10:05–10:30 | Enterprise Leadership Council Lightning Keynotes

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Conscious Networks that Prevent Guilt and Heal Fast With AI-Driven Network Operations (AIOps)

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Outline

- Traditional vs AI driven operations
- AI capabilities for operations
- Key use cases
- AIOps functional building blocks
- Industry needs and Mplify

Complex Operational Environments – Posing Operational Challenges

- Highly distributed applications
- Diverse applications and systems
- Diverse network and network security solutions

When a problem happens

Multiple operation groups debugging problems and sharing information in virtual room

Traditional vs AI Driven Operations

Traditional Operations – human intensive	AIOps - AI Driven Operations
Alarm Overload	Alarm reduction – correlation and consolidation
Static thresholds on metrics	Contextual dynamic thresholds
Dashboards (e.g., graphs, logs) searched and examined by humans	Pull in and zoom into relevant data aligned with events in time and space
Information/Data ontology and topology – for human correlation	Ontology and topology used for automated correlation
Reactive	Predictive and reactive
Syntax driven interaction – system specific	Semantic interaction
Reasoning and correlation by humans	Reasoning & correlation done by systems
Remediation – human driven	Automation - human supervised or autonomous, generative or retrieved

Data quality is fundamental to either, and it is Operations' responsibility

AIOps- ML and LLM Capabilities for Operations

Relegating to machines and algorithms what they can do best

- Telemetry processing at scale
- Seasonal anomaly detection
- Ontology, topology, time and space-based correlation
- Codified human knowledge
- Information generation and retrieval
- Semantically driven human interactions

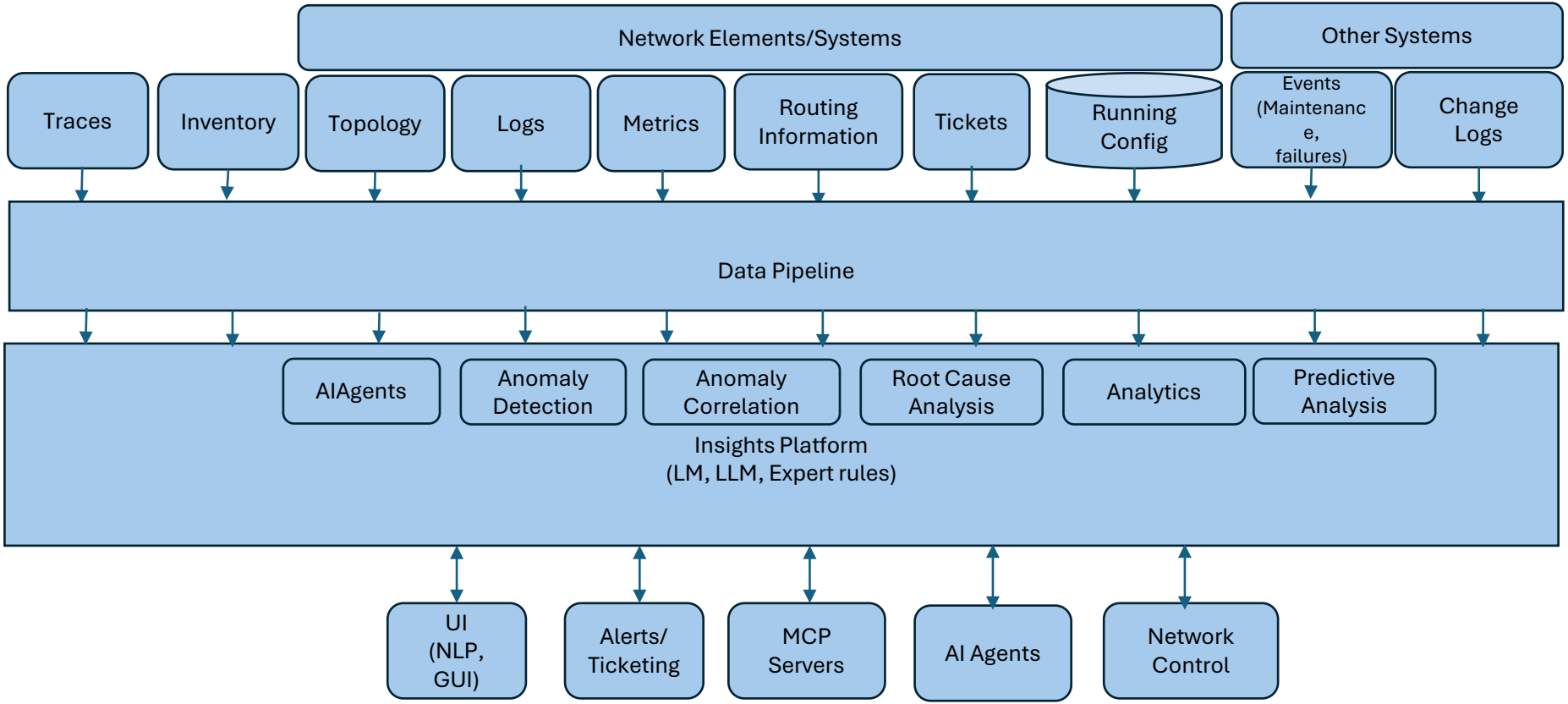
- **Contributing to Mean Time to Remediation (MTTR) reduction**
- **Augmenting human expertise**
- **Alleviating human intensive and mundane tasks**
- **Autonomously driving, when allowed**

ML: Machine Learning
LLM: Large Language Models

AIOps – Some Key Use Cases

- Reduction of Mean Time To Insights (MTTI) and Remediation (MTTR) - Anomaly detection, correlation, causality analysis and remediation
- Data and knowledge systemization, retrieval, and analysis (tickets, runbooks, tribal knowledge)
- Improved productivity & onboarding of systems and people – NLP based human-system interaction
- Contextual information retrieval and generation

AIOps Building Blocks



Industry State and Challenges

	Network Equipment Providers	AIOps Solution/Platform Providers	Enterprise Challenges
Use cases	Vendor specific	- Pre-existing - Custom - Multi-vendor/systems	- Awareness - Definition - Multi-vendor/system
Meta Data	Proprietary	Onboarding customer data and telemetry enrichment	- Data quality and consistency - Onboarding
Telemetry	Vendor specific	- pre-existing - Onboarding customer telemetry	- Coverage - Awareness - Data quality - Onboarding
Enterprise systems	Selective integration with commercial solutions	- Selective integration with commercial solutions - Custom	- Onboarding
Adoption	Increasing	Somewhat limited in network space	- Awareness/Education - Strategy - Execution

AIOps - Typical Phases

- Phase 1: Proof of Value (POV) - build the business case
- Phase 2: Use cases in Operations, augmented intelligence to operations
- Phase 3: Supervised remediation automation
- Phase 4: Selective and increasing remediation autonomy

What Does the Industry Need to Accelerate AIOps Adoption in Enterprises?

Where Mplify could potentially contribute to advancing AIOps

- Definition of use cases and associated values
- Easing enterprise data onboarding and integration in solutions/platforms
  - Identification of metrics, logs and associated use cases
  - Standardized meta data definition
  - Standardized interfaces between data pipeline/data sources and Insights platforms
  - Standardized topology representation
  - Standardized ontology, ticket and runbook structure - knowledge base
- Network-focused (expert) language models
- Motivate NLP use for managing network elements and systems
- Model Context Protocol (MCP) servers and AI agent catalogue

The Enterprise Leadership Council is working on a document describing the needs and requirements across the ecosystem (network equipment providers, service providers, AIOps solution providers, AIOps platform providers)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