Open. Together.
openSeaChest
Highly Portable Drive Management Project

Muhammad Ahmad
Seagate Technology
Problem:
Need for a highly portable, secure, non-disruptive software stack to enable various use cases of storage devices that are integrated in diverse hardware platforms & operating systems.

Solution:
Open source (MPL) cross-platform project, written in C, as a collection of utilities & libraries for storage products based on the storage industry standard T10/T13/NVMe specifications that allow for device diagnostics and management.
openSeaChest - key features

- Use case based e.g. Power, Erase, Logs
- Supports SATA/SAS/NVMe* direct attached
- Supports Windows, Linux, FreeBSD, Solaris & VMware
- ARM for Lin/Win, other arch (e.g. MIPS) for Linux
- Lightweight & portable
- Built on customizable opensea-* libraries
openSeaChest - use cases

- **Configure**
  - Provision, PUIS
  - Phy Speed, Cache, etc.

- **Erase**
  - Quickest Erase, Sanitize, Trim, etc.

- **Format**
  - PI Info, Format Unit, Fast Format, etc.

- **Generic Test**
  - Butterfly, 2 min, Diameter, User Range etc.

- **Power**
  - EPC/APM, Transition Power etc.

- **SMART**
  - Attributes, DST, Defect Listing, Repair Defects etc.

- **Logs**
  - List, GPL/SMART, Mode pages etc.
Architectural Design
Possible Extensions

GO, Python

C#, Java
Project Statistics

110K lines of code.

1000+ commits
Call to Action

Big Endian Support  UEFI Transport Layer  Extensions (python/Ruby/Go)  Build your own apps

References

https://github.com/Seagate/openSeaChest
https://github.com/Seagate (for API/libraries)
https://apps1.seagate.com/downloads/certificate.html?key=381195785857 (Bootable Linux USB Key with Tools)