itecnet AI Fabric Whitepaper 2024

Overview: AI-native network OS combining large models, graph reasoning, and real-time streams.
Goal: self-learning fabric where every link senses, decides, and optimizes for performance, cost, and e

Pillars

â¢ Observability: full-stack topology/traffic/risk in one semantic layer.
â¢ CoPilot: detect â diagnose â fix â validate self-healing loop.
â¢ AI Router: intent-based policies auto-translated to actions.
â¢ Data Mesh: live edge-to-core knowledge graph.

Impact Metrics

â¢ Latency: 62% lower (ms-level inference).
â¢ Coverage: 120+ cities across multi-cloud/edge.
â¢ Energy: 18% reduction via predictive scheduling.

Capability Matrix

â¢ Cognitive sensing: time-series + topology graph for microsecond anomalies.
â¢ Intelligent orchestration: LLM policy engine with canary/rollback/self-check.
â¢ Predictive scheduling: forecast trends; balance cost/performance/energy.
â¢ Zero-trust security: identity, anomaly profiling, forensics.
â¢ Edge collaboration: distributed inference for latency-sensitive scenarios.
â¢ Open interfaces: standardized APIs/SDKs, third-party models plug-in.

Use Cases

â¢ Smart campus: unified AI Fabric for buildings/security/energy/IoT; auto patrols; situational linkage.
  Deployment: ~4 weeks; event response â seconds with closed-loop automation.
â¢ Cloud-network synergy: intent routing across multi-cloud and DCs; AI decides traffic/cost/isolation.
  Outcomes: 15â 28% cost reduction; SLA 99.99% with self-healing.

Security & Compliance

â¢ Encryption: links, data, and model calls end-to-end with MFA on sensitive ops.
â¢ Policy sandbox: digital twin simulation before rollout to avoid downtime.
â¢ Audit trail: replayable policies/decisions/execution for finance & public sector.

Engagement Process

â¢ 01 Co-create scenarios: map intent, architecture, data; set success metrics.
â¢ 02 Rapid PoC: isolated validation with observability and ROI modeling.
â¢ 03 Production rollout: automated deploy with progressive policy release.
â¢ 04 Continuous evolution: ongoing learning, model updates, strategy co-creation.

Contact: business@itecnet.com | Book a demo via site CTA.