TIA: Threat Information for Your Most Severe Vulnerabilities

Your Best Friend In The Digital Age

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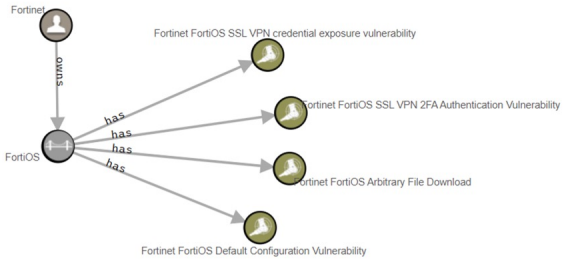
Problem Statement

This research involves the development of a web application that compiles and graphically displays vulnerabilities associated with a specific software or hardware configuration.

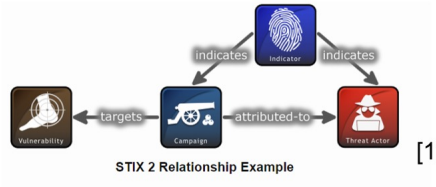
Results

Currently, TIA can generate 359 unique STIX graphs to represent CTI from 134 vendors and 351 products.



Background

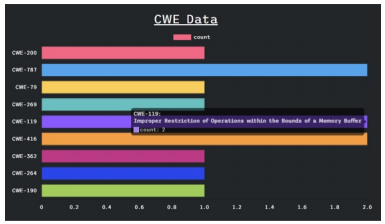
STIX: Structured Threat Information eXpression can be represented visually for an analyst or stored as JSON and machine-readable
CTI: Cyber Threat Information
CWE: Common Weakness Enumeration
Vendor: An organization
Products: Commodities owned by a vendor

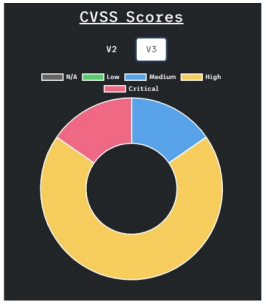


STIX 2 Relationship Example [1]

Methods

After selecting a vendor and product, three forms of CTI are returned: a table representing the known exploited vulnerabilities, CWEs and severity scores charts, and a graph generated with the STIX language.

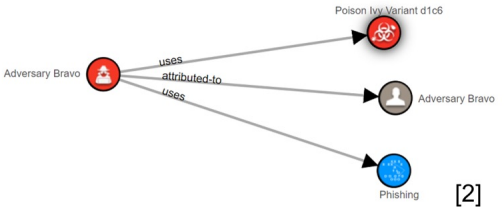




Challenges & Future Work

Future work includes:

- Enrichment of STIX graphs
- Integration of INL IX-Discovery Tools
- Serverless functionality



[2]

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[1] https://oasis-open.github.io/cti-documentation/stix/intro.html
[2] https://oasis-open.github.io/cti-documentation/stix/gettingstarted.html

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