A Brief History of AIOps

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In the beginning, there was monitoring …

…and it was good (enough)

IT Ops always included monitoring

It was 24x7, but ‘Batch’ vs ‘Online’

Monitoring data wasn’t all that different

Messages, metrics, traces, and logs

‘Engineers’ carried screwdrivers

Resources were scarce, static, costly

No DevOps – we all sat together!

Distributed systems added complexity

The first ‘shadow IT’ brought new IT Operations paradigms, controls, frameworks

All in silos, no T-shaped people

‘IT Operations Management’ (ITOM)

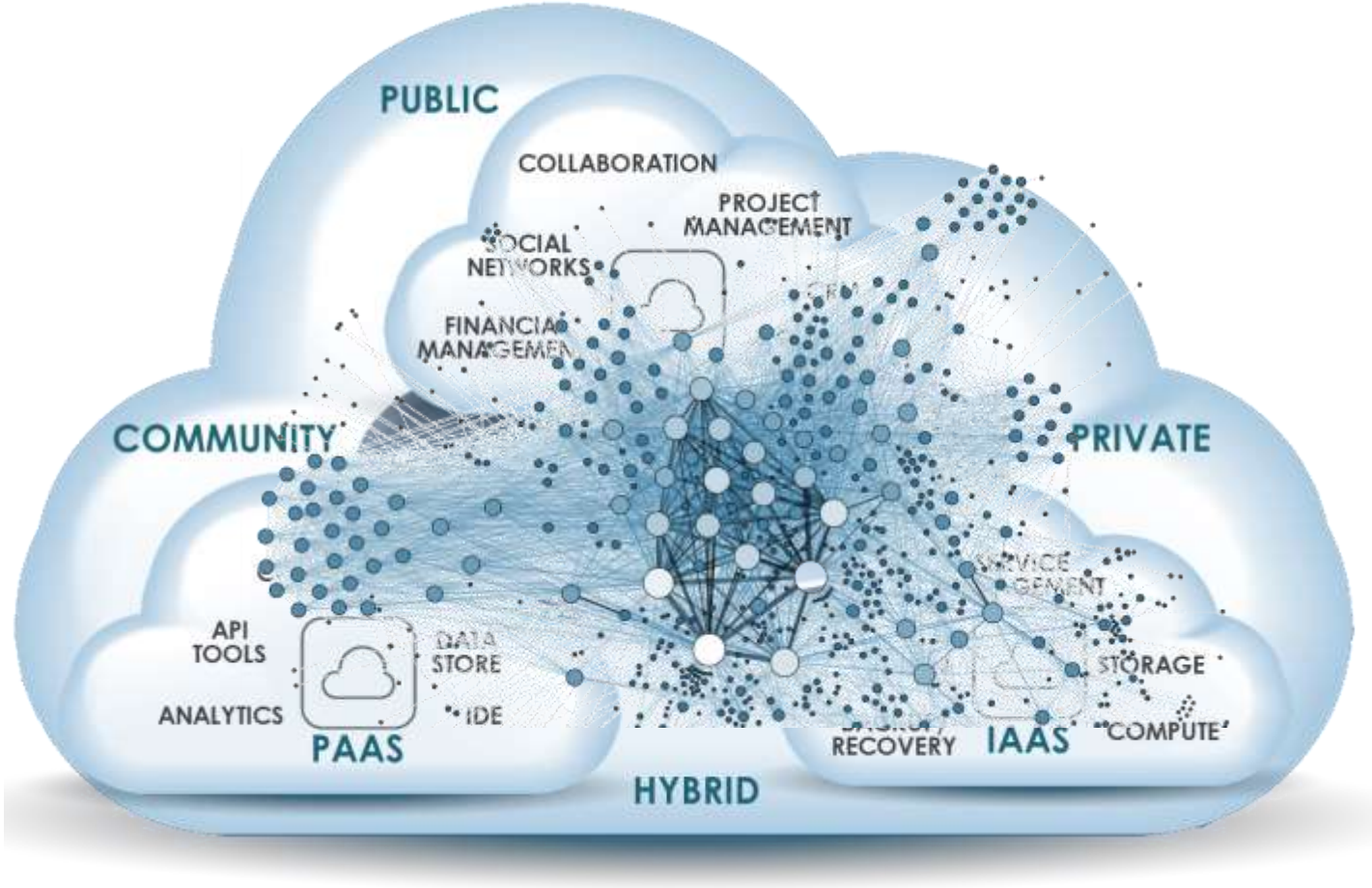
- batch scheduling, content management, resource management, capacity planning, financial planning …

IT Infrastructure Library (ITIL) and IT Service Management (ITSM)

- Problem/Incident Management, Capacity Planning, Configuration Management, Service Management …

APM – simulated ‘observability’

NPM – sniffing and inspecting traffic



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Then, there was ITOA (and *the other* AIOps)

AIOps was ITOA before it was *the other* AIOps before it was *today's* AIOps

ITOA

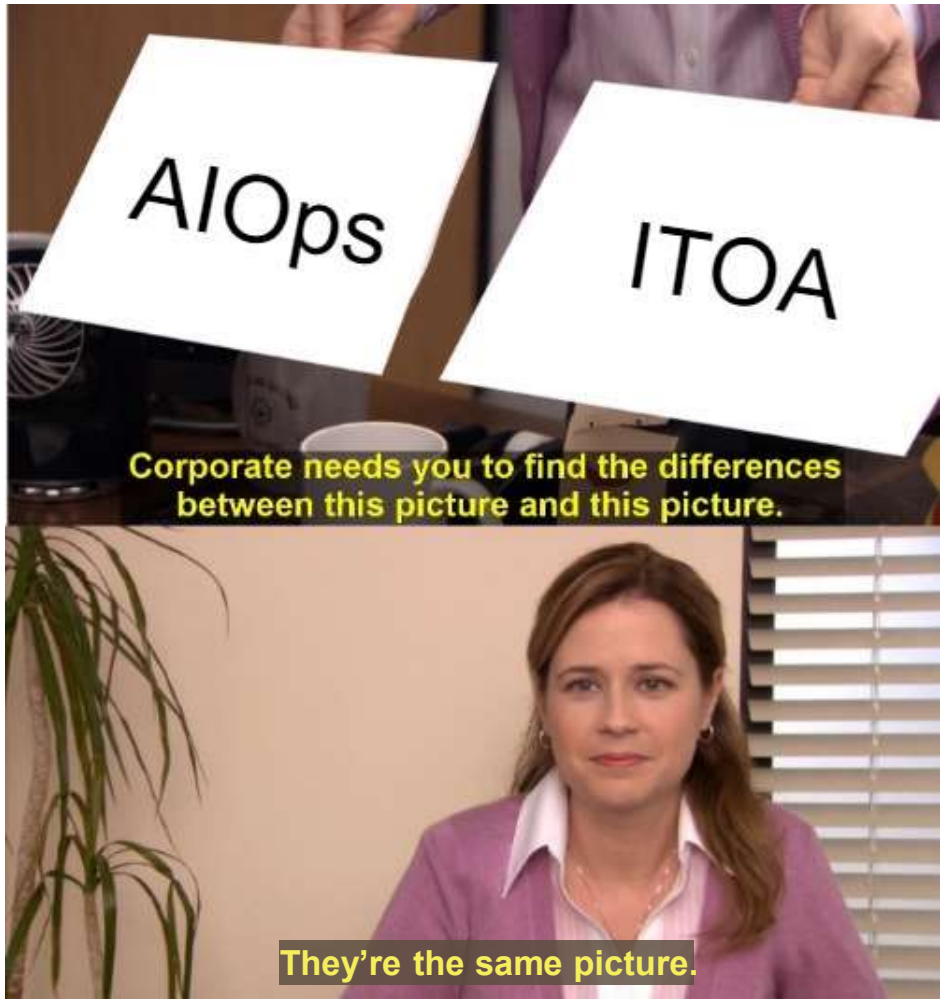
… gathering, processing, analyzing and interpreting data from various IT operations sources to guide decisions and predict potential issues

- TechTarget

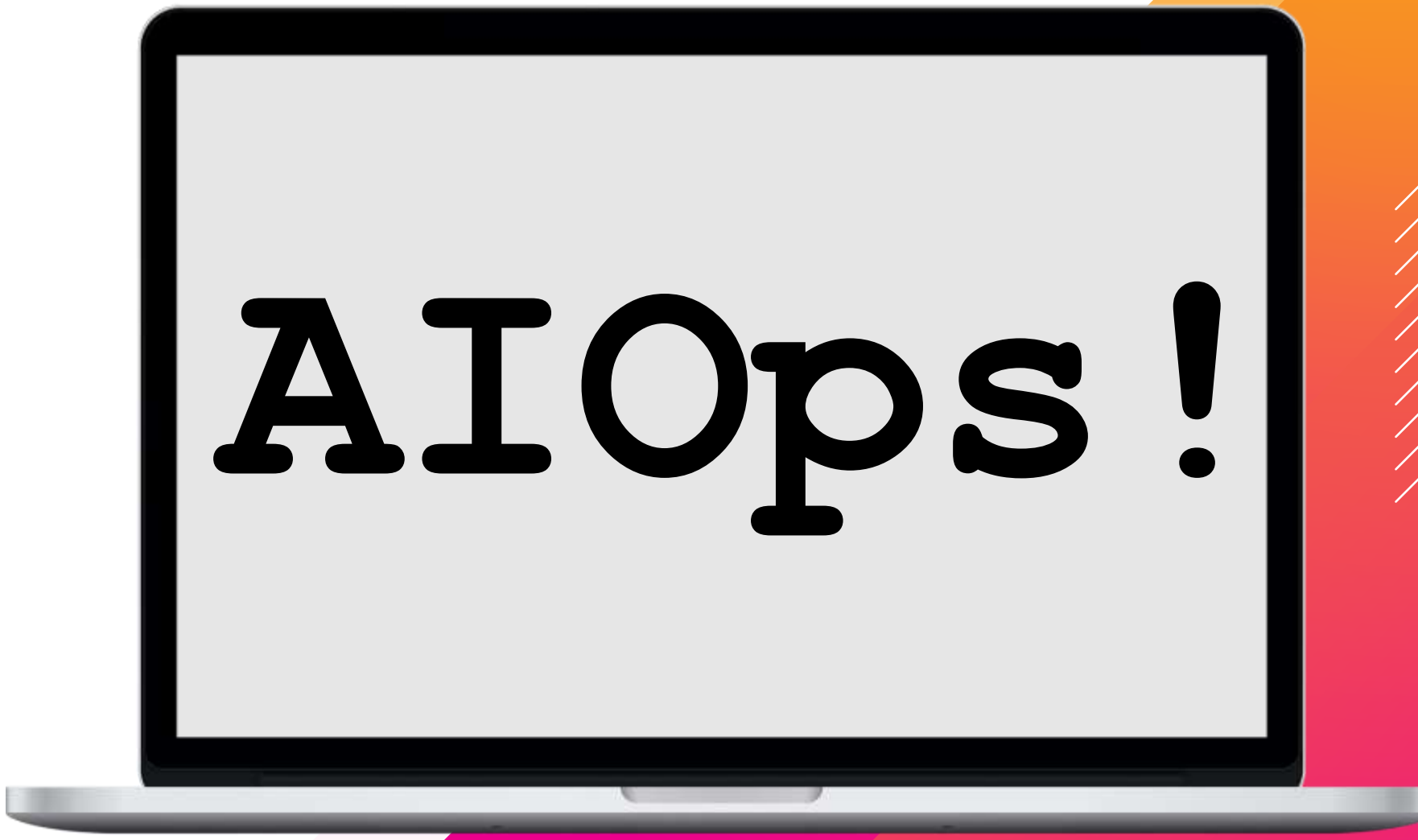
(the *other)* AIOps

… multiple layers that address data collection, storage, analytical engines and visualization.

- Gartner (2017)



Which brings us to …



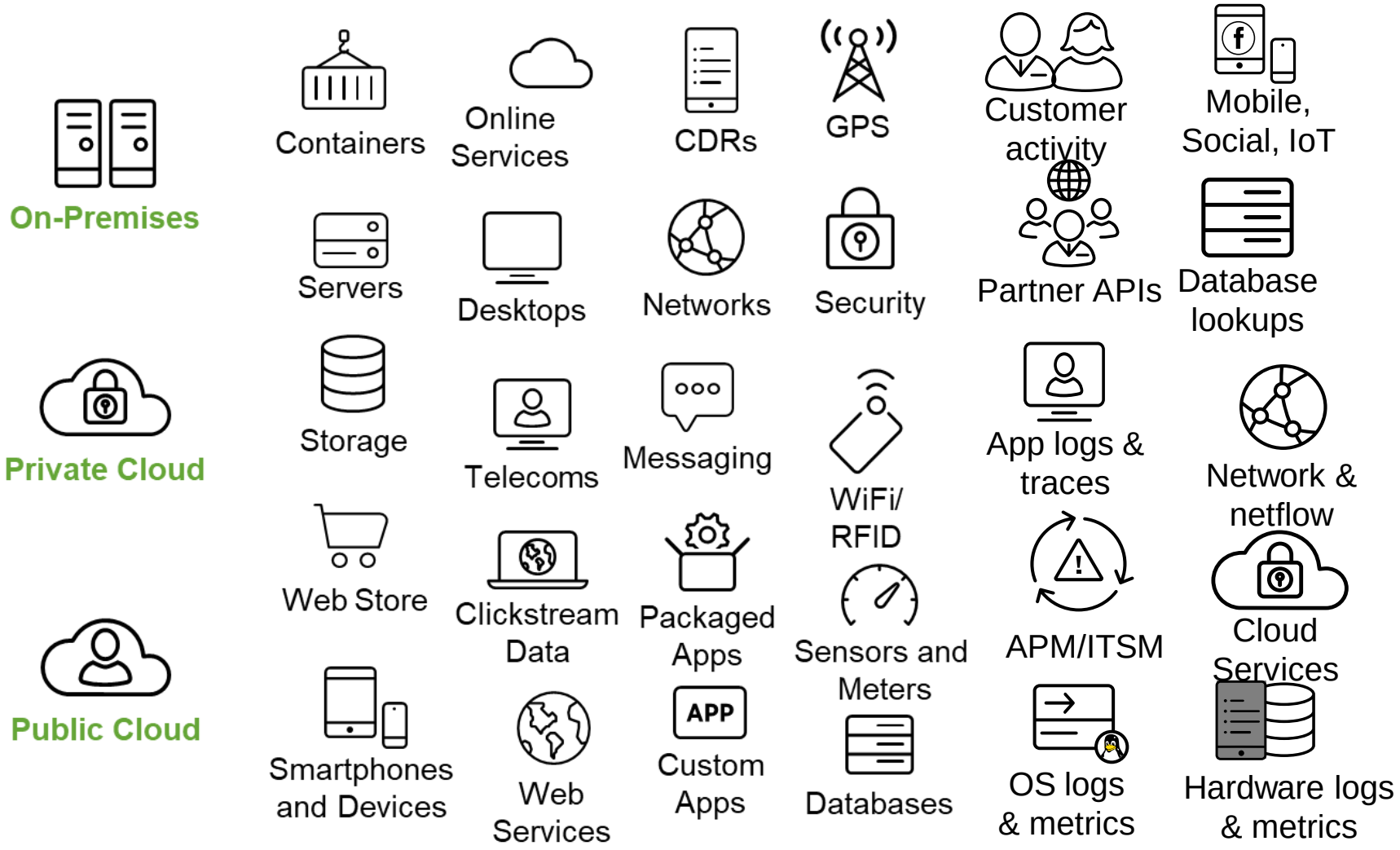
“ AIOps combines **big data** and **machine learning** to **automate** IT operations processes, including event correlation, anomaly detection and causality determination.”

-Gartner

*Gartner, “Gartner Glossary” https://www.gartner.com/en/information-technology/glossary/aiops-artificial-intelligence-operations

Take IT Ops 'Big Data' Sources

AIOps utilizes the data that is managed and stored in DataOps



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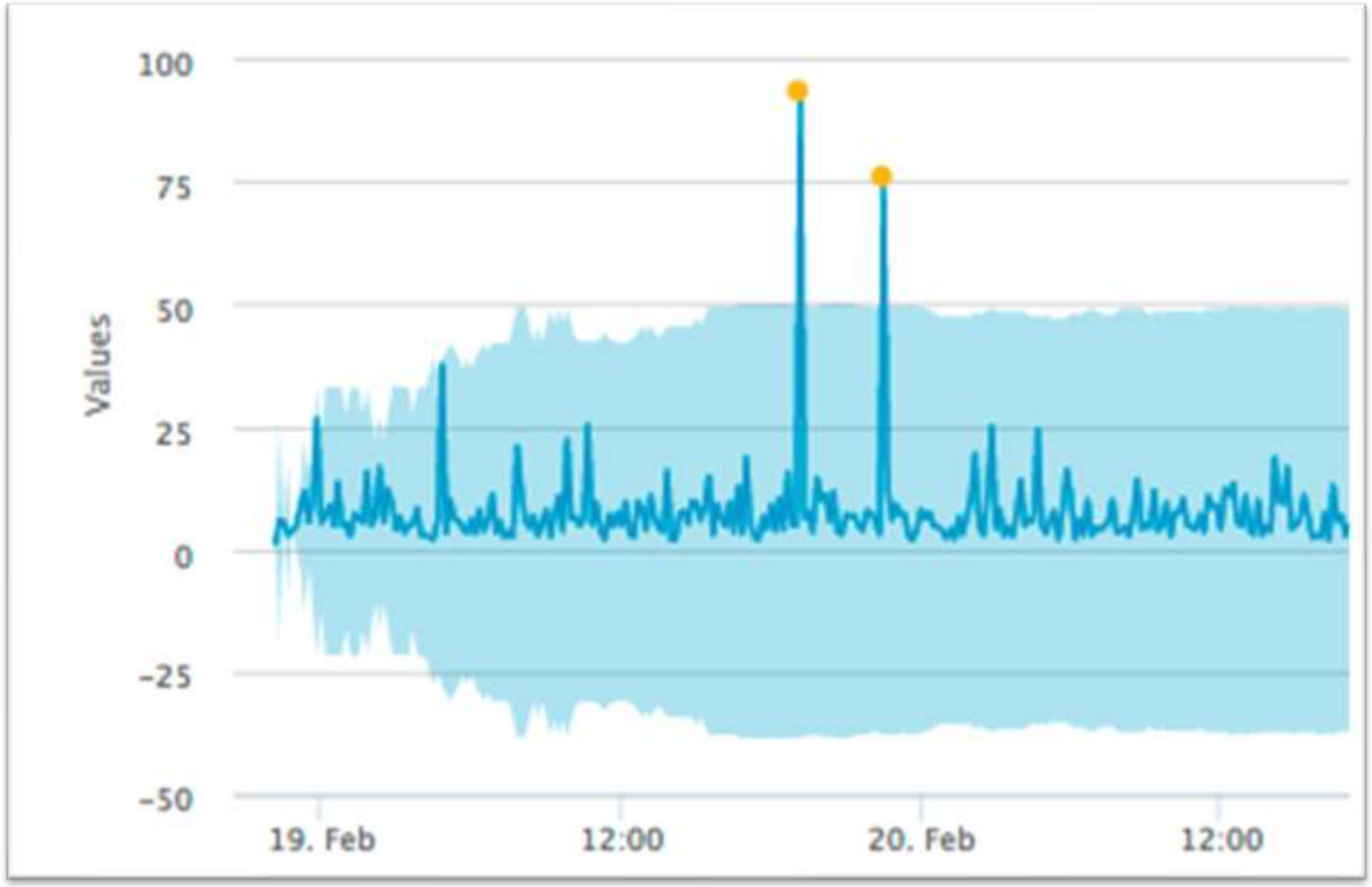
Apply Machine Learning Algorithms

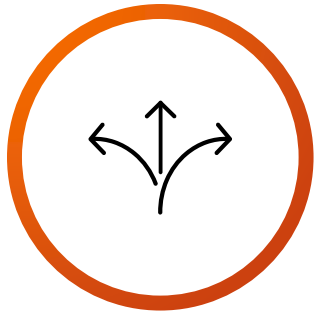
e.g. Anomaly Detection

- Alerts triggered automatically by anomalous activity
- Incident responders can see across all silos to find a quicker MTTR

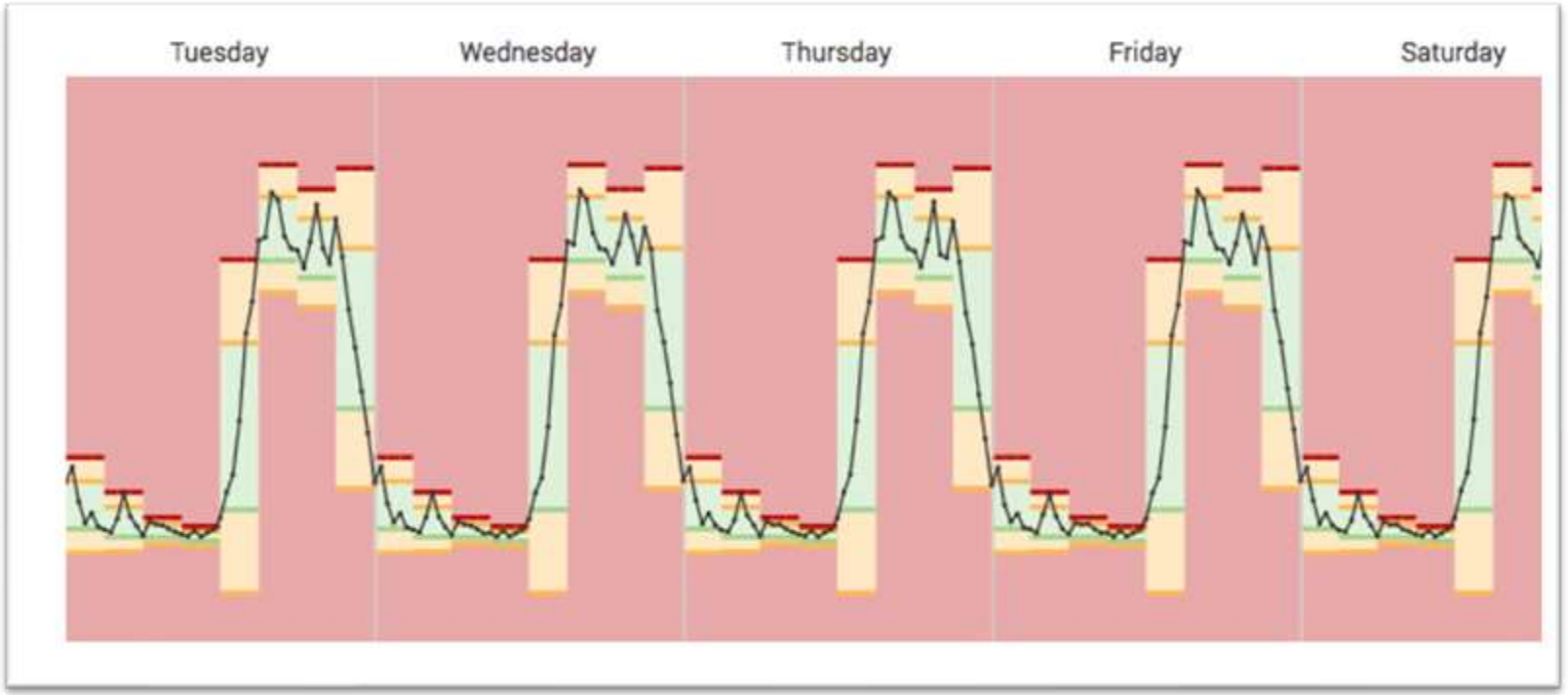


Apply Machine Learning Algorithms

e.g. Dynamic Thresholding

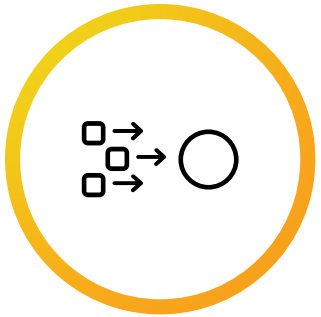


- Thresholds adapt in real time
- Trend and alert on anomalous behavior
- Prevent service degradation

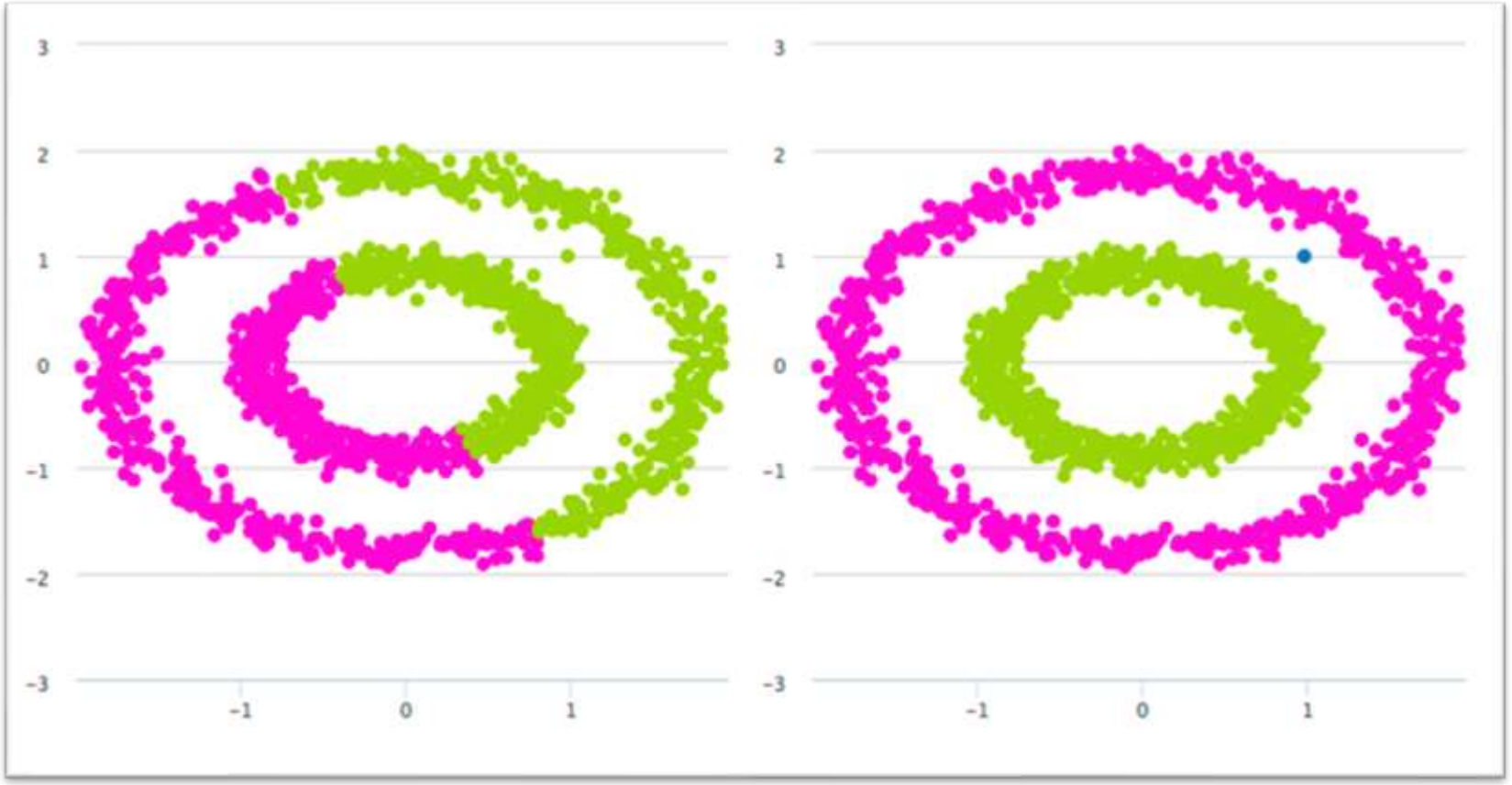


Apply Machine Learning Algorithms

e.g. Event Clustering



- Detect and highlight the events that matter
- Prioritize events that need action taken



Apply Machine Learning Algorithms

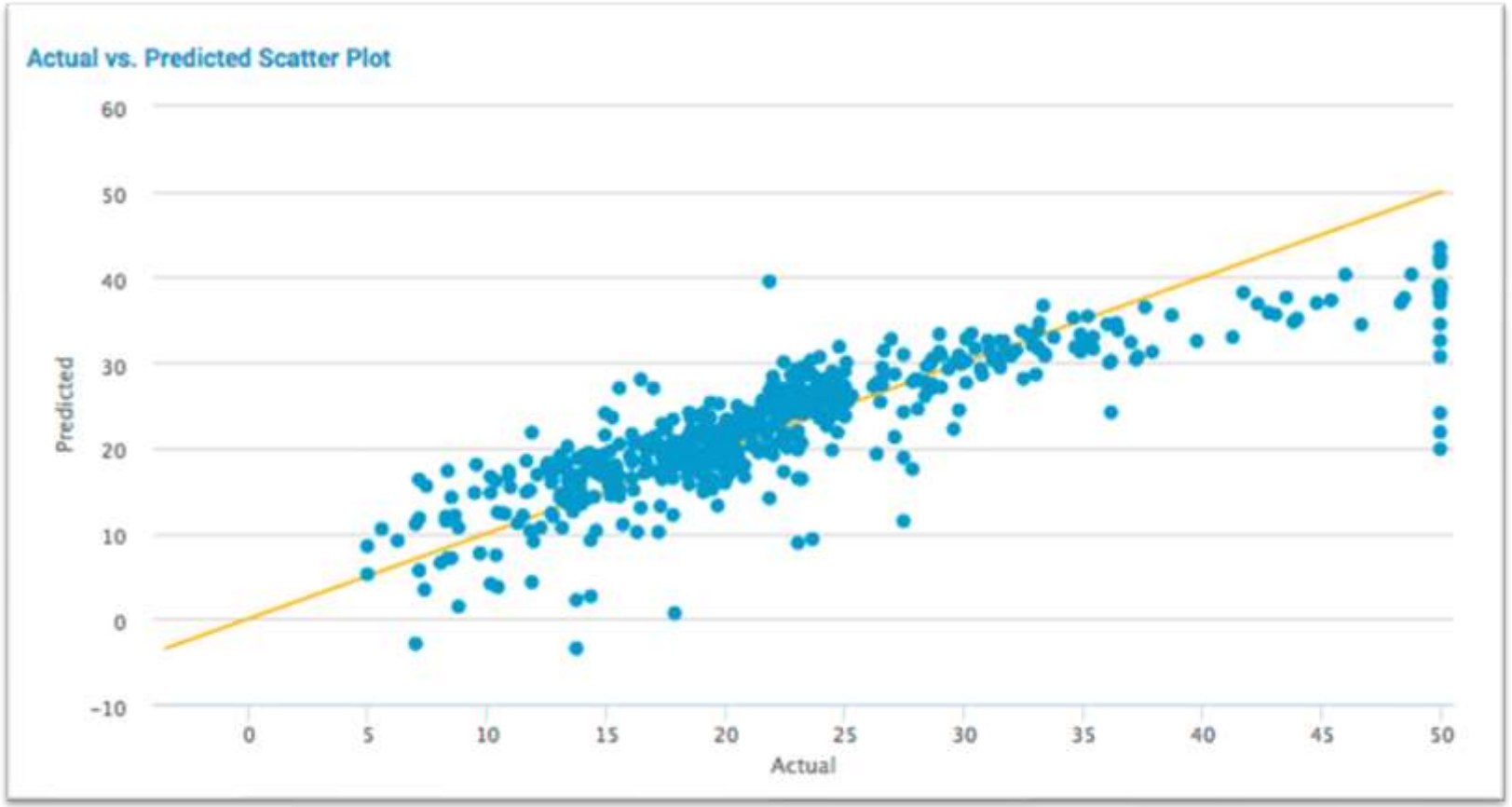
e.g. Intelligent Alerting

- Advanced problem detection increases alert fidelity
- Automatically identify and alert on risky service behavior

Apply Machine Learning Algorithms

e.g. Predictive Analytics

- Predict outages and anomalies before they occur
- Predict demand for new products and features



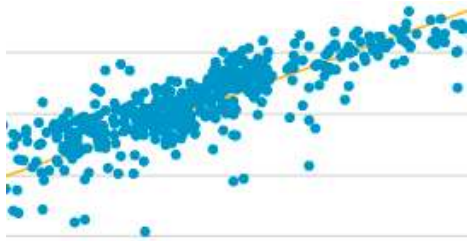
Train Machine Learning Models

Acquire data to test an algorithm

Train algorithms to create a model

Apply real data to validate model

Surface model to solve problems



Operationalize your model

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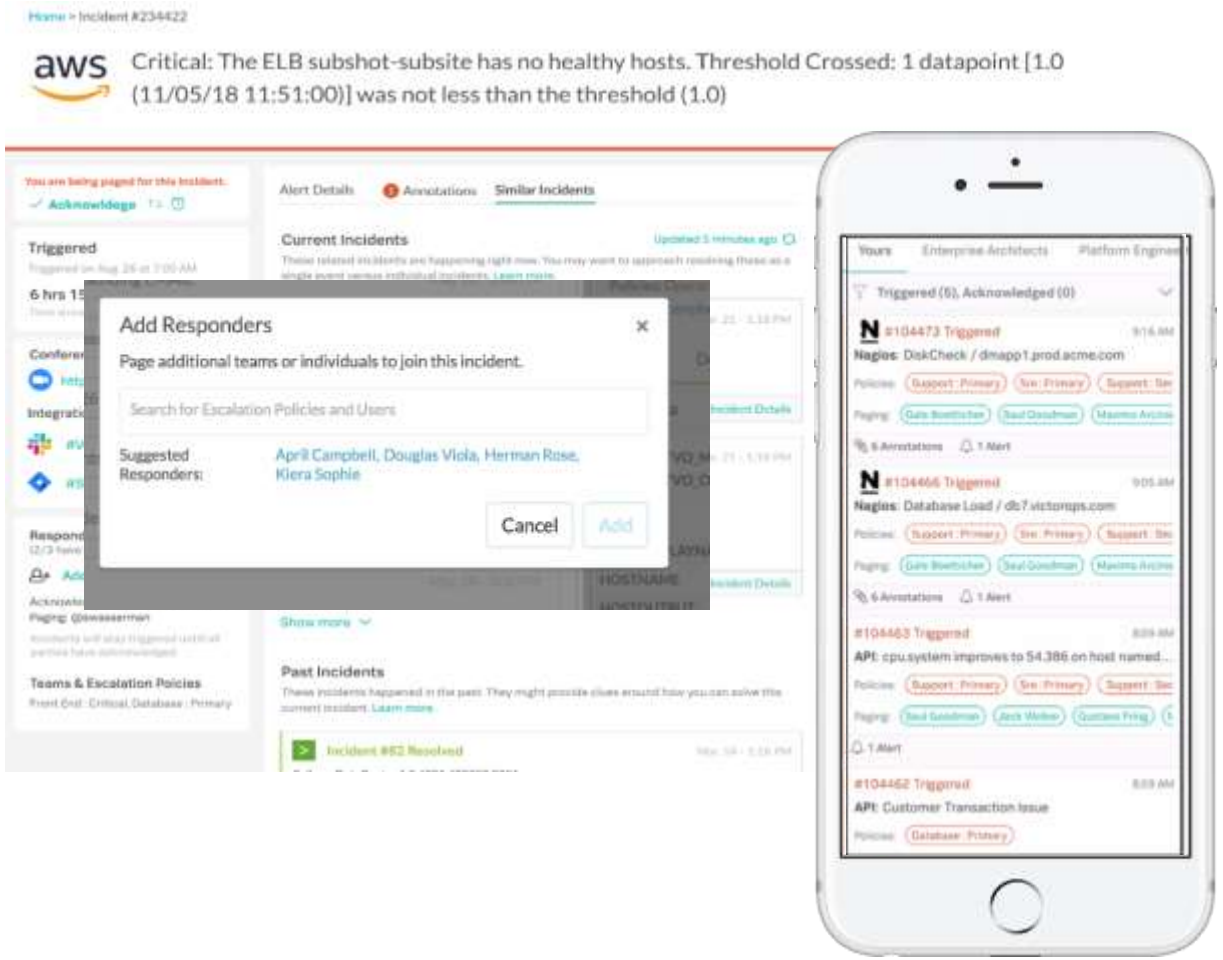
Turning AIOps Data Into Doing

Integrate and Activate Other Tools and Processes e.g.

- ITSM tool integration
  - Automatically open, update, close tickets
  - Interrogate CMDB for diags, ‘known knowns’
- Automation integration
  - Execute discrete tasks to aid investigation
  - Collect more data, execute diagnostics
- Orchestration integration
  - Identify and execute complex remediation
  - Trigger ITPA, RPA, CM, or SOAR processes
- Collaborative Incident Response
  - Correlate and analyze data across tools
  - Identify responders and share diagnostics



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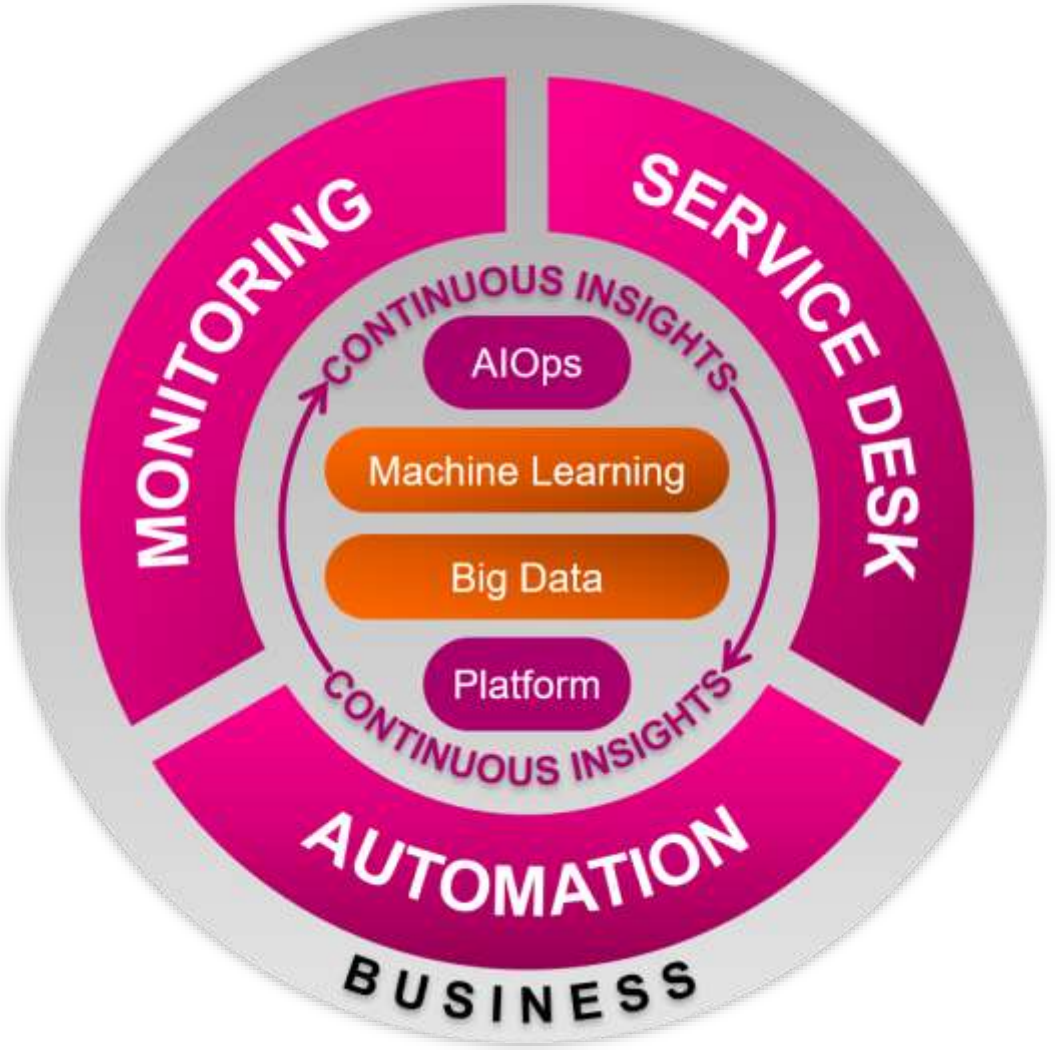
And that's AIOps!

Using big data and machine learning to provide continuous insights that improve the speed, agility, accuracy, and efficiency of IT Operations processes, including:

- Monitoring and Alerting
- ITSM and Service Desk
- Automation & Orchestration

… and more!



More Learning Resources for Your AIOps Journey

2019 Gartner Market Guide for AIOps Platforms

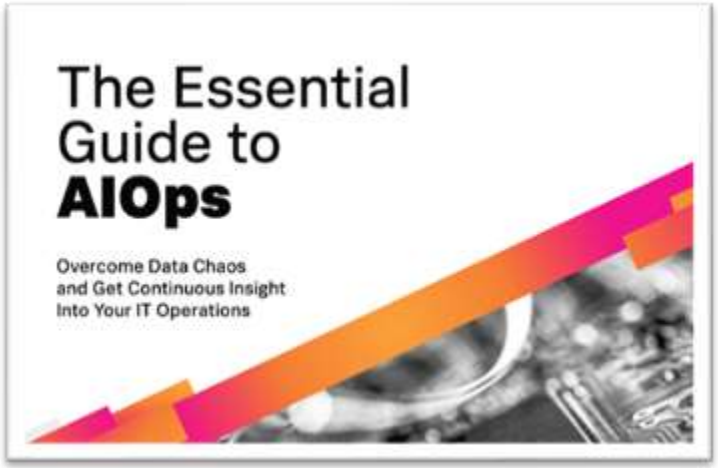
Find this report on our website, and you'll be able to compare different AIOps platform

www.splunk.com/marketguide aiops

2020 EMA Radar Report: AIOps, A Guide for Investing in Innovation

Independent analysis and unique strengths of seventeen AIOps vendors

https://www.splunk.com/en_us/form/ema-radar-report.html



The Essential Guide to AIOps

Authored by experts at Splunk, everything you need to know to begin your AIOps journey

www.splunk.com/aiopsguide

Modern IT Management With AIOps

A practical guide to using Splunk for AIOps, for current and new Splunk users.

https://www.splunk.com/en_us/form/modern-it-management-with-aiops.html

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THANK YOU!

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by DevOps Institute

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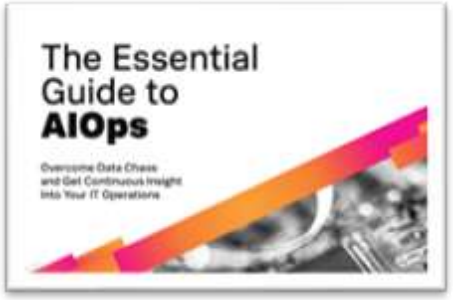

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