

which is an important step in verifying that a storage product implementation is compliant to industry specifications, such as the SMI-S standard.

### **Aperi project participants**

The following leading storage vendors are participating in the Aperi open-source project:

- 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.

For more information on the Aperi project and how to join, visit the project Website at: **[eclipse.org/aperi](http://eclipse.org/aperi)**

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## **Aperi Storage Management Project**

*An open-source project in Eclipse*



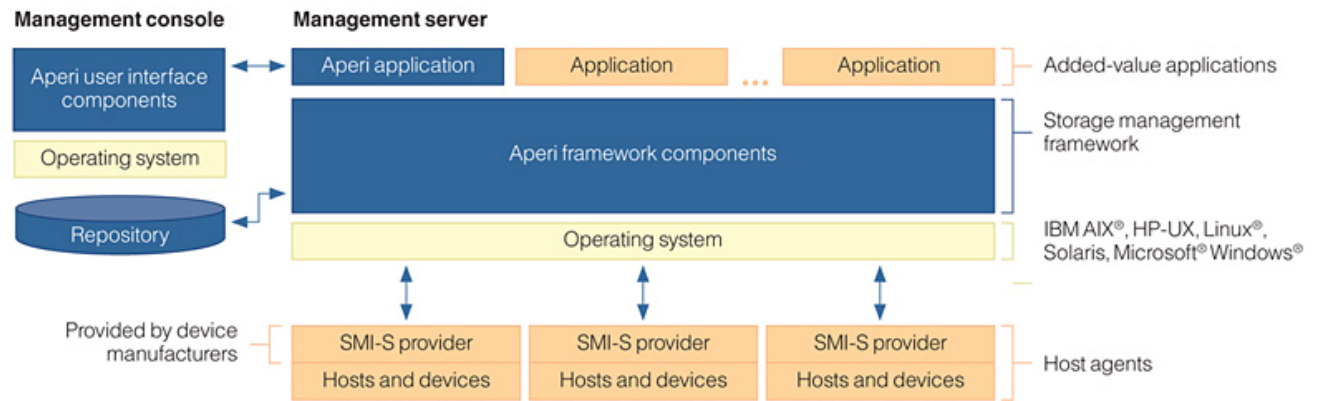
If you are a storage end user or vendor, you probably have noticed that advancements in storage networking have combined with the declining costs of storage capacity to create more complex and heterogeneous storage environments. The result is that while lower acquisition costs have helped organizations satisfy their voracious appetites for additional storage, managing such heterogeneous environments has become increasingly difficult and expensive.

Maintaining such heterogeneous environments also puts an increasing strain on the storage administrators, who must now be proficient on a growing variety of management utilities and applications to keep the organization's information available. In addition, these disparate management applications tend to have redundant infrastructures (i.e., management servers, databases, etc.), which exacerbate the costs of supporting the environment

### Community-driven approach to solving problems

- Promoting interoperability through open source collaboration
- Encouraging innovation with a common, standards-based framework
- Backed by leading storage vendors

If you are a vendor, you probably recognize that some of the software you develop and maintain to support your offering provides little differentiation from that of your competitors. As in all industries, the competition eventually closes the gap in technology that a leader had once enjoyed, which forces vendors to pursue new innovations to set themselves apart. Consequently, a proprietary advantage will likely become a standard feature for most competitors relatively quickly.



*Aperi framework architecture*

If you are like some of us that participate in the Aperi project and who market storage products, you realize there is some level of basic infrastructure software we each support that follows this maxim. So, instead of each of us spending our resources on this commoditized layer of software, wouldn't it make sense to refocus our attention on developing innovative, value-add functions? We think so, and by collaborating on a common, open-source framework, vendors like us can not only eliminate some of the costs associated with maintaining this non-differentiating technology, but also work toward improved interoperability.

So while customers struggle with incompatibility challenges, vendors are struggling to accommodate today's heterogeneous environments while delivering innovative functions. These are some of the challenges the Aperi project aims to help overcome with its standards-based, open-source management framework.

### What is Aperi?

Aperi is an open-source storage management project at the Eclipse Foundation, a not-for-profit organization dedicated to cultivating an open-source community and ecosystem of

complementary products, capabilities and services. At Eclipse, the Aperi project has developed a standards-based framework of basic storage management functions that aims to help spur innovation and help end users and storage vendors overcome the complexity and interoperability challenges in today's storage environments. At no charge, vendors can use the entire open-source framework, or select components, as part of their own offerings, which allows them to focus more of their resources on high-value functions.

As part of its commitment to supporting industry standards, the Aperi project intends to work closely with the Storage Networking Industry Association (SNIA) on interoperability programs for its Storage Management Initiative Specification (SMI-S) standard and on advancing new storage standards. Enabling Broad interoperability across heterogeneous storage systems from different vendors is the main objective of the SMI-S standard, and the Aperi project plans to make SMI-S an integral part of the Aperi framework. An example of this is Aperi's completion of the SNIA's Interoperability Conformance Test Program (CTP),