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**DATE(S) ISSUED:**

04/15/2021

**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:**

Google is aware that these vulnerabilities are being exploited in the wild.

**SYSTEMS AFFECTED:**

- Google Chrome versions prior to 90.0.4430.72

**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. These vulnerabilities can be exploited if a user visits, or is redirected to, a specially crafted web page. Details of the vulnerabilities are as follows:

- A use-after-free vulnerability that exists in the 'permissions' component. (CVE-2021-21201)
- A use-after-free vulnerability that exists in the 'extensions' component. (CVE-2021-21202)

- Multiple use-after-free vulnerabilities that exist in the 'BLINK' component. (CVE-2021-21203, CVE-2021-21204)
- A vulnerability that exists in the 'navigation component due to properly enforced certain policy. (CVE-2021-21205)
- A use-after-free vulnerability that exists in the 'IndexedDB' component. (CVE-2021-21207)
- A vulnerability exists in the 'QR scanner' component due to failure to validate data. (CVE-2021-21208)
- A vulnerability exists in the 'storage' component due to certain implementation error. (CVE-2021-21209)
- A vulnerability exists in the 'Network' component due to certain implementation error. (CVE-2021-21210)
- A vulnerability exists in the 'Navigation' component due to certain implementation error. (CVE-2021-21211)
- A vulnerability exists in the 'Network Config UI' component due to certain improper 'security UI'. (CVE-2021-21212)
- A use-after-free vulnerability that exists in the 'WebMIDI component. (CVE-2021-21213)
- A use-after-free vulnerability that exists in the 'Network API' component. (CVE-2021-21214)
- Multiple vulnerabilities exist in the 'Autofill' component due to certain implementation errors. (CVE-2021-21215, CVE-2021-21216)
- Multiple vulnerabilities exist in the 'PDFium' component due to certain uninitialized-use. (CVE-2021-21217, CVE-2021-21218, CVE-2021-21219)

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/2021/04/stable-channel-update-for-desktop\\_14.html](https://chromereleases.googleblog.com/2021/04/stable-channel-update-for-desktop_14.html)

#### **CVE:**

<https://cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2021-21201>

<https://cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2021-21202>

<https://cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2021-21203>  
<https://cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2021-21204>  
<https://cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2021-21205>  
<https://cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2021-21207>  
<https://cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2021-21208>  
<https://cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2021-21209>  
<https://cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2021-21210>  
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<https://cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2021-21212>  
<https://cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2021-21213>  
<https://cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2021-21214>  
<https://cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2021-21215>  
<https://cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2021-21216>  
<https://cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2021-21217>  
<https://cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2021-21218>  
<https://cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2021-21219>

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