The CDMI Conformance Test Program

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May 8, 2014
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Cloud Storage Initiative Members

- Cisco
- Symantec
- Cleversafe
- IBM
- NetApp
- Inktank
- Load Dynamix
- Scalability
- Spectra
- Vedams
The SNIA Cloud Data Management Interface (CDMI) Specification

- An ISO/IEC international standard for cloud data interoperability
- Provides an industry standard to move metadata from cloud to cloud
- Validates interoperability and portability of data stored in public, private or hybrid clouds
- Enables end users to control the destiny of their data
- CDMI is a maturing standard now available in more than 20 products (List of CDMI compliant products)
Benefits of CDMI

- **Data Portability Standard**
  - Move Data (and most importantly – Metadata) from cloud to cloud
  - Now ALSO via LTFS Tape (SNIA standard)

- **Advanced Cloud Services**
  - Data System Metadata allows cloud vendors to up-sell!
  - Specialized storage clouds for specific use cases

- **Logging, Security, Audit Trails**

- **Extensible to accommodate rapid innovation in cloud market**
  - Proposed Extensions: CIMI/OVF, Versioning, Jobs

- **Shrink-to-fit**
  - Only implement what makes sense for your cloud
  - Profiles: Simple Storage (i.e. S3), Simple Storage Management (NAS)
SNIA’s Cloud Interoperability Conformance Test Program Now Available for Cloud Solution Vendors

Program Validates Interoperability Standard for Data Stored in Public, Private and Hybrid Cloud Environments

DSI, Santa Clara, CA (April 22, 2014) — The Storage Networking Industry Association (SNIA), today announced the launch of a Cloud Data Management Interface (CDMI) Conformance Test Program (CTP) that validates cloud products’ conformance to the ISO/IEC CDMI standard for cloud data interoperability (ISO catalog number ISO/IEC 17826:2012). Cloud solutions that pass the CDMI CTP offer cloud consumers assurance that the CDMI standard has been properly implemented and that data stored in any conformant implementation will be transportable to any other conformant implementation.
Introducing the CDMI Conformance Test Program (CTP)

- CTP offers 3rd-party unbiased validation of CDMI conformance
- Tests for conformance against the CDMI specification 1.0.2
- Builds on SNIA’s proven track record of offering CTPs for SMI-S and KMIP standards
- Ensures data storage interoperability across a wide range of cloud storage solutions
“SNIA’s CDMI Conformance Test Program is a great step forward helping IT customers, VARs or others in the industry navigate their way through the fog of cloud interoperability requirements in a streamlined fashion.”

Greg Schulz, Founder of StorageIO
Benefits of CDMI CTP

- Meets growing CDMI compliance requirements of cloud consumers
- End users & IT buyers can request conformance during purchasing cycles
- Vendors who pass the CDMI CTP can display the SNIA CDMI CTP logo on their product and include it on RFP responses
Getting Started with CDMI CTP

- CDMI CTP executed through Tata Consultancy Services (TCS)
- TCS is a global IT services, consulting and business solutions organization
- TCS offers an automated testing suite compliant with the CDMI CTP
- Both SNIA member companies and non-SNIA member companies can validate cloud solutions for CDMI compliance.
Overview of CTP Process

1. CDMI Test Specs available on snia.org
2. Apply / Request for CDMI Conformance Test
3. Accept Profiles / Capabilities & Schedule Test
4. Notify Vendor of Test Schedule
5. First Test Execution Cycle, Discussions and Test Report Preparation
6. Discussions during Test Execution for any execution challenges
7. First Report shared with SNIA & Vendor
8. / 13. Validation of Test Results by SNIA
9. Discussions in case of issues for first test report
10. Request TCS for second Test Execution cycle
11. Second Test Execution Cycle, Discussions and Test Report Preparation
12. Second Report shared with SNIA & Vendor
13. If validation fails, Repeat complete cycle
14. Discussions in case of issues for second test report
15. Notification to TCS and Vendor for certification eligibility
16. If validation is successful, Vendor is issued Certificate
17. Results are posted on snia.org as per agreement

Vendor

TCS / SNIA
How will your product be tested?
TCS CDMI Conformance Assurance Solution

Tata Consultancy Services CDMI Conformance Assurance Solution is the first solution that enables cloud storage companies to test conformance to CDMI specifications v1.0.2 by Storage Networking Industry Association’s (SNIA), based on CDMI Conformance Test Specification v1.0.

Automated Compliance testing of CRUD Operations for following scenarios:

- CDMI/Non-CDMI
  - Data Object
  - Container Object
  - Capability Object
- Basic / Digest Authentication
- Profile Based Support

CDMI Specifications for which has been taken as base:
http://snia.org/sites/default/files/CDMI%20v1.0.2.pdf

CDMI Test Specifications against which the conformance testing will be executed:
http://snia.org/sites/default/files/CDM_Test_Spec_v1.0a.pdf
How will your product be tested?
TCS CDMI Conformance Assurance Solution

Public, Private or Hybrid Cloud Deployment

Client

Server

Request
(From CDMI Client – requests CRUD Operation)

Response
(From CDMI Implementation – Receives Response Code)

Artifacts:
Test Specification, Test Log file, Test Report

Supports both - CDMI and Non CDMI

Based on SNIA CDMI Specification / CDMI Conformance Test Specification

TCS Quality Assurance Services

Storage Center of Excellence
What will you get?

- Test Cycle and Deliverables of CDMI CTP
- Number of Test Cycles
  - 2 Cycles of testing per product
- Name of Deliverables
  - Conformance Test Results
  - Log messages for required scenarios
  - Analysis of Reported Bugs
  - SNIA CDMI Logo award for Vendor’s product (if the product Passes the test and validation from SNIA)
Benefits for you

❖ Increased market share:
   ◆ Deliver an interoperable solution based on industry standardization specifications. Certify products for greater credibility, and capture larger market share.

❖ Reduced cost of testing:
   ◆ Reduce testing costs through our fixed price engagement model that utilizes TCS’ mature solution, rather than undertaking the task of building these capabilities in-house.

❖ Quicker time-to-market:
   ◆ Accelerate product launch with our automated testing process based on a mature test framework that offers optimal test coverage. Reduce test cycle time and fix defects early on to achieve improved product quality and faster time to market.
Validity of Certificate

- Certificate for the Vendor’s certified product Major release will be valid for Three (3) years from the date certificate was awarded for a particular version (currently v1.0.2).
  - However this does not cover any other major release for the same product. Vendor needs to go for complete certification process for any other major release.

- After defined period of Three (3) years, vendors will have to reapply for renewal of certificate and they need to go through complete certification process.
What do you need to be ready for testing?

▷ Pre-Test:
  ◦ Self check of functional implementation v/s the CDMI Test Specifications v1.0
  ◦ Participate in the Cloud PlugFest scheduled June 24th thru 26th 2014

▷ During the Test:
  ◦ Server availability for the entire duration of Test Cycle – available through internet
  ◦ Key Technical Member availability for discussions

▷ Plan for Test:
  ◦ 3 months of advance request for testing of product needs to be provided by the Vendor
  ◦ Based on availability the first available time for conformance testing will be provided
How to get started...

- Vendors interested in getting started may fill out the form at:
  - [http://snia.org/content/cdmi-ctp](http://snia.org/content/cdmi-ctp)
  - TCS will follow up with agreements, etc.

- Planning a “virtual” plug-fest June 24th thru 26th 2014
  - Each vendor makes their implementation available on the Internet (typically through a proxy)
  - TCS executes test against implementation, sends report (debug, redeploy, repeat)
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Questions?
http://snia.org/content/cdmi-ctp