

Non-functional requirements - Maintainability



software
engineer

I need to make sure my design
follows these best practices.

before launch

product
launch

maintenance phase

time

checklist

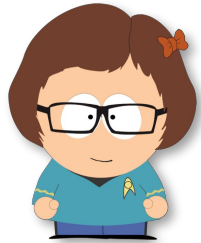
...
...
...
...

list of best practices for achieving
operational excellence

- identifying bugs and fixing them
- adding new features
- improving performance
- increasing test coverage
- writing documentation
- and more...

Non-functional requirements - Maintainability

Let's discuss maintainability...



interviewer

failure modes and mitigations

- If some component fails, what happens to the rest of the system?
- How the system handles network partitions?
- How we want the system to handle network partitions?

monitoring

- How do we monitor the health of the system?
- In case of a system failure, how do we know what exactly is broken?

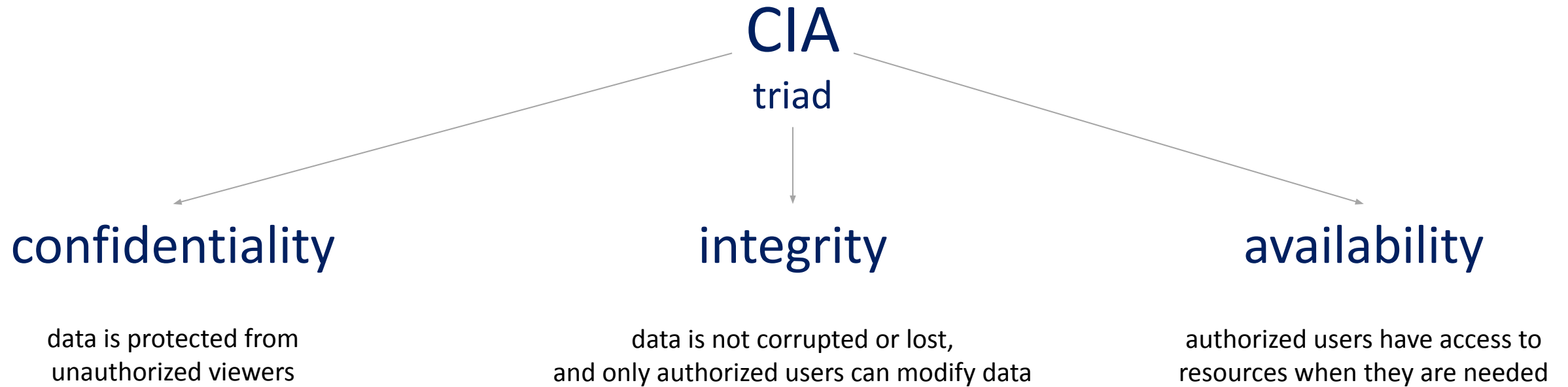
testing

- How to test each individual component?
- How to test data flows end-to-end?

deployment

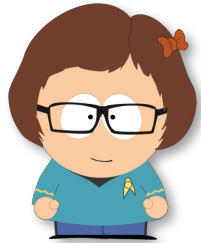
- How to deploy regular changes safely?
- How to roll back bad changes quickly?

Non-functional requirements - Security



Non-functional requirements - Security

Let's discuss security...



interviewer

Identity and permissions management

- Who can access the system?
- Who can access what in the system?
- How to implement authentication and authorization in the system?

Infrastructure protection

- Is the system protected from DDoS attacks?
- Is it protected from other common attacks, such as SQL injection or cross-site scripting?
- Should we use a web application firewall or an API Gateway to implement protection?

Data protection

- How to protect data at rest?
- How to protect data in transit?

Non-functional requirements - Cost



software
engineer

Which of these three should I expect to discuss during an interview?

unlikely

it is possible

How to reduce? Automation!

it is possible

How many resources we need.
How to reduce their cost.

total
cost



engineering
cost



maintenance
cost

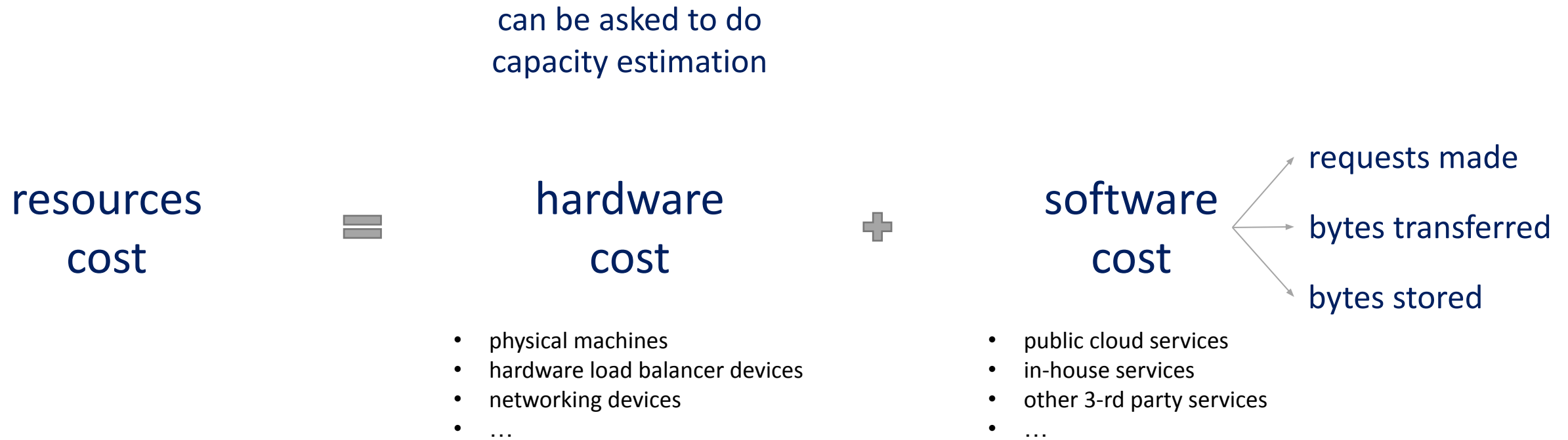


resources
cost

- design
- implementation
- testing
- deployment
- ...

- hardware
- software

Non-functional requirements - Cost



Non-functional requirements - Cost

