

How To Scale Chaos Engineering

Scaling Chaos Engineering is all about standards, processes, and efficiency. You need to build replicable testing practices that can be adopted by teams across your organization.



PHASE 1: PROVE VALUE WITH A SINGLE SERVICE



1. Select a critical service to maximize impact

For your first service, start with one where an outage would have the biggest customer impact to get the most value from your testing.

Common critical services:

- ❗ Checkout application
- ❗ Billing data processor
- ❗ Authorization verification



2. Define Health Checks from customer-impacting metrics

A **Health Check** monitors systems before, during, and after a test. Use metrics that impact users, such as the [four SRE Handbook signals](#).

Common health checks:

- ✅ Latency
- ✅ Error rates
- ✅ Request rates



3. Discover and test dependencies

[Map your dependencies](#), then test how your service reacts to dependency outages. These tests alone can take services from 99.9% to 99.99% uptime.

Common dependencies:

- ❗ Databases
- ❗ API calls
- ❗ Content Delivery Networks



4. Start with the most common failures

Most outages are caused by the same [common failure modes](#). Start with these failures, then you can add tests unique to your architecture.

Common failures:

- ❗ Scalability
- ❗ Redundancy
- ❗ Latency



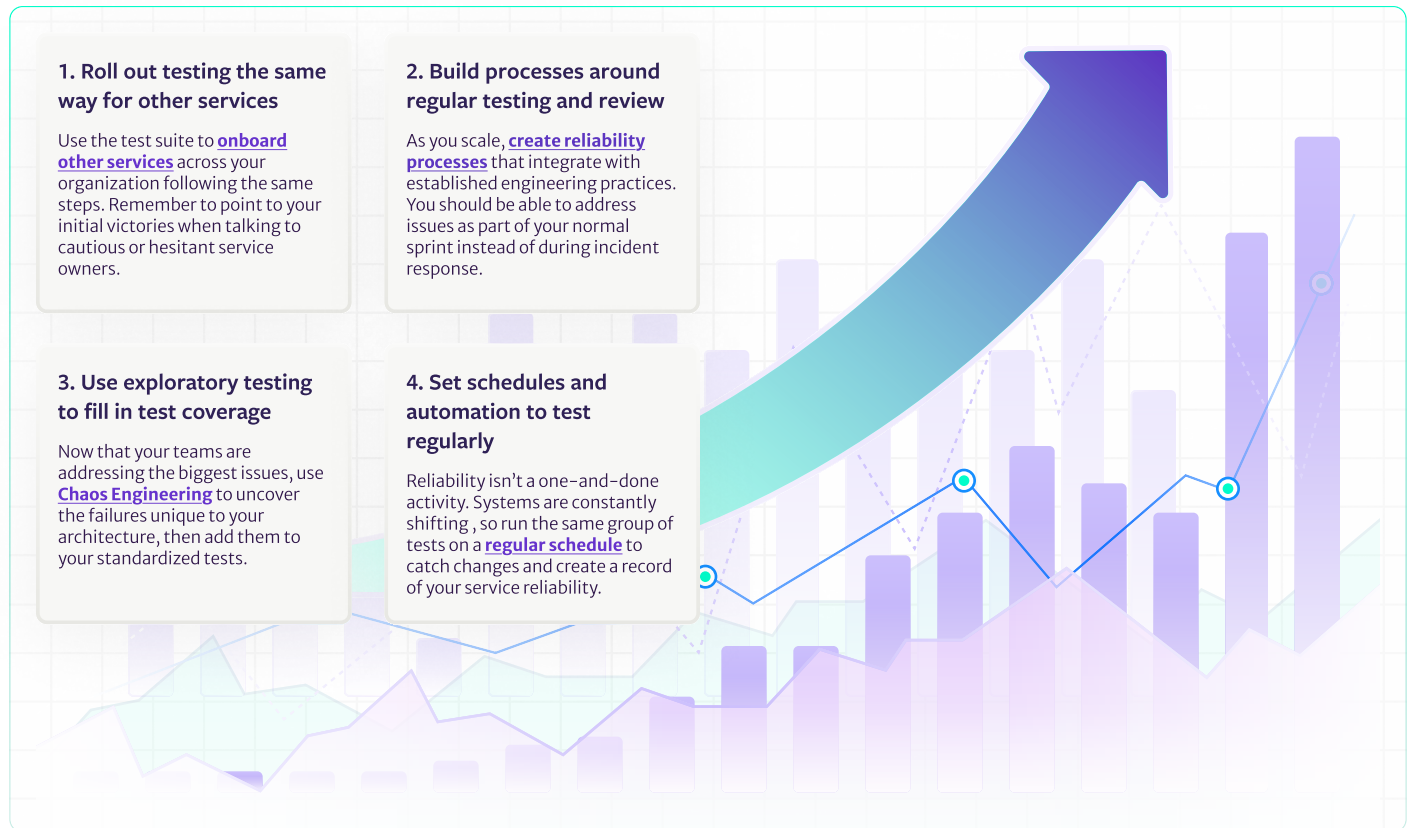
5. Interpret test results and take action

Address risks uncovered by failed tests by [analyzing results](#) and adding work to sprints. Use possible customer impact to prioritize fixes.

Common issues:

- ❗ Timeout mismatches
- ❗ Misconfigured autoscaling
- ❗ Misconfigured failovers

PHASE 2: SCALE AND IMPROVE



2X

More reliability per hour of testing



50%

Reduction in downtime



75%

Lower MTTR



\$125M/yr

Saved by preventing outages

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Holiday sales were tremendous success without any major issues. Gremlin helps us to raise our bar.

—Lead Performance Engineer, Sephora

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