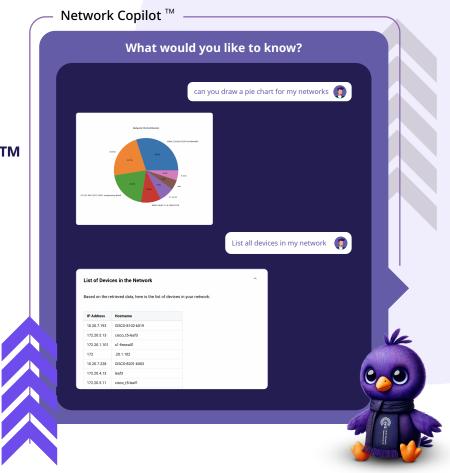




Bring AI Assistance to Your Network Infrastructure



The Future of Network Deployments

As AI frameworks powered by Large Language Models (LLMs) redefine how humans interact with data-driven applications, networking is undergoing its own evolution. Modern data centers—across edge, cloud, and enterprise—generate massive volumes of operational and application data. Aviz is pioneering the next leap in networking by using LLMs to transform this raw data into real-time, business-aligned insights. With Network Copilot, we enable AI-assisted deployments, observability, and operations—accelerating decision-making and turning complex infrastructure into an intelligent, adaptive system.

What is Aviz Network Copilot?

Aviz's Network Copilot is a next-gen Agentic AI platform that bridges your existing network automation with advanced LLM capabilities and rich network data sources. Built as a private AI solution, it can be deployed on-prem or in air-gapped environments using NVIDIA's GPU and NIM stack. Its open architecture ensures rapid integration with the latest LLMs, while its vendor-agnostic, data-centric foundation allows seamless operation across diverse network environments.





Benefits



Private AI

Deploy Network Copilot™ as a secure, on-prem, ensuring complete control over data, privacy, and compliance.



Unified Interface

Eliminate the chaos of inconsistent schemas, APIs, and UIs. Network Copilot provides a single, natural language interface that sits on top of your existing tool stack, so users don't need to learn new systems to get powerful insights.



Cross-tool Correlation

Network Copilot breaks silos. It pulls in data from disparate sources, correlates it intelligently, and delivers unified, context-rich answers without manual stitching.



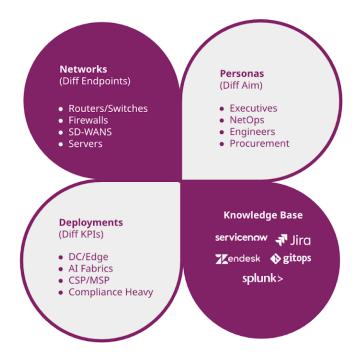
Adaptive Workflows

With Network Copilot, workflows aren't static. Users can adjust queries based on previous answers, making the automation process responsive, intelligent, and aligned with how humans think, not just how systems operate.



How does Network Copilot Work?

- → Common natural language prompt interface accessing network data, company automation support tool stack, and other knowledge bases
- → User driven, dynamic interaction (vs vendor defined UIs/ dashboards)
- → Ability to implement use cases for different personas



This visual illustrates how Aviz's Network Copilot delivers AI assistance across diverse network environments. At its core is a natural language interface that connects with your network data, automation tools, and enterprise knowledge bases—like ServiceNow, Jira, and GitOps platforms. Unlike static, vendor-defined dashboards, Copilot enables user-driven, dynamic interactions tailored to different roles—Executives, NetOps, Engineers, and Procurement. It adapts to various network endpoints (routers, switches, firewalls), supports deployment types from data center to AI fabrics, and enables flexible, use-case-driven insights across both technical and business domains.

Use Cases

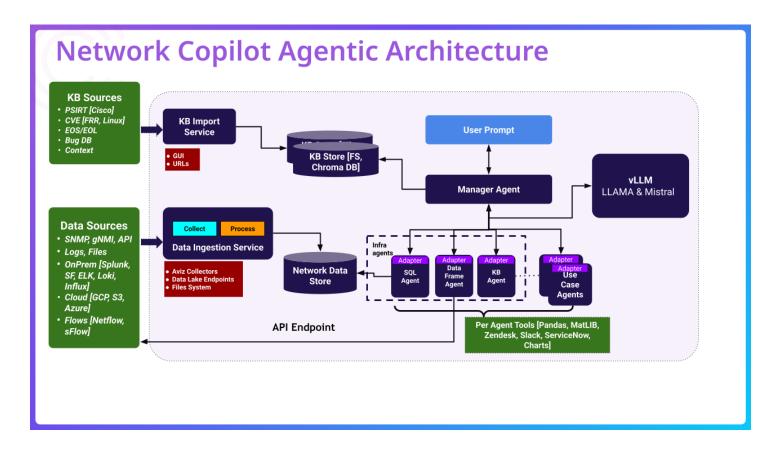
Supports SONiC, NVIDIA Cumulus, Arista EoS, Cisco NX-OS/ IOS devices

Use Case	What Network Copilot Solves
Inventory Insights	Instantly access data on devices, OS versions, HWSKUs, ASICs, MACs, and transceivers across your network infrastructure.
Basic NetOps	Automate day-to-day tasks like interface queries, MTU checks, port usage, and performance summaries using simple prompts
Support Knowledge Base	Get real-time visibility into bugs, CVEs, end-of-life details, and platform advisories to proactively mitigate risk.



Security Audits	Generate on-demand audit and security compliance reports—covering SSH, ACLs, TACACS+, CoPP, and more. Works seamlessly across multi-vendor environments.
Network Upgrade Compliance	Track and validate OS/firmware upgrades, config changes, and switch RMAs using real-time operational data. Automate pre- and post-upgrade checks across multi-vendor environments.
Real-time Insights & Flow Analytics	Generate real-time dashboards and historical flow analytics—track top talkers, peak traffic hours, and protocol-level trends without templates.

Architecture



This diagram outlines the agentic architecture behind Aviz's Network Copilot, showcasing how it transforms raw network and knowledge data into intelligent, actionable responses via LLMs.



Key Components:

- **Data Sources:** Collects information from various network inputs like SNMP, gNMI, logs, files, and flows (NetFlow, sFlow), across on-prem and cloud environments.
- **Knowledge Base (KB) Sources:** Includes structured data like PSIRTs, CVEs, EOL info, and contextual knowledge from bug databases and support systems.
- Data Ingestion Services: Gathers and processes both network and knowledge base data into structured stores.
- Manager Agent: Acts as the central brain, handling user prompts and orchestrating responses via connected agents.
- Agents & Adapters:
 - SQL Agent, Data Frame Agent, KB Agent: Specialized infrastructure agents that guery and structure data.
 - Use Case Agents: Tailored to handle specific tasks, like compliance checks or performance summaries.
- LLM Integration: Uses models like LLAMA and Mistral via vLLM for natural language generation and summarization.
- **Tool Integration:** Final outputs can connect with tools like Slack, Zendesk, ServiceNow, and are enriched with charts or data visualizations.

Capabilities

Network Copilot™ Capabilities

Data Pipeline

- Sources: SNMP, Flow, gNMI, Splunk, SYSLOG, API, AWS S3, SnowFlake, Nexus Dashboard, Influx, Loki, Azure Blob, GCP, Netbox, DL, Flow Records, NetOps Metrics
- > **Process**: Calculations (avg, min, max), normalization
- > Storage: Point-in-time & Time-series Historical Upgrade Logs, Traffic Patterns
- > **Security**: OnPrem Only with no access to internet

Knowledge Base

- > Context: Customer (Files, URLs, Real-time Bug IDs, EOS/EOL, CVEs, PSIRTs), Security Advisories, Lifecycle Data
- > **RAG**: Langchain, Chroma DB
- > Import: PDF, CSV, Text, Customer Tools



Chat Prompt

- Response: Streaming, Timestamp, Replay, Export, Up/Down, Follow up Prompts
- Analytics: Generate Table, Graphs, Charts, Inventory Reports, Upgrade Compliance Views, Traffic patterns
- > Feedback: Acknowledge "Good" vs "Bad"

Framework

- Fine Tuning: PEFT/LoRA Adaptors, Chain-Of-Thoughts (COT), Few Shot, ReAct Prompting
- Integration: Customer Tools (Zendesk, ServiceNow, Slack)
- Aviz Agents: RAG, Data and Report & Use case agents, Use Case Driven, NetOps Automation, Inventory Lookup, Support Intelligence



Deployment Options

Deployment	Specification
On-Prem	Software: Ubuntu 22.04, Docker, NVIDIA CUDA 12 & Toolkit CPU: Intel CPU 64 Cores, RAM 256 GB, DISK 20TB GPU: Min Recommended 24GB RAM, Supported Models RTX 3090 24 GB, RTX 4090 24 GB, A4000 16 GB, A5000 24 GB, A6000 48 GB, V100 16 GB
Cloud	Software: Ubuntu 22.04, Docker, NVIDIA CUDA 12 & Toolkit CPU: Intel CPU 64 Cores, RAM 256 GB, DISK 20TB Instances GPU for Inference: Nvidia T4 GPU 16 GB, A10 GPU 24 GB

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today and discover how our innovative solutions can drive your business forward.