Vulnerability Analysis

Vulnerability analysis at the CERT Coordination Center® (CERT/CC) consists of a variety of efforts, with primary focus on coordinating vulnerability disclosure and developing vulnerability discovery tools and techniques. Publicly available resources include:

- Public vulnerability information: Vulnerability Notes and vulnerability data archive
- Coordination and disclosure guidance for security researchers and vendors
- The CERT Guide to Coordinated Vulnerability Disclosure in its entirety
- Vulnerability Disclosure Policy Templates for use in creating your own customized disclosure policy
- Vulnerability Reporting Form (please be familiar with the guidelines before reporting)
- Open-source vulnerability discovery and analysis tools
  - CERT BFF - Basic Fuzzing Framework — The CERT Basic Fuzzing Framework (BFF) is a software testing tool that finds defects in applications that run on the Linux and Mac OS X platforms. BFF performs mutational fuzzing on software that consumes file input.
  - CERT FOE - Failure Observation Engine — The CERT Failure Observation Engine (FOE) is a software testing tool that finds defects in applications that run on the Windows platform. FOE performs mutational fuzzing on software that consumes file input.
  - CERT Tapioca — CERT Tapioca is a network-layer man-in-the-middle (MITM) proxy framework based on mitmproxy http://mitmproxy.org/. CERT Tapioca is installable on Red Hat Enterprise Linux, CentOS, Fedora, Ubuntu, OpenSUSE, and Raspbian.
  - CERT Triage Tools — The CERT Triage Tools project has been transitioned to the GDB 'exploitable' plugin https://github.com/jfoote/exploitable project on GitHub.
  - CERT Vulnerability Data Archive and Tools — The CERT Vulnerability Data Archive contains nearly all of the non-sensitive vulnerability data collected by the CERT/CC, from the inception of the vulnerability notes database (approximately May 1998) to the date the archive was prepared, as noted above in the Change Log.
  - Dranzer — Dranzer is a tool that enables users to examine effective techniques for fuzz testing ActiveX controls.

Recent Blog Posts

Probably Don’t Rely on EPSS Yet
Jonathan Spring posted on Jun 06, 2022

Author's Note: This post was updated on June 9, 2022, to correct factual errors including references to Kenna Security instead of AlienVault and Fortinet. This post was updated on June 14, 2022, to edit content to reflect the publication of the EPSS FAQ https://www.first.org/epss/faq on June 10, 2022. Vulnerability management https://en.wikipedia.org/wiki/Vulnerability_management involves discovering, analyzing, and handling new or reported security vulnerabilities in information systems....

Finding Privilege Escalation Vulnerabilities in Windows using Process Monitor
user-9a25e posted on Jun 21, 2021

Overview
This post will explain how to find privilege escalation vulns on Windows that no one appears to be looking for, because it’s been pretty easy to find a bunch of them. After explaining how to find them, I’ll introduce some defenses that can partly mitigate the problem in different ways. But what I’d like to see change is for developers to start looking for these vulns in the way I describe so that they stop introducing them in the first place....

Kerberos relaying with krbrelayx and mitm6
user-9a25e posted on Feb 24, 2022

Overview
Dirk-jan Mollema published a blog post that shows how an attacker on the same (V)LAN as a machine connected to an active directory where an AD CS server is present can obtain a kerberos ticket to impersonate a domain admin on the victim system: https://dirkjanm.io/relaying-kerberos-over-dns-with-krbrelayx-and-mitm6/ https://dirkjanm.io/relaying-kerberos-over-dns-with-krbrelayx-and-mitm6/ Using the steps outlined, an attacker can execute code with SYSTEM privileges on the victim system....

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