AIOps and Automatic Remediation

Next-Generation Incident Management

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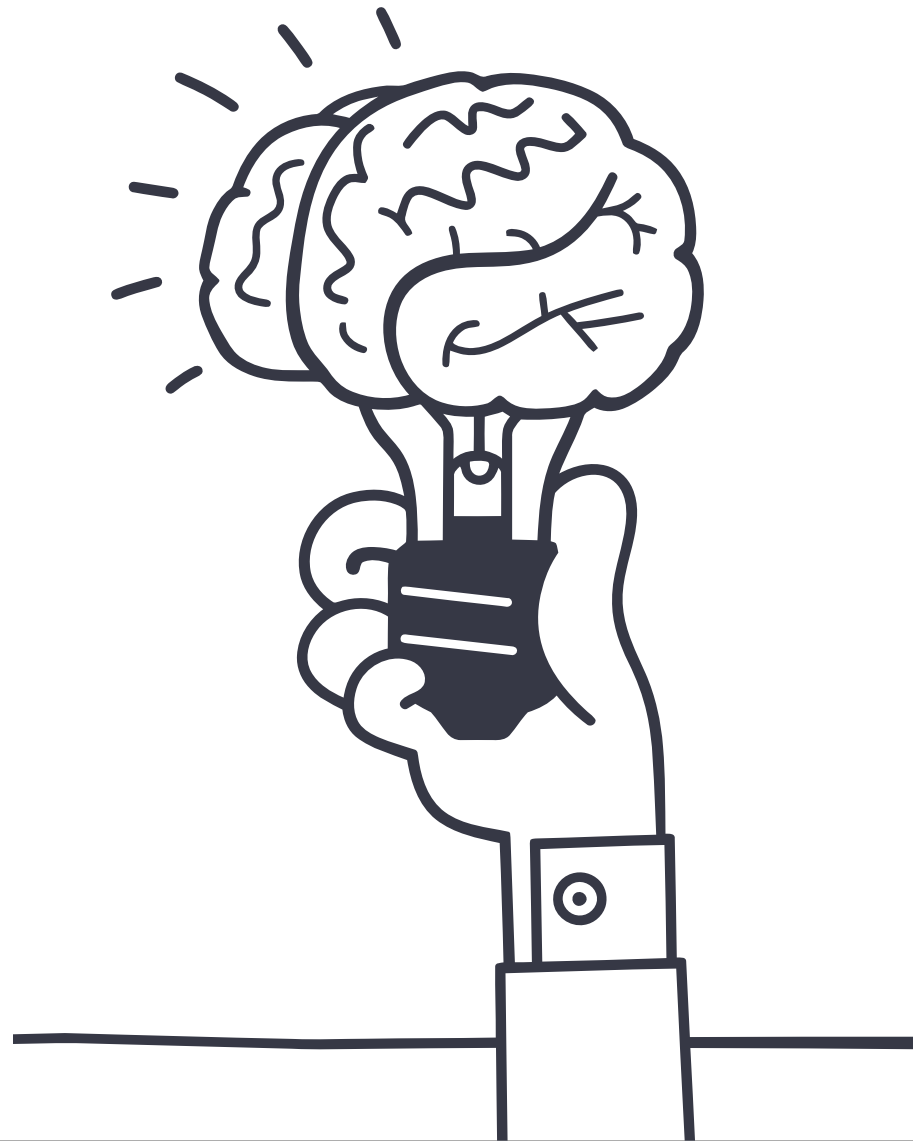
What is AIOps?

> **“AIOps is the practice of leveraging Artificial Intelligence in IT operations.”**
>
> **(Artificial Intelligence in IT Operations)**

- The term "AIOps" was coined by Gartner in 2016.
- **AIOps** is an evolution of earlier **ITOA** functions (**IT Operations Analytics**).
- AIOps distinguishes itself from earlier approaches by utilizing **Machine Learning** (ML) and **Big Data**.



Why is this topic important?

IT complexity is growing

Microservices, cloud services, hybrid architectures

More data than ever before

Monitoring systems generate large amounts of data

Accessibility of Machine Learning

ML and AI have evolved into ubiquitous standard technologies

User expectations

24/7 availability, fast response times

The cost of outages can be millions of euros per hour

AIOps: Key Benefits

Faster Resolution

Shortens the Mean Time To Resolution (MTTR) of incidents, minimizing the impact of outages.

Fewer Recurring Problems

Identifies root causes and prevents problems from reoccurring.

Improved Collaboration

Enhances communication and understanding between IT and business.

Proactive Incident Management

Enables problems to be identified and rectified before they escalate.

AIOps Journey: From History to Present

1. **2000s**

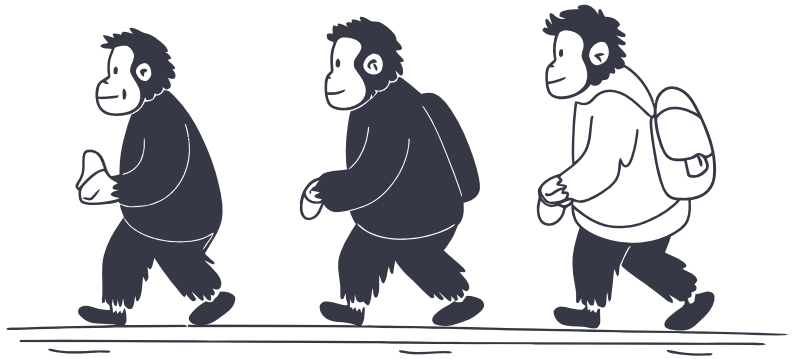
   Manual Monitoring and Alerts

2. **2010s**

   Rule-Based Automation

3. **2015–2020**

   Observability: Metrics, Logs, Traces, Events



AIOps Today and Tomorrow

ML and Anomaly Detection

Identifying anomalies from data mass

Predictive Analytics

Anticipating problems

LLM + Agents

Automated correction and decision-making

LLMs: The New Interface to Information

01

Prompt

Natural language

02

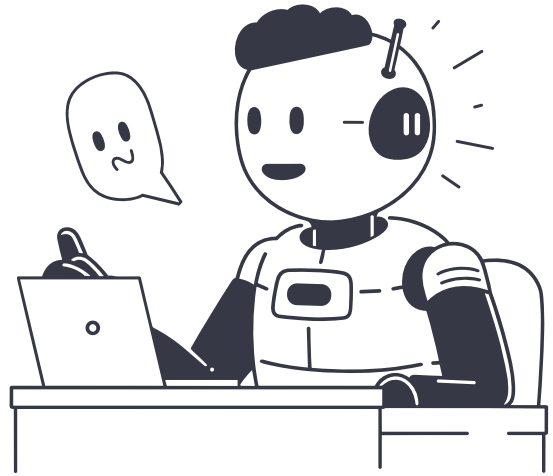
Analysis

Context building

03

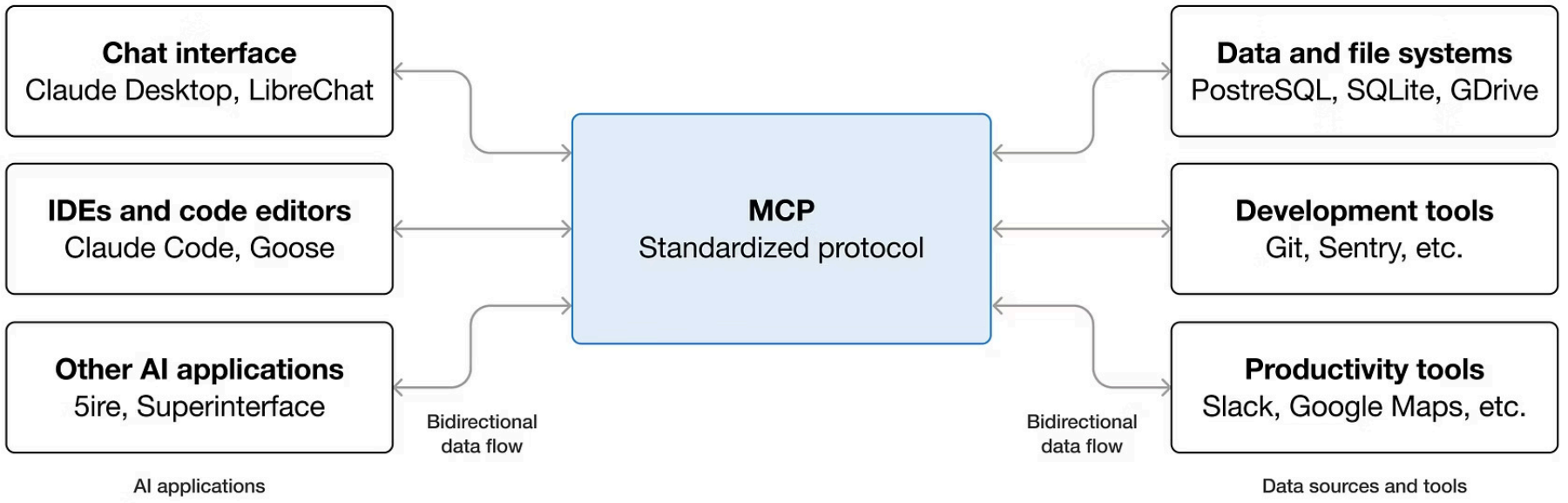
Response

Action proposals



Use cases: incident classification, root cause analysis, "ask anything" about the IT environment

MCP: Model Context Protocol



An open standard connects LLM and data sources in real-time. https://modelcontextprotocol.io/

MCP in Practice

Observability MCP

Logs, metrics, traces, events, and security data combined

API Integrations

Direct connection to various tools and systems

Natural Language Queries

"Why is the application slow?" → comprehensive analysis

Demo: Claude + Dynatrace MCP + Jira MCP + Slack MCP + Gamma MCP

1

Question

"Why is the web service slow?"

2

MCP provides data

Logs, metrics, traces automatically

3

Claude analyzes

Correlations and root causes

4

Proposed Solution

Concrete actions

Speed and coverage exceed manual analysis

Challenges

- Don't trust AI
- Cybersecurity is challenging with AI
- Bad processes are just as bad when automated

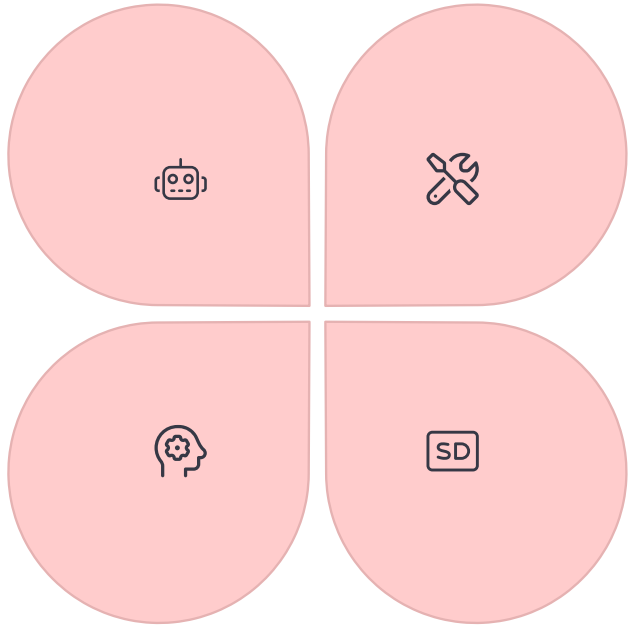
Future Outlook

Agentic AI

Hyperautomation

Human-Machine Collaboration

Deeper Integration



Self-healing

Self-healing Systems

Standards

MCP and Open Protocols

Key Insights

1 **Autonomous Systems**

AIOps evolves towards fully automated incident management

2 **New Level of Understanding**

LLM + MCP enables deeper understanding of the IT environment

3 **Speed is Key**

Automated remediation significantly reduces MTTD/MTTR

= AgentOps

Next Steps

Assess Current Maturity Level

Where is your organization on its AIOps journey?

Pilot MCP Integrations

Start small, learn fast

Build Automation Incrementally

Humans involved throughout the journey

Measure and Optimize

MTTD, MTTR, user satisfaction

Questions?

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Thank you for listening!