

# Chaos Engineering Report

22 September 2025

## Contents

<b>Summary</b>	<b>2</b>
<b>Experiment</b>	<b>3</b>
RabbitMQ slicer toxic via chaostoxi . . . . .	3
Summary . . . . .	3
Definition . . . . .	3
Result . . . . .	4
Appendix . . . . .	5

## **Summary**

This report aggregates 1 experiments spanning over the following subjects:

## Experiment

### RabbitMQ slicer toxic via chaostoxi

This experiment injects a slicer toxic into the RabbitMQ proxy using chaostoxi to simulate packet fragmentation and observe the impact on the microservices.

#### Summary

<b>Status</b>	completed
<b>Tagged</b>	
<b>Executed From</b>	338331afb042
<b>Platform</b>	Linux-6.15.11-orbstack-00539-g9885ebd8e3f4-x86_64-with-glibc2.41
<b>Started</b>	Mon, 22 Sep 2025 09:29:51 GMT
<b>Completed</b>	Mon, 22 Sep 2025 09:29:52 GMT
<b>Duration</b>	1 second

#### Definition

The experiment was made of 3 actions, to vary conditions in your system, and 0 probes, to collect objective data from your system during the experiment.

**Steady State Hypothesis** The steady state hypothesis this experiment tried was “**Services may degrade**”.

**Before Run** The steady state was verified

Probe	Tolerance	Verified
order-api-health	[200]	True
notifier-health	[200]	True

**After Run** The steady state was verified

Probe	Tolerance	Verified
order-api-health	[200]	True
notifier-health	[200]	True

**Method** The experiment method defines the sequence of activities that help gathering evidence towards, or against, the hypothesis.

The following activities were conducted as part of the experimental's method:

Type	Name
action	add-slicer-rabbitmq
action	create-order
action	remove-slicer-rabbitmq

## Result

The experiment was conducted on Mon, 22 Sep 2025 09:29:51 GMT and lasted roughly 1 second.

### Action - add-slicer-rabbitmq

<b>Status</b>	succeeded
<b>Background</b>	False
<b>Started</b>	Mon, 22 Sep 2025 09:29:51 GMT
<b>Ended</b>	Mon, 22 Sep 2025 09:29:51 GMT
<b>Duration</b>	0 seconds
<b>Paused After</b>	1s

The action provider that was executed:

<b>Type</b>	python
<b>Module</b>	chaostoxi.toxic.actions
<b>Function</b>	create_slicer_toxic
<b>Arguments</b>	{'for_proxy': 'rabbitmq_proxy', 'toxic_name': 'rabbitmq_slicer', 'average_size': 32, 'size_variation': 16, 'delay': 0}

### Action - create-order

<b>Status</b>	succeeded
<b>Background</b>	False
<b>Started</b>	Mon, 22 Sep 2025 09:29:52 GMT
<b>Ended</b>	Mon, 22 Sep 2025 09:29:52 GMT
<b>Duration</b>	0 seconds

The action provider that was executed:

<b>Type</b>	http
<b>URL</b>	http://order-api:8081/orders
<b>Method</b>	POST
<b>Timeout</b>	20
<b>Arguments</b>	{'customer': 'rabbitmq-slicer', 'item': 'kopi', 'qty': 1}

#### Action - remove-slicer-rabbitmq

<b>Status</b>	succeeded
<b>Background</b>	False
<b>Started</b>	Mon, 22 Sep 2025 09:29:52 GMT
<b>Ended</b>	Mon, 22 Sep 2025 09:29:52 GMT
<b>Duration</b>	0 seconds

The action provider that was executed:

<b>Type</b>	python
<b>Module</b>	chaostoxi.toxic.actions
<b>Function</b>	delete_toxic
<b>Arguments</b>	{'for_proxy': 'rabbitmq_proxy', 'toxic_name': 'rabbitmq_slicer'}

#### Appendix

**Action - add-slicer-rabbitmq** The *action* returned the following result:

True

**Action - create-order** The *action* returned the following result:

```
{'body': '{"status":"created","id":18}',
 'headers': {'Content-Length': '28',
             'Content-Type': 'text/plain; charset=utf-8',
             'Date': 'Mon, 22 Sep 2025 09:29:52 GMT'},
 'status': 201}
```

**Action - remove-slicer-rabbitmq** The *action* returned the following result:

True