Open Compute Project

Storage Committee Charter

March 10, 2016

Version: 1.1

1 Revision History

Date	Name	Description
11-01-2015	Asghar Riahi	Original Draft Based on Server Committee Charter Document v1.0
03-10-2016	Asghar Riahi	Reviewed at the OCP Summit 2016 – Storage Engineering Workshop and approved with minimal changes. v1.1

2 Table of Contents

3 Overview

The OCP Storage committee focuses on creating specifications and Software that drive open innovation in hardware to enable new storage applications and provide users greater efficiency and value.

The storage committee collaborates with the other OCP disciplines to ensure broad adoption and achieve optimizations throughout all aspects from validation, to manufacturing, deployments, data center operations, and de-commissioning.

4 Scope

The storage committee will further the goals of standardization and modularization by channeling investigations. Primary areas of investigations

- Open Rack Compatible Storage Chassis and Sleds
- EIA 310-D/E 19" Rack Derivative Storage Chassis and Sleds (IEC 60297-3-100 in other regions)
- Components and Peripherals

Older offerings, specifications that were not utilized, and specifications that are not of high caliber will be retired over time.

4.1 Open Rack Compatible

Chassis should be compatible with new standards (v1.8+) with 12V busbars in the rear. Storage sleds should interoperate with these chassis.

http://www.opencompute.org/projects/storage/

4.2 Open Rack 19" Compatible Derivative Storage Systems

There has been demonstrated demand for storage systems that can be installed in traditional EIA-310D/E racks typically from smaller customers.

4.3 Components and Peripherals

A healthy eco-system includes many different vendor components. Component specification may include technologies across host interconnects for peripheral storage, storage devices and storage protocols including both direct and network attached topologies.

5 Specification Standard

Specifications that are high quality and prescriptive are a prerequisite to standardization. The baseline for acceptance will be whether or not the committee believes that two different vendors can build compatible and fully interoperable storage systems.

The Storage Committee will provide a starter template for use as submission.

5.1 Storage Interfaces

All storage interfaces must be fully documented, this include: SAS, SATA, PCIe, Networking and other high-speed interfaces. Extra consideration is to be provided for submissions that include schematics, board and layout files, and manufacturing files. Additionally all the tools needed for testing including the test cases should be submitted along with the original submission or shortly thereafter.

5.2 Electrical Interfaces

All interfaces must be fully documented. Voltages, power, frequencies, standards are all required. Networking and other high-speed interfaces such as PCI-Express must be outlined. Extra consideration is to be provided for submissions that include schematics, board and layout files, and manufacturing files. Additionally all the tools needed for testing including the test cases should be submitted along with the original submission or shortly thereafter.

5.3 Mechanical Interfaces

Specifications must include all critical mechanical dimensions. Form factors, xyz heights, keep-in and keep-outs. Extra consideration is to be provided for submissions that include mechanical CAD and manufacturing files. Submitter will also provide 3-D CAD model in PDF format to allow the broader audience to review.

5.4 Manageability

Dealing at scale requires rock-solid management solutions. All interfaces, protocols and commands must be documented.

5.5 Debug

Systems will not be successful if they cannot be debugged. Hooks for troubleshooting and repair must be included.

5.6 Test Framework

Open Compute has a strong certification strategy through the Certification committee. Each specification will require working

http://www.opencompute.org/projects/storage/

with the Certification committee to identify test and certification strategy.

6 Specification Submission and Acceptance

The goal for all OCP hardware submissions is acceptance with eventual OCP certified hardware. The broader OCP specification submission process is documented [here](http://www.opencompute.org/community/get-involved/spec-submission-process/):

http://www.opencompute.org/community/get-involved/spec-submission-process/

The Storage Committee covers all hardware within scope and is the first place where specifications are reviewed. After review within the committee, the specification is forwarded to the Incubations Committee for vote on adoption. Within the committee, the basic rules for votes are as follows:

1. Majority vote to move specification from committee review to the Incubations Committee.
2. An extreme situation is the case of a confidential submission, in which no vote will be taken. The committee chair and the Incubations Committee liaison will provide feedback on the specifications. Upon agreement between the chair and the liaison, the specification will move to the Incubations Committee. It is the submitter's responsibility to ensure that appropriate legal procedures for handling confidential information is met.
3. If the Incubations Committee rejects a specification, the Incubations Committee will provide directions on whether the specification needs to go back into the review stage or is to be outright rejected.

During this process, the specification will be posted to the storage wiki:

http://www.opencompute.org/wiki/Storage – Storage_Committee_Review

Once accepted, the committee chair shall post the specification on the team's wiki website under Accepted Projects:

http://www.opencompute.org/wiki/Storage – Accepted_Projects

Revisions and addendums to existing specifications are typical for hardware projects with ongoing corrections and improvements. These will be treated formally as addendums to the existing specification. The chair and the IC liaison determine whether the changes are minor enough to approve directly or whether the changes should be sent through the full committee voting process.

7 Community Organization and Meeting Cadence

7.1 Community Organization and Meeting Cadence

The organization structure and members are a work in progress. To be a member of the storage committee, you must be a member of Open Compute Project and agree to the license agreement.

In the meantime, you can participate and contribute using the storage mailing list:

http://lists.opencompute.org/mailman/listinfo/opencompute-storage

http://www.opencompute.org/projects/storage/

Positions:

- Chair – who will facilitate the flow of information, determine consensus and commit documents.
- Incubations Committee Liaison – When specifications are ready for adoption, the IC liaison represents the storage committee for approval.
- Working Group – storage committee members who are committed moving the project forward between meetings. Members must provide contributions and attend meetings. Examples of contributions can be advice, specification and code.
- General Assembly - who are people are following the topic and want to be part of the decision process.

8 Legal and Patent Policy

All specifications and work in the storage committee is covered under the OCP Contributor license and legal agreements:

https://rightsignature.com/forms/OMMUS–72474399–v1–db5554/token/27cfcf4a00d