

Datacenter Storage Technical Work Group Charter

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VERSION: 1.2

APPROVED by Technical Council: TBD

CHARTER:

The Datacenter Storage TWG is created for the purpose of establishing architectures and software for disk and solid state drive based functionalities that allow them to be integrated primarily into large scale datacenters. The TWG creates software and standards that enables specific features to these drives that meet the requirements of datacenter customers prior to and after standardization through other standards organizations.

The Datacenter Storage TWG:

- Acts as a primary technical entity for the SNIA to identify, develop, and coordinate features to be added to storage interfaces.
- Produces an API or extends an existing API to accommodate new features.
- Promotes interoperability (for example plugfests) among drives implementing a new feature prior to it's standardization.
- Coordinates the submission of new feature proposals to T13, T10 and NVM Express and possibly other standards groups.
- Creates software to use these updated interfaces once the features have been incorporated into a new version of the standard.

Hyperscalers and enterprises building their own datacenters have unique requirements for drive features to for example, reduce the long tail and meet required service levels. In some cases, additional control over the drive's operation is desired. These and other features are requested from the drive vendors in an ad hoc manner usually through an RFP process that fragments the availability and interoperability of these features. By coordinating and refining these requirements in the TWG, a common API can be developed that meets the needs for these features without the need for one-off vendor extensions being exposed.

The TWG will also assist and cooperate with other SNIA TWGs in their efforts to incorporate or manage these features, and consider other SNIA TWG and Alliance partner work for leveraging.

This TWG intends to develop SNIA Software. This TWG intends to use an Open Repository with public access for the Software. This TWG intends to allow external contribution as a CLA Project.

PROPOSED PROGRAM OF WORK:

1. The TWG will collect and prioritize feature requests for storage drive interfaces from datacenter customers.
2. The TWG will develop an API or extend an existing API to accommodate the features, allowing drive vendors to supply the features using proprietary extensions to existing standard interfaces and develop software that uses those extensions to implement the API.
3. The TWG will coordinate the submission of new standard proposals to accommodate the new features.
4. Once the feature is standardized, the TWG will develop SNIA Software to implement the feature's API using the new version of the underlying standard that adds the feature.

The scope of new features is focused on solving problems of the involved datacenter customers when deploying drives at scale. Examples include: Long Tail Latency, Control Over Background Operations, and Total Cost of Ownership.

RESOURCES:

Toshiba and TBD have all communicated their support for this activity. Development teams at several other SNIA member companies have expressed support and are waiting for official company approval to state support.

Software License

The TWG will develop software using the 3 clause BSD License as follows:

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