Layered Visibility & Coverage Evidence (NGINX Edge vs WAF Backend)

AstroPema AI LLC

Execution Stamp (UTC)

- run_ts_utc: 2026-11-13T09:45:01Z
- host: baja.pemahosting.com
- user: davco

Analysis Window (UTC)

- window_hours: 48
- start_utc: 2026-11-11T09:45:01.918252+00:00
- end_utc: 2026-11-13T09:45:01.918252+00:00

Purpose (SOC / ISO Evidence)

This report demonstrates, for a fixed UTC time window, the relationship between: (1) NGINX edge observations, (2) backend WAF event ingestion, and (3) corroboration overlap. Artifacts are produced deterministically and include cryptographic hashes for audit verification.

Summary (Key Coverage KPIs)

- HTTP-¿WAF coverage (% of HTTP IPs also in WAF): 20.61%
- STREAM-¿WAF coverage (% of STREAM IPs also in WAF): 0.0%
- HTTP/STREAM overlap (% of HTTP IPs also in STREAM): 0.0%
- HTTP/STREAM overlap (% of STREAM IPs also in HTTP): 0.0%
- WAF visibility via HTTP (% of WAF IPs also in HTTP): 100.0%
- WAF visibility via STREAM (% of WAF IPs also in STREAM): 0.0%
- 3-layer corroboration (% of WAF IPs also in HTTP and STREAM): 0.0%

Web Links

- Stable PDF: https://astropema.ai/reports/layered/latest_report.pdf
- Stable manifest: https://astropema.ai/reports/layered/latest.json

Layer Counts (Snapshot)

Table 1: Layer event/IP counts for the analysis window (snapshot).

layer	events	ips
NGINX edge http_access_default	2148	660
NGINX edge stream_443_default	0	0
NGINX edge error_events	42	16
WAF backend (all waf.events)	660	136
Rust detector (detections.log)	660	136

Overlap Summary (Snapshot)

Table 2: Set overlaps across HTTP, STREAM, and WAF (snapshot).

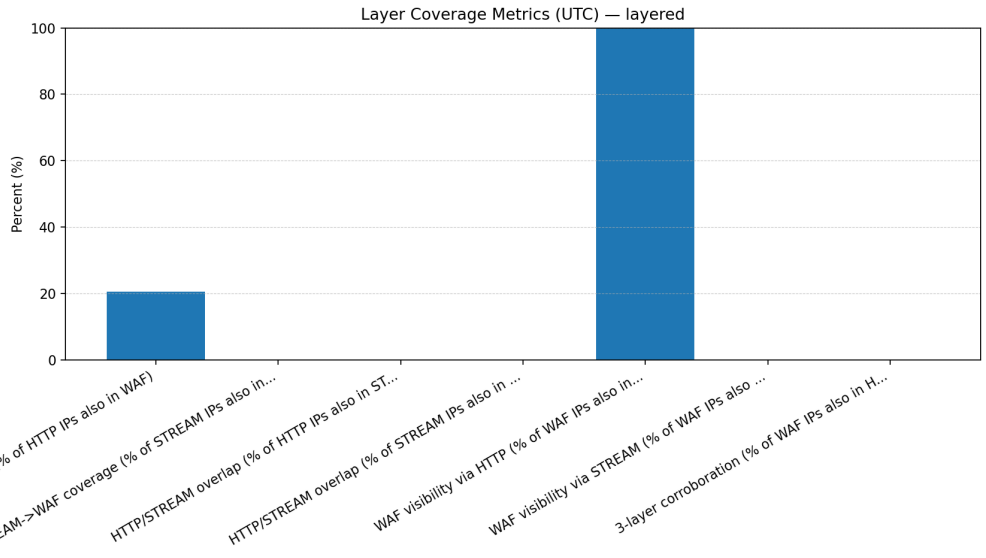
metric	count
HTTP unique IPs	660
STREAM unique IPs	0
WAF unique IPs	136
HTTP INTERSECT WAF	136
STREAM INTERSECT WAF	0
HTTP INTERSECT STREAM	0
HTTP INTERSECT STREAM INTERSECT WAF	0

Coverage Metrics (Snapshot)

Table 3: Coverage / corroboration metrics derived from overlaps (snapshot).

metric	numerator	denominator	percent	interpretation
HTTP-¿WAF coverage (% of HTTP IPs also in WAF)	136	660	20.61	Of unique HTTP client IPs, how many appear in WAF detections within the window.
STREAM-¿WAF coverage (% of STREAM IPs also in WAF)	0	0	0.0	Of unique TLS stream client IPs, how many appear in WAF detections within the window.
HTTP/STREAM overlap (% of HTTP IPs also in STREAM)	0	660	0.0	Of HTTP IPs, what fraction also appears in STREAM telemetry.
HTTP/STREAM overlap (% of STREAM IPs also in HTTP)	0	0	0.0	Of STREAM IPs, what fraction also appears in HTTP telemetry.
WAF visibility via HTTP (% of WAF IPs also in HTTP)	136	136	100.0	Of WAF-detected IPs, how many were also observed in edge HTTP logs.
WAF visibility via STREAM (% of WAF IPs also in STREAM)	0	136	0.0	Of WAF-detected IPs, how many were also observed in edge STREAM logs.
3-layer corroboration (% of WAF IPs also in HTTP and STREAM)	0	136	0.0	Of WAF-detected IPs, how many have corroboration in both edge layers (HTTP+STREAM).

Coverage Chart



Artifact Integrity (sha256)

Artifact	sha256
run_metadata_json	f44023ae6a36dd8a452c8946cb448957250f343dc161f4248c95b11a50768916
layer_counts_snapshot_csv	77062dfab3678cca2bcd1980838f590f487397b7fadb6495408a53bc63d25d0f
overlap_summary_snapshot_csv	f8a2728489f5cbb94114789d75d25c6a050d428463e07f01967993d9cf8184ff
coverage_metrics_snapshot_csv	103766d29d3198091cdf6a3e9c9fd5ba9454ae5c709272c0f387bb63436b5ef8
coverage_chart_png	85e2df6dfa3e5514c87ed8a95771ab56791b7f6db388e041cd415059c598957c