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SUBJECT:

Vulnerability in Adobe Flash Player ActionScript 3 Could Allow for Arbitrary Code Execution

OVERVIEW:

A vulnerability has been discovered in the way Adobe Flash Player ActionScript 3 handles the 'AS3 ByteArray' class. An attack utilizing this vulnerability could allow an attacker to run arbitrary code in the context of the user running the affected applications. Depending on the privileges associated with the user, an attacker could install programs; view, change, or delete data; or create new accounts with full user rights. A failed exploit attempt could create a denial-of-service attack.

THREAT INTELLIGENCE:

Proof of Concept code is publicly available. There are currently no reports of this vulnerability being exploited in the wild.

SYSTEM AFFECTED:

- Adobe Flash Player version 18.0.0.194 and prior are vulnerable.

RISK:

Government:

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

Businesses:

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

Home users: High

TECHNICAL SUMMARY:

A use after free vulnerability exists in the way Adobe Flash Player ActionScript 3 handles the 'AS3 ByteArray' class. A use after free vulnerability occurs when a memory location is referenced after it has been freed. This attack can be executed using two different attack vectors. The first is done by creating a malicious Flash file which is then distributed to the user using email or other such method. The second is done by crafting a malicious web page to which the user is then redirected to using social engineering. An attacker utilizing this vulnerability can run arbitrary code in the context of the user running the affected applications.

Depending on the privileges associated with the user, an attacker could install programs; view, change, or delete data; or create new accounts with full user rights. A failed attack can still cause a denial of service attack by causing the affected program to crash.

RECOMMENDATIONS:

The following actions should be taken:

- Once a patch is released by Adobe, update 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.

REFERENCES:

KB-CERT:

<http://www.kb.cert.org/vuls/id/561288>

Trend Micro:

<http://blog.trendmicro.com/trendlabs-security-intelligence/unpatched-flash-player-flaws-more-pocs-found-in-hacking-team-leak/>

Security Focus:

<http://www.securityfocus.com/bid/75568>

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