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CHALLENGE

- Ad hoc cybersecurity experimentation severely retards scientific progress
- Use of one-off, painstaking, and error-prone processes; not shared for reuse and validation
- Lack of repeatable, reproducible, and reusable processes and other artifacts

SCIENTIFIC IMPACT

- Enable the community to build upon the work of others or to compare solutions
- Transform the way cybersecurity experimental research is conducted
- Advance the knowledge, understanding, rigor, and practice across CISE disciplines

BROADER IMPACTS

Society

- Greater scientific quality of cybersecurity research through validation, sharing/reuse, and community building
- Enhanced research leads to new effective solutions to real-world cybersecurity challenges

Education

 Lower barrier to researchers and students from underrepresented schools – enable them to quickly become active participants in cybersecurity research through shared access to

Metrics

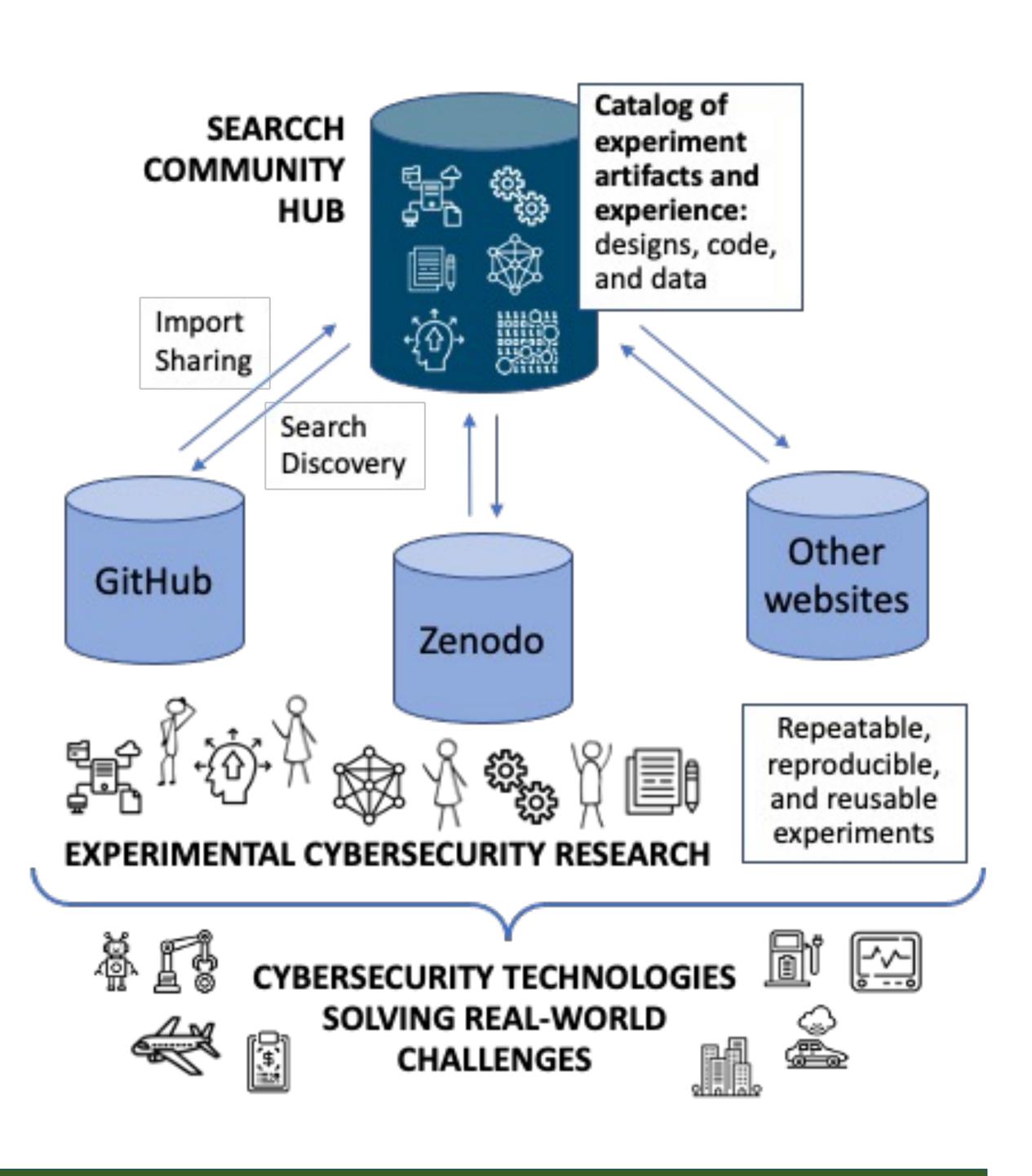
• Contributions, contributors, visits, adoptions, engagement, publications

COMMUNITY

- Outreach and engagement activities to build active, diverse, online community around hub
- Enable direct sharing of expertise and crowdsourcing research ideas and experiment design
- Grow hub to include collections of artifacts covering range of cybersecurity challenges

SEARCCH COMMUNITY HUB

- Community-driven platform lowers barrier to sharing and reusing research artifacts
- Share artifacts via web interface and importer
- Discover artifacts w/ smart search capability
- Exchange experiences via ratings and reviews



INVITATION TO NSF COMMUNITY

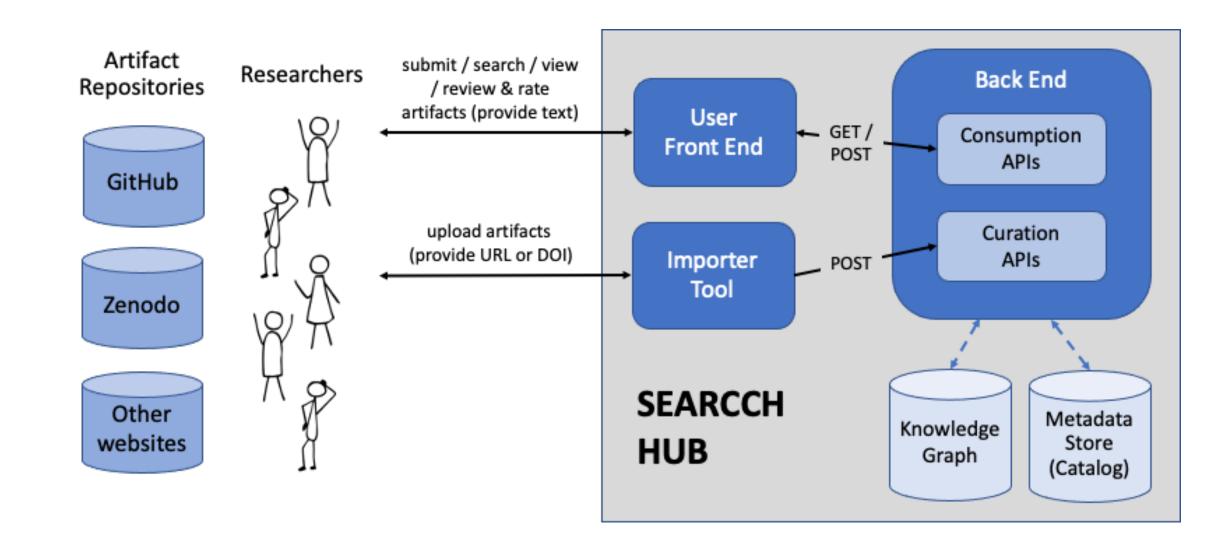
- The SEARCCH portal has been prepopulated with many artifacts from major cybersecurity conferences, such as ACSAC and USENIX Security
- Contribute and make use of artifacts and expertise in the SEARCCH hub
- Take ownership of your artifacts!!

VISIT US AT

https://hub.cyberexperimentation.org/

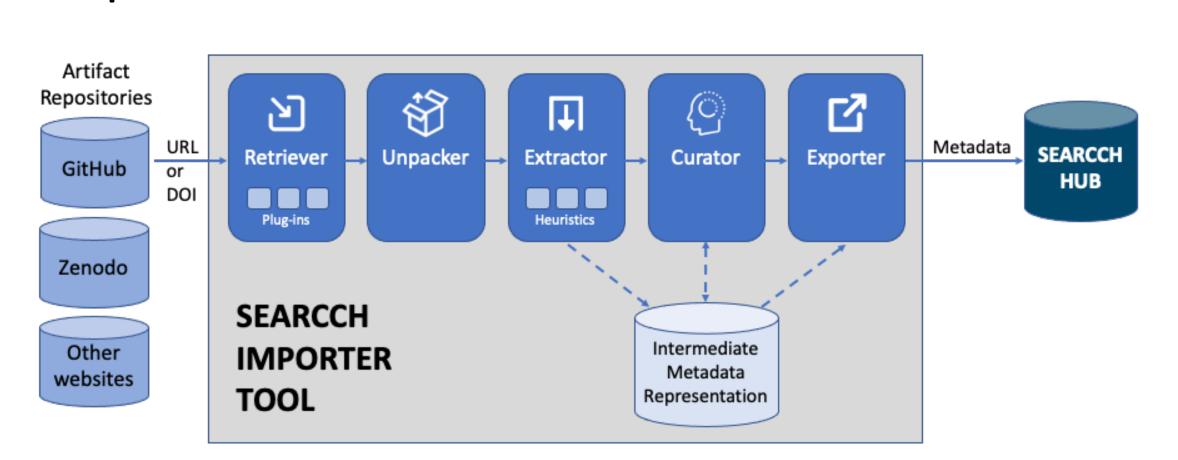
HIGH-LEVEL ARCHITECTURE

 SEARCCH is comprised of a front end and an importer tool which enable users to interact with a back end that supports consumption and curation of artifacts via a knowledge graph and a metadata store



IMPORTER TOOL

- Python application partially automates task of creating metadata that describes an artifact
- Allows manual editing of metadata prior to export



HUB FEATURES & CAPABILITIES

- Submit artifact
- Search artifacts
- View artifacts
- Rate & review artifacts
- Favorite artifacts
- Manage Account
- Best Practices
- FAQ



SEARCCH is based upon work supported by the National Science Foundation under grant numbers 1925773, 1925616, 1925588, 1925564. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.