

Arbitrary File Write via Archive Extraction (Zip Slip)

Affecting [github.com/unknwon/cae/zip](#) package, versions <1.0.1

INTRODUCED: 26 MAY 2020 CVE-2020-7664 CWE-22 FIRST ADDED BY SNYK

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How to fix?

Upgrade [github.com/unknwon/cae/zip](#) to version 1.0.1 or higher.

Overview

[github.com/unknwon/cae/zip](#) is a package that provides archiving functionality for `.zip` archives.

Affected versions of this package are vulnerable to Arbitrary File Write via Archive Extraction (Zip Slip). The `ExtractTo` function doesn't securely escape file paths in zip archives which include leading or non-leading `".."`. This allows an attacker to add or replace files system-wide.

PoC by Georgios Gkitsas

```
package main
import (
    cae_zip "github.com/unknwon/cae/zip"
)

func main() {
    file := "relative.zip"
    z, _ := cae_zip.Open(file)
    z.ExtractTo(".")
}
```

where `relative.zip` is a zip archive that includes a leading/non-leading `".."` in at least one file path.

Details

It is exploited using a specially crafted zip archive, that holds path traversal filenames. When exploited, a filename in a malicious archive is concatenated to the target extraction directory, which results in the final path ending up outside of the target folder. For instance, a zip may hold a file with a `"../file.exe"` location and thus break out of the target folder. If an executable or a configuration file is overwritten with a file containing malicious code, the problem can turn into an arbitrary code execution issue quite easily.

The following is an example of a zip archive with one benign file and one malicious file. Extracting the malicious file will result in traversing out of the target folder, ending up in `/root/.ssh/` overwriting the `authorized_keys` file:

```
+2018-04-15 22:04:29 ..... 19 19 good.txt

+2018-04-15 22:04:42 ..... 20 20 ../../../../../../root/.ssh/authorized_keys
```

References

- [GitHub Commit](#)

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Attack Complexity Low

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Credit Georgios Gkitsas of Snyk Security Team

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