Aperi Storage Management Project

An Introductory Demonstration

Agenda

- Aperi Overview
- Benefits to Storage Community
- Architecture & Capabilities
- Live Demo
- Case Study - Novell
- Q&A

Aperi Open Source Storage Management 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 others …*

"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

Benefits for Vendors & Users

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)

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
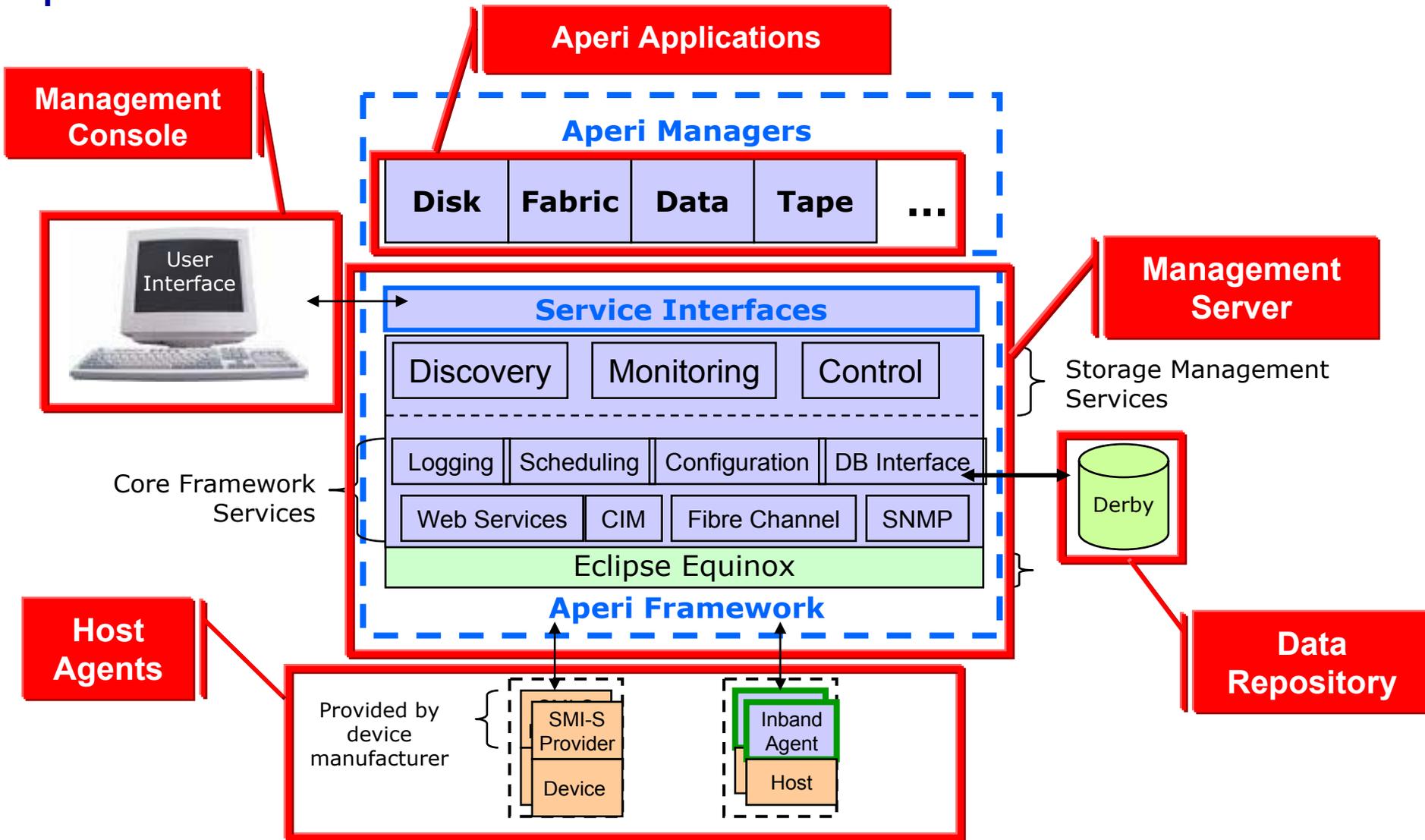
Aperi Scope

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 Applications

Management Console

Aperi Managers

Disk	Fabric	Data	Tape	...

User Interface

Management Server

Service Interfaces

Discovery	Monitoring	Control

Storage Management Services

Logging	Scheduling	Configuration	DB Interface

Web Services	CIM	Fibre Channel	SNMP

Core Framework Services

Eclipse Equinox

Aperi Framework

Derby

Data Repository

Host Agents

Provided by device manufacturer

SMI-S Provider
Device

Inband Agent
Host

Aperi Milestones

- 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

- ## Aperi Project Website:
  http://www.eclipse.org/aperi/

- ## Aperi Project Newsgroup:
  news://news.eclipse.org/eclipse.technology.aperi