

AI-assisted inventory analysis for reconciliation, topology correlation, and change impact insight

Designed for: CSP Inventory/Ops • OSS OEMs • Transformation Programs

WHY INVENTORY BREAKS IN MULTI-VENDOR TELECOM NETWORKS

- Fragmented sources (active/passive/service) create inconsistent truth
- Reconciliation debt reduces inventory trust and automation readiness
- Missing topology context slows RCA and impact analysis
- Change risk is unknown until after incidents
- Integration sprawl leads to fragile pipelines and drift

WHAT THE AGENT DELIVERS

- ✓ **Entity resolution & normalization** → consistent identifiers + relationships
- ✓ **Topology correlation (physical/logical)** → reconciled topology view
- ✓ **Data gap identification** → gap reports + exception queue
- ✓ **Change impact/risk insight** → impacted services/sites + risk score
- ✓ **Natural language query (governed)** → evidence-linked answers + confidence

INPUTS

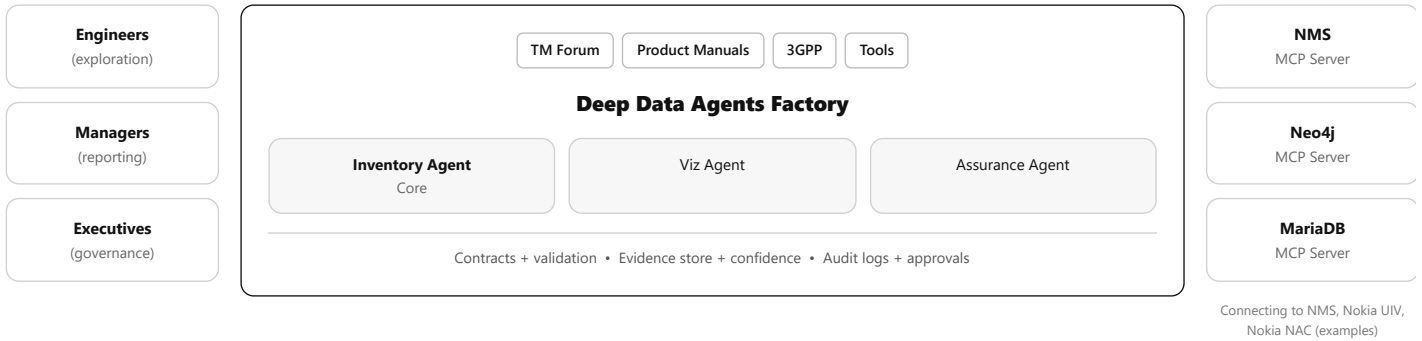
- Inventory databases
- NMS/EMS topology data
- Device configurations
- Alarm/event streams
- Service models/orders

OUTPUTS

- Reconciled topology view
- Data gap reports
- Impact analysis
- NL query answers
- Risk assessments

Outputs are API/event/export ready for downstream OSS consumption.

AZALIO INVENTORY AGENT ARCHITECTURE



GOVERNANCE & TRACEABILITY

- Human-in-the-loop approvals for corrections
- Audit trail for answers and changes
- Evidence-linked responses + confidence indicator
- Role-based access control (RBAC) boundaries

Topology-aware impact analysis

Input: → Change request

Output: → Impacted services

DEPLOYMENT OPTIONS

- Runs on Kubernetes/OpenShift (containerized)
- On-prem / private cloud / VPC patterns
- Integrates via API gateway + OIDC/OAuth2

Observability: Traces/logs/metrics (OpenTelemetry pattern)

Reconciliation automation + gap remediation workflow

Input: → Disparate DBs

Output: → Gap report & sync

Ops query: NL answers with evidence for faster triage

Input: → "What affected site X?"

Output: → Root cause + evidence



Reduce manual reconciliation effort

Improve inventory trust score

Faster impact analysis

Lower time-to-answer for ops queries

Metrics vary by ecosystem; baselined during pilot.

Ready to modernize your inventory?

Accelerate transformation with verifiable topology intelligence.

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[Talk to an OSS Architect](#)

[See Integration Interfaces](#)

Example systems shown for illustration; interfaces adapt to customer ecosystem.

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