

Sustaining DOE's HPC Software

Scientific Achievement

- A CLOMonitor dashboard fork now tracks OpenSSF security scores for every DAV & TOOLS project
- ADIOS2's Scorecard rose 7.1 → 8.6/10, passing the Best Practices badge
- Security policies shipped for ADIOS2, Viskores, ZFP, Darshan, and PAPI; supply-chain hardening fixed vulnerabilities across the stack

Significance and Impact

- 16 DAV & TOOLS products stay interoperable and DOE-workflow-ready via shared Spack, CDash, and CI
- Curated Spack environments feed E4S, the Ecosystem for Science, so a fix made once reaches every facility
- **Automated Frontier deployment and shared binary caches speed the path from a merged PR to an exascale-ready module**

Technical Approach

- Three-tier CI: per-product GitHub/GitLab workflows, Spack CI on Frank Cluster, Jacamar-based Frontier facility CI — synced via gh-gl-sync
- Each Integration = a curated Spack environment + site configs, shared with E4S
- CDash and smoke tests validate every build and installed package at runtime



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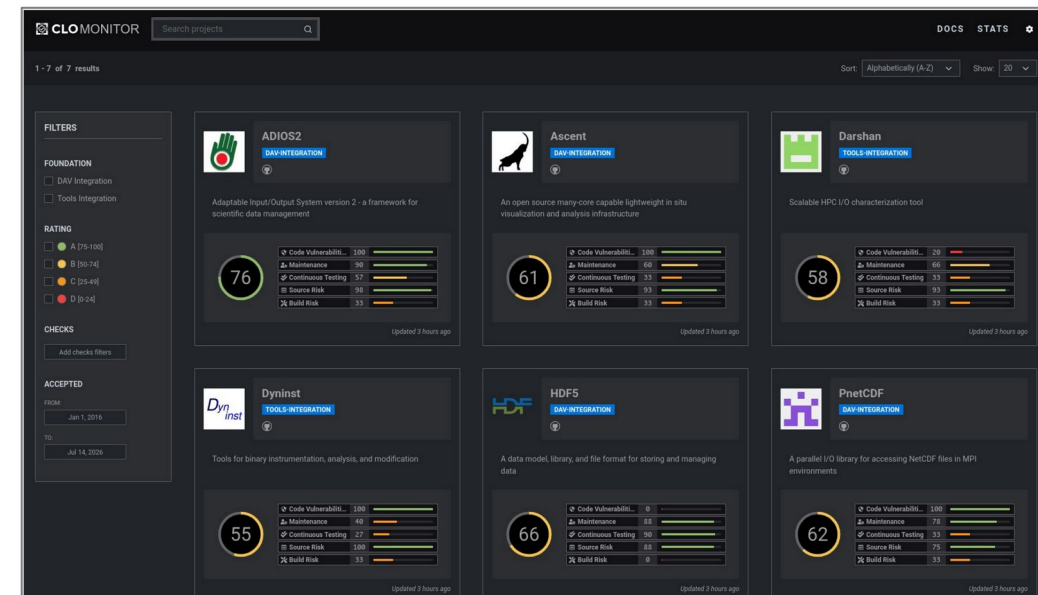
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Stewarding and advancing the current and future ecosystem of HPC-AI computing software



The CLOMonitor fork dashboard scores each DAV & TOOLS project on five OpenSSF (Open Source Security Foundation) measures — code vulnerabilities, maintenance, continuous testing, source risk, and build risk — shown here for ADIOS2, Ascent, Darshan, Dyninst, HDF5, and PnetCDF.

The 0-100 score in each circle is CLOMonitor's own composite rating, a separate metric from the OpenSSF Scorecard figure (7.1 → 8.6/10) cited for ADIOS2 at left.

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