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**TLP: WHITE**

**Traffic Light Protocol (TLP): WHITE information may be distributed without restriction, subject to copyright controls.**

<http://www.us-cert.gov/tlp/>

**DATE(S) ISSUED:**

10/11/2016

**SUBJECT:**

Cumulative Security Update for Internet Explorer (MS16-118)

**OVERVIEW:**

Multiple vulnerabilities have been discovered in Microsoft Internet Explorer, the most severe of which could allow remote code execution if a user views a specially crafted web page. An attacker who successfully exploited these vulnerabilities could gain the same user rights as the current user. If the current user is logged on with administrative user rights, an attacker could take control of an affected system. An attacker could then install programs; view, change, or delete data; or create new accounts with full user rights.

**THREAT INTELLIGENCE:**

There are reports of an information disclosure vulnerability (CVE-2016-3298) being exploited in the wild.

**SYSTEMS AFFECTED:**

- Internet Explorer 9
- Internet Explorer 10
- Internet Explorer 11

**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:**

Microsoft Internet Explorer is prone to multiple vulnerabilities that could allow remote code execution. The vulnerabilities are as follows:

- Three memory corruption vulnerabilities exist when Internet Explorer improperly accesses objects in memory (CVE-2016-3331, CVE-2016-3383, CVE-2016-3384)
- Three scripting engine memory corruption vulnerability exist in the way that Scripting Engine renders when handling objects in memory in Internet Explorer (CVE-2016-3382, CVE-2016-3385, CVE-2016-3390)
- Two elevation of privilege vulnerabilities exist when Internet Explorer fails to properly secure private namespace (CVE-2016-3387, CVE-2016-3388)
- Two information disclosure vulnerabilities exists when Internet Explorer does not properly handle objects in memory (CVE-2016-3267, CVE-2016-3298)
- One information disclosure vulnerability exists when Internet Explorer leaves credential data in memory (CVE-2016-3391)

The most severe of these vulnerabilities could allow an attacker to execute remote code by luring a victim to visit a specially crafted malicious website. If the current user is logged on with administrative user rights, an attacker could take control of an affected system. Depending on the privileges associated with the user, an attacker could then install programs; view, change, or delete data; or create new accounts with full user rights.

#### **RECOMMENDATIONS:**

The following actions should be taken:

- Apply appropriate patches by Microsoft immediately after appropriate testing.
- Remind users not to visit websites or follow links provided by unknown or untrusted sources.
- Inform and educate users regarding the threats posed by hypertext links contained in emails or attachments especially from untrusted sources.
- Apply the Principle of Least Privilege to all systems and services.

#### **REFERENCES:**

##### **Microsoft:**

<https://technet.microsoft.com/library/security/MS16-118>

##### **CVE:**

<http://www.cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2016-3267>

<http://www.cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2016-3298>

<http://www.cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2016-3331>

<http://www.cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2016-3382>

<http://www.cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2016-3383>

<http://www.cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2016-3384>

<http://www.cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2016-3385>

<http://www.cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2016-3387>

<http://www.cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2016-3388>

<http://www.cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2016-3390>

<http://www.cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2016-3391>

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