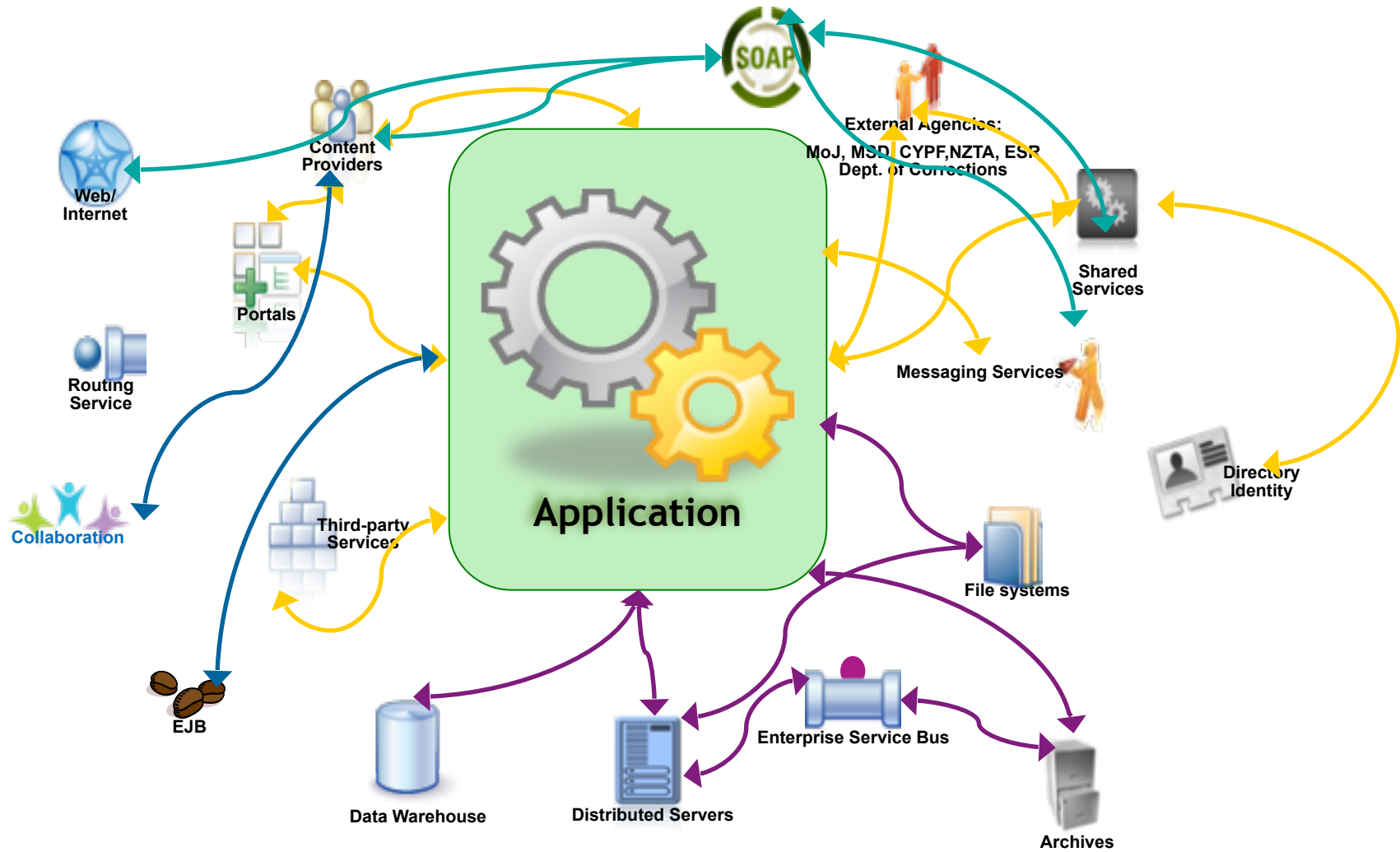


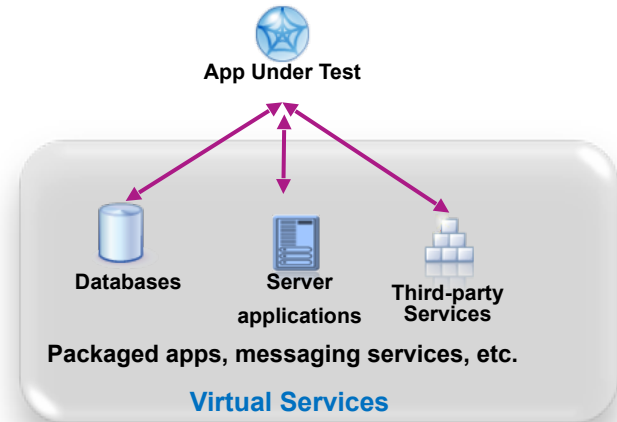
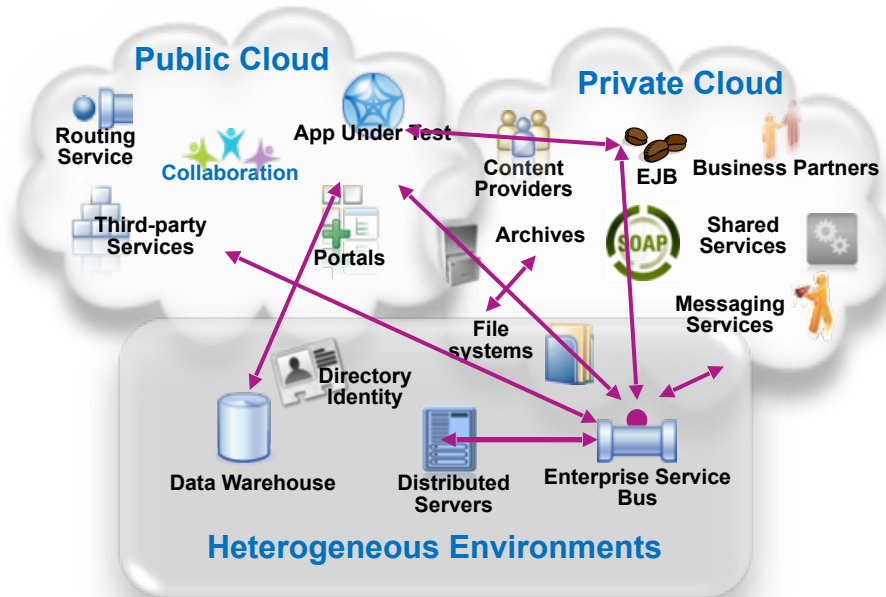
Measure Performance Sooner:

Combine Service Virtualization and Controlled Integration to Test the ESB

Does This look like the Application you are building?



Virtual Services simulate the behaviour of an entire application, a specific component or an entire system undergoing test



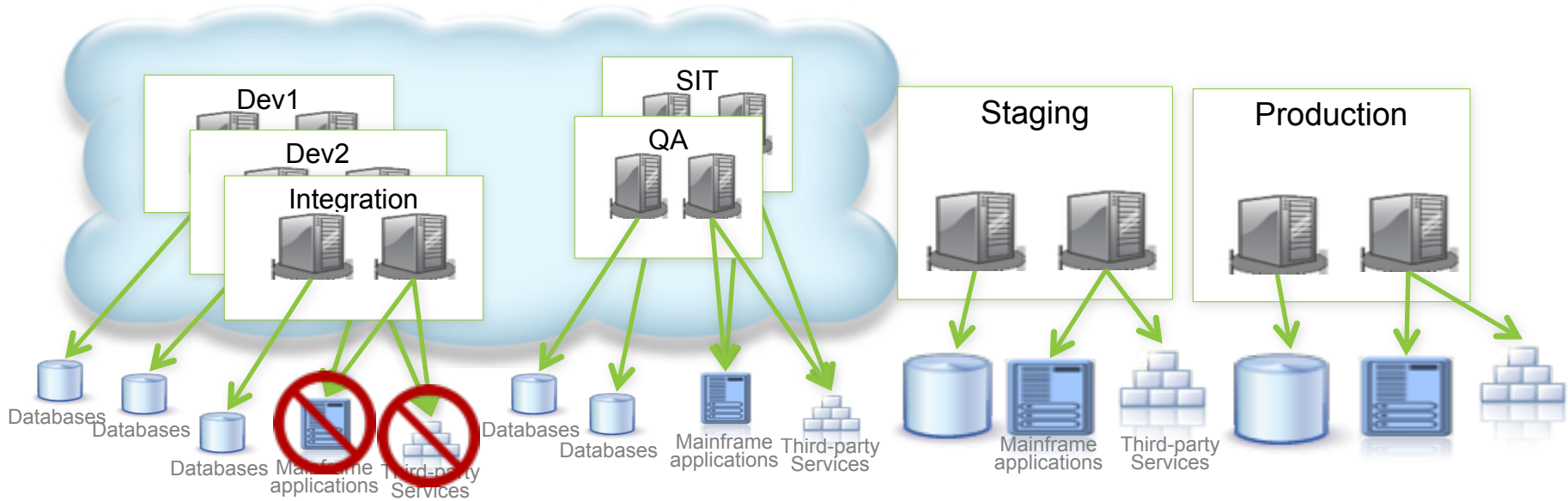
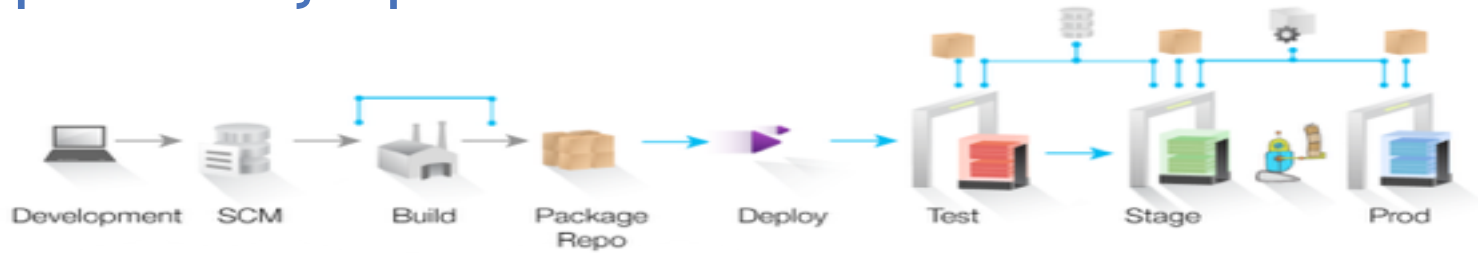
System dependencies are a key challenge in delivering software:

Unavailable/inaccessible: Testing and integration is constrained due to production schedules, security restrictions, contention between teams, or because they are still under development

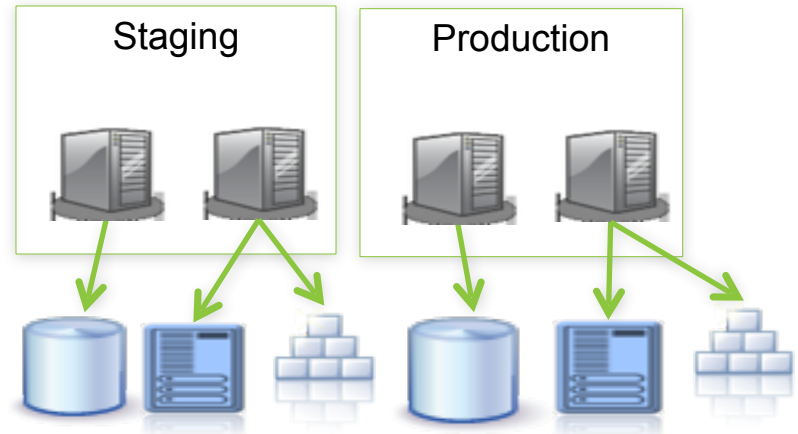
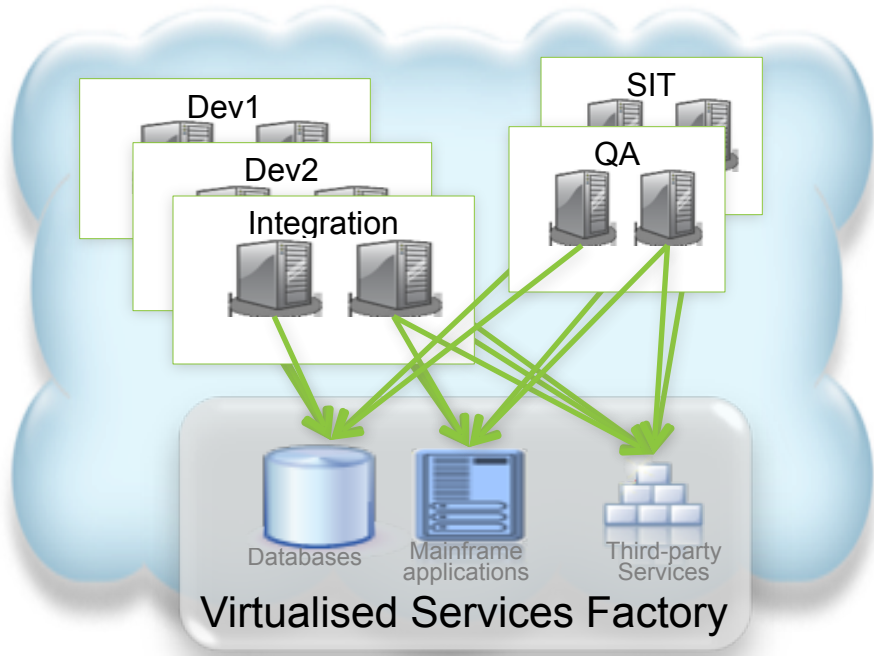
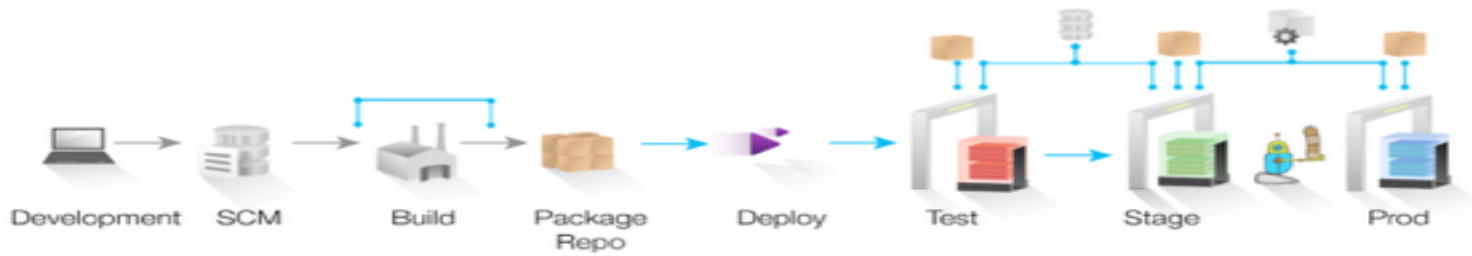
Dependencies in software supply chain from 3rd party vendors or interfaces with cost to test or resource

Impractical hardware-based virtualisation: Systems are either too difficult (mainframes) or remote (third-party services) to replicate via traditional hardware-based virtualisation approaches

Example Delivery Pipeline



Shift-left with Service Virtualisation



The Context – The Client



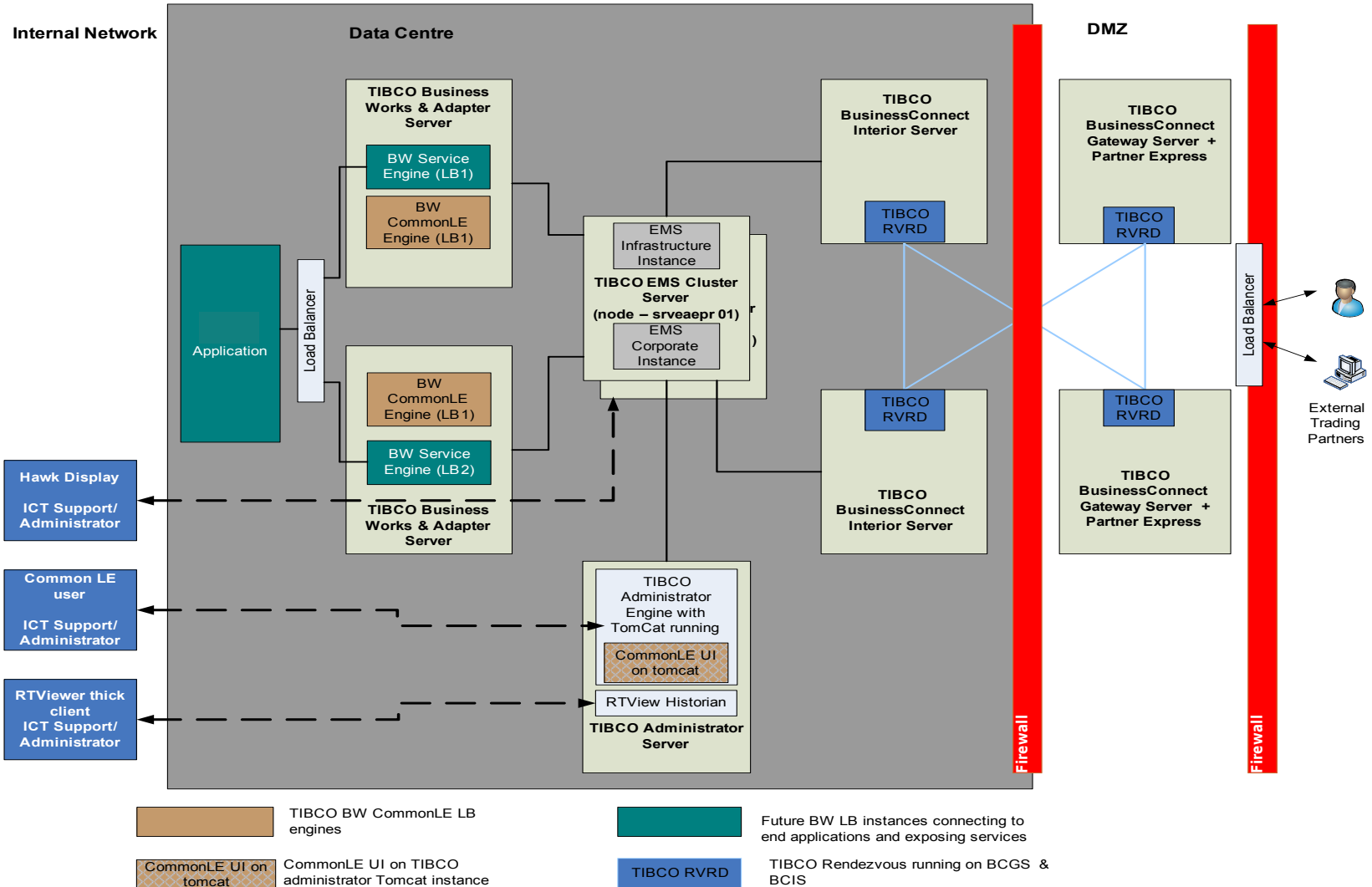
- Large Government Owned Superannuation Company
- Modernising Platforms
- New Service Orientated Architect based on TIBCO integration
- Speed to market crucial – entering a competitive environment

The Problem - Business



- New Integration Platform
- Lack of Test Automation and Integration testing knowledge
- Minimal environments available
- No understanding of scalability

The Problem - Technology

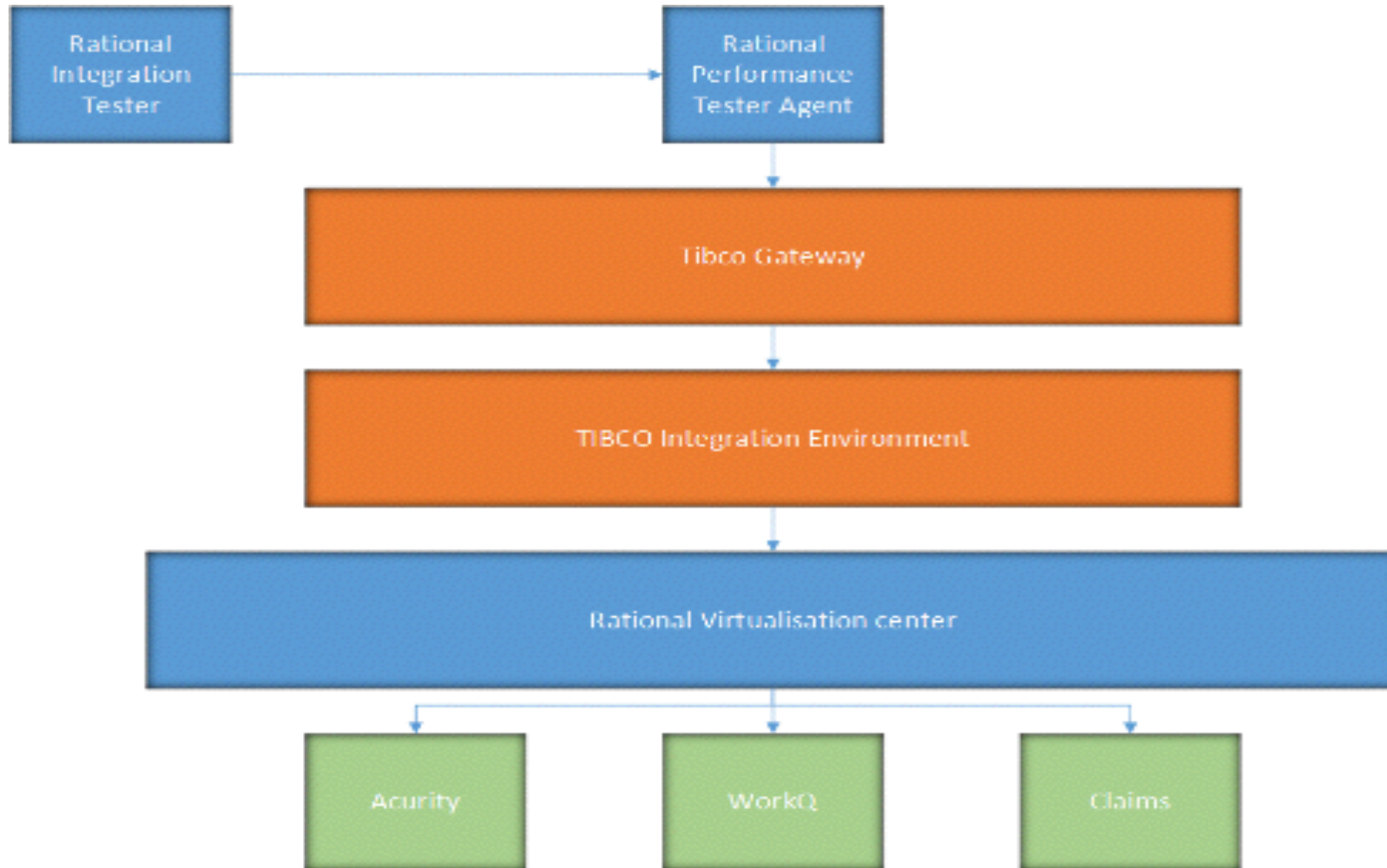


The Solution - Business

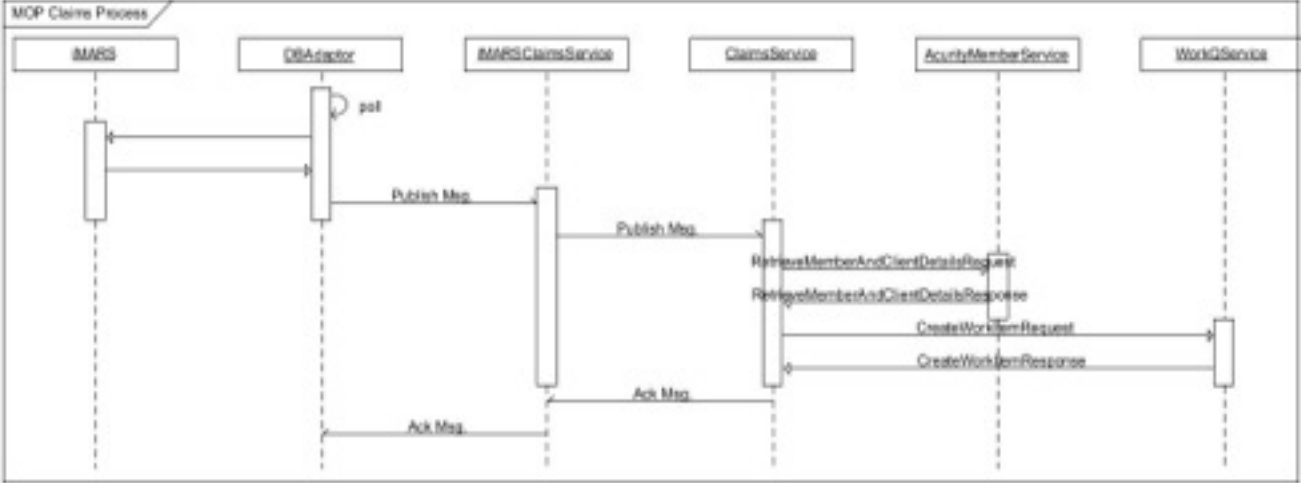
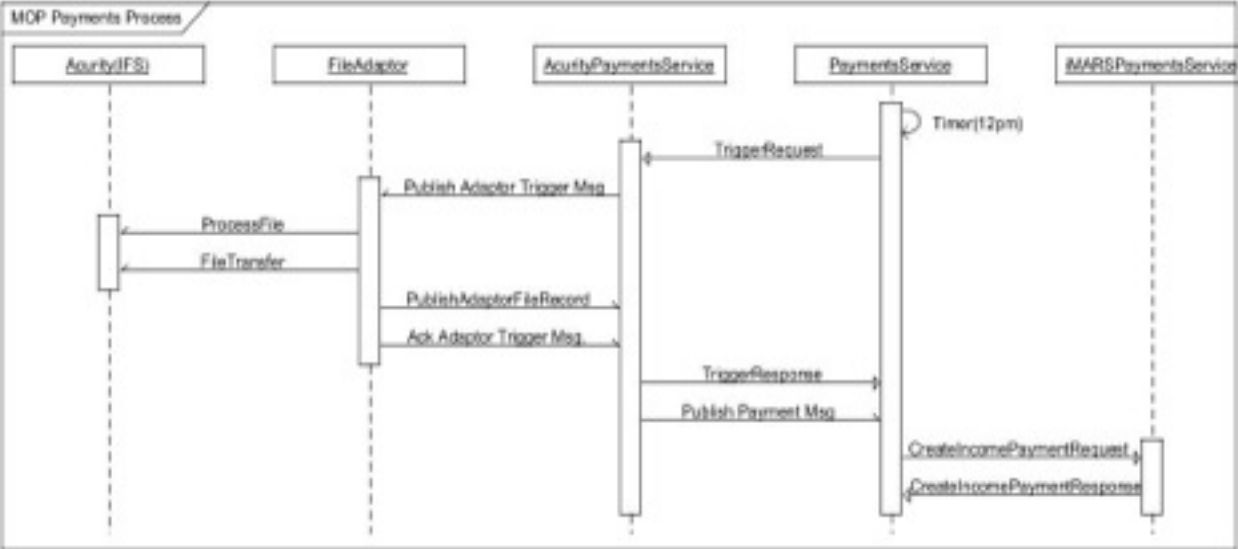


- Test Automation
- Virtualisation of Back End systems
- Benchmarking tests to determine capacity
- Create baseline

The Solution - Technology



The Solution - Technology



The Solution - Technology



The screenshot displays the Rational Test Control Panel interface. At the top, there is a navigation bar with 'Rational Test Control Panel' and 'IBM' logo. Below it, a breadcrumb trail shows 'Home > VIE > Gaspar > MaD'. A table lists various test cases with columns for Name, Satisfied by, Handled, Since reset, and Status. The 'ClaimProcess 1.0' test case is highlighted in grey and shows a status of 'Setting...'. A status box at the bottom left indicates the system is running on '10.191.156.65 (8.0.0.3)' with 'Windows Server 2008 R2, CPUs 1, Free Mem: 254M'.

Name	Satisfied by	Handled	Since reset	Status
testDate	Live system			
TestCreateWorkitem	Live system			
TestMemberRetrieve	Live system			
TestOrchestration	Live system			
TestResolveWorkItemType1	Live system			
Temp Process Definition	Live system			
TestIncomeProtectionInsert	Live system			
StarterProcesses				
ReceiveIncomeProtectionPayments	Live system			
IncomeProtectionClaimsSubscriber				
ClaimProcess 1.0		322	322	Setting...
PublishClaims	Live system			
RetrieveCIM_IPBenefit	Live system			
CreateIMARSIncomeProtectionPayme				
Member Service				
wsRetrieveMemberDetails	Live system			
Services/MemberService/Int/RetrieveMem				
service/RetrieveMemberDetails/HTTPEndp				
Services/MemberService/Int/RetrieveM	Live system			
service/RetrieveMemberDetails/HTTPEr				
Services/MemberService/Int/RetrieveMem				

10.191.156.65 (8.0.0.3)
Windows Server 2008 R2, CPUs 1, Free Mem: 254M
ClaimProcess 1.0

Benefits

- Bottlenecks in the Connection Pools were discovered early
- Maximum thresholds for throughput within the bus were discovered.
- Error handling code was found to be faulty under load
- Corrective actions could be done mid development
- The tests were re-useable as integration tests

Lessons Learnt

- Integration knowledge is essential
- Be good friend with TIBCO Admin
- DATA, Can it be reused?
- Firewalls are tricky but not insurmountable
- Get it working before getting tricky