



# Aperi Storage Management Project

An Introductory Demonstration

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# Overview and Mission

- Provide an open, extensible, standards-based storage management framework
- Give customers more flexibility and choice on how to manage their storage
- Simplify the infrastructure customers need to manage storage
- Drive adoption of industry standards

# Open Source Community

## *Aperi Project*

- ***Implementation of SMI-S Standards***
  - ***Alliance Announced with Storage Networking Industry Assoc (SNIA)***
  - ***Vendor-Neutral Framework***
  - ***A project at the Eclipse Foundation***
  - ***Code Available under Eclipse Public License***
- *Brocade Communication Systems, Inc.*
  - *Cisco Systems, Inc.*
  - *CA, Inc.*
  - *Emulex Corporation*
  - *LSI Logic Corporation (Engenio Storage Group)*
  - *Fujitsu Limited*
  - *IBM Corporation*
  - *Network Appliance, Inc.*
  - *Novell, Inc.*
  - *Yotta Yotta, Inc.*
  - *And more...*

***“Together, we plan to accelerate further the adoption of SMI-S and help ensure that end users have the confidence that Aperi development efforts are complementary to the SNIA's SMI-S progress.”***

*-- Vincent Franceschini, SNIA Board Chairman*

# The Effect of Open Standards, like SMI-S

- Standardization drives interoperability and interchangeability
- It breaks the old-style dependence on proprietary methods, trade secrets, and single providers
- It builds a strong foundation upon which others can quickly build and innovate
- When the playing field gets levelled in this way, we get increased competition with new people and ideas entering the marketplace



# From Infrastructure Plumbing To Application Enablement

## *Storage Management*

### Today's Environment

Focus on platform support  
and development



### Tomorrow's Environment

Focus on advanced  
applications



# Benefits for Users & Vendors

## *Storage Users*

- Accelerates the advancement of interoperability and interchangeability across storage systems, devices, and management software
- Encourages greater flexibility and choice for customers – reducing customer costs
- Open source model encourages end user customization
- Increases vendor collaboration on SMI-S to spur innovation and reduce barriers to interoperability

## *Storage Vendors*

- Accelerates product development cycles, decreases development costs, increases customer trial and adoption, and lowers cost of customer acquisition
- Delivers strong foundation on which others can quickly build and innovate
  - New vendors and ideas enter the marketplace
- Helps reduce interoperability challenges by allowing vendors to contribute code directly to the framework or interface with it
- Implements SMI-S standards that many vendors already support
- Value accelerates as more vendors join and interface with framework (Law of Network Effect)

# Aperi Scope

## ***Modular and Extensible Architecture***

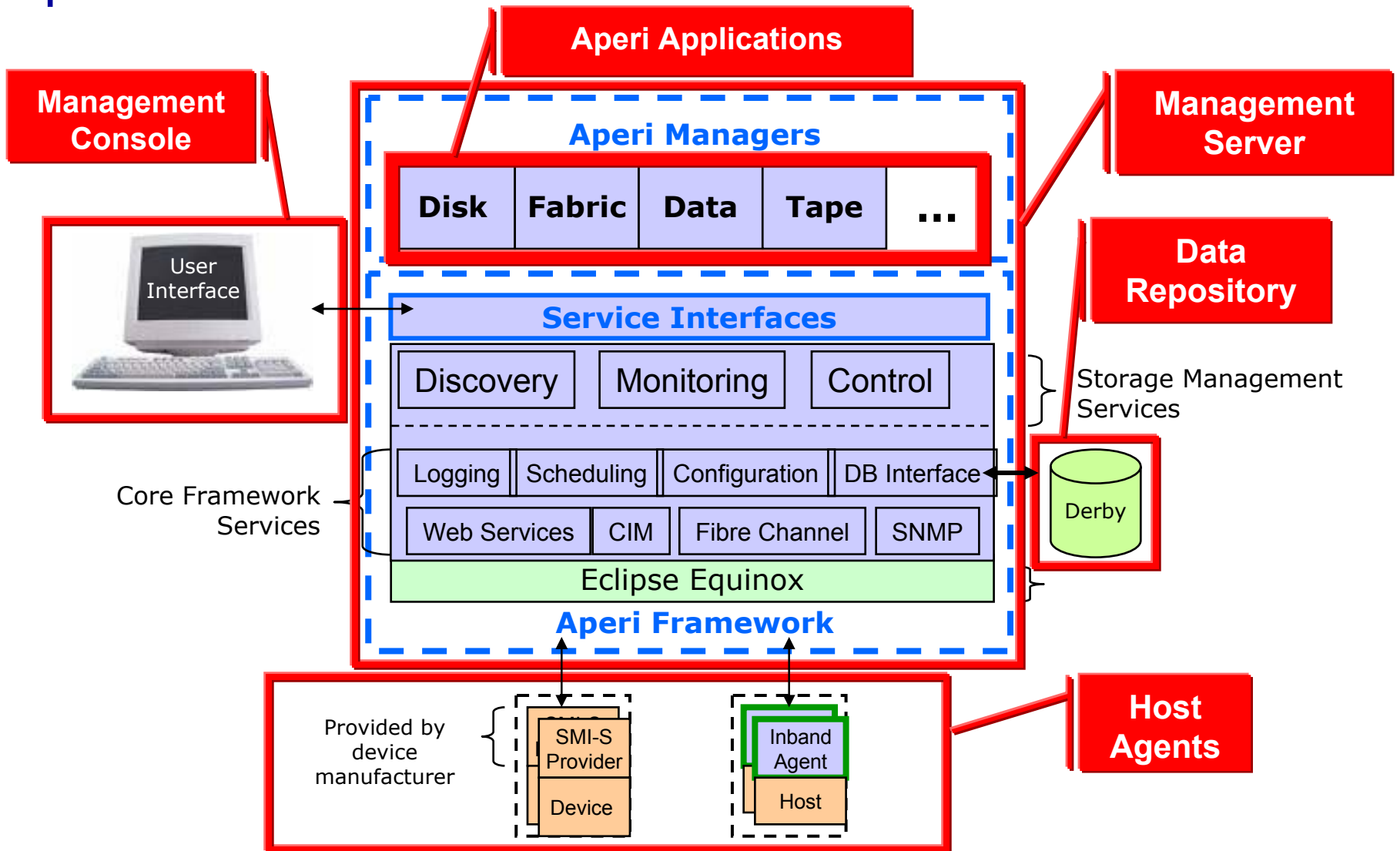
- Basic management components act as building blocks for advanced capabilities

## ***Major Functions Include:***

- Resource discovery, monitoring, and reporting across heterogeneous devices
- Graphical user interface, including topology mapping
- Event management
- Storage subsystem configuration and LUN provisioning
- Storage area network (SAN) fabric management
- Tape-library discovery and reporting
- File-system capacity reporting (size, percent used, percent free, etc.)



# Aperi Architecture



# Aperi Milestones

- October 2005 – Initial members announce formation of Aperi project
- January 2006 - IBM internal code contribution work started
- June 2006 - Novell joins Aperi; community submits project proposal to host project at Eclipse Foundation
- August 2006 - Eclipse announces formal approval of the Aperi Storage Management Framework Project
- August 2006 - Aperi release 0.1 code passes SNIA conformance testing (CTP) for disk array discovery and disk array management
- October 2006 – Aperi release 0.1 code passes Eclipse's rigorous intellectual property review
- November 2006 - Aperi code made available for public download
- January 2007 – Aperi milestone release 0.2 available for download
- May 2007 – Aperi release 0.3 milestone release available for download
- May 2007 – Yotta Yotta, Inc. latest to join Aperi community

## Comments or Suggestions? *Let Us Know What You Think...*

- Aperi Mailing List  
[aperi-news@eclipse.org](mailto:aperi-news@eclipse.org)
- Aperi Project Website:  
<http://www.eclipse.org/aperi/>
- Aperi Project Newsgroup:  
<news://news.eclipse.org/eclipse.technology.aperi>