

Directory Traversal

Affecting **marked-tree** package, versions *

INTRODUCED: 20 JUN 2020
CVE-2020-7682 ⓘ
CWE-22 ⓘ
FIRST ADDED BY SNYK
Share

How to fix?

There is no fixed version for **marked-tree** .

Overview

marked-tree is a markdown viewer for viewing markdown within a development environment.

Affected versions of this package are vulnerable to Directory Traversal. There is no path sanitization in the path provided at `fs.readFile` in `index.js` .

PoC by JHU System Security Lab

1. Start the server `node index.js`
2. Create a file `sensitive-file` in the server's parent directory
3. `curl -s --path-as-is http://127.0.0.1:3500/../../sensitive-file`

Details

A Directory Traversal attack (also known as path traversal) aims to access files and directories that are stored outside the intended folder. By manipulating files with "dot-dot-slash (`../`)" sequences and its variations, or by using absolute file paths, it may be possible to access arbitrary files and directories stored on file system, including application source code, configuration, and other critical system files.

Directory Traversal vulnerabilities can be generally divided into two types:

- **Information Disclosure:** Allows the attacker to gain information about the folder structure or read the contents of sensitive files on the system.

`st` is a module for serving static files on web pages, and contains a **vulnerability of this type**. In our example, we will serve files from the `public` route.

If an attacker requests the following URL from our server, it will in turn leak the sensitive private key of the root user.

```
curl http://localhost:8080/public/%2e%2e/%2e%2e/%2e%2e/%2e%2e/%2e%2e/%2e%2e/root/.ssh/id_rsa
```

Note `%2e` is the URL encoded version of `.` (dot).

- **Writing arbitrary files:** Allows the attacker to create or replace existing files. This type of vulnerability is also known as `Zip-Slip` .

One way to achieve this is by using a malicious `zip` archive that holds path traversal filenames. When each filename in the zip archive gets concatenated to the target extraction folder, without validation, the final path ends up outside 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
```

PRODUCT

Snyk Open Source

Snyk Code

Snyk Container

Snyk Infrastructure as Code

Test with Github

Test with CLI

RESOURCES

Vulnerability DB

Documentation

Disclosed Vulnerabilities

HIGH

Search by package name or CVE

Snyk CVSS

Exploit Maturity
Proof of concept ⓘ

Attack Complexity
Low ⓘ

Confidentiality
HIGH ⓘ

See more

> NVD
7.5 HIGH

Do your applications use this vulnerable package?

In a few clicks we can analyze your entire application and see what components are vulnerable in your application, and suggest you quick fixes.

Test your applications

Snyk Learn

Learn about Directory Traversal vulnerabilities in an interactive lesson.

Start learning

Snyk ID
SNYK-JS-MARKEDTREE-590121

Published
20 Jun 2020

Disclosed
20 Jun 2020

Credit
JHU System Security Lab

Report a new vulnerability

Found a mistake?

[Blog](#)
[FAQs](#)
COMPANY
[About](#)
[Jobs](#)
[Contact](#)
[Policies](#)
[Do Not Sell My Personal Information](#)

CONTACT US
[Support](#)
[Report a new vuln](#)
[Press Kit](#)
[Events](#)

[FIND US ONLINE](#)

[TRACK OUR DEVELOPMENT](#)



© 2022 Snyk Limited

Registered in England and Wales. Company number: 09677925

Registered address: Highlands House, Basingstoke Road, Spencers Wood, Reading, Berkshire, RG7 1NT.