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11/13/2012

SUBJECT:

Vulnerabilities in .NET Framework Could Allow Remote Code Execution (MS12-074)

OVERVIEW:

Five vulnerabilities have been discovered in the Microsoft .NET Framework, some of which could allow an attacker to take complete control of an affected system. Microsoft .NET is a software framework for applications designed to run under Microsoft Windows. These vulnerabilities can be exploited if a user visits or is redirected to a malicious web page, runs a specially crafted Microsoft .NET application, or loads a specially crafted proxy configuration file.

Successful exploitation of these vulnerabilities could allow the attacker to obtain complete control of the affected system. An attacker could then install programs; view, change, or delete data; or create new accounts with full user rights.

SYSTEMS AFFECTED:

- Microsoft .NET Framework 1.0
- Microsoft .NET Framework 1.1
- Microsoft NET Framework 2.0
- Microsoft .NET Framework 3.5
- Microsoft .NET Framework 3.5.1
- Microsoft .NET Framework 4
- Microsoft .NET Framework 4.5

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

DESCRIPTION:

Five vulnerabilities have been discovered in the Microsoft .NET Framework, details of which are described below:

Reflection Bypass Vulnerability (CVE-2012-1895) – A privilege escalation vulnerability exists in .NET Framework due to the improper validation of permissions for objects performing reflection. Exploitation could occur if a user visits a specially crafted website that hosts malicious XBAP (Extensible Application Markup Language Browser Application) content using Internet Explorer. Additionally, an attacker can

exploit this issue by creating a specially crafted Windows .NET application to bypass Code Access Security(CAS) restrictions.

Web Reflection Optimization Vulnerability (CVE-2012-4777) - An elevation of privilege vulnerability exists in the way that the .NET Framework validates permissions for objects involved with reflection. Exploitation could occur if a user visits a specially crafted website that hosts malicious XBAP (Extensible Application Markup Language Browser Application) content using Internet Explorer. Additionally, an attacker can exploit this issue by creating a specially crafted Windows .NET application to bypass Code Access Security(CAS) restrictions.

Code Access Security Information Disclosure (CVE-2012-1896) – An information disclosure vulnerability exists in the Microsoft .NET Framework due to the improper sanitation of output when a function is called from partially trusted code. Exploitation could occur if a user visits a specially crafted website that hosts malicious XBAP (Extensible Application Markup Language Browser Application) content using Internet Explorer. Additionally, an attacker can exploit this issue by creating a specially crafted Windows .NET application to bypass Code Access Security (CAS) restrictions. Successful exploitation could result in the disclosure of sensitive information.

.NET Framework Insecure Library Loading (CVE-2012-2519) – A remote code execution vulnerability exists in the way .NET restricts the path for loading external libraries. Exploitation may occur if an attacker convinces a user to open a .NET application that resides in the same directory as a specially crafted Dynamic Link Library (DLL) file.

Web Proxy Auto-Discovery Vulnerability (CVE-2012-4776) - A remote code execution vulnerability exists in the way that the .Net Framework retrieves the default web proxy settings. Exploitation may occur if an attacker performs a man in the middle attack and provides the end-user with a specially crafted proxy detection file that contains client-side code in the form of JavaScript.

Successful exploitation of these vulnerabilities could result in the execution of the attacker-supplied code and allow the attacker to obtain complete control of the affected system. 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 provided by Microsoft 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.

- Unless there is a business need to do otherwise, consider disabling XAML browser applications (XBAP) in Internet Explorer.

REFERENCES:

Microsoft:

<http://technet.microsoft.com/en-us/security/bulletin/ms12-074>

CVE:

<http://www.cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2012-1895>

<http://www.cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2012-1896>

<http://www.cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2012-2519>
<http://www.cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2012-4776>
<http://www.cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2012-4777>

Security Focus:

<http://www.securityfocus.com/bid/56455>
<http://www.securityfocus.com/bid/56456>
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