Chaos engineering war games – prepare for the unexpected

Gabor Gerencser
February 2024

Chaos engineering war games - prepare for the unexpected

Chaos and systems

Chaos engineering war games

System current state

Stake holders

Tabletop war game

Environment based war game

Gamification

Start easy

Exercises

Participants

Goals

Delivering result

Publicise

In all chaos there is a
cosmos, in all disorder a
secret order.
(Carl Jung)

Chaos and systems

- Random events of the world

- Complex systems

- Boundaries

- Knowns

Chaos engineering war games

- Fire drill

- Testing resiliency

- Training

- Team building

System current state

- Analyse current state

- Identify goals

- Observability

- Metrics

mtta

mttd

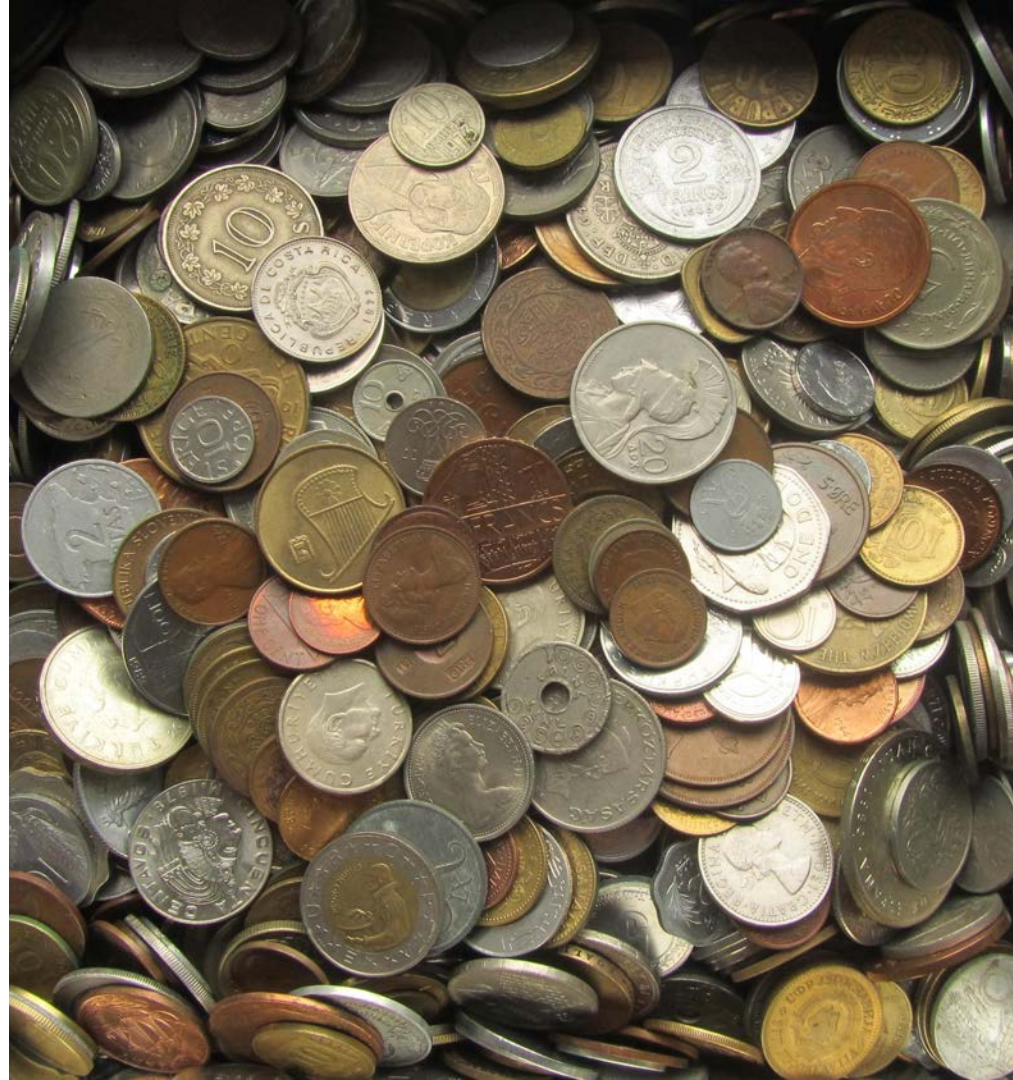customer satisfaction

availability

code quality priority

cost incident number

defect

mttr

Stake holders

- Customer satisfaction

- Increased revenue

- Faster incident resolution

- Less incidents

- Better code quality

- Cost

Invention, it must be humbly admitted, does not consist in creating out of void, but out of chaos.
(Mary Shelley)

Tabletop war game

Target

- Knowledge
- Processes
- Communication
- Documentation
- Architecture

Cost

- Low cost
- Simple to organise
- 1-2 hours
- No environment involved

Logistics

- Online vs on-site
- Single or multiple teams
- 6-30 participants
- Record vs not record

Exercises

- Analyse past incidents
- Keep it simple

Environment based war game

Target

- Software solution
- Knowledge
- Processes
- Communication
- Architecture
- Documentation

Cost

- Medium to high cost
- Complex to organise
- Men days/weeks to create exercise
- 6-8 hours
- Environment involved

Logistics

- Online vs on-site
- Single or multiple teams
- 6-30 participants
- Test env: mixed
- Prod env: mixed but not very junior

Exercises

- Analyse past incidents
- Keep it simple
- Blast radius
- Maturity
- Avoid panic

Gamification

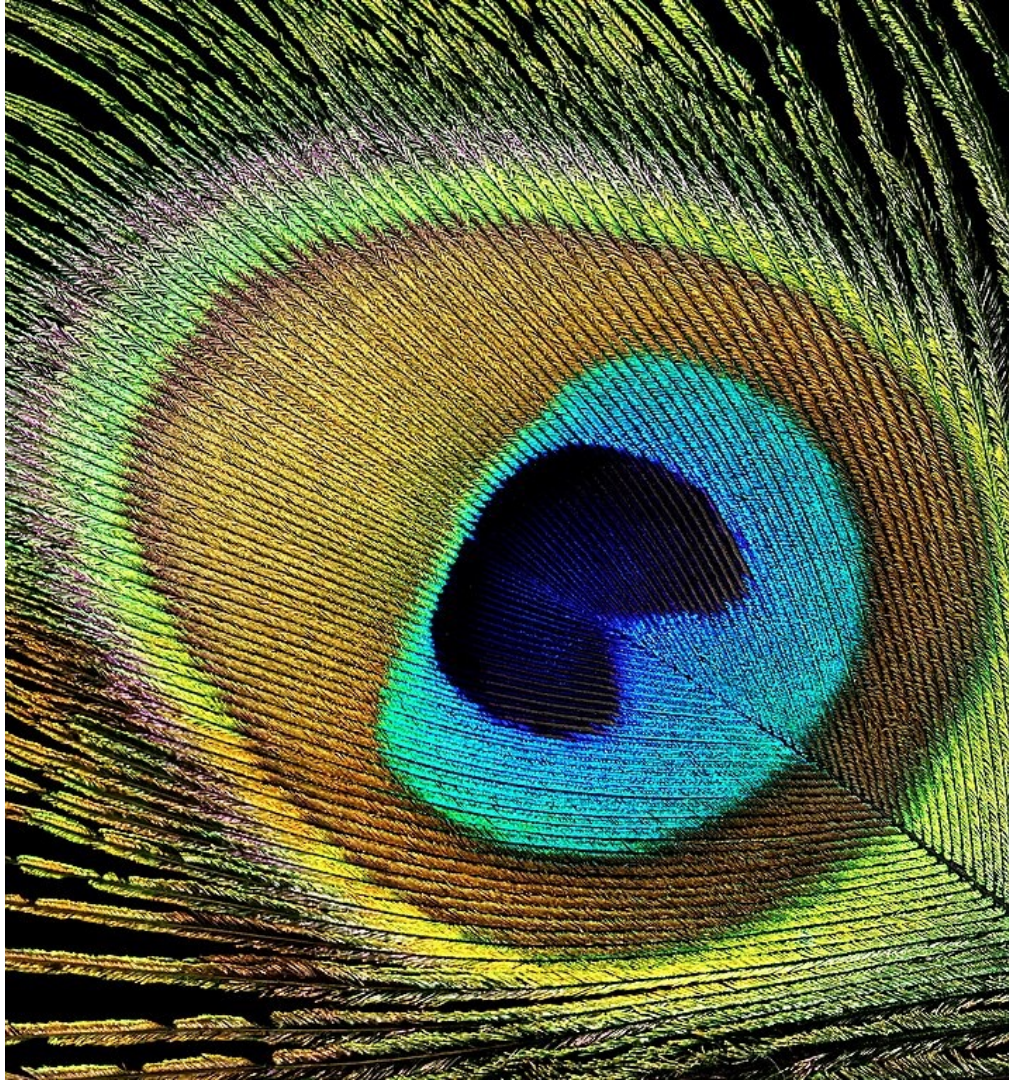Anything else which makes it fun!

Keep it safe!

I have great belief in the fact that whenever there is chaos, it creates wonderful thinking.
I consider chaos a gift.
(Septima P. Clark)

Start easy

- Tabletop vs focus area vs full war game

- "Pull a cable"

- Keep cost in mind

- Complexity is not your friend

Exercises

- Common resiliency scenarios

- Don't test known issue, fix first

- Manual vs automated

- Production like traffic

Participants

- Training before war game

- Junior vs senior

- Backup participant

- War game host and scribe

- Swap roles

Goals

- Improved revenue

- Improved customer satisfaction

- Software resiliency improvements

- Incident resolution improvements

- Preparedness

- Collaboration

- Training

- Communication

Chaos often breeds life, when order breeds habit.
(Henry Adams)

Delivering result

- Identify improvements

- Impact vs probability

- Track improvements

- Metrics

- Retest

Publicise

- Reports
  - TLDR
  - Summary
  - War game description
  - Improvement areas (description, action(s), probability, impact)
- Improvements and tracking
- Mentions
- Articles
- Prizes

Gabor Gerencser
LinkedIn:

Thank you!