

Data Center Storage Task Force

Kickoff Slides
July 19, 2016



Webex Call – July 19th, 2pm PDT



- <https://isspimeetings.webex.com/isspimeetings/j.php?MTID=mba42303de4671a23561a931138b9c286>
- Use Voice over IP (VoIP) built into your device, or
- Phone in: +1-415-655-0002 US Toll
 - ◆ ID: 736586008#
- Open Mailing List:
 - ◆ Send email to the list (must be subscribed): datacenter@snia.org
 - ◆ Subscribe (empty email to): datacenter-subscribe@snia.org
- Please take Doodle poll for weekly slot:
 - <http://doodle.com/poll/gdd95v2gemxdnxiz>

- Datacenter Customers – Hyperscalers and Enterprises building their own data centers
 - ◆ Are big enough that they can demand custom features in drive firmware
 - ◆ Similar to Enterprise Storage System vendors historically
- Can and do create an API that drive vendor is expected to support in order to get their business
- But each customer may have varying features they put in those APIs
- Drive vendors then have multiple APIs to support with firmware, proprietary extensions and API plug-ins

Why not push right into a standard?



- ◆ Standards groups take a long time to add features to a standard
 - ◆ This can be good, leading to stability of interoperable interfaces
 - ◆ But this delays the availability of the new features
- ◆ Standards groups dominated by Enterprise Storage Vendors
 - ◆ Somewhat hostile to different requirements coming from Datacenter customers
 - ◆ Requirements for Datacenter drives sometimes in opposition to those from other participants for Enterprise drives
- ◆ They just need the features
 - ◆ Not religious about interoperability if they get what they need

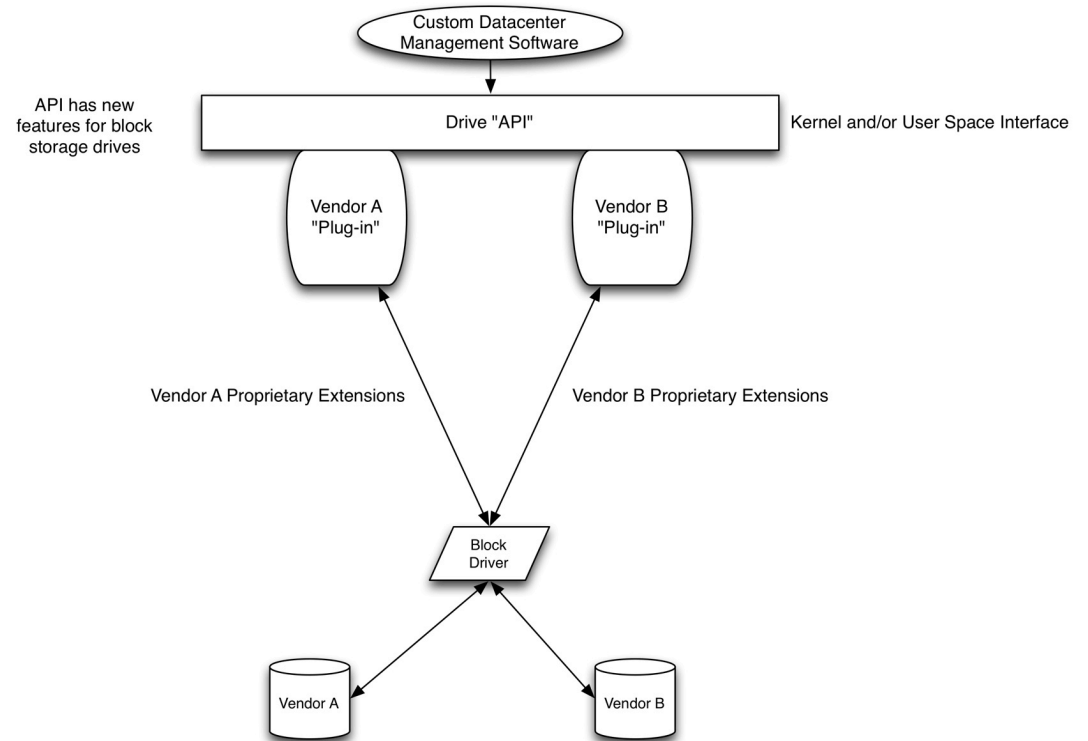
How can SNIA help?

A decorative horizontal bar composed of a series of colored rectangular segments in purple, grey, yellow, blue, orange, and light grey.

- Good relationships with INCITS and NVM Express groups
 - ◆ Tutorials, Forums and Initiatives promote and educate
 - › SMR, NVM, etc.
- Open Development Process
 - ◆ SNIA Software, CLA, Open Repositories
- Encourage adoption of new features
 - ◆ Storage Developer Conference, BrightTalk webcasts, social media
- Key drive vendor stakeholders already involved

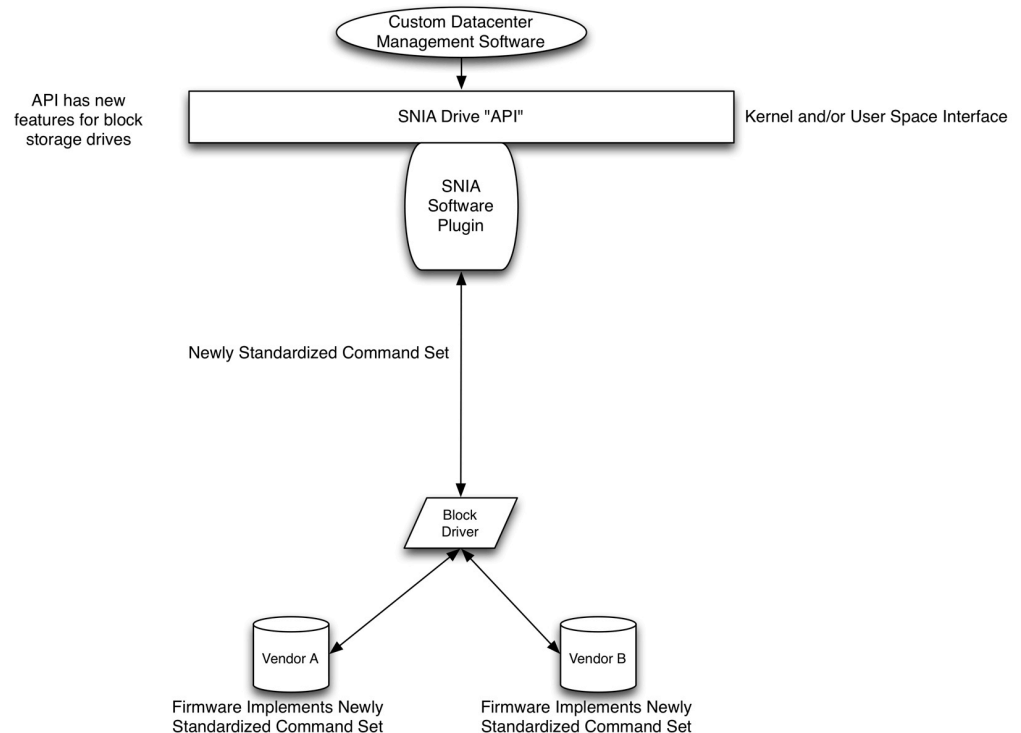
Drive API Project

- Get Datacenter customers to work with drive vendors to quickly establish a common API
- TWG focused on adding agreed features to a Software project
- Functionality is “pre-standard”
 - ◆ Quickly bring new features to market with proprietary extensions to SATA, SAS, NVMe
- Each drive vendor supports a software plug-in (in the short term)
 - ◆ Makes calls to their drive using existing platform support
 - ◆ Windows, Linux, etc.



Push new features into standards

- Once new version of standard is stabilized (may be pre-publication)
 - ◆ Develop a common plug-in via SNIA Software open source
- Drive vendors no longer need to support their plug-in
- Datacenter customers see minimal changes to their API and software
- Adoption of new standard features is accelerated
- SNIA is seen as a place to “get things done”



But?



- ◆ This is “Software first” not “Standards first” approach
 - ◆ This is the way the world is moving – “the software IS the standard”
- ◆ However, this approach keeps the standards relevant
 - ◆ It lets standards proceed in orderly fashion as before
- ◆ Serves as a “proxy” for Datacenter feature requirements
 - ◆ Forming proposals from working code that have built-in drive vendor support should accelerate new standard features

Organization



- ◆ Formed this Taskforce to investigate forming:
 - ◆ “Datacenter Storage” Initiative – to fund and promote involvement in the technical project, adoption and involvement by Datacenter customers, Software Defined Storage vendors
 - ◆ “Datacenter Storage” TWG – with SNIA Software/Architecture charter for API and common plug-in, leverage existing code and standards
- ◆ Take “open” approach to involvement
 - ◆ Allow non-SNIA members to help with formation, open formation meetings
 - ◆ Aggressively recruit the right stakeholders
 - ◆ Convert Datacenter customers to SNIA membership in order to participate in Governance of the projects

Technical Work



- Create draft TWG Charter with software license, open repository (Github) and CLA Project status
 - ◆ Requirement: 3+ members to form
- Document candidate Datacenter features and priorities
 - ◆ e.g. Streams, DePop
- Which languages to support?
- Which standards do the features extend?
 - ◆ Eventual targets for standard features

Promotion

- ▶ **Draft initiative charter**
 - ◆ Requirement: 5+ companies to form
- ▶ **Conferences**
 - ◆ SDC, LinuxCon, O'Reilly OSCON, OCP Summit, etc.
- ▶ **Webcasts**
 - ◆ Launch, Each Project Announcement, Focused Topics
- ▶ **Social Media**
 - ◆ Get multiple “personalities” involved, build the momentum

Roadmap



- ◆ Open Mailing List (ongoing): datacenter@snia.org
- ◆ Kickoff – today (this call)
- ◆ Doodle poll for weekly slot – logistics to the list
 - ◆ <http://doodle.com/poll/gdd95v2gemxdnxiz>
- ◆ Technical Call – draft TWG charter & sign up
- ◆ Initiative Call – discuss scope, goals, fees
- ◆ Successive calls: ½ Technical, ½ Initiative
- ◆ Launch each when requirements are met
 - ◆ Dissolve Task Force when complete



Discuss

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