

# FROM ALERT STORMS TO MTTR

An AIOps pipeline for SecOps and SRE using Microsoft Sentinel, Defender XDR, Azure Monitor, and Security Copilot

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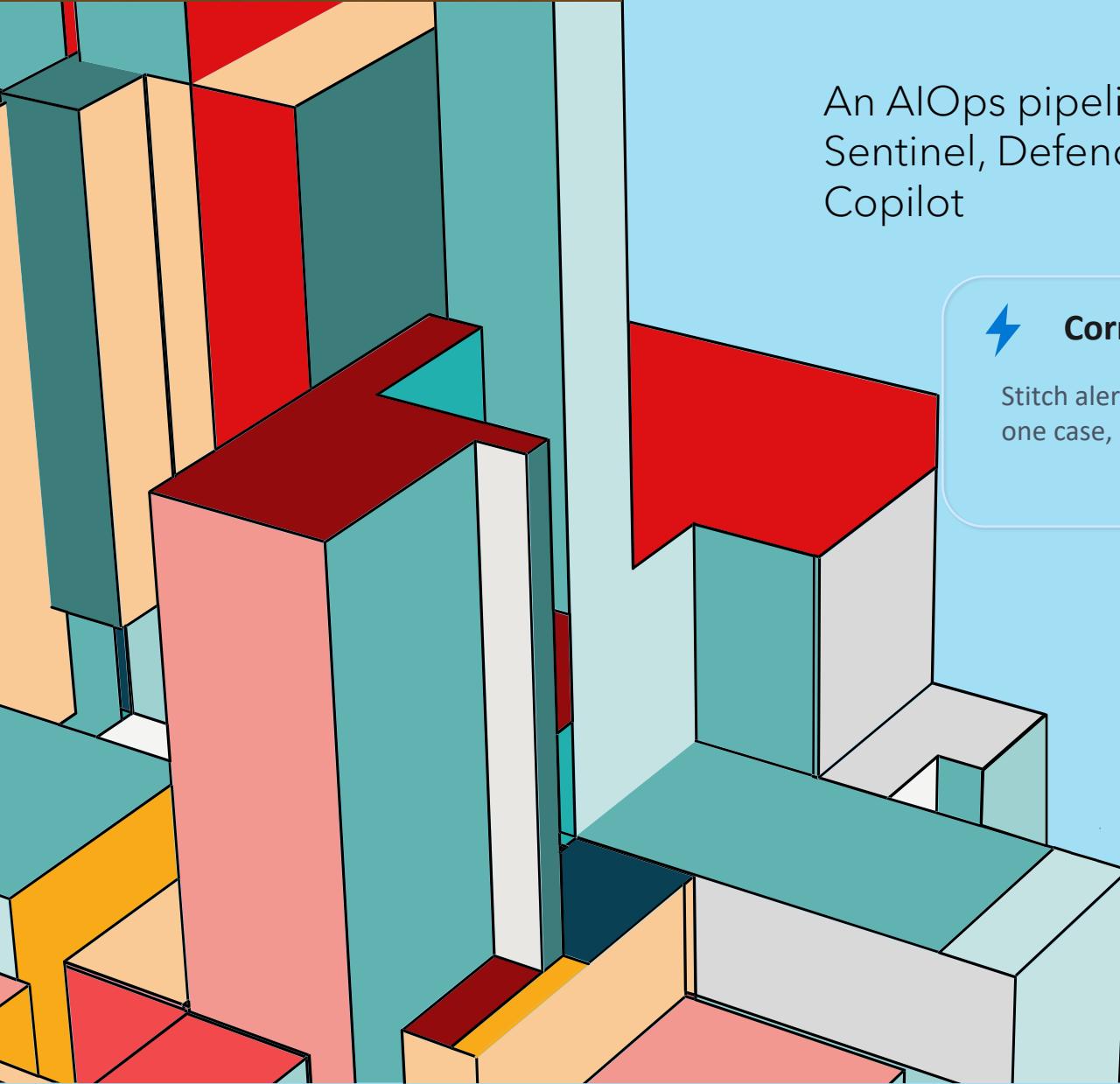
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The presentation/slides/information I share today represent my own personal views. I am speaking for myself and not on behalf of my employer, Microsoft Corporation.

# FROM ALERT STORMS TO MTTR



An AIOps pipeline for SecOps and SRE using Microsoft Sentinel, Defender XDR, Azure Monitor, and Security Copilot



## Correlate

Stitch alerts into incidents so humans see one case, not fifty.



## Automate

Safe first-mile playbooks: enrich, dedupe, route, and notify.



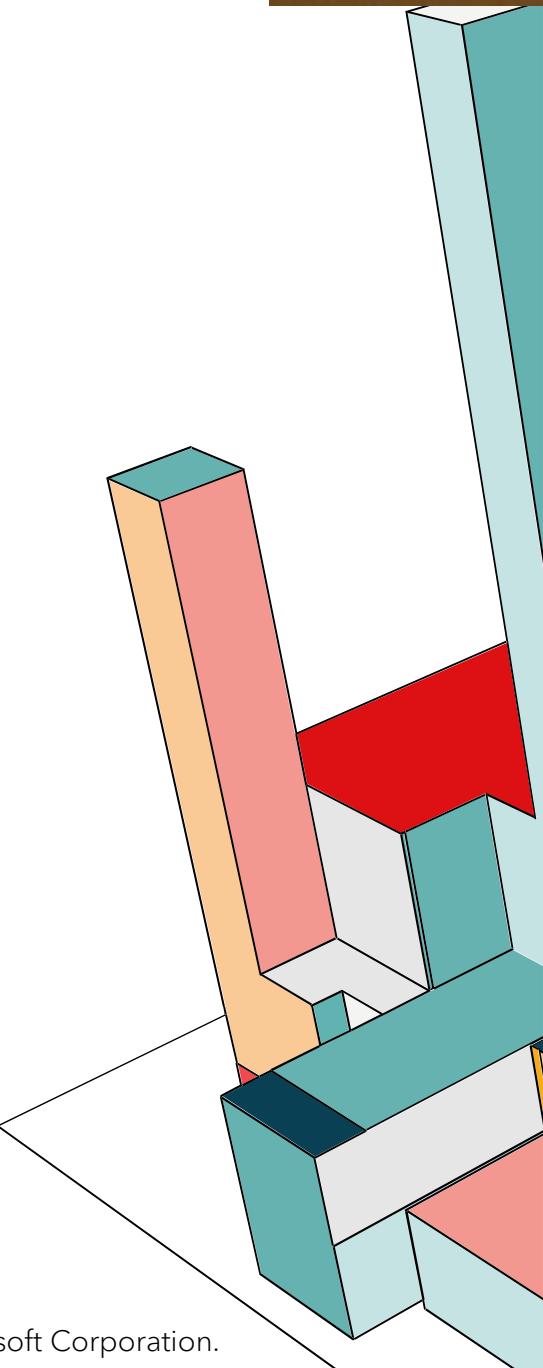
## Assist

Security Copilot summarizes, answers, and suggests next steps.

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# AGENDA

- Why alert storms drive MTTR up (and morale down)
- Pipeline overview: correlate, automate, assist, measure
- Correlation options: Sentinel, Defender XDR, Azure Monitor
- First-mile automation: enrichment, deduplication, routing
- Security Copilot: summaries, guided response, natural language to queries
- Scorecard: how to prove MTTR reduction to leadership
- End-to-end example and implementation roadmap



# ALERT STORMS ARE A MTTR MULTIPLIER

NOISE, FATIGUE, AND SLOW RESOLUTION

## What that does

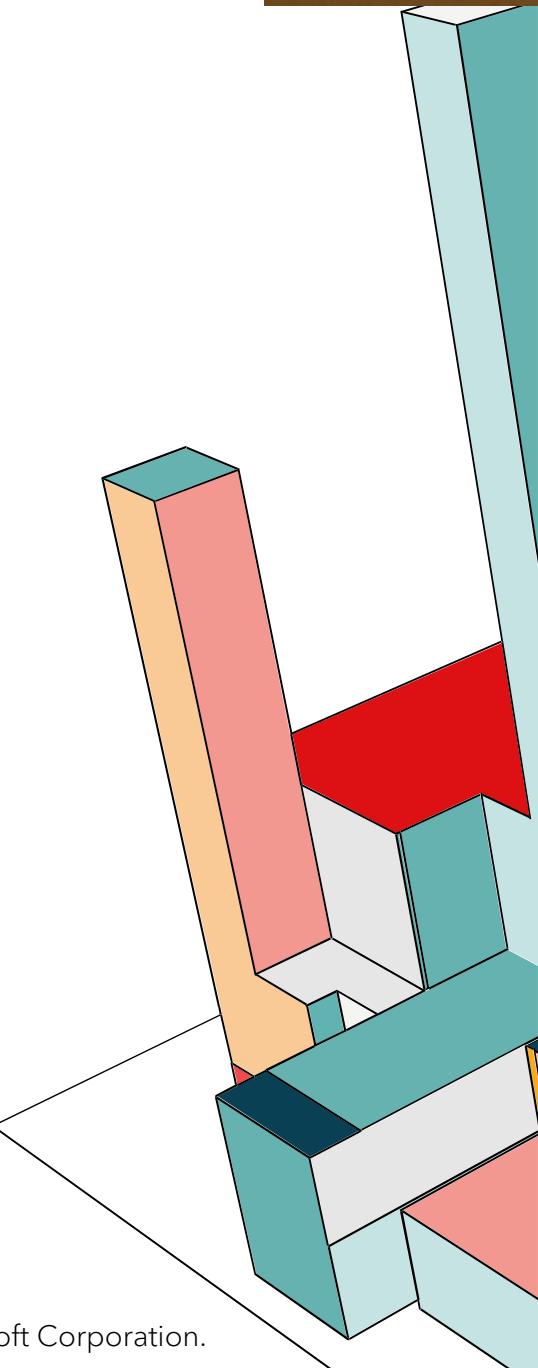
- Alert fatigue: humans stop trusting alerts
- Slow triage: time spent deduping and hunting for context
- Missed correlation: multistage attacks and cascading outages hide in plain sight
- MTTR rises because analysis and coordination are the bottlenecks

Goal for today: collapse the "time to understand" so responders spend minutes, not hours, before they act.

Typical SOC day

3,832  
alerts per day (average)

62%  
go unattended in some environments



# THE AIOPS PIPELINE (HIGH LEVEL)

## A REPEATABLE FLOW FROM NOISE TO RESOLUTION

### 1) Correlate

Convert raw alerts into one incident with shared entities and timeline.

### 2) Automate

Run safe first-mile tasks: enrich, dedupe, assign, notify, ticket.

### 3) Assist

Use Copilot to summarize, answer questions, and suggest next steps.

### 4) Measure

Track MTTR and time saved to prove impact and guide tuning.

#### Microsoft-native building blocks

##### Correlation

Sentinel Fusion and incident grouping  
Defender XDR correlation and merging  
Azure Monitor smart groups

##### Automation

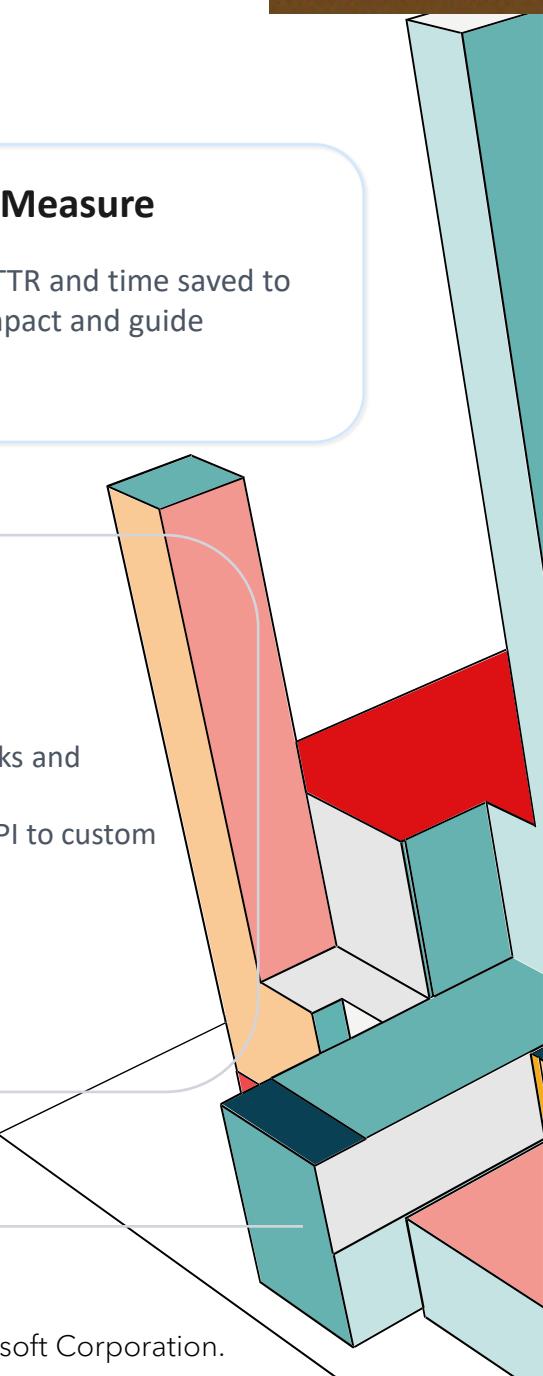
Sentinel automation rules  
Logic Apps playbooks  
Action Groups and ITSM connectors

##### AI assist

Security Copilot in Defender and Sentinel  
Promptbooks and Logic App connector

##### Measurement

Sentinel workbooks and incident metrics  
Export via REST API to custom tables



# CORRELATION: ALERTS TO INCIDENTS

REDUCE VOLUME, RAISE FIDELITY

## What changes when you correlate

### Before

- Dozens of individual alerts
- Multiple consoles and handoffs
- Duplicate investigations
- Low confidence and high noise

### After

- One incident with all related alerts
- Shared entities and timeline
- Higher confidence, better prioritization
- Ready for automation and AI summaries

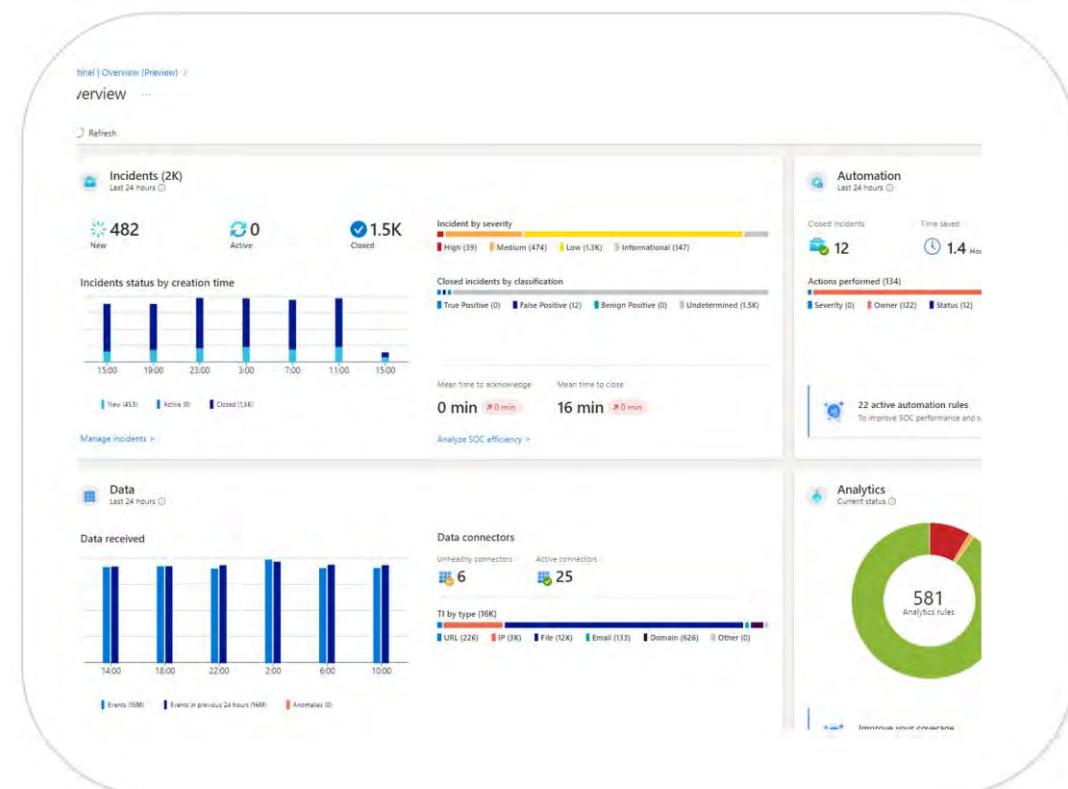
Where correlation happens: Sentinel Fusion and incident grouping | Defender XDR incident correlation and merging | Azure Monitor smart groups

# MICROSOFT SENTINEL CORRELATION

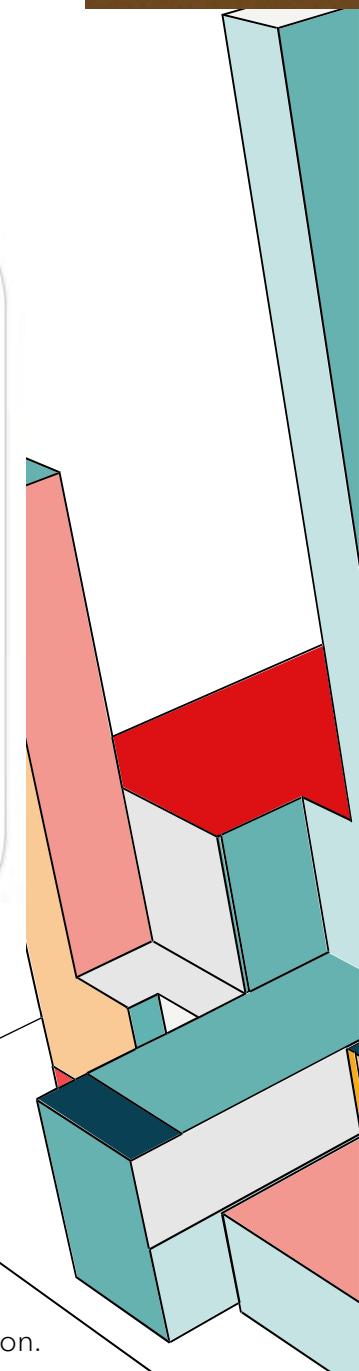
## FUSION PLUS RULE-LEVEL INCIDENT GROUPING

### Key mechanisms

- Fusion: machine-learning correlation for multistage attacks
- Analytics rule grouping: control how alerts roll up into incidents
- Entity-centric view: users, hosts, IPs, cloud apps, and more
- SOAR-ready incidents: automation rules trigger playbooks instantly



Practical tuning tip: start with grouping to prevent floods (for example failed logons), then iterate on Fusion coverage and custom detection logic.



# DEFENDER XDR CORRELATION AND UNIFIED SECOPS

## INCIDENT MERGING ACROSS ENDPOINT, IDENTITY, EMAIL, AND APPS

### What Defender XDR adds

- Incident-level correlation across Microsoft 365 signals
- Automatically adds related alerts to an existing incident
- Merges incidents when patterns show a broader campaign
- Unified queue when Sentinel is onboarded to the Defender portal

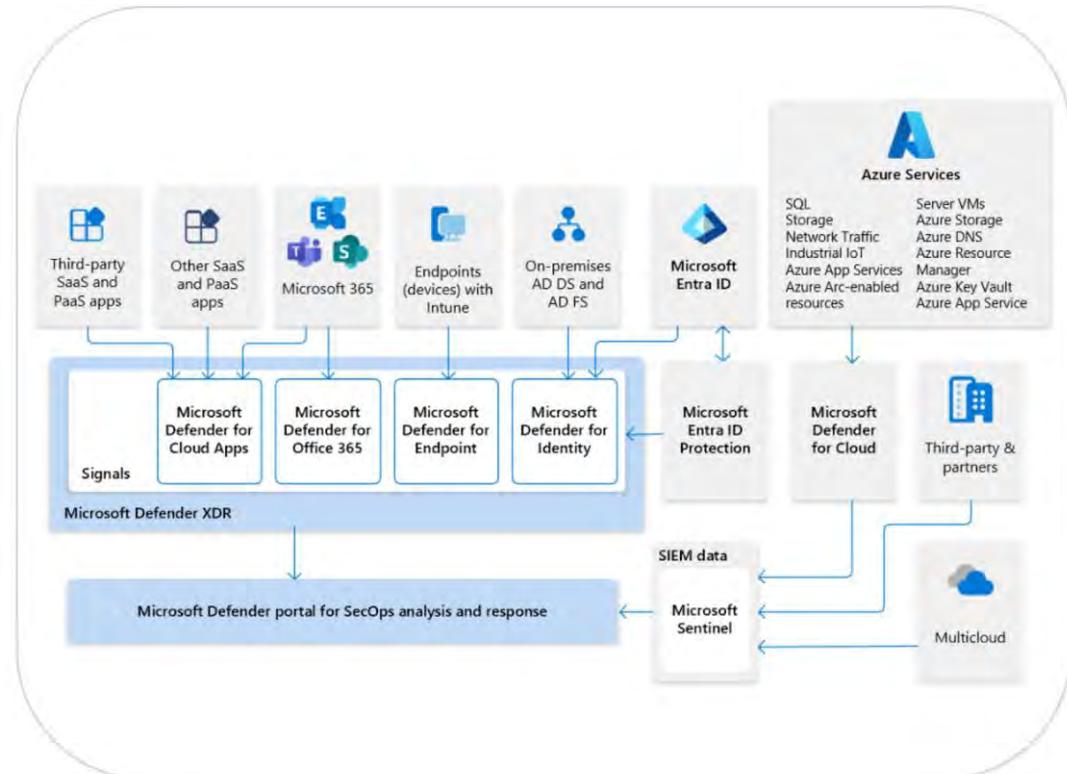
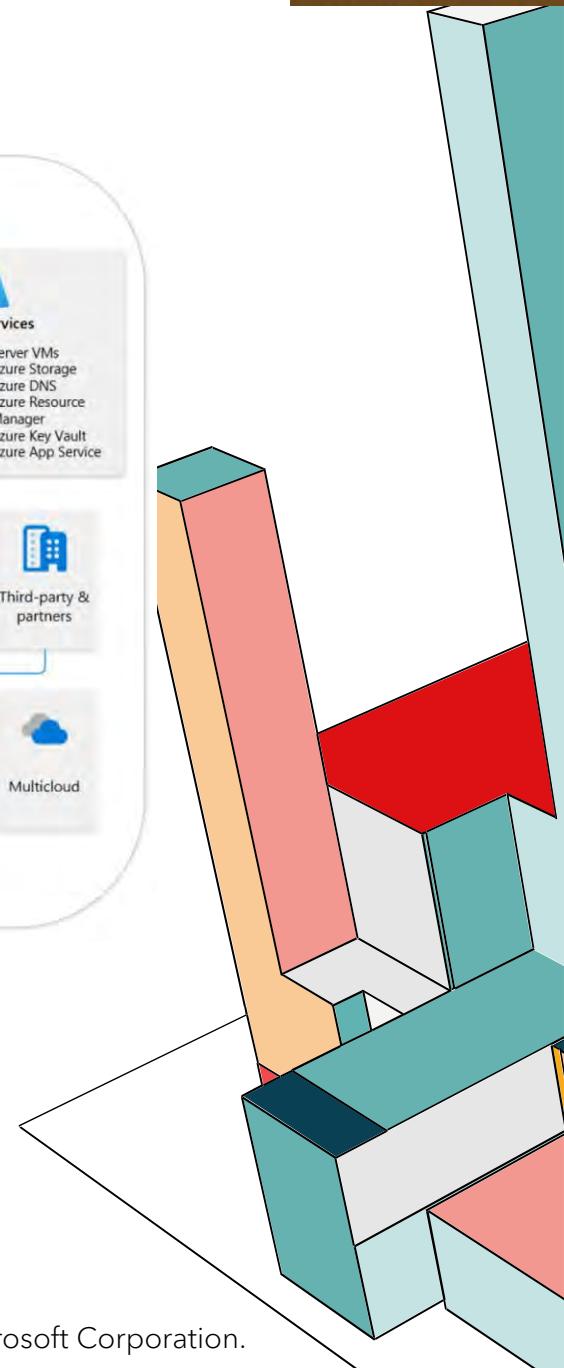


Illustration: XDR and integrated SIEM experience

Outcome: fewer incidents, each with a clearer narrative and cross-domain evidence. That is how you stop handoffs between tools from becoming handoffs between humans.



# AZURE MONITOR FOR SRE: GROUP THE NOISE

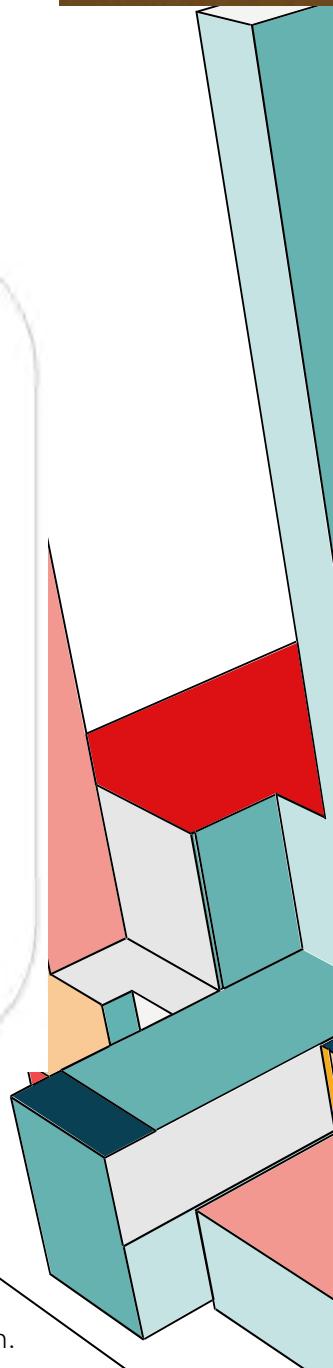
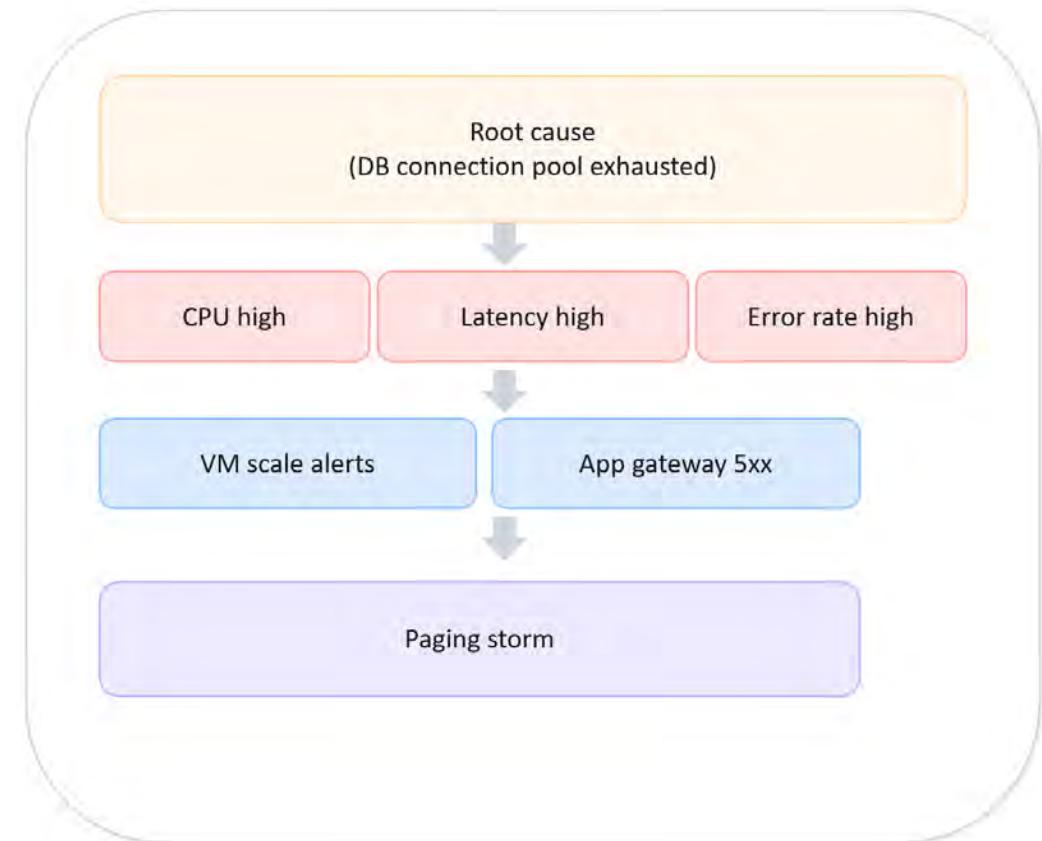
## SMART GROUPS AND AIOPS FEATURES

### Azure Monitor AIOps features

- Smart Groups cluster related alerts into one group
- Anomaly detection and dynamic thresholds reduce false paging
- Correlate metrics, logs, and traces to speed investigation
- Same AIOps idea: make incidents actionable, not noisy

SecOps and SRE can share the same playbook pattern: group signals, enrich context, then act with guardrails.

### Same problem, different alerts



# FIRST-MILE AUTOMATION (SAFE BY DESIGN)

## ENRICHMENT, DEDUPLICATION, ROUTING

Automate what is routine, keep humans for judgment



### Enrich

- Threat intel for IPs, URLs, hashes
- User and device context (Entra, Intune)
- Historical context: seen before, known benign?



### Dedupe

- Suppress obvious repeats
- Group by entity and time window
- Auto-close true duplicates with traceability



### Route

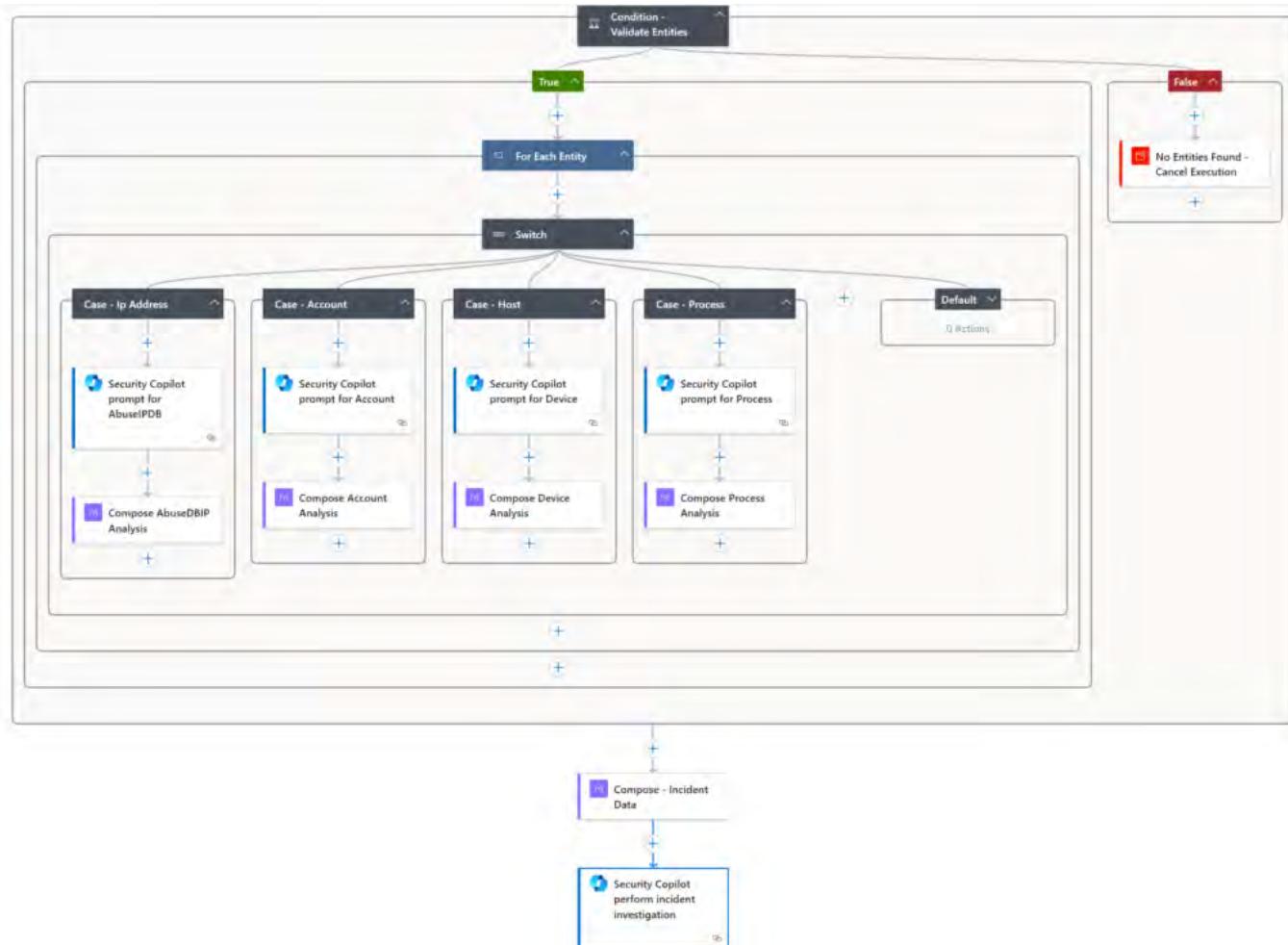
- Assign owner and severity
- Notify Teams or paging
- Create ITSM ticket and attach context

Guardrails: prefer read-only enrichment first, log every action, and make any containment step reversible or require approval.

# AUTOMATION + AI IN PRACTICE

## A PLAYBOOK THAT CALLS SECURITY COPILOT

Pattern: trigger on new incident, enrich entities, ask Copilot, post summary back



## What to implement

- Trigger: incident created (Sentinel automation rule)
- Loop over entities: IP, account, host, process
- Collect signals: TI lookup, Intune or Entra context
- Call Security Copilot prompt or promptbook
- Write back: incident comment with summary and next steps

Why it works: by the time a human opens the incident, the case already contains context, prioritization cues, and an AI generated investigation summary.

# SECURITY COPILOT: ANALYSIS AT MACHINE SPEED

## Example prompts

### Summarize for leadership

Provide an executive summary of this incident and the remediation steps taken.

### Hunting question

Did this file hash appear on any other devices in the last 30 days?

### Next steps

List the top 5 containment actions to take next, with rationale and checks.

## How it fits the pipeline

- Turns incident data into readable narrative
- Converts natural language into KQL and hunting steps
- Generates draft reports and handoff notes
- Provides guided response suggestions in Defender
- Human stays in control: advice, not autonomous action

Best practice: attach Copilot outputs to the incident so the team captures knowledge, not just chat transcripts.

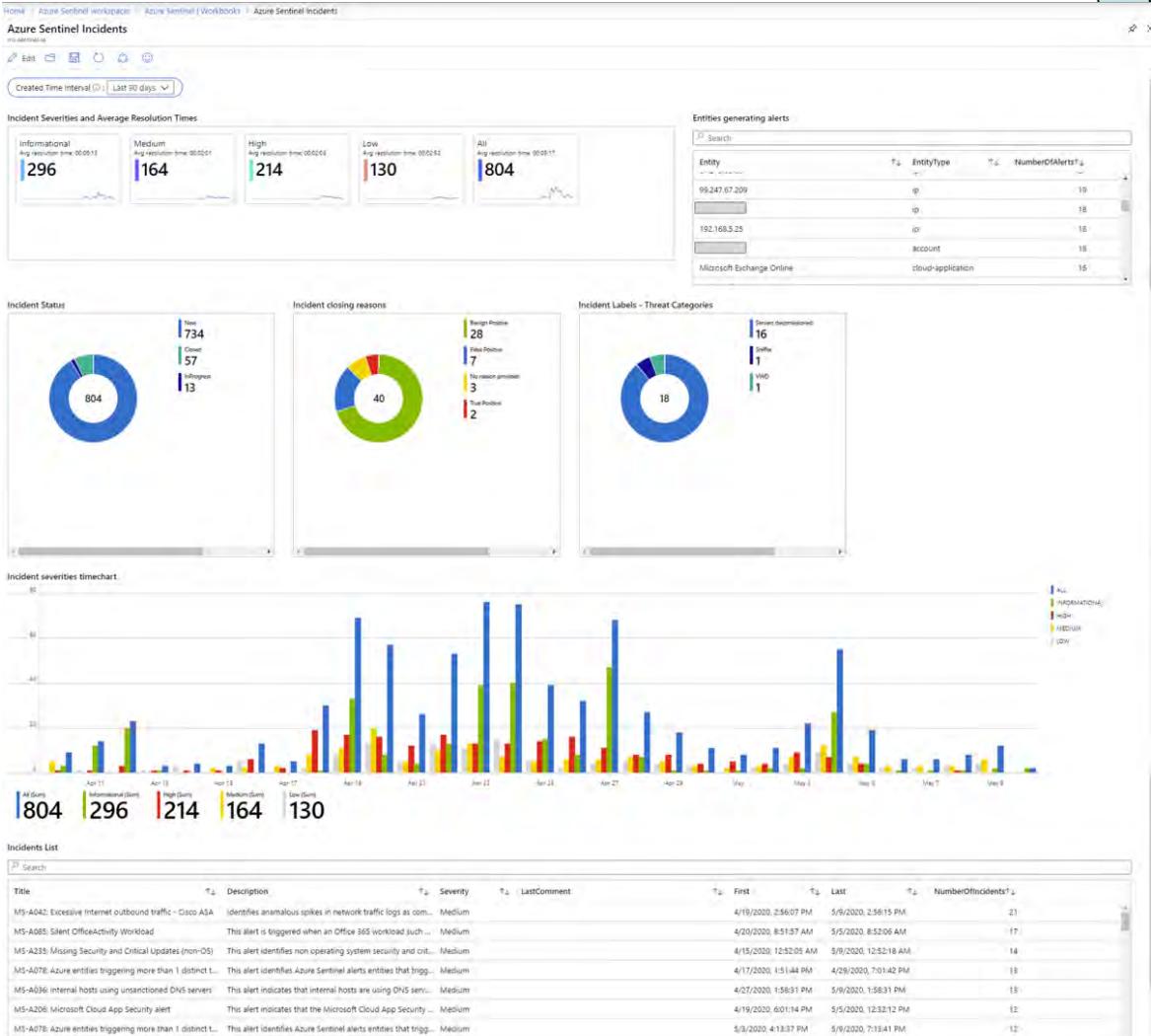
# PROVE IT: MTTR AND THE EXECUTIVE SCORECARD

## MEASURE, REPORT, AND TUNE

### KPIs that actually move

- MTTR (time to close) by severity and category
- MTTA (time to acknowledge) and response SLA compliance
- Incidents closed by automation and estimated time saved
- False positive rate and closure reasons
- Incident volume trend after rule tuning and grouping

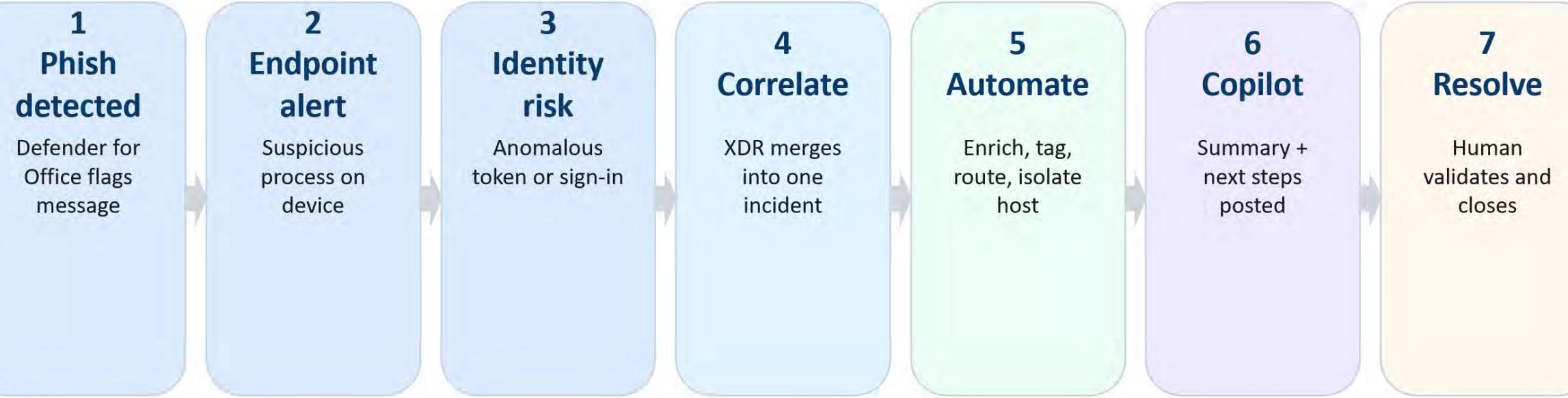
Measurement is not just reporting. It is a feedback loop: the scorecard tells you which incident types still have high MTTR and deserve new playbooks.



# END-TO-END EXAMPLE: PHISH TO CONTAINMENT

## CORRELATION + AUTOMATION + COPILOT

Scenario: phishing email triggers endpoint and identity signals



The fastest wins come from compressing the first 15 minutes: correlation plus automatic enrichment and a Copilot summary often removes most of the manual triage work.

# IMPLEMENTATION ROADMAP AND GUARDRAILS

## START SMALL, BUILD TRUST, THEN SCALE

### A practical rollout in 4 phases

#### Phase 1

##### Baseline and hygiene

- Measure MTTA and MTTR
- Tune obvious noisy rules
- Turn on grouping where possible

#### Phase 2

##### Safe automation

- Enrichment playbooks first
- Auto routing and ITSM tickets
- Document rollback steps

#### Phase 3

##### Copilot acceleration

- Standard promptbooks
- Attach summaries to incidents
- Train analysts on validation

#### Phase 4

##### Optimization loop

- Scorecard reviews
- Automate frequent remediations
- Expand to SRE alerts and on call

Governance checklist: least privilege identities for playbooks, change control for automation, audit logs, and clear criteria for when automation can take containment actions.

# KEY TAKEAWAYS: FROM STORMS TO FAST RESOLUTION

- Correlation is the first win: fewer cases, higher confidence
- First-mile automation buys time and reduces manual toil
- Security Copilot compresses analysis and reporting
- A scorecard turns improvements into measurable outcomes
- Start with safe steps, add power only after trust is earned

Next step: pick one noisy incident category and implement correlation + enrichment + a Copilot summary.

Measure MTTR before and after.

# THANK YOU

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