

Trusted Computing Group Storage Work Group Logical Port Locking Feature Set Specification FAQ

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Q. What is the Storage Work Group?

A. The Storage Work Group is an organization within the Trusted Computing Group (TCG). It consists of TCG member companies with interests in the implementation of the Trusted Computing Group's methodologies for storage. For more information on the Storage Work Group, please see the documents at:

www.trustedcomputinggroup.org.

Q. What is the purpose of the Storage Work Group?

A. The Storage Work Group builds upon existing TCG philosophy in the development of specifications that provide a comprehensive architecture for storage devices. The Storage Work Group's objective is to define specifications and accompanying documents for building and managing storage devices that enforce policy controls as set by hosts across a wide range of storage transport command protocols.

Q. How is the Storage Work Group organized?

A. The Storage Work Group operates under the auspices of the TCG. Membership in the Storage Work Group is determined by TCG bylaws and is open to all TCG members.

Q. Who is participating in the Storage Work Group?

A. Participation in the Storage Work Group includes storage device manufacturers, storage subsystem manufacturers, software vendors, and designers of custom, highly integrated components. Storage and security management and storage integration vendors also participate. A complete list of current TCG members is available at www.trustedcomputinggroup.org.

Q. What is the output of this Work Group?

A. The Storage Work Group deliverables include specifications that define security functionality requirements for storage devices and managing hosts; test cases and certification process documents; and informative supporting documents.

Q. What is the Core Specification?

A. The Core Specification, officially known as TCG Storage Architecture Core Specification, developed by the Storage Work Group provides a comprehensive definition of TCG-related functions for a TCG storage device.

Q. What is a Security Subsystem Class (SSC)?

A. The Core Specification can be further broken down in multiple subsets of functionality called Security Subsystem Classes (SSCs). SSCs explicitly define the minimum acceptable Core Specification capabilities of a storage device in a specific "class" and potentially expand functionality beyond what is defined in the Core Specification.

Q. What is a Feature Set?

A. A Feature Set defines additional functionality that extends an SSC.

Q. What is the Logical Port Locking Feature Set?

A. The Logical Port Locking Feature Set defines mechanisms that allow a storage device to enforce access control over specific device services using logical ports. When a logical port is locked, the associated service is disabled; when unlocked, the service is enabled.

For example, if the port associated with firmware updates is locked, the device will reject all firmware update commands and would only accept those commands if the port is unlocked.

Q. Why is the Logical Port Locking Feature Set needed?

A. The feature set is needed to provide fine-grained control over access to sensitive device functionality (e.g., firmware updates, diagnostics) so that storage devices can meet security requirements and reduce risk exposure.

Q. How does Logical Port Locking work at a high level?

A. Device services are associated with Logical Ports and each Logical Port has a locking state. If the locking state is enabled, the associated interface commands are rejected. If the locking state is disabled, the associated interface commands are allowed (assuming all other conditions related to the command are satisfied). Enabling or disabling locking on a Logical Port is accomplished via standard TCG storage interfaces (e.g., IF-SEND and IF-RECV).

Q. What services can be controlled by Logical Ports?

A. At least one of the following device services must be controlled via a Logical Port if a device support the Logical Port Feature Set:

- Manufacturer diagnostic commands
- Device firmware updates
- Device rollback firmware updates
- Manufacturer logs

Additionally, device manufacturers may define vendor unique Logical Ports.

Q. What storage interfaces are supported?

A. The SATA, SCSI, and NVMe storage interfaces are supported.

Q. Is this feature applicable across the Opal family?

A. Yes. The Logical Port Locking Feature Set is defined for the Opal family of SSCs.

Q. Is there a way to check whether a storage device has support for the Logical Port Feature Set?

A. Yes. A host can perform a discovery process (i.e., Level 0 discovery) on a storage device and then inspect the response for the presence of the feature descriptor for the Logical Port Feature Set (i.e., Feature Code = 0x040B).

Q. Where can I find more information about Logical Port Feature Set?

A. The Logical Port Feature Set specification v1.00 is available at <https://trustedcomputinggroup.org/work-groups/storage/>