Rest Assured

SECURE DATA PROCESSING IN THE CLOUD

Deliverable D2.1
Project Management and Quality Assurance Handbook
Release 1.0

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Executive Summary

This document describes the methodology to be used in RestAssured to assure the success of the project through proper management and quality assurance procedures. In particular, this document defines:

- The methodology for handling intellectual property (IP) and project artifacts
  - Inclusion of 3rd party source code
  - Attributing authorship to publications
  - Maintaining source code and documentation sources
  - Avoiding data privacy issues

- Managerial reporting and status procedures
  - Monthly Management Reports (MMRs)
  - Scheduled teleconferences
  - Planned meetings

- Quality principles
  - Process for assuring code quality
  - Process for assuring the quality of report deliverables

This document is considered to be a living document, and additional guidelines, best practices and management procedures may be added in the future as required.
1 Management Procedures

In order to assure the smooth running of the project and to protect the rights of the individual partners in the consortium, various managerial procedures have been put in place. These procedures represent the results of the best practices derived from the experience of managing a large number of EU and industrial projects in the past.

1.1 Introduction of 3d Party Code into the Project

While the use of 3d party code into the project is encouraged in order to allow partners to concentrate on the development of components that go beyond the state of the art, care must be taken to avoid potential intellectual property issues (IP) which may arise, such as the viral effect of a number of Open Source software licenses, and the lack of provenance that may be associated with a 3d party piece of code.

In RestAssured, while most of the code to be developed is expected to be made Open Source, there may still be portions which will be proprietary. The inclusion of 3d party code which is distributed under what is known as a viral license (or “copyleft”), such as GPL, needs to be carefully handed so as not to infringe upon the rights of the partners. Copyleft licenses require that any derivative work retain the original license permission, which essentially turns the derivative work into copyleft, Open Source itself. Note, however, that using copyleft software as a dynamically linked dll is not considered to affect (i.e. convert to open source) the rest of the software modules.

In addition to issues with copyleft licenses, there is always the risk that 3d party code may contain plagiarized portions. The use or distribution of such code (even if allowed by the license), may cause legal complications for distributing party.

In order to avoid all potential pitfalls with 3d party code, all partners wishing to bring 3d party software into the project must register such software under the “3d Party Software” section of the project wiki where it will be visible to all consortium members. Any member who objects to the introduction of such software will then raise this objection in writing to the Project Coordinator, who will then be responsible to bring resolution.

1.2 Attributing Authorship to Publications

The publication of RestAssured results in scientific journals and conferences is considered to be a significant goal of the project. It is equally important to the project that all contributors to an article are given due credit. It is recognized that there may be instances where new ideas will arise as a result of joint discussions, some of which may end up in a publication. In order to avoid the case where a partner feels that his/her work was used in a publication without proper accreditation, partners planning on submitting a publication should post an abstract of this work in advance on the project wiki, in the “Proposed Publications” table, filling in supplemental information such as the publication authors, targeted publication and date. Project members who believe that they should be given authorship credit on the publication can then either directly address the authors, or if required, escalate to the Project Coordinator who will then negotiate a resolution of this issue upon consultation with the IBM Legal department, if necessary.

1.3 Maintaining source code and documentation sources

OCC, the leader of the Impact (Dissemination and Exploitation) work package, has set up a Github repository for software control management (SCM) of both the code developed by the project, and documentation (including deliverables). Github, by design, is a distributed version control system and SCM, which pro-
vides resiliency and traceability, as well as allowing developers to work in parallel on different portions of
documents written in LaTex.

1.4 Avoiding Data Privacy Issues

In order to avoid any possible issues that might arise from the use of personally identifiable information (PII)
or from the EU’s General Data Protection Regulation (GDPR), no PII will be introduced into the project. All data used will either be publicly available, synthesized, or anonymized. It is the responsibility of the partner introducing the data to make sure that the above condition has been met. In the event the data to be used consists of real data that was anonymized, IT Innovation will utilize the University of Southampton’s Ethics committee to approve the anonymization before the data is released to the consortium.
2 Managerial Reporting and Status Procedures

The goal of establishing reporting protocols is two-fold; it will make sure that the Project Coordinator has an accurate vision of the status of project (both from a technical, and resource usage point of view), as well as encourage the exchange of information and the promotion of transparency between the partners.

2.1 Monthly Management Reports

An essential part of allowing enabling the Project Coordinator to understand the use of resources in the project is through the Monthly Management Reports (MMRs). The MMR, due after the end of every month, summarizes the person-months consumed per work packages by each partner organization. The Project Coordinator uses the MMR data to track partner resource usage, and can use this information to flag potential looming impacting issues, such as under staffing, or over-consumption of resources by a partner.

The MMR template is implemented as an Excel spreadsheet, and is presented in 2.1.

![Figure 2.1: The MMR template](image)

2.2 Scheduled Teleconferences

Maintaining a high level of communication across the consortium is crucial to the success of any project. From experience, meetings in which all participants are physically co-located are the most effective, followed by telephone and video conferencing calls. To that end, the Project Coordinator has reserved monthly General Assembly (GA) calls for the first Wednesday of every month. Every partner organization is requested to be present in these calls. The Project Coordinator publishes the topics for the meeting in advance on the wiki, and all partners are free to request that other topics be discussed too. GA calls deal with topics at a managerial topic; technical issues are left to the Architecture and Implementation calls described below. In the event that an urgent issue requiring either a General Assembly vote or other action crops up in the period between calls, the Project Coordinator will schedule an additional call.

Architecture and Implementation calls deal with technical topics; while the Architecture calls typically deal with system design issues, the Implementation calls are more oriented to the actual execution of the
work required to create the working reference architecture for RestAssured. Technical partners are expected to participate in these calls.

2.3 Planned Meetings

Additionally, there will be a number of physical face-to-face meetings scheduled throughout the duration of the project, both for technical planning of project direction, and to collaborate on code integration.
3 Quality Assurance

RestAssured defines a methodology for assuring quality, both for software and for deliverables.

3.1 Quality Assurance for Software

While the goal of RestAssured is to create a prototype implementation (as opposed to a product), the assurance of software quality is paramount. Low quality would affect the overall performance and stability of the entire RestAssured stack, and would delay the efforts of the whole consortium.

It is expected that each component will be developed using the software engineering best practices of the given organization, such as holding code reviews, and will be unit-tested before being integrated in the RestAssured testbed. New code uploaded to the testbed will need to be verified by both component-level testing (which the component developer is responsible for) and system-level testing. System-level testing will be accomplished by running scenarios from the use cases – this will have the double benefit of making sure that the use case scenarios are always in a demonstrable state, while at the same time verifying the changes. Github will be used for source control, and all changes will be first saved as branches until they pass the system test, at which time they will then be merged back in to the main development path.

3.2 Quality Assurance for Deliverables

In order to assure the quality – both from a technical and from a presentation standpoint – for all project deliverables, the following process has been defined:

1. The Project Coordinator creates a \LaTeX template, which will be used for all scientific deliverable documents. This will guarantee consistency in the organization and visual aspects of the deliverables.

2. For each deliverable, the Work Package Leader is responsible for organizing all contributions.

3. Each contributed file should have (for .tex files) the following comments:

   $\text{name of file}.tex$
   $\text{Written by: [name of author]}$

   If there are sections within a file written by various authors, the “$\text{Written by:}” comment should accompany each section.

4. Documents should be written with the spelling checker enabled.

5. For each deliverable, the Work Package Leader is responsible for organizing an internal review. Once the review has concluded and all issues have been addressed, the deliverable is ready for cross work package review.

6. At least two weeks must be available for the cross work package review and the subsequent revision of the deliverable based on the review comments.

7. For the cross work package review, the basic rule is that WP1 reviews the deliverables of WP2, WP2 reviews the deliverables of WP3 etc. WP9 reviews the deliverables of WP1. However, in cases where it makes sense to have another reviewer for a deliverable, the leader of the relevant work package can arrange another reviewer.

8. The Project Coordinator has the right to reject any document before delivery if he feels that it needs to be improved.