



Observability

Site Reliability Engineering



Objectives

In this module, we will provide an overview of the concept of observability.

Learning Objectives

- Describe the parts of observability
- Discuss the concept of application performance monitoring
- Explain the relationship between service level indicators (SLIs), service level objects (SLOs) and service level agreements (SLAs)



Observability

- ↘ More than monitoring
- ↘ Three parts
 - >>> Logs
 - >>> Metrics
 - >>> Traces
- ↘ Using data from a complex system to infer its state
 - >>> Capacity & performance
 - >>> Satisfaction
 - >>> Expectations

Three Parts of Observability



Logs

Record of past events



Metrics

Current data about the system components



Traces

Capture activity for a business transaction

Shows interactivity in complex systems



Observability Data

- ↘ Combining four parts to answer questions
 - >>> Why performance is degrading
 - >>> What dependency behaviors have changed
 - >>> Why this application is failing
 - >>> Where to look for a fix



Expectations

- ↘ Focus on user expectations
 - >>> Delivering more than expected doesn't gain much
 - >>> Failing to deliver will lose a lot
- ↘ Observability should provide at a glance:
 - >>> Are we out of SLO?
 - >>> Should SLO be adjusted?
 - >>> Where is the problem?



Observing Toil

- ↘ How do we measure toil success?
- ↘ Where do we get the metrics?



Q&A



SLAs vs SLOs vs SLIs

A close-up photograph of a pair of ornate metal scales of justice, with a wooden gavel resting on the surface in front of them. The image is overlaid with a semi-transparent blue filter.

Service level agreements

Formal financial or contractual agreements

Usually with penalties

A photograph showing a hand holding a pen, poised to sign a document. The document has some handwritten text, including 'Cb' and 'LIL'. The image is overlaid with a semi-transparent pink filter.

Service level objectives

Reflect customer expectations

Based on customer satisfaction

Majority of customers happy

Always outliers

An abstract image with a teal background, featuring organic, flame-like or smoke-like shapes in a lighter shade of teal. The image is overlaid with a semi-transparent teal filter.

Service level indicators

Show progress towards SLO

Indicate health of business

Observing Toil

- ↘ Toil backlog
 - >>> Should be reducing
 - >>> Should not see the same toil recurring in the backlog
 - >>> Error budget not decreasing as fast = more reliable system
- ↘ Reduced fatigue in the team
- ↘ Shorter MTTR
- ↘ Toil metrics come from
 - >>> Ticketing and job systems such as Jira and ServiceNow
 - >>> Other systems that gather information about time at work

