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DATE(S) ISSUED:

07/21/2021

SUBJECT:

Multiple Vulnerabilities in Google Chrome Could Allow for Arbitrary Code Execution

OVERVIEW:

Multiple vulnerabilities have been discovered in Google Chrome, the most severe of which could allow for arbitrary code execution. Google Chrome is a web browser used to access the Internet. Successful exploitation of the most severe of these vulnerabilities could allow an attacker to execute arbitrary code in the context of the browser. Depending on the privileges associated with the application, an attacker could view, change, or delete data. If this application has been configured to have fewer user rights on the system, exploitation of the most severe of these vulnerabilities could have less impact than if it was configured with administrative rights.

THREAT INTELLIGENCE:

There are no reports of these vulnerabilities being exploited in the wild

SYSTEMS AFFECTED:

- Google Chrome versions prior to 92.0.4515.107

RISK:

Government:

- Large and medium government entities: **High**
- Small government entities: **Medium**

Businesses:

- Large and medium business entities: **High**
- Small business entities: **Medium**

Home users: Low

TECHNICAL SUMMARY:

Multiple vulnerabilities have been discovered in Google Chrome, the most severe of which could allow for arbitrary code execution. Details of the vulnerabilities are as follows:

- Out of bounds write vulnerability exists in Tab Groups. (CVE-2021-30565)
- Stack buffer overflow vulnerability exists in Printing. (CVE-2021-30566)
- Use after free vulnerability exists in DevTools. (CVE-2021-30567)

- Heap buffer overflow vulnerability exists in WebGL. (CVE-2021-30568)
- Use after free vulnerability exists in sqlite. (CVE-2021-30569)
- Insufficient policy enforcement vulnerability exists in DevTools. (CVE-2021-30571)
- Use after free vulnerability exists in Autofill. (CVE-2021-30572)
- Use after free vulnerability exists in GPU. (CVE-2021-30573)
- Use after free vulnerability exists in protocol handling. (CVE-2021-30574)
- Out of bounds read vulnerability exists in Autofill. (CVE-2021-30575)
- Use after free vulnerability exists in DevTools. (CVE-2021-30576)
- Insufficient policy enforcement vulnerability exists in Installer. (CVE-2021-30577)
- Uninitialized Use vulnerability exists in Media. (CVE-2021-30578)
- Use after free vulnerability exists in UI framework. (CVE-2021-30579)
- Insufficient policy enforcement vulnerability exists in Android intents. (CVE-2021-30580)
- Use after free vulnerability exists in DevTools. (CVE-2021-30581)
- Inappropriate implementation vulnerability exists in Animation. (CVE-2021-30582)
- Insufficient policy enforcement vulnerability exists in image handling on Windows. (CVE-2021-30583)
- Incorrect security UI vulnerability exists in Downloads. (CVE-2021-30584)
- Use after free vulnerability exists in sensor handling. (CVE-2021-30585)
- Use after free vulnerability exists in dialog box handling on Windows. (CVE-2021-30586)
- Inappropriate implementation vulnerability exists in Compositing on Windows. (CVE-2021-30587)
- Type Confusion vulnerability exists in V8. (CVE-2021-30588)
- Insufficient validation of untrusted input vulnerability exists in Sharing. (CVE-2021-30589)

Successful exploitation of the most severe of these vulnerabilities could allow an attacker to execute arbitrary code in the context of the browser. Depending on the privileges associated with the application, an attacker could view, change, or delete data. If this application has been configured to have fewer user rights on the system, exploitation of the most severe of these vulnerabilities could have less impact than if it was configured with administrative rights.

RECOMMENDATIONS:

The following actions should be taken:

- Apply the stable channel update provided by Google to vulnerable systems immediately after appropriate testing.
- Run all software as a non-privileged user (one without administrative privileges) to diminish the effects of a successful attack.
- Remind users not to visit un-trusted websites or follow links provided by unknown or un-trusted sources.
- Inform and educate users regarding the threats posed by hypertext links contained in emails or attachments especially from un-trusted sources.
- Apply the Principle of Least Privilege to all systems and services.

REFERENCES:

Google:

https://chromereleases.googleblog.com/2021/07/stable-channel-update-for-desktop_20.html

CVE:

<https://cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2021-30565>
<https://cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2021-30566>
<https://cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2021-30567>
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