



# Data Interoperability

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# SNIA At A Glance

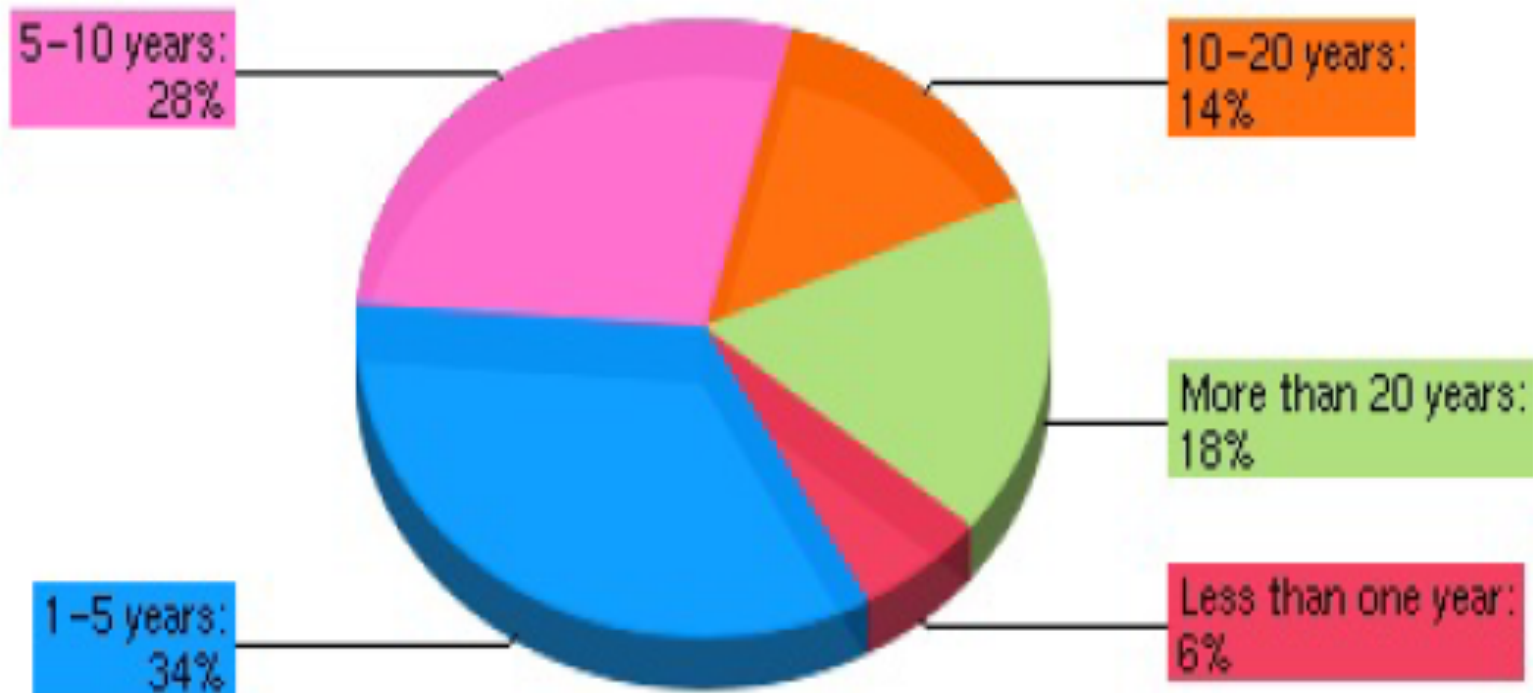
[www.snia.org](http://www.snia.org)

Advancing storage & information technology



- Voice of the ~\$60B storage industry
- Founded 1997 as a non-profit trade association
- Collaborative environment and SDO
- International organization with 7 regional affiliates
- Technology Center in Colorado
- Focus on education, conferences, specifications / standards, software, industry alliances, best practices, plug-fests, and conformance testing for SNIA specifications
- Storage Networking World (SNW) in China, USA, Europe
- Storage Developer Conference (SDC)
- Topical conferences (e.g. Cloud, Data Protection, Big Data)

# How long will you retain data in the cloud?



60% of data kept over five years!

Source: SSG 2011

- Increasing data lifetimes mean multiple platform upgrades
  - ◆ Possible vendor changes as well
- Platform changes are scary
  - ◆ Possible data loss
  - ◆ Likely information loss
- Self-describing data and information models needed
  - ◆ i.e. rich metadata
  - ◆ e.g. PREMIS, SIRF
- Well-defined export/import needed
  - ◆ e.g. serialization/deserialization

# SNIA CDMI

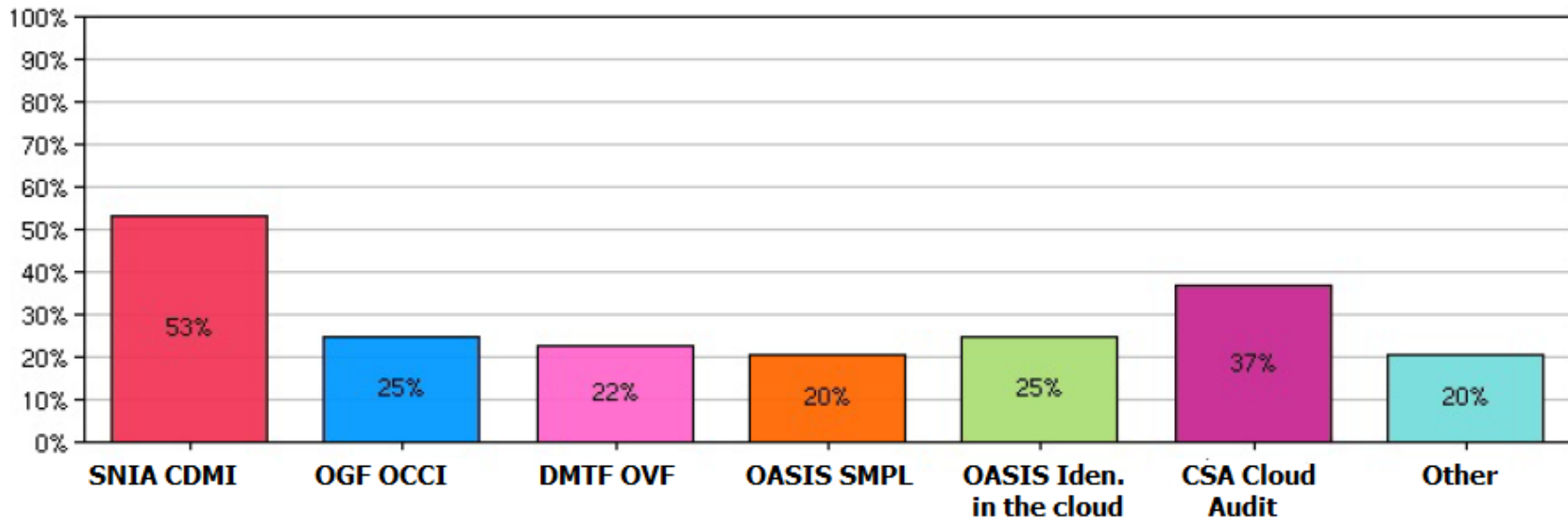
## Cloud Data Management Interface

Advancing storage & information technology



- Developed at SNIA over 4 years
- Comprehensive RESTful data and management interface – S3 on steroids
- Domains, containers, objects, persistent queues
- **Includes serialization and deserialization** for data portability
- Submitted to ISO/IEC JTC 1 under the PAS Program
- Approved by FDIS ballot in Oct 2012 as **ISO/IEC 17826**
  - ◆ Expected to accelerate the adoption of the standard
  - ◆ Official copy (for purchase) available at [http://www.iso.org/iso/catalogue\\_detail.htm?csnumber=60617](http://www.iso.org/iso/catalogue_detail.htm?csnumber=60617)
  - ◆ SNIA version available on the SNIA web site.

# What standards will you require being included in RFPs?



Note: Related question – how important are standards for cloud computing:

Very Important - 47%

Important - 31%

Somewhat Important – 18%

Not important – 4%

- Vendors releasing CDMI-compliant products include:
  - ◆ Mezeo Software - MezeoCloud 4.0
  - ◆ Scality - Scality Ring Organic Storage, Dewpoint
  - ◆ Data Direct Networks - Web Object Scaler
  - ◆ NetApp - StorageGRID 9.0
  - ◆ Compuverde AB - Compuverde Gateway
- Two open source implementations
  - ◆ OpenStack Swift - supports CDMI; supports basic CDMI cloud data and container manipulation and provides 70 functional tests based on the CDMI spec.
  - ◆ JClouds - open source API library to get started in the cloud and utilize Java or Clojure development skills.
- CDMI Reference Implementation
  - ◆ <http://www.snia.org/forums/csi/programs/CDMIportal>
- Test suite available
  - ◆ from Tata Consultancy Services.
- Mandated for use in public service proposals by the Public Administration Government Agency for Digitalization of Italy.



# For More SNIA Cloud Information

- One SNIA Web Site to Remember: <http://snia.org/cloud>
  - ◆ [Specification](#)
  - ◆ [Whitepapers](#)
  - ◆ [Tutorials, webcasts, podcasts](#)
- Large Cloud Storage Community
  - ◆ <http://groups.google.com/group/snia-cloud>
  - ◆ <http://twitter.com/SNIAcloud> (@SNIAcloud)
- Tracking all Cloud Standards
  - ◆ [www.cloud-standards.org](http://www.cloud-standards.org)