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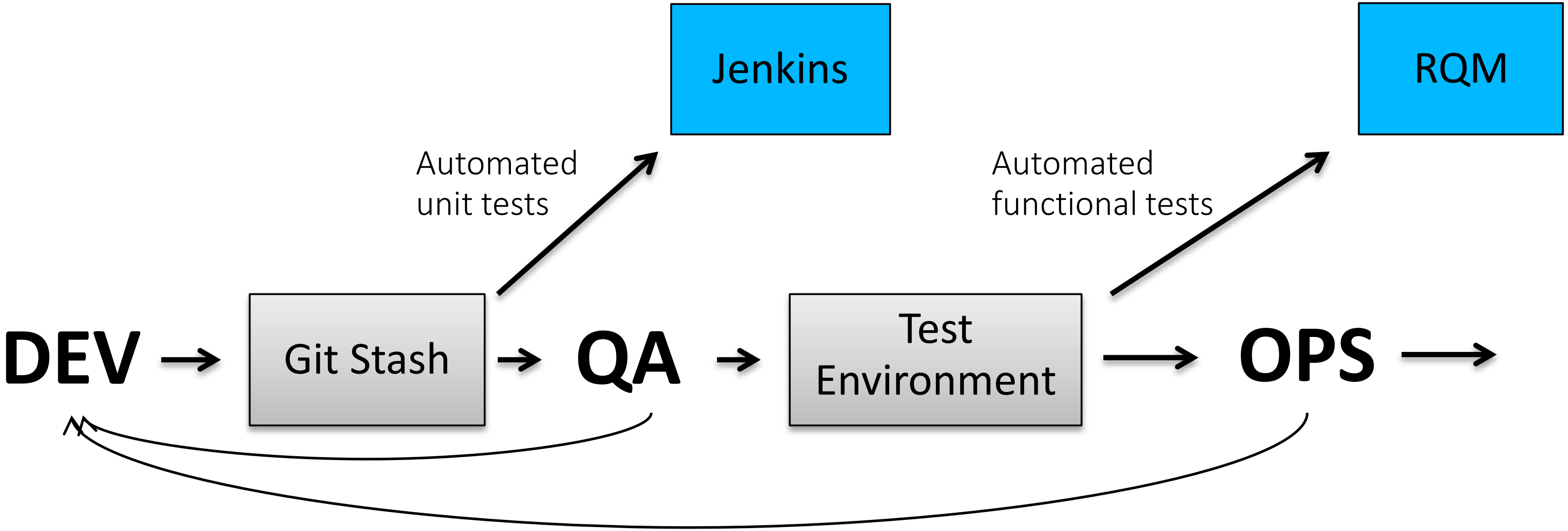
Försäkringskassan IT

Extend functionality for test management by building integration with Rational RQM

Where we're at now



PROBLEM: With fully automated tests, how do we Populate RQM with test results?

Approach #1:

Programmatic interaction through RQM Reportable REST API

RQM Reportable REST API

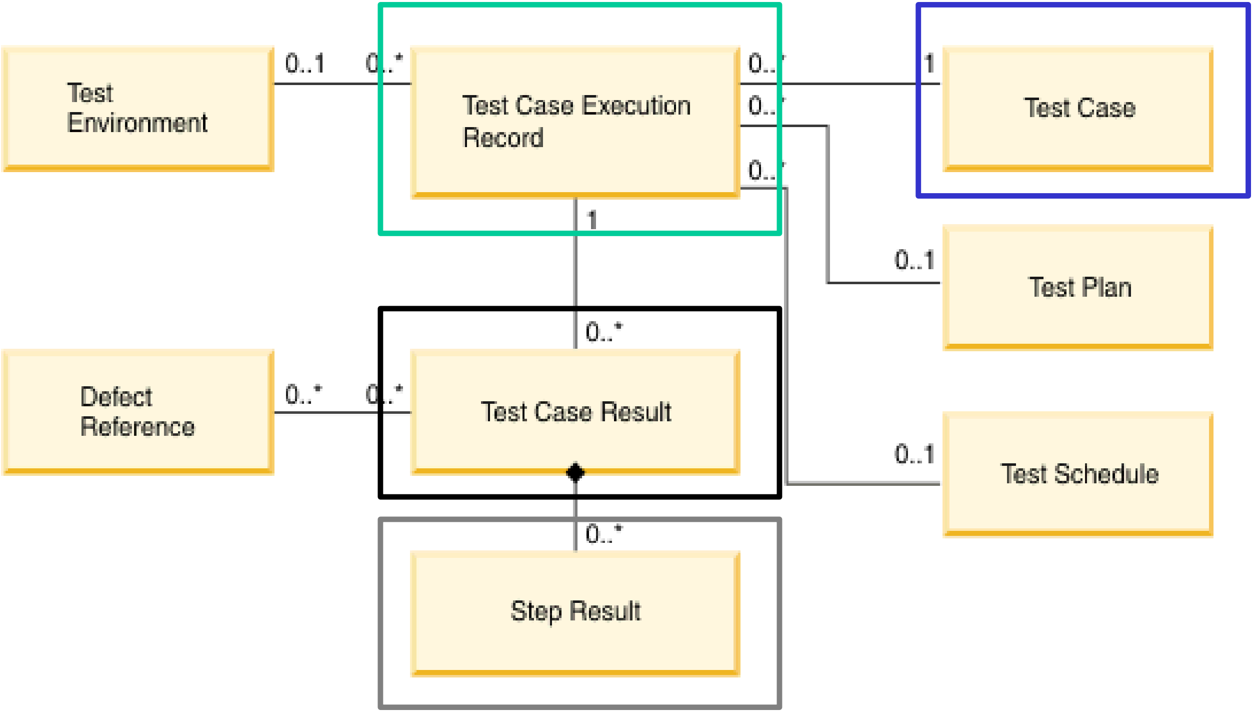
- Available since RQM 2.0
- ”Object-based” REST API
- Can interact and create most entities in RQM

BUT:

- Highly convoluted XML messages (15+ schemas in most messages)
- Threadbare (and sometimes incorrect) documentation (https://jazz.net/wiki/bin/view/Main/RqmApi)

What we want to do:

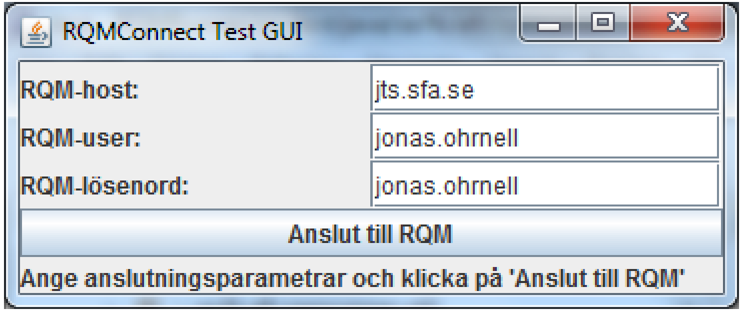
1. Find Test Case
2. Find or create Test Case Execution Record
3. Create Test Case Result
4. (Add step results)



What we've done at FK IT

- Java library that connects to the RQM Reportable REST API
- Small Java-based UI to explore the API and test the library
- Open source, available at GitHub: **https://github.com/jonasohrnell/rqmconnect.git**

- Full implementation of the object model
- A small subset of tasks implemented in a programmer-friendly way



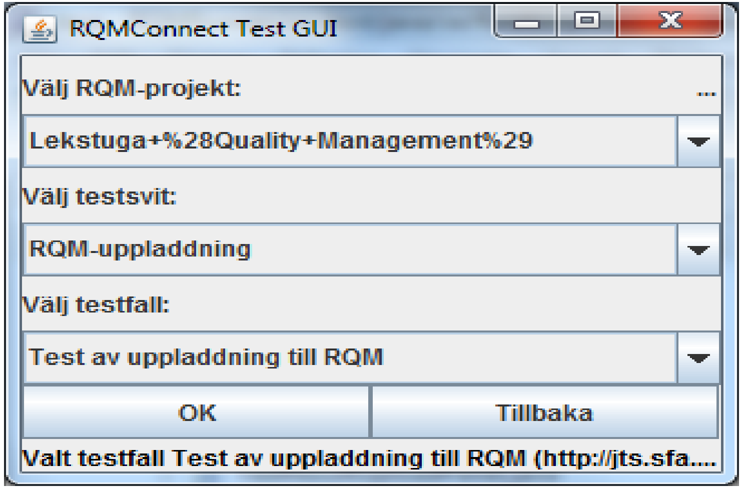
RQMConnect Test GUI

RQM-host: jts.sfa.se

RQM-user: jonas.ohrnell

RQM-lösenord: jonas.ohrnell

Ange anslutningsparametrar och klicka på 'Anslut till RQM'



RQMConnect Test GUI

Välj RQM-projekt: ...

Lekstuga+%28Quality+Management%29

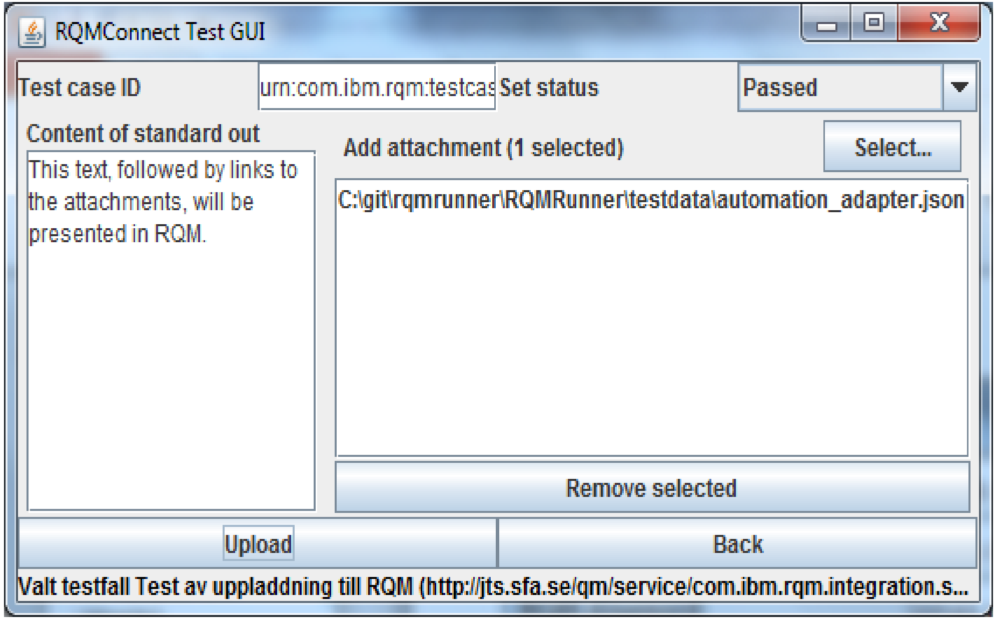
Välj testsvit:

RQM-uppladdning

Välj testfall:

Test av uppladdning till RQM

Valt testfall Test av uppladdning till RQM (http://jts.sfa....



RQMConnect Test GUI

Test case ID urn:com.ibm.rqm:testcas Set status Passed

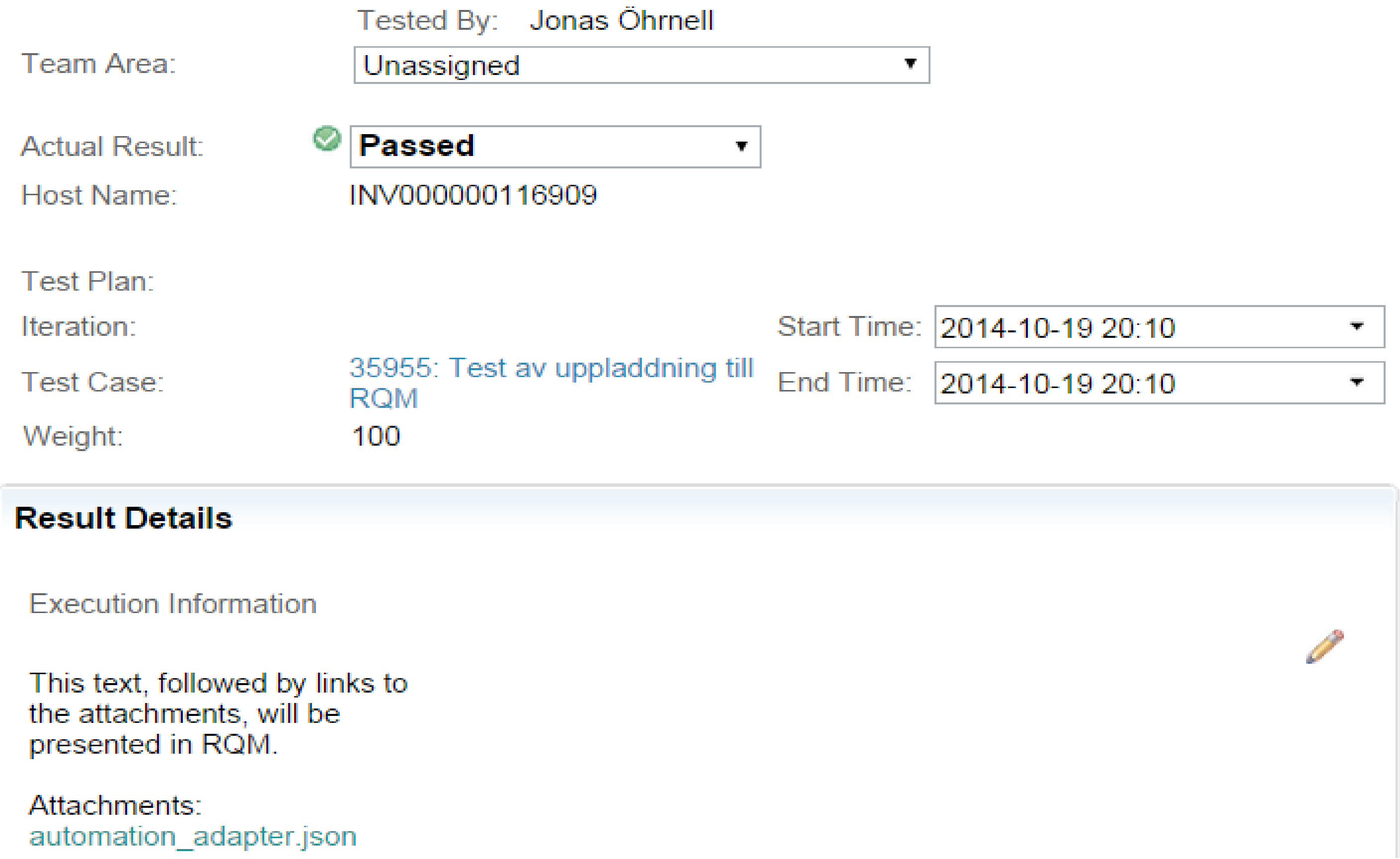
Content of standard out

This text, followed by links to the attachments, will be presented in RQM.

Add attachment (1 selected)

C:\git\rqmrunner\RQMRunner\testdata\automation_adapter.json

Valt testfall Test av uppladdning till RQM (http://jts.sfa.se/qm/service/com.ibm.rqm.integration.s...



Tested By: Jonas Öhrnell

Team Area: Unassigned

Actual Result: ✓ **Passed**

Host Name: INV000000116909

Test Plan:

Iteration:

Test Case: 35955: Test av uppladdning till RQM

Weight: 100

Start Time: 2014-10-19 20:10

End Time: 2014-10-19 20:10

Result Details

Execution Information

This text, followed by links to the attachments, will be presented in RQM.

Attachments:
automation_adapter.json

Approach #2: Scheduling tests from within RQM

Isn’t this part of RQM already?

- Well… kind of.

BUT:

- No generic adapter pooling mechanism
- We’re looking at 1000+ test suites per night -> binding of test runs to specific clients is highly impractical

- We would like to build our own adapter which pools and distributes requests for execution

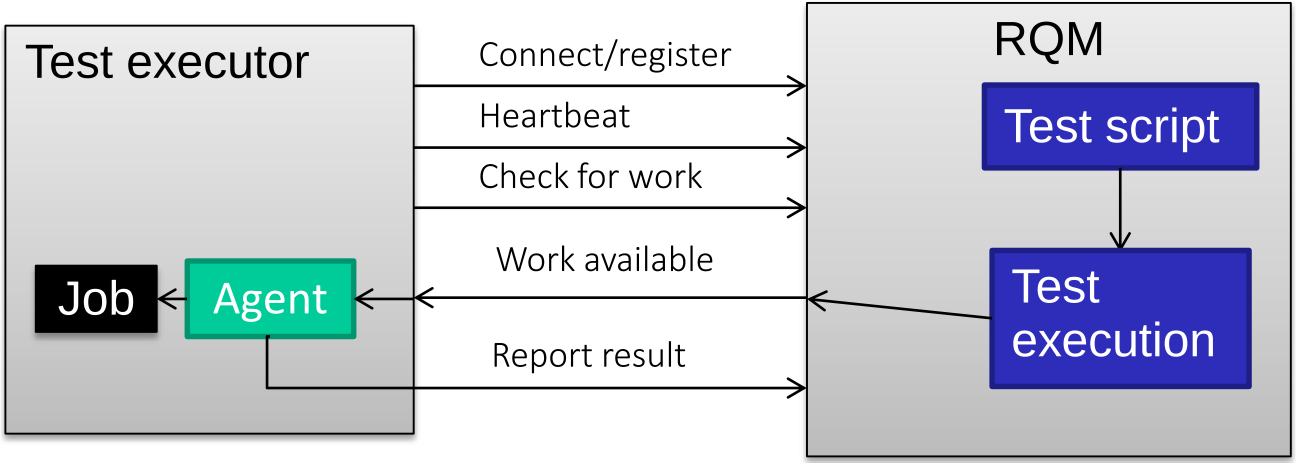
RQM Test Automation Adapter API

- Available since RQM 4.0.1
- ”Resource-based” API conformant to OSLC version 2
- Contains necessary functionality to implement a custom automation adapter that RQM users can connect their test runs to

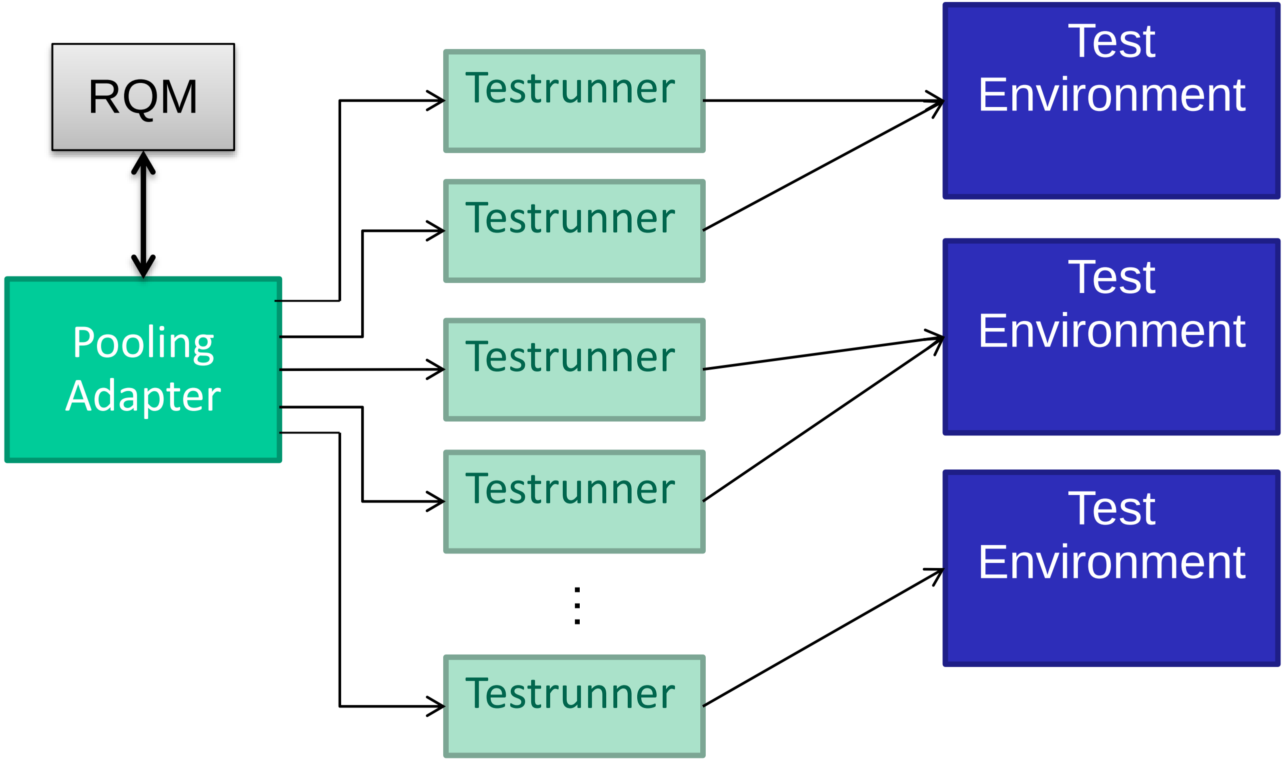
BUT:

- Uses RDF resources (not obsolete, but who else uses it?)
- Specification intermingled with OSLC v2 -> somewhat opaque
- Threadbare (and sometimes incorrect) documentation (https://jazz.net/wiki/bin/view/Main/RQMTestAutomationAdapterAPI)
- Reference sample (Eclipse Lyo) consists of 14 interdependent Eclipse projects – 300+ classes

What we want to do:



Actually, it's more like this:



What we’ve done at FK IT

- Extended the RQMConnect library with Test Automation functionality
- Web application serves as work pool and UI
- Developed custom test runners due to security and networking constraints

- Still work in progress. Registration and handshake works; uploading of results still not bug free. Will update GitHub continuously.

Reflections and wishes

- The API:s seem to be feature complete, which is nice
- We will be able to harness the powerful reporting and statistics capabilites of RQM, as well as workflow and audit functionality

- Documentation is substandard and sometimes outright wrong – *I wish that the guys working on RQM would find the time to expand the documentation*

- Unfortunate choices of information carrier (multi-schema XML and RDF)

- We would like to get in touch with other organizations that face the same challenges so that we can share the workload

Thank you

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