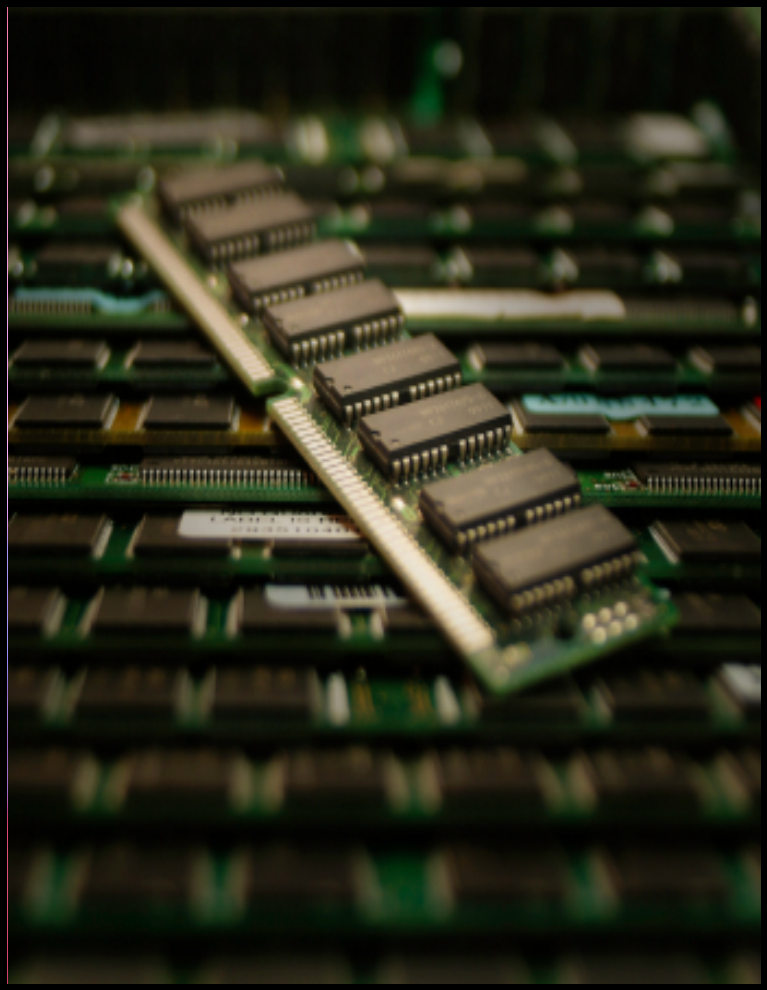
The Impact of Software Defined Storage on Flash/SSD

1. What is Software Defined Storage?
2. Does it really reduce hardware costs?
3. Can it reduce operational costs?
4. Does it eliminate vendor lock in?
5. Is it right for me and my data center?



Storage Switzerland, LLC

Agenda

- What is Software Defined Storage?
- Does it reduce hardware costs?
- Does it reduce operational costs?
- Does it eliminate vendor lock in?
- Is it right for me and my data center?

Background

- Analyst firm covering storage, cloud and virtualization markets
- Knowledge of these markets is gained through product testing, real world implementations and interactions with users and suppliers
- The results of this research are found in the articles, briefing reports, case studies and lab reports on our web site:

www.storage-switzerland.com

What is Software Defined Storage?

Software Defined Storage is the abstraction of the storage controller functions like volume management, data protection (RAID) and advanced services (snapshots) from the physical storage hardware.

What is Software Defined Storage?

Software Defined Storage is the abstraction of the storage controller functions like volume management, data protection (RAID) and advanced services (snapshots) from the physical storage hardware.

Storage Switzerland sees three categories emerging as a subset – Storage Virtualization, Storage Hypervisors and Hyperscale Storage

What is Software Defined Storage?

Storage Virtualization - the movement of storage services to a dedicated, purpose built appliance

What is Software Defined Storage?

Storage Virtualization - the movement of storage services to a dedicated, purpose built appliance

Storage Hypervisor – the movement of storage via virtual appliance to the virtualized infrastructure

Software Defined Storage Categories

Storage Virtualization - the movement of storage services to a dedicated, purpose built appliance

Storage Hypervisor – the movement of storage via virtual appliance to the virtualized infrastructure

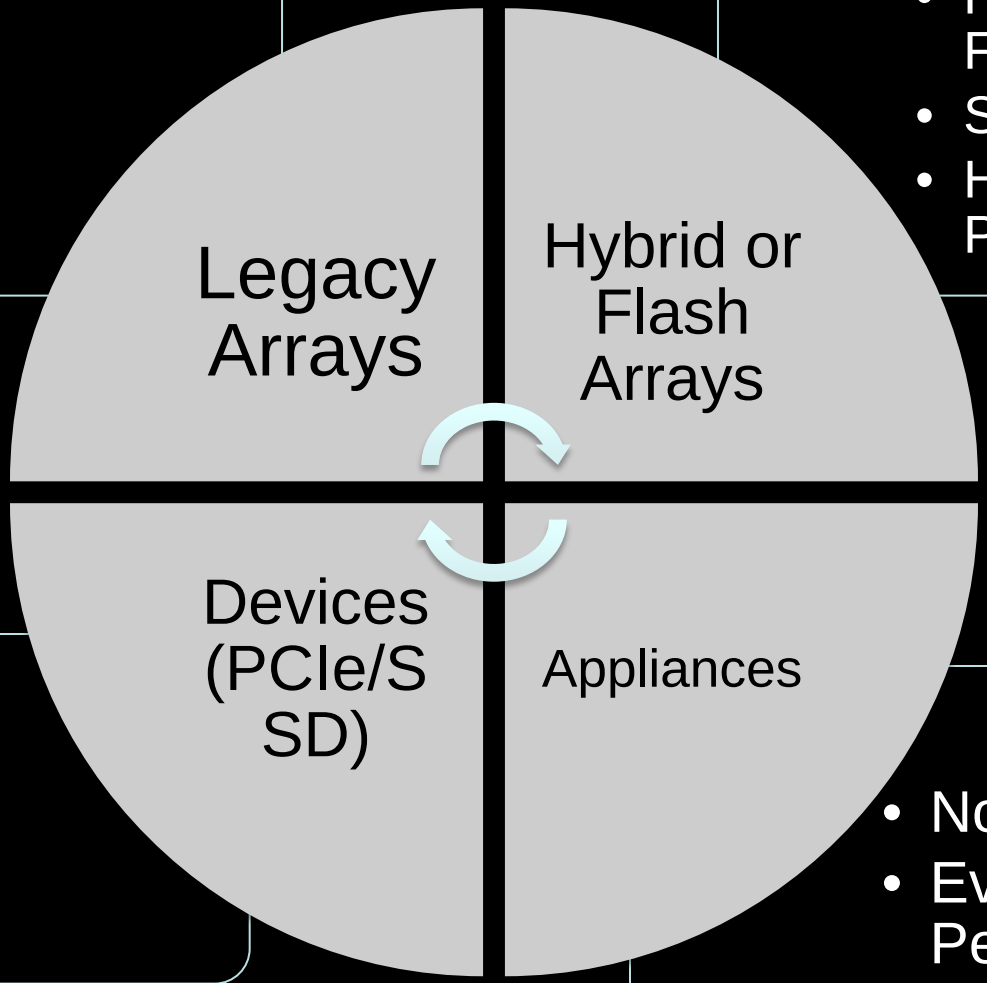
Hyperscale Storage – the aggregation of storage services across hypervisor servers leveraging local storage

The Key Questions

- Does it reduce hardware costs?
- Does it reduce operational costs?
- Does it eliminate vendor lock in?
- Could we see the demise of stand alone storage systems?

The Flash Paradox

- Features and HA
- Hybrid
- Lowest Performance



- Focused Features
- Start Ups
- Higher Performance

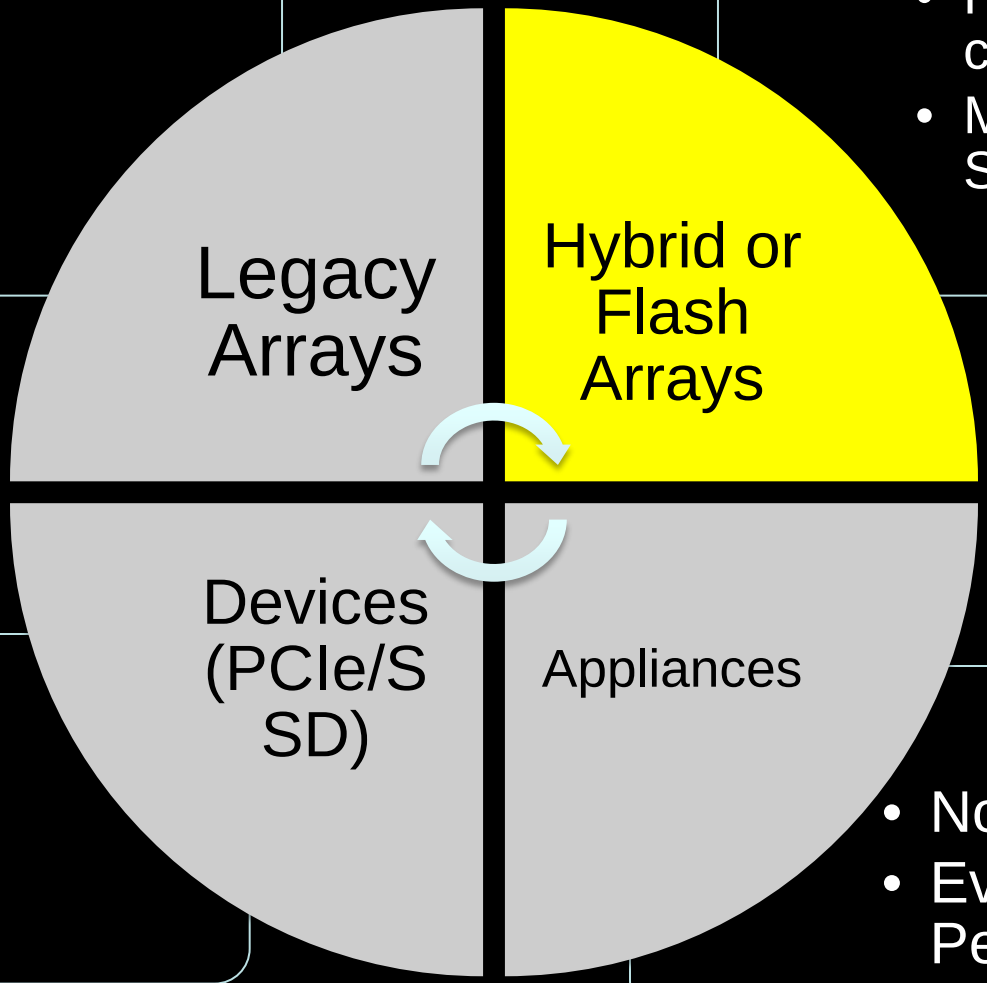
- Focused Features
- Highest Performance

- No Features
- Even Higher Performance

The Impact of Software Defined Storage on Flash

- Features and HA
- Hybrid
- Lowest Performance

- Feature completion
- Modular Selection



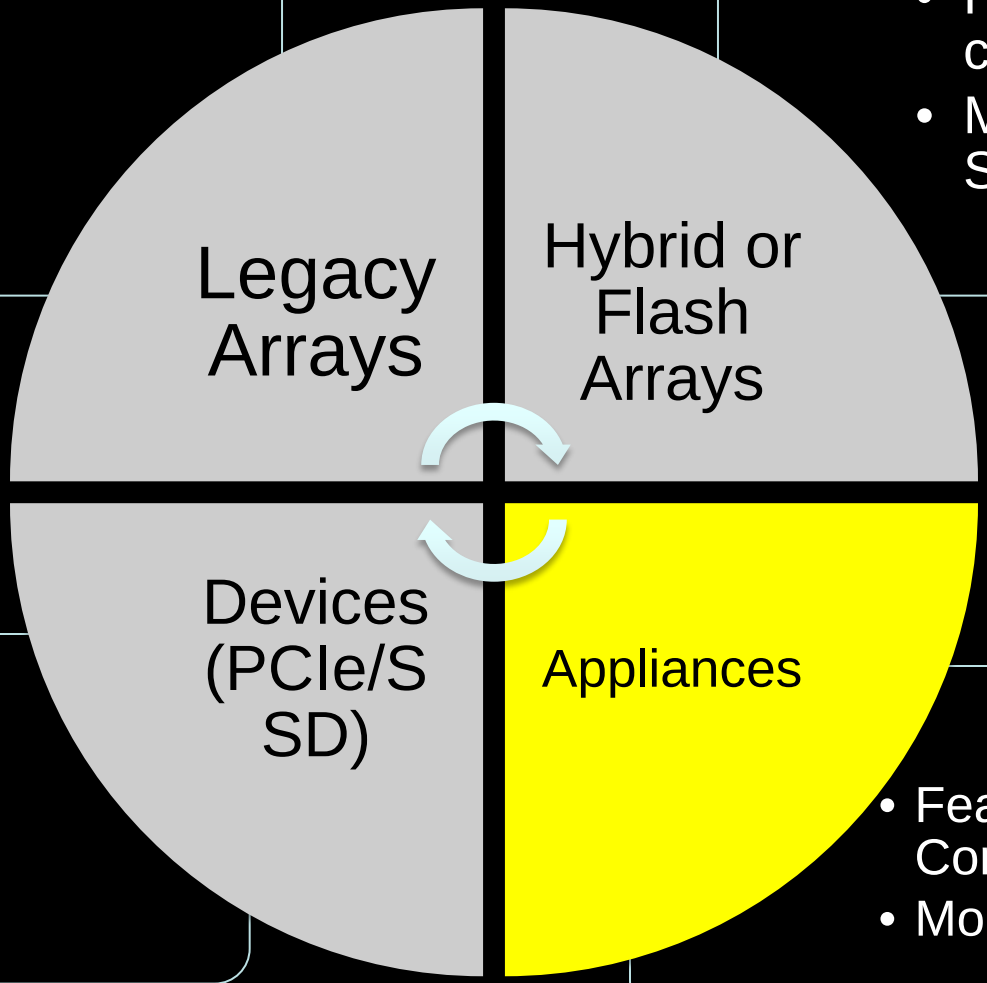
- Focused Features
- Highest Performance

- No Features
- Even Higher Performance

The Impact of Software Defined Storage on Flash

- Features and HA
- Hybrid
- Lowest Performance

- Feature completion
- Modular Selection



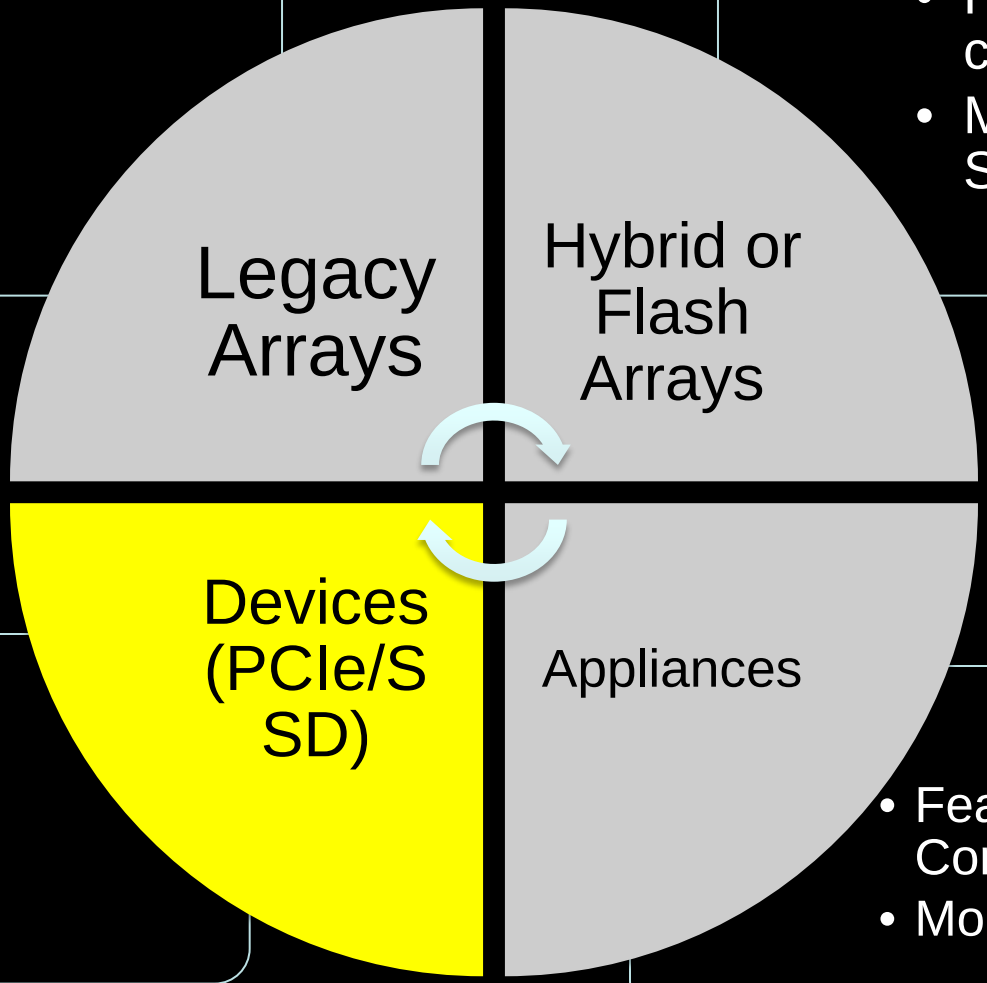
- Focused Features
- Highest Performance

- Feature Completion
- Modular Selection

The Impact of Software Defined Storage on Flash

- Features and HA
- Hybrid
- Lowest Performance

- Feature completion
- Modular Selection

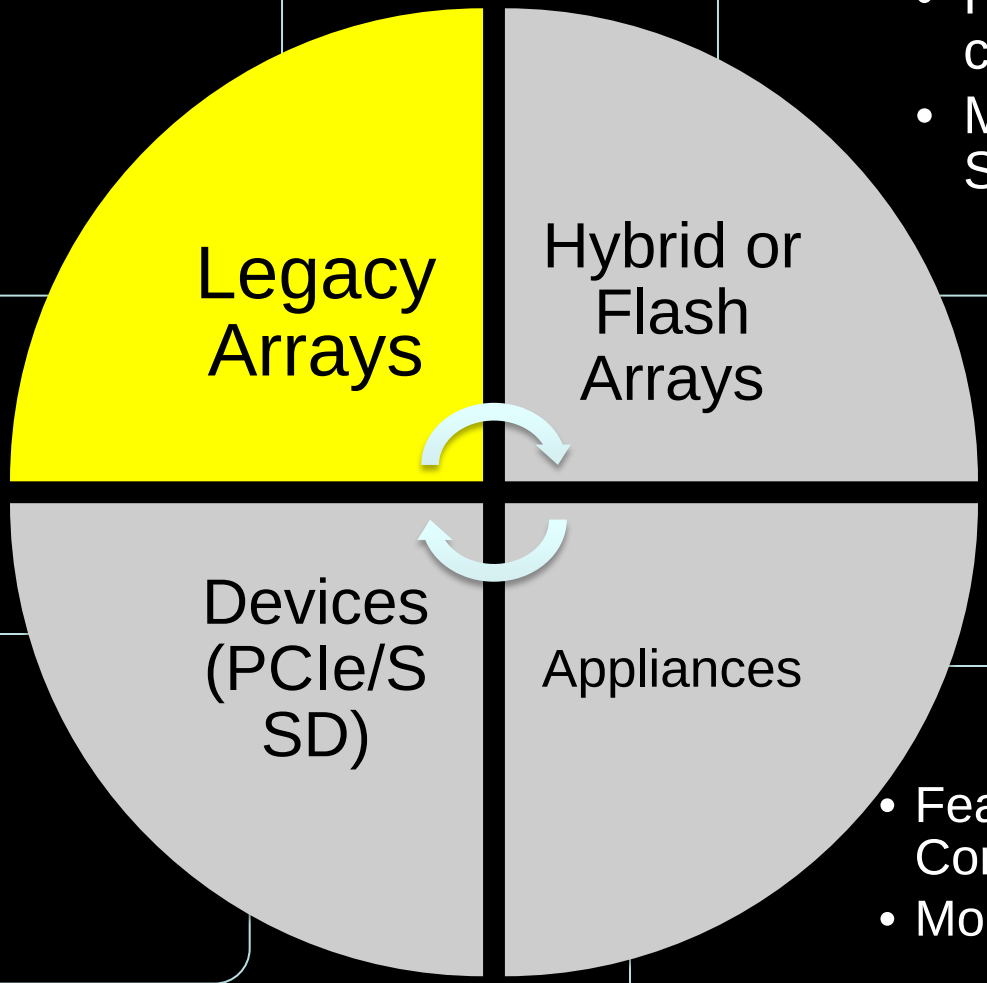


- Enables Server Side Storage Networks

- Feature Completion
- Modular Selection

The Impact of Software Defined Storage on Flash

- Will Compete against SDS
- Until they become SDS



- Feature completion
- Modular Selection

- Enables Server Side Storage Networks

- Feature Completion
- Modular Selection

The Software Defined Future

- Eventually everything will be Software Defined
- *But hardware quality and performance will become more important than ever*
  - *Flash Controller Intelligence included*
- *Software Defined will come pre-installed on servers*

Thank you

George Crump, Chief Steward, Storage Switzerland
gcrump@storage-switzerland.com
http://www.storage-switzerland.com

Storage Swiss on Twitter:
http://twitter.com/storageswiss
Storage Swiss on Facebook:
http://www.facebook.com/storageswiss
Storage Swiss on YouTube:
http://www.youtube.com/user/storageswiss