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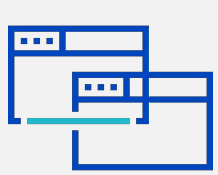
Going beyond the three pillars

Abelardo Gonzalez, Director of Product Marketing, Sumo Logic

Technology complexity is growing



Expanding tech stack

+

Exploding # of components

+

Rapid rate of change

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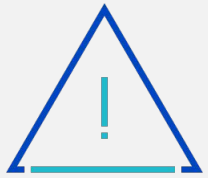


Broadening attack surface

Data deluge

Legacy tools can’t keep up

“We think the definition of observability should be expanded in a couple of ways. Certainly, that’s the data you need—logs, metrics and traces. But all of this needs to be placed and correlated into a topology so that we see the relationships between everything, because that’s how you know if it can impact something else.”

- Charlie Rich, Gartner

A practical definition of Observability

An **observable system** is one that can both be:

1) **monitored** for known issues and performance standards (SLIs/KPIs), and
2) **debugged** (troubleshooting)

in order to **resolve issues quickly enough** to continue to meet availability and performance requirements

How is Observability different from monitoring

- **Monitoring** by itself only tells you that **something is broken**.
  - It is predicated on **knowing what to look for** beforehand

- **Observability** is about finding out **“why”**.
  - **Monolithic** applications often fail in **predictable** ways
  - **Modern** applications are **too complicated** to know all of the ways your application can fail
  - **Observability** allows you to ask the **right questions**

- So, **Monitoring** is a **subset** of **Observability**

Honest Status Page
@honest_update

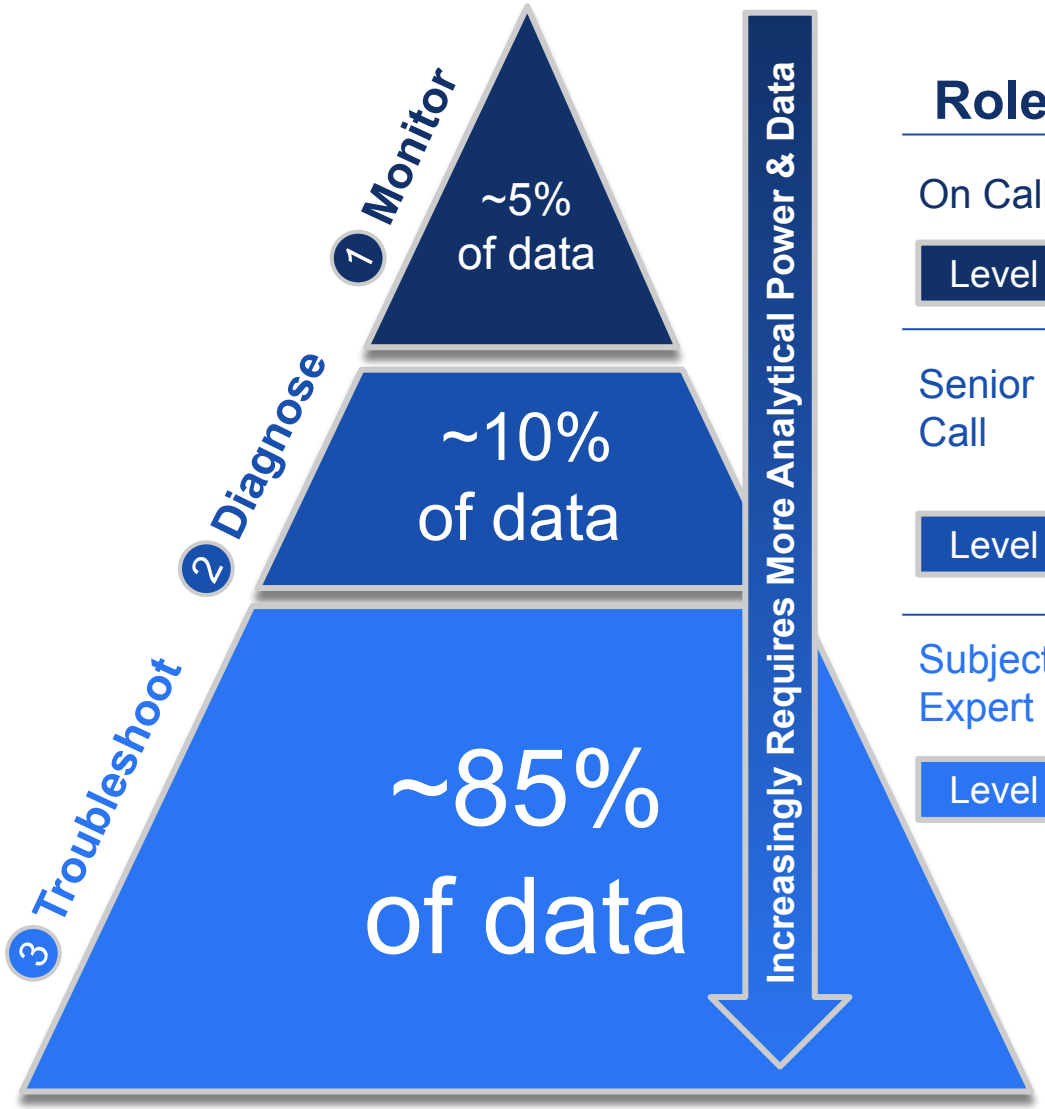
Follow

We replaced our monolith with micro services so that every outage could be more like a murder mystery.

4:10 PM - 7 Oct 2015

For those who don't remember the movie Clue

Why Observability is so hard



Role	Activities	Challenges	Implication
On Call Level 1	• **Alert** and notify • **Playbook** driven steps	• **Thresholds** only • **Incomplete** monitoring	• Increased **downtime** • **Reactive** monitoring • **Slower reaction** time
Senior On Call Level 2	• **Dashboard** focused • Triage based on **basic analytics**	• Forced to **sample** • Difficult to understand **dependencies**	• **Longer time** to identify issues • **Difficult to pinpoint** problem areas
Subject Matter Expert Level 3	• **Analytics-driven** investigation • **Expertise-driven** exploration	• Restricted to **pre-parsed** data • Can't identify **unknown-unknowns** • **Missing** data • Too much **manual**, **tedious** analysis	• **Problem resolution** takes too long • **Long lead-time** to establish cause & effect • Root causes remain hidden causing **repeated failures**

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"Observability" requires **rich data** and **richer analytics** to get from **alert** to **resolution**.

1 **Monitor**
Using Unified Alerts for quick MTTI

2 **Diagnose**
With contextual information for better MTTD

3 **Troubleshoot**
Leveraging powerful analytics deliverting fast MTTR

~20% of data

~30% of data

~50% of data

More Data Requiring More Sophisticated Analytics

Source: Based on Sumo Logic Internal Analysis

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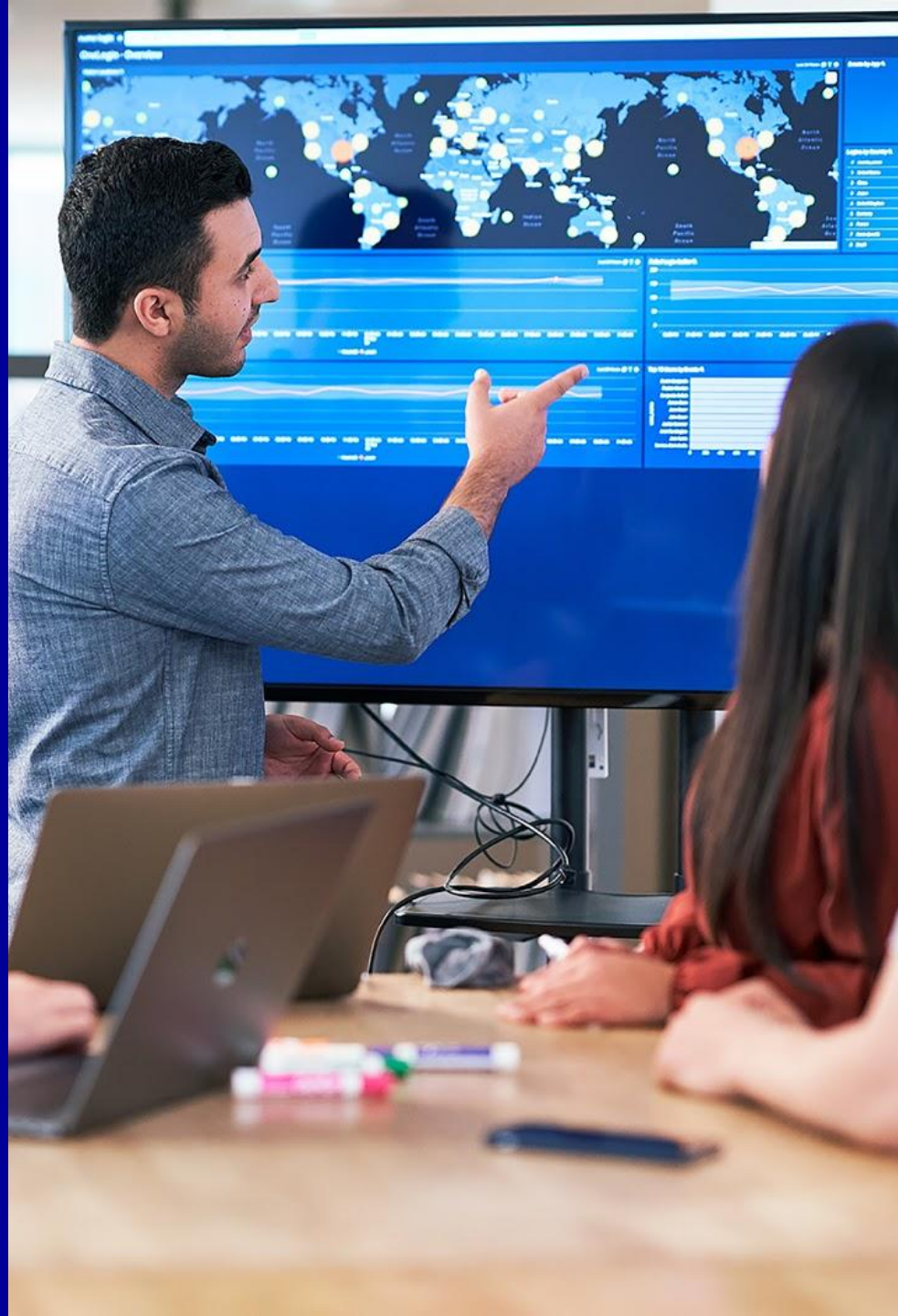
How do we go about achieving this?



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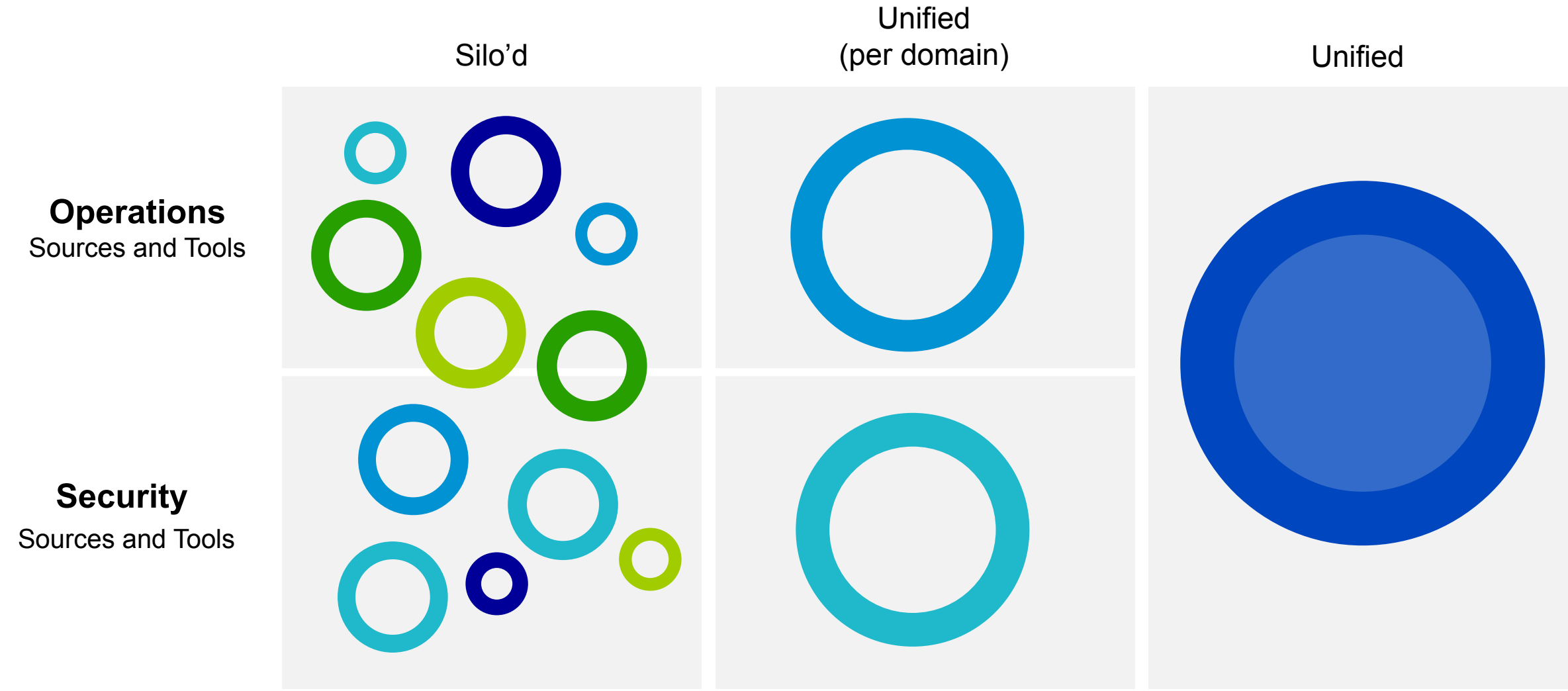
How are you managing that complexity?

On-premises or cloud-based solutions?



Simple Steps to Achieving Observability

1. Determine your Objectives
2. Evaluate existing telemetry
3. Add new telemetry
4. Deploy
5. Repeat

Objectives-Driven Observability

- **Step 1**: What are your goals/objectives?
  - Service Level Objectives (SLOs) or Key Performance Objectives (KPOs)
- **Step 2**: How do you measure those goals?
  - Service Level Indicators (SLIs) or Key Performance Indicators (KPIs)
- **Step 3**: Can you measure your SLIs with your current data?
- **Step 4**: (If No) Add more data - Logs, Metrics, Traces/APM

Three key takeaways

Observability is meant to address the new realities of keeping modern applications reliable

1. Monitoring is a subset of Observability
2. Domain agnostic analytics is essential to Troubleshooting
3. Start with your objectives and work from there

Thank you

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