Talking Points about Aperi, Eclipse, & SNIA

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Q&A

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Key Points to Emphasize When Promoting Aperi

It's important that we emphasize in conversations with end users the fact that Aperi, and all other open source projects, aim to put customers in control of their critical storage environments with the ability to modify the code as they see fit. What's more, as vendors re-use various Aperi components as part of their own storage offerings, end users should see the resulting benefits of more innovation and increased choice in the types of storage offerings made available with open source software. Similar to how they view other open source projects, customers want to have the option to customize their management software if their needs require it, and they want to feel secure that if their current commercial application no longer meets their needs, they can find another vendor that does… without a complete overhaul of their storage environment. Deploying a solution based on an open source framework provides exactly that type of customization and flexibility.

From the vendor perspective, Aperi will help foster greater interoperability across storage vendors and reduce development costs with the software re-use inherent in open source projects. Wayne Adams, Chair of SNIA's Board of Directors, agrees and says that, "Eclipse's Aperi Project will further advance the adoption of SNIA's SMI-S, benefiting the entire storage industry and IT community." In addition to the existing Aperi vendor participants, storage analysts and journalists also agree that open source software based on open standards is the real value of Aperi.

What is Aperi?

Aperi is an open source project that aims to simplify the management of storage environments through a standards-based, open source software framework. The Aperi open source project intends to work closely with the Storage Networking Industry Association (SNIA) to promote interoperability and eliminate complexity in today's storage environments.

What is Aperi's Mission?

The mission of the Aperi project is to create a standards-based, open source storage management framework and to cultivate an open source community and ecosystem for complementary products, capabilities, and services around the framework. Key objectives of Aperi are to promote interoperability, eliminate complexity, foster greater opportunity for innovation, and provide a greater choice and added-value functionality for end-users.

Where Has the Aperi Project Been Formed?

Aperi is an open source project at the Eclipse Foundation.

What Type of Licensing Model Will Aperi Have?

Because the Aperi project is based at Eclipse, it will use the Eclipse Public License.

Who Is Involved in the Aperi Project?

In addition to individual developers that participate in the project, Aperi includes representatives from industry leaders Brocade, CA, Cisco Systems, Emulex, Fujitsu Limited, IBM, LSI Logic (Engenio Storage Group), Network Appliance, and Novell.

What Capabilities Does the Aperi Framework Include?

One of the guiding principles of the Aperi project is that the framework should provide immediate value upon install with basic storage management capabilities, rather than simply a collection of components that require costly integration. As such, the Aperi framework includes such functions as:

- Resource discovery, monitoring, and reporting
- Topology mapping
- Event management
- Disk / Tape management
- Device configuration & LUN assignment
- SAN fabric management
- Basic asset management
- User Interface

Why Was Eclipse Chosen to Host the Aperi Open Source Project?

The Eclipse Foundation was created for the sole purpose of creating, promoting, and supporting open source projects. With about 50 current open source projects, Eclipse has demonstrated the ability to successfully manage large open source projects. The Aperi participants will benefit greatly from working within such an experienced open source community.

How Will Aperi and the SNIA Work Together?

SNIA and Aperi will have very complementary roles in defining and driving standards across the entire storage market. The Aperi project intends to work closely with the SNIA on interoperability programs for its Storage Management Initiative Specification (SMI-S) standard and advancing current and new storage standards. In 2006, the Aperi framework passed SNIA's Conformance Testing Program (CTP) for disk array discovery and array management. By providing a tested implementation of SMI-S, Aperi will drive broader industry availability of SMI-S, as well as offer the many benefits of an industry-backed open source community.

What Is the Typical Relationship Between Open Source and Standards?

Typically, one organization develops the standards, while an independent group develops open-source code that adheres to those standards. Successful open source projects are known to implement open standards to a great extent. A good example is the relationship between the MySQL and PostgreSQL open source databases and the Structured Query Language (SQL) standard.

Is Aperi Conformant with SNIA SMI-S Standard?

Yes. The Aperi framework has passed the SNIA Conformance Testing Program (CTP) for Disk Array Management (SMI-S: 1.1.0) and Disk Array Discovery (SMI-S: 1.0.2). The Aperi framework also supports the management of storage fabrics and tape drives, and the project plans to add SMI-S support for them in 2007.

What's SNIA's View on Aperi?

Wayne Adams, former SNIA Chairman, gave his full support to the Aperi project declaring, *"The IT industry will benefit from Aperi helping to drive SMI-S implementations, storage technologies and open standards."*

Why Is It Better to Separate the Aperi Open Source Project and the SNIA Open Standards Efforts?

Separating the intellectual property (IP) environments of the SNIA standards body and the Aperi open source project was an important decision for the Aperi participants. From an open source perspective, a single body trying to manage both types of IP policies is complex and can lead to conflicts. Today, there are no examples of a standards body running a successful open source project/initiative, primarily because the day-to-day activities of a standards body and an open source community (and what ultimately makes them successful) are completely different. Every successful open source community (e.g., Apache, Eclipse, Mozilla) is based on open standards but separate from the standards body itself.

How Will the Aperi Open Source Storage Management Framework Use the SMI-S Standard?

The Aperi framework recently passed the SNIA's SMI-S conformance tests at the latest levels, and the project intends to continue working closely with the SNIA to remain conformant to the latest standards.

Who Will Be Contributing to Aperi?

As an open source project, all participants are encouraged to contribute code, as well as defect identification and documentation. IBM, McData (now Brocade), and Fujitsu intend to contribute storage management software code initially, and the Aperi participants will continue to work with additional hardware and software vendors to join the project and make additional contributions.

Is There A Technical Roadmap Available?

- Yes, the project keeps an updated roadmap under the architecture section of the Aperi project wiki page at: eclipse.org/aperi

How Will an Open Source Storage Project Benefit Users?

It's been proven many times that open standards and collaborative communities help spur innovation in the market and eliminate many barriers to interoperability. With the backing of some of the storage industry's biggest names, the Aperi open source project will benefit users by helping advance the interoperability across storage systems, devices, and software. As a result, users will also benefit through greater flexibility and choice across storage offerings, which should result in lower costs.

How Will an Open Source Storage Project Benefit Storage Vendors?

One benefit is that storage vendors will be able to lower their development costs by re-using Aperi components for their own offerings without paying licensing fees. Another benefit is that the common framework can help overcome the interoperability challenges in their customers' storage environments. To that end, vendors of all types can enable their respective offerings through the standards-based Aperi framework by contributing code directly to it or simply by interfacing with it. As more vendors participate, the increase in interoperability benefits the entire community.

Does Open Source Mean No Support?

Generally, open source code is provided "as-is" to whomever wishes to use it. Testing, problem reporting, and patching are encouraged by the entire community. As with many open source programs, however, a variety of services vendors will likely add fee-based technical support and education. Vendors who elect to incorporate Aperi into commercial offerings will also likely provide technical support and education.

Are These 3rd-party Aperi-based Offerings Free?

Since Aperi will use the Eclipse Public License, contributors can charge money for programs they've changed and added to the project. Also, there are no restrictions on providing source code. The contributor can make, use, sell, offer to sell, import and transfer his/her contribution.

Each vendor who incorporates Aperi open source code will make their own decisions about pricing for these offerings.

What is Open Source Software?

Open source development is about openness and collaboration. According to the Open Source Initiative (OSI), "open source promotes software reliability and quality by supporting independent peer review and rapid evolution of source code. To be OSI certified, the software must be distributed under a license that guarantees the right to read, redistribute, modify, and use the software freely." The Eclipse Public License that Aperi will use is OSI-approved.

How Do Open Source Projects Get Started?

Large contributions of software code are the hallmark of most successful open source projects, such as Eclipse, Firefox Mozilla, OpenAjax, Apache, etc. Such key contributions provide developers with a usable program they can run, test, and debug immediately. Another important characteristic of an initial contribution is being able to convince the development community that it can evolve into something special. Unlike the creation and ratification of standards, however, open source projects rarely start with design and functional specifications that are reviewed and agreed upon by the community before any code is written.

Who Uses Open Source Software?

Almost everyone who uses e-mail or surfs the Web is an open source software user. Most e-mail passes through open source servers as it crosses the Internet. Most Web servers also rely on open source software, and Google's search engine is based on open source software, too. As the OSI (Open Source Initiative) points out, the running gears of the Internet, including the mail transports, Web and FTP servers, are virtually all open source-based.

Where Can I Get More Information About Aperi?

Interested parties can visit Eclipse.org/aperi for additional information and details on joining the Aperi project.