INTEL471

Vulnerability Intelligence

KEY VALUE

- Informs vulnerability management and drives patch priorities with external threat intelligence
- Provides a live dashboard to track and alert on changes across the range of precursors of exploitation
- Delivers a regular stream of vulnerability reporting complete with sourcing for deeper context and background on vulnerabilities
- Drives all intelligence reporting and observations via actual analysts judgements versus monitoring volumetric keyword hits
- Tracks threat actor discussions and interest levels related to vulnerabilities, which often drives weaponization and productization
- Alerts when threat actors are selling, buying and trading proof-of-concept (POC) code signaling weaponization is imminent
- Identifies when patching is critical based on threat actors integrating vulnerabilities into exploit products, which vastly lowers the barrier to entry for exploitation
- Integrates using a RESTful API or one of our third-party integrations — SEIMs, Threat Intelligence Platforms (TIPs) and other security tooling

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Vulnerability Patching Must Align with Business Realities

Companies of all shapes and sizes are facing an ever increasing list of applications and systems requiring regular patching to stay ahead of adversaries keen to exploit vulnerabilities. The idea that you can continuously take an enterprise offline to conduct patching is unrealistic. A good vulnerability management program must prioritize patching as it relates to the business realities of their organization, but without timely and relevant intelligence this can be a challenge.

Intelligence Driven Vulnerability Management and Patching

Intel 471's Vulnerability Intelligence is made to provide both relevant and timely intelligence information about the adversary scenario and address the gap in current vulnerability offerings, which focus mainly on existing exploits based on known attacks and open source information. Our Vulnerability Intelligence closes this gap by including the precursors to such activity such as an increase in interest levels amongst threat actors, proof-of-concept (POC) code being developed, traded or sold, and ultimately the weaponization and productization of the code as it gets integrated into exploit kits, exploit packs or other tools. This activity often takes place prior to attacks being observed in the wild and being alerted enables a more proactive approach to vulnerability management.

Focus on the Precursors of Exploitation

Intel 471's Vulnerability Intelligence focuses on the precursors to exploitation of vulnerabilities in the wild via a regularly updated dashboard that tracks the life cycle of significant vulnerabilities observed in the underground from initial disclosure to exploit weaponization and productization. Vulnerability Intelligence offers an analyst-driven assessment of priority vulnerabilities beyond volumetric keyword hits, which just isn't adequate in today's cyber security environment. Precursors to exploitation include:

- Vulnerability publicized and patches released
- Threat actor interest levels start to orient toward specific vulnerabilities
- Proof-of-Concept (POC) code is made availability amongst cybercriminals and researchers
- Weaponization is observed as exploits are bought and employed
- Productization occurs as exploits are integrated into products lowering the barrier to exploitation significantly

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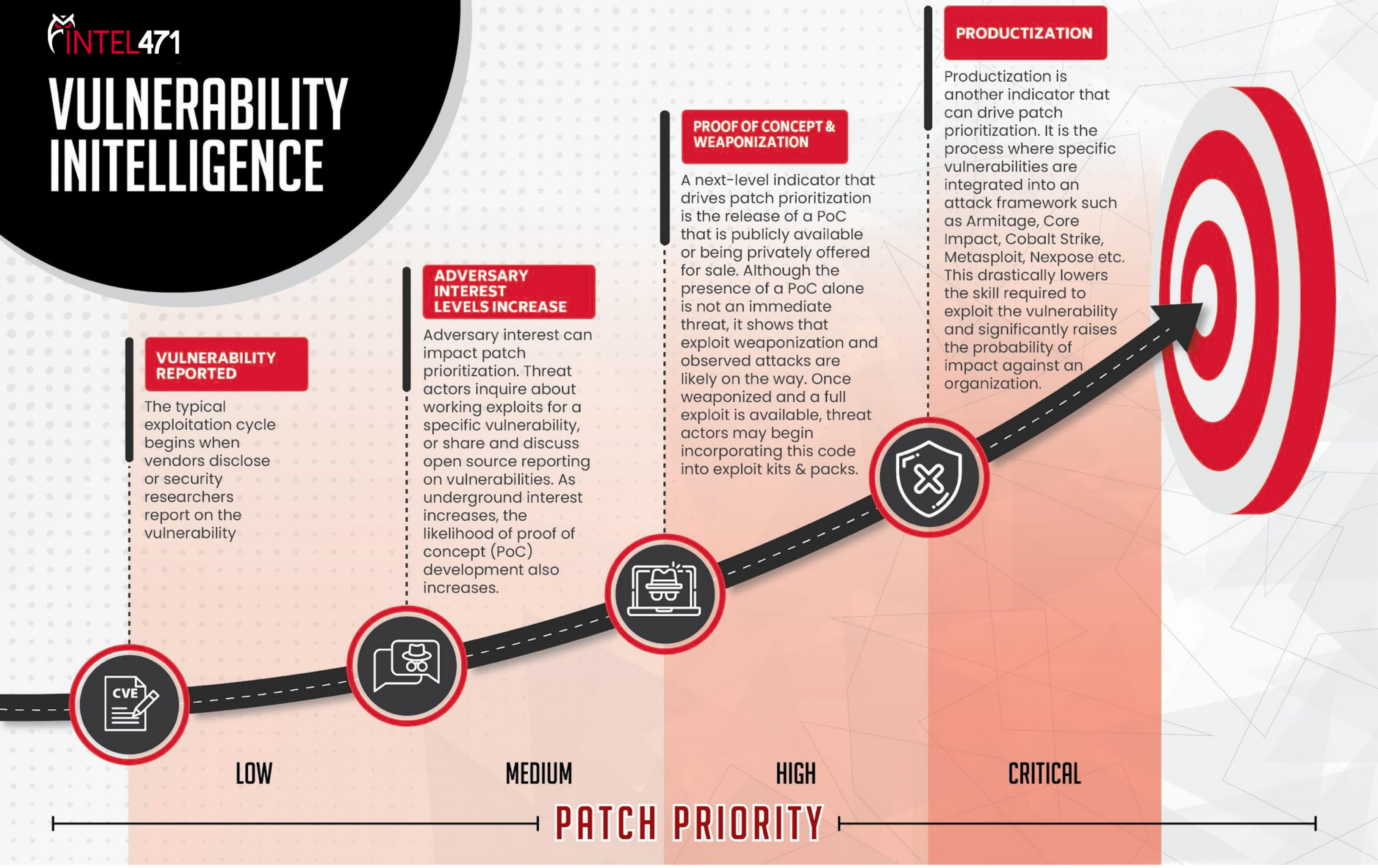
VULNERABILITY INITELLIGENCE



VULNERABILITY REPORTED

The typical exploitation cycle begins when vendors disclose or security researchers report on the vulnerability

ADVERSARY INTEREST LEVELS INCREASE

Adversary interest can impact patch prioritization. Threat actors inquire about working exploits for a specific vulnerability, or share and discuss open source reporting on vulnerabilities. As underground interest increases, the likelihood of proof of concept (PoC) development also increases.

PROOF OF CONCEPT & WEAPONIZATION

A next-level indicator that drives patch prioritization is the release of a PoC that is publicly available or being privately offered for sale. Although the presence of a PoC alone is not an immediate threat, it shows that exploit weaponization and observed attacks are likely on the way. Once weaponized and a full exploit is available, threat actors may begin incorporating this code into exploit kits & packs.

PRODUCTIZATION

Productization is another indicator that can drive patch prioritization. It is the process where specific vulnerabilities are integrated into an attack framework such as Armitage, Core Impact, Cobalt Strike, Metasploit, Nexpose etc. This drastically lowers the skill required to exploit the vulnerability and significantly raises the probability of impact against an organization.

FREQUENTLY ASKED QUESTIONS

What is the purpose of Intel 471's Vulnerability Intelligence dashboard?

Intel 471's Vulnerability Intelligence Dashboard is a quick reference tool designed to assist patch prioritization and vulnerability management decision-making. This regularly updated dashboard tracks the life cycle of significant vulnerabilities observed in the underground from initial disclosure to exploit weaponization and productization. It offers an analyst-driven assessment of priority vulnerabilities beyond keyword hits.

How are CVEs phased off Intel 471's Vulnerability Intelligence dashboard over time?

To keep the dashboard current and concise, a vulnerability is removed from the dashboard after no significant state changes have been observed within two weeks. High risk vulnerabilities will continue to be monitored for up to an additional 30 days and re-published to the dashboard if a state change occurs.

Note: CVEs phased off the dashboard will still be searchable within TITAN.

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What vulnerabilities are included in Intel 471's Vulnerability Intelligence dashboard?

To help prioritize and track vulnerabilities likely to impact you, we regularly push individual vulnerabilities into dashboard view once an analyst manually reviews and validates any of the following criteria have been met:

- A significant CVE is discussed actively in the underground.
- Requests for exploits are observed.
- The CVE is weaponized or productized.

How are vulnerabilities prioritized and ranked on Intel 471's Vulnerability Intelligence dashboard?

Intel 471 analysts review and assess individual vulnerabilities and weigh them collectively against a number of factors including a proprietary Intel 471 risk level which factors in exploit status, actor interest level, patch availability, CVSS score, CVE ID and more.

What do the different "Interest Level" indicators mean?

- Disclosed publicly – applies to CVEs that have been publicly disclosed
- Researched publicly – applies to CVEs when they are observed in research publications (blogs, whitepapers, etc.)
- Exploit sought in underground – applies to CVEs when a threat actor is looking for exploits in the underground

These are contextualized indicators, not based on simply the number of observed underground discussions.

What do the different "Exploit Status" indicators mean?

- ***Not observed*** – no exploit code observed
- ***Code available*** – exploit proof-of-concept (POC) code has been published or shared
- ***Weaponized*** – integrated into malicious code for use by sophisticated actors, for example: exploit kits, malvertising
- ***Productized*** – available for use in mass production by unsophisticated actors, for example: incorporating an exploit into Armitage or Metasploit

What does "patch or update" mean?

The impacted vendor released mitigation information such as software updates or patching details to address the vulnerability.