2025/10/08 07:23 1/2 eBPF Configuration

eBPF Configuration

This page outlines how to configure and enable eBPF integration for TapeTrack Server on Linux systems. eBPF (Extended Berkeley Packet Filter) allows TapeTrack to dynamically manage IP-level blocking at the kernel level during the time-out period.



Prerequisites

Before enabling eBPF support, ensure the following:

- Linux kernel version 4.4 or later
- Root or sudo privileges
- TapeTrack Server binary supports the `-B` argument
- A preloaded eBPF table is available and accessible

Setup

Create or Load an eBPF Table

Use your preferred method to create an eBPF table that supports IP filtering. This may involve:

- Using `bpftool` or `tc` to define a map
- Preloading the table with default values
- Ensuring the table is accessible to the TapeTrack Server process

Example:

bpftool map create /sys/fs/bpf/tapetrack_block_map type hash key 4 value 4
entries 1024 name tapetrack_block_map

Start TapeTrack Server with eBPF Integration

Launch the TapeTrack Server with the -B argument pointing to the eBPF table:

```
./TapeTrackServer -B /sys/fs/bpf/tapetrack block map
```

This enables dynamic IP blocking. When a client sends a non-TapeTrack packet, its IP will be added to the eBPF table and blocked at the kernel level for the duration of the time-out period.

Last update: 2025/10/03 02:58

Monitor and Verify

To confirm that IPs are being added and removed correctly:

bpftool map dump name tapetrack_block_map

You should see entries corresponding to banned IP addresses.

Notes

eBPF integration is optional but recommended for public-facing servers

Ensure firewall rules do not conflict with eBPF behavior

TapeTrack will manage the table dynamically — manual edits may be overwritten

See Also

TapeTrack Server: Anti-Throttle and Anti-Hacking Measures

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Last update: 2025/10/03 02:58



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