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SUBJECT:

Vulnerability in Microsoft Windows Could Allow Remote Code Execution

OVERVIEW:

A recently identified malicious software, called W32.Duqu or Duqu, has been taking advantage of an unpatched vulnerability in the Microsoft Windows Kernel which is a critical component of a computer operating system that provides basic services for all other parts of the operating system. This vulnerability could allow a remote attacker to take control of a system if a user opens a specially crafted Microsoft Word file. An attacker could then install programs; view, change, or delete data; or create new accounts with full system rights.

SYSTEMS AFFECTED:

- Microsoft Windows XP
- Microsoft Vista
- Microsoft Windows 7
- Microsoft Windows Server 2003
- Microsoft Windows Server 2008

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:

A zero-day vulnerability was discovered in the Microsoft Windows Kernel that could result in remote code execution with kernel-level privileges. The researchers responsible for identifying the vulnerability concluded that the Trojan known as W32.Duqu has been successfully exploiting the vulnerability. The University concluded that the Trojan known as W32.Duqu was successfully exploiting the vulnerability. Microsoft has been notified of the vulnerability and is expected to address the issue.

The specifics of this vulnerability are currently unknown at this time. Attackers can exploit this issue by creating a specially crafted Microsoft Word ‘.doc’ file and distributing the file to unsuspecting users. File distribution is likely to occur through attachments or links embedded in email messages. Successful exploitation has been documented to allow remote code execution resulting in the installation of malicious software.

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:

- When available, apply the 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.
- Remind users not to open e-mail attachments from unknown users or suspicious e-mails from trusted sources.
- Apply the principle of Least Privilege to all services.

REFERENCES:

Security Focus:

<http://www.securityfocus.com/bid/50462/>

Symantec:

http://www.symantec.com/connect/w32-duqu_status-updates_installer-zero-day-exploit

http://www.symantec.com/connect/w32_duqu_precursor_next_stuxnet

Laboratory of Cryptography and System Security:

<http://www.crysys.hu/>