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Reliable digital IT experience

NetEye
User Group
2023



Society

runs on

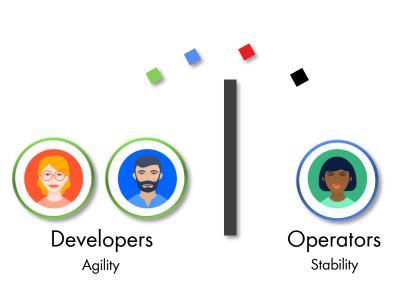
software services.



DevOps Agile Approach



Set of principles building on the Agile movement and best practices for developing and deploying software.







WITH DEVOPS ADOPTION





Site reliability engineering practice





"SRE is what you get when you treat operations as if it's a software problem" (Benjamin Treynor Sloss)



[...] a software engineering approach to IT operations. SRE teams use software as a tool to manage systems, solve problems, and <u>automate</u> operations tasks.



[...] an engineering discipline devoted to helping an organization sustainably achieve the appropriate level of reliability in their systems, services, and products.



[...] Site reliability describes the stability and quality of service that an application offers after being made available to end users.

SRE as Service Management approach



DevOps

- Focus is on the software core development
- Team members are development-oriented but informed of the needs of IT-Ops team
- Works with IT-Ops team to assist in preparing the software for operations

SRE

- Focus is on response times
 and software reliability
- Team members are
 operations-oriented but informed
 of the needs of development team
- Works with development team to assist in informing them on the needs of the operations team

DevSecOps

- Focus is on the security
- Works with IT-Ops and Dev team to assist in security compliance



Class SRE implements DevOps











Implement Gradual Change



Leverage Tooling & Automation



Measure Everything



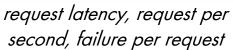


SREs: desired state of services



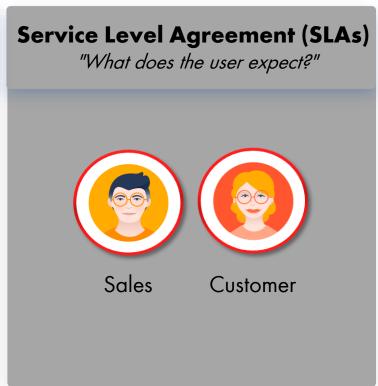
Enough room for error and enough room to roll out feature reliably







binding target for a collection of SLIs



business agreement based on SLOs



Accept Failure as Normal



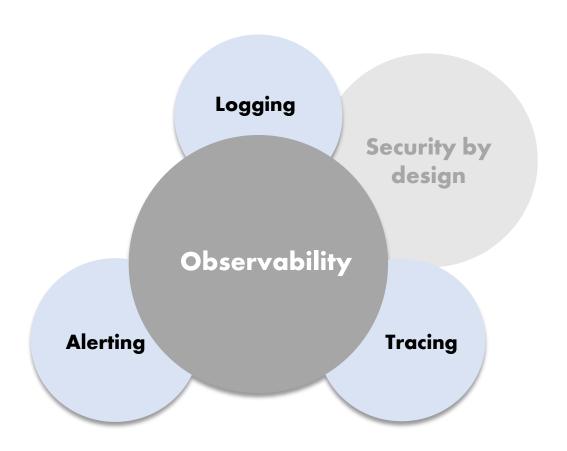
Reliable digital IT Experience requires SRE Observability



Detect and diagnose issues as they happen to avoid customer-impacting outages or performance degradation







Methods of achieving observability





IT Operation Analytics

TELEMETRY

LOG Management

& SIEM





Observability

AlOps



Service Management

> INCIDENT RESPONSE



Monitoring

ORCHESTRATION & DETECTION



APM

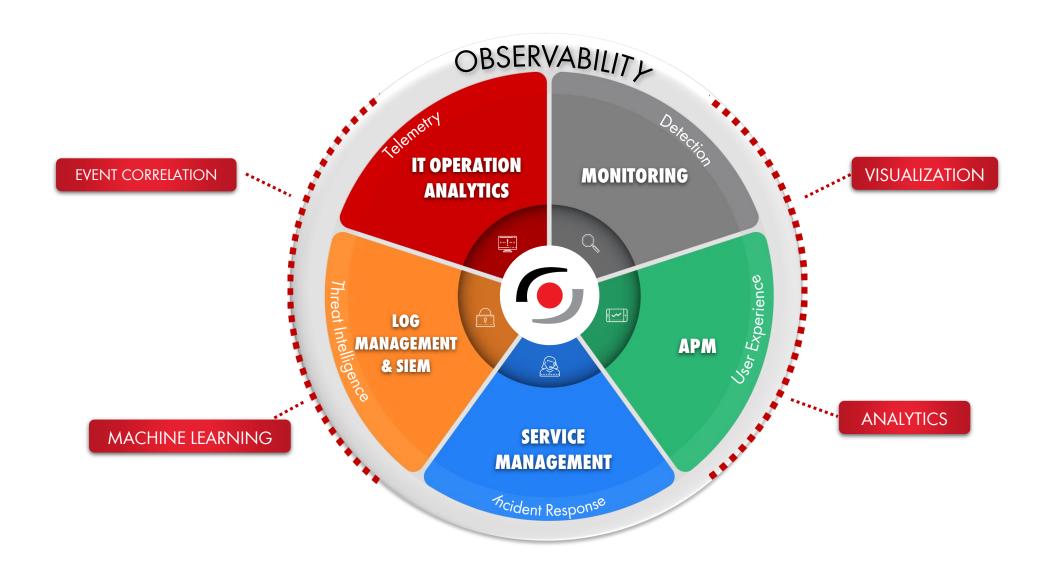
USER EXPERIENCE



Reliable digital IT Experience requires SRE Observability



Detect and diagnose issues as they happen to avoid customer-impacting outages or performance degradation



NetEye Observability



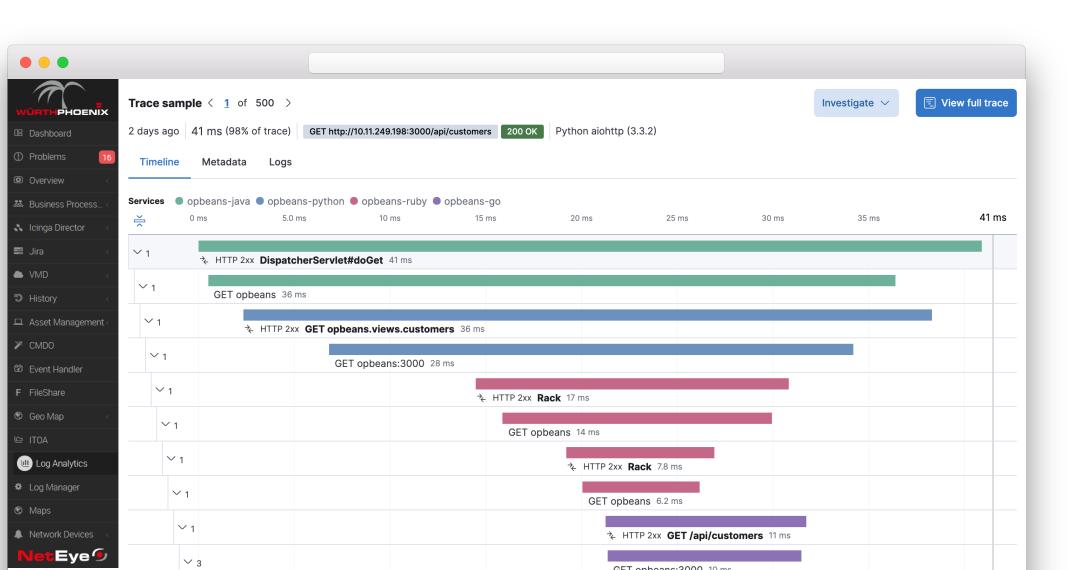






NetEye Observability



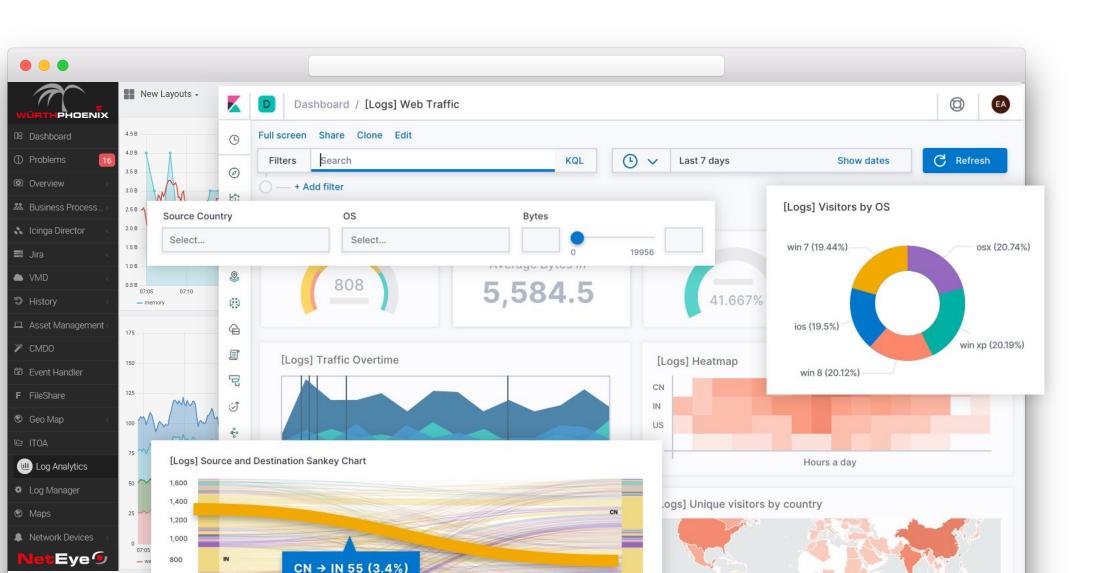






NetEye Observability









Alerting for SRE must be actionable



Non-actionable alerts are useless: they create noise and make the monitoring system not trustable

Service Level Indicators

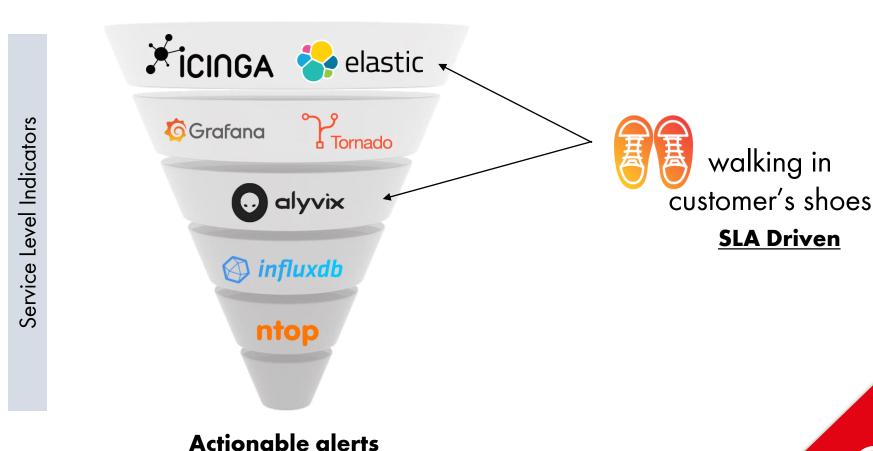


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SLO Driven



Alerting for SRE must be actionable

Service Level Indicators



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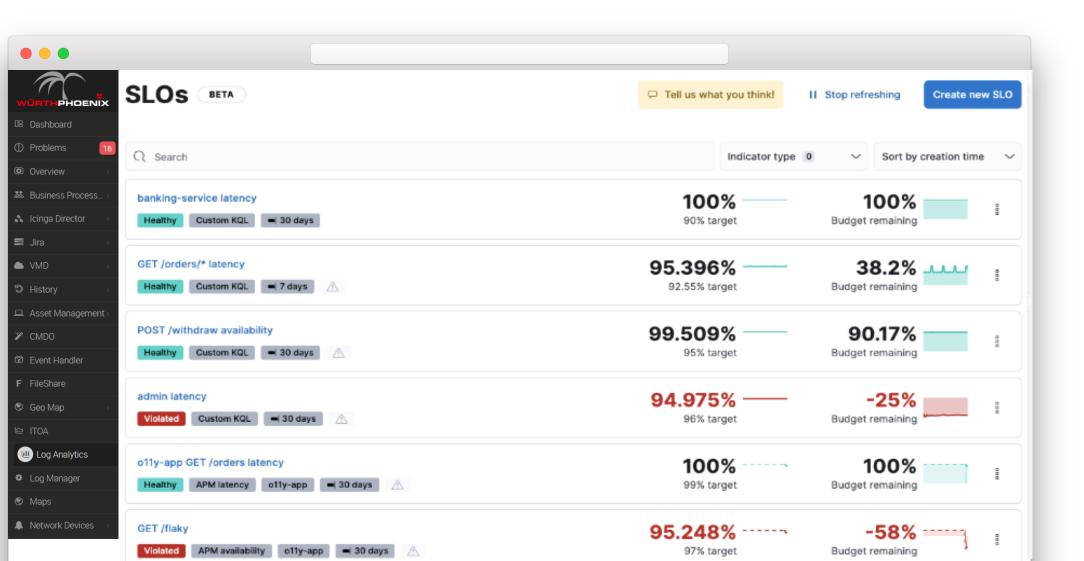
FICINGA Pelastic **Grafana** alyvix (influxdb) ntop



Error Budget Monitoring



Correct communication (CSRE) will reduce error budget consumption !!!







Eliminating Toil



«If a human operator needs to touch your system during normal operations, you have a bug. The definition of normal changes as your systems grow.» Carla Geisser, Google SRE

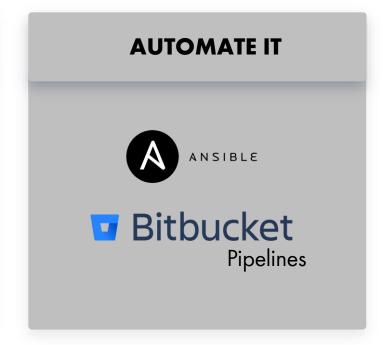


Leverage
Tooling &
Automation

RECOGNIZE IT AS A TOIL

- Manual
- Repetitive
- Automatable
- Tactical
- No enduring value
- On with service growth

TRACE IT Jira Jira Service Management

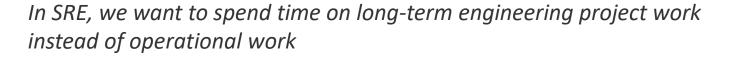














Incident Response: learning from failure







Immediate benefits of SRE adoption

- Higher levels of application reliability and resiliency
- Increased efficiency through automation
- Improved customer satisfaction and retention
- Driving a culture of continuous improvement
- Business agility alignment





Immediate benefits of SRE adoption



