AWS re:Invent

WIN404-R

Managing health of .NET and SQL Server applications on AWS

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Let’s introduce ourselves

My name is…

I work at…

My biggest monitoring pain-point is…

AND

My last purchase online was…

Agenda

Monitoring challenges in the DevOps world

CloudWatch Application Insights for .NET & SQL Server

How it works

Hands-on labs and demo

Q & A

Resources

Monitoring Challenges

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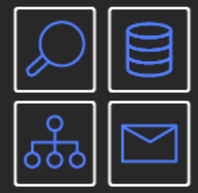
Monitoring in the DevOps world

Resource utilization



Monitor multiple individual systems & technologies

Detect and troubleshoot problems

Set up monitoring infrastructure and systems

Amazon CloudWatch

Get visibility

Built-in and custom metrics,

Application and Windows Event logs

Monitor

Alert on anomalies, errors

Perform calculation of metrics

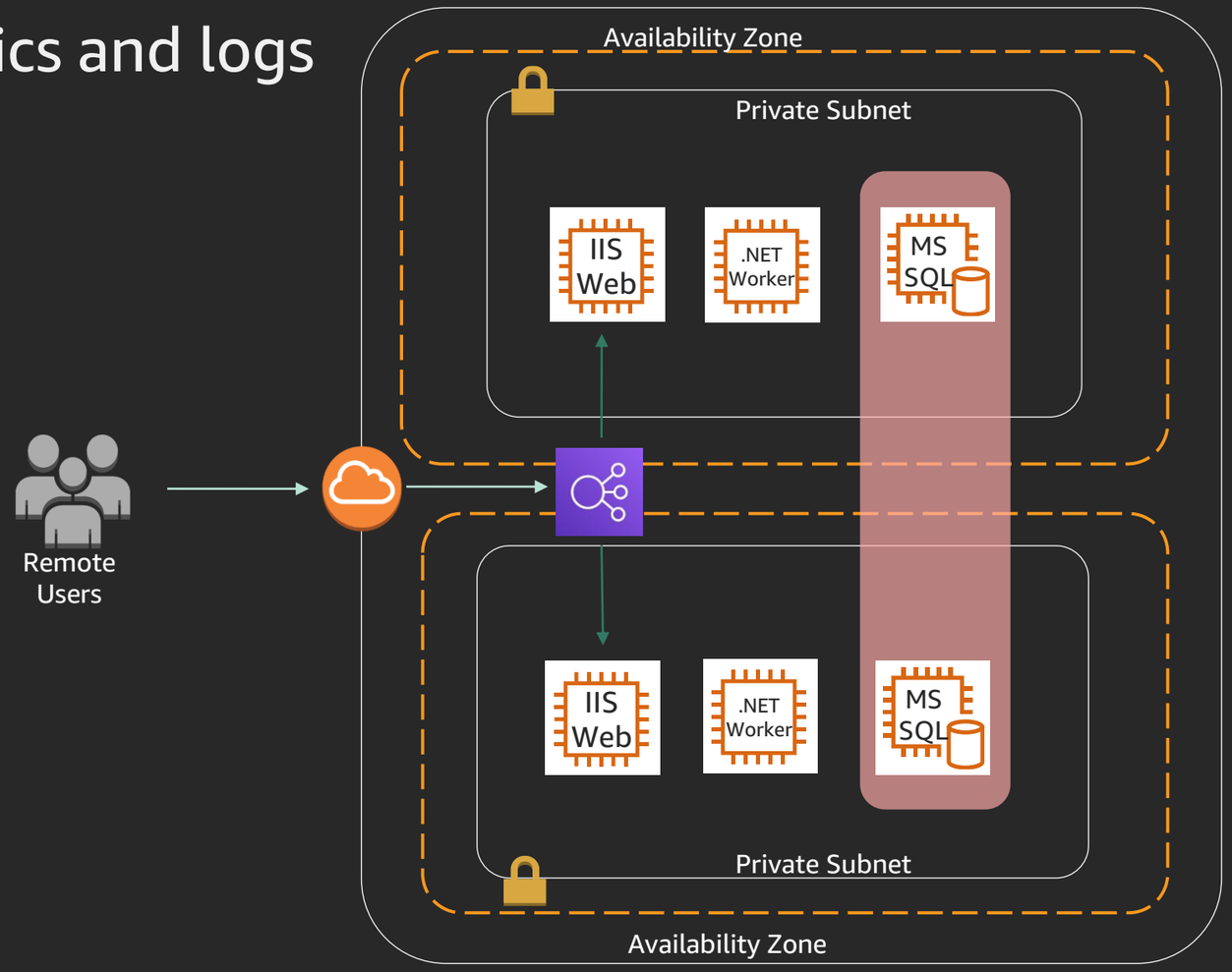
Take action

Visualize health using dashboards,

trigger actions/events

Application monitoring gaps

- Identify and set-up relevant metrics and logs



Application monitoring gaps

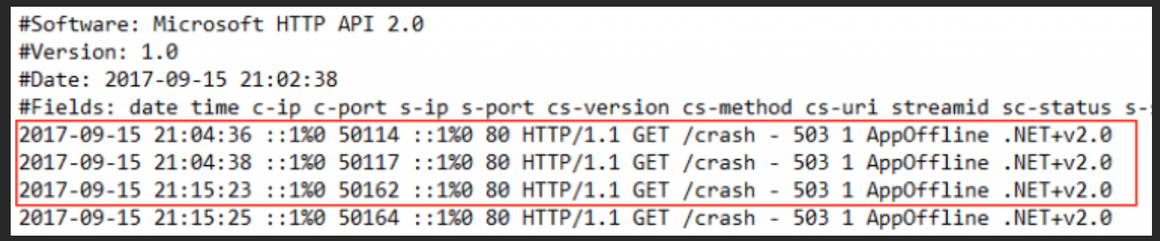
- Identify and set-up relevant metrics and logs

- Detect signs of a problem

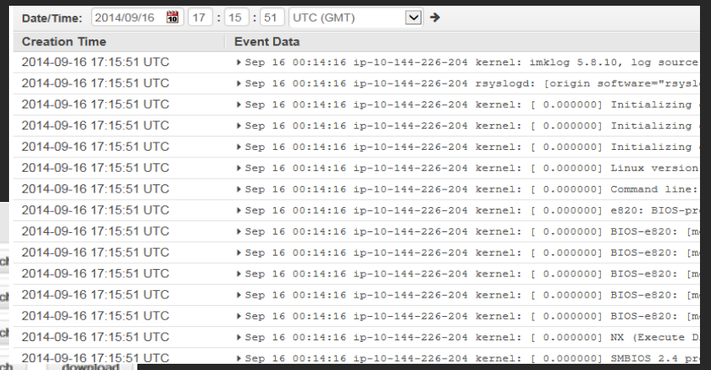
Application monitoring gaps

- Identify and set-up relevant metrics and logs
- Detect signs of a problem
- Diagnose and troubleshoot

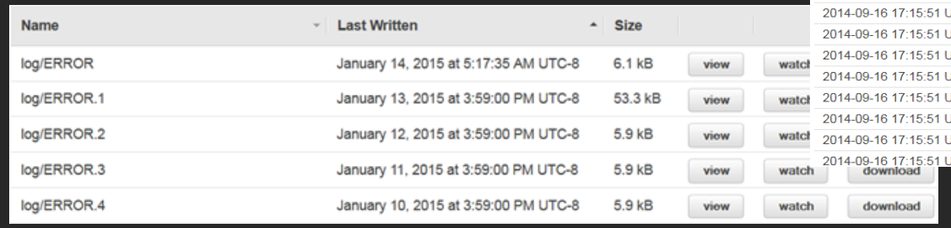
IIS logs



Windows Event logs



SQL Server error log



Amazon CloudWatch Application Insights

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Amazon CloudWatch Application Insights for .NET & SQL Server

Easily and quickly detect and diagnose common problems with .NET and SQL Server applications

Visibility into monitoring data

ML-based anomaly detection

Visualize root-cause with automated dashboards

Remedial actions using Systems Manager

Benefits

- Easily set-up monitoring for .NET applications
- Out-of-the-box analysis
- Reduce mean-time-to-resolution (MTTR)

A common scenario…

How it works

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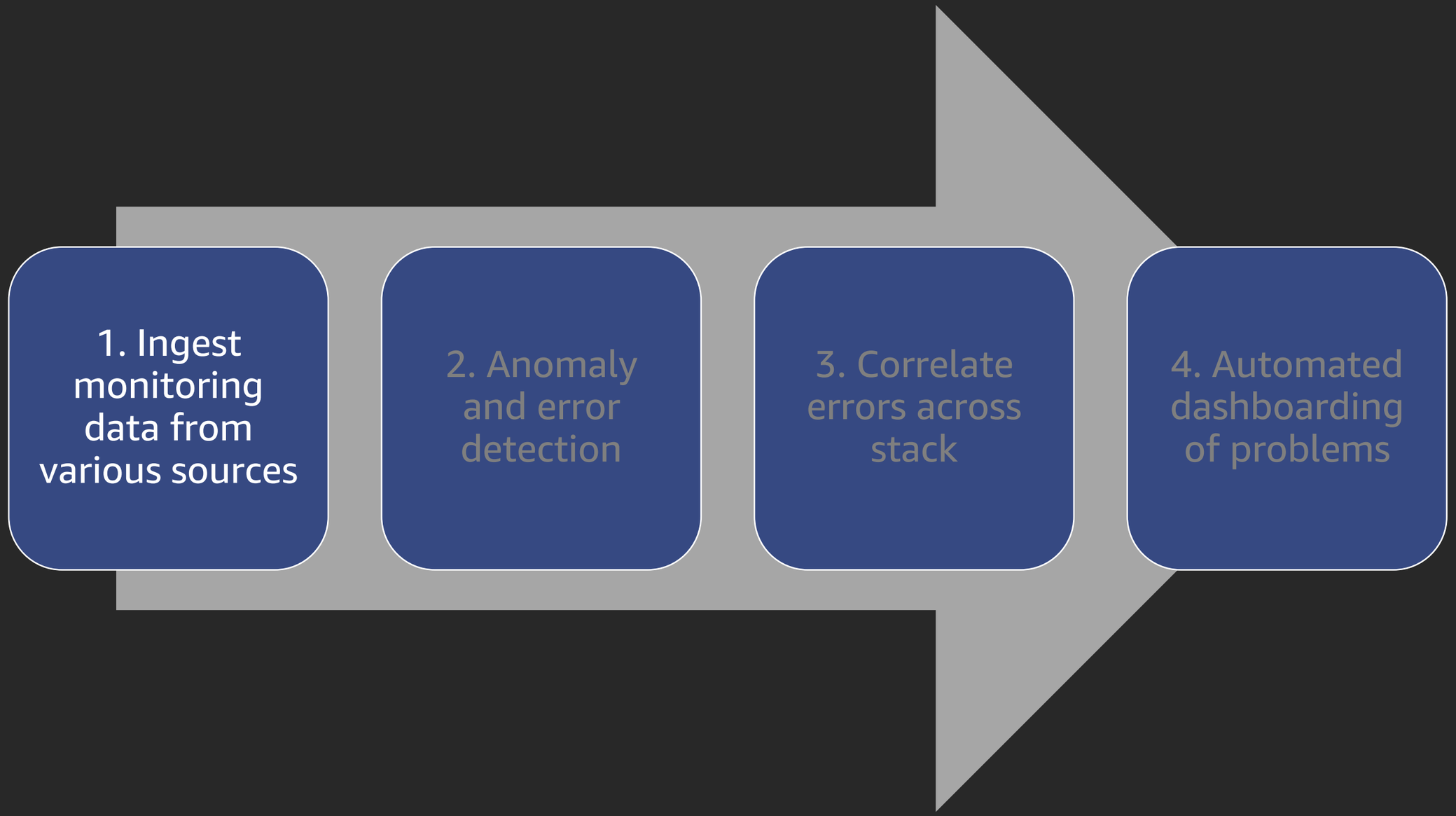
How it works


1. Ingest monitoring data from various sources
2. Anomaly and error detection
3. Correlate errors across stack
4. Automated dashboarding of problems

Supported data sources

1. Platform metrics

- Built-in platform metrics
- Advanced custom
- Custom alarms

2. Application logs

- Microsoft IIS
- Microsoft SQL Server Error log
- Custom .NET application

3. Windows Performance Counters

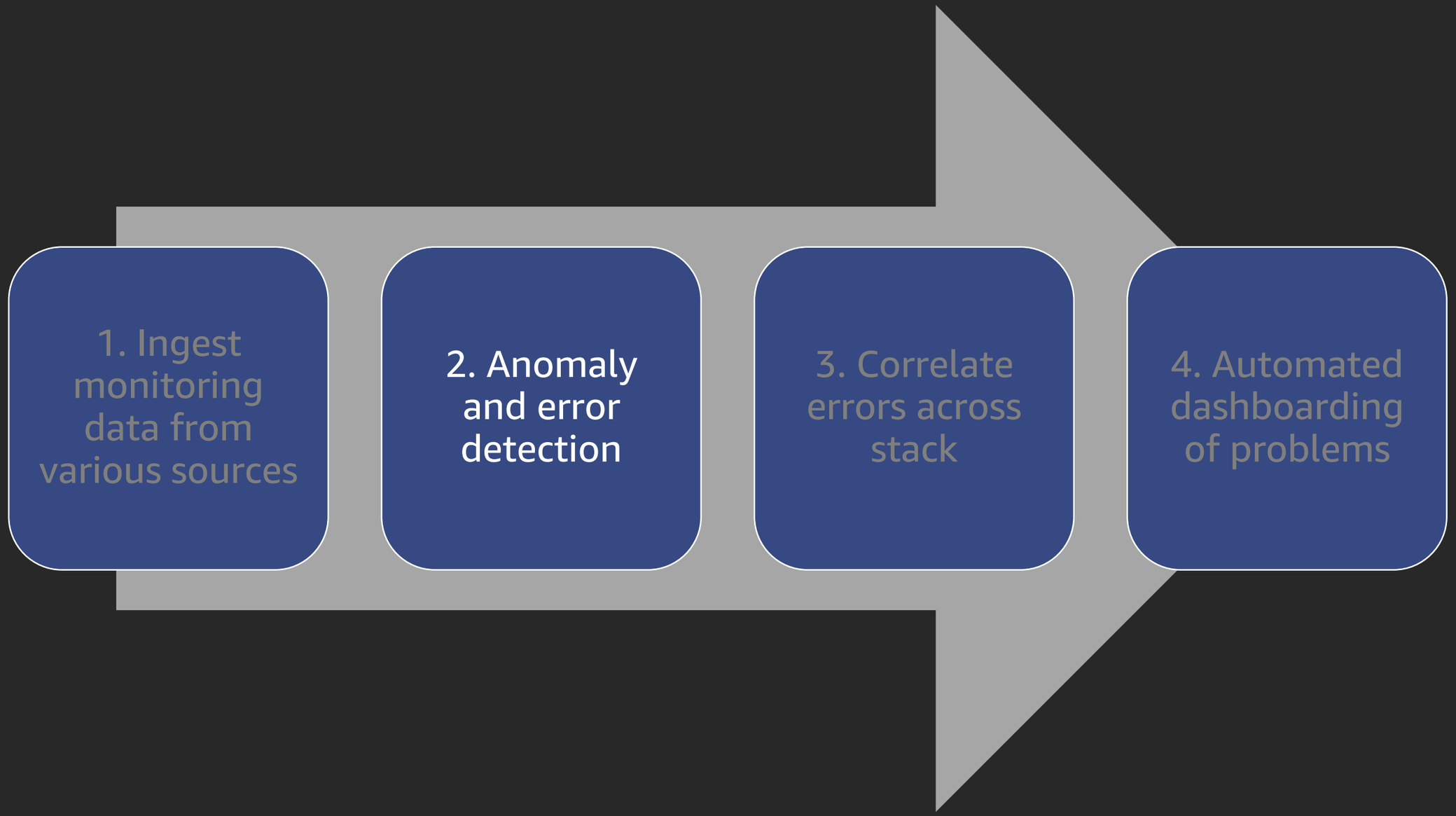
- .NET CLR, W3SVC_W3WP, Interop CLR
- SQL Server metrics
- IIS counters

4. Windows Event logs

- System, Security and Application
- Windows and application logs

5. Custom alarms

How it works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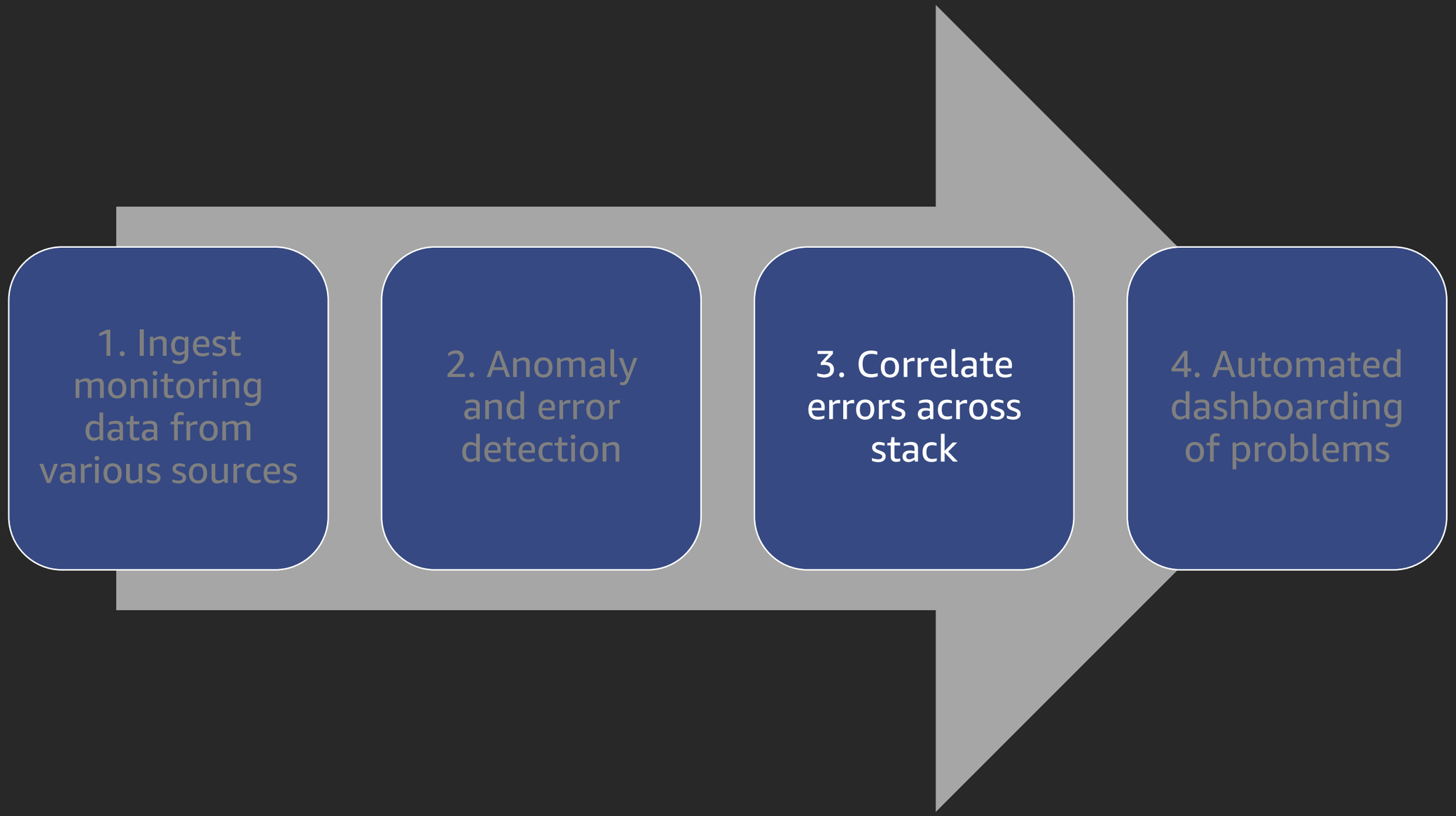
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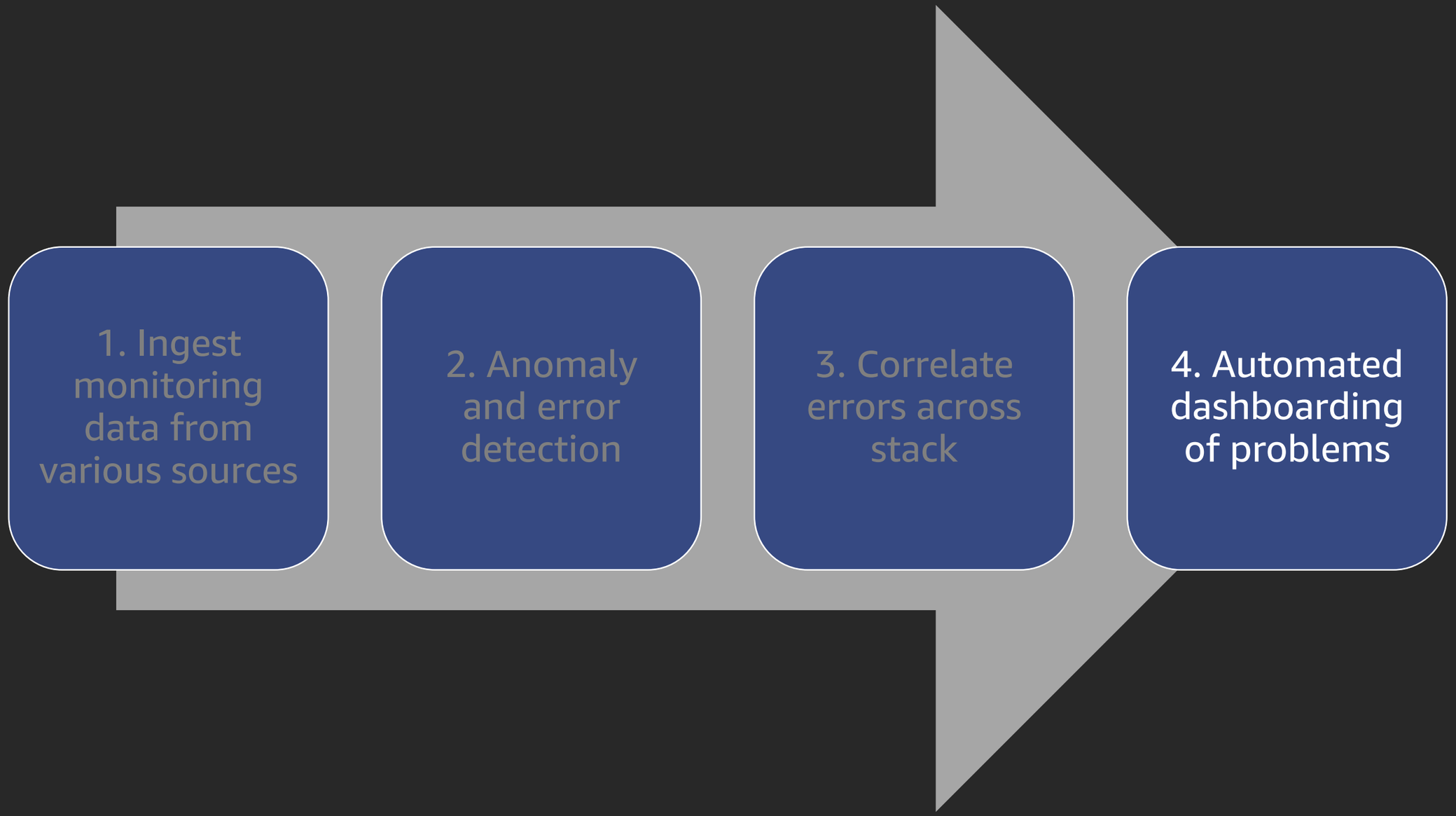
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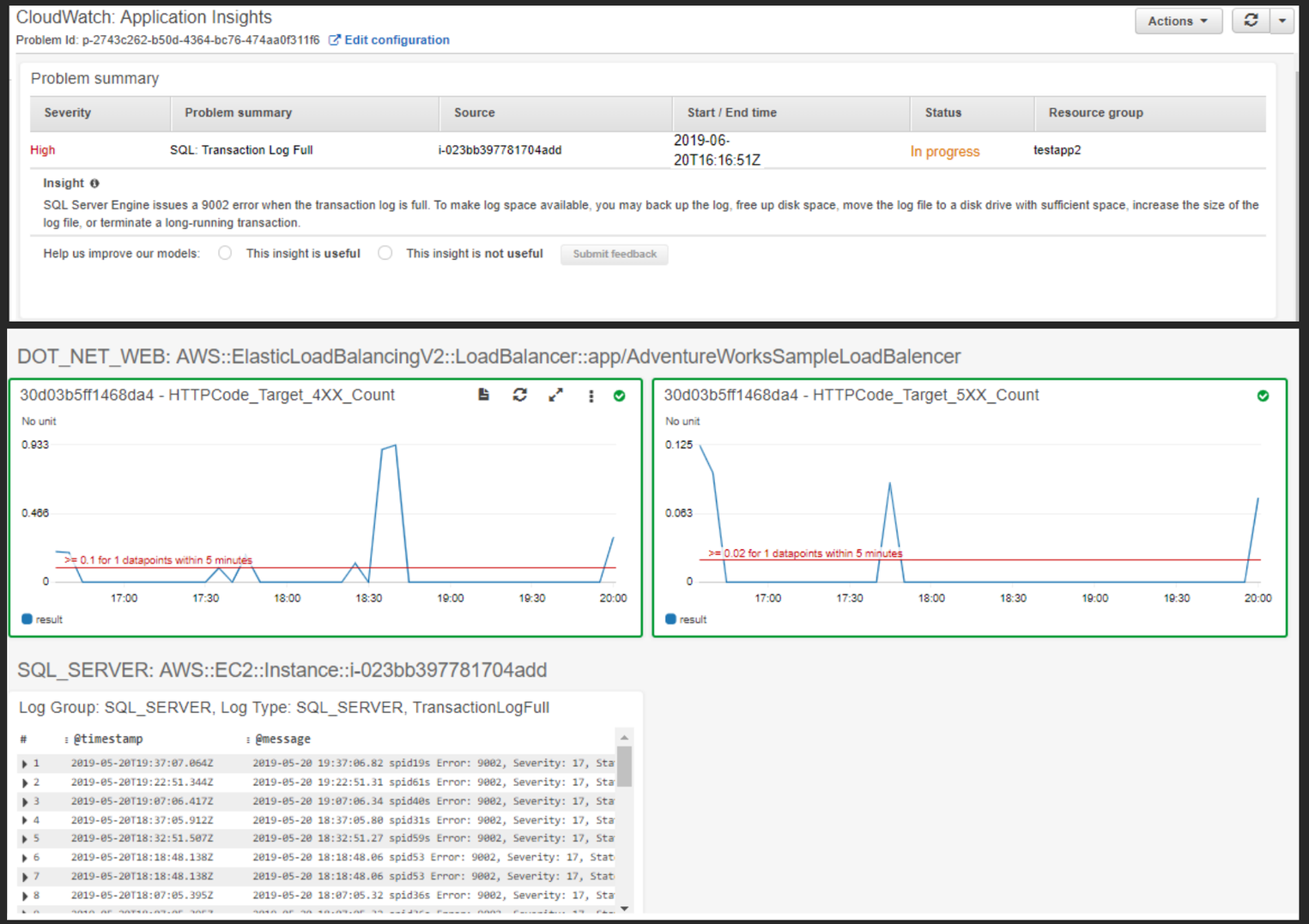
Problem-based automated dashboards



Hands-on labs and demo

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Common Problems

- Microsoft SQL Server
  - Failed backups, memory leak errors, database I/O operation errors, SQL time-out due to memory lock, too many parallel operations
- Microsoft IIS
  - HTTP request URI too large, read access forbidden, I/O operation aborted, Client request time-out, 4XX and 5XX errors

Summary

- CloudWatch Application Insights for .NET & SQL Server brings together CloudWatch capabilities
- Easy set-up and getting started experience
- Machine-learning based problem detection
- Faster troubleshooting through automated dashboards
- Reduced MTTR and improved user experience

Questions?

Learn more at https://docs.aws.amazon.com/AmazonCloudWatch/latest/monitoring/cloudwatch-application-insights.html

Thank you!

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