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10/12/2010

SUBJECT

Multiple vulnerabilities in Microsoft Office Excel Could Allow Remote Code Execution (MS10-080)

OVERVIEW:

Multiple vulnerabilities have been discovered in Microsoft Office Excel, a spreadsheet application. These vulnerabilities could allow remote code execution if a user opens a specially crafted Excel file. The file may be received as an email attachment, or downloaded via the web. Successful exploitation could result in an attacker gaining the same privileges as the logged on user. 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.

SYSTEMS AFFECTED:

- Microsoft Office XP
- Microsoft Office 2003
- Microsoft Office 2007
- Microsoft Office 2004 for Mac
- Microsoft Office 2008 for Mac
- Open XML File Format Converter for Mac
- Microsoft Excel Viewer
- Microsoft Office Compatibility Pack for Word, Excel, and PowerPoint 2007 File Formats

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:

Thirteen vulnerabilities have been identified in Microsoft Office Excel that could allow an attacker to take complete control of an affected system. These vulnerabilities can be triggered by opening a specially crafted Excel file (.XLS) and can be exploited via email or through the web. In the email-based scenario, the user would have to open the specially crafted Excel file as an email attachment. In the web based scenario, a user would have to open the specially crafted Excel file that is hosted on a website. When the user opens the Excel file, the attacker's supplied code will execute. Details of these vulnerabilities are as follows:

Seven Excel Parsing Vulnerabilities

Microsoft Excel is prone to seven remote code vulnerabilities because of the way Microsoft Office Excel parses the Excel file format when processing Excel files.

Formula Substream Memory Corruption Vulnerability

Microsoft Excel is prone to a memory-corruption vulnerability when handling formula information included in an Excel file.

BIFF Record Parsing Vulnerability

Microsoft Excel is prone to a remote code-execution vulnerability when validating malformed BIFF record information included in an Excel file.

Out of Bounds Array Vulnerability

Microsoft Excel is prone to a remote code-execution vulnerability due to an out-of-bounds array condition when handling malformed records included in an Excel file.

Merge Cell Record Pointer Vulnerability

Microsoft Excel is prone to a remote code-execution vulnerability because it fails to properly handle a malformed merge-cell record pointer in a specially crafted Excel file.

Negative Future Function Vulnerability

Microsoft Excel is prone to a remote code-execution vulnerability that occurs when handling binary file format information included in an Excel file.

Record Validation Vulnerability

Microsoft Excel is prone to a remote code-execution vulnerability when validating malformed real time data array records included in an Excel file.

Successful exploitation of these vulnerabilities could result in an attacker gaining the same privileges as the logged on user. 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 provided by Microsoft to vulnerable systems immediately after appropriate testing.
- Remind users not to open e-mail attachments from unknown users or suspicious e-mails from un-trusted sources.
- 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.

REFERENCES:

Microsoft:

<http://www.microsoft.com/technet/security/Bulletin/MS10-080.msp>

Security Focus:

<http://www.securityfocus.com/bid/43643>

<http://www.securityfocus.com/bid/43644>

<http://www.securityfocus.com/bid/43646>

<http://www.securityfocus.com/bid/43647>

<http://www.securityfocus.com/bid/43649>

<http://www.securityfocus.com/bid/43650>

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<http://www.securityfocus.com/bid/43657>

CVE:

<http://www.cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2010-3230>
<http://www.cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2010-3231>
<http://www.cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2010-3232>
<http://www.cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2010-3233>
<http://www.cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2010-3234>
<http://www.cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2010-3235>
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<http://www.cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2010-3240>
<http://www.cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2010-4241>
<http://www.cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2010-3242>