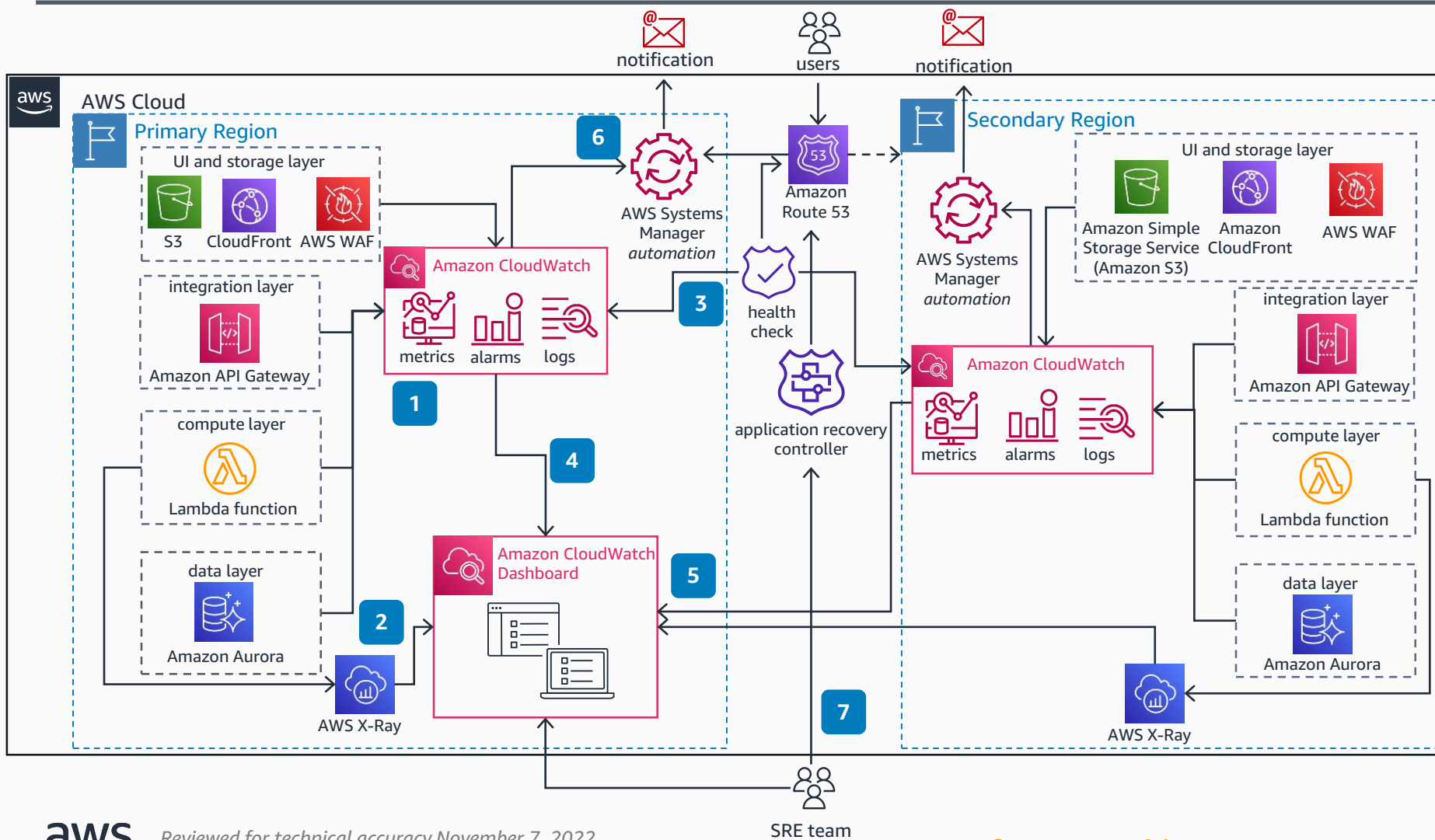


# Guidance for Deep Application Observability on AWS

Monitoring application and infrastructure components in Amazon Web Services (AWS) to improve resiliency across two AWS Regions requires deep monitoring across the entire stack. Absolute failures, grey failures, and service degradation need to be observed across both Regions and coupled with automated alerting and actioning.



- 1 All appropriate business and infrastructure metrics are collected using **Amazon CloudWatch**.
- 2 Application-level logic, like in **AWS Lambda**, can be collected using specific monitoring services, such as **AWS X-Ray**.
- 3 **Amazon Route 53** health checks are used to monitor appropriate endpoints.
- 4 **Amazon CloudWatch** metrics, logs, and alarms are displayed on **Amazon CloudWatch** dashboards.
- 5 **Amazon CloudWatch** metrics, logs, and alarms are displayed on **Amazon CloudWatch** dashboards across Regions. **Amazon CloudWatch** instances are replicated across regions.
- 6 **AWS Systems Manager** Automation runbooks are initiated on service degradation, grey failures, and absolute failures. They can be used to run tasks and notify the site reliability engineering (SRE) team.
- 7 Upon receiving the notification, the SRE team can signal the **Amazon Route 53** Application Recovery Controller to point to the secondary cluster and follow relevant failover procedures.

