SERVICE VIRTUALISATION

STUBBING ON STEROIDS

ANUJ SHARMA & NATHAN HOLT

INTRODUCTION

- Anuj Sharma aka the Jedi tester

- Nathan Holt aka Mr FixIt

A FEW QUESTIONS…

1) Limited number of test environments available for a large number of projects ?
2) Test environments have to be booked weeks in advance for a limited duration only?
3) Testing is dependent on all components being completely developed ?
4) Test data set up and maintenance is a significant overhead ?
5) Is your project dependent on the third party applications or services ?

WHAT IS SERVICE VIRTUALISATION ?

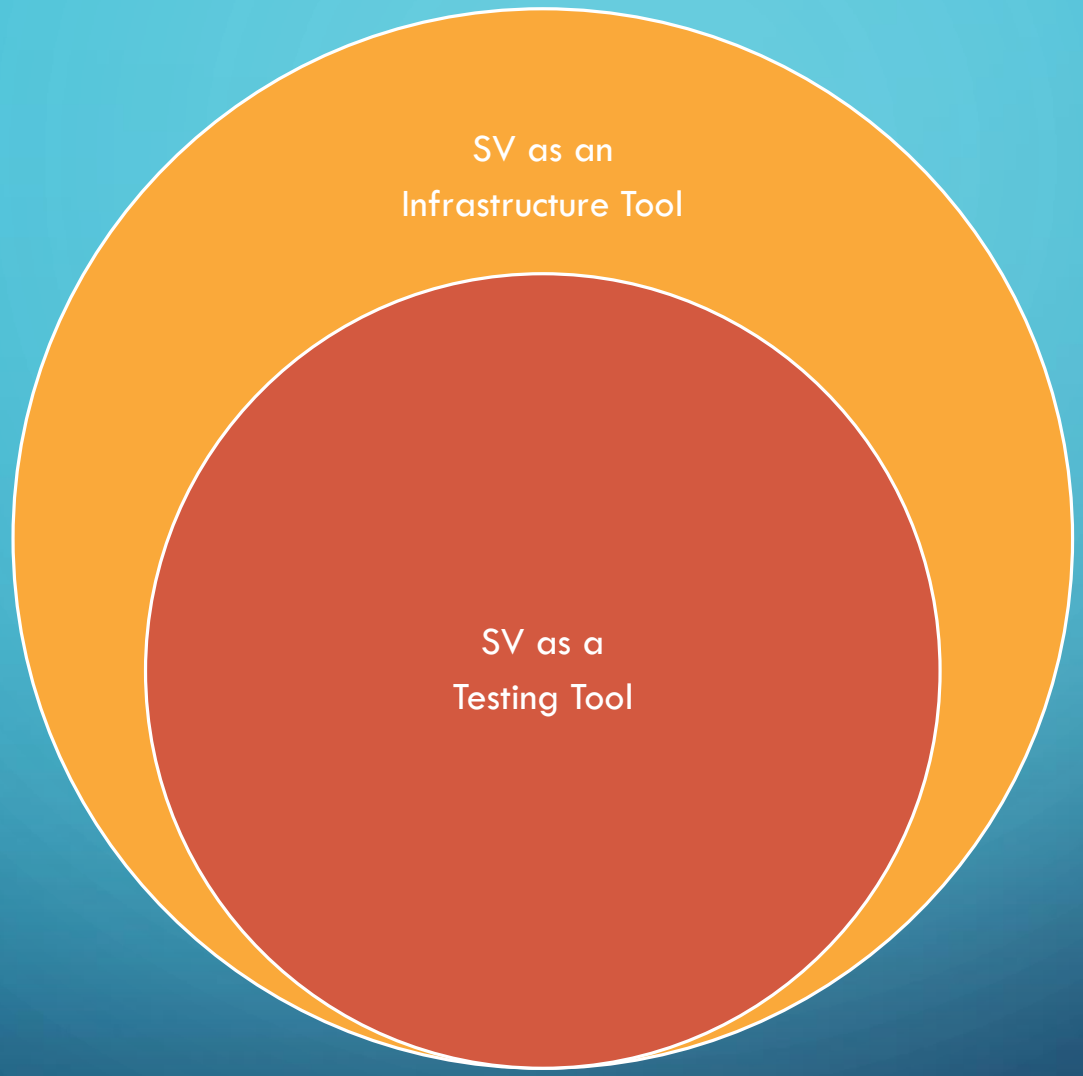
*In software engineering, **service virtualisation** is a method to emulate the behaviour of specific components in heterogeneous component-based applications such as API-driven applications, cloud-based applications and **service**-oriented architectures*.

- Wikipedia

FLIGHT SIMULATOR

- Replicating how the aircraft flies
- How it interacts with external factors such as:
  - Air density
  - Turbulence
  - Performance
- Used to test the pilots capability in a realistic environment

WHEN/HOW TO USE SERVICE VIRTUALISATION?

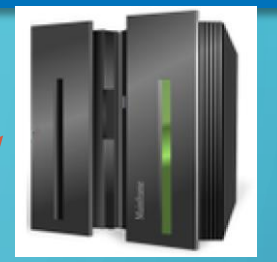

SV as an
Infrastructure Tool
SV as a
Testing Tool

USING AS AN INFRASTRUCTURE TOOL

ARCHITECTURE OVERVIEW

System under test

Middleware



Legacy Systems

System of record

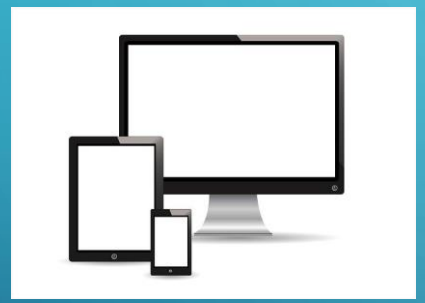
Databases

Third party applications

THIRD PARTY APPLICATIONS

- $$$$
- Where's my test data ?!?
- Is it available ?!?

MAKING IT WORK WITH SV



Middleware

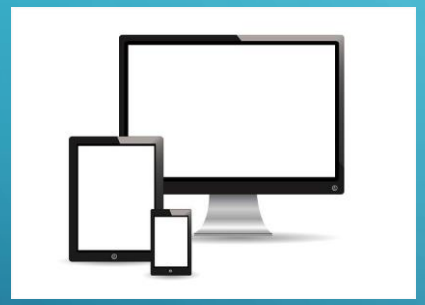
Legacy Systems

System of record

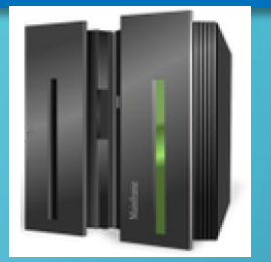
Databases

Third party applications

MAKING IT WORK WITH SV



Middleware



Legacy Systems

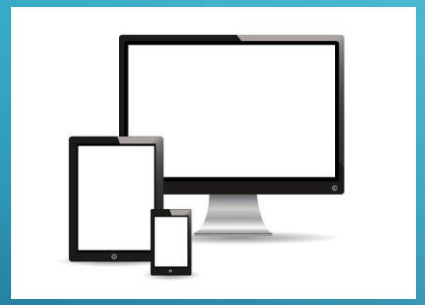
System of record

Databases

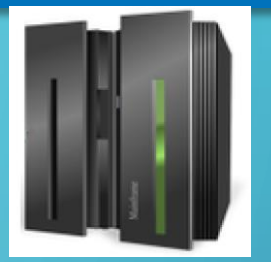
Virtual service

Third party applications

MAKING IT WORK WITH SV



Middleware



Legacy Systems

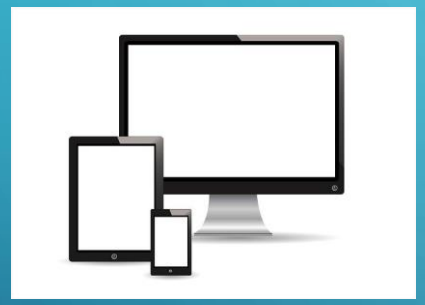
System of record

Databases

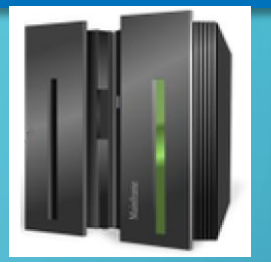
Virtual service

Third party applications

MAKING IT WORK WITH SV



Middleware



Legacy Systems

System of record

Databases

Virtual service

Third party applications

USING AS AN INFRASTRUCTURE TOOL (CONTD..)

- Dependency on third party applications or systems
- Limited number of environments available

Development Environment

Testing Environment

Training Environment

Development Environment

Testing Environment

Training Environment

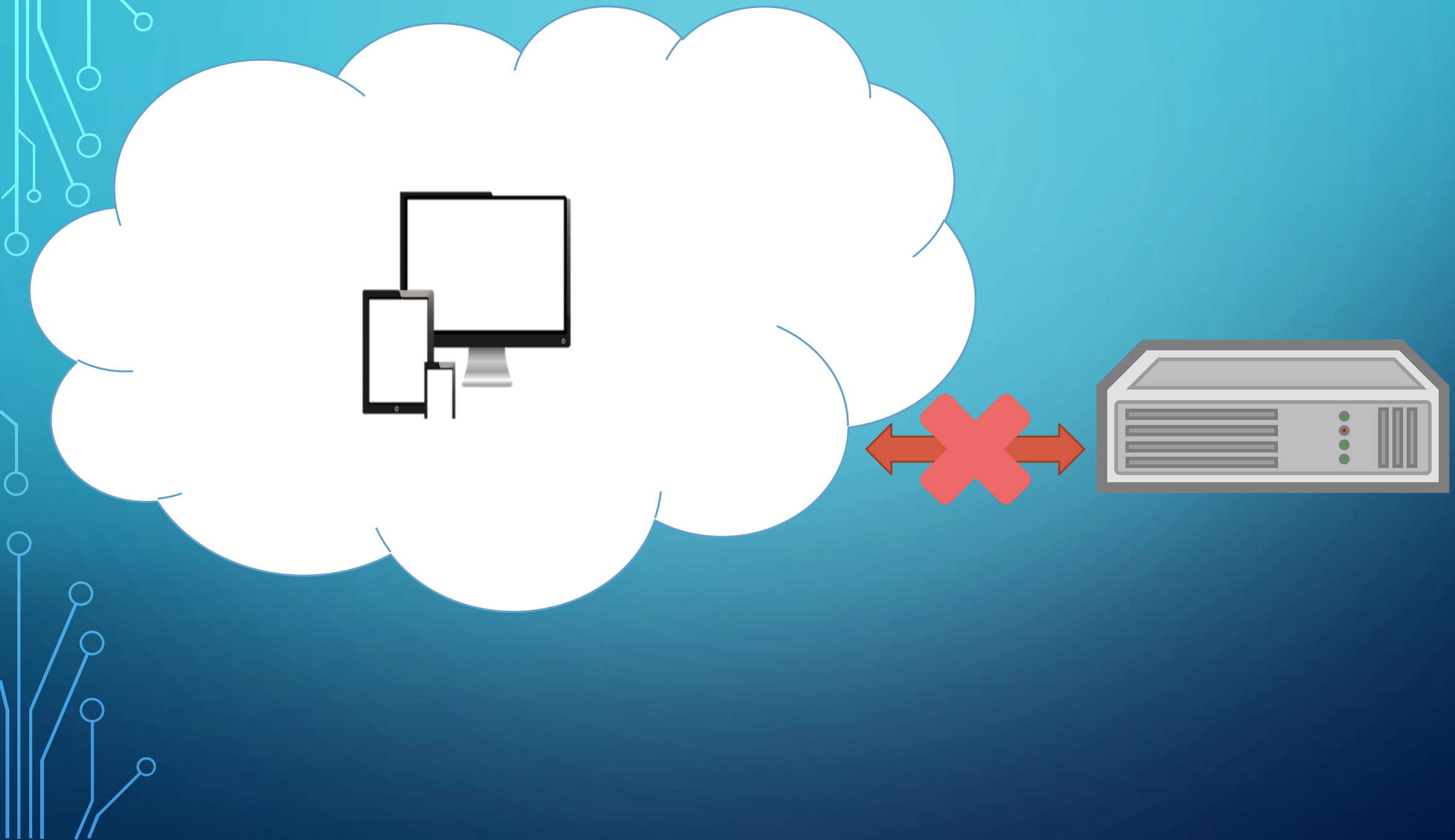
Development Environment

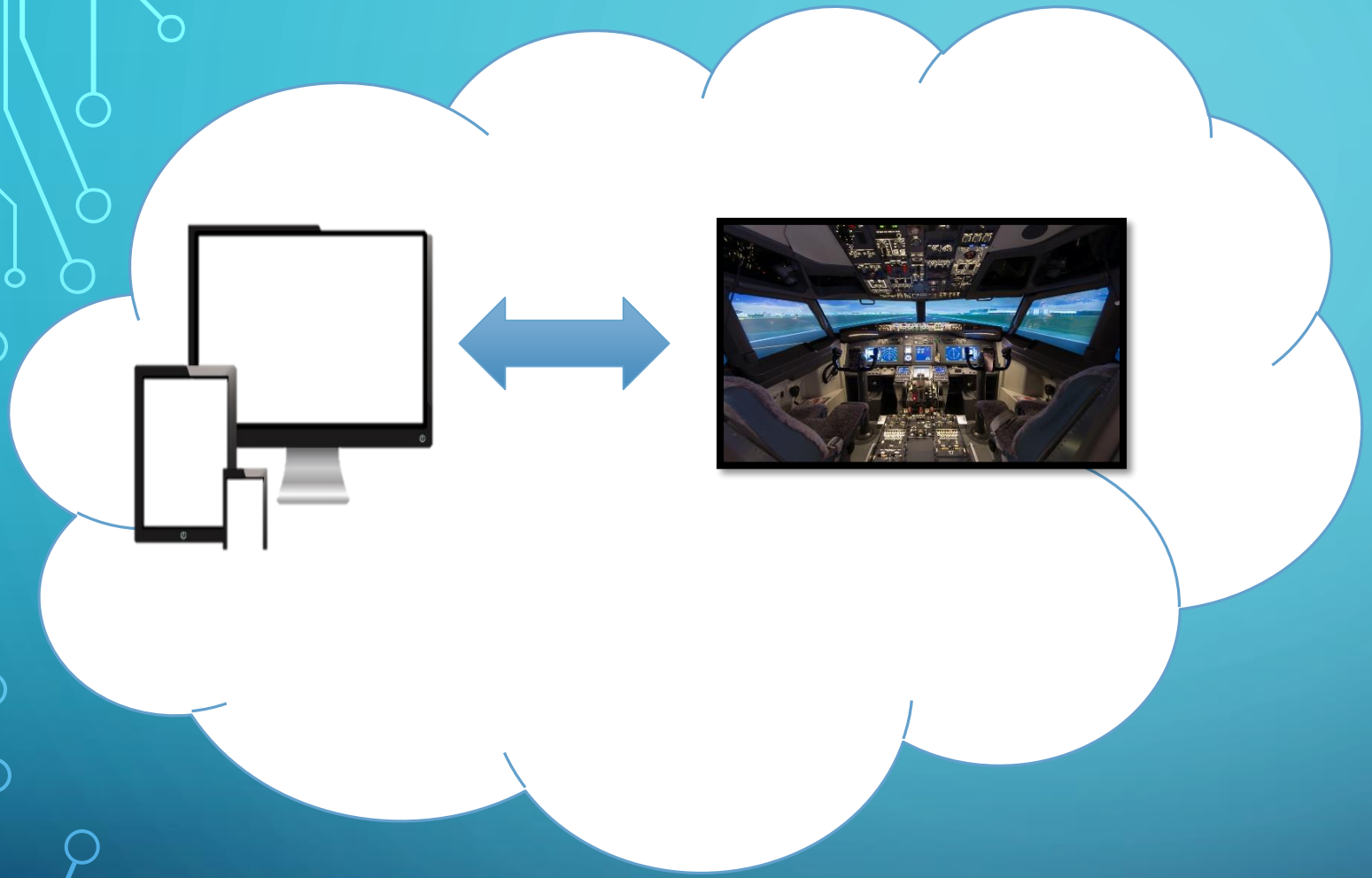
Testing Environment

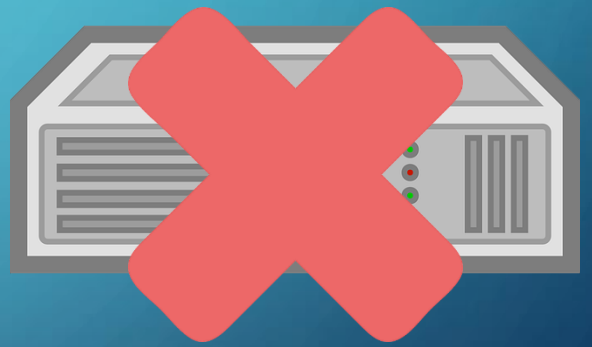
Training Environment

USING AS AN INFRASTRUCTURE TOOL (CONTD..)

- Dependency on third party applications or systems
- Limited number of environments available
- Not all components are available at the same time







USING AS AN INFRASTRUCTURE TOOL (CONTD..)

- Dependency on third party applications or systems
- Limited number of environments available
- Not all components are available at the same time
- Training and Demo environments

USING AS A TESTING TOOL

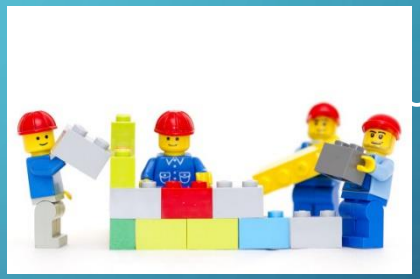
- Parallel Development

COMPONENT NOT AVAILABLE

System under test

Middleware

Legacy Systems



Under construction

Databases

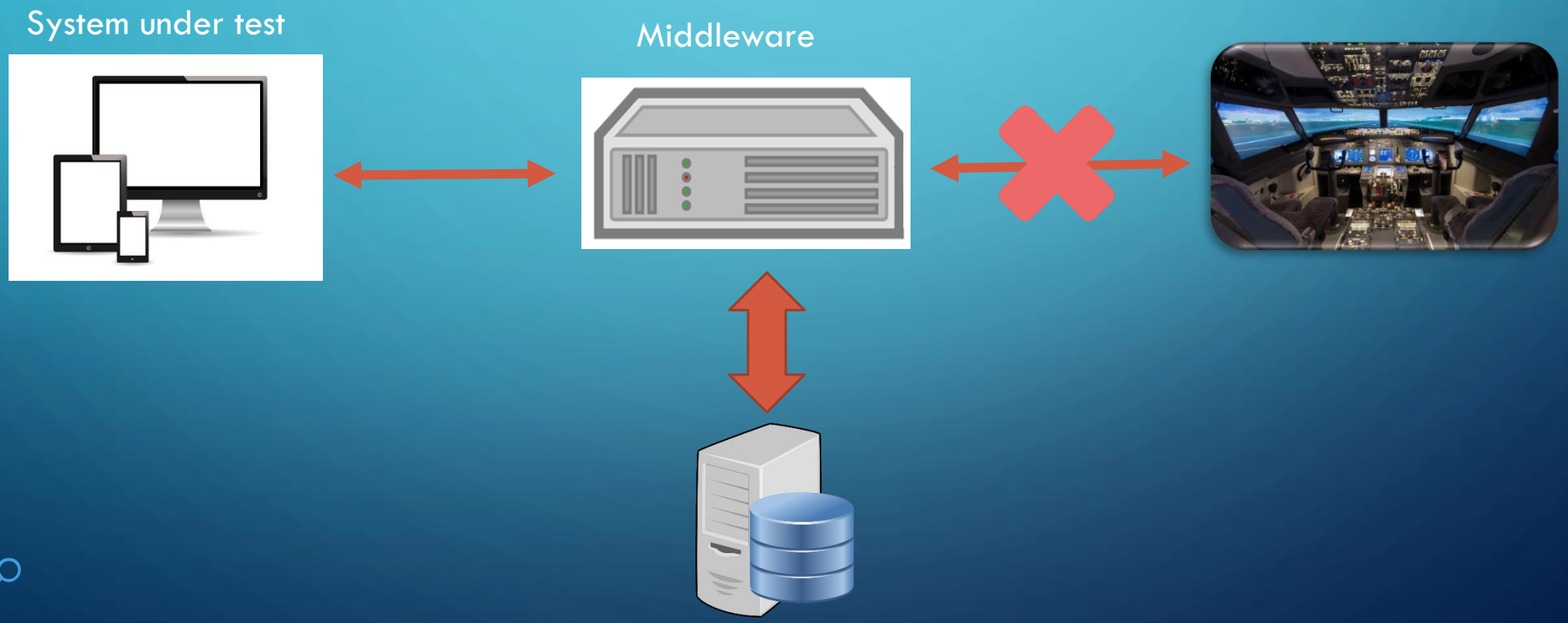
Third party applications

MAKING IT WORK WITH SV

System under test

Middleware

MAKING IT WORK WITH SV



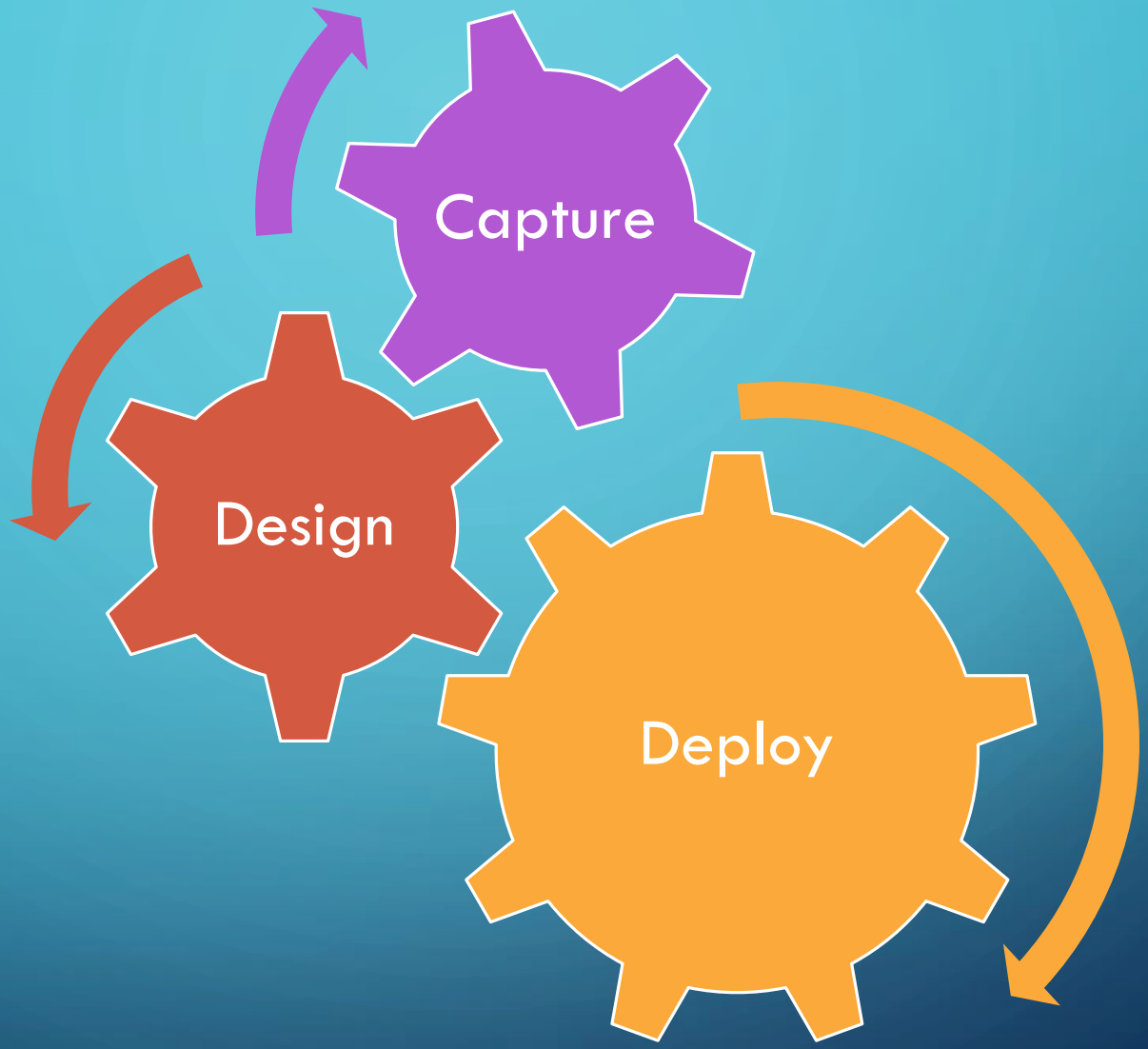
PARALLEL DEVELOPMENT

- Reduce test execution time with the real component
- Reduce number of defects
- Improve quality
- Shift left
- Faster time to market

USING AS A TESTING TOOL (CONTD…)

- Parallel Development
- Test Data Management
- ‘What If’ scenarios testing
- DevOps – Continuous Testing

HOW DOES SERVICE VIRTUALISATION WORK ?


Capture
Design
Deploy

I can see no way in which this carefully laid plan could ever fail.

WHAT COULD GO WRONG

- Virtual services not maintained or updated
- Lack of understanding of the architecture
- Not fit for purpose services
- Lack of a long term strategy
- Unrealistic expectations

SERVICE VIRTUALISATION AND STUBS

Stub Expectation

Stub Reality

SERVICE VIRTUALISATION - STUBBING ON STEROIDS

Shift Left

Continuous Testing

Reduce Environment bottlenecks

Test Data Mgmt

CONCLUSION

THANK YOU

Contact us :

a.sharma@planittesting.com

nholt@planittesting.com