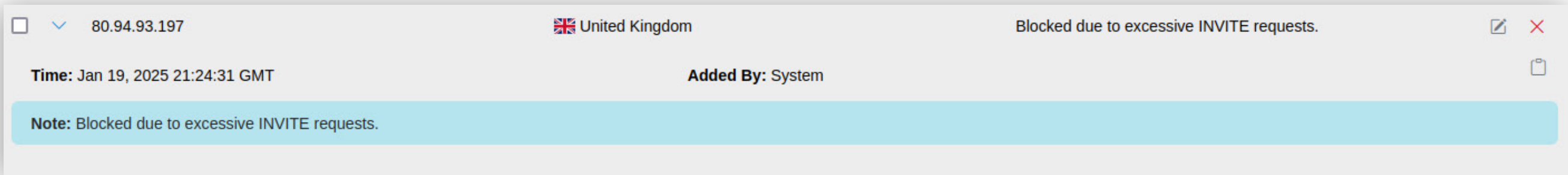
x Elite

x

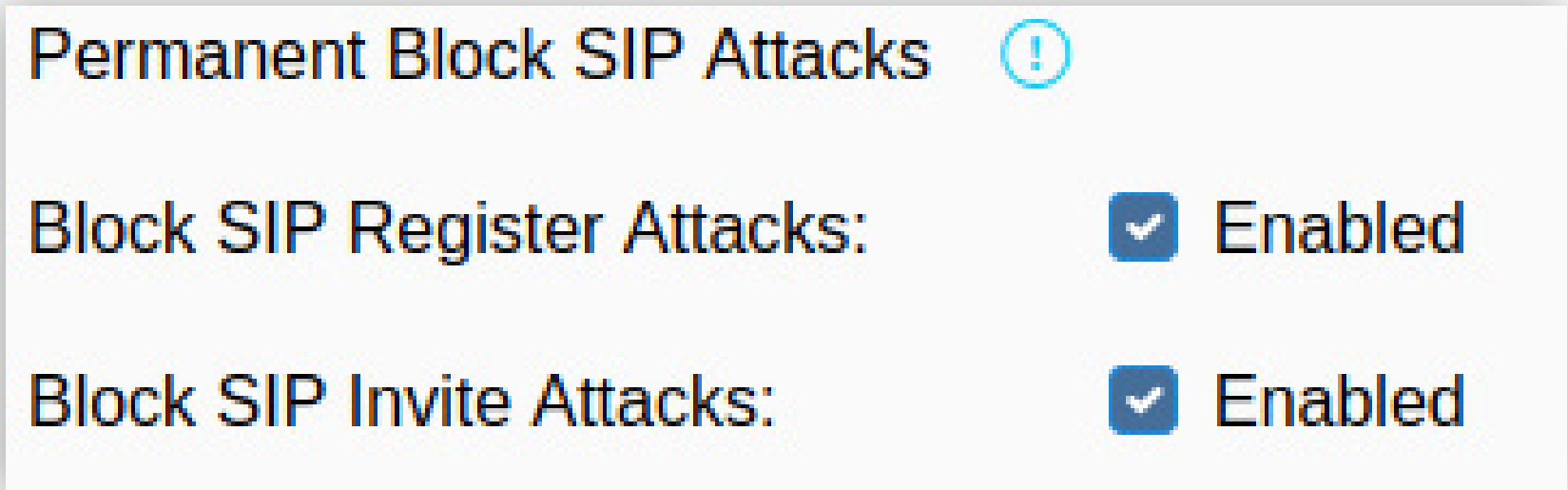
For example, when a system receives 20 SIP INVITE requests from a single IP address within a minute, the rate limiter is triggered. Once active, the system will accept only one INVITE every three seconds, while any additional INVITE requests sent in the meantime will be dropped. The behavior is defined by the following formula:

$$interval = \frac{unit [s]}{value} = \frac{60 s}{20} = 3s$$

The dynamic blocking rules can be applied to rate limited IP addresses as well, meaning that if an address has been rate limited for example, three times in three hours, it will be permanently blocked, with an automatic note generated that the IP address was blocked by the system.



To activate this functionality, the checkbox next to Block SIP INVITE Attacks needs to be selected.



Additionally, logs of all addresses affected by the rate limiter will be stored in the Attack logs, so that administrators can monitor the attacks and act accordingly.



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### Attack Logs

Attack Type

Mar 7, 2025 - Mar 14, 2025

Reset

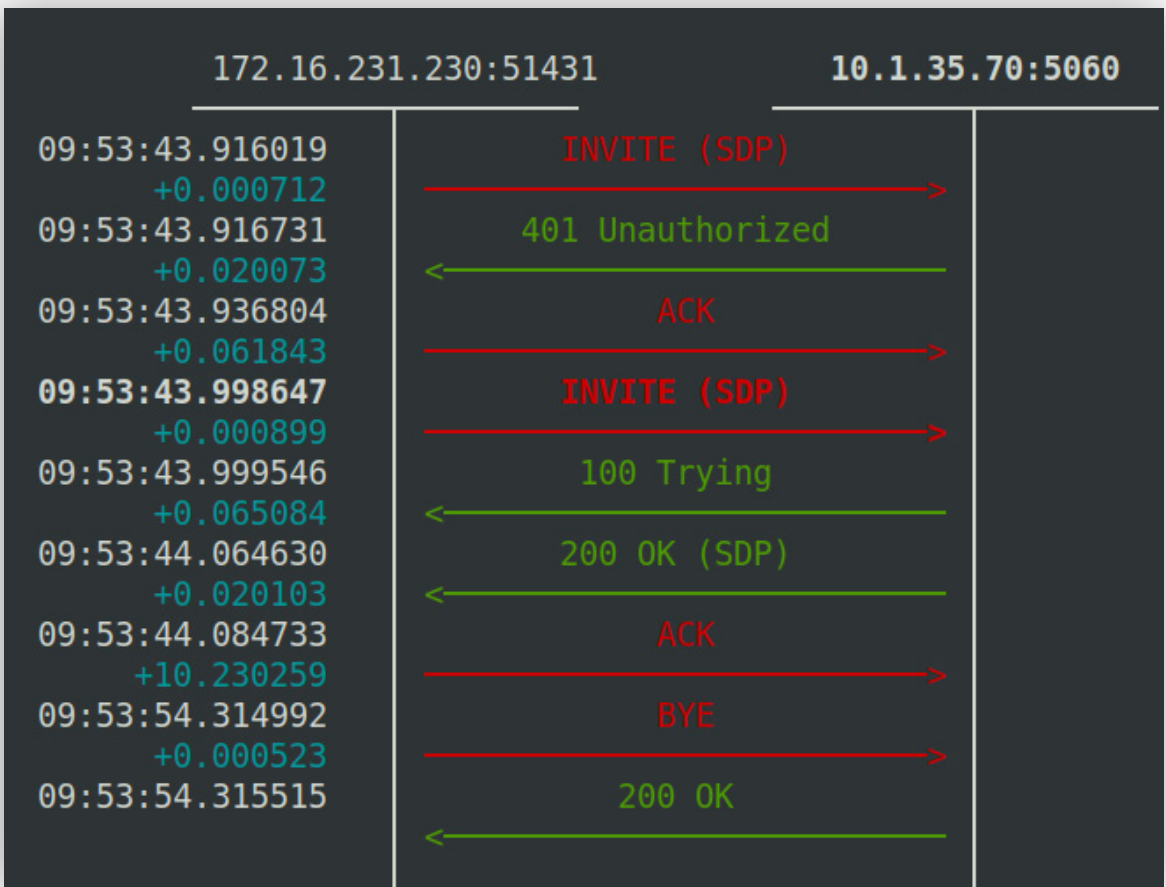
15 Per Page

Attacker IP Address	Victim IP Address	Attack Type	User Agent	Time
> 80.94.93.238	45.141.164.104	INVITE	Linksys-SPA942	Mar 14, 2025 07:14:05 GMT
> 80.94.93.238	45.141.164.91	INVITE	Linksys-SPA942	Mar 14, 2025 07:13:59 GMT
> 80.94.93.238	45.141.164.96	INVITE	Linksys-SPA942	Mar 14, 2025 07:13:58 GMT
> 80.94.93.238	45.141.164.104	INVITE	Linksys-SPA942	Mar 14, 2025 07:13:49 GMT
> 80.94.93.238	45.141.164.104	INVITE	Linksys-SPA942	Mar 14, 2025 07:13:49 GMT
> 80.94.93.238	45.141.164.96	INVITE	Linksys-SPA942	Mar 14, 2025 07:13:47 GMT
> 80.94.93.238	45.141.164.95	INVITE	Linksys-SPA942	Mar 14, 2025 07:13:46 GMT
> 80.94.93.238	45.141.164.91	INVITE	Linksys-SPA942	Mar 14, 2025 07:13:44 GMT
> 80.94.93.238	45.141.164.96	INVITE	Linksys-SPA942	Mar 14, 2025 07:13:38 GMT
> 80.94.93.238	45.141.164.104	INVITE	Linksys-SPA942	Mar 14, 2025 07:13:32 GMT
> 80.94.93.238	45.141.164.96	INVITE	Linksys-SPA942	Mar 14, 2025 07:13:18 GMT
> 80.94.93.238	45.141.164.104	INVITE	Linksys-SPA942	Mar 14, 2025 07:13:16 GMT
> 80.94.93.238	45.141.164.91	INVITE	Linksys-SPA942	Mar 14, 2025 07:13:16 GMT
> 80.94.93.238	45.141.164.104	INVITE	Linksys-SPA942	Mar 14, 2025 07:13:09 GMT
> 80.94.93.238	45.141.164.96	INVITE	Linksys-SPA942	Mar 14, 2025 07:13:08 GMT

816 total

1
2
3
4
5

Please note: for each call, two SIP INVITEs are sent. The first INVITE initiates the call, but is rejected by the system requiring authentication. The second INVITE carries the authentication details, after which the connection is established.



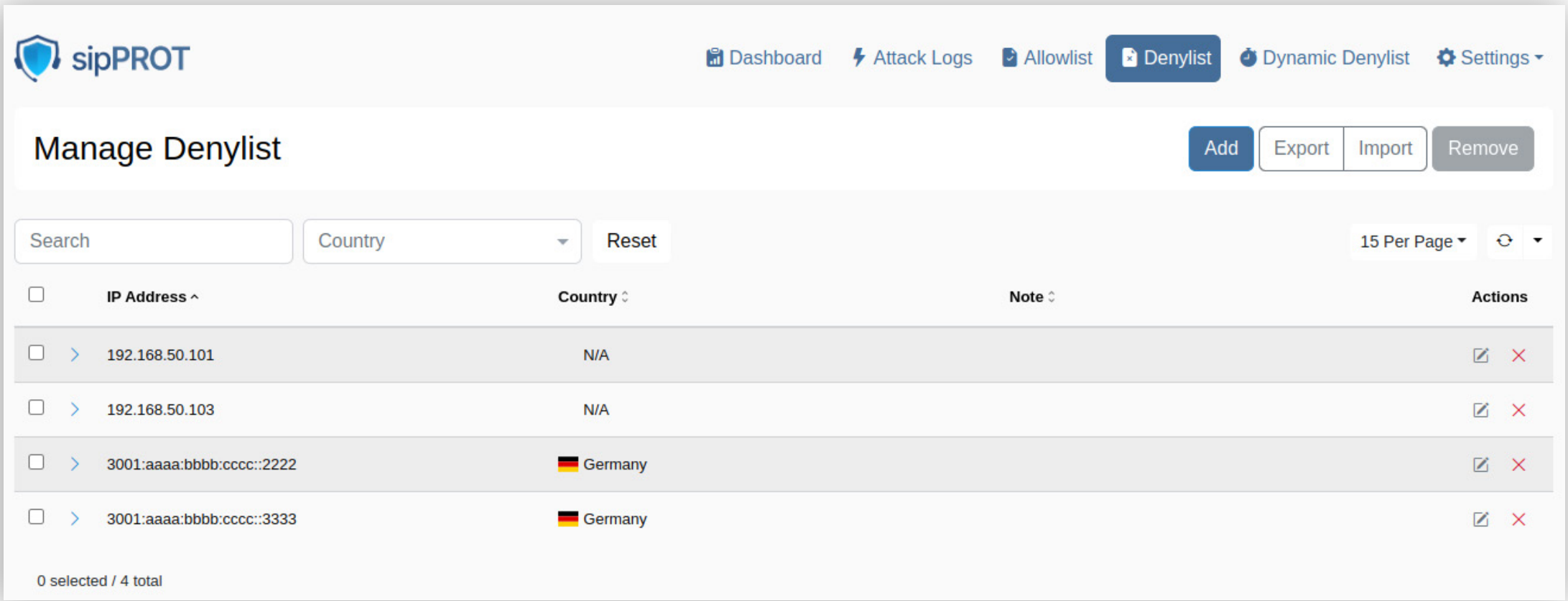
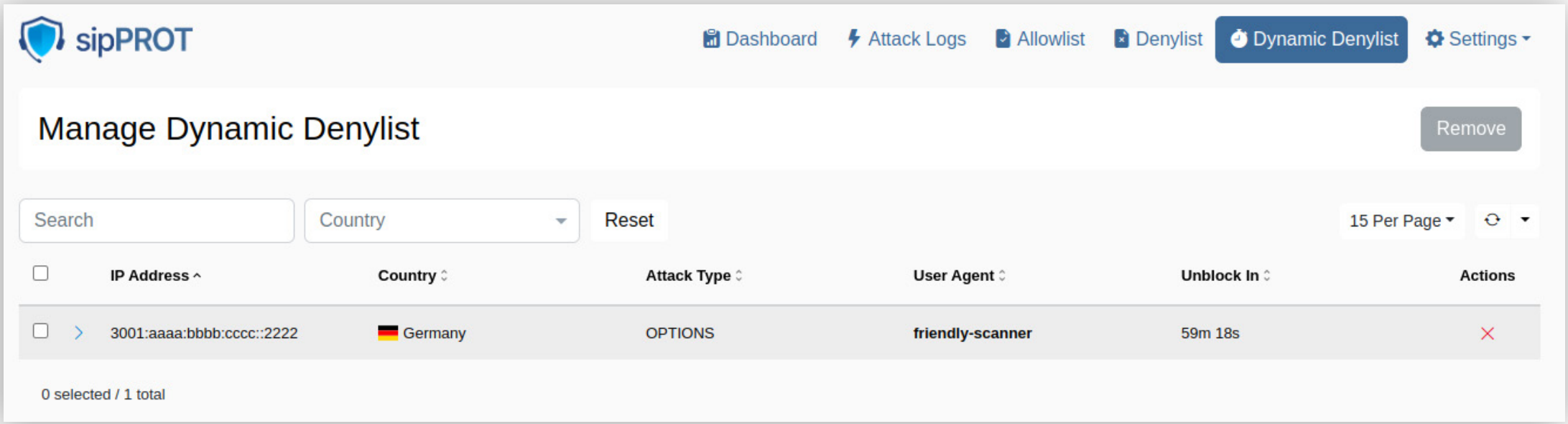
**Allowed IPs will be exempt from the rate limiter, but all other addresses that are not on the Allow list will be affected by the rate limiter.**

The rate limiter is disabled by default.

# IPv6 support

Boosting the security of systems protected by sipPROT, sipPROT can now detect attacks coming from IPv6 addresses.

This also extends to the dynamic blocking functionality, meaning that sipPROT will temporarily, then permanently block an IPv6 address, according to the configured settings.



All attacks will be documented in the attack logs.

# Improved notification settings configuration

The “From name” and “From email” fields were added in the notification settings, so that sipPROT admins can configure the host name and email address that will be displayed on sipPROT notifications. As for the security settings, the username and password fields are now optional.

Notifications

SMTP

SSL Encryption: ☒ Enabled ☐ Disabled

Host:

Port:

From Name:

From Address:

User (Optional):

Password (Optional):

Save Settings

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