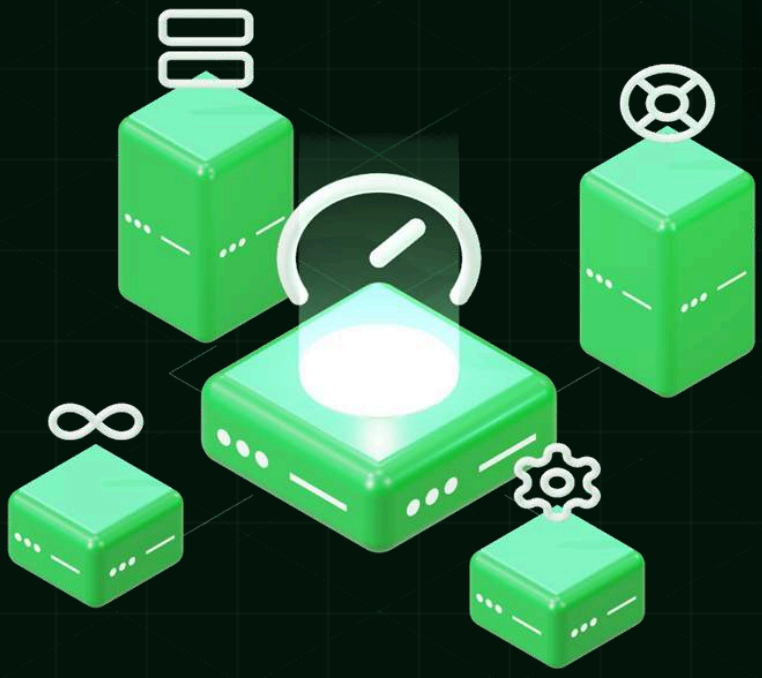
✦ DEVOPS & PLATFORM ENGINEERING · EXPERT

SRE — Site Reliability Engineering

Reliability as an engineering discipline.





80	8	SAM-SRE
HOURS	MODULES	CERTIFICATION

✦ INSIDE THIS BROCHURE

Contents

Program overview 03

Who it's for 04

Learning outcomes 05

Program runway 06

Detailed curriculum 07

Tools & platforms 10

Projects & capstone 11

Certification & method 12

Learning path 13

FAQs 14

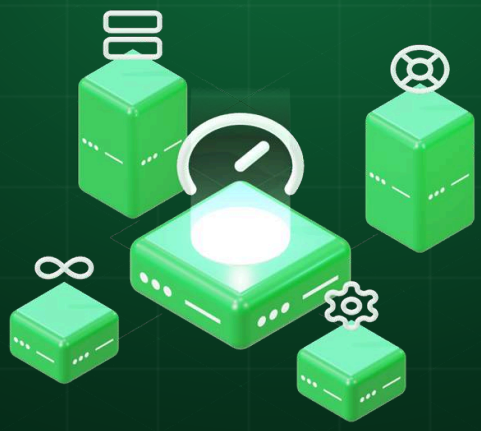


AT A GLANCE

Level	Expert
Duration	80 Hours
Modules	8
Certificate	SAM-SRE

✦ PROGRAM OVERVIEW

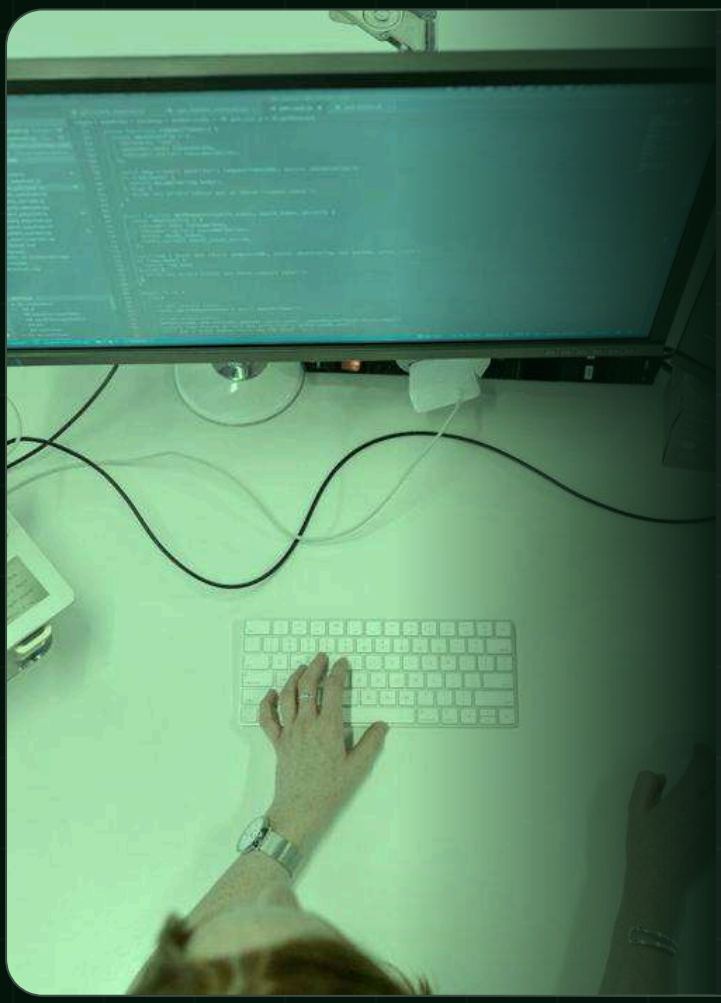
Reliability as an engineering discipline.



SLOs, error budgets, incident response and reliability engineering at scale.

Users expect services to be available and fast, while businesses expect teams to keep shipping features. Site Reliability Engineering balances both by treating operations as a software problem, using SLOs, error budgets, automation and blameless learning. This expert program covers reliability measurement, incident response, toil reduction, capacity planning, resilience testing and production readiness for large-scale distributed systems.

LEVEL	DURATION	CERTIFICATION	DELIVERY
Expert	80 Hours	SAM-SRE	ILT · VILT · Blended



✦ WHAT YOU'LL PRACTISE

Define SLIs, SLOs and error budgets	01
Run effective incident response	02
Reduce toil with automation	03
Plan capacity and resilience	04

✦ WHO IT'S FOR

Built for people ready to grow.

01

Developers & sysadmins

DevOps, Linux and Git foundations

02

DevOps engineers

Docker, Kubernetes, Terraform, CI/CD

03

Platform teams

GitOps, Helm, Backstage, observability

04

Reliability leads

SRE practices and DevSecOps

PREREQUISITES

Strong Linux and networking fundamentals	01
Hands-on Kubernetes and observability experience	02
Scripting skills in Python, Go or Bash	03

ROLES YOU CAN TARGET

- Site Reliability Engineer ↗
- Senior DevOps Engineer ↗
- Production Engineer ↗
- Reliability Lead ↗
- Incident Commander ↗
- Infrastructure Engineer ↗

✦ LEARNING OUTCOMES

What you'll be able to do.

01 Define meaningful SLIs, SLOs and error budget policies

02 Lead structured incident response using an incident command model

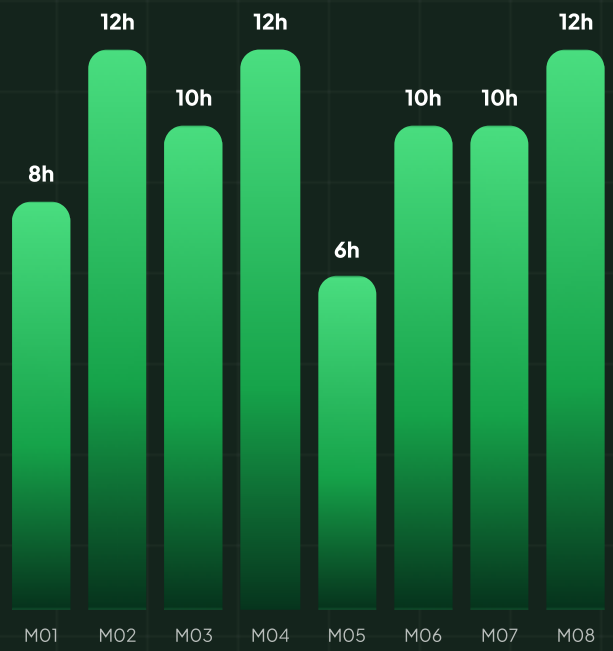
03 Write blameless postmortems that drive lasting improvements

04 Identify and eliminate toil through targeted automation

05 Plan capacity and design for resilience and graceful degradation

06 Validate reliability through chaos engineering and load testing

HOURS PER MODULE



✦ PROGRAM RUNWAY

Your journey, module by module.

8
MODULES · 80 HRS

01	**SRE Principles and Practices** Origins and principles of SRE, SRE versus DevOps, Embracing risk	8 hrs
02	**SLIs, SLOs and Error Budgets** Choosing user-centric SLIs, Setting realistic SLO targets, Error budget calculation	12 hrs
03	**Monitoring and Alerting for Reliability** Four golden signals, Symptom versus cause alerts, Prometheus, Grafana and Alertmanager	10 hrs
04	**Incident Management** Severity levels and escalation, Incident command roles, Communication and status updates	12 hrs
05	**Postmortems and Learning** Blameless postmortem culture, Timeline and contributing factors, Action item tracking	6 hrs
06	**Toil Reduction and Automation** Defining and measuring toil, Automation priorities, Python and Go for operations	10 hrs
07	**Capacity Planning and Performance** Demand forecasting, Load testing with k6, Autoscaling strategies	10 hrs
08	**Resilience and Chaos Engineering** Failure modes in distributed systems, Timeouts, retries and circuit breakers, Graceful degradation and load shedding	12 hrs
★	**Capstone · Reliability Program for Production Service** Assessment, capstone review and certification	

✦ DETAILED CURRICULUM

The syllabus.

Modules 01–03

MODULE 01

SRE Principles and Practices

8 hours

Hands-on lab
Assess a sample service against a production readiness review checklist.

TOPICS COVERED

- Origins and principles of SRE
- SRE versus DevOps
- Embracing risk
- SRE team models
- Reliability as a feature
- Production readiness reviews

MODULE 02

SLIs, SLOs and Error Budgets

12 hours

Hands-on lab
Define SLOs for an API and implement burn-rate alerts in Prometheus.

TOPICS COVERED

- Choosing user-centric SLIs
- Setting realistic SLO targets
- Error budget calculation
- Error budget policies
- SLOs as code with Sloth or OpenSLO
- Burn-rate alerting

Prometheus

MODULE 03

Monitoring and Alerting for Reliability

10 hours

Hands-on lab
Redesign a noisy alert set into actionable, SLO-driven alerts.

TOPICS COVERED

- Four golden signals
- Symptom versus cause alerts
- Prometheus, Grafana and Alertmanager
- Reducing alert fatigue
- Dashboards for on-call

Prometheus Grafana

LEARN BY DOING

8 guided labs, one in every module.

✦ DETAILED CURRICULUM

Syllabus, continued.

Modules 04–06

MODULE 04

Incident Management

12 hours

Hands-on lab
Run a simulated major incident with defined commander, ops and comms roles.

TOPICS COVERED

- Severity levels and escalation
- Incident command roles
- Communication and status updates
- On-call rotations and handoffs
- Runbooks and playbooks
- Incident tooling and paging

MODULE 05

Postmortems and Learning

6 hours

Hands-on lab
Write a blameless postmortem for the simulated incident with action items.

TOPICS COVERED

- Blameless postmortem culture
- Timeline and contributing factors
- Action item tracking
- Learning reviews
- Sharing lessons across teams

MODULE 06

Toil Reduction and Automation

10 hours

Hands-on lab
Measure team toil and automate one recurring manual task with Python.

TOPICS COVERED

- Defining and measuring toil
- Automation priorities
- Python and Go for operations
- Self-healing with Kubernetes operators
- Safe automation guardrails

Python · Kubernetes

LEARN BY DOING

8 guided labs, one in every module.

✦ DETAILED CURRICULUM

Syllabus, continued.

Modules 07–08

MODULE 07

Capacity Planning and Performance

10 hours

Hands-on lab
Load test a service with k6 and produce a capacity plan.

TOPICS COVERED

- Demand forecasting
- Load testing with k6
- Autoscaling strategies
- Performance bottleneck analysis
- Cost and efficiency trade-offs

MODULE 08

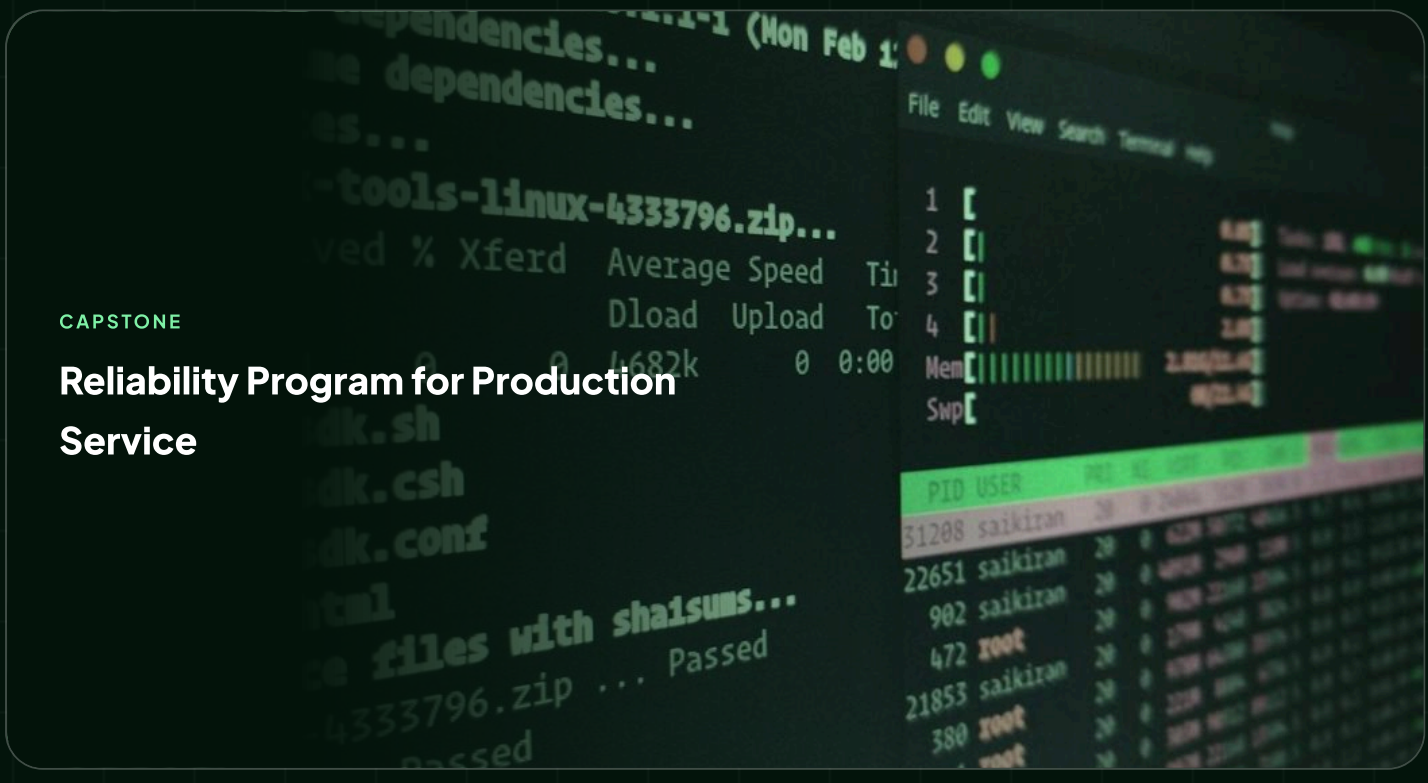
Resilience and Chaos Engineering

12 hours

Hands-on lab
Run a chaos experiment that kills pods and verify SLO impact.

TOPICS COVERED

- Failure modes in distributed systems
- Timeouts, retries and circuit breakers
- Graceful degradation and load shedding
- Multi-zone and disaster recovery design
- Chaos experiments with LitmusChaos or Chaos Mesh
- Game days



CAPSTONE

Reliability Program for Production Service

✦ YOUR STACK

Tools you'll build with.

Real platforms and frameworks — the same stack modern teams ship with, practised in cloud-hosted labs.

Prometheus
Metrics & alerting

Grafana
Observability dashboards

Kubernetes
Container orchestration

Linux
Server & CLI fundamentals

Python
Automation & scripting



LAB ACCESS

24×7 cloud labs for the length of the program

✦ HANDS-ON WORK

Projects that prove you can do it.

01

SLO Framework for a Service

Define SLIs, SLOs and an error budget policy for a microservice, implemented as code with dashboards and burn-rate alerts.

02

Incident Response Playbook

Create severity definitions, escalation paths, runbooks and communication templates, then test them in a simulated incident drill.

03

Chaos and Load Game Day

Plan and run a game day combining k6 load tests and chaos experiments, documenting findings and resilience improvements.

CAPSTONE PROJECT

Reliability Program for Production Service

Take ownership of a Kubernetes-hosted application and build its reliability program: SLOs and error budgets, actionable alerting, on-call runbooks, an incident simulation with postmortem, toil automation, capacity plan and chaos-tested resilience improvements.

Real-world scenario | Mentor review | Portfolio ready



CERTIFICATION

SAM-SRE

Awarded on successful completion of the program assessments.

- MCQ assessments
- Practical lab evaluation
- Project & capstone review
- Final presentation



✦ HOW YOU LEARN

The SAM Learning Framework™

PHASE 01

S

Scenario

Real-world attack and use-case scenarios open every module.

PHASE 02

A

Apply

Hands-on lab work, CTF challenges and live projects.

PHASE 03

M

Master

Assessment, peer review and certification prep.

PHASE 04

M

Mentor

Post-program career guidance and support.

DELIVERY MODELS

- Instructor-Led (ILT)
- Virtual Instructor-Led
- Self-Paced Online
- E-Learning Licensing
- Blended Learning
- Corporate Onsite
- Bootcamp Intensive
- Hackathon / CTF
- Mentorship

✦ LEARNING PATH · DEVOPS & PLATFORM ENGINEERING

Where this program fits.

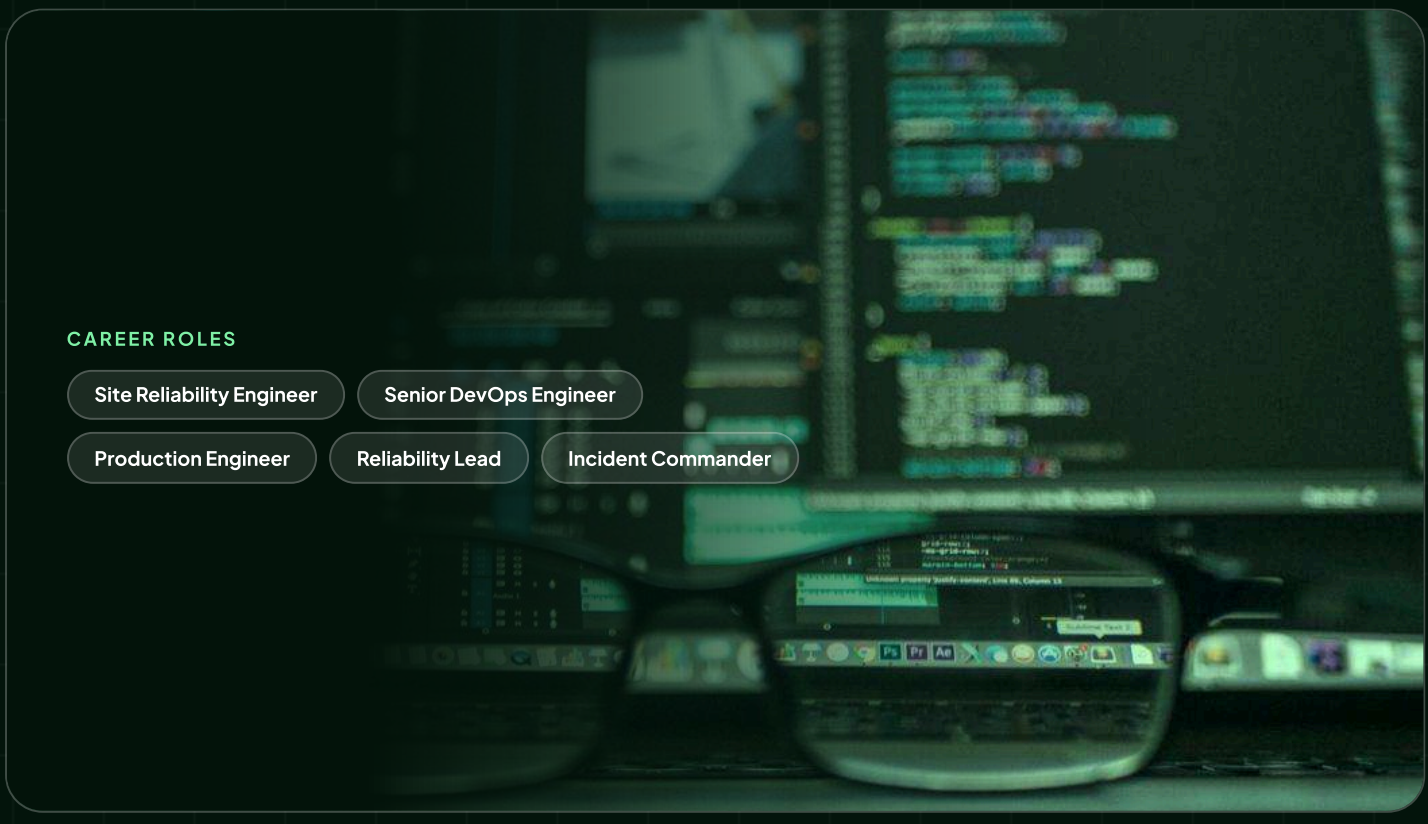
Beginner	Intermediate	Advanced	Expert
3 programs	6 programs	5 programs	You are here

BEFORE THIS

DevSecOps — Security in DevOps Pipelines	72 Hours
ArgoCD & GitOps	48 Hours
Helm & Kubernetes Advanced	56 Hours
Platform Engineering with Backstage	64 Hours

UP NEXT

The top of this pathway — explore related tracks.



CAREER ROLES

- Site Reliability Engineer
- Senior DevOps Engineer
- Production Engineer
- Reliability Lead
- Incident Commander

✦ FAQS

Questions, answered.

Q01

Do I need prior experience to join?

This is an expert-level program. You should have strong Linux and networking skills, hands-on Kubernetes and monitoring experience, and the ability to script in Python, Go or Bash. It suits working engineers moving into SRE.

Q02

How is the program delivered and scheduled?

Sessions are instructor-led and run as live virtual classes or in a blended format. Batch timings, including weekday and weekend options, are confirmed at enrolment, and session recordings and notes support revision between classes.

Q03

What certification will I receive?

Learners who complete the required labs, projects and final assessments receive the Samcommunity Academy SAM-SRE certificate. It records the skills you have demonstrated during the program and is awarded only after assessments are passed.

Q04

Will I get access to labs and tools?

Yes. You work with lab Kubernetes clusters and tools including Prometheus, Grafana, Alertmanager, k6, Sloth and Chaos Mesh or LitmusChaos. All are open source, so you can reproduce the exercises in your own environment.

Q05

Does the program include career support?

You receive guidance on building a portfolio from your projects, resume and profile review, and mock interviews focused on site reliability, production engineering and senior DevOps roles. Career support helps you prepare, but jobs, interviews and salaries are not guaranteed.



✦ LET'S TALK

Start SRE — Site Reliability Engineering with Samcommunity.

INDIVIDUALS

academy@samcommunity.in

Batches, enrolment & career guidance

CORPORATE & INSTITUTIONS

corporate@samcommunity.in

Team batches & custom programs

Xylyn Samcommunity Private Limited · DPIIT-recognized startup · Surat, Gujarat, India