Application Virtualization testing complex distributed application architectures - A Business Case

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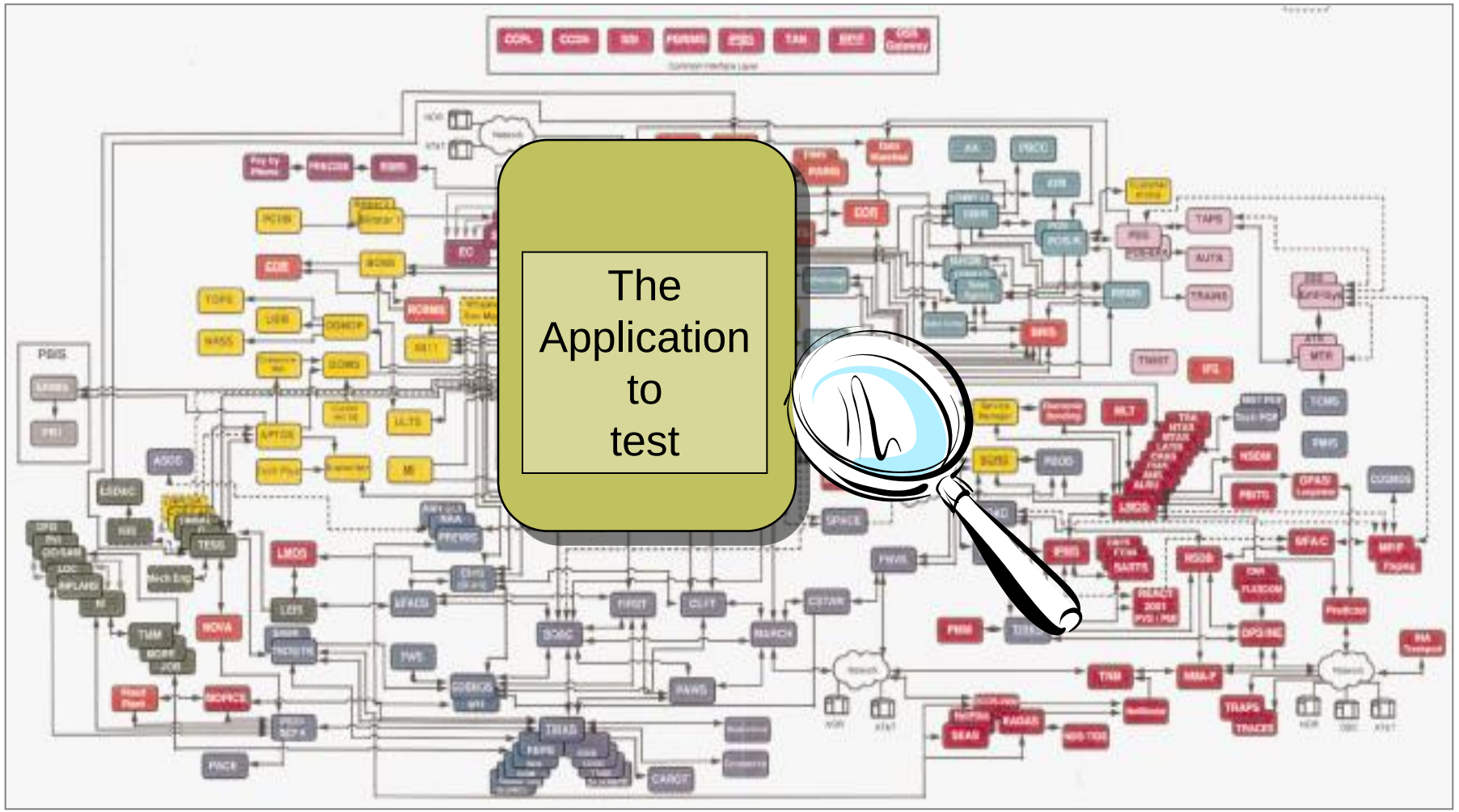
How to test an application



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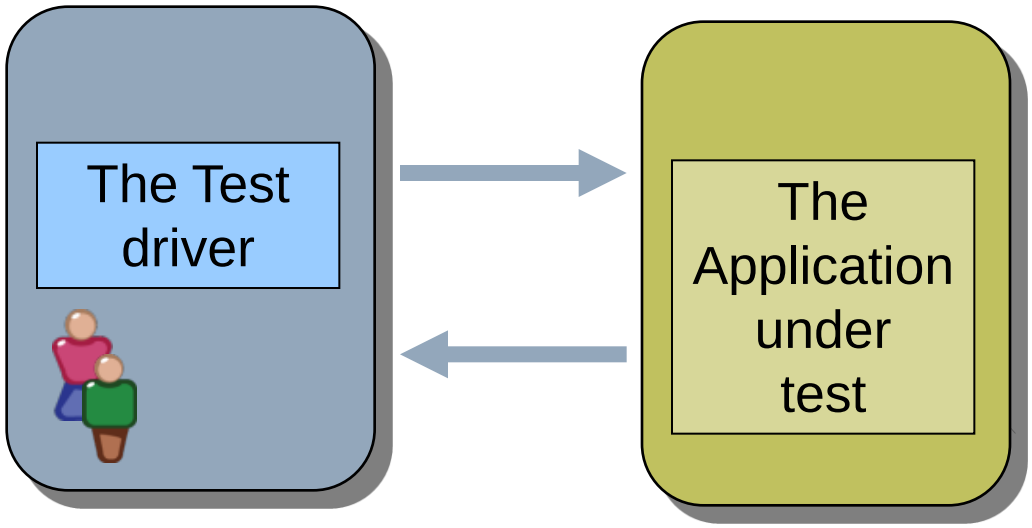
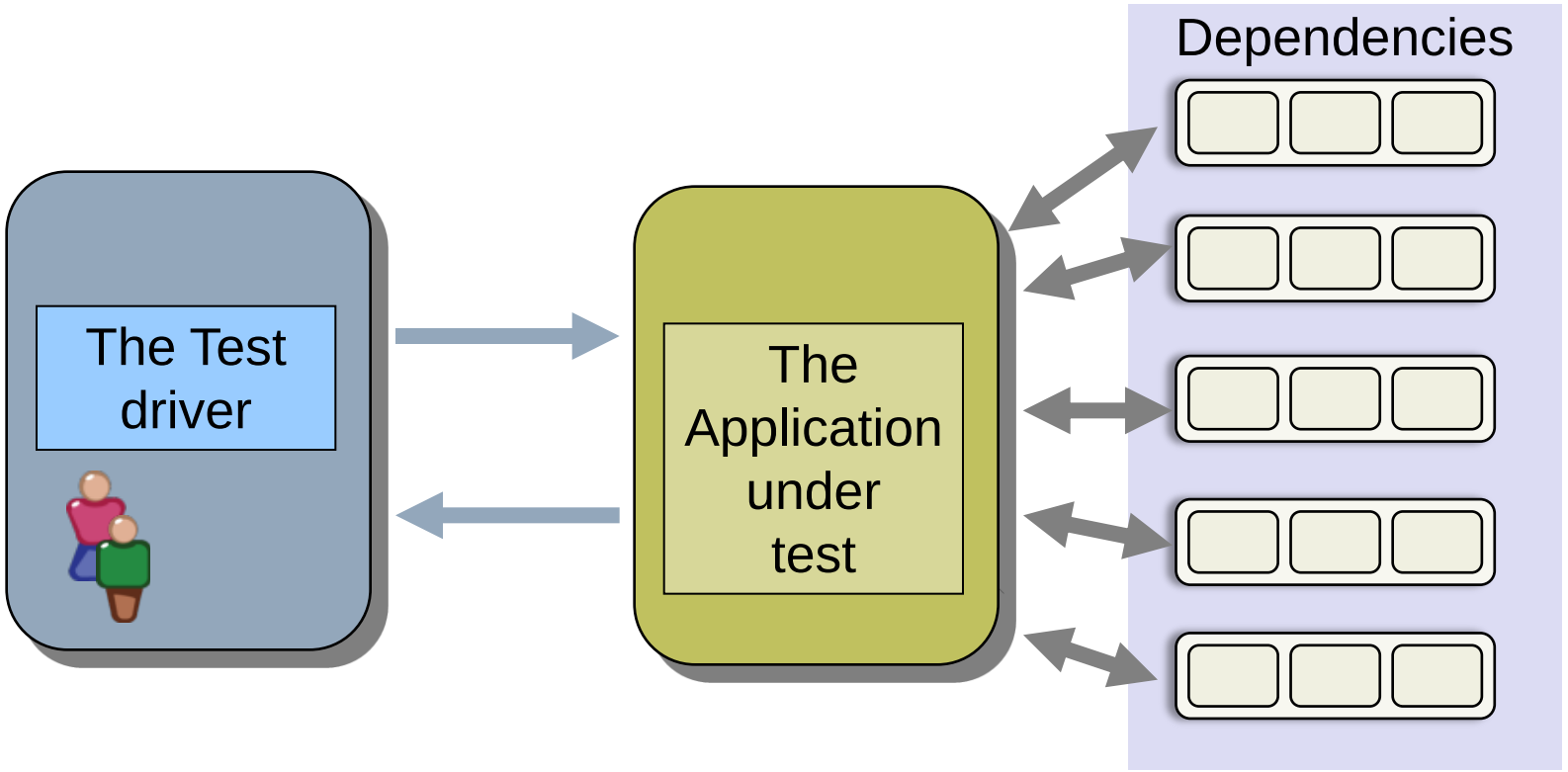
Testing requires isolation of the application

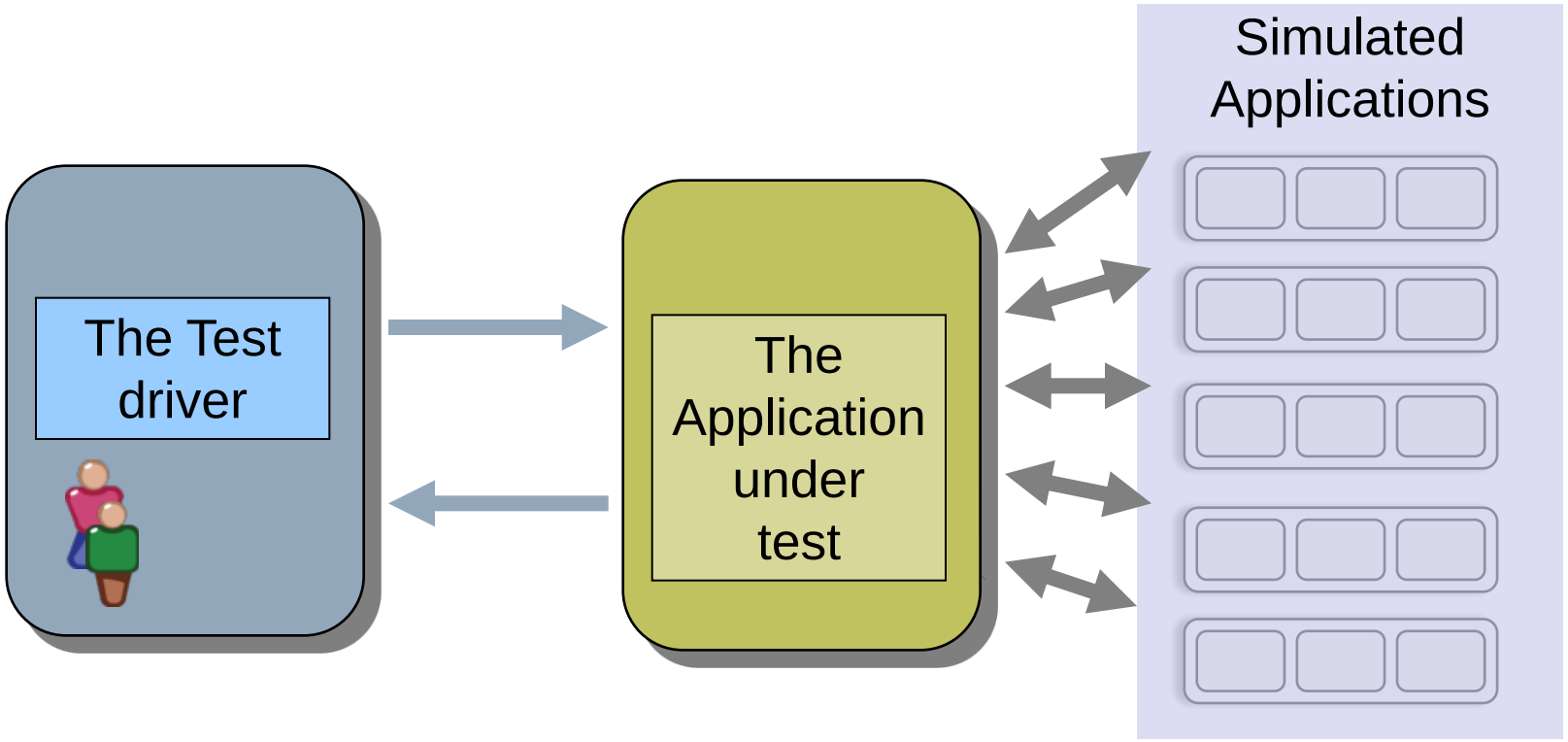


But what about the dependent Applications ?



- Need hardware/software/licenses/setup
- Not available 24/7 because of other projects
- Some applications are not developed yet
- Are not stable, other testers can influence tests

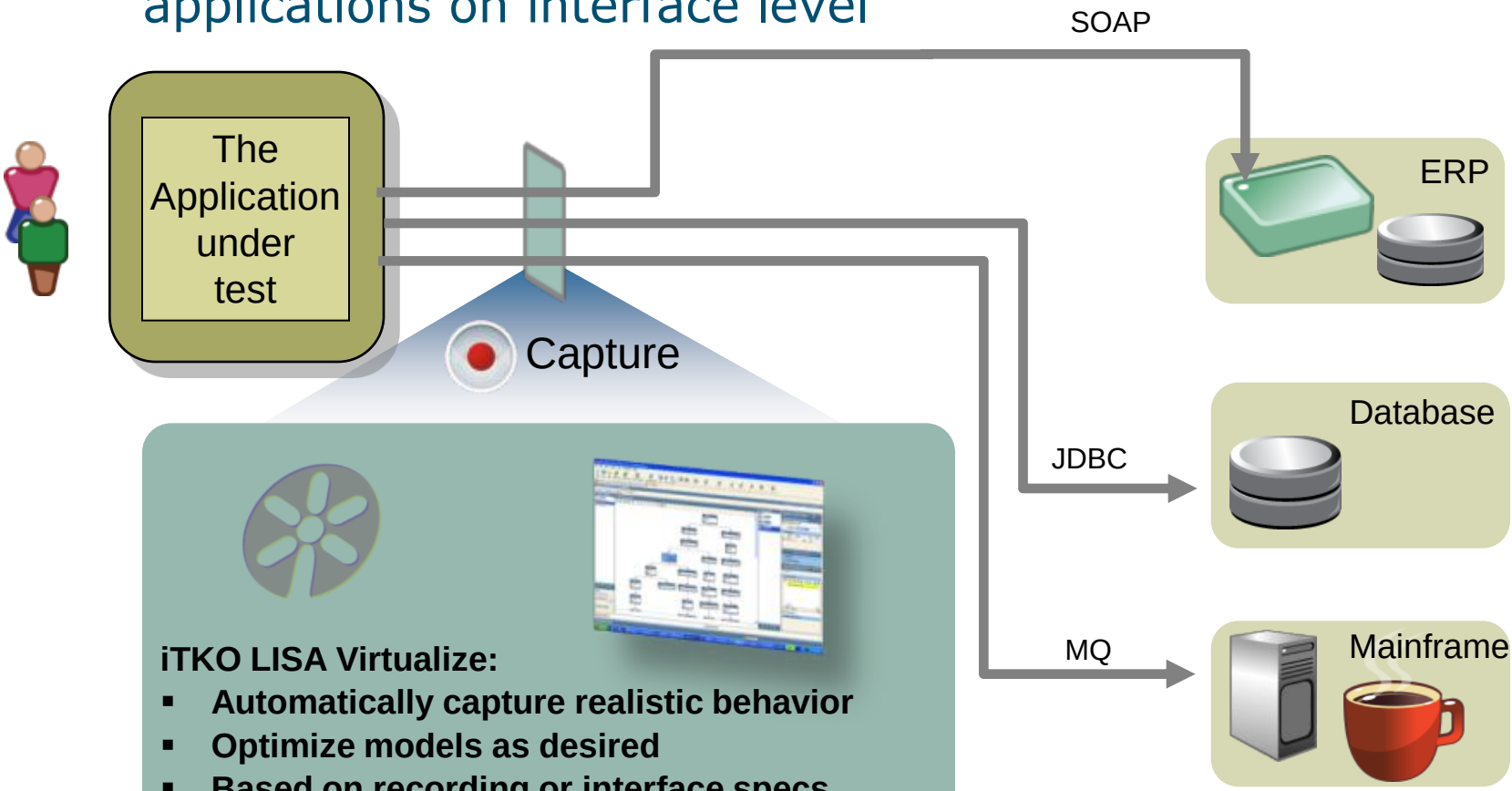
Solution: Isolate Applications using Simulation



- Simulate the behavior of applications based on interfaces
- Available 24/7 for your project
- Simulate applications that need to be developed
- Are stable, no one can influence your test

How to create Simulated applications

Simulate the behavior of applications on interface level



iTKO LISA Virtualize:

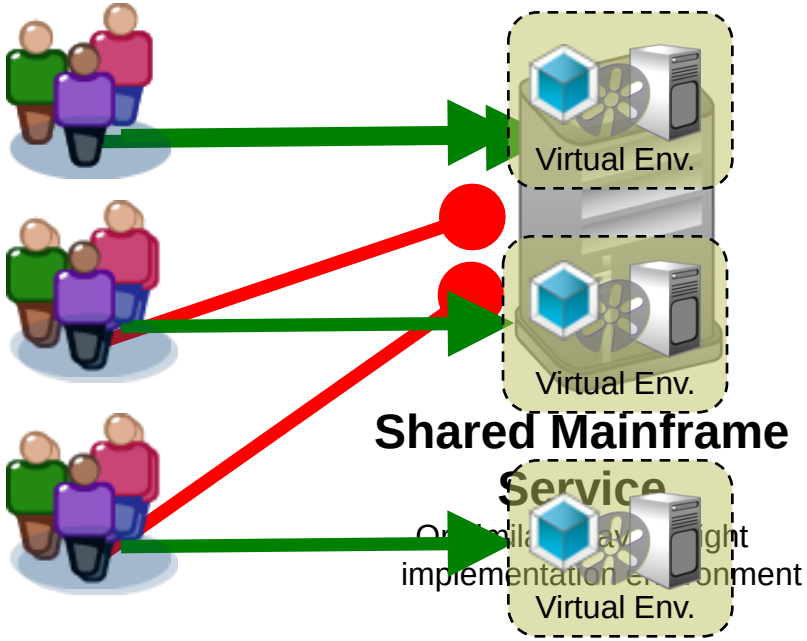
- **Automatically capture realistic behavior**
- **Optimize models as desired**
- **Based on recording or interface specs**
- **Support stateless + stateful conversations**

Real Applications – versus - Virtual applications

Comparing real applications with Simulated or Virtual applications on the following aspects:

- Availability
- Test Completeness
- Behavior
- Test Data Management
- Cost

Availability: Real versus Virtualized

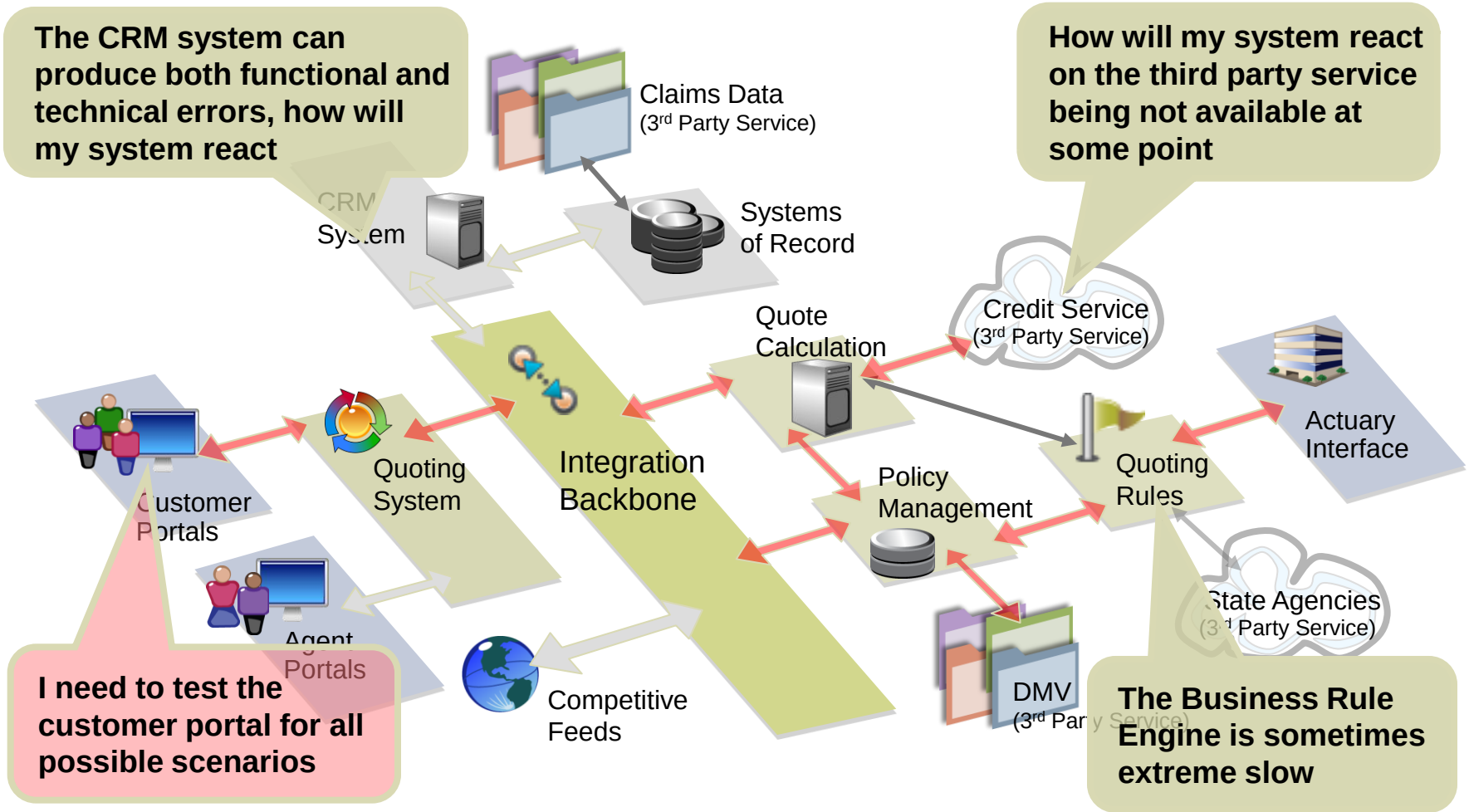


- 3 projects depend on a central mainframe in a test
- Multiple versions of this hardware is to expensive
- The test environment is only available 1 week a month for my project

Projects use timesharing while testing

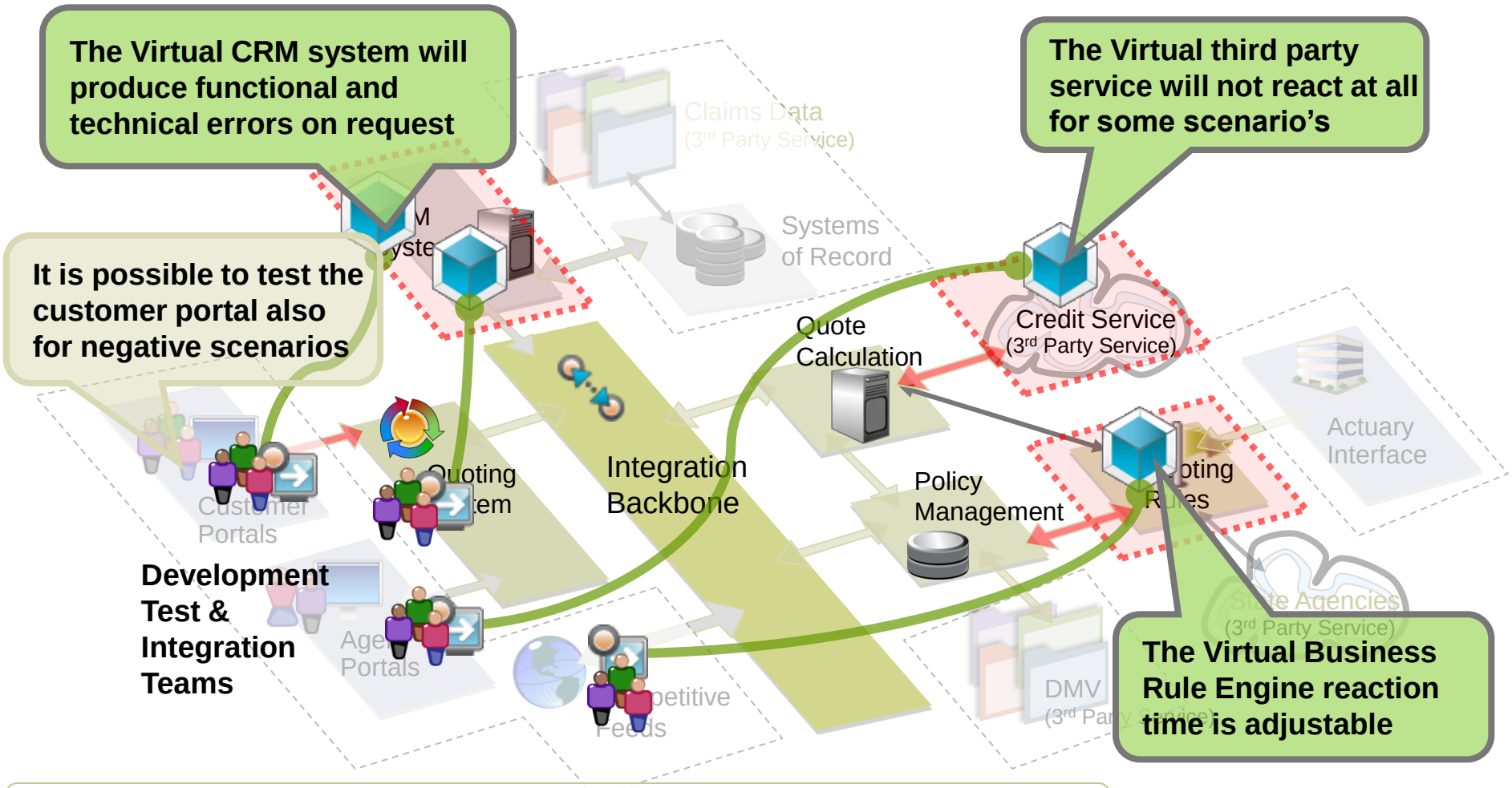
nment availability

Test Completeness: Real versus Virtualized



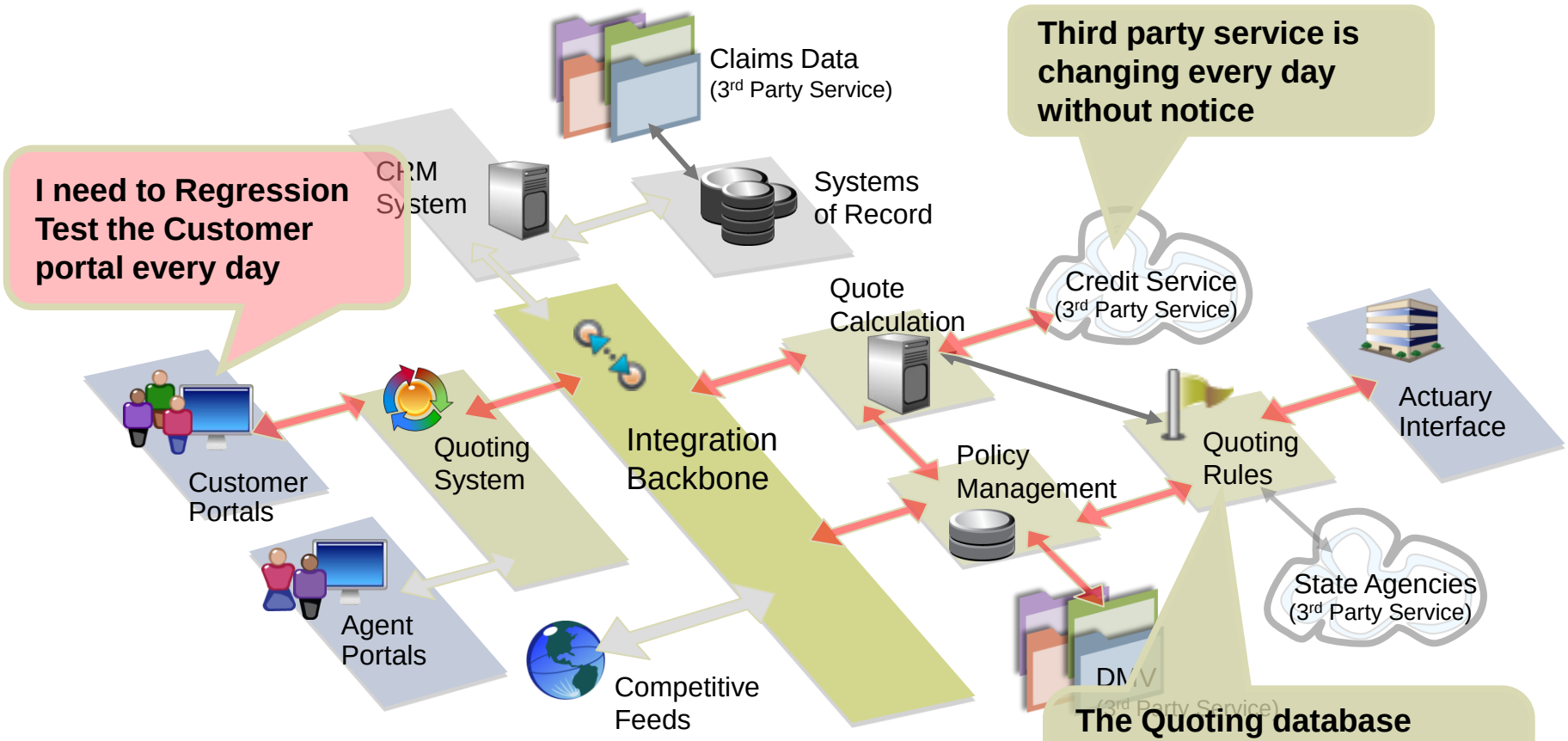
Testing with negative responses is almost impossible with real systems

Test Completeness: Real versus Virtualized



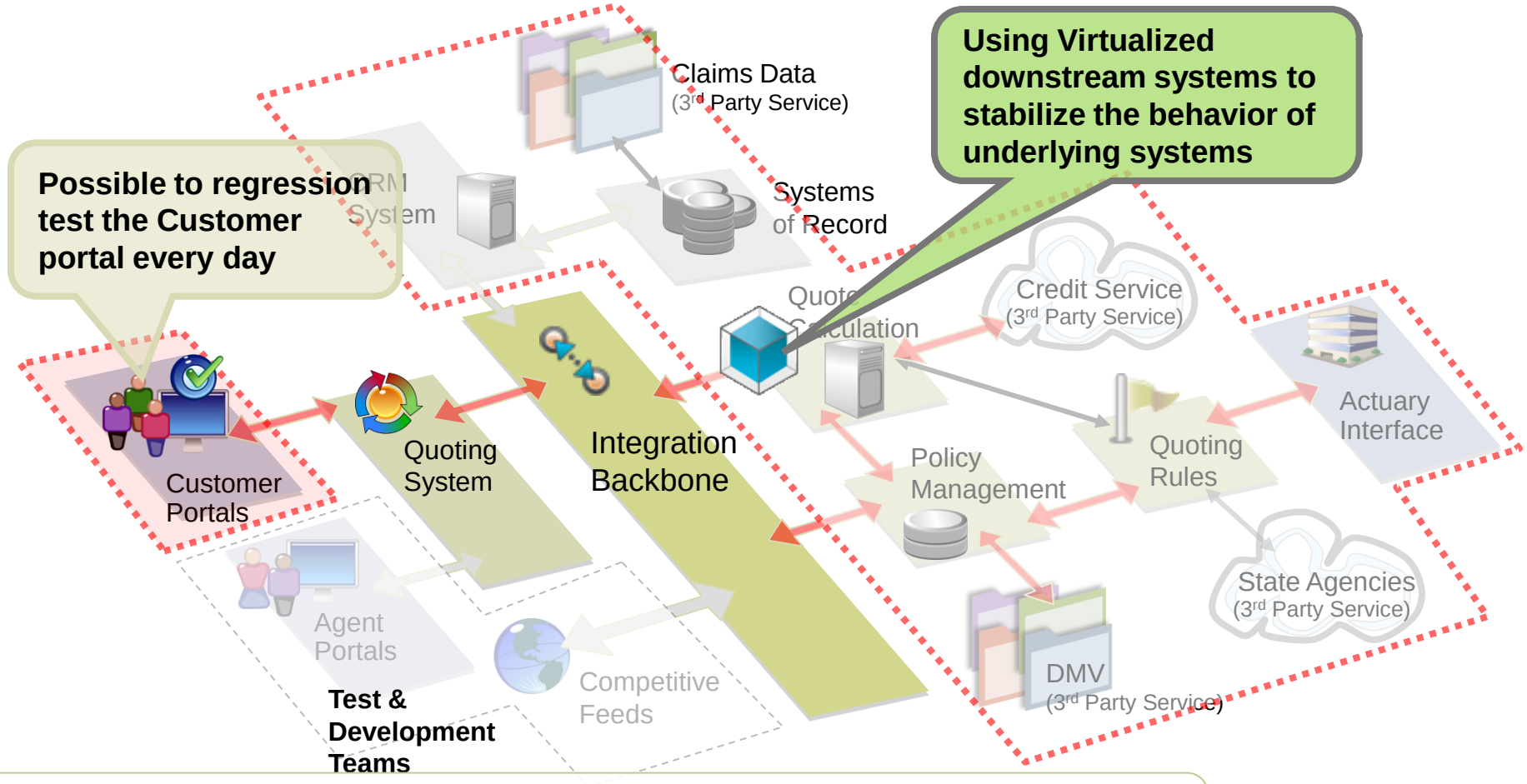
Virtualization makes negative tests possible

Behavior: Real versus Virtualized



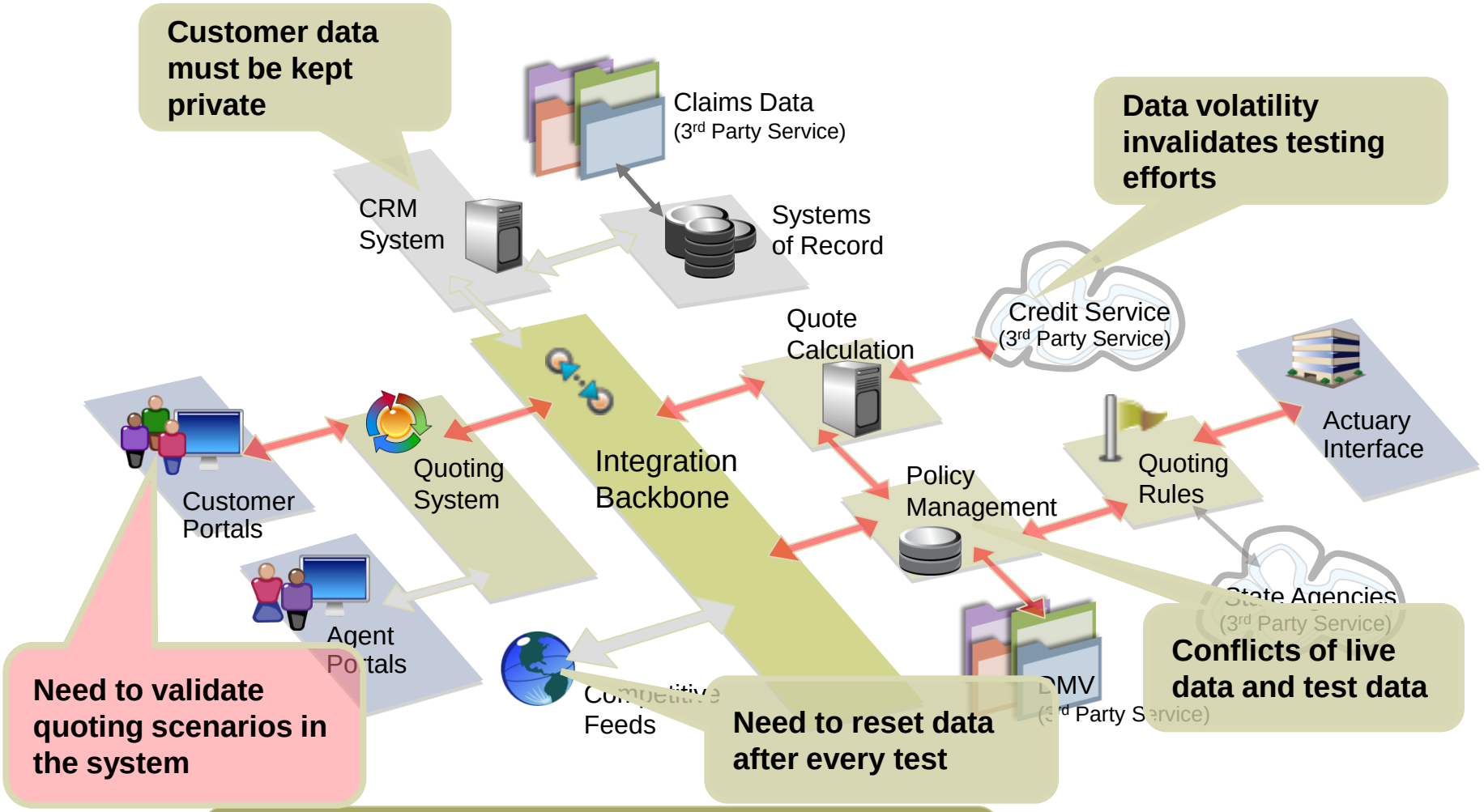
Without a stable environment regression testing is impossible

Behavior: Real versus Virtualized



Virtualization provides isolated, never changing test environments

Test Data Management: Real versus Virtualized



Managing test data consumes as much as 60% of the test lifecycle!

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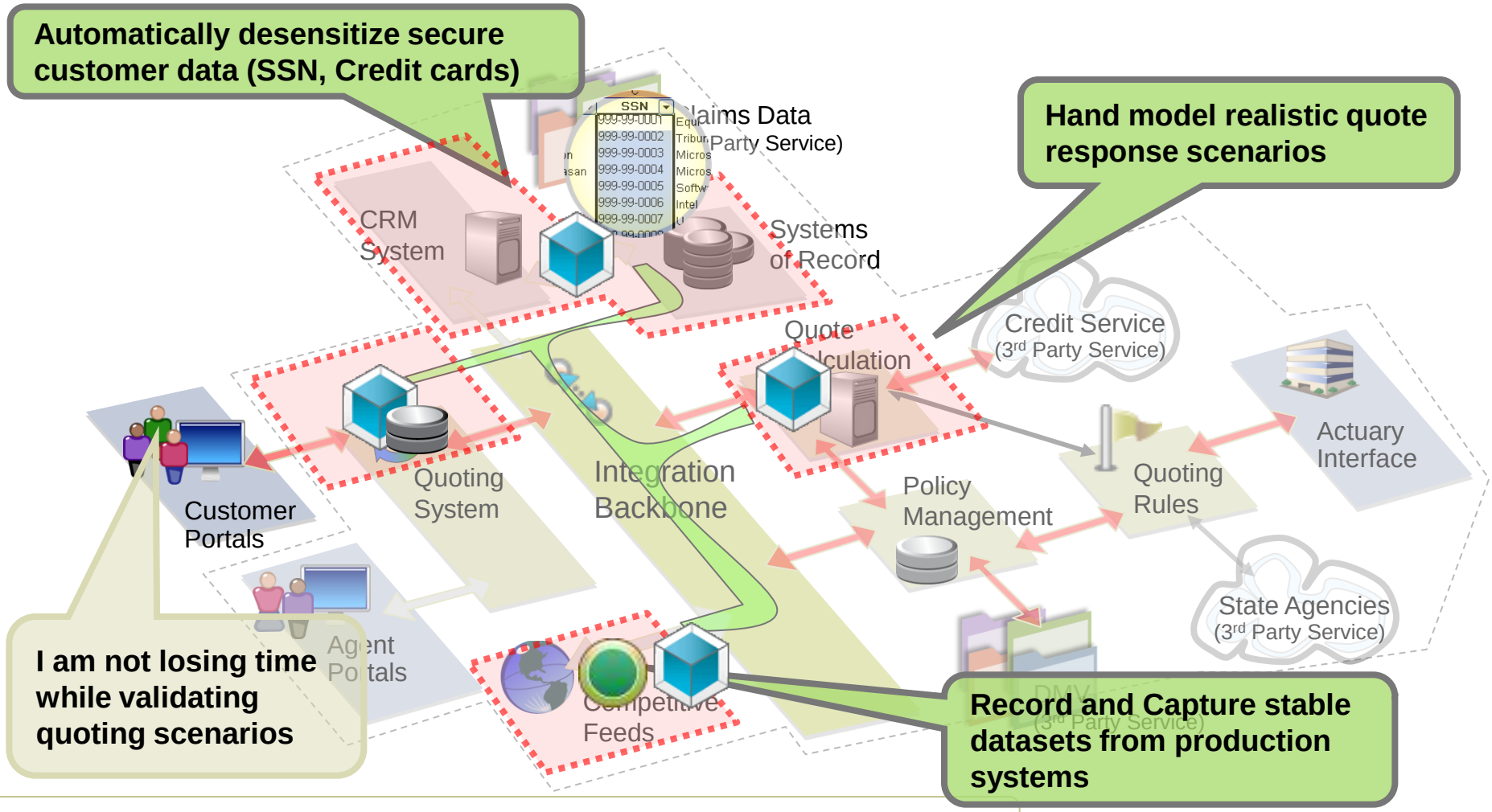
Test Data Management: Real versus Virtualized



Virtualization makes test data management easier

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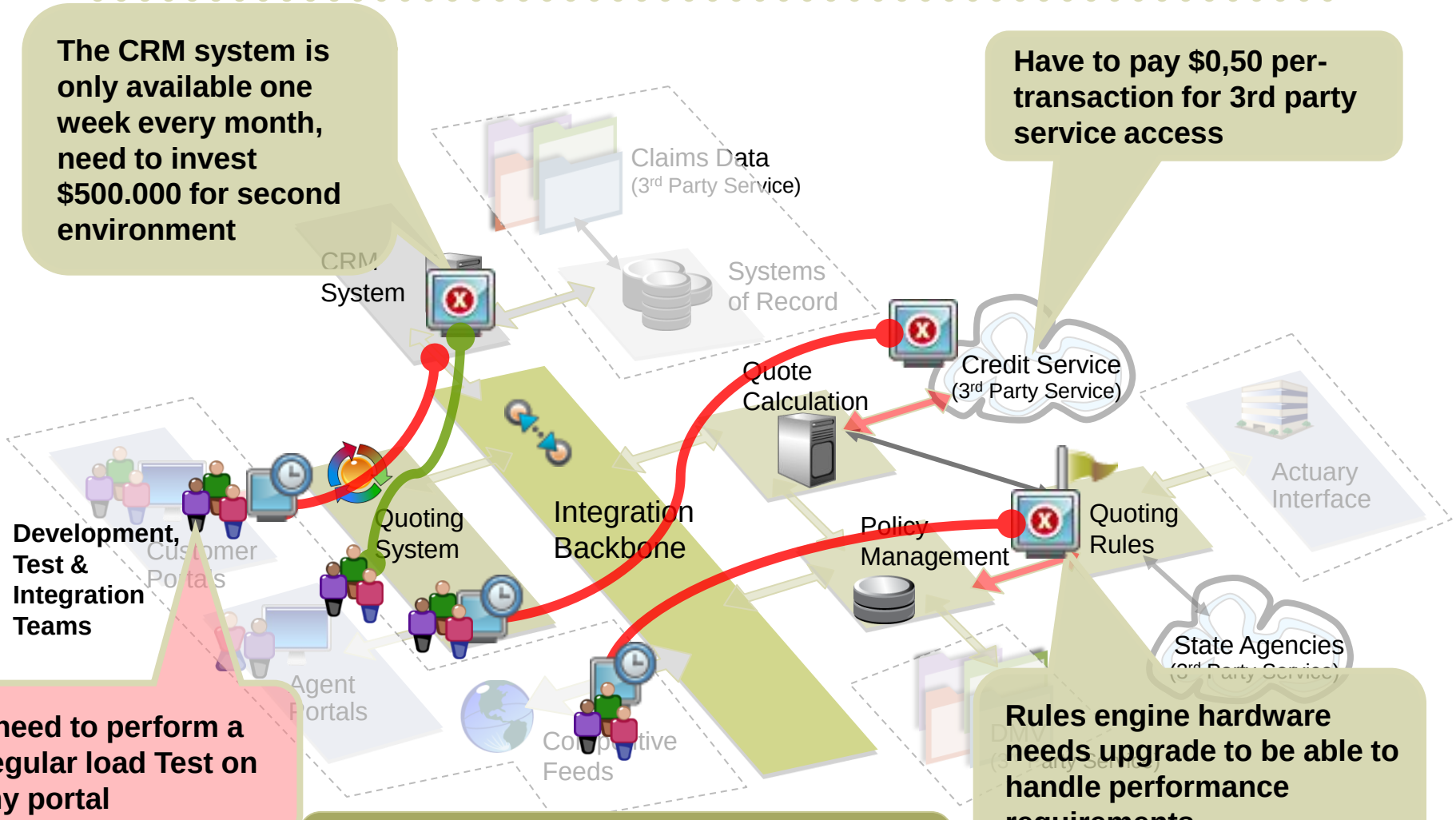
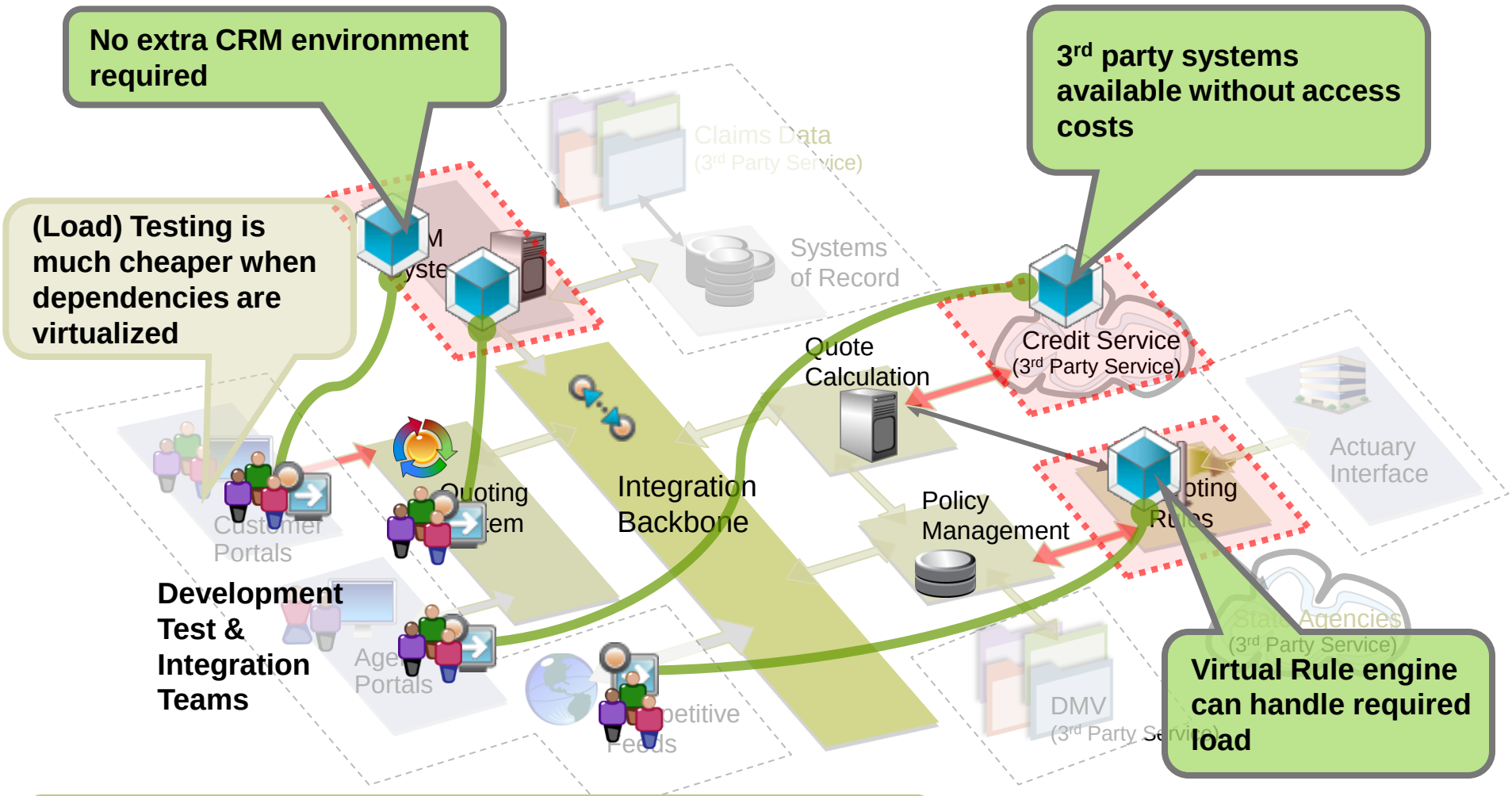
Cost: Real versus Virtualized



Cost: Real versus Virtualized



Virtualization makes load testing cheaper

Recap: Real versus Virtualized/Simulated

- Availability
  - Virtual test environments are available 24/7
- Test Completeness
  - Both positive and negative testing are possible
- Behavior
  - Virtualization offers stable and isolated test environments
- Test data management
  - Virtualization simplifies test data management
- Costs
  - Saves costs on transaction fees and hardware/software for load tests

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Thank you for your attention

Questions ?

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