Data Rights System 0.5

Protocol Interoperability Testing

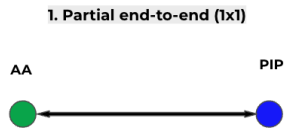
We've been getting a number of questions about the testing roadmap for the Data Rights Protocol. This document describes the testing we have conducted and tools we have released to date, and our roadmap for the future.

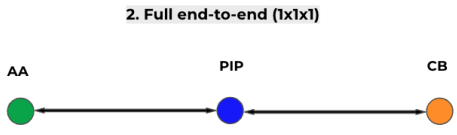
We are testing both conformance of implementations with the protocol and also interoperability of implementations with each other. We have released an open-source reference application to assist with testing conformance with the protocol. We run live data exchanges between implementations of multiple companies to test interoperability.

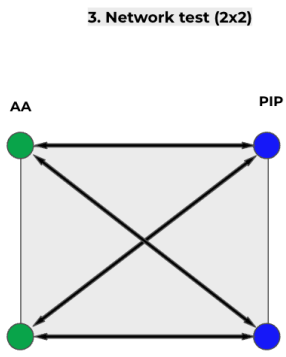
This is the CR interoperability testing roadmap, and we're responsible for all of these tests happening. Not every implementer will be part of every phase. CR will learn from each phase and carry the knowledge forward for all partners in subsequent phases. Documentation of the protocol conformance testing resources can be found here.

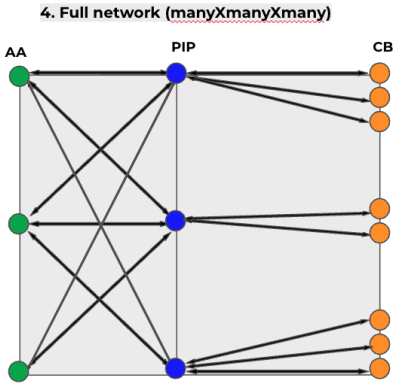
Protocol Interoperability Testing

In addition to the test suites and reference applications available to test conformance with the Data Rights Protocol, a number of interoperability tests will focus on the capabilities of Participants to exchange data with other Participants in a networked environment. The following phases of testing represent key milestones toward proving the interoperability, readiness, value, and fitness of both the protocol and network comprising the Data Rights System.



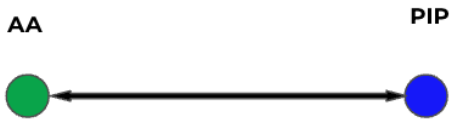






1-to-1 Testing

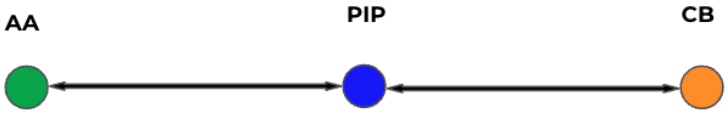
As of May 2022, the Data Rights Protocol has undergone initial testing of the data model and endpoints between pairs of participants. We call this 1-to-1 testing. The purpose of these initial tests has been to confirm or correct assumptions about the adequacy and suitability of the data model and capabilities of the endpoints and to elicit important missing requirements and constraints necessary for the protocol to be deployed in production by participants.



While our first 1-to-1 test is complete, we are planning a second 1-to-1 test that leverages the OSIRAA test suite with another partner. Because OSIRAA utilizes Ethyca's FidesOps infrastructure, a second 1-to-1 test is sufficient to prove interoperability at this phase.

1-to-1-to-1 Testing

The next phase of testing is between Authorized Agents, Privacy Infrastructure Providers, and Covered Businesses. We call this 1-to-1-to-1 testing, and it is intended to represent an entire lifecycle end-to-end test of the protocol.

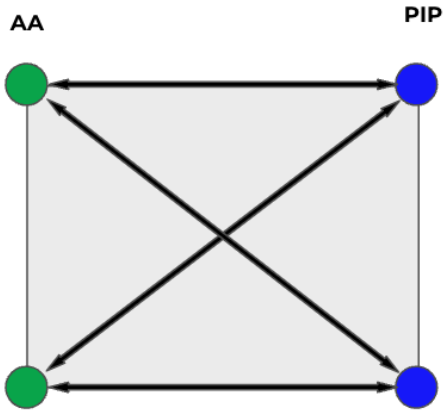


In addition, parties may, by agreement, choose to test other technical capabilities or business hypotheses, such as whether a Data Rights Protocol encoded request initiated by an Authorized Agent and transmitted through a Privacy Infrastructure Provider would be received and processed by a Covered Business identically to the same request if it had not been exchanged through the Data Rights System.

The first 1-to-1-to-1 test is currently in progress. The plan is for CR's Permission Slip, OneTrust, and the Consumer Reports enterprise to participate in the test. We're seeking at least one more triad of an AA, PIP, and CB for this phase. If you are aware of a CB that might be willing to participate, let the DRP team know and we can help organize a 1-to-1-to-1 test that includes them.

2X2 Testing

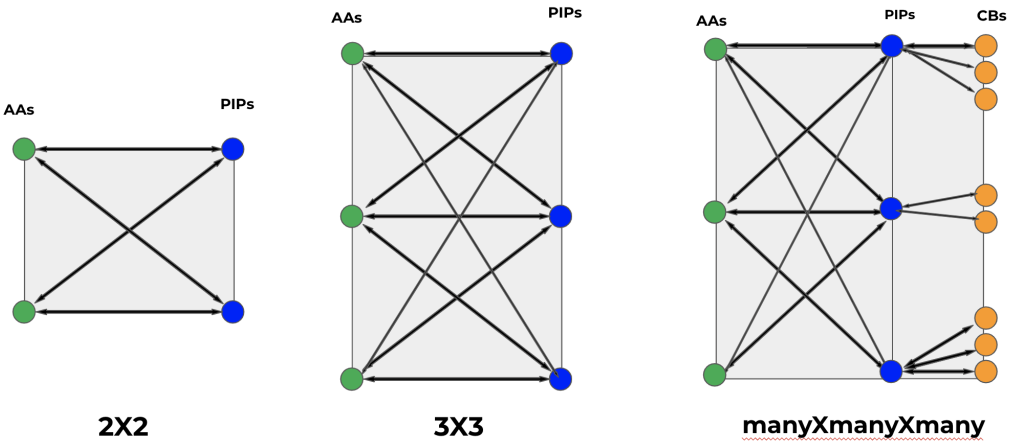
The next phase of testing is between two Authorized Agents and two Privacy Infrastructure Providers. We call this 2X2 testing, and it is intended to ensure the protocol can be successfully implemented as part of a network whereby a given Authorized agent can discover, route to, and exchange data requests with more than one PIP or CB, and conversely that a PIP or CB can receive and respond to data rights requests from more than one AA.



The focus of this phase of testing will be efficient public key exchange and reliable attribution of public keys to other Participants in the data rights network.

manyXmany Testing

The final phase of testing will evaluate processing requests by and between any combination of Participants. This phase of testing will establish the methods and mechanisms needed to discover, route, and verify relevant information in a multi-party network.



The ultimate North Star architecture currently postulated to achieve this is based on a directory service; however, based on the actual results of testing, the simplest and easiest process to maintain and secure will be sought.

Alpha Phase Testing

To date, all testing has been completed with synthetic user identities. The use of such synthetic user identities will continue through the entirety of the Alpha Phase. Over time, the use of synthetic user identity information will become more detailed and coordinated between the participants.

For example, in future stages of Alpha phase testing, it is expected that Consumer Reports will create synthetic users in its live systems in order to evaluate how well the protocol provides information necessary to successfully process requests and also to assess whether requests that arise through DRP implementations vary in any material way from comparable requests that arise through existing channels.

Beta Phase Testing

When live use data is exchanged, the Beta Phase begins. It is expected that Participants will be able to limit and curate data exchanges during the Beta Phase indefinitely until all Participants agree that the DRP service is capable of production-grade levels of performance.

Conclusion

Lots of testing is underway. Thanks to the implementers who have already doubled down on this roadmap and begun the testing process. We'll keep the consortium posted as new tests are successfully completed. If you know which of these stages you're most interested in, you can contact Dazza Greenwood to discuss.