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 to 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

SEARCH 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

HIGH-LEVEL ARCHITECTURE
• SEARCCH is comprised of a front end and an importer tool that 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

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/

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