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The Airbus Method: Transforming vulnerability noise into actionable intelligence

```
$ ./pipeline.py --input CVE-2025-53521 --mode demo
Continue ? (Y/n)_
```

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Airbus · THCon 2026

—[AGENDA]—

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Flight Plan

03 | The team — Airbus
04 | Maintain Security Condition — Scope
05 | From scan to report — Architecture
06 | The real problem — Problem statement
07 | Plug & Play, Zero Friction — Workflow
08 | Day 0 — The CVE is born — Running thread 1/5
09 | Enrichment — Running thread 2/5
10 | Score contextualisation — Running thread 3/5
11 | Context is King — Contextualisation
12 | ThreatLevel — Running thread 4/5
13 | The reality test — Comparison
14 | Your Mileage May Vary — Configuration
15 | Pipeline output — Running thread 5/5
16 | The core of prioritization — Summary

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The Team

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NEVERHACK

——[SCOPE]——

Maintain Security Condition

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01

Vulnerability Management

Detection, prioritization and tracking of CVEs affecting our systems.

presentation scope

02

Obsolescence Management

Lifecycle management of components and end-of-support tracking.

03

Audit & Pentest Management

Penetration testing and audit campaigns.

04

Incident Management

Response to security incidents.

05

Change Management

Validation, tracking of security-impacting changes and secure updates.

From Scan to Report

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01

Scan Pipeline

Architecture Dossier · Network scanners · Host agents · Ansible playbooks · Cyberwatch matching

→

02

Analysis Pipeline

Enrichment · Scoring · Prioritization · Threat level · Report generation

→

03

Processing

Decisions · Tickets · Remediation · Follow-up

Report
(Presentation scope)

Decisions

—[CONTEXT]—

The problem isn't the vuln.

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50 000 CVEs — NVD 2025

50 000 CVEs → matched against inventory (SBOM · Cyberwatch)

~2 500 CVEs → actually affect our systems

—[CLASSIC WORKFLOW — PER CVE]—

├─ Analyst review	~2h
├─ Ticket, decision and severity assessed	~4h
├─ Patch / mitigation / quarantine planned	~2 days
├─ Management approval, scheduling	~1 week
└─ Ticket resolution	???

× 1 250 CVEs/year. Workflow clearly improvable.

How do we automate CVE prioritization?

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Plug & Play, Zero Friction

from raw CVE to actionable report — zero human in the critical loop

— SCAN PIPELINE —

A routine that already cuts 95% of the noise.
5% go through analysis

— ANALYSIS PIPELINE —

Zero human intervention in the loop
Fully autonomous pipeline ***(internal SaaS + CI/CD)***.

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Day 0 — The CVE is born

—— CVE-2025-53521 ——

CVSS Base	**9.8**
Vector	AV:N/AC:L/PR:N/UI:N/S:U/C:H/I:H/A:H
Product	F5 BIG-IP APM
CWE	CWE-121
Published	2025-10-14 — TODAY

—[WHAT WE KNOW]—

- ✓ A CVE number
- ✓ CVSS 9.8 — critical on paper
- ✓ Network, no auth, full impact
- ? Is there an exploit?
- ? Is it exploited IRL?
- ? Is our server reachable?

> 9.8 network, no auth: **panic**. But is it **really** urgent?

CVE-2025-53521
raw

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Enrichment — Who are you really?

1. CWE / CAPEC | 2. Exploits | 3. References

src/processing/enrichment.py ⏮ 4 / 4 ⏭

```python
def enrich_cve_row(row, exploits_data,
                   cwes_data, capec_data):
    cve_id = row["CVE Code"]
    # Step 1: CWE / CAPEC
    cwe_key = extract_cwe_id(row["CWE"])
    cwe_info = cwes_data.get(cwe_key, {})
    capec_ids = cwe_info.get("Related_Attack_Patterns", [])
    # Step 2: Exploits
    exploits = lookup_exploits_for_cve(cve_id, exploits_data)
    # Step 3: References
    cisa_hit = cve_id in cisa_cve_set
    certfr_refs = get_certfr_refs(cve_id)
    return pd.Series({
        "CWE Name":   cwe_info.get("Name"),
        "CAPEC IDs":  capec_ids,
        "Exploits":   exploits,
        "CISA_KEV":   cisa_hit,
        "CertFR":     certfr_refs,
    })
```

cve_id="CVE-2025-53521"

cwe_key="CWE-121"

cwe_info=
{Name: "Stack Buffer Overflow"}

capec_ids=["CAPEC-100"]

exploits=
[{id:"none", maturity:"functional"}]

cisa_hit=True

cisa_due="2026-04-17"

certfr_refs="ALE-2026-XXXX"

// OUTPUT

CWE-121 → Stack Buffer Overflow

ExploitDB #none — functional RCE

CISA KEV — active exploitation

CERT-FR ALE — active French alert

→ return pd.Series({5 keys})

CALL STACK enrich_cve_row() ← enrich_dataframes() ← ReportGenerator.compute()

CVE-2025-53521

enriched

Score Contextualisation

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V3 COMPUTED

Base (NVD)	9.8
Computed	5.9

AV:N/AC:L/PR:N/UI:N
/S:U/C:H/I:H/A:H
+ E:F/RL:O/RC:C
+ MAV:A/MAC:H/MPR:L
+ CR:M/IR:H/AR:H

—— CVSS V3.1 — base (NVD) ——

```
base = "AV:N/AC:L/PR:N/UI:N/S:U/C:H/I:H/A:H"
CVSS3(base).scores()[0]  # → 9.8
```

—— get_temporals_vectors() ——

```
temporal = join_vectors(base, "E:F/RL:O/RC:C")
CVSS3(temporal).scores()[1]  # → 9.1
```

—— get_surface_vectors() — env. mitigations ——

```
surface  = "/MAV:A"  # AV:N → A  (Adjacent behind a FW)
surface += "/MAC:H"  # AC:L → H  (segmented network)
surface += "/MPR:L"  # PR:N → L  (auth required)
```

—— domain_vectors — business weighting ——

```
domain = "/CR:M/IR:H/AR:H"  # perimeter requirements
full   = join_vectors(base, temporal, surface, domain)
CVSS3(full).scores()[-1]  # → 5.9
```

CVE-2025-53521
scored

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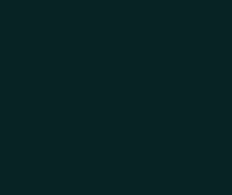
Context is King

—— LB-DMZ-01 ——



Base (NVD)	9.8
Computed	5.9

lb-dmz-01

Network	**DMZ — adjacent**
Max Attack Vector	Adjacent (MAV:A)
Min Privileges	Low (MPR:L)

—— LB-PROD-EXT-01 ——

Base (NVD)	9.8
Computed	9.8

lb-prod-ext-01

Network	WAN — Internet-exposed
Max Attack Vector	Network (AV:N)
Min Privileges	None (PR:N)

Same CVE-2025-53521 · Same BIG-IP APM · Same pipeline · **5.9** vs 9.8 · The network zone changes everything.

CVE-2025-53521
scored

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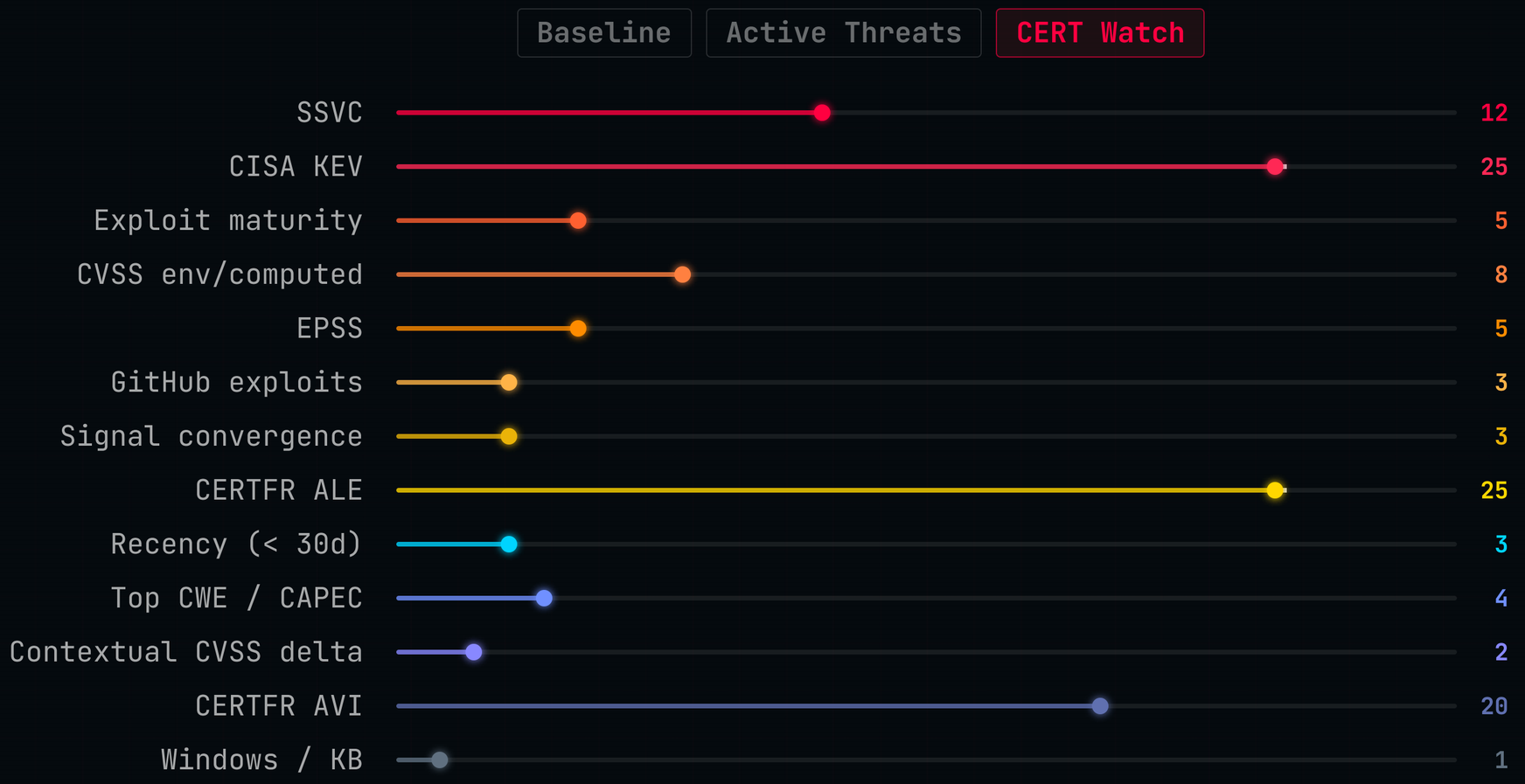
ThreatLevel — composite scoring

Adjust weights · add your sources · the score adapts to your context



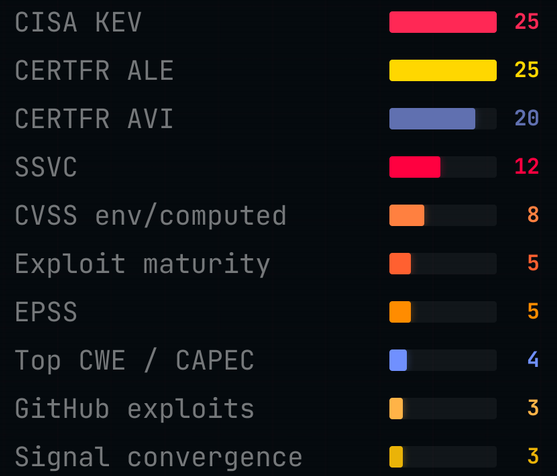
Theoretical max

116

pts

→ capped at 100 by min()

— TOP SIGNALS —



13 signals · 13 active

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The Reality Test

— CVE-2025-53521 (F5 BIG-IP APM) —

Base CVSS **9.8** CRITICAL — computed → 5.9

✓	SSVC	Active · Auto…	+25
✓	CISA KEV	2026-03-26	+18
✓	Exploit maturity	PoC (mat. 2)	+10
✓	CVSS env/computed	5.9 ↓ (surfac…	+5
✓	EPSS	19%	+2
✗	GitHub exploits	0 public PoC	—
✓	Convergence	2 strong sign…	+2
✗	CERTFR ALE	not published	—
✗	Recency (<30d)	>90d	—
✓	Top CWE / CAPEC	Capec-100	+4
✗	Delta CVSS	computed < ba…	—
✓	CERTFR AVI	2025-AVI-0886	+3
✗	Windows / KB		—

ThreatLevel **69** /100

— CVE-2025-58034 (FORTINET) —

Base CVSS **7.2** HIGH — computed → 7.7 ↑

✓	SSVC	Active · No a…	+20
✓	CISA KEV	2025-11-17	+18
✓	Exploit maturity	Weaponized (m…	+15
✓	CVSS env/computed	7.7 ↑ (env am…	+7
✓	EPSS	51%	+2
✓	GitHub exploits	4 PoCs	+2
✓	Convergence	4 strong sign…	+5
✗	CERTFR ALE	not published	—
✗	Recency (<30d)	>90d	—
✓	Top CWE / CAPEC	CWE-78 (cmd i…	+4
✓	Delta CVSS	+0.5 env > ba…	+1
✓	CERTFR AVI	2025-AVI-1023	+3
✗	Windows / KB		—

ThreatLevel **77** /100

Base CVSS **9.8** vs **7.2** · ThreatLevel **65** vs **73** → **Priority inversion**

—[CONFIGURATION]—

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Customisation

Same CVE. Four teams. Four decisions.

PROD Critical Production

Critical assets in production — zero tolerance

CISA KEV · SSVC · Exploit mat. · CVSS env

ThreatLevel P1 87

DEV Active Development

No env context yet — reduced signals

CVSS base · EPSS · CISA KEV

ThreatLevel P4 52

CI/CD Release Candidate

Pre-release — exploit maturity is critical

Exploit mat. · SSVC · Delta CVSS · GitHub

ThreatLevel P2 71

SOC SOC / Threat Intel

Watch mode — real-time signals

EPSS · Recency · Convergence · CERTFR ALE

ThreatLevel P2 64

CVE-2025-53521
contextualizing

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Pipeline output

——[CVE REPORT — DETAILED ANALYSIS]——

ASSET	CVE	PRODUCT	BASE	COMP.	EPSS	EXPLOIT	PATCH	PRIORITY
fw-core-01	**CVE-2025-58034**	FortiOS	7.2	7.7↑	51%	Weaponized	*in progress…*	[P1 — CRITICAL]
lb-prod-ext	**CVE-2025-53521**	F5 BIG-IP APM	9.3	9.3	19%	CISA KEV	v17.1.2.1	[P1 — CRITICAL]
lb-dmz-01	**CVE-2025-53521**	F5 BIG-IP APM	9.3	5.9↓	19%	CISA KEV	v17.1.2.1	[P2 — CRITICAL]
lb-prod-ext	**CVE-2026-31431**	Linux Kernel	8.1	7.8	34%	PoC	6.12.31	[P2 — CRITICAL]
lb-dmz-01	CVE-2026-31431	Linux Kernel	8.1	5.2↓	34%	PoC	6.12.31	[P3 — HIGH]
wks-linux-12	CVE-2026-31431	Linux Kernel	8.1	3.9↓	34%	PoC	6.12.31	[P4 — HIGH]
app-srv-03	CVE-2021-44228	Apache Log4j	10.0	7.4	2%	#46805	v2.17.2	[P3 — HIGH]
wks-lan	CVE-2025-99999	Chrome Browser	7.2	7.2	31%	N/A	*pending*	[P7 — MEDIUM]

Sorted by **ThreatLevel**, not CVSS — FortiOS 7.2 above BIG-IP 9.3. Zone and exploit maturity make the difference.

CVE-2025-53521
prioritized

The core of prioritization

—— SOVEREIGNTY · FULL AUTOMATION ——

- European Cyberwatch + internal scripts.
- **Internal SaaS + CI/CD** — zero human intervention in the loop.
- One-click report — accessible to every team, zero friction.
- Autonomous, reproducible, scalable pipeline.
- **6 months ahead** of SSVC at time of implementation.

SOVEREIGNTY
INTEGRATION
ACCESSIBILITY
AUTONOMY

ENRICHISSEMENT

CISA · CERT-FR · EPSS · ExploitDB · MITRE

Cross-referencing, not cherry-picking.

CONTEXTUALISATION

A 9.8 can become 5.9. A 5.9 can be P1.

Raw CVSS means nothing without context.

LEVELING

Active threats always go first.

No drowning in weak signals.

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Report generated

```
$ ./pipeline.py --status CVE-2025-53521
→ [P1] Immediate action. Isolation recommended.
```

Thanks for listening

Jérémy RICHARD & Paul VARGAS & Bertrand LECONTE & Eric CAUSSIN