



Invitation to tender for the provision of “Establishment of an IDS reference testbed and test center”

Date Published on International Data Spaces Association website: 15th March 2021
ITT submission deadline: Friday 26th March 2021

1. Introduction

The purpose of the International Data Spaces e.V. (IDSA) is to develop the IT architecture for future data spaces that supports the exchange and processing of industrial data in a decentralized and open network. To this end, the association promotes science, research and standardization in this field. Further information on the International Data Spaces e.V. can be found on the website www.internationaldataspaces.org.

2. Purpose of service

The purpose of the service is to establish an IDS Reference Testbed and to define the Checklist Approach and the Concept Review for the Base Security Profile for an IDS Connector as well as for the IDS Broker (in a first version).

The goal of the “IDS Reference Testbed” is to have a comparable setup with stable versions of the IDS core components which can be used to verify that a component.

1

- implements the IDS specifications for establishing connections and communication.
- and, thus, can work interoperable with all IDS components in the testbed setup (and consequently in the operating IDS).
- while providing adequate security for the communication and data exchange.

This project aims to use the previous work on the required components and their interactions (including the IDS Lab, the IDSA Plugfest activities and the Integration Test Camp) and finalize the necessary specifications for all components in order to define and establish one reference setup. These specifications will be provided to the IDSA Technical Steering Committee for approval.

The testbed and its finalized specifications are essential to ensure the interoperability and are, thus, the essential basis for the active operation of the IDS in the industry by helping to align the existing solutions. The results of this project (specifications, procedures, testbed setup, ...) will be made available to the entire IDSA or publicly (depending on the decision of the IDSA) so that developers can test their components against the reference testbed. After initially specifying the testbed, changes can be made using a formal change management, which is governed by the IDSA Technical Steering Committee.



3. Scope of Work

The services are provided in English. If translation is necessary, the client will take over any further necessary translation.

A further development or adaptation of the services can take place during the project period. There may be shifts in the priorities of each module, provided that they do not exceed the agreed total volume.

Lot 1: Specification of Interfaces and functionalities. Integration of the Testbed CA into the testbed.

Lot 2: Testbed Validation. Assess/validate compliance for the reference implementation for each component with the specifications and provide Validation Reports

Lot 3: Testbed operation. Instructions for setting up the testbed, integrating the component to be tested and further required specifications.

Lot 4: Change management. Instructions for synchronization of testbed instances with the „IDS Reference Testbed“ as well as version and release management

Lot 5: Machine-readable criteria catalog. Instruction Manual and first version of a machine-readable criteria catalog that can be used for managing the criteria catalog as well as utilized for the test procedures

Milestones

Milestone 1 – First version of Reference Testbed and of Checklist Approach ready for Base Connectors and Basic Brokers

2

The IDS Certification scheme provides that the lowest test profile in the IDS will be a checklist approach where the applicants fill out a questionnaire and self-declares that or how he fulfills the required certification criteria. Additionally, the component has to pass an automated test suite to assure interoperability. The checklist approach will not include an evaluation facility but enable the applicants to run this “low level certification” themselves. However, the certification body will still evaluate the results of this automated evaluation before issuing the certificate. This test profile intends to offer a low barrier to try out the IDS but should not become the standard in the IDS.

However, these questionnaire and tests should be based on concrete specifications and, while there are already many different components implemented or in development, the specifications for ensuring the interoperability and cooperation of the components still have to be finalized. For this purpose, a reference testbed should be set up in order to have a basis for deciding whether a component to be tested exhibits a correct behavior.

Milestone 2 – First version of Concept Review ready for Base Connectors and Basic Brokers

Apart from the Checklist Approach that offers a low barrier, all other test profiles are based on the evaluation conducted by an evaluation facility that acts as an independent third party and ensures a correct implementation of the requirements. The evaluation conducted for this assurance level (Concept Review) consists of a review of the provided concepts and documents as well as (semi-)automated and manual testing at the evaluation facility. In order to make sure that each evaluation facility conducts the tests in a comparable fashion and in sufficient depth to achieve the corresponding value proposition, the evaluation will be based on common test specifications.



The achievement of milestone 1 is targeted for three months after the start of the project.

The work for milestone 2 will start in parallel and the achievement of the milestone is targeted for six months after the start of the project.

4. Performance period

Commencement of services: After contract award

End of services: October 2021

5. Required profile

A service provider with experience in the IDS Certification Scheme and IDS Reference Architecture Model is sought for these services.

- At the time of the start of the service, the contractor is certainly familiar with the topics of the IDSA, so that direct support can be provided.
- Independent working methods: At the beginning of the project, the International Data Spaces e. V. transmits the contact details of all involved colleagues and appoints permanent contact persons. The contractor independently accesses the respective colleagues and (potential) network partners.

6. Framework Conditions

When providing the services referred to in point 3, the contractor must take into account the following conditions:

- The contractor appoints an English-speaking project manager and an English-speaking deputy for the entire duration of the project. The project manager accepts all concerns and coordinates the individual projects. He/she forwards all relevant information to the client.
- The language of the contract is English. The elaborations and documents must be prepared primarily in English.
- A weekly digital coordination with IDSA is necessary.
- The client guarantees the timely provision of necessary information and contact details.

3

7. Contract award procedure

The submitted tenders will be evaluated on the basis of the procedure described below.

Evaluation of the offer

The following evaluation criteria will be used to evaluate offers received in response to this Invitation to Tender.

Price Evaluation 50%

The offer shows an individual and a total price for each service referred to in point 3. The conditions in point 5 are taken into account in the respective prices.

When evaluating the offer, the offer with the lowest total net price receives 50 points.



Offers that are twice as expensive or more than twice as expensive as the lowest offer will receive 0 points.

Implementation concept 50%

The implementation concept outlines how the contractor would implement the contract in practice. The own competences, which are queried in the call for tenders, are presented. The scope of the concept should not exceed 20 A4 pages. The concept represents in a minimum: the approach to conception, rough schedule divided into months, the implementation of the services, knowledge management.

A maximum of 50 points will be awarded when evaluating the implementation concepts. This maximum rating will be awarded to the offer, which sets out the most convincing, complete concept, takes into account the practical requirements of the contract and allows you to expect to ensure work at a very high level of quality. Consistency and problem orientation must convince.

The other concepts are measured by this and evaluated with correspondingly fewer points.

It is explicitly pointed out that the absence of the concept in any case leads to the exclusion of the participant in the further procurement procedure.

Please send your offer to sonia.jimenez@internationaldataspaces.org not later than March 26th, 16:00 CET.