How-to Guide:
Stuff Off Thingful

DEFEND TODAY, SECURE TOMORROW

The use of Internet of Things (IoT) in our world has grown steadily, as the use of sensors, mobile devices, cameras, meters, etc. are being integrated into everyday life. But our increasingly connected society also increases the chances that a person or organization can face a cyberattack through our smart devices – and often, device owners are unaware of this risk. What's more, the ability to manage the data that drives IoT relies very specifically on an organization's ability to identify and classify the usefulness of that data. With Thingful, organizations can increase visibility while managing the increased risk of exposure to cybercrime.

WHAT IS THINGFUL[1]?

Thingful (www.thingful.net) is a web-based search platform for finding and using open IoT data from around the world. While in and of itself not an attack surface management tool, Thingful can be leveraged to provide information about categories of IoT data, which could further be utilized for other threat intelligence activities. Thingful's mining capabilities allow for considerable vertical diversity, such as weather, energy, or telecommunications, which could be useful for situational awareness and operational analysis with a high degree of specificity. Thingful's API allow for the extensible use of its real time IoT data in a host of developed applications, including GIS, supply chain optimization and logistics, manufacturing optimization, etc.

POTENTIAL USE CASES FOR THINGFUL

Thingful can also be used in automatic discovery of IoT data pathways, and thereby support attack surface reduction activities; however, that capability is not its primary purpose. Thingful's main use cases are focused on the manipulation of IoT data in ways that unlock value and visibility within an identified dataset. Specifically, the ability to organize, access, respond and unlock IoT data streams into useful 'data pipes' for consumption is key to Thingful's business model. Further, it is quite possible that the IoT use cases defined by Thingful could be adapted to assist in more complex cyber security threat hunting and identification activities, if an organization wished to do so.

ASSESS PUBLIC ASSET RISK PROFILE

Each finding represents a distinct system, and each system may have many entries for services running on different ports. For each system, service, and port that is exposed, ask the following questions:

- Why does this system and service need to be running? Equipment often enables capabilities by default that are not necessary in normal operations.
- What is the business need requiring this system, service, and port to be exposed to the Internet? Administrative tools may be inadvertently configured to connect on an Internet-accessible interface.
- Can this system, service, or port reside behind a VPN? VPNs add strong authentication mechanisms and remove a direct link to potential adversaries.
- Can the service offer strong, multi-factor authentication? Contact your vendor to explore options.
- When was the last time this system or service was fully updated? There may be a valid business justification for why a system was not updated; otherwise, follow your change management process and update your systems on schedule.
- When was the last time this system or service was hardened? Contact your vendor for best practices and support.

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[1] The United States Government does not endorse any commercial product or service. Any reference to specific commercial products, processes, or services by service mark, trademark, manufacturer, or otherwise, does not constitute or imply their endorsement, recommendation, or favoring by the United States Government.

THINGFUL SEARCH CAPABILITIES

The Thingful search function is more traditional to a search engine. Using the search bar, type in your IP address, device type, or location, and you will retrieve a map pointing to available information relevant to your search.
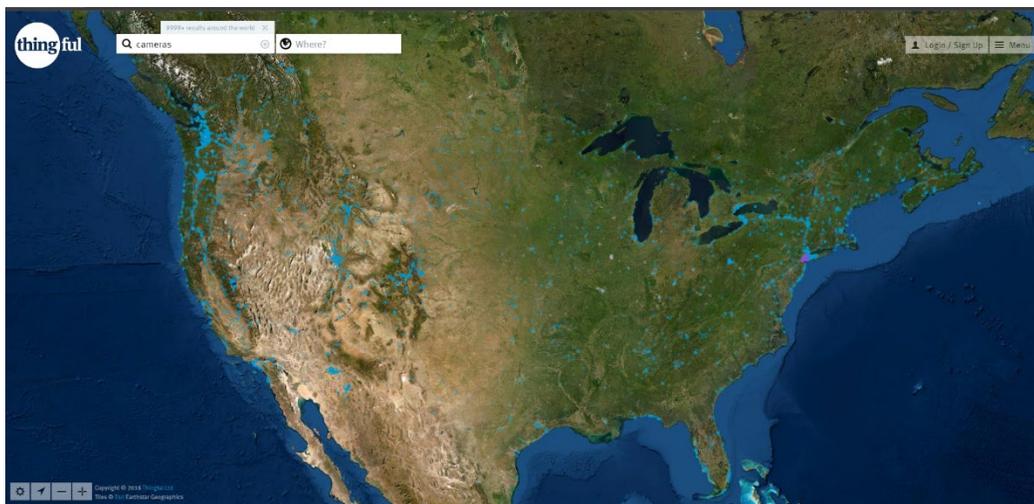
MORE INFORMATION

Thingful is a powerful tool with searching capabilities that are extensive, particularly focused on global IoT data. There are several licensing options that are available depending on the type of usage required, as well as the specific use cases that need to be addressed. For more information about Thingful or to get further searching guidance, visit https://www.thingful.net.