

ASPHODEL + TIRESIAS-ZT • DATA ANALYST

The governed data-analyst agent

Triage and synthesis that runs at zero marginal cost on its free_large home, degrades cleanly to a self-hosted ollama_oss floor, and signs every token into a durable audit chain.

● Asphodel + Tiresias-ZT • ACME Corporation

THE ROLE

Synthesis is where cost and trust collide

The data-analyst is a high-frequency middle node: it takes the research-lead's hand-off, condenses it, and feeds the content-editor. Exactly the unglamorous, high-volume work that must run for free — yet can never be allowed to hallucinate, leak across tenants, or drift unwatched.

THE PRESSURE

Every synthesis job is another LLM call. At fleet scale, routing this workload to a paid frontier model is the difference between cents and five-figure monthly spend.

THE NON-NEGOTIABLE

Cheap cannot mean ungoverned. The same call must pass deny-by-default policy, land in an RLS-isolated tenant, and be signed into the audit chain — free or not.

THE WORKFORCE

367 agents under one zero-trust policy

The data-analyst is one tenant in a live fleet mapped like-for-like to the real Acme org — every call enrolled, policy-gated, and audited.

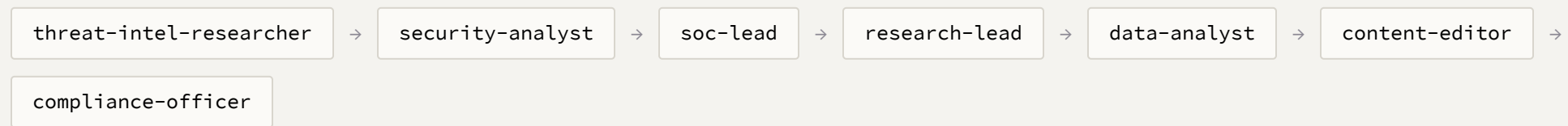
367 GOVERNED AGENTS	360 FLEET AGENTS	325,154 DIRECTORY PRINCIPALS	28 DEPARTMENTS • 10 REGIONS
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Source: CP registry (367 agent tenants, postgres) • Samba-AD directory sync — 120,120 humans + 205,034 NHI identities across 626 roles.

POSITION

One node in a 14-edge hand-off DAG

Among the 7 showcase agents, the data-analyst runs on a fixed schedule and sits mid-chain — downstream of intelligence gathering, upstream of publishing and compliance.



Source: `personas.json` • `container acme-runner-sched • runner.py schedule --interval 3600 (hourly).`

ROUTING

Free by default, degrade by design

The tier ladder is the mechanism that makes this role cheap and reliable at once. Home is free; the floor is self-hosted; keywords are the only thing that buys a costlier tier.

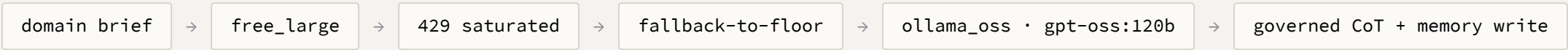
HOME	free_large Default tier for routine triage and synthesis — an OpenRouter free model, \$0/call.	\$0.00
FLOOR	ollama_oss Reliable degrade target on failure — self-hosted gpt-oss:120b via Ollama Cloud.	\$0.0015
FALLBACK	Fallback-to-floor on LLMError Any home-tier failure (e.g. free-tier 429) drops the job to the ollama_oss floor — not to nothing.	auto
ESCALATE	Keyword escalation +incident / +breach / +critical push the job up toward the ceiling tier.	on-match

Source: `personas.json` tiering — `free-homed floor = ollama_oss` for reliable degrade; routing favors `free/Ollama`.

LIVE PROOF

One job, watched degrade cleanly

A real synthesis job: the free_large home returns a 429 under free-tier saturation, the runner catches the LLMError, and the job completes on the ollama_oss floor — still fully governed.



429 HOME-TIER RESPONSE	\$0.0015 DEGRADED CALL COST	1 RLS-ISOLATED WRITE	100% AUDIT-CHAIN COVERAGE
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Source: tzt_usage → acme-roi-economics board. hermes-405b:free chronic 429 → deterministic degrade to gpt-oss:120b at \$0.0015/call.

ENFORCEMENT

Deny-by-default, then forwarded verbatim

Whichever tier answers, the call takes exactly one path. The PEP validates, evaluates policy, and only on allow forwards the request unchanged to this agent's own soul-svc tenant.



VERIFY	X-Tiresias-API-Key + X-Capability-Token Tenant api-key plus a per-agent HS256 token minted from a 64-hex capability secret.	deny-by-default
ISOLATE	Per-agent soul-svc tenant FORCE RLS on _memories / _soul_api_keys; cross-tenant reads require SET ROLE service_role.	RLS forced
SIGN	SoulKey Ed25519 audit chain Every allowed call signed and shipped to CP; durable WAL at /data/audit-wal.	→ CP

Source: governed request flow – PEP (TZT_ROLE=proxy, site acme-site) → acme-soul-svc → acme_soul (RLS forced).

THE JOB

Four steps, every hour, all recorded

A data-analyst run is deterministic and self-documenting — it leaves behind reasoning, a memory, and a usage record the ROI board reads.

01	Domain brief The scheduler feeds the agent its synthesis brief on the hourly interval.	runner.py
02	Tiered LLM call Routes to free_large home; degrades to ollama_oss on error; escalates on keyword match.	9 tiers
03	Governed CoT + memory write Chain-of-thought captured and a memory written into the RLS-isolated tenant; ContentInspection requires source_type + authored_by.	/v1/memory/write
04	Usage report Tokens and cost posted to /cp/usage/report → tzt_usage → Grafana.	/cp/usage/report

Source: fleet/showcase job lifecycle — domain brief → tiered LLM → governed CoT + memory write → usage report.

GOVERNANCE

Signed, isolated, and watched

Three independent controls wrap every call this agent makes — none of them optional, none of them bypassable by choosing a cheaper tier.

SIGNED AUDIT

SoulKey Ed25519 chain per call, durable WAL at /data/audit-wal, shipped to the control plane. RFC5424 syslog → Promtail:1514 → Loki for SIEM.

TENANT ISOLATION

The agent's writes land only in its own acme_soul tenant. FORCE RLS on Cloud SQL means even postgres is subject to row-level policy.

SoulWatch turns behavioral drift into auto-quarantine — a misbehaving analyst is contained without a human in the loop.

Source: PEP audit chain + SoulWatch (shared postgres quarantine store) • analyst console at pdp.tiresias.watch/admin.

The self-host-versus-API answer

The ROI board makes the case in one column. The data-analyst's home and floor sit at the bottom of it — the tiers it actually uses cost cents-of-cents while frontier tiers are reserved for escalation.

MODEL / TIER	OBSERVED \$/CALL	RELATIVE
opus-4.8 (paid ceiling)	\$0.19	
sonnet-4.5 (paid)	\$0.03	
deepseek-v4-pro (ollama_deep)	\$0.002	
gpt-oss:120b (ollama_oss · this floor)	\$0.0015	
Llama-3.3-70B (HF)	\$0.0012	
gemma-4-31b:free (free_large · this home)	\$0.00	

Source: Grafana ROI dashboard uid acme-roi-economics · per-model \$/1M-token economics on tzt_usage.

RELIABILITY

Why the floor is self-hosted

Free is the right home, but free saturates. The chronic 429 on free-tier models is precisely why the floor is an owned, self-hosted tier rather than another rate-limited freebie.

\$0 FREE_LARGE HOME COST	429 CHRONIC SATURATION SIGNAL	\$0.0015 OWNED FLOOR • GPT-OSS:120B	127× CHEAPER THAN OPUS CEILING
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A \$0 home with a \$0.0015 self-hosted floor keeps this agent running when the free tier can't — at a fraction of a cent per job.

Source: acme-roi-economics — hermes-405b:free chronic 429 → the self-host case; gpt-oss:120b \$0.0015 vs opus \$0.19/call.

THE CLOSE

Cheap, reliable, and provably governed

The data-analyst agent shows the whole thesis in one workload: routine synthesis runs free, degrades to a self-hosted floor under load, and every call is policy-gated, RLS-isolated, and signed — no exception for being cheap.

HOME	free_large — \$0/call routine triage & synthesis	\$0.00
FLOOR	ollama_oss (gpt-oss:120b) — deterministic degrade	\$0.0015
TRUST	deny-by-default · RLS forced · Ed25519 audit chain	signed
SCALE	1 of 367 governed agents on the live ACME instance	367