Conformance Test Suite

Data holder guidance material

Consumer Data Standards version 1.6.0

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1.   Overview

This section provides general information about the Consumer Data Right (CDR) Conformance Test Suite (CTS) (the CTS) and will exclusively cover the data holder (DH) scope of conformance. Separate guidance material is available specifically for accredited data recipients (ADR).

It will give you an understanding of the goals and functionality of the CTS.

1.1.   About the CTS

The CTS is an important part of the CDR on-boarding process. It plays a key role in ensuring CDR works as intended for consumers.

The CTS tests if participants can conform with the Consumer Data Standards (CDS) and CDR Register (the Register) design.

It enables testing to take place in a secure environment without:

- exposing consumer data
- interacting with live software products and brands.

Participants must pass the CTS before they can be made **active** on the Register, which can be found on the CDR website (the website).

1.2.   Goals of the CTS

The CTS aims to give consumers confidence that participants:

- can enter the CDR ecosystem (the ecosystem) without disruption
- are capable of conforming with the CDS and the Register design.

To do this, the CTS tests how DH brands make and respond to various requests. It ensures they react correctly to valid and invalid requests.

This means consumers can trust that software products and brands on the Register can provide a safe and secure service.

1.3.   What the CTS is designed to do
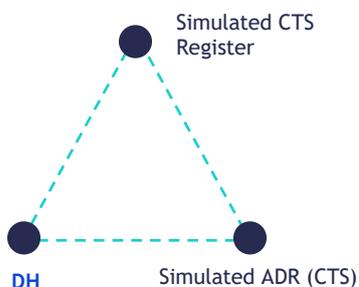
Registered Data Holder's interaction with CTS

The CTS tests how DH brands interact within the ecosystem.

The CTS tests that the DH brand can safely interact with a DR in the ecosystem. It conforms the participants technical competency in selected areas via a collection of test scenarios. CTS plays the necessary role of simulated ADR in the DH tests. CTS provides simulated CDR Register function in support of the test scenarios.

1.4.   What the CTS is **not** designed to do

The CTS does not test the internal workings and validations of a DH brand.

DHs should know that the CTS cannot confirm:

- how they manage consent within their brand
- their brand correctly handles certain consent flow attack vectors
- they correctly remove consent and consumer data in their brand.

The CTS is not a sandbox or assisted development tool. The simulated CTS register and ADR implements conformance test scenarios only. They do not support all endpoints and APIs and therefore should not be used for other testing purposes. CTS assumes that you have a production-ready brand that is built following the CDS and the Register design before taking on the conformance testing.

2. Getting started

This section explains how to get ready to use the CTS.

2.1. Checklist before you can use the CTS

You are ready to begin conformance testing when you have:

- been registered as a DH
- have a production-ready brand built that follows the CDS and the Register design
- have access to the CDR Participant Portal
- signed the ACCC PKI Subscriber and Relying Party Agreements
- completed and submitted your CTS enrolment form
- performed the tasks outlined in the CTS test preparation section.

2.2. What the CTS will be testing

The CTS will conduct a series of tests to determine if a DH brand can conform to the CDS and the Register design.

The CTS will test the technical competency of the DH brand in the following areas:

- Dynamic client registration (DCR)
- Consent
  - facilitate authorisation for once-off data sharing request
  - facilitate authorisation for data sharing request with duration
  - facilitate concurrent consent arrangements.
- Consent withdrawal
  - revoke consent arrangements
  - revoke refresh token.
- Pushed Authorisation Requests (PAR)
- Resource APIs
  - Facilitate calls to Get Accounts.
- Interaction with the Register
  - Get latest ADR status from the Register
  - Correct usage of the ADR status in DCR and consent management in relation to DH responsibilities for data disclosure, consent and registration management
  - Polling ADR software status every 5 minutes
  - Correct handling of ADR status change from **active** to **inactive**.
  - Includes correct handling of ADR status change from **inactive** to **active**(i.e. reactivation)
  - Correct handling of ADR status change from **active** to **removed.**

3.   How to enrol in the CTS

This section explains the enrolment process and how to complete the CTS enrolment form.

3.1.   Enrolling to use the CTS

The CTS needs to be set-up to enable you to begin conformance testing. To do this, you need to provide the technical details of your system for the environment you wish to test in. You can provide your technical details by submitting a CTS enrolment form.

For a DH, each brand needs to pass the CTS. If you have multiple brands, each brand needs to be enrolled separately.

3.2.   When to enrol in the CTS

The CTS is not designed to assist you to develop your brand.

You should enrol in the CTS when your brand is ready for production release or close to being ready.

3.3.   Filling in the CTS enrolment form

The current release of the CTS requires you to complete an enrolment form. You need to complete and return the form electronically. The ACCC will not accept printed or scanned versions of the document.

You need to complete a CTS enrolment form for each brand that is required to pass the CTS.

The CTS enrolment form refers to the CDR Register design for technical field definitions. Look up the definitions and make sure you provide the correct details. Incorrect technical details will result in failed tests.

The CTS enrolment form requires a CTS tester account that will log into the CTS user interface. The CTS tester account must be a valid account on the CDR Participant Portal (the Participant Portal). You will be required to setup Multi-Factor Authentication (MFA) on the account when logging in to CTS.

Once you have completed the CTS enrolment form, email it back to the ACCC On-boarding Team at CDRTechnicalOperations@accc.gov.au.

3.4.   Inform ACCC if tests cannot be taken

Typically, you need to successfully complete every applicable conformance test to pass the CTS. However, if your brand is not designed to execute all of the applicable tests, you will need to provide an explanation to the ACCC. Inform the ACCC, via the enrolment form, if cannot undertaken any by listing any tests that you cannot take on the CTS enrolment form.

4. CTS test preparation

This section provides information on tasks required to prepare your system after you have enrolled to use the CTS.

4.1. Applying your test certificate

As part of the enrolment process, the ACCC will provide you with a test certificate based on the certificate signing request (CSR) included in your completed and returned CTS enrolment form. You will need to apply the test certificate to your DH brand before using the CTS.

4.2. Prepare the network

You may have a network configuration that will block the API calls between the DH brand and CTS system. Whitelisting or other network preparation activities may be required to connect to the CTS system. You will be provided with IP addresses and domain names of the CTS to assist in your network preparation.

4.3. Connecting to the CTS Register

For DH, CTS simulates both the Register and an ADR that your brand interacts with.

DH brands will need to be configured to connect to the CTS Register.

A CTS conformance ID and the CTS Register URL will be provided by an ACCC on-boarding officer during enrolment.

You will need to:

- embed the conformance ID in the CTS Register URLs

- apply the DH brand to use the CTS Register.

4.4. Prepare test data

The CTS ecosystem assumes the DH brand can simulate a consumer granting consent on the DH brand. To prepare for this you should have:

- the necessary login and consent patterns for a test customer

- a test account with the DH brand that has transactions on the account (specific transaction data is not needed).

The CTS does not store any test data used during the tests. The participant is responsible for the correct usage of customer data if real data is used.

5. Performing CTS tests

This section provides instructions on how to perform CTS tests.

5.1. DH test plan

The CTS supports a collection of scenarios that can be composed to test plans based on the DH brand conformance needs. During enrolment, an ACCC on-boarding officer will assess your test needs and create your test plan.

DH participants are required to provide test results for all scenarios, or to provide sufficient justification on why the tests is not relevant to them.

5.2. DH user interface

To use the CTS you will need to login to the CTS user interface. The CTS UI URL will be shared during the enrolment process.

Only the CTS tester account on the CTS enrolment form can log into the CTS UI.

5.3. Run the DH test scenarios

You will be able to see your test scenarios after logging in to the CTS UI. The UI will let you select a test scenario to run, re-run the scenario and to view test reports.

The test scenarios are independent from each other and you can run the test scenarios in any order. You can re-run the test scenarios multiple times as you need.

Within a test scenario, the CTS ecosystem simulates a DR to dynamically register to the DH brand. The CTS DR will begin to run tests, such as consent and consent withdrawal. Where there is a need for the test consumer to grant consent, the CTS UI provides a reminder for manual steps.

5.4. View test report

CTS UI displays a **pass** or **fail** result for each test step under a test scenario and any error messages for the test step.

CTS UI displays **pass** for a test scenario after all test steps inside the scenario are passed. CTS UI displays **fail** for a test scenario if any test steps inside the scenario are failed.

The CTS test report is the collection of test results from all test scenarios and test steps. Participants have full access to all information within the CTS test report on the CTS UI.

5.5. Submitting your test results

After completing the test run, you will be able to submit the test result via the CTS UI. However, you still need to inform the ACCC On-boarding Team via email at CDRTechnicalOperations@accc.gov.au. An ACCC on-boarding officer can then start assessing your results.

When submitting a test plan, you need to provide test results for all scenarios or provide sufficient justification on why the test is not relevant. Special consideration can be given by the ACCC on whether to grant a **CTS pass** status.

Once you have submitted your test plan, the test plan is closed and you will not be able to run more tests. If you want to undergo more testing, you need to contact the ACCC On-boarding Team to create a new test plan. Doing this will overwrite previous test plans and they will no longer be accessible.

6.   Request ACCC on-boarding officer assistance

The ACCC On-boarding Team will be available to assist you with your CTS test runs and reporting.

To make it easier to track and respond to your requests, for email communication, use the following format in your email subject line:

- Brand name – type of assistance required

7. Reference

For more information or guidance on this process, please visit the CDR website at [Conformance Test Suite for data holders | Consumer Data Right (cdr.gov.au)](https://cdr.gov.au).

If you have any questions or require additional support, please visit the CDR Support Portal: [https://cdr-support.zendesk.com/.](https://cdr-support.zendesk.com/)

8.   Glossary

This section provides a list of CTS specific terms and their meanings.

Term	Meaning
ADR	Accredited data recipient.
Authenticate / authentication	When a consumer verifies themselves with a DH. For more information see: https://consumerdatastandardsaustralia.github.io/standards/#authentication-flows.
Authorise / authorisation	A consumer confirming to the disclosure of their CDR data from a DH. For more information see: https://openid.net/specs/openid-connect-core-1_0.html#Overview.
Brand	A DH's system that is designed to interact with an ADR's software product.
CDR	Consumer Data Right.
CDS	Consumer Data Standards.
Consent	Technically used to refer to when a consumer agrees to share their CDR data with an ADR for a specific purpose (i.e. collect and use); technically distinguished from the final affirmative action (i.e. authorise) in the consent flow. Consent is also used as a term in consumer-facing interactions to refer to data sharing arrangements. Consent requirements will be communicated between the ADR and DH via the authorisation request object. The primary mechanism for capturing consent will be scopes and claims under Open ID connect. Other patterns for the establishment of consent may be considered in the future, including the incorporation of fine-grained consent for specific use cases. For more information see: https://consumerdatastandardsaustralia.github.io/standards/#consent.

CTS	Conformance Test Suite.
CTS consumer	Acts as a consumer within CTS. Used in some test scenarios.
CTS data holder	The DH built within CTS. Used to test an ADR's software product during on-boarding.
CTS data recipient	The ADR built within CTS. Used to test a DH's brand during on-boarding.
CTS ecosystem	The components of the CTS which ADR and DH will interact with during conformance testing.
CTS Register	CDR Register functionality that has been replicated within CTS. Used for testing ADR software products and DH brands during on-boarding.
DH	Data holder.
E2E testing	Refers to a software testing method that involves testing an application's workflow from beginning to end.
Revoke / revocation	Revocation endpoint.
	DH and DR **must** implement an arrangement revocation endpoint as described in the Consumer Data Standards endpoints. The arrangement revocation endpoint is used to revoke an existing sharing arrangement.
	DH **must** implement a token revocation end point as described in section 2 of [RFC7009]. The revocation end point serves as a revocation mechanism that allows an ADR to invalidate its tokens as required to allow for token clean up.
	Revocation of refresh tokens and access tokens must be supported.
	For more information see:
	• https://consumerdatastandardsaustralia.github.io/standards/#end-points
	• https://tools.ietf.org/html/rfc7009#section-2.
Software product	A software product developed by an ADR that is designed to interact with a DH's brand to facilitate consent and request consumer data.

Test run	A single instance of end to end testing that a participant will complete, resulting in a report used as evidence that a participant has completed CTS testing.
Withdrawal	When a consumer stops a data sharing arrangement (i.e. consent/authorisation). This can occur via an ADR or a DH. This was previously referred to as **revocation**.