# Scan Report

# October 9, 2018

# Summary

This document reports on the results of an automatic security scan. All dates are displayed using the timezone "Coordinated Universal Time", which is abbreviated "UTC". The task was "Example Scans". The scan started at Tue Feb 21 15:24:31 2017 UTC and ended at Tue Feb 21 18:11:04 2017 UTC. The report first summarises the results found. Then, for each host, the report describes every issue found. Please consider the advice given in each description, in order to rectify the issue.

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# 1 Result Overview

Host	High	Medium	Low	Log	False Positive
127.0.0.46	5	2	1	0	0
127.0.0.4	2	5	2	0	0
127.0.0.23	3	3	1	0	0
127.0.0.29	4	0	0	0	0
127.0.0.14	1	23	1	0	0
127.0.0.1	4	4	2	0	0
127.0.0.10	5	4	2	0	0
127.0.0.22	4	1	0	0	0
127.0.0.44	1	1	2	0	0
127.0.0.26	4	2	1	0	0
127.0.0.13	4	7	1	0	0
127.0.0.7	4	14	0	0	0
127.0.0.20	1	8	1	0	0
127.0.0.31	1	4	1	0	0
127.0.0.34	1	9	1	0	0
127.0.0.25	3	3	1	0	0
127.0.0.36	1	1	1	0	0
127.0.0.47	1	0	1	0	0
127.0.0.8	2	20	1	0	0
127.0.0.35	2	0	0	0	0
127.0.0.39	1	2	1	0	0
127.0.0.2	1	4	1	0	0
127.0.0.6	1	5	2	0	0
127.0.0.3	1	2	1	0	0
127.0.0.43	1	0	0	0	0
127.0.0.28	1	0	1	0	0
127.0.0.32	1	0	1	0	0
127.0.0.5	1	1	2	0	0
127.0.0.38	1	1	2	0	0
127.0.0.41	0	5	0	0	0
127.0.0.27	0	5	2	0	0
127.0.0.15	0	4	2	0	0
127.0.0.17	0	3	1	0	0
127.0.0.19	0	2	2	0	0
127.0.0.12	0	1	2	0	0
127.0.0.42	0	5	1	0	0
127.0.0.40	0	1	2	0	0
127.0.0.11	0	1	2	0	0
127.0.0.37	0	2	2	0	0
127.0.0.21	0	1	2	0	0
127.0.0.16	0	1	2	0	0
127.0.0.24	0	2	0	0	0
127.0.0.45	0	0	2	0	0

... (continues) ...

 $\dots$  (continued)  $\dots$ 

Host	High	Medium	Low	Log	False Positive
127.0.0.30	0	0	1	0	0
127.0.0.48	0	0	1	0	0
127.0.0.18	0	0	1	0	0
Total: 46	62	159	56	0	0

Vendor security updates are not trusted.

Overrides are on. When a result has an override, this report uses the threat of the override.

Information on overrides is included in the report.

Notes are included in the report.

This report might not show details of all issues that were found.

It only lists hosts that produced issues.

Issues with the threat level "Log" are not shown.

Issues with the threat level "Debug" are not shown.

Issues with the threat level "False Positive" are not shown.

Only results with a minimum QoD of 70 are shown.

This report contains all 277 results selected by the filtering described above. Before filtering there were 278 results.

#### 1.1 Host Authentications

Host	Protocol	Result	$\mathrm{Port}/\mathrm{User}$
127.0.0.1	SMB	Success	Protocol SMB, Port 445, User
127.0.0.5	SMB	Success	Protocol SMB, Port 445, User
127.0.0.38	SMB	Success	Protocol SMB, Port 445, User
127.0.0.45	ESXi	Failure	Protocol ESXi, Port 443, User: Login failure

# 2 Results per Host

# $2.1 \quad 127.0.0.46$

Host scan start Tue Feb 21 15:24:48 2017 UTC Host scan end Tue Feb 21 16:32:45 2017 UTC

Service (Port)	Threat Level
$445/\mathrm{tcp}$	High
$22/\mathrm{tcp}$	High
$135/\mathrm{tcp}$	Medium
$22/\mathrm{tcp}$	Medium
$22/\mathrm{tcp}$	Low

# $2.1.1 \quad High \ 445/tcp$

2 RESULTS PER HOST

# High (CVSS: 10.0)

NVT: Vulnerabilities in SMB Could Allow Remote Code Execution (958687) - Remote

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#### Summary

This host is missing a critical security update according to Microsoft Bulletin MS09-001.

#### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

Successful exploitation could allow remote unauthenticated attackers to cause denying the service by sending a specially crafted network message to a system running the server service.

Impact Level: System/Network

# Solution

### Solution type: VendorFix

Run Windows Update and update the listed hot fixes or download and update mentioned hot fixes in the advisory from the below link,  $\frac{\text{http:}}{\text{www.microsoft.com/technet/security/bulletin/ms09-001.mspx}}$ 

#### Affected Software/OS

Microsoft Windows 2K Service Pack 4 and prior. Microsoft Windows XP Service Pack 3 and prior. Microsoft Windows 2003 Service Pack 2 and prior.

# Vulnerability Insight

The issue is due to the way Server Message Block (SMB) Protocol software handles specially crafted SMB packets.

# Vulnerability Detection Method

Details: Vulnerabilities in SMB Could Allow Remote Code Execution (958687) - Remote

OID:1.3.6.1.4.1.25623.1.0.900233 Version used: \$Revision: 4692 \$

#### References

CVE: CVE-2008-4114, CVE-2008-4834, CVE-2008-4835

BID:31179 Other:

URL:http://www.milwOrm.com/exploits/6463

URL: http://www.microsoft.com/technet/security/bulletin/ms09-001.mspx

#### High (CVSS: 0.0)

NVT: SMBv1 enabled (Remote Check)

#### Summary

The remote Windows host is prone to an unspecified remote code execution vulnerability in SMBv1 protocol.

This NVT has been replaced by NVT 'Microsoft Windows SMB Server Multiple Vulnerabilities-Remote (4013389)' (OID: 1.3.6.1.4.1.25623.1.0.810810).

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Workaround

Disable SMB v1 and/or block all versions of SMB at the network boundary by blocking TCP port 445 with related protocols on UDP ports 137-138 and TCP port 139, for all boundary devices.

### Vulnerability Insight

The remote Windows host is supporting SMBv1 and is therefore prone to an unspecified remote code execution vulnerability. This vulnerability is related to the 'Shadow Brokers' group.

# Log Method

Details: SMBv1 enabled (Remote Check)

OID:1.3.6.1.4.1.25623.1.0.140151 Version used: \$Revision: 5222 \$

#### References

# Other:

URL:https://www.us-cert.gov/ncas/current-activity/2017/01/16/SMB-Security-Best

 $\hookrightarrow$ -Practices

URL:https://support.microsoft.com/en-us/kb/2696547
URL:https://support.microsoft.com/en-us/kb/204279

URL:https://technet.microsoft.com/en-us/library/security/MS17-010

#### High (CVSS: 10.0)

NVT: Microsoft Windows SMB Server NTLM Multiple Vulnerabilities (971468)

#### Summary

This host is missing a critical security update according to Microsoft Bulletin MS10-012.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

Successful exploitation will allow remote attackers to execute arbitrary code or cause a denial of service or bypass the authentication mechanism via brute force technique. Impact Level: System/Application

# Solution

Solution type: VendorFix

Run Windows Update and update the listed hot fixes or download and update mentioned hot fixes in the advisory from the below link, http://www.microsoft.com/technet/security/bulletin/ms10-012.mspx

#### Affected Software/OS

Microsoft Windows 7 Microsoft Windows 2000 Service Pack and prior Microsoft Windows XP Service Pack 3 and prior Microsoft Windows Vista Service Pack 2 and prior Microsoft Windows Server 2003 Service Pack 2 and prior Microsoft Windows Server 2008 Service Pack 2 and prior

#### Vulnerability Insight

- An input validation error exists while processing SMB requests and can be exploited to cause a buffer overflow via a specially crafted SMB packet. - An error exists in the SMB implementation while parsing SMB packets during the Negotiate phase causing memory corruption via a specially crafted SMB packet. - NULL pointer dereference error exists in SMB while verifying the 'share' and 'servername' fields in SMB packets causing denial of service. - A lack of cryptographic entropy when the SMB server generates challenges during SMB NTLM authentication and can be exploited to bypass the authentication mechanism.

#### **Vulnerability Detection Method**

Details: Microsoft Windows SMB Server NTLM Multiple Vulnerabilities (971468)

OID:1.3.6.1.4.1.25623.1.0.902269 Version used: \$Revision: 5136 \$

#### References

CVE: CVE-2010-0020, CVE-2010-0021, CVE-2010-0022, CVE-2010-0231

Other:

URL:http://secunia.com/advisories/38510/
URL:http://support.microsoft.com/kb/971468

URL:http://www.vupen.com/english/advisories/2010/0345

URL:http://www.microsoft.com/technet/security/bulletin/ms10-012.mspx

[ return to 127.0.0.46 ]

#### 2.1.2 High 22/tcp

### High (CVSS: 7.8)

NVT: OpenSSH Denial of Service And User Enumeration Vulnerabilities (Windows)

### Summary

This host is installed with openssh and is prone to denial of service and user enumeration vulnerabilities.

#### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

Successfully exploiting this issue allows remote attackers to cause a denial of service (crypt CPU consumption) and to enumerate users by leveraging the timing difference between responses when a large password is provided.

#### Solution

Solution type: VendorFix

Upgrade to OpenSSH version 7.3 or later. For updates refer to http://www.openssh.com

#### Affected Software/OS

OpenSSH versions before 7.3 on Windows

### Vulnerability Insight

Multiple flaws exists due to,

- The auth\_password function in 'auth-passwd.c' script does not limit password lengths for password authentication.
- The sshd in OpenSSH, when SHA256 or SHA512 are used for user password hashing uses BLOWFISH hashing on a static password when the username does not exist and it takes much longer to calculate SHA256/SHA512 hash than BLOWFISH hash.

# Vulnerability Detection Method

Checks if a vulnerable version is present on the target host.

Details: OpenSSH Denial of Service And User Enumeration Vulnerabilities (Windows)

OID:1.3.6.1.4.1.25623.1.0.809121 Version used: \$Revision: 5083 \$

#### References

CVE: CVE-2016-6515, CVE-2016-6210

BID:92212 Other:

URL:http://www.openssh.com/txt/release-7.3

URL:http://seclists.org/fulldisclosure/2016/Jul/51

URL:https://security-tracker.debian.org/tracker/CVE-2016-6210

URL:http://openwall.com/lists/oss-security/2016/08/01/2

#### High (CVSS: 7.5)

NVT: OpenSSH Multiple Vulnerabilities Jan17 (Windows)

#### Summary

This host is installed with openssh and is prone to multiple vulnerabilities.

#### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

# Impact

Successfully exploiting this issue allows local users to obtain sensitive private-key information, to gain privileges, conduct a senial-of-service condition and allows remote attackers to execute arbitrary local PKCS#11 modules.

Impact Level: Application

#### Solution

Solution type: VendorFix

Upgrade to OpenSSH version 7.4 or later. For updates refer to http://www.openssh.com

### Affected Software/OS

OpenSSH versions before 7.4 on Windows

#### Vulnerability Insight

Multiple flaws exists due to, - An 'authfile.c' script does not properly consider the effects of realloc on buffer contents. - The shared memory manager (associated with pre-authentication compression) does not ensure that a bounds check is enforced by all compilers. - The sshd in OpenSSH creates forwarded Unix-domain sockets as root, when privilege separation is not used. - An untrusted search path vulnerability in ssh-agent.c in ssh-agent. - NULL pointer dereference error due to an out-of-sequence NEWKEYS message.

# **Vulnerability Detection Method**

Get the installed version with the help of detect NVT and check the version is vulnerable or not.

Details: OpenSSH Multiple Vulnerabilities Jan17 (Windows)

OID:1.3.6.1.4.1.25623.1.0.810325 Version used: \$Revision: 5084 \$

### References

CVE: CVE-2016-10009, CVE-2016-10010, CVE-2016-10011, CVE-2016-10012, CVE-2016-10

 $\hookrightarrow$ 708

BID:94968, 94972, 94977, 94975

Other:

URL:https://www.openssh.com/txt/release-7.4

URL:http://www.openwall.com/lists/oss-security/2016/12/19/2

URL:http://blog.swiecki.net/2018/01/fuzzing-tcp-servers.html

URL:https://anongit.mindrot.org/openssh.git/commit/?id=28652bca29046f62c7045e

→933e6b931de1d16737

[ return to 127.0.0.46 ]

# 2.1.3 Medium 135/tcp

#### Medium (CVSS: 5.0)

NVT: DCE/RPC and MSRPC Services Enumeration Reporting

#### Summary

Distributed Computing Environment / Remote Procedure Calls (DCE/RPC) or MSRPC services running on the remote host can be enumerated by connecting on port 135 and doing the appropriate queries.

 $\dots$  continues on next page  $\dots$ 

#### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

An attacker may use this fact to gain more knowledge about the remote host.

#### Solution

**Solution type:** Mitigation Filter incoming traffic to this ports.

### **Vulnerability Detection Method**

Details: DCE/RPC and MSRPC Services Enumeration Reporting

OID:1.3.6.1.4.1.25623.1.0.10736 Version used: \$Revision: 4998 \$

[ return to 127.0.0.46 ]

# 2.1.4 Medium 22/tcp

#### (61-66

NVT: SSH Weak Encryption Algorithms Supported

#### Summary

The remote SSH server is configured to allow weak encryption algorithms.

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

# Solution

Solution type: Mitigation

Disable the weak encryption algorithms.

# Vulnerability Insight

The 'arcfour' cipher is the Arcfour stream cipher with 128-bit keys. The Arcfour cipher is believed to be compatible with the RC4 cipher [SCHNEIER]. Arcfour (and RC4) has problems with weak keys, and should not be used anymore.

The 'none' algorithm specifies that no encryption is to be done. Note that this method provides no confidentiality protection, and it is NOT RECOMMENDED to use it.

A vulnerability exists in SSH messages that employ CBC mode that may allow an attacker to recover plaintext from a block of ciphertext.

#### Vulnerability Detection Method

Check if remote ssh service supports Arcfour, none or CBC ciphers.

Details: SSH Weak Encryption Algorithms Supported

OID: 1.3.6.1.4.1.25623.1.0.105611

Version used: \$Revision: 4490 \$

#### References

Other:

URL:https://tools.ietf.org/html/rfc4253#section-6.3

URL:https://www.kb.cert.org/vuls/id/958563

[ return to 127.0.0.46 ]

# 2.1.5 Low 22/tcp

Low (CVCC, 26)

NVT: SSH Weak MAC Algorithms Supported

#### Summary

The remote SSH server is configured to allow weak MD5 and/or 96-bit MAC algorithms.

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

**Solution type:** Mitigation Disable the weak MAC algorithms.

# Vulnerability Detection Method

Details: SSH Weak MAC Algorithms Supported

OID:1.3.6.1.4.1.25623.1.0.105610 Version used: \$Revision: 4490 \$

[ return to 127.0.0.46 ]

# $2.2 \quad 127.0.0.4$

Host scan start Tue Feb 21 15:24:50 2017 UTC Host scan end Tue Feb 21 15:55:39 2017 UTC

Service (Port)	Threat Level
$22/\mathrm{tcp}$	High
$445/\mathrm{tcp}$	High
$22/\mathrm{tcp}$	Medium
$80/\mathrm{tcp}$	Medium
$135/{ m tcp}$	Medium
$3389/\mathrm{tcp}$	Medium
$22/\mathrm{tcp}$	Low
m general/tcp	Low

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# 2.2.1 High 22/tcp

#### High (CVSS: 7.5)

NVT: SSH Brute Force Logins With Default Credentials Reporting

### Summary

It was possible to login into the remote SSH server using default credentials.

As the NVT 'SSH Brute Force Logins with default Credentials' (OID: 1.3.6.1.4.1.25623.1.0.108013) might run into a timeout the actual reporting of this vulnerability takes place in this NVT instead. The script preference 'Report timeout' allows you to configure if such an timeout is reported.

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Mitigation

Change the password as soon as possible.

# Vulnerability Detection Method

Try to login with a number of known default credentials via the SSH protocol. Details: SSH Brute Force Logins With Default Credentials Reporting

OID:1.3.6.1.4.1.25623.1.0.103239 Version used: \$Revision: 4508 \$

[ return to 127.0.0.4 ]

#### 2.2.2 High 445/tcp

### High (CVSS: 0.0)

NVT: SMBv1 enabled (Remote Check)

# Summary

The remote Windows host is prone to an unspecified remote code execution vulnerability in SMBv1 protocol.

This NVT has been replaced by NVT 'Microsoft Windows SMB Server Multiple Vulnerabilities-Remote (4013389)' (OID: 1.3.6.1.4.1.25623.1.0.810810).

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

# Solution type: Workaround

Disable SMB v1 and/or block all versions of SMB at the network boundary by blocking TCP port 445 with related protocols on UDP ports 137-138 and TCP port 139, for all boundary devices.

# Vulnerability Insight

The remote Windows host is supporting SMBv1 and is therefore prone to an unspecified remote code execution vulnerability. This vulnerability is related to the 'Shadow Brokers' group.

# Log Method

Details: SMBv1 enabled (Remote Check)

OID:1.3.6.1.4.1.25623.1.0.140151 Version used: \$Revision: 5222 \$

#### References

#### Other:

URL:https://www.us-cert.gov/ncas/current-activity/2017/01/16/SMB-Security-Best

 $\hookrightarrow$ -Practices

URL:https://support.microsoft.com/en-us/kb/2696547 URL:https://support.microsoft.com/en-us/kb/204279

URL:https://technet.microsoft.com/en-us/library/security/MS17-010

[ return to 127.0.0.4 ]

#### 2.2.3 Medium 22/tcp

#### Medium (CVSS: 4.3)

NVT: SSH Weak Encryption Algorithms Supported

#### Summary

The remote SSH server is configured to allow weak encryption algorithms.

## Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

# Solution

Solution type: Mitigation

Disable the weak encryption algorithms.

#### Vulnerability Insight

The 'arcfour' cipher is the Arcfour stream cipher with 128-bit keys. The Arcfour cipher is believed to be compatible with the RC4 cipher [SCHNEIER]. Arcfour (and RC4) has problems with weak keys, and should not be used anymore.

The 'none' algorithm specifies that no encryption is to be done. Note that this method provides no confidentiality protection, and it is NOT RECOMMENDED to use it.

A vulnerability exists in SSH messages that employ CBC mode that may allow an attacker to recover plaintext from a block of ciphertext.

# Vulnerability Detection Method

Check if remote ssh service supports Arcfour, none or CBC ciphers.

Details: SSH Weak Encryption Algorithms Supported

OID:1.3.6.1.4.1.25623.1.0.105611 Version used: \$Revision: 4490 \$

#### References

Other:

URL:https://tools.ietf.org/html/rfc4253#section-6.3

URL:https://www.kb.cert.org/vuls/id/958563

[ return to 127.0.0.4 ]

#### 2.2.4 Medium 80/tcp

Medium (CVSS: 5.0)

NVT: Microsoft IIS Default Welcome Page Information Disclosure Vulnerability

#### Summary

The host is running Microsoft IIS Webserver and is prone to information disclosure vulnerability.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

Successful exploitation will allow remote attackers to obtain sensitive information that could aid in further attacks.

# Solution

Solution type: Mitigation

Disable the default pages within the server configuration.

# Affected Software/OS

Microsoft Internet Information Services

# Vulnerability Insight

The flaw is due to misconfiguration of IIS Server, which allows to access default pages when the server is not used.

# Vulnerability Detection Method

 $\operatorname{Details}$ : Microsoft IIS Default Welcome Page Information Disclosure Vulnerability

OID:1.3.6.1.4.1.25623.1.0.802806 Version used: \$Revision: 2715 \$

#### References

Other:

URL:http://www.iis.net/

[ return to 127.0.0.4 ]

# 2.2.5 Medium 135/tcp

#### Medium (CVSS: 5.0)

NVT: DCE/RPC and MSRPC Services Enumeration Reporting

# Summary

Distributed Computing Environment / Remote Procedure Calls (DCE/RPC) or MSRPC services running on the remote host can be enumerated by connecting on port 135 and doing the appropriate queries.

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

An attacker may use this fact to gain more knowledge about the remote host.

#### Solution

Solution type: Mitigation

Filter incoming traffic to this ports.

# Vulnerability Detection Method

Details: DCE/RPC and MSRPC Services Enumeration Reporting

OID:1.3.6.1.4.1.25623.1.0.10736 Version used: \$Revision: 4998 \$

[ return to 127.0.0.4 ]

# 2.2.6 Medium 3389/tcp

#### Medium (CVSS: 4.3)

NVT: SSL/TLS: Report Weak Cipher Suites

# Summary

This routine reports all Weak SSL/TLS cipher suites accepted by a service.

NOTE: No severity for SMTP services with 'Opportunistic TLS' and weak cipher suites on port 25/tcp is reported. If too strong cipher suites are configured for this service the alternative would be to fall back to an even more insecure clear text communication.

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

## Solution

# Solution type: Mitigation

The configuration of this services should be changed so that it does not accept the listed weak cipher suites anymore.

Please see the references for more resources supporting you with this task.

#### Vulnerability Insight

These rules are applied for the evaluation of the cryptographic strength:

- RC4 is considered to be weak (CVE-2013-2566, CVE-2015-2808).
- Ciphers using 64 bit or less are considered to be vulnerable to brute force methods and therefore considered as weak (CVE-2015-4000).
- 1024 bit RSA authentication is considered to be insecure and therefore as weak.
- Any cipher considered to be secure for only the next 10 years is considered as medium
- Any other cipher is considered as strong

### Vulnerability Detection Method

Details: SSL/TLS: Report Weak Cipher Suites

OID:1.3.6.1.4.1.25623.1.0.103440 Version used: \$Revision: 4863 \$

#### References

CVE: CVE-2013-2566, CVE-2015-2808, CVE-2015-4000

Other

URL: https://www.bsi.bund.de/SharedDocs/Warnmeldungen/DE/CB/warnmeldung\_cb-k16-

 $\hookrightarrow$  1465\_update\_6.html

URL:https://bettercrypto.org/

URL: https://mozilla.github.io/server-side-tls/ssl-config-generator/

#### Medium (CVSS: 4.0)

NVT: SSL/TLS: Certificate Signed Using A Weak Signature Algorithm

#### Summary

The remote service is using a SSL/TLS certificate in the certificate chain that has been signed using a cryptographically weak hashing algorithm.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

# Solution

Solution type: Mitigation

Servers that use SSL/TLS certificates signed with a weak SHA-1, MD5, MD4 or MD2 hashing algorithm will need to obtain new SHA-2 signed SSL/TLS certificates to avoid web browser SSL/TLS certificate warnings.

# Vulnerability Insight

The following hashing algorithms used for signing SSL/TLS certificates are considered cryptographically weak and not secure enough for ongoing use:

- Secure Hash Algorithm 1 (SHA-1)
- Message Digest 5 (MD5)
- Message Digest 4 (MD4)
- Message Digest 2 (MD2)
- ... continues on next page ...

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Beginning as late as January 2017 and as early as June 2016, browser developers such as Microsoft and Google will begin warning users when visiting web sites that use SHA-1 signed Secure Socket Layer (SSL) certificates.

NOTE: The script preference allows to set one or more custom SHA-1 fingerprints of CA certificates which are trusted by this routine. The fingerprints needs to be passed comma-separated and case-insensitive:

Fingerprint1

or

fingerprint1, Fingerprint2

### Vulnerability Detection Method

Check which hashing algorithm was used to sign the remote SSL/TLS certificate. Details: SSL/TLS: Certificate Signed Using A Weak Signature Algorithm

OID:1.3.6.1.4.1.25623.1.0.105880 Version used: \$Revision: 4781 \$

#### References

Other:

URL:https://blog.mozilla.org/security/2014/09/23/phasing-out-certificates-with  $\hookrightarrow$ -sha-1-based-signature-algorithms/

[ return to 127.0.0.4 ]

# 2.2.7 Low 22/tcp

# Low (CVSS: 2.6)

NVT: SSH Weak MAC Algorithms Supported

#### Summary

The remote SSH server is configured to allow weak MD5 and/or 96-bit MAC algorithms.

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Mitigation Disable the weak MAC algorithms.

# Vulnerability Detection Method

Details: SSH Weak MAC Algorithms Supported

OID:1.3.6.1.4.1.25623.1.0.105610 Version used: \$Revision: 4490 \$

[ return to 127.0.0.4 ]

# 2.2.8 Low general/tcp

Low (CVSS: 2.6) NVT: TCP timestamps

#### Summary

The remote host implements TCP timestamps and therefore allows to compute the uptime.

#### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

A side effect of this feature is that the uptime of the remote host can sometimes be computed.

#### Solution

Solution type: Mitigation

To disable TCP timestamps on linux add the line 'net.ipv4.tcp\_timestamps = 0' to /etc/sysctl.conf. Execute 'sysctl-p' to apply the settings at runtime.

To disable TCP timestamps on Windows execute 'netsh int tcp set global timestamps=disabled' Starting with Windows Server 2008 and Vista, the timestamp can not be completely disabled. The default behavior of the TCP/IP stack on this Systems is to not use the Timestamp options when initiating TCP connections, but use them if the TCP peer that is initiating communication includes them in their synchronize (SYN) segment.

See also: http://www.microsoft.com/en-us/download/details.aspx?id=9152

#### Affected Software/OS

TCP/IPv4 implementations that implement RFC1323.

#### Vulnerability Insight

The remote host implements TCP timestamps, as defined by RFC1323.

#### **Vulnerability Detection Method**

Special IP packets are forged and sent with a little delay in between to the target IP. The responses are searched for a timestamps. If found, the timestamps are reported.

Details: TCP timestamps OID:1.3.6.1.4.1.25623.1.0.80091 Version used: \$Revision: 5309 \$

#### References

Other:

URL:http://www.ietf.org/rfc/rfc1323.txt

[ return to 127.0.0.4 ]

#### 2.3 127.0.0.23

Host scan start Tue Feb 21 15:24:50 2017 UTC Host scan end Tue Feb 21 16:27:05 2017 UTC

Service (Port)	Threat Level
$445/\mathrm{tcp}$	High
$3389/\mathrm{tcp}$	Medium
$135/\mathrm{tcp}$	Medium
general/tcp	Low

# 2.3.1 High 445/tcp

# High (CVSS: 10.0)

NVT: Microsoft Windows SMB2 Negotiation Protocol Remote Code Execution Vulnerability

#### Summary

This host is missing a critical security update according to Microsoft Bulletin MS09-050.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

An attacker can exploit this issue to execute code with SYSTEM-level privileges failed exploit attempts will likely cause denial-of-service conditions.

Impact Level: System

# Solution

Solution type: VendorFix

# Affected Software/OS

- Windows 7 RC
- Windows Vista and
- Windows 2008 Server

# Vulnerability Insight

Multiple vulnerabilities exists,

- A denial of service vulnerability exists in the way that Microsoft Server Message Block (SMB) Protocol software handles specially crafted SMB version 2 (SMBv2) packets.
- Unauthenticated remote code execution vulnerability exists in the way that Microsoft Server Message Block (SMB) Protocol software handles specially crafted SMB packets.

# Vulnerability Detection Method

Details: Microsoft Windows SMB2 Negotiation Protocol Remote Code Execution Vulnerability OID:1.3.6.1.4.1.25623.1.0.900965

Version used: \$Revision: 5074 \$

#### References

CVE: CVE-2009-2526, CVE-2009-2532, CVE-2009-3103

BID:36299 Other:

URL: http://www.microsoft.com/technet/security/bulletin/MS09-050.mspx

#### Note

This is a sample note on this scan result which I would like to see for any othe  $\hookrightarrow$ r occurance of

this vulnerability, regardless of the task or host.

Last modified: Thu Mar 23 16:52:39 2017 UTC

#### High (CVSS: 0.0)

NVT: SMBv1 enabled (Remote Check)

#### Summary

The remote Windows host is prone to an unspecified remote code execution vulnerability in SMBv1 protocol.

This NVT has been replaced by NVT 'Microsoft Windows SMB Server Multiple Vulnerabilities-Remote (4013389)' (OID: 1.3.6.1.4.1.25623.1.0.810810).

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Workaround

Disable SMB v1 and/or block all versions of SMB at the network boundary by blocking TCP port 445 with related protocols on UDP ports 137-138 and TCP port 139, for all boundary devices.

# Vulnerability Insight

The remote Windows host is supporting SMBv1 and is therefore prone to an unspecified remote code execution vulnerability. This vulnerability is related to the 'Shadow Brokers' group.

#### Log Method

Details: SMBv1 enabled (Remote Check)

OID:1.3.6.1.4.1.25623.1.0.140151 Version used: \$Revision: 5222 \$

#### References

Other:

 $\label{eq:url:https://www.us-cert.gov/ncas/current-activity/2017/01/16/SMB-Security-Best} \hookrightarrow - \text{Practices}$ 

URL:https://support.microsoft.com/en-us/kb/2696547

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URL:https://support.microsoft.com/en-us/kb/204279

URL:https://technet.microsoft.com/en-us/library/security/MS17-010

# High (CVSS: 10.0)

NVT: Microsoft Windows SMB Server NTLM Multiple Vulnerabilities (971468)

#### Summary

This host is missing a critical security update according to Microsoft Bulletin MS10-012.

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

Successful exploitation will allow remote attackers to execute arbitrary code or cause a denial of service or bypass the authentication mechanism via brute force technique. Impact Level: System/Application

#### Solution

# Solution type: VendorFix

Run Windows Update and update the listed hot fixes or download and update mentioned hot fixes in the advisory from the below link,  $\frac{\text{http:}}{\text{www.microsoft.com/technet/security/bulletin/ms10-012.mspx}}$ 

#### Affected Software/OS

Microsoft Windows 7 Microsoft Windows 2000 Service Pack and prior Microsoft Windows XP Service Pack 3 and prior Microsoft Windows Vista Service Pack 2 and prior Microsoft Windows Server 2003 Service Pack 2 and prior Microsoft Windows Server 2008 Service Pack 2 and prior

#### Vulnerability Insight

- An input validation error exists while processing SMB requests and can be exploited to cause a buffer overflow via a specially crafted SMB packet. - An error exists in the SMB implementation while parsing SMB packets during the Negotiate phase causing memory corruption via a specially crafted SMB packet. - NULL pointer dereference error exists in SMB while verifying the 'share' and 'servername' fields in SMB packets causing denial of service. - A lack of cryptographic entropy when the SMB server generates challenges during SMB NTLM authentication and can be exploited to bypass the authentication mechanism.

#### Vulnerability Detection Method

Details: Microsoft Windows SMB Server NTLM Multiple Vulnerabilities (971468)

OID:1.3.6.1.4.1.25623.1.0.902269 Version used: \$Revision: 5136 \$

#### References

CVE: CVE-2010-0020, CVE-2010-0021, CVE-2010-0022, CVE-2010-0231

Other:

URL:http://secunia.com/advisories/38510/

URL:http://support.microsoft.com/kb/971468

URL:http://www.vupen.com/english/advisories/2010/0345

URL:http://www.microsoft.com/technet/security/bulletin/ms10-012.mspx

[ return to 127.0.0.23 ]

# 2.3.2 Medium 3389/tcp

Medium (CVSS: 4.3)

NVT: SSL/TLS: Report Weak Cipher Suites

#### Summary

This routine reports all Weak SSL/TLS cipher suites accepted by a service.

NOTE: No severity for SMTP services with 'Opportunistic TLS' and weak cipher suites on port 25/tcp is reported. If too strong cipher suites are configured for this service the alternative would be to fall back to an even more insecure clear text communication.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Mitigation

The configuration of this services should be changed so that it does not accept the listed weak cipher suites anymore.

Please see the references for more resources supporting you with this task.

# Vulnerability Insight

These rules are applied for the evaluation of the cryptographic strength:

- RC4 is considered to be weak (CVE-2013-2566, CVE-2015-2808).
- Ciphers using 64 bit or less are considered to be vulnerable to brute force methods and therefore considered as weak (CVE-2015-4000).
- 1024 bit RSA authentication is considered to be insecure and therefore as weak.
- Any cipher considered to be secure for only the next 10 years is considered as medium
- Any other cipher is considered as strong

# **Vulnerability Detection Method**

Details: SSL/TLS: Report Weak Cipher Suites

OID:1.3.6.1.4.1.25623.1.0.103440 Version used: \$Revision: 4863 \$

### References

CVE: CVE-2013-2566, CVE-2015-2808, CVE-2015-4000

Other:

 $\label{lem:url:https://www.bsi.bund.de/SharedDocs/Warnmeldungen/DE/CB/warnmeldung_cb-k16-$$$$$\hookrightarrow 1465\_update_6.html$ 

URL:https://bettercrypto.org/

URL:https://mozilla.github.io/server-side-tls/ssl-config-generator/

#### Medium (CVSS: 4.0)

NVT: SSL/TLS: Certificate Signed Using A Weak Signature Algorithm

#### Summary

The remote service is using a SSL/TLS certificate in the certificate chain that has been signed using a cryptographically weak hashing algorithm.

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Mitigation

Servers that use SSL/TLS certificates signed with a weak SHA-1, MD5, MD4 or MD2 hashing algorithm will need to obtain new SHA-2 signed SSL/TLS certificates to avoid web browser SSL/TLS certificate warnings.

#### Vulnerability Insight

The following hashing algorithms used for signing SSL/TLS certificates are considered cryptographically weak and not secure enough for ongoing use:

- Secure Hash Algorithm 1 (SHA-1)
- Message Digest 5 (MD5)
- Message Digest 4 (MD4)
- Message Digest 2 (MD2)

Beginning as late as January 2017 and as early as June 2016, browser developers such as Microsoft and Google will begin warning users when visiting web sites that use SHA-1 signed Secure Socket Layer (SSL) certificates.

NOTE: The script preference allows to set one or more custom SHA-1 fingerprints of CA certificates which are trusted by this routine. The fingerprints needs to be passed comma-separated and case-insensitive:

Fingerprint1

or

fingerprint 1, Fingerprint 2

# Vulnerability Detection Method

Check which hashing algorithm was used to sign the remote SSL/TLS certificate. Details: SSL/TLS: Certificate Signed Using A Weak Signature Algorithm OID: 1.3.6.1.4.1.25623.1.0.105880

Version used: \$Revision: 4781 \$

# References

Other:

URL:https://blog.mozilla.org/security/2014/09/23/phasing-out-certificates-with  $\hookrightarrow$ -sha-1-based-signature-algorithms/

[ return to 127.0.0.23 ]

# 2.3.3 Medium 135/tcp

#### Medium (CVSS: 5.0)

NVT: DCE/RPC and MSRPC Services Enumeration Reporting

#### Summary

Distributed Computing Environment / Remote Procedure Calls (DCE/RPC) or MSRPC services running on the remote host can be enumerated by connecting on port 135 and doing the appropriate queries.

#### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

# Impact

An attacker may use this fact to gain more knowledge about the remote host.

#### Solution

**Solution type:** Mitigation Filter incoming traffic to this ports.

# **Vulnerability Detection Method**

Details: DCE/RPC and MSRPC Services Enumeration Reporting

OID:1.3.6.1.4.1.25623.1.0.10736 Version used: \$Revision: 4998 \$

[ return to 127.0.0.23 ]

# 2.3.4 Low general/tcp

#### Low (CVSS: 2.6)

NVT: TCP timestamps

#### Summary

The remote host implements TCP timestamps and therefore allows to compute the uptime.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

A side effect of this feature is that the uptime of the remote host can sometimes be computed.

#### Solution

Solution type: Mitigation

To disable TCP timestamps on linux add the line 'net.ipv4.tcp\_timestamps = 0' to /etc/sysctl.conf. Execute 'sysctl-p' to apply the settings at runtime.

To disable TCP timestamps on Windows execute 'netsh int tcp set global timestamps=disabled' Starting with Windows Server 2008 and Vista, the timestamp can not be completely disabled.

The default behavior of the TCP/IP stack on this Systems is to not use the Timestamp options when initiating TCP connections, but use them if the TCP peer that is initiating communication includes them in their synchronize (SYN) segment.

See also: http://www.microsoft.com/en-us/download/details.aspx?id=9152

### Affected Software/OS

TCP/IPv4 implementations that implement RFC1323.

# Vulnerability Insight

The remote host implements TCP timestamps, as defined by RFC1323.

#### Vulnerability Detection Method

Special IP packets are forged and sent with a little delay in between to the target IP. The responses are searched for a timestamps. If found, the timestamps are reported.

Details: TCP timestamps OID:1.3.6.1.4.1.25623.1.0.80091 Version used: \$Revision: 5309 \$

### References

Other:

URL:http://www.ietf.org/rfc/rfc1323.txt

[ return to 127.0.0.23 ]

#### $2.4 \quad 127.0.0.29$

Host scan start Tue Feb 21 15:24:50 2017 UTC Host scan end Tue Feb 21 15:35:42 2017 UTC

Service (Port)	Threat Level
$3389/\mathrm{tcp}$	High
$445/\mathrm{tcp}$	High

#### 2.4.1 High 3389/tcp

# High (CVSS: 9.3)

NVT: Microsoft Remote Desktop Protocol Remote Code Execution Vulnerabilities (2671387)

# Summary

This host is missing a critical security update according to Microsoft Bulletin MS12-020.

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

Successful exploitation could allow remote attackers to execute arbitrary code as the logged-on user or cause a denial of service condition.

#### Solution

# Solution type: VendorFix

Run Windows Update and update the listed hotfixes or download and update mentioned hotfixes in the advisory from the below link.

http://technet.microsoft.com/en-us/security/bulletin/ms12-020

#### Affected Software/OS

Microsoft Windows 7 Service Pack 1 and prior Microsoft Windows XP Service Pack 3 and prior Microsoft Windows 2K3 Service Pack 2 and prior Microsoft Windows Vista Service Pack 2 and prior Microsoft Windows Server 2008 Service Pack 2 and prior

# Vulnerability Insight

The flaws are due to the way Remote Desktop Protocol accesses an object in memory that has been improperly initialized or has been deleted and the way RDP service processes the packets.

#### Vulnerability Detection Method

 ${
m Details:}$  Microsoft Remote Desktop Protocol Remote Code Execution Vulnerabilities (267138.

 $\hookrightarrow$  . .

OID:1.3.6.1.4.1.25623.1.0.902818 Version used: \$Revision: 4234 \$

### References

CVE: CVE-2012-0002, CVE-2012-0152

BID:52353, 52354

Other:

URL:http://blog.binaryninjas.org/?p=58
URL:http://secunia.com/advisories/48395
URL:http://support.microsoft.com/kb/2671387
URL:http://www.securitytracker.com/id/1026790

URL:http://technet.microsoft.com/en-us/security/bulletin/ms12-020

[ return to 127.0.0.29 ]

# 2.4.2 High 445/tcp

2 RESULTS PER HOST

# High (CVSS: 0.0)

NVT: SMBv1 enabled (Remote Check)

#### Summary

The remote Windows host is prone to an unspecified remote code execution vulnerability in SMBv1 protocol.

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This NVT has been replaced by NVT 'Microsoft Windows SMB Server Multiple Vulnerabilities-Remote (4013389)' (OID: 1.3.6.1.4.1.25623.1.0.810810).

#### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Workaround

Disable SMB v1 and/or block all versions of SMB at the network boundary by blocking TCP port 445 with related protocols on UDP ports 137-138 and TCP port 139, for all boundary devices.

#### Vulnerability Insight

The remote Windows host is supporting SMBv1 and is therefore prone to an unspecified remote code execution vulnerability. This vulnerability is related to the 'Shadow Brokers' group.

#### Log Method

Details: SMBv1 enabled (Remote Check)

OID:1.3.6.1.4.1.25623.1.0.140151 Version used: \$Revision: 5222 \$

#### References

Other:

URL:https://www.us-cert.gov/ncas/current-activity/2017/01/16/SMB-Security-Best ←-Practices

URL:https://support.microsoft.com/en-us/kb/2696547 URL:https://support.microsoft.com/en-us/kb/204279

URL:https://technet.microsoft.com/en-us/library/security/MS17-010

# High (CVSS: 10.0)

NVT: Vulnerabilities in SMB Could Allow Remote Code Execution (958687) - Remote

## Summary

This host is missing a critical security update according to Microsoft Bulletin MS09-001.

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

# Impact

Successful exploitation could allow remote unauthenticated attackers to cause denying the service by sending a specially crafted network message to a system running the server service.

Impact Level: System/Network

#### Solution

Solution type: VendorFix

Run Windows Update and update the listed hot fixes or download and update mentioned hot fixes in the advisory from the below link,  $\frac{\text{http:}}{\text{www.microsoft.com/technet/security/bulletin/ms09-001.mspx}}$ 

# Affected Software/OS

Microsoft Windows 2K Service Pack 4 and prior. Microsoft Windows XP Service Pack 3 and prior. Microsoft Windows 2003 Service Pack 2 and prior.

### Vulnerability Insight

The issue is due to the way Server Message Block (SMB) Protocol software handles specially crafted SMB packets.

# Vulnerability Detection Method

Details: Vulnerabilities in SMB Could Allow Remote Code Execution (958687) - Remote

OID:1.3.6.1.4.1.25623.1.0.900233 Version used: \$Revision: 4692 \$

#### References

CVE: CVE-2008-4114, CVE-2008-4834, CVE-2008-4835

BID:31179 Other:

URL:http://www.milwOrm.com/exploits/6463

URL:http://www.microsoft.com/technet/security/bulletin/ms09-001.mspx

# High (CVSS: 10.0)

NVT: Microsoft Windows SMB Server NTLM Multiple Vulnerabilities (971468)

#### Summary

This host is missing a critical security update according to Microsoft Bulletin MS10-012.

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

Successful exploitation will allow remote attackers to execute arbitrary code or cause a denial of service or bypass the authentication mechanism via brute force technique. Impact Level: System/Application

#### Solution

Solution type: VendorFix

Run Windows Update and update the listed hot fixes or download and update mentioned hot fixes in the advisory from the below link,  $\frac{\text{http:}}{\text{www.microsoft.com/technet/security/bulletin/ms10-012.mspx}}$ 

#### Affected Software/OS

Microsoft Windows 7 Microsoft Windows 2000 Service Pack and prior Microsoft Windows XP Service Pack 3 and prior Microsoft Windows Vista Service Pack 2 and prior Microsoft Windows Server 2003 Service Pack 2 and prior Microsoft Windows Server 2008 Service Pack 2 and prior

#### Vulnerability Insight

- An input validation error exists while processing SMB requests and can be exploited to cause a buffer overflow via a specially crafted SMB packet. - An error exists in the SMB implementation while parsing SMB packets during the Negotiate phase causing memory corruption via a specially crafted SMB packet. - NULL pointer dereference error exists in SMB while verifying the 'share' and 'servername' fields in SMB packets causing denial of service. - A lack of cryptographic entropy when the SMB server generates challenges during SMB NTLM authentication and can be exploited to bypass the authentication mechanism.

#### **Vulnerability Detection Method**

Details: Microsoft Windows SMB Server NTLM Multiple Vulnerabilities (971468)

OID:1.3.6.1.4.1.25623.1.0.902269 Version used: \$Revision: 5136 \$

#### References

CVE: CVE-2010-0020, CVE-2010-0021, CVE-2010-0022, CVE-2010-0231

Other:

URL:http://secunia.com/advisories/38510/
URL:http://support.microsoft.com/kb/971468

URL:http://www.vupen.com/english/advisories/2010/0345

URL:http://www.microsoft.com/technet/security/bulletin/ms10-012.mspx

[ return to 127.0.0.29 ]

#### 2.5 127.0.0.14

Host scan start Tue Feb 21 15:24:51 2017 UTC Host scan end Tue Feb 21 15:57:20 2017 UTC

Service (Port)	Threat Level
$445/{ m tcp}$	High
$389/\mathrm{tcp}$	Medium
$80/\mathrm{tcp}$	Medium
$3389/\mathrm{tcp}$	Medium
$3269/\mathrm{tcp}$	Medium
$3268/\mathrm{tcp}$	Medium
$135/{ m tcp}$	Medium

 $\dots$  (continues)  $\dots$ 

#### $\dots$ (continued) $\dots$

Service (Port)	Threat Level
$443/\mathrm{tcp}$	Medium
$636/\mathrm{tcp}$	Medium
m general/tcp	Low

# 2.5.1 High 445/tcp

#### High (CVSS: 0.0)

NVT: SMBv1 enabled (Remote Check)

#### **Summary**

The remote Windows host is prone to an unspecified remote code execution vulnerability in SMBv1 protocol.

This NVT has been replaced by NVT 'Microsoft Windows SMB Server Multiple Vulnerabilities-Remote (4013389)' (OID: 1.3.6.1.4.1.25623.1.0.810810).

#### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Workaround

Disable SMB v1 and/or block all versions of SMB at the network boundary by blocking TCP port 445 with related protocols on UDP ports 137-138 and TCP port 139, for all boundary devices.

#### Vulnerability Insight

The remote Windows host is supporting SMBv1 and is therefore prone to an unspecified remote code execution vulnerability. This vulnerability is related to the 'Shadow Brokers' group.

### Log Method

Details: SMBv1 enabled (Remote Check)

OID:1.3.6.1.4.1.25623.1.0.140151 Version used: \$Revision: 5222 \$

#### References

# Other:

URL:https://support.microsoft.com/en-us/kb/2696547
URL:https://support.microsoft.com/en-us/kb/204279

URL:https://technet.microsoft.com/en-us/library/security/MS17-010

[ return to 127.0.0.14 ]

#### 2.5.2 Medium 389/tcp

2 RESULTS PER HOST

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# Medium (CVSS: 5.0)

NVT: Use LDAP search request to retrieve information from NT Directory Services

#### Summary

It is possible to disclose LDAP information.

Description:

The directory base of the remote server is set to NULL. This allows information to be enumerated without any prior knowledge of the directory structure.

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Workaround

If pre-Windows 2000 compatibility is not required, remove pre-Windows 2000 compatibility as follows:

- start cmd.exe
- execute the command: net localgroup 'Pre-Windows 2000 Compatible Access' everyone / delete
- restart the remote host

#### **Vulnerability Detection Method**

Details: Use LDAP search request to retrieve information from NT Directory Services

OID:1.3.6.1.4.1.25623.1.0.12105 Version used: \$Revision: 5190 \$

[ return to 127.0.0.14 ]

# 2.5.3 Medium 80/tcp

#### Medium (CVSS: 5.0)

NVT: Microsoft IIS Default Welcome Page Information Disclosure Vulnerability

#### Summary

The host is running Microsoft IIS Webserver and is prone to information disclosure vulnerability.

#### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

Successful exploitation will allow remote attackers to obtain sensitive information that could aid in further attacks.

# Solution

Solution type: Mitigation

Disable the default pages within the server configuration.

#### Affected Software/OS

Microsoft Internet Information Services

## Vulnerability Insight

The flaw is due to misconfiguration of IIS Server, which allows to access default pages when the server is not used.

## **Vulnerability Detection Method**

Details: Microsoft IIS Default Welcome Page Information Disclosure Vulnerability

OID:1.3.6.1.4.1.25623.1.0.802806 Version used: \$Revision: 2715 \$

# References

Other:

URL:http://www.iis.net/

[ return to 127.0.0.14 ]

## 2.5.4 Medium 3389/tcp

Modium (CVSS: 4.2)

NVT: SSL/TLS: Report Weak Cipher Suites

#### Summary

This routine reports all Weak SSL/TLS cipher suites accepted by a service.

NOTE: No severity for SMTP services with 'Opportunistic TLS' and weak cipher suites on port 25/tcp is reported. If too strong cipher suites are configured for this service the alternative would be to fall back to an even more insecure cleartext communication.

#### **Vulnerability Detection Result**

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Mitigation

The configuration of this services should be changed so that it does not accept the listed weak cipher suites anymore.

Please see the references for more resources supporting you with this task.

### Vulnerability Insight

These rules are applied for the evaluation of the cryptographic strength:

- RC4 is considered to be weak (CVE-2013-2566, CVE-2015-2808).
- Ciphers using 64 bit or less are considered to be vulnerable to brute force methods and therefore considered as weak (CVE-2015-4000).
- 1024 bit RSA authentication is considered to be insecure and therefore as weak.
- Any cipher considered to be secure for only the next 10 years is considered as medium
- Any other cipher is considered as strong
- $\dots$  continues on next page  $\dots$

# Vulnerability Detection Method

Details: SSL/TLS: Report Weak Cipher Suites

OID:1.3.6.1.4.1.25623.1.0.103440 Version used: \$Revision: 4863 \$

# References

CVE: CVE-2013-2566, CVE-2015-2808, CVE-2015-4000

Other:

URL:https://www.bsi.bund.de/SharedDocs/Warnmeldungen/DE/CB/warnmeldung\_cb-k16-

 $\hookrightarrow$  1465\_update\_6.html

URL:https://bettercrypto.org/

URL:https://mozilla.github.io/server-side-tls/ssl-config-generator/

#### Medium (CVSS: 4.0)

NVT: SSL/TLS: Diffie-Hellman Key Exchange Insufficient DH Group Strength Vulnerability

### Summary

The SSL/TLS service uses Diffie-Hellman groups with insufficient strength (key size < 2048).

## Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

# Impact

An attacker might be able to decrypt the SSL/TLS communication offline.

# Solution

# Solution type: Workaround

Deploy (Ephemeral) Elliptic-Curve Diffie-Hellman (ECDHE) or use a 2048-bit or stronger Diffie-Hellman group. (see https://weakdh.org/sysadmin.html).

For Apache Web Servers: Beginning with version 2.4.7, mod\_ssl will use DH parameters which include primes with lengths of more than 1024 bits.

# Vulnerability Insight

The Diffie-Hellman group are some big numbers that are used as base for the DH computations. They can be, and often are, fixed. The security of the final secret depends on the size of these parameters. It was found that 512 and 768 bits to be weak, 1024 bits to be breakable by really powerful attackers like governments.

# Vulnerability Detection Method

Checks the DHE temporary public key size.

Details: SSL/TLS: Diffie-Hellman Key Exchange Insufficient DH Group Strength Vulnerabili.

 $\hookrightarrow$  . .

OID:1.3.6.1.4.1.25623.1.0.106223 Version used: \$Revision: 4739 \$

# References

Other:

URL:https://weakdh.org/

URL:https://weakdh.org/sysadmin.html

#### Medium (CVSS: 4.0)

NVT: SSL/TLS: Certificate Signed Using A Weak Signature Algorithm

### Summary

The remote service is using a SSL/TLS certificate in the certificate chain that has been signed using a cryptographically weak hashing algorithm.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

### Solution

Solution type: Mitigation

Servers that use SSL/TLS certificates signed with a weak SHA-1, MD5, MD4 or MD2 hashing algorithm will need to obtain new SHA-2 signed SSL/TLS certificates to avoid web browser SSL/TLS certificate warnings.

### Vulnerability Insight

The following hashing algorithms used for signing SSL/TLS certificates are considered cryptographically weak and not secure enough for ongoing use:

- Secure Hash Algorithm 1 (SHA-1)
- Message Digest 5 (MD5)
- Message Digest 4 (MD4)
- Message Digest 2 (MD2)

Beginning as late as January 2017 and as early as June 2016, browser developers such as Microsoft and Google will begin warning users when visiting web sites that use SHA-1 signed Secure Socket Layer (SSL) certificates.

NOTE: The script preference allows to set one or more custom SHA-1 fingerprints of CA certificates which are trusted by this routine. The fingerprints needs to be passed comma-separated and case-insensitive:

Fingerprint1

or

fingerprint1,Fingerprint2

# Vulnerability Detection Method

Check which hashing algorithm was used to sign the remote SSL/TLS certificate. Details: SSL/TLS: Certificate Signed Using A Weak Signature Algorithm

OID:1.3.6.1.4.1.25623.1.0.105880 Version used: \$Revision: 4781 \$

# References

Other:

URL:https://blog.mozilla.org/security/2014/09/23/phasing-out-certificates-with

 $\hookrightarrow$ -sha-1-based-signature-algorithms/

[ return to 127.0.0.14 ]

# 2.5.5 Medium 3269/tcp

#### Medium (CVSS: 5.0)

NVT: Use LDAP search request to retrieve information from NT Directory Services

# Summary

It is possible to disclose LDAP information.

Description:

The directory base of the remote server is set to NULL. This allows information to be enumerated without any prior knowledge of the directory structure.

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Workaround

If pre-Windows 2000 compatibility is not required, remove pre-Windows 2000 compatibility as follows:

- start cmd.ex $\epsilon$
- $\hbox{- execute the command: net local group 'Pre-Windows\ 2000\ Compatible\ Access'\ everyone\ / \ delete}$
- restart the remote host

# Vulnerability Detection Method

Details: Use LDAP search request to retrieve information from NT Directory Services OID:1.3.6.1.4.1.25623.1.0.12105

Version used: \$Revision: 5190 \$

# Medium (CVSS: 4.3)

NVT: SSL/TLS: Deprecated SSLv2 and SSLv3 Protocol Detection

#### Summary

It was possible to detect the usage of the deprecated SSLv2 and/or SSLv3 protocol on this system.

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

An attacker might be able to use the known cryptographic flaws to eavesdrop the connection between clients and the service to get access to sensitive data transferred within the secured connection.

#### Solution

Solution type: Mitigation

It is recommended to disable the deprecated SSLv2 and/or SSLv3 protocols in favor of the TLSv1+ protocols. Please see the references for more information.

### Affected Software/OS

All services providing an encrypted communication using the SSLv2 and/or SSLv3 protocols.

# Vulnerability Insight

The SSLv2 and SSLv3 protocols containing known cryptographic flaws like:

- Padding Oracle On Downgraded Legacy Encryption (POODLE, CVE-2014-3566)
- Decrypting RSA with Obsolete and Weakened eNcryption (DROWN, CVE-2016-0800)

## **Vulnerability Detection Method**

Check the used protocols of the services provided by this system.

Details: SSL/TLS: Deprecated SSLv2 and SSLv3 Protocol Detection

OID:1.3.6.1.4.1.25623.1.0.111012 Version used: \$Revision: 4686 \$

### References

CVE: CVE-2016-0800, CVE-2014-3566

Other:

URL:https://www.enisa.europa.eu/activities/identity-and-trust/library/delivera

 $\hookrightarrow$ bles/algorithms-key-sizes-and-parameters-report

URL:https://bettercrypto.org/

URL:https://mozilla.github.io/server-side-tls/ssl-config-generator/

URL:https://drownattack.com/

URL: https://www.imperialviolet.org/2014/10/14/poodle.html

#### Medium (CVSS: 4.3)

NVT: SSL/TLS: SSLv3 Protocol CBC Cipher Suites Information Disclosure Vulnerability (POO-DLE)

### Summary

This host is prone to an information disclosure vulnerability.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

Successful exploitation will allow a man-in-the-middle attackers gain access to the plain text data stream.

# Solution

Solution type: Mitigation

Possible Mitigations are:

- Disable SSLv3
- Disable cipher suites supporting CBC cipher modes
- Enable TLS FALLBACK SCSV if the service is providing TLSv1.0+

#### Vulnerability Insight

The flaw is due to the block cipher padding not being deterministic and not covered by the Message Authentication Code

## Vulnerability Detection Method

Evaluate previous collected information about this service.

 ${
m Details:}$  SSL/TLS: SSLv3 Protocol CBC Cipher Suites Information Disclosure Vulnerability .

 $\hookrightarrow$  . .

OID:1.3.6.1.4.1.25623.1.0.802087 Version used: \$Revision: 4749 \$

#### References

CVE: CVE-2014-3566

BID:70574 Other:

URL:https://www.openssl.org/~bodo/ssl-poodle.pdf

URL: https://www.imperialviolet.org/2014/10/14/poodle.html

URL: https://www.dfranke.us/posts/2014-10-14-how-poodle-happened.html

URL: http://googleonlinesecurity.blogspot.in/2014/10/this-poodle-bites-exploit

 $\hookrightarrow$ ing-ssl-30.html

# Medium (CVSS: 4.3)

#### NVT: SSL/TLS: Report Weak Cipher Suites

## Summary

This routine reports all Weak SSL/TLS cipher suites accepted by a service.

NOTE: No severity for SMTP services with 'Opportunistic TLS' and weak cipher suites on port 25/tcp is reported. If too strong cipher suites are configured for this service the alternative would be to fall back to an even more insecure clear text communication.

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

# Solution

Solution type: Mitigation

The configuration of this services should be changed so that it does not accept the listed weak cipher suites anymore.

Please see the references for more resources supporting you with this task.

# Vulnerability Insight

These rules are applied for the evaluation of the cryptographic strength:

- RC4 is considered to be weak (CVE-2013-2566, CVE-2015-2808).

- Ciphers using 64 bit or less are considered to be vulnerable to brute force methods and therefore considered as weak (CVE-2015-4000).
- 1024 bit RSA authentication is considered to be insecure and therefore as weak.
- Any cipher considered to be secure for only the next 10 years is considered as medium
- Any other cipher is considered as strong

### Vulnerability Detection Method

Details: SSL/TLS: Report Weak Cipher Suites

OID:1.3.6.1.4.1.25623.1.0.103440 Version used: \$Revision: 4863 \$

#### References

CVE: CVE-2013-2566, CVE-2015-2808, CVE-2015-4000

Other

URL: https://www.bsi.bund.de/SharedDocs/Warnmeldungen/DE/CB/warnmeldung\_cb-k16-

 $\hookrightarrow$ 1465\_update\_6.html

URL:https://bettercrypto.org/

URL:https://mozilla.github.io/server-side-tls/ssl-config-generator/

### Medium (CVSS: 4.0)

NVT: SSL/TLS: Diffie-Hellman Key Exchange Insufficient DH Group Strength Vulnerability

#### Summary

The SSL/TLS service uses Diffie-Hellman groups with insufficient strength (key size < 2048).

## Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

## Impact

An attacker might be able to decrypt the SSL/TLS communication offline.

### Solution

### Solution type: Workaround

Deploy (Ephemeral) Elliptic-Curve Diffie-Hellman (ECDHE) or use a 2048-bit or stronger Diffie-Hellman group. (see https://weakdh.org/sysadmin.html).

For Apache Web Servers: Beginning with version 2.4.7, mod\_ssl will use DH parameters which include primes with lengths of more than 1024 bits.

## Vulnerability Insight

The Diffie-Hellman group are some big numbers that are used as base for the DH computations. They can be, and often are, fixed. The security of the final secret depends on the size of these parameters. It was found that 512 and 768 bits to be weak, 1024 bits to be breakable by really powerful attackers like governments.

# Vulnerability Detection Method

Checks the DHE temporary public key size.

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 ${
m Details:}$  SSL/TLS: Diffie-Hellman Key Exchange Insufficient DH Group Strength Vulnerabili.

 $\hookrightarrow$  . .

OID:1.3.6.1.4.1.25623.1.0.106223 Version used: \$Revision: 4739 \$

### References

Other:

URL:https://weakdh.org/

URL:https://weakdh.org/sysadmin.html

[ return to 127.0.0.14 ]

# 2.5.6 Medium 3268/tcp

#### Medium (CVSS: 5.0)

NVT: Use LDAP search request to retrieve information from NT Directory Services

### Summary

It is possible to disclose LDAP information.

Description:

The directory base of the remote server is set to NULL. This allows information to be enumerated without any prior knowledge of the directory structure.

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

## Solution

Solution type: Workaround

If pre-Windows 2000 compatibility is not required, remove pre-Windows 2000 compatibility as follows:

- start cmd.exe
- execute the command: net localgroup 'Pre-Windows 2000 Compatible Access' everyone /delete
- restart the remote host

## Vulnerability Detection Method

Details: Use LDAP search request to retrieve information from NT Directory Services  $\mathrm{OID}{:}1.3.6.1.4.1.25623.1.0.12105$ 

Version used: \$Revision: 5190 \$

[ return to 127.0.0.14 ]

# 2.5.7 Medium 135/tcp

2 RESULTS PER HOST

45

# Medium (CVSS: 5.0)

NVT: DCE/RPC and MSRPC Services Enumeration Reporting

### Summary

Distributed Computing Environment / Remote Procedure Calls (DCE/RPC) or MSRPC services running on the remote host can be enumerated by connecting on port 135 and doing the appropriate queries.

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

# Impact

An attacker may use this fact to gain more knowledge about the remote host.

# Solution

Solution type: Mitigation

Filter incoming traffic to this ports.

# Vulnerability Detection Method

Details: DCE/RPC and MSRPC Services Enumeration Reporting

OID:1.3.6.1.4.1.25623.1.0.10736 Version used: \$Revision: 4998 \$

[ return to 127.0.0.14 ]

# 2.5.8 Medium 443/tcp

# Medium (CVSS: 5.0)

NVT: Microsoft IIS Default Welcome Page Information Disclosure Vulnerability

# Summary

The host is running Microsoft IIS Webserver and is prone to information disclosure vulnerability.

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

Successful exploitation will allow remote attackers to obtain sensitive information that could aid in further attacks.

### Solution

Solution type: Mitigation

Disable the default pages within the server configuration.

# Affected Software/OS

Microsoft Internet Information Services

### Vulnerability Insight

The flaw is due to misconfiguration of IIS Server, which allows to access default pages when the server is not used.

# Vulnerability Detection Method

Details: Microsoft IIS Default Welcome Page Information Disclosure Vulnerability

OID:1.3.6.1.4.1.25623.1.0.802806 Version used: \$Revision: 2715 \$

### References

Other:

URL:http://www.iis.net/

#### Medium (CVSS: 5.0)

NVT: SSL/TLS: Report Vulnerable Cipher Suites for HTTPS

#### Summary

This routine reports all SSL/TLS cipher suites accepted by a service where attack vectors exists only on HTTPS services.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

### Solution

Solution type: Mitigation

The configuration of this services should be changed so that it does not accept the listed cipher suites anymore.

Please see the references for more resources supporting you with this task.

# Affected Software/OS

Services accepting vulnerable SSL/TLS cipher suites via HTTPS.

# Vulnerability Insight

These rules are applied for the evaluation of the vulnerable cipher suites:

- 64-bit block cipher 3DES vulnerable to the SWEET32 attack (CVE-2016-2183).

## Vulnerability Detection Method

Details: SSL/TLS: Report Vulnerable Cipher Suites for HTTPS

OID:1.3.6.1.4.1.25623.1.0.108031 Version used: \$Revision: 5232 \$

# ${\bf References}$

CVE: CVE-2016-2183, CVE-2016-6329

Other:

URL:https://bettercrypto.org/

URL:https://mozilla.github.io/server-side-tls/ssl-config-generator/

URL:https://sweet32.info/

Medium (CVSS: 4.3)

NVT: SSL/TLS: Report Weak Cipher Suites

### Summary

This routine reports all Weak SSL/TLS cipher suites accepted by a service.

NOTE: No severity for SMTP services with 'Opportunistic TLS' and weak cipher suites on port 25/tcp is reported. If too strong cipher suites are configured for this service the alternative would be to fall back to an even more insecure cleartext communication.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

### Solution

Solution type: Mitigation

The configuration of this services should be changed so that it does not accept the listed weak cipher suites anymore.

Please see the references for more resources supporting you with this task.

### Vulnerability Insight

These rules are applied for the evaluation of the cryptographic strength:

- RC4 is considered to be weak (CVE-2013-2566, CVE-2015-2808).
- Ciphers using 64 bit or less are considered to be vulnerable to brute force methods and therefore considered as weak (CVE-2015-4000).
- 1024 bit RSA authentication is considered to be insecure and therefore as weak.
- Any cipher considered to be secure for only the next 10 years is considered as medium
- Any other cipher is considered as strong

# Vulnerability Detection Method

Details: SSL/TLS: Report Weak Cipher Suites

OID:1.3.6.1.4.1.25623.1.0.103440 Version used: \$Revision: 4863 \$

# References

CVE: CVE-2013-2566, CVE-2015-2808, CVE-2015-4000

Other

 $\label{lem:url:https://www.bsi.bund.de/SharedDocs/Warnmeldungen/DE/CB/warnmeldung_cb-k16-$$$$ \hookrightarrow 1465\_update_6.html$ 

URL:https://bettercrypto.org/

URL:https://mozilla.github.io/server-side-tls/ssl-config-generator/

2 RESULTS PER HOST

Medium (CVSS: 4.3)

NVT: SSL/TLS: SSLv3 Protocol CBC Cipher Suites Information Disclosure Vulnerability (POO-DLE)

## Summary

This host is prone to an information disclosure vulnerability.

## Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

### Impact

Successful exploitation will allow a man-in-the-middle attackers gain access to the plain text data stream.

#### Solution

**Solution type:** Mitigation Possible Mitigations are:

- Disable SSLv3
- Disable cipher suites supporting CBC cipher modes
- Enable TLS  $\,$  FALLBACK\_SCSV if the service is providing TLSv1.0+

### Vulnerability Insight

The flaw is due to the block cipher padding not being deterministic and not covered by the Message Authentication Code

# Vulnerability Detection Method

Evaluate previous collected information about this service.

Details: SSL/TLS: SSLv3 Protocol CBC Cipher Suites Information Disclosure Vulnerability .

 $\hookrightarrow$  . .

OID:1.3.6.1.4.1.25623.1.0.802087 Version used: \$Revision: 4749 \$

# ${\bf References}$

CVE: CVE-2014-3566

BID:70574 Other:

URL:https://www.openssl.org/~bodo/ssl-poodle.pdf

URL:https://www.imperialviolet.org/2014/10/14/poodle.html

URL:https://www.dfranke.us/posts/2014-10-14-how-poodle-happened.html

URL:http://googleonlinesecurity.blogspot.in/2014/10/this-poodle-bites-exploit

 $\hookrightarrow$ ing-ssl-30.html

# Medium (CVSS: 4.3)

NVT: SSL/TLS: Deprecated SSLv2 and SSLv3 Protocol Detection

# Summary

It was possible to detect the usage of the deprecated SSLv2 and/or SSLv3 protocol on this system.

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

## Impact

An attacker might be able to use the known cryptographic flaws to eavesdrop the connection between clients and the service to get access to sensitive data transferred within the secured connection.

#### Solution

Solution type: Mitigation

It is recommended to disable the deprecated SSLv2 and/or SSLv3 protocols in favor of the TLSv1+ protocols. Please see the references for more information.

## Affected Software/OS

All services providing an encrypted communication using the SSLv2 and/or SSLv3 protocols.

## Vulnerability Insight

The SSLv2 and SSLv3 protocols containing known cryptographic flaws like:

- Padding Oracle On Downgraded Legacy Encryption (POODLE, CVE-2014-3566)
- Decrypting RSA with Obsolete and Weakened eNcryption (DROWN, CVE-2016-0800)

# Vulnerability Detection Method

Check the used protocols of the services provided by this system.

Details: SSL/TLS: Deprecated SSLv2 and SSLv3 Protocol Detection

OID:1.3.6.1.4.1.25623.1.0.111012 Version used: \$Revision: 4686 \$

## References

CVE: CVE-2016-0800, CVE-2014-3566

Other:

URL:https://www.enisa.europa.eu/activities/identity-and-trust/library/delivera

 $\hookrightarrow \texttt{bles/algorithms-key-sizes-and-parameters-report}$ 

URL:https://bettercrypto.org/

URL:https://mozilla.github.io/server-side-tls/ssl-config-generator/

URL:https://drownattack.com/

URL:https://www.imperialviolet.org/2014/10/14/poodle.html

# Medium (CVSS: 4.0)

NVT: SSL/TLS: Diffic-Hellman Key Exchange Insufficient DH Group Strength Vulnerability

#### Summary

The SSL/TLS service uses Diffie-Hellman groups with insufficient strength (key size < 2048).

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

An attacker might be able to decrypt the SSL/TLS communication offline.

# Solution

Solution type: Workaround

Deploy (Ephemeral) Elliptic-Curve Diffie-Hellman (ECDHE) or use a 2048-bit or stronger Diffie-Hellman group. (see https://weakdh.org/sysadmin.html).

For Apache Web Servers: Beginning with version 2.4.7, mod\_ssl will use DH parameters which include primes with lengths of more than 1024 bits.

### Vulnerability Insight

The Diffie-Hellman group are some big numbers that are used as base for the DH computations. They can be, and often are, fixed. The security of the final secret depends on the size of these parameters. It was found that 512 and 768 bits to be weak, 1024 bits to be breakable by really powerful attackers like governments.

## Vulnerability Detection Method

Checks the DHE temporary public key size.

Details: SSL/TLS: Diffie-Hellman Key Exchange Insufficient DH Group Strength Vulnerabili.  $\hookrightarrow$ ..

OID:1.3.6.1.4.1.25623.1.0.106223 Version used: \$Revision: 4739 \$

### References

Other:

URL:https://weakdh.org/

URL:https://weakdh.org/sysadmin.html

[ return to 127.0.0.14 ]

## 2.5.9 Medium 636/tcp

#### Medium (CVSS: 5.0)

NVT: Use LDAP search request to retrieve information from NT Directory Services

# Summary

It is possible to disclose LDAP information.

Description:

The directory base of the remote server is set to NULL. This allows information to be enumerated without any prior knowledge of the directory structure.

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

#### Solution type: Workaround

If pre-Windows 2000 compatibility is not required, remove pre-Windows 2000 compatibility as follows:

- start cmd.exe
- execute the command: net localgroup 'Pre-Windows 2000 Compatible Access' everyone / delete
- restart the remote host

# Vulnerability Detection Method

 $\operatorname{Details}$ : Use LDAP search request to retrieve information from NT Directory Services

OID:1.3.6.1.4.1.25623.1.0.12105 Version used: \$Revision: 5190 \$

#### Medium (CVSS: 4.3)

#### NVT: SSL/TLS: Report Weak Cipher Suites

### Summary

This routine reports all Weak SSL/TLS cipher suites accepted by a service.

NOTE: No severity for SMTP services with 'Opportunistic TLS' and weak cipher suites on port 25/tcp is reported. If too strong cipher suites are configured for this service the alternative would be to fall back to an even more insecure cleartext communication.

### **Vulnerability Detection Result**

Vulnerability was detected according to the Vulnerability Detection Method.

# Solution

# Solution type: Mitigation

The configuration of this services should be changed so that it does not accept the listed weak cipher suites anymore.

Please see the references for more resources supporting you with this task.

### Vulnerability Insight

These rules are applied for the evaluation of the cryptographic strength:

- RC4 is considered to be weak (CVE-2013-2566, CVE-2015-2808).
- Ciphers using 64 bit or less are considered to be vulnerable to brute force methods and therefore considered as weak (CVE-2015-4000).
- 1024 bit RSA authentication is considered to be insecure and therefore as weak.
- Any cipher considered to be secure for only the next 10 years is considered as medium
- Any other cipher is considered as strong

# Vulnerability Detection Method

Details: SSL/TLS: Report Weak Cipher Suites

OID:1.3.6.1.4.1.25623.1.0.103440 Version used: \$Revision: 4863 \$

# References

....continued from previous page ...

CVE: CVE-2013-2566, CVE-2015-2808, CVE-2015-4000

Other:

URL:https://www.bsi.bund.de/SharedDocs/Warnmeldungen/DE/CB/warnmeldung\_cb-k16
1465\_update\_6.html

URL:https://bettercrypto.org/

URL:https://mozilla.github.io/server-side-tls/ssl-config-generator/

Medium (CVSS: 4.3)

NVT: SSL/TLS: SSLv3 Protocol CBC Cipher Suites Information Disclosure Vulnerability (POODLE)

#### Summary

This host is prone to an information disclosure vulnerability.

## Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

Successful exploitation will allow a man-in-the-middle attackers gain access to the plain text data stream.

#### Solution

**Solution type:** Mitigation Possible Mitigations are:

- Disable SSLv3
- Disable cipher suites supporting CBC cipher modes
- Enable TLS FALLBACK SCSV if the service is providing TLSv1.0+

### Vulnerability Insight

The flaw is due to the block cipher padding not being deterministic and not covered by the Message Authentication Code

### Vulnerability Detection Method

Evaluate previous collected information about this service.

Details: SSL/TLS: SSLv3 Protocol CBC Cipher Suites Information Disclosure Vulnerability .  $\hookrightarrow$  ...

OID:1.3.6.1.4.1.25623.1.0.802087 Version used: \$Revision: 4749 \$

### References

CVE: CVE-2014-3566

BID:70574 Other:

URL:https://www.openssl.org/~bodo/ssl-poodle.pdf

URL:https://www.imperialviolet.org/2014/10/14/poodle.html

 ${\tt URL:https://www.dfranke.us/posts/2014-10-14-how-poodle-happened.html}$ 

URL: http://googleonlinesecurity.blogspot.in/2014/10/this-poodle-bites-exploit

 $\hookrightarrow$ ing-ssl-30.html

#### Medium (CVSS: 4.3)

NVT: SSL/TLS: Deprecated SSLv2 and SSLv3 Protocol Detection

#### Summary

It was possible to detect the usage of the deprecated SSLv2 and/or SSLv3 protocol on this system.

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

### Impact

An attacker might be able to use the known cryptographic flaws to eavesdrop the connection between clients and the service to get access to sensitive data transferred within the secured connection.

#### Solution

Solution type: Mitigation

It is recommended to disable the deprecated SSLv2 and/or SSLv3 protocols in favor of the TLSv1+ protocols. Please see the references for more information.

# Affected Software/OS

All services providing an encrypted communication using the SSLv2 and/or SSLv3 protocols.

# Vulnerability Insight

The SSLv2 and SSLv3 protocols containing known cryptographic flaws like:

- Padding Oracle On Downgraded Legacy Encryption (POODLE, CVE-2014-3566)
- Decrypting RSA with Obsolete and Weakened eNcryption (DROWN, CVE-2016-0800)

### Vulnerability Detection Method

Check the used protocols of the services provided by this system.

Details: SSL/TLS: Deprecated SSLv2 and SSLv3 Protocol Detection

OID:1.3.6.1.4.1.25623.1.0.111012 Version used: \$Revision: 4686 \$

# References

CVE: CVE-2016-0800, CVE-2014-3566

Other:

URL:https://www.enisa.europa.eu/activities/identity-and-trust/library/delivera

 $\hookrightarrow$ bles/algorithms-key-sizes-and-parameters-report

URL:https://bettercrypto.org/

URL:https://mozilla.github.io/server-side-tls/ssl-config-generator/

URL:https://drownattack.com/

URL: https://www.imperialviolet.org/2014/10/14/poodle.html

Medium (CVSS: 4.0)

NVT: SSL/TLS: Diffie-Hellman Key Exchange Insufficient DH Group Strength Vulnerability

### Summary

The SSL/TLS service uses Diffie-Hellman groups with insufficient strength (key size < 2048).

### **Vulnerability Detection Result**

Vulnerability was detected according to the Vulnerability Detection Method.

## Impact

An attacker might be able to decrypt the SSL/TLS communication offline.

### Solution

Solution type: Workaround

Deploy (Ephemeral) Elliptic-Curve Diffie-Hellman (ECDHE) or use a 2048-bit or stronger Diffie-Hellman group. (see https://weakdh.org/sysadmin.html).

For Apache Web Servers: Beginning with version 2.4.7, mod\_ssl will use DH parameters which include primes with lengths of more than 1024 bits.

### Vulnerability Insight

The Diffie-Hellman group are some big numbers that are used as base for the DH computations. They can be, and often are, fixed. The security of the final secret depends on the size of these parameters. It was found that 512 and 768 bits to be weak, 1024 bits to be breakable by really powerful attackers like governments.

# **Vulnerability Detection Method**

Checks the DHE temporary public key size.

Details: SSL/TLS: Diffie-Hellman Key Exchange Insufficient DH Group Strength Vulnerabili.

 $\hookrightarrow$  . .

OID:1.3.6.1.4.1.25623.1.0.106223 Version used: \$Revision: 4739 \$

#### References

Other:

URL:https://weakdh.org/

URL:https://weakdh.org/sysadmin.html

[ return to 127.0.0.14 ]

# 2.5.10 Low general/tcp

Low (CVSS: 2.6)

NVT: TCP timestamps

## Summary

The remote host implements TCP timestamps and therefore allows to compute the uptime.

## Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

### Impact

A side effect of this feature is that the uptime of the remote host can sometimes be computed.

# Solution

# Solution type: Mitigation

To disable TCP timestamps on linux add the line 'net.ipv4.tcp\_timestamps = 0' to /etc/sysctl.conf. Execute 'sysctl-p' to apply the settings at runtime.

To disable TCP timestamps on Windows execute 'netsh int tcp set global timestamps=disabled' Starting with Windows Server 2008 and Vista, the timestamp can not be completely disabled. The default behavior of the TCP/IP stack on this Systems is to not use the Timestamp options when initiating TCP connections, but use them if the TCP peer that is initiating communication includes them in their synchronize (SYN) segment.

See also: http://www.microsoft.com/en-us/download/details.aspx?id=9152

### Affected Software/OS

TCP/IPv4 implementations that implement RFC1323.

## Vulnerability Insight

The remote host implements TCP timestamps, as defined by RFC1323.

## **Vulnerability Detection Method**

Special IP packets are forged and sent with a little delay in between to the target IP. The responses are searched for a timestamps. If found, the timestamps are reported.

Details: TCP timestamps OID:1.3.6.1.4.1.25623.1.0.80091 Version used: \$Revision: 5309 \$

#### References

Other:

URL:http://www.ietf.org/rfc/rfc1323.txt

[ return to 127.0.0.14 ]

### $2.6 \quad 127.0.0.1$

Host scan start Tue Feb 21 15:24:50 2017 UTC Host scan end Tue Feb 21 16:29:33 2017 UTC

Service (Port)	Threat Level
$445/\mathrm{tcp}$	High
$22/\mathrm{tcp}$	High
$135/\mathrm{tcp}$	Medium

 $\dots$  (continues)  $\dots$ 

	(continued)	)		

Service (Port)	Threat Level
$22/\mathrm{tcp}$	Medium
$3389/\mathrm{tcp}$	Medium
$22/\mathrm{tcp}$	Low
m general/tcp	Low

# 2.6.1 High 445/tcp

## High (CVSS: 0.0)

NVT: SMBv1 enabled (Remote Check)

# Summary

The remote Windows host is prone to an unspecified remote code execution vulnerability in SMBv1 protocol.

This NVT has been replaced by NVT 'Microsoft Windows SMB Server Multiple Vulnerabilities-Remote (4013389)' (OID: 1.3.6.1.4.1.25623.1.0.810810).

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

### Solution

Solution type: Workaround

Disable SMB v1 and/or block all versions of SMB at the network boundary by blocking TCP port 445 with related protocols on UDP ports 137-138 and TCP port 139, for all boundary devices.

## Vulnerability Insight

The remote Windows host is supporting SMBv1 and is therefore prone to an unspecified remote code execution vulnerability. This vulnerability is related to the 'Shadow Brokers' group.

# Log Method

Details: SMBv1 enabled (Remote Check)

OID:1.3.6.1.4.1.25623.1.0.140151 Version used: \$Revision: 5222 \$

# References

### Other:

 $\label{limits} \begin{tabular}{ll} $\tt URL:https://www.us-cert.gov/ncas/current-activity/2017/01/16/SMB-Security-Best $\hookrightarrow-{\tt Practices}$ \end{tabular}$ 

URL:https://support.microsoft.com/en-us/kb/2696547
URL:https://support.microsoft.com/en-us/kb/204279

URL:https://technet.microsoft.com/en-us/library/security/MS17-010

# High (CVSS: 10.0)

 $\operatorname{NVT}$ : Microsoft Windows SMB Server NTLM Multiple Vulnerabilities (971468)

# Summary

This host is missing a critical security update according to Microsoft Bulletin MS10-012.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

### Impact

Successful exploitation will allow remote attackers to execute arbitrary code or cause a denial of service or bypass the authentication mechanism via brute force technique. Impact Level: System/Application

#### Solution

Solution type: VendorFix

Run Windows Update and update the listed hot fixes or download and update mentioned hot fixes in the advisory from the below link,  $\frac{\text{http:}}{\text{www.microsoft.com/technet/security/bulletin/ms10-012.mspx}$ 

# Affected Software/OS

Microsoft Windows 7 Microsoft Windows 2000 Service Pack and prior Microsoft Windows XP Service Pack 3 and prior Microsoft Windows Vista Service Pack 2 and prior Microsoft Windows Server 2003 Service Pack 2 and prior Microsoft Windows Server 2008 Service Pack 2 and prior

### Vulnerability Insight

- An input validation error exists while processing SMB requests and can be exploited to cause a buffer overflow via a specially crafted SMB packet. - An error exists in the SMB implementation while parsing SMB packets during the Negotiate phase causing memory corruption via a specially crafted SMB packet. - NULL pointer dereference error exists in SMB while verifying the 'share' and 'servername' fields in SMB packets causing denial of service. - A lack of cryptographic entropy when the SMB server generates challenges during SMB NTLM authentication and can be exploited to bypass the authentication mechanism.

## Vulnerability Detection Method

Details: Microsoft Windows SMB Server NTLM Multiple Vulnerabilities (971468)

OID:1.3.6.1.4.1.25623.1.0.902269 Version used: \$Revision: 5136 \$

# References

CVE: CVE-2010-0020, CVE-2010-0021, CVE-2010-0022, CVE-2010-0231

Other:

URL:http://secunia.com/advisories/38510/
URL:http://support.microsoft.com/kb/971468

URL: http://www.vupen.com/english/advisories/2010/0345

URL:http://www.microsoft.com/technet/security/bulletin/ms10-012.mspx

[ return to 127.0.0.1 ]

# 2.6.2 High 22/tcp

2 RESULTS PER HOST 58

# High (CVSS: 7.8)

NVT: OpenSSH Denial of Service And User Enumeration Vulnerabilities (Windows)

### Summary

This host is installed with openssh and is prone to denial of service and user enumeration vulnerabilities.

## Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

### Impact

Successfully exploiting this issue allows remote attackers to cause a denial of service (crypt CPU consumption) and to enumerate users by leveraging the timing difference between responses when a large password is provided.

#### Solution

Solution type: VendorFix

Upgrade to OpenSSH version 7.3 or later. For updates refer to http://www.openssh.com

## Affected Software/OS

OpenSSH versions before 7.3 on Windows

## Vulnerability Insight

Multiple flaws exists due to,

- The auth\_password function in 'auth-passwd.c' script does not limit password lengths for password authentication.
- The sshd in OpenSSH, when SHA256 or SHA512 are used for user password hashing uses BLOWFISH hashing on a static password when the username does not exist and it takes much longer to calculate SHA256/SHA512 hash than BLOWFISH hash.

### Vulnerability Detection Method

Checks if a vulnerable version is present on the target host.

 $\operatorname{Details}$ : OpenSSH Denial of Service And User Enumeration Vulnerabilities (Windows)

OID:1.3.6.1.4.1.25623.1.0.809121 Version used: \$Revision: 5083 \$

### References

CVE: CVE-2016-6515, CVE-2016-6210

BID:92212 Other:

URL:http://www.openssh.com/txt/release-7.3

URL:http://seclists.org/fulldisclosure/2016/Jul/51

URL:https://security-tracker.debian.org/tracker/CVE-2016-6210

URL:http://openwall.com/lists/oss-security/2016/08/01/2

## High (CVSS: 7.5)

NVT: OpenSSH Multiple Vulnerabilities Jan17 (Windows)

#### Summary

This host is installed with openssh and is prone to multiple vulnerabilities.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

## Impact

Successfully exploiting this issue allows local users to obtain sensitive private-key information, to gain privileges, conduct a senial-of-service condition and allows remote attackers to execute arbitrary local PKCS#11 modules.

Impact Level: Application

### Solution

Solution type: VendorFix

Upgrade to OpenSSH version 7.4 or later. For updates refer to http://www.openssh.com

## Affected Software/OS

OpenSSH versions before 7.4 on Windows

### Vulnerability Insight

Multiple flaws exists due to, - An 'authfile.c' script does not properly consider the effects of realloc on buffer contents. - The shared memory manager (associated with pre-authentication compression) does not ensure that a bounds check is enforced by all compilers. - The sshd in OpenSSH creates forwarded Unix-domain sockets as root, when privilege separation is not used. - An untrusted search path vulnerability in ssh-agent.c in ssh-agent. - NULL pointer dereference error due to an out-of-sequence NEWKEYS message.

# Vulnerability Detection Method

Get the installed version with the help of detect NVT and check the version is vulnerable or not. Details: OpenSSH Multiple Vulnerabilities Jan17 (Windows)

OID:1.3.6.1.4.1.25623.1.0.810325 Version used: \$Revision: 5084 \$

# References

```
CVE: CVE-2016-10009, CVE-2016-10010, CVE-2016-10011, CVE-2016-10012, CVE-2016-10
```

BID:94968, 94972, 94977, 94975

#### Other:

URL:https://www.openssh.com/txt/release-7.4

URL:http://www.openwall.com/lists/oss-security/2016/12/19/2 URL:http://blog.swiecki.net/2018/01/fuzzing-tcp-servers.html

 $\label{lem:url:https://anongit.mindrot.org/openssh.git/commit/?id=28652bca29046f62c7045ecommit/?id=28652bca29046f62c7046ecommit/?id=28652bca29046f62c7045ecommit/?id=28652bca29046f62c7046ecommit/?id=28652bca29046f62c7046ecommit/?id=28652bca29046f62c7046ecommit/?id=28652bca29046f62c7046ecommit/?id=28652bca29046f62c7046ecommit/?id=28652bca29046f62c7046ecommit/?id=28652bca29046f62c7046ecommit/?id=28652bca29046f62c7046ecommit/?id=28652bca29046f62c7046ecommit/?id=28652bca29046f62c7046ecommit/?id=28652bca29046f62c7046ecommit/?id=28652bca29046f62c7046ecommit/?id=28652bca29046f62c7046ecommit/?id=28652bca29046f62c7046ecommit/?id=28652bca29046ecommit/?id=28652bca29046ecommit/?id=286652bca29046ecommit/?id=286656ecommit/?id=286666commit/?id=286666ecommit/?id=286666ecommit/?id=286666ecommit/?id=286666ecommit/?id=286666ecommit/?id=286666ecommit/?id=286666ecom$ 

[ return to 127.0.0.1 ]

# 2.6.3 Medium 135/tcp

# Medium (CVSS: 5.0)

NVT: DCE/RPC and MSRPC Services Enumeration Reporting

#### Summary

Distributed Computing Environment / Remote Procedure Calls (DCE/RPC) or MSRPC services running on the remote host can be enumerated by connecting on port 135 and doing the appropriate queries.

#### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

# Impact

An attacker may use this fact to gain more knowledge about the remote host.

#### Solution

**Solution type:** Mitigation Filter incoming traffic to this ports.

# Vulnerability Detection Method

Details: DCE/RPC and MSRPC Services Enumeration Reporting

OID:1.3.6.1.4.1.25623.1.0.10736 Version used: \$Revision: 4998 \$

[ return to 127.0.0.1 ]

# 2.6.4 Medium 22/tcp

#### Medium (CVSS: 4.3)

NVT: SSH Weak Encryption Algorithms Supported

### Summary

The remote SSH server is configured to allow weak encryption algorithms.

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Mitigation

Disable the weak encryption algorithms.

### Vulnerability Insight

The 'arcfour' cipher is the Arcfour stream cipher with 128-bit keys. The Arcfour cipher is believed to be compatible with the RC4 cipher [SCHNEIER]. Arcfour (and RC4) has problems with weak keys, and should not be used anymore.

The 'none' algorithm specifies that no encryption is to be done. Note that this method provides no confidentiality protection, and it is NOT RECOMMENDED to use it.

A vulnerability exists in SSH messages that employ CBC mode that may allow an attacker to recover plaintext from a block of ciphertext.

# Vulnerability Detection Method

Check if remote ssh service supports Arcfour, none or CBC ciphers.

Details: SSH Weak Encryption Algorithms Supported

OID:1.3.6.1.4.1.25623.1.0.105611 Version used: \$Revision: 4490 \$

#### References

Other:

URL:https://tools.ietf.org/html/rfc4253#section-6.3

URL:https://www.kb.cert.org/vuls/id/958563

[ return to 127.0.0.1 ]

# 2.6.5 Medium 3389/tcp

Medium (CVSS: 4.3)

NVT: SSL/TLS: Report Weak Cipher Suites

# Summary

This routine reports all Weak SSL/TLS cipher suites accepted by a service.

NOTE: No severity for SMTP services with 'Opportunistic TLS' and weak cipher suites on port 25/tcp is reported. If too strong cipher suites are configured for this service the alternative would be to fall back to an even more insecure clear text communication.

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

# Solution

Solution type: Mitigation

The configuration of this services should be changed so that it does not accept the listed weak cipher suites anymore.

Please see the references for more resources supporting you with this task.

# Vulnerability Insight

These rules are applied for the evaluation of the cryptographic strength:

- RC4 is considered to be weak (CVE-2013-2566, CVE-2015-2808).
- Ciphers using 64 bit or less are considered to be vulnerable to brute force methods and therefore considered as weak (CVE-2015-4000).
- ... continues on next page ...

- 1024 bit RSA authentication is considered to be insecure and therefore as weak.
- Any cipher considered to be secure for only the next 10 years is considered as medium
- Any other cipher is considered as strong

# Vulnerability Detection Method

Details: SSL/TLS: Report Weak Cipher Suites

OID:1.3.6.1.4.1.25623.1.0.103440 Version used: \$Revision: 4863 \$

#### References

CVE: CVE-2013-2566, CVE-2015-2808, CVE-2015-4000

Other:

URL: https://www.bsi.bund.de/SharedDocs/Warnmeldungen/DE/CB/warnmeldung\_cb-k16-

 $\hookrightarrow$  1465\_update\_6.html

URL:https://bettercrypto.org/

URL:https://mozilla.github.io/server-side-tls/ssl-config-generator/

#### Medium (CVSS: 4.0)

NVT: SSL/TLS: Certificate Signed Using A Weak Signature Algorithm

### Summary

The remote service is using a SSL/TLS certificate in the certificate chain that has been signed using a cryptographically weak hashing algorithm.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

# Solution

Solution type: Mitigation

Servers that use SSL/TLS certificates signed with a weak SHA-1, MD5, MD4 or MD2 hashing algorithm will need to obtain new SHA-2 signed SSL/TLS certificates to avoid web browser SSL/TLS certificate warnings.

# Vulnerability Insight

The following hashing algorithms used for signing SSL/TLS certificates are considered cryptographically weak and not secure enough for ongoing use:

- Secure Hash Algorithm 1 (SHA-1)
- Message Digest 5 (MD5)
- Message Digest 4 (MD4)
- Message Digest 2 (MD2)

Beginning as late as January 2017 and as early as June 2016, browser developers such as Microsoft and Google will begin warning users when visiting web sites that use SHA-1 signed Secure Socket Layer (SSL) certificates.

NOTE: The script preference allows to set one or more custom SHA-1 fingerprints of CA certificates which are trusted by this routine. The fingerprints needs to be passed comma-separated and case-insensitive:

## Fingerprint1

 $\dots$  continues on next page  $\dots$ 

or

fingerprint 1, Fingerprint 2

# **Vulnerability Detection Method**

Check which hashing algorithm was used to sign the remote SSL/TLS certificate. Details: SSL/TLS: Certificate Signed Using A Weak Signature Algorithm

OID:1.3.6.1.4.1.25623.1.0.105880 Version used: \$Revision: 4781 \$

#### References

Other:

URL:https://blog.mozilla.org/security/2014/09/23/phasing-out-certificates-with  $\hookrightarrow$ -sha-1-based-signature-algorithms/

[ return to 127.0.0.1 ]

# 2.6.6 Low 22/tcp

Low (CVSS: 2.6)

NVT: SSH Weak MAC Algorithms Supported

## Summary

The remote SSH server is configured to allow weak MD5 and/or 96-bit MAC algorithms.

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

# Solution

Solution type: Mitigation Disable the weak MAC algorithms.

### **Vulnerability Detection Method**

Details: SSH Weak MAC Algorithms Supported

OID:1.3.6.1.4.1.25623.1.0.105610 Version used: \$Revision: 4490 \$

[ return to 127.0.0.1 ]

# 2.6.7 Low general/tcp

Low (CVSS: 2.6)

NVT: TCP timestamps

# Summary

The remote host implements TCP timestamps and therefore allows to compute the uptime.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

A side effect of this feature is that the uptime of the remote host can sometimes be computed.

# Solution

## Solution type: Mitigation

To disable TCP timestamps on linux add the line 'net.ipv4.tcp\_timestamps = 0' to /etc/sysctl.conf. Execute 'sysctl-p' to apply the settings at runtime.

To disable TCP timestamps on Windows execute 'netsh int tcp set global timestamps=disabled' Starting with Windows Server 2008 and Vista, the timestamp can not be completely disabled.

The default behavior of the TCP/IP stack on this Systems is to not use the Timestamp options when initiating TCP connections, but use them if the TCP peer that is initiating communication includes them in their synchronize (SYN) segment.

See also: http://www.microsoft.com/en-us/download/details.aspx?id=9152

# Affected Software/OS

TCP/IPv4 implementations that implement RFC1323.

### Vulnerability Insight

The remote host implements TCP timestamps, as defined by RFC1323.

### Vulnerability Detection Method

Special IP packets are forged and sent with a little delay in between to the target IP. The responses are searched for a timestamps. If found, the timestamps are reported.

Details: TCP timestamps OID:1.3.6.1.4.1.25623.1.0.80091 Version used: \$Revision: 5309 \$

### References

Other:

URL:http://www.ietf.org/rfc/rfc1323.txt

[ return to 127.0.0.1 ]

# $2.7 \quad 127.0.0.10$

Host scan start Tue Feb 21 15:24:50 2017 UTC Host scan end Tue Feb 21 16:29:11 2017 UTC

Service (Port)	Threat Level
$445/\mathrm{tcp}$	High
$22/\mathrm{tcp}$	High
	•

 $\dots$  (continues)  $\dots$ 

$\dots$ (continued).		
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Service (Port)	Threat Level
$3389/\mathrm{tcp}$	Medium
$22/\mathrm{tcp}$	Medium
$135/{ m tcp}$	Medium
general/tcp	Low
$22/\mathrm{tcp}$	Low

# 2.7.1 High 445/tcp

#### High (CVSS: 10.0)

NVT: Microsoft Windows SMB2 Negotiation Protocol Remote Code Execution Vulnerability

#### Summary

This host is missing a critical security update according to Microsoft Bulletin MS09-050.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

An attacker can exploit this issue to execute code with SYSTEM-level privileges failed exploit attempts will likely cause denial-of-service conditions.

Impact Level: System

### Solution

Solution type: VendorFix

# Affected Software/OS

- Windows 7 RC
- Windows Vista and
- Windows 2008 Server

# Vulnerability Insight

Multiple vulnerabilities exists,

- A denial of service vulnerability exists in the way that Microsoft Server Message Block (SMB) Protocol software handles specially crafted SMB version 2 (SMBv2) packets.
- Unauthenticated remote code execution vulnerability exists in the way that Microsoft Server Message Block (SMB) Protocol software handles specially crafted SMB packets.

# Vulnerability Detection Method

Details: Microsoft Windows SMB2 Negotiation Protocol Remote Code Execution Vulnerability

OID:1.3.6.1.4.1.25623.1.0.900965 Version used: \$Revision: 5074 \$

# References

CVE: CVE-2009-2526, CVE-2009-2532, CVE-2009-3103

BID:36299

### Other:

URL:http://www.microsoft.com/technet/security/bulletin/MS09-050.mspx

#### Note

This is a sample note on this scan result which I would like to see for any othe  $\hookrightarrow$ r occurance of

this vulnerability, regardless of the task or host.

Last modified: Thu Mar 23 16:52:39 2017 UTC

# High (CVSS: 10.0)

NVT: Microsoft Windows SMB Server NTLM Multiple Vulnerabilities (971468)

### Summary

This host is missing a critical security update according to Microsoft Bulletin MS10-012.

#### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

### Impact

Successful exploitation will allow remote attackers to execute arbitrary code or cause a denial of service or bypass the authentication mechanism via brute force technique. Impact Level: System/Application

# Solution

# Solution type: VendorFix

Run Windows Update and update the listed hot fixes or download and update mentioned hot fixes in the advisory from the below link, http://www.microsoft.com/technet/security/bulletin/ms10-012.mspx

### Affected Software/OS

Microsoft Windows 7 Microsoft Windows 2000 Service Pack and prior Microsoft Windows XP Service Pack 3 and prior Microsoft Windows Vista Service Pack 2 and prior Microsoft Windows Server 2003 Service Pack 2 and prior Microsoft Windows Server 2008 Service Pack 2 and prior

### Vulnerability Insight

- An input validation error exists while processing SMB requests and can be exploited to cause a buffer overflow via a specially crafted SMB packet. - An error exists in the SMB implementation while parsing SMB packets during the Negotiate phase causing memory corruption via a specially crafted SMB packet. - NULL pointer dereference error exists in SMB while verifying the 'share' and 'servername' fields in SMB packets causing denial of service. - A lack of cryptographic entropy when the SMB server generates challenges during SMB NTLM authentication and can be exploited to bypass the authentication mechanism.

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# Vulnerability Detection Method

Details: Microsoft Windows SMB Server NTLM Multiple Vulnerabilities (971468)

OID:1.3.6.1.4.1.25623.1.0.902269 Version used: \$Revision: 5136 \$

#### References

CVE: CVE-2010-0020, CVE-2010-0021, CVE-2010-0022, CVE-2010-0231

Other:

URL:http://secunia.com/advisories/38510/
URL:http://support.microsoft.com/kb/971468

URL:http://www.vupen.com/english/advisories/2010/0345

URL:http://www.microsoft.com/technet/security/bulletin/ms10-012.mspx

# High (CVSS: 0.0)

NVT: SMBv1 enabled (Remote Check)

### Summary

The remote Windows host is prone to an unspecified remote code execution vulnerability in SMBv1 protocol.

This NVT has been replaced by NVT 'Microsoft Windows SMB Server Multiple Vulnerabilities-Remote (4013389)' (OID: 1.3.6.1.4.1.25623.1.0.810810).

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

### Solution

# Solution type: Workaround

Disable SMB v1 and/or block all versions of SMB at the network boundary by blocking TCP port 445 with related protocols on UDP ports 137-138 and TCP port 139, for all boundary devices.

# Vulnerability Insight

The remote Windows host is supporting SMBv1 and is therefore prone to an unspecified remote code execution vulnerability. This vulnerability is related to the 'Shadow Brokers' group.

# Log Method

Details: SMBv1 enabled (Remote Check)

OID:1.3.6.1.4.1.25623.1.0.140151 Version used: \$Revision: 5222 \$

# References

#### Other:

URL:https://www.us-cert.gov/ncas/current-activity/2017/01/16/SMB-Security-Best

 $\hookrightarrow$ -Practices

URL:https://support.microsoft.com/en-us/kb/2696547 URL:https://support.microsoft.com/en-us/kb/204279

URL:https://technet.microsoft.com/en-us/library/security/MS17-010

[ return to 127.0.0.10 ]

# 2.7.2 High 22/tcp

### High (CVSS: 7.8)

NVT: OpenSSH Denial of Service And User Enumeration Vulnerabilities (Windows)

### Summary

This host is installed with openssh and is prone to denial of service and user enumeration vulnerabilities.

#### **Vulnerability Detection Result**

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

Successfully exploiting this issue allows remote attackers to cause a denial of service (crypt CPU consumption) and to enumerate users by leveraging the timing difference between responses when a large password is provided.

#### Solution

Solution type: VendorFix

Upgrade to OpenSSH version 7.3 or later. For updates refer to http://www.openssh.com

#### Affected Software/OS

OpenSSH versions before 7.3 on Windows

# Vulnerability Insight

Multiple flaws exists due to,

- The auth\_password function in 'auth-passwd.c' script does not limit password lengths for password authentication.
- The sshd in OpenSSH, when SHA256 or SHA512 are used for user password hashing uses BLOWFISH hashing on a static password when the username does not exist and it takes much longer to calculate SHA256/SHA512 hash than BLOWFISH hash.

# Vulnerability Detection Method

Checks if a vulnerable version is present on the target host.

Details: OpenSSH Denial of Service And User Enumeration Vulnerabilities (Windows)

OID:1.3.6.1.4.1.25623.1.0.809121 Version used: \$Revision: 5083 \$

# References

CVE: CVE-2016-6515, CVE-2016-6210

BID:92212 Other:

URL:http://www.openssh.com/txt/release-7.3

URL:http://seclists.org/fulldisclosure/2016/Jul/51

URL:https://security-tracker.debian.org/tracker/CVE-2016-6210

URL:http://openwall.com/lists/oss-security/2016/08/01/2

# High (CVSS: 7.5)

NVT: OpenSSH Multiple Vulnerabilities Jan17 (Windows)

#### Summary

This host is installed with openssh and is prone to multiple vulnerabilities.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

Successfully exploiting this issue allows local users to obtain sensitive private-key information, to gain privileges, conduct a senial-of-service condition and allows remote attackers to execute arbitrary local PKCS#11 modules.

Impact Level: Application

### Solution

Solution type: VendorFix

Upgrade to OpenSSH version 7.4 or later. For updates refer to http://www.openssh.com

### Affected Software/OS

OpenSSH versions before 7.4 on Windows

## Vulnerability Insight

Multiple flaws exists due to, - An 'authfile.c' script does not properly consider the effects of realloc on buffer contents. - The shared memory manager (associated with pre-authentication compression) does not ensure that a bounds check is enforced by all compilers. - The sshd in OpenSSH creates forwarded Unix-domain sockets as root, when privilege separation is not used. - An untrusted search path vulnerability in ssh-agent.c in ssh-agent. - NULL pointer dereference error due to an out-of-sequence NEWKEYS message.

### Vulnerability Detection Method

Get the installed version with the help of detect NVT and check the version is vulnerable or not. Details: OpenSSH Multiple Vulnerabilities Jan17 (Windows)

OID:1.3.6.1.4.1.25623.1.0.810325 Version used: \$Revision: 5084 \$

#### References

CVE: CVE-2016-10009, CVE-2016-10010, CVE-2016-10011, CVE-2016-10012, CVE-2016-10

BID:94968, 94972, 94977, 94975

# Other:

URL:https://www.openssh.com/txt/release-7.4

URL:http://www.openwall.com/lists/oss-security/2016/12/19/2 URL:http://blog.swiecki.net/2018/01/fuzzing-tcp-servers.html

URL:https://anongit.mindrot.org/openssh.git/commit/?id=28652bca29046f62c7045e  $\hookrightarrow$  933e6b931de1d16737

[ return to 127.0.0.10 ]

# 2.7.3 Medium 3389/tcp

Medium (CVSS: 4.3)

NVT: SSL/TLS: Report Weak Cipher Suites

# Summary

This routine reports all Weak SSL/TLS cipher suites accepted by a service.

NOTE: No severity for SMTP services with 'Opportunistic TLS' and weak cipher suites on port 25/tcp is reported. If too strong cipher suites are configured for this service the alternative would be to fall back to an even more insecure cleartext communication.

## Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Mitigation

The configuration of this services should be changed so that it does not accept the listed weak cipher suites anymore.

Please see the references for more resources supporting you with this task.

#### Vulnerability Insight

These rules are applied for the evaluation of the cryptographic strength:

- RC4 is considered to be weak (CVE-2013-2566, CVE-2015-2808).
- Ciphers using 64 bit or less are considered to be vulnerable to brute force methods and therefore considered as weak (CVE-2015-4000).
- 1024 bit RSA authentication is considered to be insecure and therefore as weak.
- Any cipher considered to be secure for only the next 10 years is considered as medium
- Any other cipher is considered as strong

# Vulnerability Detection Method

Details: SSL/TLS: Report Weak Cipher Suites

OID:1.3.6.1.4.1.25623.1.0.103440 Version used: \$Revision: 4863 \$

#### References

CVE: CVE-2013-2566, CVE-2015-2808, CVE-2015-4000

Other:

 $\label{lem:url:https://www.bsi.bund.de/SharedDocs/Warnmeldungen/DE/CB/warnmeldung_cb-k16-$$$$$\hookrightarrow 1465\_update_6.html$ 

URL:https://bettercrypto.org/

URL:https://mozilla.github.io/server-side-tls/ssl-config-generator/

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# Medium (CVSS: 4.0)

NVT: SSL/TLS: Certificate Signed Using A Weak Signature Algorithm

#### Summary

The remote service is using a SSL/TLS certificate in the certificate chain that has been signed using a cryptographically weak hashing algorithm.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Mitigation

Servers that use SSL/TLS certificates signed with a weak SHA-1, MD5, MD4 or MD2 hashing algorithm will need to obtain new SHA-2 signed SSL/TLS certificates to avoid web browser SSL/TLS certificate warnings.

# Vulnerability Insight

The following hashing algorithms used for signing SSL/TLS certificates are considered cryptographically weak and not secure enough for ongoing use:

- Secure Hash Algorithm 1 (SHA-1)
- Message Digest 5 (MD5)
- Message Digest 4 (MD4)
- Message Digest 2 (MD2)

Beginning as late as January 2017 and as early as June 2016, browser developers such as Microsoft and Google will begin warning users when visiting web sites that use SHA-1 signed Secure Socket Layer (SSL) certificates.

NOTE: The script preference allows to set one or more custom SHA-1 fingerprints of CA certificates which are trusted by this routine. The fingerprints needs to be passed comma-separated and case-insensitive:

Fingerprint1

or

fingerprint 1, Fingerprint 2

## Vulnerability Detection Method

Check which hashing algorithm was used to sign the remote SSL/TLS certificate. Details: SSL/TLS: Certificate Signed Using A Weak Signature Algorithm OID: 1.3.6.1.4.1.25623.1.0.105880

Version used: \$Revision: 4781 \$

# References

Other:

URL:https://blog.mozilla.org/security/2014/09/23/phasing-out-certificates-with  $\hookrightarrow$ -sha-1-based-signature-algorithms/

[ return to 127.0.0.10 ]

## 2.7.4 Medium 22/tcp

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# Medium (CVSS: 4.3)

NVT: SSH Weak Encryption Algorithms Supported

### Summary

The remote SSH server is configured to allow weak encryption algorithms.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Mitigation

Disable the weak encryption algorithms.

## Vulnerability Insight

The 'arcfour' cipher is the Arcfour stream cipher with 128-bit keys. The Arcfour cipher is believed to be compatible with the RC4 cipher [SCHNEIER]. Arcfour (and RC4) has problems with weak keys, and should not be used anymore.

The 'none' algorithm specifies that no encryption is to be done. Note that this method provides no confidentiality protection, and it is NOT RECOMMENDED to use it.

A vulnerability exists in SSH messages that employ CBC mode that may allow an attacker to recover plaintext from a block of ciphertext.

# **Vulnerability Detection Method**

Check if remote ssh service supports Arcfour, none or CBC ciphers.

Details: SSH Weak Encryption Algorithms Supported

OID:1.3.6.1.4.1.25623.1.0.105611 Version used: \$Revision: 4490 \$

# References

Other:

URL:https://tools.ietf.org/html/rfc4253#section-6.3

URL:https://www.kb.cert.org/vuls/id/958563

[ return to 127.0.0.10 ]

# 2.7.5 Medium 135/tcp

#### Medium (CVSS: 5.0)

NVT: DCE/RPC and MSRPC Services Enumeration Reporting

### Summary

Distributed Computing Environment / Remote Procedure Calls (DCE/RPC) or MSRPC services running on the remote host can be enumerated by connecting on port 135 and doing the appropriate queries.

# Vulnerability Detection Result

 $\label{thm:conding} \mbox{ Vulnerability was detected according to the Vulnerability Detection Method.}$ 

#### Impact

An attacker may use this fact to gain more knowledge about the remote host.

#### Solution

Solution type: Mitigation

Filter incoming traffic to this ports.

# Vulnerability Detection Method

Details: DCE/RPC and MSRPC Services Enumeration Reporting

OID:1.3.6.1.4.1.25623.1.0.10736 Version used: \$Revision: 4998 \$

[ return to 127.0.0.10 ]

# 2.7.6 Low general/tcp

# Low (CVSS: 2.6)

NVT: TCP timestamps

## Summary

The remote host implements TCP timestamps and therefore allows to compute the uptime.

#### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

A side effect of this feature is that the uptime of the remote host can sometimes be computed.

# Solution

# Solution type: Mitigation

To disable TCP timestamps on linux add the line 'net.ipv4.tcp\_timestamps = 0' to /etc/sysctl.conf. Execute 'sysctl-p' to apply the settings at runtime.

To disable TCP timestamps on Windows execute 'netsh int tcp set global timestamps=disabled' Starting with Windows Server 2008 and Vista, the timestamp can not be completely disabled. The default behavior of the TCP/IP stack on this Systems is to not use the Timestamp options when initiating TCP connections, but use them if the TCP peer that is initiating communication includes them in their synchronize (SYN) segment.

See also: http://www.microsoft.com/en-us/download/details.aspx?id=9152

# Affected Software/OS

TCP/IPv4 implementations that implement RFC1323.

#### Vulnerability Insight

The remote host implements TCP timestamps, as defined by RFC1323.

 $\dots$  continues on next page  $\dots$ 

#### **Vulnerability Detection Method**

Special IP packets are forged and sent with a little delay in between to the target IP. The responses are searched for a timestamps. If found, the timestamps are reported.

Details: TCP timestamps OID:1.3.6.1.4.1.25623.1.0.80091 Version used: \$Revision: 5309 \$

#### References

Other:

URL:http://www.ietf.org/rfc/rfc1323.txt

[ return to 127.0.0.10 ]

# 2.7.7 Low 22/tcp

#### Low (CVSS: 2.6)

NVT: SSH Weak MAC Algorithms Supported

#### Summary

The remote SSH server is configured to allow weak MD5 and/or 96-bit MAC algorithms.

#### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

**Solution type:** Mitigation Disable the weak MAC algorithms.

# Vulnerability Detection Method

Details: SSH Weak MAC Algorithms Supported

OID:1.3.6.1.4.1.25623.1.0.105610 Version used: \$Revision: 4490 \$

[ return to 127.0.0.10 ]

## $2.8 \quad 127.0.0.22$

Host scan start Tue Feb 21 15:24:48 2017 UTC Host scan end Tue Feb 21 15:58:28 2017 UTC

Service (Port)	Threat Level
$3389/\mathrm{tcp}$	High
$445/{ m tcp}$	High
$135/{ m tcp}$	Medium

75

## 2.8.1 High 3389/tcp

#### High (CVSS: 9.3)

NVT: Microsoft Remote Desktop Protocol Remote Code Execution Vulnerabilities (2671387)

#### Summary

This host is missing a critical security update according to Microsoft Bulletin MS12-020.

#### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

Successful exploitation could allow remote attackers to execute arbitrary code as the logged-on user or cause a denial of service condition.

#### Solution

Solution type: VendorFix

Run Windows Update and update the listed hotfixes or download and update mentioned hotfixes in the advisory from the below link,

http://technet.microsoft.com/en-us/security/bulletin/ms12-020

#### Affected Software/OS

Microsoft Windows 7 Service Pack 1 and prior Microsoft Windows XP Service Pack 3 and prior Microsoft Windows 2K3 Service Pack 2 and prior Microsoft Windows Vista Service Pack 2 and prior Microsoft Windows Server 2008 Service Pack 2 and prior

#### Vulnerability Insight

The flaws are due to the way Remote Desktop Protocol accesses an object in memory that has been improperly initialized or has been deleted and the way RDP service processes the packets.

## Vulnerability Detection Method

Details: Microsoft Remote Desktop Protocol Remote Code Execution Vulnerabilities (267138.

 $\hookrightarrow$  . .

OID:1.3.6.1.4.1.25623.1.0.902818 Version used: \$Revision: 4234 \$

#### References

CVE: CVE-2012-0002, CVE-2012-0152

BID:52353, 52354

Other:

URL:http://blog.binaryninjas.org/?p=58
URL:http://secunia.com/advisories/48395
URL:http://support.microsoft.com/kb/2671387
URL:http://www.securitytracker.com/id/1026790

URL:http://technet.microsoft.com/en-us/security/bulletin/ms12-020

[ return to 127.0.0.22 ]

## 2.8.2 High 445/tcp

## High (CVSS: 0.0)

NVT: SMBv1 enabled (Remote Check)

#### Summary

The remote Windows host is prone to an unspecified remote code execution vulnerability in SMBv1 protocol.

This NVT has been replaced by NVT 'Microsoft Windows SMB Server Multiple Vulnerabilities-Remote (4013389)' (OID: 1.3.6.1.4.1.25623.1.0.810810).

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Workaround

Disable SMB v1 and/or block all versions of SMB at the network boundary by blocking TCP port 445 with related protocols on UDP ports 137-138 and TCP port 139, for all boundary devices.

#### Vulnerability Insight

The remote Windows host is supporting SMBv1 and is therefore prone to an unspecified remote code execution vulnerability. This vulnerability is related to the 'Shadow Brokers' group.

#### Log Method

 $\label{eq:Details: SMBv1 enabled (Remote Check)} Details: \texttt{SMBv1 enabled (Remote Check)}$ 

OID:1.3.6.1.4.1.25623.1.0.140151 Version used: \$Revision: 5222 \$

#### References

Other:

URL:https://www.us-cert.gov/ncas/current-activity/2017/01/16/SMB-Security-Best 
→-Practices

URL:https://support.microsoft.com/en-us/kb/2696547
URL:https://support.microsoft.com/en-us/kb/204279

URL:https://technet.microsoft.com/en-us/library/security/MS17-010

#### High (CVSS: 10.0)

NVT: Microsoft Windows SMB Server NTLM Multiple Vulnerabilities (971468)

#### Summary

This host is missing a critical security update according to Microsoft Bulletin MS10-012.

#### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

Successful exploitation will allow remote attackers to execute arbitrary code or cause a denial of service or bypass the authentication mechanism via brute force technique. Impact Level: System/Application

#### Solution

Solution type: VendorFix

Run Windows Update and update the listed hot fixes or download and update mentioned hot fixes in the advisory from the below link,  $\frac{\text{http:}}{\text{www.microsoft.com/technet/security/bulletin/ms10-012.mspx}$ 

# Affected Software/OS

Microsoft Windows 7 Microsoft Windows 2000 Service Pack and prior Microsoft Windows XP Service Pack 3 and prior Microsoft Windows Vista Service Pack 2 and prior Microsoft Windows Server 2003 Service Pack 2 and prior Microsoft Windows Server 2008 Service Pack 2 and prior

#### Vulnerability Insight

- An input validation error exists while processing SMB requests and can be exploited to cause a buffer overflow via a specially crafted SMB packet. - An error exists in the SMB implementation while parsing SMB packets during the Negotiate phase causing memory corruption via a specially crafted SMB packet. - NULL pointer dereference error exists in SMB while verifying the 'share' and 'servername' fields in SMB packets causing denial of service. - A lack of cryptographic entropy when the SMB server generates challenges during SMB NTLM authentication and can be exploited to bypass the authentication mechanism.

## Vulnerability Detection Method

Details: Microsoft Windows SMB Server NTLM Multiple Vulnerabilities (971468)

OID:1.3.6.1.4.1.25623.1.0.902269 Version used: \$Revision: 5136 \$

#### References

CVE: CVE-2010-0020, CVE-2010-0021, CVE-2010-0022, CVE-2010-0231

Other:

URL:http://secunia.com/advisories/38510/
URL:http://support.microsoft.com/kb/971468

URL:http://www.vupen.com/english/advisories/2010/0345

URL:http://www.microsoft.com/technet/security/bulletin/ms10-012.mspx

#### High (CVSS: 10.0)

NVT: Vulnerabilities in SMB Could Allow Remote Code Execution (958687) - Remote

# Summary

This host is missing a critical security update according to Microsoft Bulletin MS09-001.

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### **Impact**

Successful exploitation could allow remote unauthenticated attackers to cause denying the service by sending a specially crafted network message to a system running the server service.

Impact Level: System/Network

#### Solution

# Solution type: VendorFix

Run Windows Update and update the listed hot fixes or download and update mentioned hot fixes in the advisory from the below link, http://www.microsoft.com/technet/security/bulletin/ms09-001.mspx

#### Affected Software/OS

Microsoft Windows 2K Service Pack 4 and prior. Microsoft Windows XP Service Pack 3 and prior. Microsoft Windows 2003 Service Pack 2 and prior.

#### Vulnerability Insight

The issue is due to the way Server Message Block (SMB) Protocol software handles specially crafted SMB packets.

# **Vulnerability Detection Method**

Details: Vulnerabilities in SMB Could Allow Remote Code Execution (958687) - Remote OID:1.3.6.1.4.1.25623.1.0.900233

Version used: \$Revision: 4692 \$

# References

CVE: CVE-2008-4114, CVE-2008-4834, CVE-2008-4835

BID:31179 Other:

URL:http://www.milwOrm.com/exploits/6463

URL:http://www.microsoft.com/technet/security/bulletin/ms09-001.mspx

[ return to 127.0.0.22 ]

## 2.8.3 Medium 135/tcp

#### Medium (CVSS: 5.0)

NVT: DCE/RPC and MSRPC Services Enumeration Reporting

# Summary

Distributed Computing Environment / Remote Procedure Calls (DCE/RPC) or MSRPC services running on the remote host can be enumerated by connecting on port 135 and doing the appropriate queries.

 $\dots$  continues on next page  $\dots$ 

## Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

## Impact

An attacker may use this fact to gain more knowledge about the remote host.

#### Solution

**Solution type:** Mitigation Filter incoming traffic to this ports.

# Vulnerability Detection Method

Details: DCE/RPC and MSRPC Services Enumeration Reporting

OID:1.3.6.1.4.1.25623.1.0.10736 Version used: \$Revision: 4998 \$

[ return to 127.0.0.22 ]

#### 2.9 127.0.0.44

Host scan start Tue Feb 21 15:24:45 2017 UTC Host scan end Tue Feb 21 15:43:02 2017 UTC

Service (Port)	Threat Level
$22/\mathrm{tcp}$	High
$22/\mathrm{tcp}$	Medium
general/tcp	Low
$22/\mathrm{tcp}$	Low

#### 2.9.1 High 22/tcp

# High (CVSS: 10.0)

NVT: Default password 'WhatsHappeningNow' for 'insight' account

## Summary

The remote device is prone to a default account authentication bypass vulnerability.

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

# Impact

This issue may be exploited by a remote attacker to gain access to sensitive information or modify system configuration.

#### Solution

Solution type: Workaround

Change the password

#### Vulnerability Detection Method

Try to login as 'insight' with password 'WhatsHappeningNow'.

Details: Default password 'WhatsHappeningNow' for 'insight' account

OID:1.3.6.1.4.1.25623.1.0.140110 Version used: \$Revision: 4868 \$

[ return to 127.0.0.44 ]

# 2.9.2 Medium 22/tcp

CTTCC (CTTCC

NVT: SSH Weak Encryption Algorithms Supported

#### Summary

The remote SSH server is configured to allow weak encryption algorithms.

## Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Mitigation

Disable the weak encryption algorithms.

## Vulnerability Insight

The 'arcfour' cipher is the Arcfour stream cipher with 128-bit keys. The Arcfour cipher is believed to be compatible with the RC4 cipher [SCHNEIER]. Arcfour (and RC4) has problems with weak keys, and should not be used anymore.

The 'none' algorithm specifies that no encryption is to be done. Note that this method provides no confidentiality protection, and it is NOT RECOMMENDED to use it.

A vulnerability exists in SSH messages that employ CBC mode that may allow an attacker to recover plaintext from a block of ciphertext.

## Vulnerability Detection Method

Check if remote ssh service supports Arcfour, none or CBC ciphers.

Details: SSH Weak Encryption Algorithms Supported

OID:1.3.6.1.4.1.25623.1.0.105611 Version used: \$Revision: 4490 \$

# References

Other:

URL:https://tools.ietf.org/html/rfc4253#section-6.3

URL:https://www.kb.cert.org/vuls/id/958563

[ return to 127.0.0.44 ]

## 2.9.3 Low general/tcp

Low (CVSS: 2.6)

NVT: TCP timestamps

#### Summary

The remote host implements TCP timestamps and therefore allows to compute the uptime.

#### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

A side effect of this feature is that the uptime of the remote host can sometimes be computed.

#### Solution

# Solution type: Mitigation

To disable TCP timestamps on linux add the line 'net.ipv4.tcp\_timestamps = 0' to /etc/sysctl.conf. Execute 'sysctl-p' to apply the settings at runtime.

To disable TCP timestamps on Windows execute 'netsh int tcp set global timestamps=disabled' Starting with Windows Server 2008 and Vista, the timestamp can not be completely disabled. The default behavior of the TCP/IP stack on this Systems is to not use the Timestamp options when initiating TCP connections, but use them if the TCP peer that is initiating communication includes them in their synchronize (SYN) segment.

See also: http://www.microsoft.com/en-us/download/details.aspx?id=9152

#### Affected Software/OS

TCP/IPv4 implementations that implement RFC1323.

## Vulnerability Insight

The remote host implements TCP timestamps, as defined by RFC1323.

#### **Vulnerability Detection Method**

Special IP packets are forged and sent with a little delay in between to the target IP. The responses are searched for a timestamps. If found, the timestamps are reported.

Details: TCP timestamps OID:1.3.6.1.4.1.25623.1.0.80091 Version used: \$Revision: 5309 \$

## References

# Other:

URL:http://www.ietf.org/rfc/rfc1323.txt

 $[\ \mathrm{return\ to\ }127.0.0.44\ ]$ 

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## 2.9.4 Low 22/tcp

Low (CVSS: 2.6)

NVT: SSH Weak MAC Algorithms Supported

#### Summary

The remote SSH server is configured to allow weak MD5 and/or 96-bit MAC algorithms.

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

Solution

**Solution type:** Mitigation Disable the weak MAC algorithms.

# Vulnerability Detection Method

Details: SSH Weak MAC Algorithms Supported

OID:1.3.6.1.4.1.25623.1.0.105610 Version used: \$Revision: 4490 \$

[ return to 127.0.0.44 ]

## $2.10 \quad 127.0.0.26$

Host scan start Tue Feb 21 15:24:49 2017 UTC Host scan end Tue Feb 21 16:16:03 2017 UTC

Service (Port)	Threat Level
$445/\mathrm{tcp}$	High
3389/tcp	High
$135/\mathrm{tcp}$	Medium
$22/\mathrm{tcp}$	Medium
$22/\mathrm{tcp}$	Low

# 2.10.1 High 445/tcp

High (CVSS: 10.0)

 $\operatorname{NVT}$ : Vulnerabilities in SMB Could Allow Remote Code Execution (958687) - Remote

#### Summary

This host is missing a critical security update according to Microsoft Bulletin MS09-001.

## Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

Successful exploitation could allow remote unauthenticated attackers to cause denying the service by sending a specially crafted network message to a system running the server service.

Impact Level: System/Network

# Solution

## Solution type: VendorFix

Run Windows Update and update the listed hot fixes or download and update mentioned hot fixes in the advisory from the below link, http://www.microsoft.com/technet/security/bulletin/ms09-001.mspx

## Affected Software/OS

Microsoft Windows 2K Service Pack 4 and prior.

Microsoft Windows XP Service Pack 3 and prior.

Microsoft Windows 2003 Service Pack 2 and prior.

## Vulnerability Insight

The issue is due to the way Server Message Block (SMB) Protocol software handles specially crafted SMB packets.

#### Vulnerability Detection Method

Details: Vulnerabilities in SMB Could Allow Remote Code Execution (958687) - Remote

OID:1.3.6.1.4.1.25623.1.0.900233 Version used: \$Revision: 4692 \$

#### References

CVE: CVE-2008-4114, CVE-2008-4834, CVE-2008-4835

BID:31179 Other:

URL:http://www.milwOrm.com/exploits/6463

URL:http://www.microsoft.com/technet/security/bulletin/ms09-001.mspx

## High (CVSS: 0.0)

# NVT: SMBv1 enabled (Remote Check)

# Summary

The remote Windows host is prone to an unspecified remote code execution vulnerability in SMBv1 protocol.

This NVT has been replaced by NVT 'Microsoft Windows SMB Server Multiple Vulnerabilities-Remote (4013389)' (OID: 1.3.6.1.4.1.25623.1.0.810810).

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

# Solution

Solution type: Workaround

Disable SMB v1 and/or block all versions of SMB at the network boundary by blocking TCP port 445 with related protocols on UDP ports 137-138 and TCP port 139, for all boundary devices.

## Vulnerability Insight

The remote Windows host is supporting SMBv1 and is therefore prone to an unspecified remote code execution vulnerability. This vulnerability is related to the 'Shadow Brokers' group.

## Log Method

Details: SMBv1 enabled (Remote Check)

OID:1.3.6.1.4.1.25623.1.0.140151 Version used: \$Revision: 5222 \$

#### References

#### Other:

 $\label{eq:url:https://www.us-cert.gov/ncas/current-activity/2017/01/16/SMB-Security-Best-Practices$ 

URL:https://support.microsoft.com/en-us/kb/2696547 URL:https://support.microsoft.com/en-us/kb/204279

URL:https://technet.microsoft.com/en-us/library/security/MS17-010

## High (CVSS: 10.0)

NVT: Microsoft Windows SMB Server NTLM Multiple Vulnerabilities (971468)

#### Summary

This host is missing a critical security update according to Microsoft Bulletin MS10-012.

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

Successful exploitation will allow remote attackers to execute arbitrary code or cause a denial of service or bypass the authentication mechanism via brute force technique. Impact Level: System/Application

#### Solution

Solution type: VendorFix

Run Windows Update and update the listed hot fixes or download and update mentioned hot fixes in the advisory from the below link, http://www.microsoft.com/technet/security/bulletin/ms10-012.mspx

#### Affected Software/OS

Microsoft Windows 7 Microsoft Windows 2000 Service Pack and prior Microsoft Windows XP Service Pack 3 and prior Microsoft Windows Vista Service Pack 2 and prior Microsoft Windows Server 2003 Service Pack 2 and prior Microsoft Windows Server 2008 Service Pack 2 and prior

# Vulnerability Insight

- An input validation error exists while processing SMB requests and can be exploited to cause a buffer overflow via a specially crafted SMB packet. - An error exists in the SMB implementation while parsing SMB packets during the Negotiate phase causing memory corruption via a specially crafted SMB packet. - NULL pointer dereference error exists in SMB while verifying the 'share' and 'servername' fields in SMB packets causing denial of service. - A lack of cryptographic entropy when the SMB server generates challenges during SMB NTLM authentication and can be exploited to bypass the authentication mechanism.

# Vulnerability Detection Method

Details: Microsoft Windows SMB Server NTLM Multiple Vulnerabilities (971468)

OID:1.3.6.1.4.1.25623.1.0.902269 Version used: \$Revision: 5136 \$

#### References

CVE: CVE-2010-0020, CVE-2010-0021, CVE-2010-0022, CVE-2010-0231

Other:

URL:http://secunia.com/advisories/38510/
URL:http://support.microsoft.com/kb/971468

URL:http://www.vupen.com/english/advisories/2010/0345

URL:http://www.microsoft.com/technet/security/bulletin/ms10-012.mspx

[ return to 127.0.0.26 ]

# 2.10.2 High 3389/tcp

# High (CVSS: 9.3)

NVT: Microsoft Remote Desktop Protocol Remote Code Execution Vulnerabilities (2671387)

#### Summary

This host is missing a critical security update according to Microsoft Bulletin MS12-020.

#### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

Successful exploitation could allow remote attackers to execute arbitrary code as the logged-on user or cause a denial of service condition.

#### Solution

Solution type: VendorFix

Run Windows Update and update the listed hotfixes or download and update mentioned hotfixes in the advisory from the below link,

http://technet.microsoft.com/en-us/security/bulletin/ms12-020

## Affected Software/OS

Microsoft Windows 7 Service Pack 1 and prior

... continued from previous page ...

Microsoft Windows XP Service Pack 3 and prior Microsoft Windows 2K3 Service Pack 2 and prior Microsoft Windows Vista Service Pack 2 and prior Microsoft Windows Server 2008 Service Pack 2 and prior

#### Vulnerability Insight

The flaws are due to the way Remote Desktop Protocol accesses an object in memory that has been improperly initialized or has been deleted and the way RDP service processes the packets.

#### Vulnerability Detection Method

Details: Microsoft Remote Desktop Protocol Remote Code Execution Vulnerabilities (267138.

 $\hookrightarrow$ ..

OID:1.3.6.1.4.1.25623.1.0.902818 Version used: \$Revision: 4234 \$

#### References

CVE: CVE-2012-0002, CVE-2012-0152

BID:52353, 52354

Other:

URL:http://blog.binaryninjas.org/?p=58 URL: http://secunia.com/advisories/48395 URL:http://support.microsoft.com/kb/2671387 URL:http://www.securitytracker.com/id/1026790

URL:http://technet.microsoft.com/en-us/security/bulletin/ms12-020

[ return to 127.0.0.26 ]

#### 2.10.3 Medium 135/tcp

# Summary

Distributed Computing Environment / Remote Procedure Calls (DCE/RPC) or MSRPC services running on the remote host can be enumerated by connecting on port 135 and doing the appropriate queries.

#### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

# Impact

An attacker may use this fact to gain more knowledge about the remote host.

## Solution

Solution type: Mitigation Filter incoming traffic to this ports.

... continued from previous page ...

## Vulnerability Detection Method

Details: DCE/RPC and MSRPC Services Enumeration Reporting

OID:1.3.6.1.4.1.25623.1.0.10736 Version used: \$Revision: 4998 \$

[ return to 127.0.0.26 ]

# 2.10.4 Medium 22/tcp

Medium (CVSS: 4.3)

NVT: SSH Weak Encryption Algorithms Supported

## Summary

The remote SSH server is configured to allow weak encryption algorithms.

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Mitigation

Disable the weak encryption algorithms.

## Vulnerability Insight

The 'arcfour' cipher is the Arcfour stream cipher with 128-bit keys. The Arcfour cipher is believed to be compatible with the RC4 cipher [SCHNEIER]. Arcfour (and RC4) has problems with weak keys, and should not be used anymore.

The 'none' algorithm specifies that no encryption is to be done. Note that this method provides no confidentiality protection, and it is NOT RECOMMENDED to use it.

A vulnerability exists in SSH messages that employ CBC mode that may allow an attacker to recover plaintext from a block of ciphertext.

# Vulnerability Detection Method

Check if remote ssh service supports Arcfour, none or CBC ciphers.

Details: SSH Weak Encryption Algorithms Supported

OID:1.3.6.1.4.1.25623.1.0.105611 Version used: \$Revision: 4490 \$

# References

Other:

URL:https://tools.ietf.org/html/rfc4253#section-6.3

URL:https://www.kb.cert.org/vuls/id/958563

[ return to 127.0.0.26 ]

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## 2.10.5 Low 22/tcp

Low (CVSS: 2.6)

NVT: SSH Weak MAC Algorithms Supported

#### Summary

The remote SSH server is configured to allow weak MD5 and/or 96-bit MAC algorithms.

## Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

Solution

**Solution type:** Mitigation Disable the weak MAC algorithms.

# Vulnerability Detection Method

Details: SSH Weak MAC Algorithms Supported

OID:1.3.6.1.4.1.25623.1.0.105610 Version used: \$Revision: 4490 \$

[ return to 127.0.0.26 ]

## $2.11 \quad 127.0.0.13$

Service (Port)	Threat Level
$22/\mathrm{tcp}$	High
general/tcp	High
$445/\mathrm{tcp}$	High
$22/\mathrm{tcp}$	Medium
$2011/\mathrm{tcp}$	Medium
$22/\mathrm{tcp}$	Low

# 2.11.1 High 22/tcp

# High (CVSS: 7.8)

NVT: OpenSSH Denial of Service And User Enumeration Vulnerabilities (Windows)

## Summary

This host is installed with openssh and is prone to denial of service and user enumeration vulnerabilities.

## Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### **Impact**

Successfully exploiting this issue allows remote attackers to cause a denial of service (crypt CPU consumption) and to enumerate users by leveraging the timing difference between responses when a large password is provided.

## Solution

Solution type: VendorFix

Upgrade to OpenSSH version 7.3 or later. For updates refer to http://www.openssh.com

# Affected Software/OS

OpenSSH versions before 7.3 on Windows

#### Vulnerability Insight

Multiple flaws exists due to,

- The auth\_password function in 'auth-passwd.c' script does not limit password lengths for password authentication.
- The sshd in OpenSSH, when SHA256 or SHA512 are used for user password hashing uses BLOWFISH hashing on a static password when the username does not exist and it takes much longer to calculate SHA256/SHA512 hash than BLOWFISH hash.

#### **Vulnerability Detection Method**

Checks if a vulnerable version is present on the target host.

Details: OpenSSH Denial of Service And User Enumeration Vulnerabilities (Windows)

OID:1.3.6.1.4.1.25623.1.0.809121 Version used: \$Revision: 5083 \$

#### References

CVE: CVE-2016-6515, CVE-2016-6210

BID:92212 Other:

URL:http://www.openssh.com/txt/release-7.3

URL:http://seclists.org/fulldisclosure/2016/Jul/51

URL:https://security-tracker.debian.org/tracker/CVE-2016-6210

URL:http://openwall.com/lists/oss-security/2016/08/01/2

#### High (CVSS: 7.5)

NVT: OpenSSH Multiple Vulnerabilities Jan17 (Windows)

#### Summary

This host is installed with openssh and is prone to multiple vulnerabilities.

#### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

# Impact

Successfully exploiting this issue allows local users to obtain sensitive private-key information, to gain privileges, conduct a senial-of-service condition and allows remote attackers to execute arbitrary local PKCS#11 modules.

Impact Level: Application

#### Solution

Solution type: VendorFix

Upgrade to OpenSSH version 7.4 or later. For updates refer to http://www.openssh.com

#### Affected Software/OS

OpenSSH versions before 7.4 on Windows

#### Vulnerability Insight

Multiple flaws exists due to, - An 'authfile.c' script does not properly consider the effects of realloc on buffer contents. - The shared memory manager (associated with pre-authentication compression) does not ensure that a bounds check is enforced by all compilers. - The sshd in OpenSSH creates forwarded Unix-domain sockets as root, when privilege separation is not used. - An untrusted search path vulnerability in ssh-agent.c in ssh-agent. - NULL pointer dereference error due to an out-of-sequence NEWKEYS message.

## **Vulnerability Detection Method**

Get the installed version with the help of detect NVT and check the version is vulnerable or not. Details: OpenSSH Multiple Vulnerabilities Jan17 (Windows)

OID:1.3.6.1.4.1.25623.1.0.810325 Version used: \$Revision: 5084 \$

# References

CVE: CVE-2016-10009, CVE-2016-10010, CVE-2016-10011, CVE-2016-10012, CVE-2016-10  $\hookrightarrow$  708

BID:94968, 94972, 94977, 94975

#### Other:

URL:https://www.openssh.com/txt/release-7.4

URL:http://www.openwall.com/lists/oss-security/2016/12/19/2

URL:http://blog.swiecki.net/2018/01/fuzzing-tcp-servers.html

URL:https://anongit.mindrot.org/openssh.git/commit/?id=28652bca29046f62c7045e

 $\hookrightarrow$  933e6b931de1d16737

[ return to 127.0.0.13 ]

# 2.11.2 High general/tcp

High (CVSS: 10.0)

NVT: OS End Of Life Detection

#### Summary

OS End Of Life Detection

The Operating System on the remote host has reached the end of life and should not be used anymore.

## Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

Solution

Solution type: Mitigation

# Vulnerability Detection Method

Details: OS End Of Life Detection OID:1.3.6.1.4.1.25623.1.0.103674 Version used: \$Revision: 4111 \$

[ return to 127.0.0.13 ]

# 2.11.3 High 445/tcp

# High (CVSS: 0.0)

NVT: SMBv1 enabled (Remote Check)

#### Summary

The remote Windows host is prone to an unspecified remote code execution vulnerability in SMBv1 protocol.

This NVT has been replaced by NVT 'Microsoft Windows SMB Server Multiple Vulnerabilities-Remote (4013389)' (OID: 1.3.6.1.4.1.25623.1.0.810810).

#### **Vulnerability Detection Result**

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Workaround

Disable SMB v1 and/or block all versions of SMB at the network boundary by blocking TCP port 445 with related protocols on UDP ports 137-138 and TCP port 139, for all boundary devices.

# Vulnerability Insight

The remote Windows host is supporting SMBv1 and is therefore prone to an unspecified remote code execution vulnerability. This vulnerability is related to the 'Shadow Brokers' group.

## Log Method

Details: SMBv1 enabled (Remote Check)

OID:1.3.6.1.4.1.25623.1.0.140151 Version used: \$Revision: 5222 \$

#### References

Other:

URL:https://www.us-cert.gov/ncas/current-activity/2017/01/16/SMB-Security-Best

→-Practices

URL:https://support.microsoft.com/en-us/kb/2696547

URL:https://support.microsoft.com/en-us/kb/204279

URL:https://technet.microsoft.com/en-us/library/security/MS17-010

[ return to 127.0.0.13 ]

## 2.11.4 Medium 22/tcp

Medium (CVSS: 4.3)

NVT: SSH Weak Encryption Algorithms Supported

#### Summary

The remote SSH server is configured to allow weak encryption algorithms.

#### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Mitigation

Disable the weak encryption algorithms.

# Vulnerability Insight

The 'arcfour' cipher is the Arcfour stream cipher with 128-bit keys. The Arcfour cipher is believed to be compatible with the RC4 cipher [SCHNEIER]. Arcfour (and RC4) has problems with weak keys, and should not be used anymore.

The 'none' algorithm specifies that no encryption is to be done. Note that this method provides no confidentiality protection, and it is NOT RECOMMENDED to use it.

A vulnerability exists in SSH messages that employ CBC mode that may allow an attacker to recover plaintext from a block of ciphertext.

#### Vulnerability Detection Method

Check if remote ssh service supports Arcfour, none or CBC ciphers.

Details: SSH Weak Encryption Algorithms Supported

OID:1.3.6.1.4.1.25623.1.0.105611 Version used: \$Revision: 4490 \$

#### References

Other:

URL:https://tools.ietf.org/html/rfc4253#section-6.3

URL:https://www.kb.cert.org/vuls/id/958563

[ return to 127.0.0.13 ]

## 2.11.5 Medium 2011/tcp

Medium (CVSS: 6.8)

NVT: SSL/TLS: OpenSSL CCS Man in the Middle Security Bypass Vulnerability

## Summary

OpenSSL is prone to security-bypass vulnerability.

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

Successfully exploiting this issue may allow attackers to obtain sensitive information by conducting a man-in-the-middle attack. This may lead to other attacks.

#### Solution

**Solution type:** VendorFix Updates are available.

## Affected Software/OS

OpenSSL before 0.9.8za, 1.0.0 before 1.0.0m and 1.0.1 before 1.0.1h

## Vulnerability Insight

OpenSSL does not properly restrict processing of ChangeCipherSpec messages, which allows man-in-the-middle attackers to trigger use of a zero-length master key in certain OpenSSL-to-OpenSSL communications, and consequently hijack sessions or obtain sensitive information, via a crafted TLS handshake, aka the 'CCS Injection' vulnerability.

## Vulnerability Detection Method

Send two SSL ChangeCipherSpec request and check the response.

Details: SSL/TLS: OpenSSL CCS Man in the Middle Security Bypass Vulnerability

OID:1.3.6.1.4.1.25623.1.0.105042 Version used: \$Revision: 4679 \$

#### References

CVE: CVE-2014-0224

BID:67899 Other:

URL: http://www.securityfocus.com/bid/67899

URL:http://openssl.org/

Medium (CVSS: 5.0)

NVT: SSL/TLS: Certificate Expired

# Summary

The remote server's SSL/TLS certificate has already expired.

#### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Mitigation

Replace the SSL/TLS certificate by a new one.

# Vulnerability Insight

This script checks expiry dates of certificates associated with SSL/TLS-enabled services on the target and reports whether any have already expired.

#### Vulnerability Detection Method

Details: SSL/TLS: Certificate Expired

OID:1.3.6.1.4.1.25623.1.0.103955 Version used: \$Revision: 4765 \$

#### Medium (CVSS: 4.3)

NVT: SSL/TLS: Report Weak Cipher Suites

#### Summary

This routine reports all Weak SSL/TLS cipher suites accepted by a service.

NOTE: No severity for SMTP services with 'Opportunistic TLS' and weak cipher suites on port 25/tcp is reported. If too strong cipher suites are configured for this service the alternative would be to fall back to an even more insecure cleartext communication.

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

# Solution type: Mitigation

The configuration of this services should be changed so that it does not accept the listed weak cipher suites anymore.

Please see the references for more resources supporting you with this task.

#### Vulnerability Insight

These rules are applied for the evaluation of the cryptographic strength:

- RC4 is considered to be weak (CVE-2013-2566, CVE-2015-2808).
- Ciphers using 64 bit or less are considered to be vulnerable to brute force methods and therefore considered as weak (CVE-2015-4000).
- 1024 bit RSA authentication is considered to be insecure and therefore as weak.
- Any cipher considered to be secure for only the next 10 years is considered as medium
- Any other cipher is considered as strong

## Vulnerability Detection Method

Details: SSL/TLS: Report Weak Cipher Suites

OID:1.3.6.1.4.1.25623.1.0.103440 Version used: \$Revision: 4863 \$

#### References

CVE: CVE-2013-2566, CVE-2015-2808, CVE-2015-4000

Other:

URL:https://www.bsi.bund.de/SharedDocs/Warnmeldungen/DE/CB/warnmeldung\_cb-k16-

 $\hookrightarrow$ 1465\_update\_6.html

URL:https://bettercrypto.org/

URL:https://mozilla.github.io/server-side-tls/ssl-config-generator/

#### Medium (CVSS: 4.3)

NVT: SSL/TLS: Deprecated SSLv2 and SSLv3 Protocol Detection

#### Summary

It was possible to detect the usage of the deprecated SSLv2 and/or SSLv3 protocol on this system.

#### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

An attacker might be able to use the known cryptographic flaws to eavesdrop the connection between clients and the service to get access to sensitive data transferred within the secured connection.

# Solution

# Solution type: Mitigation

It is recommended to disable the deprecated SSLv2 and/or SSLv3 protocols in favor of the TLSv1+ protocols. Please see the references for more information.

#### Affected Software/OS

All services providing an encrypted communication using the SSLv2 and/or SSLv3 protocols.

# Vulnerability Insight

The SSLv2 and SSLv3 protocols containing known cryptographic flaws like:

- Padding Oracle On Downgraded Legacy Encryption (POODLE, CVE-2014-3566)
- Decrypting RSA with Obsolete and Weakened eNcryption (DROWN, CVE-2016-0800)

# Vulnerability Detection Method

Check the used protocols of the services provided by this system.

Details: SSL/TLS: Deprecated SSLv2 and SSLv3 Protocol Detection

OID:1.3.6.1.4.1.25623.1.0.111012 Version used: \$Revision: 4686 \$

# References

CVE: CVE-2016-0800, CVE-2014-3566

URL:https://bettercrypto.org/

... continued from previous page ... URL: https://www.enisa.europa.eu/activities/identity-and-trust/library/delivera ⇔bles/algorithms-key-sizes-and-parameters-report URL:https://mozilla.github.io/server-side-tls/ssl-config-generator/

URL:https://drownattack.com/ URL:https://www.imperialviolet.org/2014/10/14/poodle.html

## Summary

This host is prone to an information disclosure vulnerability.

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

Successful exploitation will allow a man-in-the-middle attackers gain access to the plain text data stream.

#### Solution

Solution type: Mitigation Possible Mitigations are:

- Disable SSLv3
- Disable cipher suites supporting CBC cipher modes
- Enable TLS  $\,$  FALLBACK  $\,$  SCSV if the service is providing TLSv1.0+

# Vulnerability Insight

The flaw is due to the block cipher padding not being deterministic and not covered by the Message Authentication Code

## Vulnerability Detection Method

Evaluate previous collected information about this service.

Details: SSL/TLS: SSLv3 Protocol CBC Cipher Suites Information Disclosure Vulnerability .

OID:1.3.6.1.4.1.25623.1.0.802087 Version used: \$Revision: 4749 \$

#### References

CVE: CVE-2014-3566

BID:70574 Other:

URL:https://www.openssl.org/~bodo/ssl-poodle.pdf

URL: https://www.imperialviolet.org/2014/10/14/poodle.html

URL:https://www.dfranke.us/posts/2014-10-14-how-poodle-happened.html
URL:http://googleonlinesecurity.blogspot.in/2014/10/this-poodle-bites-exploit

→ing-ssl-30.html

#### Medium (CVSS: 4.0)

NVT: SSL/TLS: Certificate Signed Using A Weak Signature Algorithm

#### Summary

The remote service is using a SSL/TLS certificate in the certificate chain that has been signed using a cryptographically weak hashing algorithm.

#### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Mitigation

Servers that use SSL/TLS certificates signed with a weak SHA-1, MD5, MD4 or MD2 hashing algorithm will need to obtain new SHA-2 signed SSL/TLS certificates to avoid web browser SSL/TLS certificate warnings.

#### Vulnerability Insight

The following hashing algorithms used for signing SSL/TLS certificates are considered cryptographically weak and not secure enough for ongoing use:

- Secure Hash Algorithm 1 (SHA-1)
- Message Digest 5 (MD5)
- Message Digest 4 (MD4)
- Message Digest 2 (MD2)

Beginning as late as January 2017 and as early as June 2016, browser developers such as Microsoft and Google will begin warning users when visiting web sites that use SHA-1 signed Secure Socket Layer (SSL) certificates.

NOTE: The script preference allows to set one or more custom SHA-1 fingerprints of CA certificates which are trusted by this routine. The fingerprints needs to be passed comma-separated and case-insensitive:

Fingerprint1

or

fingerprint 1, Fingerprint 2

## **Vulnerability Detection Method**

Check which hashing algorithm was used to sign the remote  $\mathrm{SSL}/\mathrm{TLS}$  certificate. Details:  $\mathrm{SSL}/\mathrm{TLS}$ : Certificate Signed Using A Weak Signature Algorithm

OID:1.3.6.1.4.1.25623.1.0.105880 Version used: \$Revision: 4781 \$

#### References

Other:

URL:https://blog.mozilla.org/security/2014/09/23/phasing-out-certificates-with  $\hookrightarrow$ -sha-1-based-signature-algorithms/

[ return to 127.0.0.13 ]

# 2.11.6 Low 22/tcp

Low (CVSS: 2.6)

NVT: SSH Weak MAC Algorithms Supported

#### Summary

The remote SSH server is configured to allow weak MD5 and/or 96-bit MAC algorithms.

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

**Solution type:** Mitigation Disable the weak MAC algorithms.

## Vulnerability Detection Method

Details: SSH Weak MAC Algorithms Supported

OID:1.3.6.1.4.1.25623.1.0.105610 Version used: \$Revision: 4490 \$

[ return to 127.0.0.13 ]

## $2.12 \quad 127.0.0.7$

Service (Port)	Threat Level
$3389/\mathrm{tcp}$	High
$445/{ m tcp}$	High
$135/\mathrm{tcp}$	Medium
$8080/\mathrm{tcp}$	Medium
$443/\mathrm{tcp}$	Medium
$8098/\mathrm{tcp}$	Medium
$80/\mathrm{tcp}$	Medium
$21/\mathrm{tcp}$	Medium

# 2.12.1 High 3389/tcp

High (CVSS: 9.3)

NVT: Microsoft Remote Desktop Protocol Remote Code Execution Vulnerabilities (2671387)

... continued from previous page ...

#### Summary

This host is missing a critical security update according to Microsoft Bulletin MS12-020.

#### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

Successful exploitation could allow remote attackers to execute arbitrary code as the logged-on user or cause a denial of service condition.

#### Solution

Solution type: VendorFix

Run Windows Update and update the listed hotfixes or download and update mentioned hotfixes in the advisory from the below link,

http://technet.microsoft.com/en-us/security/bulletin/ms12-020

# Affected Software/OS

Microsoft Windows 7 Service Pack 1 and prior

Microsoft Windows XP Service Pack 3 and prior

Microsoft Windows 2K3 Service Pack 2 and prior

Microsoft Windows Vista Service Pack 2 and prior

Microsoft Windows Server 2008 Service Pack 2 and prior

#### Vulnerability Insight

The flaws are due to the way Remote Desktop Protocol accesses an object in memory that has been improperly initialized or has been deleted and the way RDP service processes the packets.

# Vulnerability Detection Method

Details: Microsoft Remote Desktop Protocol Remote Code Execution Vulnerabilities (267138.

→.. NID.1 9 € 1 4 1 9

OID:1.3.6.1.4.1.25623.1.0.902818 Version used: \$Revision: 4234 \$

#### References

CVE: CVE-2012-0002, CVE-2012-0152

BID:52353, 52354

Other:

URL:http://blog.binaryninjas.org/?p=58
URL:http://secunia.com/advisories/48395
URL:http://support.microsoft.com/kb/2671387

URL:http://www.securitytracker.com/id/1026790

URL: http://technet.microsoft.com/en-us/security/bulletin/ms12-020

[ return to 127.0.0.7 ]

#### 2.12.2 High 445/tcp

# High (CVSS: 10.0)

 $\operatorname{NVT}$ : Vulnerabilities in SMB Could Allow Remote Code Execution (958687) - Remote

100

#### Summary

This host is missing a critical security update according to Microsoft Bulletin MS09-001.

#### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

Successful exploitation could allow remote unauthenticated attackers to cause denying the service by sending a specially crafted network message to a system running the server service.

Impact Level: System/Network

## Solution

#### Solution type: VendorFix

Run Windows Update and update the listed hot fixes or download and update mentioned hot fixes in the advisory from the below link,  $\frac{\text{http:}}{\text{www.microsoft.com/technet/security/bulletin/ms09-001.mspx}}$ 

#### Affected Software/OS

Microsoft Windows 2K Service Pack 4 and prior. Microsoft Windows XP Service Pack 3 and prior. Microsoft Windows 2003 Service Pack 2 and prior.

## Vulnerability Insight

The issue is due to the way Server Message Block (SMB) Protocol software handles specially crafted SMB packets.

# Vulnerability Detection Method

Details: Vulnerabilities in SMB Could Allow Remote Code Execution (958687) - Remote

OID:1.3.6.1.4.1.25623.1.0.900233 Version used: \$Revision: 4692 \$

#### References

CVE: CVE-2008-4114, CVE-2008-4834, CVE-2008-4835

BID:31179 Other:

URL:http://www.milwOrm.com/exploits/6463

URL: http://www.microsoft.com/technet/security/bulletin/ms09-001.mspx

#### High (CVSS: 0.0)

NVT: SMBv1 enabled (Remote Check)

#### Summary

The remote Windows host is prone to an unspecified remote code execution vulnerability in SMBv1 protocol.

This NVT has been replaced by NVT 'Microsoft Windows SMB Server Multiple Vulnerabilities-Remote (4013389)' (OID: 1.3.6.1.4.1.25623.1.0.810810).

## Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Workaround

Disable SMB v1 and/or block all versions of SMB at the network boundary by blocking TCP port 445 with related protocols on UDP ports 137-138 and TCP port 139, for all boundary devices.

## Vulnerability Insight

The remote Windows host is supporting SMBv1 and is therefore prone to an unspecified remote code execution vulnerability. This vulnerability is related to the 'Shadow Brokers' group.

## Log Method

Details: SMBv1 enabled (Remote Check)

OID:1.3.6.1.4.1.25623.1.0.140151 Version used: \$Revision: 5222 \$

#### References

## Other:

URL:https://www.us-cert.gov/ncas/current-activity/2017/01/16/SMB-Security-Best

URL:https://support.microsoft.com/en-us/kb/2696547 URL:https://support.microsoft.com/en-us/kb/204279

URL:https://technet.microsoft.com/en-us/library/security/MS17-010

#### High (CVSS: 10.0)

NVT: Microsoft Windows SMB Server NTLM Multiple Vulnerabilities (971468)

#### Summary

This host is missing a critical security update according to Microsoft Bulletin MS10-012.

## Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

Successful exploitation will allow remote attackers to execute arbitrary code or cause a denial of service or bypass the authentication mechanism via brute force technique. Impact Level: System/Application

## Solution

Solution type: VendorFix

Run Windows Update and update the listed hot fixes or download and update mentioned hot fixes in the advisory from the below link,  $\frac{\text{http:}}{\text{www.microsoft.com/technet/security/bulletin/ms10-012.mspx}}$ 

#### Affected Software/OS

Microsoft Windows 7 Microsoft Windows 2000 Service Pack and prior Microsoft Windows XP Service Pack 3 and prior Microsoft Windows Vista Service Pack 2 and prior Microsoft Windows Server 2003 Service Pack 2 and prior Microsoft Windows Server 2008 Service Pack 2 and prior

#### Vulnerability Insight

- An input validation error exists while processing SMB requests and can be exploited to cause a buffer overflow via a specially crafted SMB packet. - An error exists in the SMB implementation while parsing SMB packets during the Negotiate phase causing memory corruption via a specially crafted SMB packet. - NULL pointer dereference error exists in SMB while verifying the 'share' and 'servername' fields in SMB packets causing denial of service. - A lack of cryptographic entropy when the SMB server generates challenges during SMB NTLM authentication and can be exploited to bypass the authentication mechanism.

#### **Vulnerability Detection Method**

Details: Microsoft Windows SMB Server NTLM Multiple Vulnerabilities (971468)

OID:1.3.6.1.4.1.25623.1.0.902269 Version used: \$Revision: 5136 \$

#### References

CVE: CVE-2010-0020, CVE-2010-0021, CVE-2010-0022, CVE-2010-0231

Other:

URL:http://secunia.com/advisories/38510/
URL:http://support.microsoft.com/kb/971468

URL:http://www.vupen.com/english/advisories/2010/0345

URL:http://www.microsoft.com/technet/security/bulletin/ms10-012.mspx

[ return to 127.0.0.7 ]

#### 2.12.3 Medium 135/tcp

## Medium (CVSS: 5.0)

NVT: DCE/RPC and MSRPC Services Enumeration Reporting

#### Summary

Distributed Computing Environment / Remote Procedure Calls (DCE/RPC) or MSRPC services running on the remote host can be enumerated by connecting on port 135 and doing the appropriate queries.

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

# Impact

An attacker may use this fact to gain more knowledge about the remote host.

#### Solution

Solution type: Mitigation

Filter incoming traffic to this ports.

# Vulnerability Detection Method

Details: DCE/RPC and MSRPC Services Enumeration Reporting

OID:1.3.6.1.4.1.25623.1.0.10736 Version used: \$Revision: 4998 \$

[ return to 127.0.0.7 ]

# 2.12.4 Medium 8080/tcp

# Medium (CVSS: 5.0)

NVT: IIS Service Pack - 404

## Summary

Ensure that the server is running the latest stable Service Pack

## Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

# Solution

Solution type: VendorFix

The Patch level (Service Pack) of the remote IIS server appears to be lower than the current IIS service pack level. As each service pack typically contains many security patches, the server may be at risk.

Caveat: This test makes assumptions of the remote patch level based on static return values (Content-Length) within the IIS Servers 404 error message. As such, the test can not be totally reliable and should be manually confirmed.

# Vulnerability Detection Method

Details: IIS Service Pack - 404 OID:1.3.6.1.4.1.25623.1.0.11874 Version used: \$Revision: 4703 \$

[ return to 127.0.0.7 ]

## 2.12.5 Medium 443/tcp

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## Medium (CVSS: 5.0)

NVT: Microsoft IIS Tilde Character Information Disclosure Vulnerability

#### Summary

This host is running Microsoft IIS Webserver and is prone to information disclosure vulnerability.

#### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

Successful exploitation will allow remote attackers to obtain sensitive information that could aid in further attacks.

#### Solution

Solution type: WillNotFix

No known solution was made available for at least one year since the disclosure of this vulnerability. Likely none will be provided anymore. General solution options are to upgrade to a newer release, disable respective features, remove the product or replace the product by another one.

#### Affected Software/OS

Microsoft Internet Information Services versions 7.5 and prior

#### Vulnerability Insight

Microsoft IIS fails to validate a specially crafted GET request containing a '' tilde character, which allows to disclose all short-names of folders and files having 4 letters extensions.

## Vulnerability Detection Method

 $\operatorname{Details}$ : Microsoft IIS Tilde Character Information Disclosure Vulnerability

OID:1.3.6.1.4.1.25623.1.0.802887 Version used: \$Revision: 3565 \$

#### References

BID:54251

Other:

URL:http://www.exploit-db.com/exploits/19525

URL:http://code.google.com/p/iis-shortname-scanner-poc

URL:http://soroush.secproject.com/downloadable/iis\_tilde\_shortname\_disclosure

# Medium (CVSS: 5.0)

NVT: IIS Service Pack - 404

#### Summary

Ensure that the server is running the latest stable Service Pack

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

## Solution type: VendorFix

The Patch level (Service Pack) of the remote IIS server appears to be lower than the current IIS service pack level. As each service pack typically contains many security patches, the server may be at risk.

Caveat: This test makes assumptions of the remote patch level based on static return values (Content-Length) within the IIS Servers 404 error message. As such, the test can not be totally reliable and should be manually confirmed.

#### Vulnerability Detection Method

Details: IIS Service Pack - 404 OID:1.3.6.1.4.1.25623.1.0.11874 Version used: \$Revision: 4703 \$

[ return to 127.0.0.7 ]

# 2.12.6 Medium 8098/tcp

#### Modium (CVSS: 5.0)

NVT: SSL/TLS: Report Vulnerable Cipher Suites for HTTPS

#### Summary

This routine reports all SSL/TLS cipher suites accepted by a service where attack vectors exists only on HTTPS services.

#### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

# Solution

# Solution type: Mitigation

The configuration of this services should be changed so that it does not accept the listed cipher suites anymore.

Please see the references for more resources supporting you with this task.

#### Affected Software/OS

Services accepting vulnerable SSL/TLS cipher suites via HTTPS.

## Vulnerability Insight

These rules are applied for the evaluation of the vulnerable cipher suites:

- 64-bit block cipher 3DES vulnerable to the SWEET32 attack (CVE-2016-2183).

# Vulnerability Detection Method

Details: SSL/TLS: Report Vulnerable Cipher Suites for HTTPS

OID:1.3.6.1.4.1.25623.1.0.108031 Version used: \$Revision: 5232 \$

#### References

CVE: CVE-2016-2183, CVE-2016-6329

Other:

URL:https://bettercrypto.org/

URL:https://mozilla.github.io/server-side-tls/ssl-config-generator/

URL:https://sweet32.info/

#### Medium (CVSS: 5.0)

NVT: SSL/TLS: Certificate Expired

#### Summary

The remote server's SSL/TLS certificate has already expired.

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Mitigation

Replace the SSL/TLS certificate by a new one.

#### Vulnerability Insight

This script checks expiry dates of certificates associated with SSL/TLS-enabled services on the target and reports whether any have already expired.

# **Vulnerability Detection Method**

Details: SSL/TLS: Certificate Expired

OID:1.3.6.1.4.1.25623.1.0.103955 Version used: \$Revision: 4765 \$

#### Medium (CVSS: 4.3)

NVT: SSL/TLS: Deprecated SSLv2 and SSLv3 Protocol Detection

#### Summary

It was possible to detect the usage of the deprecated SSLv2 and/or SSLv3 protocol on this system.

## Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

# Impact

An attacker might be able to use the known cryptographic flaws to eavesdrop the connection between clients and the service to get access to sensitive data transferred within the secured connection.

#### Solution

Solution type: Mitigation

It is recommended to disable the deprecated SSLv2 and/or SSLv3 protocols in favor of the TLSv1+ protocols. Please see the references for more information.

## Affected Software/OS

All services providing an encrypted communication using the SSLv2 and/or SSLv3 protocols.

#### Vulnerability Insight

The SSLv2 and SSLv3 protocols containing known cryptographic flaws like:

- Padding Oracle On Downgraded Legacy Encryption (POODLE, CVE-2014-3566)
- Decrypting RSA with Obsolete and Weakened eNcryption (DROWN, CVE-2016-0800)

## Vulnerability Detection Method

Check the used protocols of the services provided by this system.

Details: SSL/TLS: Deprecated SSLv2 and SSLv3 Protocol Detection

OID:1.3.6.1.4.1.25623.1.0.111012 Version used: \$Revision: 4686 \$

#### References

CVE: CVE-2016-0800, CVE-2014-3566

Other

URL: https://www.enisa.europa.eu/activities/identity-and-trust/library/delivera

 $\hookrightarrow \texttt{bles/algorithms-key-sizes-and-parameters-report}$ 

URL:https://bettercrypto.org/

URL:https://mozilla.github.io/server-side-tls/ssl-config-generator/

URL:https://drownattack.com/

URL:https://www.imperialviolet.org/2014/10/14/poodle.html

#### Medium (CVSS: 4.3)

NVT: SSL/TLS: SSLv3 Protocol CBC Cipher Suites Information Disclosure Vulnerability (POO-DLE)

## Summary

This host is prone to an information disclosure vulnerability.

#### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

Successful exploitation will allow a man-in-the-middle attackers gain access to the plain text data stream.

#### Solution

**Solution type:** Mitigation Possible Mitigations are:

- Disable SSLv3
- Disable cipher suites supporting CBC cipher modes
- Enable TLS FALLBACK SCSV if the service is providing TLSv1.0+

## Vulnerability Insight

The flaw is due to the block cipher padding not being deterministic and not covered by the Message Authentication Code

#### Vulnerability Detection Method

Evaluate previous collected information about this service.

Details: SSL/TLS: SSLv3 Protocol CBC Cipher Suites Information Disclosure Vulnerability .

 $\hookrightarrow$  . .

OID:1.3.6.1.4.1.25623.1.0.802087 Version used: \$Revision: 4749 \$

#### References

CVE: CVE-2014-3566

BID:70574 Other:

URL:https://www.openssl.org/~bodo/ssl-poodle.pdf

URL: https://www.imperialviolet.org/2014/10/14/poodle.html

URL: https://www.dfranke.us/posts/2014-10-14-how-poodle-happened.html

URL:http://googleonlinesecurity.blogspot.in/2014/10/this-poodle-bites-exploit

 $\hookrightarrow$ ing-ssl-30.html

#### Medium (CVSS: 4.3)

NVT: SSL/TLS: RSA Temporary Key Handling 'RSA EXPORT' Downgrade Issue (FREAK)

#### Summary

This host is accepting 'RSA EXPORT' cipher suites and is prone to man in the middle attack.

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

# Impact

Successful exploitation will allow remote attacker to downgrade the security of a session to use 'RSA\_EXPORT' cipher suites, which are significantly weaker than non-export cipher suites. This may allow a man-in-the-middle attacker to more easily break the encryption and monitor or tamper with the encrypted stream.

## Solution

Solution type: VendorFix

- Remove support for 'RSA EXPORT' cipher suites from the service.

- If running OpenSSL update to version 0.9.8zd or 1.0.0p or 1.0.1k or later For updates refer to https://www.openssl.org

# Affected Software/OS

- Hosts accepting 'RSA EXPORT' cipher suites
- OpenSSL version before 0.9.8zd, 1.0.0 before 1.0.0p, and 1.0.1 before 1.0.1k.

# Vulnerability Insight

Flaw is due to improper handling RSA temporary keys in a non-export RSA key exchange cipher suite.

# Vulnerability Detection Method

Check previous collected cipher suites saved in the KB.

Details: SSL/TLS: RSA Temporary Key Handling 'RSA\_EXPORT' Downgrade Issue (FREAK)

OID:1.3.6.1.4.1.25623.1.0.805142 Version used: \$Revision: 4781 \$

#### References

CVE: CVE-2015-0204

BID:71936 Other:

URL:https://freakattack.com

URL:http://secpod.org/blog/?p=3818

URL: http://blog.cryptographyengineering.com/2015/03/attack-of-week-freak-or-f

 $\hookrightarrow$ actoring-nsa.html

#### Medium (CVSS: 4.3)

NVT: SSL/TLS: Report Weak Cipher Suites

### Summary

This routine reports all Weak SSL/TLS cipher suites accepted by a service.

NOTE: No severity for SMTP services with 'Opportunistic TLS' and weak cipher suites on port 25/tcp is reported. If too strong cipher suites are configured for this service the alternative would be to fall back to an even more insecure cleartext communication.

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

# Solution

Solution type: Mitigation

The configuration of this services should be changed so that it does not accept the listed weak cipher suites anymore.

Please see the references for more resources supporting you with this task.

# Vulnerability Insight

These rules are applied for the evaluation of the cryptographic strength:

- RC4 is considered to be weak (CVE-2013-2566, CVE-2015-2808).
- Ciphers using 64 bit or less are considered to be vulnerable to brute force methods and therefore considered as weak (CVE-2015-4000).
- 1024 bit RSA authentication is considered to be insecure and therefore as weak.
- Any cipher considered to be secure for only the next 10 years is considered as medium
- Any other cipher is considered as strong

# **Vulnerability Detection Method**

Details: SSL/TLS: Report Weak Cipher Suites

OID:1.3.6.1.4.1.25623.1.0.103440 Version used: \$Revision: 4863 \$

#### References

CVE: CVE-2013-2566, CVE-2015-2808, CVE-2015-4000

Other:

URL:https://www.bsi.bund.de/SharedDocs/Warnmeldungen/DE/CB/warnmeldung\_cb-k16-

 $\hookrightarrow$ 1465\_update\_6.html

URL:https://bettercrypto.org/

URL:https://mozilla.github.io/server-side-tls/ssl-config-generator/

#### Medium (CVSS: 4.0)

NVT: SSL/TLS: Certificate Signed Using A Weak Signature Algorithm

### Summary

The remote service is using a SSL/TLS certificate in the certificate chain that has been signed using a cryptographically weak hashing algorithm.

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

### Solution

Solution type: Mitigation

Servers that use SSL/TLS certificates signed with a weak SHA-1, MD5, MD4 or MD2 hashing algorithm will need to obtain new SHA-2 signed SSL/TLS certificates to avoid web browser SSL/TLS certificate warnings.

# Vulnerability Insight

The following hashing algorithms used for signing SSL/TLS certificates are considered cryptographically weak and not secure enough for ongoing use:

- Secure Hash Algorithm 1 (SHA-1)
- Message Digest 5 (MD5)
- Message Digest 4 (MD4)
- Message Digest 2 (MD2)

Beginning as late as January 2017 and as early as June 2016, browser developers such as Microsoft and Google will begin warning users when visiting web sites that use SHA-1 signed Secure Socket Layer (SSL) certificates.

NOTE: The script preference allows to set one or more custom SHA-1 fingerprints of CA certificates which are trusted by this routine. The fingerprints needs to be passed comma-separated and case-insensitive:

Fingerprint1

or

fingerprint1, Fingerprint2

### **Vulnerability Detection Method**

Check which hashing algorithm was used to sign the remote  $\mathrm{SSL}/\mathrm{TLS}$  certificate. Details:  $\mathrm{SSL}/\mathrm{TLS}$ : Certificate Signed Using A Weak Signature Algorithm

OID:1.3.6.1.4.1.25623.1.0.105880 Version used: \$Revision: 4781 \$

#### References

Other:

 $\label{local_problem} \begin{tabular}{ll} URL: https://blog.mozilla.org/security/2014/09/23/phasing-out-certificates-with $$\hookrightarrow-sha-1-based-signature-algorithms/$ \end{tabular}$ 

[ return to 127.0.0.7 ]

### 2.12.7 Medium 80/tcp

#### Maliana (CVCC, FO)

NVT: Microsoft IIS Tilde Character Information Disclosure Vulnerability

#### Summary

This host is running Microsoft IIS Webserver and is prone to information disclosure vulnerability.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

Successful exploitation will allow remote attackers to obtain sensitive information that could aid in further attacks.

# Solution

### Solution type: WillNotFix

No known solution was made available for at least one year since the disclosure of this vulnerability. Likely none will be provided anymore. General solution options are to upgrade to a newer release, disable respective features, remove the product or replace the product by another one.

# Affected Software/OS

Microsoft Internet Information Services versions 7.5 and prior

# Vulnerability Insight

2 RESULTS PER HOST

... continued from previous page ...

Microsoft IIS fails to validate a specially crafted GET request containing a ' ' tilde character, which allows to disclose all short-names of folders and files having 4 letters extensions.

# Vulnerability Detection Method

 $\operatorname{Details}$ : Microsoft IIS Tilde Character Information Disclosure Vulnerability

OID:1.3.6.1.4.1.25623.1.0.802887 Version used: \$Revision: 3565 \$

#### References

BID:54251

Other:

URL:http://www.exploit-db.com/exploits/19525

URL:http://code.google.com/p/iis-shortname-scanner-poc

URL:http://soroush.secproject.com/downloadable/iis\_tilde\_shortname\_disclosure

 $\hookrightarrow$ .txt

URL:http://soroush.secproject.com/downloadable/microsoft\_iis\_tilde\_character\_

 $\hookrightarrow$ vulnerability\_feature.pdf

# Medium (CVSS: 5.0)

NVT: IIS Service Pack - 404

# Summary

Ensure that the server is running the latest stable Service Pack

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

# Solution

Solution type: VendorFix

The Patch level (Service Pack) of the remote IIS server appears to be lower than the current IIS service pack level. As each service pack typically contains many security patches, the server may be at risk.

Caveat: This test makes assumptions of the remote patch level based on static return values (Content-Length) within the IIS Servers 404 error message. As such, the test can not be totally reliable and should be manually confirmed.

# Vulnerability Detection Method

Details: IIS Service Pack - 404 OID:1.3.6.1.4.1.25623.1.0.11874 Version used: \$Revision: 4703 \$

[ return to 127.0.0.7 ]

# 2.12.8 Medium 21/tcp

2 RESULTS PER HOST

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Medium (CVSS: 6.4)

NVT: Check for Anonymous FTP Login

# Summary

This FTP Server allows anonymous logins.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

### Impact

Based on the files accessible via this anonymous FTP login and the permissions of this account an attacker might be able to:

- gain access to sensitive files
- upload or delete files

#### Solution

Solution type: Mitigation

If you do not want to share files, you should disable anonymous logins.

#### Vulnerability Insight

A host that provides an FTP service may additionally provide Anonymous FTP access as well. Under this arrangement, users do not strictly need an account on the host. Instead the user typically enters 'anonymous' or 'ftp' when prompted for username. Although users are commonly asked to send their email address as their password, little to no verification is actually performed on the supplied data.

# Vulnerability Detection Method

Try to login with an anonymous account at the remove FTP service.

Details: Check for Anonymous FTP Login

OID:1.3.6.1.4.1.25623.1.0.900600 Version used: \$Revision: 4987 \$

### References

Other:

URL:https://web.nvd.nist.gov/view/vuln/detail?vulnId=CVE-1999-0497

[ return to 127.0.0.7 ]

### $2.13 \quad 127.0.0.20$

Host scan start Tue Feb 21 15:24:57 2017 UTC Host scan end Tue Feb 21 15:56:50 2017 UTC

Service (Port)	Threat Level
$445/{ m tcp}$	High
$3389/\mathrm{tcp}$	Medium
$135/{ m tcp}$	Medium
/	

... (continues) ...

### $\dots$ (continued) $\dots$

Service (Port)	Threat Level
$8080/\mathrm{tcp}$	Medium
$443/\mathrm{tcp}$	Medium
m general/tcp	Low

# $\mathbf{2.13.1} \quad \mathbf{High} \,\, \mathbf{445/tcp}$

### High (CVSS: 0.0)

NVT: SMBv1 enabled (Remote Check)

### Summary

The remote Windows host is prone to an unspecified remote code execution vulnerability in SMBv1 protocol.

This NVT has been replaced by NVT 'Microsoft Windows SMB Server Multiple Vulnerabilities-Remote (4013389)' (OID: 1.3.6.1.4.1.25623.1.0.810810).

#### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Workaround

Disable SMB v1 and/or block all versions of SMB at the network boundary by blocking TCP port 445 with related protocols on UDP ports 137-138 and TCP port 139, for all boundary devices.

### Vulnerability Insight

The remote Windows host is supporting SMBv1 and is therefore prone to an unspecified remote code execution vulnerability. This vulnerability is related to the 'Shadow Brokers' group.

# Log Method

Details: SMBv1 enabled (Remote Check)

OID:1.3.6.1.4.1.25623.1.0.140151 Version used: \$Revision: 5222 \$

#### References

# Other:

 $\label{lem:url:https://www.us-cert.gov/ncas/current-activity/2017/01/16/SMB-Security-Best $$\hookrightarrow$-Practices$ 

URL:https://support.microsoft.com/en-us/kb/2696547
URL:https://support.microsoft.com/en-us/kb/204279

URL:https://technet.microsoft.com/en-us/library/security/MS17-010

 $[ \ \mathrm{return} \ \mathrm{to} \ 127.0.0.20 \ ]$ 

### 2.13.2 Medium 3389/tcp

2 RESULTS PER HOST

115

Medium (CVSS: 4.3)

NVT: SSL/TLS: Report Weak Cipher Suites

### Summary

This routine reports all Weak SSL/TLS cipher suites accepted by a service.

NOTE: No severity for SMTP services with 'Opportunistic TLS' and weak cipher suites on port 25/tcp is reported. If too strong cipher suites are configured for this service the alternative would be to fall back to an even more insecure cleartext communication.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

# Solution

Solution type: Mitigation

The configuration of this services should be changed so that it does not accept the listed weak cipher suites anymore.

Please see the references for more resources supporting you with this task.

### Vulnerability Insight

These rules are applied for the evaluation of the cryptographic strength:

- RC4 is considered to be weak (CVE-2013-2566, CVE-2015-2808).
- Ciphers using 64 bit or less are considered to be vulnerable to brute force methods and therefore considered as weak (CVE-2015-4000).
- 1024 bit RSA authentication is considered to be insecure and therefore as weak.
- Any cipher considered to be secure for only the next 10 years is considered as medium
- Any other cipher is considered as strong

# **Vulnerability Detection Method**

Details: SSL/TLS: Report Weak Cipher Suites

OID:1.3.6.1.4.1.25623.1.0.103440 Version used: \$Revision: 4863 \$

#### References

CVE: CVE-2013-2566, CVE-2015-2808, CVE-2015-4000

Other:

 $\label{lem:url:https://www.bsi.bund.de/SharedDocs/Warnmeldungen/DE/CB/warnmeldung_cb-k16- $$$ \hookrightarrow 1465\_update_6.html$ 

URL:https://bettercrypto.org/

URL:https://mozilla.github.io/server-side-tls/ssl-config-generator/

#### Medium (CVSS: 4.0)

NVT: SSL/TLS: Certificate Signed Using A Weak Signature Algorithm

### Summary

The remote service is using a SSL/TLS certificate in the certificate chain that has been signed using a cryptographically weak hashing algorithm.

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Mitigation

Servers that use SSL/TLS certificates signed with a weak SHA-1, MD5, MD4 or MD2 hashing algorithm will need to obtain new SHA-2 signed SSL/TLS certificates to avoid web browser SSL/TLS certificate warnings.

#### Vulnerability Insight

The following hashing algorithms used for signing SSL/TLS certificates are considered cryptographically weak and not secure enough for ongoing use:

- Secure Hash Algorithm 1 (SHA-1)
- Message Digest 5 (MD5)
- Message Digest 4 (MD4)
- Message Digest 2 (MD2)

Beginning as late as January 2017 and as early as June 2016, browser developers such as Microsoft and Google will begin warning users when visiting web sites that use SHA-1 signed Secure Socket Layer (SSL) certificates.

NOTE: The script preference allows to set one or more custom SHA-1 fingerprints of CA certificates which are trusted by this routine. The fingerprints needs to be passed comma-separated and case-insensitive:

Fingerprint1

or

fingerprint1,Fingerprint2

# Vulnerability Detection Method

Check which hashing algorithm was used to sign the remote SSL/TLS certificate. Details: SSL/TLS: Certificate Signed Using A Weak Signature Algorithm OID:1.3.6.1.4.1.25623.1.0.105880

Version used: \$Revision: 4781 \$

# References

Other:

URL:https://blog.mozilla.org/security/2014/09/23/phasing-out-certificates-with  $\hookrightarrow$ -sha-1-based-signature-algorithms/

[ return to 127.0.0.20 ]

### 2.13.3 Medium 135/tcp

Medium (CVSS: 5.0)

NVT: DCE/RPC and MSRPC Services Enumeration Reporting

#### Summary

Distributed Computing Environment / Remote Procedure Calls (DCE/RPC) or MSRPC services running on the remote host can be enumerated by connecting on port 135 and doing the appropriate queries.

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

An attacker may use this fact to gain more knowledge about the remote host.

#### Solution

Solution type: Mitigation

Filter incoming traffic to this ports.

# Vulnerability Detection Method

Details: DCE/RPC and MSRPC Services Enumeration Reporting

OID:1.3.6.1.4.1.25623.1.0.10736 Version used: \$Revision: 4998 \$

 $[ \ \mathrm{return} \ \mathrm{to} \ 127.0.0.20 \ ]$ 

# 2.13.4 Medium 8080/tcp

#### Medium (CVSS: 5.0)

NVT: Missing 'httpOnly' Cookie Attribute

# Summary

The application is missing the 'httpOnly' cookie attribute

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

# Solution

Solution type: Mitigation

Set the 'httpOnly' attribute for any session cookie.

# Affected Software/OS

Application with session handling in cookies.

# Vulnerability Insight

The flaw is due to a cookie is not using the 'httpOnly' attribute. This allows a cookie to be accessed by JavaScript which could lead to session hijacking attacks.

### Vulnerability Detection Method

Check all cookies sent by the application for a missing 'httpOnly' attribute

Details: Missing 'httpOnly' Cookie Attribute

OID:1.3.6.1.4.1.25623.1.0.105925 Version used: \$Revision: 5270 \$

#### References

Other:

URL:https://www.owasp.org/index.php/HttpOnly

URL:https://www.owasp.org/index.php/Testing\_for\_cookies\_attributes\_(OTG-SESS-

[ return to 127.0.0.20 ]

# 2.13.5 Medium 443/tcp

75.11

NVT: SSL/TLS: Report Vulnerable Cipher Suites for HTTPS

# Summary

This routine reports all  $\mathrm{SSL}/\mathrm{TLS}$  cipher suites accepted by a service where attack vectors exists only on HTTPS services.

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

### Solution

Solution type: Mitigation

The configuration of this services should be changed so that it does not accept the listed cipher suites anymore.

Please see the references for more resources supporting you with this task.

# Affected Software/OS

Services accepting vulnerable SSL/TLS cipher suites via HTTPS.

# Vulnerability Insight

These rules are applied for the evaluation of the vulnerable cipher suites:

- 64-bit block cipher 3DES vulnerable to the SWEET32 attack (CVE-2016-2183).

# Vulnerability Detection Method

Details: SSL/TLS: Report Vulnerable Cipher Suites for HTTPS

OID:1.3.6.1.4.1.25623.1.0.108031 Version used: \$Revision: 5232 \$

# References

CVE: CVE-2016-2183, CVE-2016-6329

Other:

URL:https://bettercrypto.org/

URL:https://mozilla.github.io/server-side-tls/ssl-config-generator/

URL:https://sweet32.info/

Medium (CVSS: 4.3)

NVT: SSL/TLS: Report Weak Cipher Suites

#### Summary

This routine reports all Weak SSL/TLS cipher suites accepted by a service.

NOTE: No severity for SMTP services with 'Opportunistic TLS' and weak cipher suites on port 25/tcp is reported. If too strong cipher suites are configured for this service the alternative would be to fall back to an even more insecure cleartext communication.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Mitigation

The configuration of this services should be changed so that it does not accept the listed weak cipher suites anymore.

Please see the references for more resources supporting you with this task.

### Vulnerability Insight

These rules are applied for the evaluation of the cryptographic strength:

- RC4 is considered to be weak (CVE-2013-2566, CVE-2015-2808).
- Ciphers using 64 bit or less are considered to be vulnerable to brute force methods and therefore considered as weak (CVE-2015-4000).
- 1024 bit RSA authentication is considered to be insecure and therefore as weak.
- Any cipher considered to be secure for only the next 10 years is considered as medium
- Any other cipher is considered as strong

### **Vulnerability Detection Method**

 $\operatorname{Details:}$  SSL/TLS: Report Weak Cipher Suites

OID:1.3.6.1.4.1.25623.1.0.103440 Version used: \$Revision: 4863 \$

### References

CVE: CVE-2013-2566, CVE-2015-2808, CVE-2015-4000

Other:

 $\label{lem:url:https://www.bsi.bund.de/SharedDocs/Warnmeldungen/DE/CB/warnmeldung_cb-k16-$$$$ \hookrightarrow 1465\_update_6.html$ 

URL:https://bettercrypto.org/

URL: https://mozilla.github.io/server-side-tls/ssl-config-generator/

Medium (CVSS: 4.3)

 ${
m NVT:~SSL/TLS:~Deprecated~SSLv2~and~SSLv3~Protocol~Detection}$ 

 $\dots$  continues on next page  $\dots$ 

# Summary

It was possible to detect the usage of the deprecated SSLv2 and/or SSLv3 protocol on this system.

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

### Impact

An attacker might be able to use the known cryptographic flaws to eavesdrop the connection between clients and the service to get access to sensitive data transferred within the secured connection.

#### Solution

Solution type: Mitigation

It is recommended to disable the deprecated SSLv2 and/or SSLv3 protocols in favor of the TLSv1+ protocols. Please see the references for more information.

# Affected Software/OS

All services providing an encrypted communication using the SSLv2 and/or SSLv3 protocols.

### Vulnerability Insight

The SSLv2 and SSLv3 protocols containing known cryptographic flaws like:

- Padding Oracle On Downgraded Legacy Encryption (POODLE, CVE-2014-3566)
- Decrypting RSA with Obsolete and Weakened eNcryption (DROWN, CVE-2016-0800)

### Vulnerability Detection Method

Check the used protocols of the services provided by this system.

Details: SSL/TLS: Deprecated SSLv2 and SSLv3 Protocol Detection

OID:1.3.6.1.4.1.25623.1.0.111012 Version used: \$Revision: 4686 \$

#### References

CVE: CVE-2016-0800, CVE-2014-3566

Other:

 $\label{likelihood} \begin{tabular}{ll} URL: https://www.enisa.europa.eu/activities/identity-and-trust/library/delivera \\ \hookrightarrow bles/algorithms-key-sizes-and-parameters-report \\ \end{tabular}$ 

URL:https://bettercrypto.org/

URL:https://mozilla.github.io/server-side-tls/ssl-config-generator/

URL:https://drownattack.com/

URL: https://www.imperialviolet.org/2014/10/14/poodle.html

#### Medium (CVSS: 4.3)

NVT: SSL/TLS: SSLv3 Protocol CBC Cipher Suites Information Disclosure Vulnerability (POO-DLE)

# Summary

This host is prone to an information disclosure vulnerability.

#### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

Successful exploitation will allow a man-in-the-middle attackers gain access to the plain text data stream.

#### Solution

# Solution type: Mitigation

Possible Mitigations are:

- Disable SSLv3
- Disable cipher suites supporting CBC cipher modes
- Enable TLS  $\,$  FALLBACK  $\,$  SCSV if the service is providing  $\,$  TLSv1.0+

### Vulnerability Insight

The flaw is due to the block cipher padding not being deterministic and not covered by the Message Authentication Code

### **Vulnerability Detection Method**

Evaluate previous collected information about this service.

Details: SSL/TLS: SSLv3 Protocol CBC Cipher Suites Information Disclosure Vulnerability .

 $\hookrightarrow$  . .

OID:1.3.6.1.4.1.25623.1.0.802087 Version used: \$Revision: 4749 \$

# References

CVE: CVE-2014-3566

BID:70574 Other:

URL:https://www.openssl.org/~bodo/ssl-poodle.pdf

URL:https://www.imperialviolet.org/2014/10/14/poodle.html

URL:https://www.dfranke.us/posts/2014-10-14-how-poodle-happened.html

URL:http://googleonlinesecurity.blogspot.in/2014/10/this-poodle-bites-exploit

 $\hookrightarrow$ ing-ssl-30.html

[ return to 127.0.0.20 ]

### 2.13.6 Low general/tcp

Low (CVSS: 2.6)

NVT: TCP timestamps

# Summary

The remote host implements TCP timestamps and therefore allows to compute the uptime.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

A side effect of this feature is that the uptime of the remote host can sometimes be computed.

# Solution

# Solution type: Mitigation

To disable TCP timestamps on linux add the line 'net.ipv4.tcp\_timestamps = 0' to /etc/sysctl.conf. Execute 'sysctl-p' to apply the settings at runtime.

To disable TCP timestamps on Windows execute 'netsh int tcp set global timestamps=disabled' Starting with Windows Server 2008 and Vista, the timestamp can not be completely disabled. The default behavior of the TCP/IP stack on this Systems is to not use the Timestamp options when initiating TCP connections, but use them if the TCP peer that is initiating communication includes them in their synchronize (SYN) segment.

See also: http://www.microsoft.com/en-us/download/details.aspx?id=9152

### Affected Software/OS

TCP/IPv4 implementations that implement RFC1323.

### Vulnerability Insight

The remote host implements TCP timestamps, as defined by RFC1323.

### **Vulnerability Detection Method**

Special IP packets are forged and sent with a little delay in between to the target IP. The responses are searched for a timestamps. If found, the timestamps are reported.

Details: TCP timestamps OID:1.3.6.1.4.1.25623.1.0.80091 Version used: \$Revision: 5309 \$

### References

Other:

URL:http://www.ietf.org/rfc/rfc1323.txt

[ return to 127.0.0.20 ]

#### $2.14 \quad 127.0.0.31$

Host scan start Tue Feb 21 15:24:58 2017 UTC Host scan end Tue Feb 21 15:53:55 2017 UTC

Service (Port)	Threat Level
$445/{ m tcp}$	High
$135/{ m tcp}$	Medium
$3389/\mathrm{tcp}$	Medium
(continues)	

 $\dots$  (continues)  $\dots$ 

### ... (continued) ...

Service (Port)	Threat Level
general/tcp	Low

# 2.14.1 High 445/tcp

# High (CVSS: 0.0)

NVT: SMBv1 enabled (Remote Check)

### Summary

The remote Windows host is prone to an unspecified remote code execution vulnerability in SMBv1 protocol.

This NVT has been replaced by NVT 'Microsoft Windows SMB Server Multiple Vulnerabilities-Remote (4013389)' (OID: 1.3.6.1.4.1.25623.1.0.810810).

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

# Solution type: Workaround

Disable SMB v1 and/or block all versions of SMB at the network boundary by blocking TCP port 445 with related protocols on UDP ports 137-138 and TCP port 139, for all boundary devices.

### Vulnerability Insight

The remote Windows host is supporting SMBv1 and is therefore prone to an unspecified remote code execution vulnerability. This vulnerability is related to the 'Shadow Brokers' group.

### Log Method

Details: SMBv1 enabled (Remote Check)

OID:1.3.6.1.4.1.25623.1.0.140151 Version used: \$Revision: 5222 \$

### References

### Other:

URL:https://www.us-cert.gov/ncas/current-activity/2017/01/16/SMB-Security-Best

 $\hookrightarrow$ -Practices

URL:https://support.microsoft.com/en-us/kb/2696547
URL:https://support.microsoft.com/en-us/kb/204279

URL:https://technet.microsoft.com/en-us/library/security/MS17-010

[ return to 127.0.0.31 ]

# 2.14.2 Medium 135/tcp

2 RESULTS PER HOST

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# Medium (CVSS: 5.0)

NVT: DCE/RPC and MSRPC Services Enumeration Reporting

#### Summary

Distributed Computing Environment / Remote Procedure Calls (DCE/RPC) or MSRPC services running on the remote host can be enumerated by connecting on port 135 and doing the appropriate queries.

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

An attacker may use this fact to gain more knowledge about the remote host.

#### Solution

Solution type: Mitigation

Filter incoming traffic to this ports.

# Vulnerability Detection Method

Details: DCE/RPC and MSRPC Services Enumeration Reporting

OID:1.3.6.1.4.1.25623.1.0.10736 Version used: \$Revision: 4998 \$

[ return to 127.0.0.31 ]

# 2.14.3 Medium 3389/tcp

# Medium (CVSS: 4.3)

NVT: SSL/TLS: Report Weak Cipher Suites

# Summary

This routine reports all Weak SSL/TLS cipher suites accepted by a service.

NOTE: No severity for SMTP services with 'Opportunistic TLS' and weak cipher suites on port 25/tcp is reported. If too strong cipher suites are configured for this service the alternative would be to fall back to an even more insecure clear text communication.

# **Vulnerability Detection Result**

Vulnerability was detected according to the Vulnerability Detection Method.

# Solution

Solution type: Mitigation

The configuration of this services should be changed so that it does not accept the listed weak cipher suites anymore.

Please see the references for more resources supporting you with this task.

# Vulnerability Insight

These rules are applied for the evaluation of the cryptographic strength:

- RC4 is considered to be weak (CVE-2013-2566, CVE-2015-2808).
- Ciphers using 64 bit or less are considered to be vulnerable to brute force methods and therefore considered as weak (CVE-2015-4000).
- 1024 bit RSA authentication is considered to be insecure and therefore as weak.
- Any cipher considered to be secure for only the next 10 years is considered as medium
- Any other cipher is considered as strong

# **Vulnerability Detection Method**

Details: SSL/TLS: Report Weak Cipher Suites

OID:1.3.6.1.4.1.25623.1.0.103440 Version used: \$Revision: 4863 \$

#### References

CVE: CVE-2013-2566, CVE-2015-2808, CVE-2015-4000

Other:

URL:https://www.bsi.bund.de/SharedDocs/Warnmeldungen/DE/CB/warnmeldung\_cb-k16-

 $\hookrightarrow$  1465\_update\_6.html

URL:https://bettercrypto.org/

URL:https://mozilla.github.io/server-side-tls/ssl-config-generator/

#### Medium (CVSS: 4.0)

NVT: SSL/TLS: Diffie-Hellman Key Exchange Insufficient DH Group Strength Vulnerability

#### Summary

The SSL/TLS service uses Diffie-Hellman groups with insufficient strength (key size < 2048).

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

An attacker might be able to decrypt the SSL/TLS communication offline.

#### Solution

# Solution type: Workaround

Deploy (Ephemeral) Elliptic-Curve Diffie-Hellman (ECDHE) or use a 2048-bit or stronger Diffie-Hellman group. (see https://weakdh.org/sysadmin.html).

For Apache Web Servers: Beginning with version 2.4.7, mod\_ssl will use DH parameters which include primes with lengths of more than 1024 bits.

# Vulnerability Insight

The Diffie-Hellman group are some big numbers that are used as base for the DH computations. They can be, and often are, fixed. The security of the final secret depends on the size of these parameters. It was found that 512 and 768 bits to be weak, 1024 bits to be breakable by really powerful attackers like governments.

# Vulnerability Detection Method

Checks the DHE temporary public key size.

Details: SSL/TLS: Diffie-Hellman Key Exchange Insufficient DH Group Strength Vulnerabili.

 $\hookrightarrow$  . .

OID:1.3.6.1.4.1.25623.1.0.106223 Version used: \$Revision: 4739 \$

#### References

Other:

URL:https://weakdh.org/

URL:https://weakdh.org/sysadmin.html

#### Medium (CVSS: 4.0)

NVT: SSL/TLS: Certificate Signed Using A Weak Signature Algorithm

### Summary

The remote service is using a SSL/TLS certificate in the certificate chain that has been signed using a cryptographically weak hashing algorithm.

#### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Mitigation

Servers that use SSL/TLS certificates signed with a weak SHA-1, MD5, MD4 or MD2 hashing algorithm will need to obtain new SHA-2 signed SSL/TLS certificates to avoid web browser SSL/TLS certificate warnings.

# Vulnerability Insight

The following hashing algorithms used for signing SSL/TLS certificates are considered cryptographically weak and not secure enough for ongoing use:

- Secure Hash Algorithm 1 (SHA-1)
- Message Digest 5 (MD5)
- Message Digest 4 (MD4)
- Message Digest 2 (MD2)

Beginning as late as January 2017 and as early as June 2016, browser developers such as Microsoft and Google will begin warning users when visiting web sites that use SHA-1 signed Secure Socket Layer (SSL) certificates.

NOTE: The script preference allows to set one or more custom SHA-1 fingerprints of CA certificates which are trusted by this routine. The fingerprints needs to be passed comma-separated and case-insensitive:

Fingerprint1

or

fingerprint1, Fingerprint2

# Vulnerability Detection Method

Check which hashing algorithm was used to sign the remote SSL/TLS certificate. Details: SSL/TLS: Certificate Signed Using A Weak Signature Algorithm

 $\dots$  continues on next page  $\dots$ 

OID:1.3.6.1.4.1.25623.1.0.105880 Version used: \$Revision: 4781 \$

#### References

Other:

URL:https://blog.mozilla.org/security/2014/09/23/phasing-out-certificates-with  $\hookrightarrow$ -sha-1-based-signature-algorithms/

[ return to 127.0.0.31 ]

# 2.14.4 Low general/tcp

# Low (CVSS: 2.6)

#### Summary

The remote host implements TCP timestamps and therefore allows to compute the uptime.

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

A side effect of this feature is that the uptime of the remote host can sometimes be computed.

# Solution

Solution type: Mitigation

To disable TCP timestamps on linux add the line 'net.ipv4.tcp\_timestamps = 0' to /etc/sysctl.conf. Execute 'sysctl-p' to apply the settings at runtime.

To disable TCP timestamps on Windows execute 'netsh int tcp set global timestamps=disabled' Starting with Windows Server 2008 and Vista, the timestamp can not be completely disabled. The default behavior of the TCP/IP stack on this Systems is to not use the Timestamp options when initiating TCP connections, but use them if the TCP peer that is initiating communication includes them in their synchronize (SYN) segment.

See also: http://www.microsoft.com/en-us/download/details.aspx?id=9152

# Affected Software/OS

TCP/IPv4 implementations that implement RFC1323.

# Vulnerability Insight

The remote host implements TCP timestamps, as defined by RFC1323.

# Vulnerability Detection Method

Special IP packets are forged and sent with a little delay in between to the target IP. The responses are searched for a timestamps. If found, the timestamps are reported.

Details: TCP timestamps OID:1.3.6.1.4.1.25623.1.0.80091

Version used: \$Revision: 5309 \$

#### References

Other:

URL:http://www.ietf.org/rfc/rfc1323.txt

[ return to 127.0.0.31 ]

#### $2.15 \quad 127.0.0.34$

Host scan start Tue Feb 21 16:16:42 2017 UTC Host scan end Tue Feb 21 17:10:34 2017 UTC

Service (Port)	Threat Level
$445/{ m tcp}$	High
$636/\mathrm{tcp}$	Medium
389/tcp	Medium
$3389/\mathrm{tcp}$	Medium
$135/{ m tcp}$	Medium
m general/tcp	Low

# 2.15.1 High 445/tcp

# High (CVSS: 0.0)

NVT: SMBv1 enabled (Remote Check)

### Summary

The remote Windows host is prone to an unspecified remote code execution vulnerability in SMBv1 protocol.

This NVT has been replaced by NVT 'Microsoft Windows SMB Server Multiple Vulnerabilities-Remote (4013389)' (OID: 1.3.6.1.4.1.25623.1.0.810810).

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

# Solution

Solution type: Workaround

Disable SMB v1 and/or block all versions of SMB at the network boundary by blocking TCP port 445 with related protocols on UDP ports 137-138 and TCP port 139, for all boundary devices.

### Vulnerability Insight

The remote Windows host is supporting SMBv1 and is therefore prone to an unspecified remote code execution vulnerability. This vulnerability is related to the 'Shadow Brokers' group.

# Log Method

Details: SMBv1 enabled (Remote Check)

OID:1.3.6.1.4.1.25623.1.0.140151 Version used: \$Revision: 5222 \$

#### References

Other:

URL:https://www.us-cert.gov/ncas/current-activity/2017/01/16/SMB-Security-Best

 $\hookrightarrow$ -Practices

URL:https://support.microsoft.com/en-us/kb/2696547
URL:https://support.microsoft.com/en-us/kb/204279

URL:https://technet.microsoft.com/en-us/library/security/MS17-010

[ return to 127.0.0.34 ]

# 2.15.2 Medium 636/tcp

#### Medium (CVSS: 5.0)

NVT: Use LDAP search request to retrieve information from NT Directory Services

### Summary

It is possible to disclose LDAP information.

Description:

The directory base of the remote server is set to NULL. This allows information to be enumerated without any prior knowledge of the directory structure.

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

# Solution

Solution type: Workaround

If pre-Windows 2000 compatibility is not required, remove pre-Windows 2000 compatibility as follows:

- start cmd.exe
- $\hbox{- execute the command: net local$  $group 'Pre-Windows 2000 Compatible Access' everyone / delete}\\$
- restart the remote host

### Vulnerability Detection Method

Details: Use LDAP search request to retrieve information from NT Directory Services

OID:1.3.6.1.4.1.25623.1.0.12105 Version used: \$Revision: 5190 \$

#### Medium (CVSS: 5.0)

NVT: SSL/TLS: Certificate Expired

# Summary

The remote server's SSL/TLS certificate has already expired.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

### Solution

Solution type: Mitigation

Replace the SSL/TLS certificate by a new one.

### Vulnerability Insight

This script checks expiry dates of certificates associated with SSL/TLS-enabled services on the target and reports whether any have already expired.

### Vulnerability Detection Method

Details: SSL/TLS: Certificate Expired

OID:1.3.6.1.4.1.25623.1.0.103955 Version used: \$Revision: 4765 \$

# Medium (CVSS: 4.3)

NVT: SSL/TLS: Deprecated SSLv2 and SSLv3 Protocol Detection

## Summary

It was possible to detect the usage of the deprecated SSLv2 and/or SSLv3 protocol on this system.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

### Impact

An attacker might be able to use the known cryptographic flaws to eavesdrop the connection between clients and the service to get access to sensitive data transferred within the secured connection.

### Solution

Solution type: Mitigation

It is recommended to disable the deprecated SSLv2 and/or SSLv3 protocols in favor of the TLSv1+ protocols. Please see the references for more information.

# Affected Software/OS

All services providing an encrypted communication using the SSLv2 and/or SSLv3 protocols.

# Vulnerability Insight

The SSLv2 and SSLv3 protocols containing known cryptographic flaws like:

- Padding Oracle On Downgraded Legacy Encryption (POODLE, CVE-2014-3566)
- Decrypting RSA with Obsolete and Weakened eNcryption (DROWN, CVE-2016-0800)
- ... continues on next page ...

# **Vulnerability Detection Method**

Check the used protocols of the services provided by this system.

Details: SSL/TLS: Deprecated SSLv2 and SSLv3 Protocol Detection

OID:1.3.6.1.4.1.25623.1.0.111012 Version used: \$Revision: 4686 \$

#### References

CVE: CVE-2016-0800, CVE-2014-3566

Other:

URL:https://www.enisa.europa.eu/activities/identity-and-trust/library/delivera

 $\hookrightarrow \texttt{bles/algorithms-key-sizes-and-parameters-report}$ 

URL:https://bettercrypto.org/

URL:https://mozilla.github.io/server-side-tls/ssl-config-generator/

URL:https://drownattack.com/

URL:https://www.imperialviolet.org/2014/10/14/poodle.html

### Medium (CVSS: 4.3)

NVT: SSL/TLS: Report Weak Cipher Suites

#### Summary

This routine reports all Weak SSL/TLS cipher suites accepted by a service.

NOTE: No severity for SMTP services with 'Opportunistic TLS' and weak cipher suites on port 25/tcp is reported. If too strong cipher suites are configured for this service the alternative would be to fall back to an even more insecure cleartext communication.

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

# Solution

Solution type: Mitigation

The configuration of this services should be changed so that it does not accept the listed weak cipher suites anymore.

Please see the references for more resources supporting you with this task.

# Vulnerability Insight

These rules are applied for the evaluation of the cryptographic strength:

- RC4 is considered to be weak (CVE-2013-2566, CVE-2015-2808).
- Ciphers using 64 bit or less are considered to be vulnerable to brute force methods and therefore considered as weak (CVE-2015-4000).
- 1024 bit RSA authentication is considered to be insecure and therefore as weak.
- Any cipher considered to be secure for only the next 10 years is considered as medium
- Any other cipher is considered as strong

# Vulnerability Detection Method

Details: SSL/TLS: Report Weak Cipher Suites

OID:1.3.6.1.4.1.25623.1.0.103440

 $\dots$  continues on next page  $\dots$ 

Version used: \$Revision: 4863 \$

#### References

CVE: CVE-2013-2566, CVE-2015-2808, CVE-2015-4000

Other:

URL:https://www.bsi.bund.de/SharedDocs/Warnmeldungen/DE/CB/warnmeldung\_cb-k16-

 $\hookrightarrow$  1465\_update\_6.html

URL:https://bettercrypto.org/

URL:https://mozilla.github.io/server-side-tls/ssl-config-generator/

#### Medium (CVSS: 4.0)

NVT: SSL/TLS: Certificate Signed Using A Weak Signature Algorithm

### Summary

The remote service is using a SSL/TLS certificate in the certificate chain that has been signed using a cryptographically weak hashing algorithm.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Mitigation

Servers that use SSL/TLS certificates signed with a weak SHA-1, MD5, MD4 or MD2 hashing algorithm will need to obtain new SHA-2 signed SSL/TLS certificates to avoid web browser SSL/TLS certificate warnings.

### Vulnerability Insight

The following hashing algorithms used for signing SSL/TLS certificates are considered cryptographically weak and not secure enough for ongoing use:

- Secure Hash Algorithm 1 (SHA-1)
- Message Digest 5 (MD5)
- Message Digest 4 (MD4)
- Message Digest 2 (MD2)

Beginning as late as January 2017 and as early as June 2016, browser developers such as Microsoft and Google will begin warning users when visiting web sites that use SHA-1 signed Secure Socket Layer (SSL) certificates.

NOTE: The script preference allows to set one or more custom SHA-1 fingerprints of CA certificates which are trusted by this routine. The fingerprints needs to be passed comma-separated and case-insensitive:

Fingerprint1

or

fingerprint 1, Fingerprint 2

#### Vulnerability Detection Method

Check which hashing algorithm was used to sign the remote SSL/TLS certificate. Details: SSL/TLS: Certificate Signed Using A Weak Signature Algorithm OID: 1.3.6.1.4.1.25623.1.0.105880

 $\dots$  continues on next page  $\dots$ 

Version used: \$Revision: 4781 \$

#### References

Other:

URL:https://blog.mozilla.org/security/2014/09/23/phasing-out-certificates-with  $\hookrightarrow$ -sha-1-based-signature-algorithms/

[ return to 127.0.0.34 ]

# 2.15.3 Medium 389/tcp

#### Medium (CVSS: 5.0)

NVT: Use LDAP search request to retrieve information from NT Directory Services

### Summary

It is possible to disclose LDAP information.

Description:

The directory base of the remote server is set to NULL. This allows information to be enumerated without any prior knowledge of the directory structure.

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

### Solution

Solution type: Workaround

If pre-Windows 2000 compatibility is not required, remove pre-Windows 2000 compatibility as follows:

- start cmd.exe
- execute the command: net localgroup 'Pre-Windows 2000 Compatible Access' everyone / delete
- restart the remote host

### Vulnerability Detection Method

 $\operatorname{Details}$ : Use LDAP search request to retrieve information from NT Directory Services

OID:1.3.6.1.4.1.25623.1.0.12105 Version used: \$Revision: 5190 \$

[ return to 127.0.0.34 ]

### 2.15.4 Medium 3389/tcp

Medium (CVSS: 4.3)

NVT: SSL/TLS: Report Weak Cipher Suites

# Summary

This routine reports all Weak SSL/TLS cipher suites accepted by a service.

NOTE: No severity for SMTP services with 'Opportunistic TLS' and weak cipher suites on port 25/tcp is reported. If too strong cipher suites are configured for this service the alternative would be to fall back to an even more insecure cleartext communication.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

### Solution

### Solution type: Mitigation

The configuration of this services should be changed so that it does not accept the listed weak cipher suites anymore.

Please see the references for more resources supporting you with this task.

### Vulnerability Insight

These rules are applied for the evaluation of the cryptographic strength:

- RC4 is considered to be weak (CVE-2013-2566, CVE-2015-2808).
- Ciphers using 64 bit or less are considered to be vulnerable to brute force methods and therefore considered as weak (CVE-2015-4000).
- 1024 bit RSA authentication is considered to be insecure and therefore as weak.
- Any cipher considered to be secure for only the next 10 years is considered as medium
- Any other cipher is considered as strong

#### **Vulnerability Detection Method**

Details: SSL/TLS: Report Weak Cipher Suites

OID:1.3.6.1.4.1.25623.1.0.103440 Version used: \$Revision: 4863 \$

#### References

CVE: CVE-2013-2566, CVE-2015-2808, CVE-2015-4000

Other:

 $\label{lem:url:https://www.bsi.bund.de/SharedDocs/Warnmeldungen/DE/CB/warnmeldung_cb-k16-$$$$ \hookrightarrow 1465\_update_6.html$ 

URL:https://bettercrypto.org/

URL:https://mozilla.github.io/server-side-tls/ssl-config-generator/

#### Medium (CVSS: 4.0)

NVT: SSL/TLS: Certificate Signed Using A Weak Signature Algorithm

#### Summary

The remote service is using a SSL/TLS certificate in the certificate chain that has been signed using a cryptographically weak hashing algorithm.

#### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

### Solution

Solution type: Mitigation

Servers that use SSL/TLS certificates signed with a weak SHA-1, MD5, MD4 or MD2 hashing algorithm will need to obtain new SHA-2 signed SSL/TLS certificates to avoid web browser SSL/TLS certificate warnings.

### Vulnerability Insight

The following hashing algorithms used for signing SSL/TLS certificates are considered cryptographically weak and not secure enough for ongoing use:

- Secure Hash Algorithm 1 (SHA-1)
- Message Digest 5 (MD5)
- Message Digest 4 (MD4)
- Message Digest 2 (MD2)

Beginning as late as January 2017 and as early as June 2016, browser developers such as Microsoft and Google will begin warning users when visiting web sites that use SHA-1 signed Secure Socket Layer (SSL) certificates.

NOTE: The script preference allows to set one or more custom SHA-1 fingerprints of CA certificates which are trusted by this routine. The fingerprints needs to be passed comma-separated and case-insensitive:

Fingerprint1

or

fingerprint1,Fingerprint2

# **Vulnerability Detection Method**

Check which hashing algorithm was used to sign the remote SSL/TLS certificate. Details: SSL/TLS: Certificate Signed Using A Weak Signature Algorithm

OID:1.3.6.1.4.1.25623.1.0.105880 Version used: \$Revision: 4781 \$

# References

Other:

URL:https://blog.mozilla.org/security/2014/09/23/phasing-out-certificates-with  $\hookrightarrow$ -sha-1-based-signature-algorithms/

[ return to 127.0.0.34 ]

# 2.15.5 Medium 135/tcp

#### Medium (CVSS: 5.0)

NVT: DCE/RPC and MSRPC Services Enumeration Reporting

### Summary

Distributed Computing Environment / Remote Procedure Calls (DCE/RPC) or MSRPC services running on the remote host can be enumerated by connecting on port 135 and doing the appropriate queries.

 $\dots$  continues on next page  $\dots$ 

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

An attacker may use this fact to gain more knowledge about the remote host.

#### Solution

**Solution type:** Mitigation Filter incoming traffic to this ports.

# Vulnerability Detection Method

Details: DCE/RPC and MSRPC Services Enumeration Reporting

OID:1.3.6.1.4.1.25623.1.0.10736 Version used: \$Revision: 4998 \$

[ return to 127.0.0.34 ]

### 2.15.6 Low general/tcp

# Low (CVSS: 2.6)

NVT: TCP timestamps

#### Summary

The remote host implements TCP timestamps and therefore allows to compute the uptime.

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

A side effect of this feature is that the uptime of the remote host can sometimes be computed.

# Solution

# Solution type: Mitigation

To disable TCP timestamps on linux add the line 'net.ipv4.tcp\_timestamps = 0' to /etc/sysctl.conf. Execute 'sysctl-p' to apply the settings at runtime.

To disable TCP timestamps on Windows execute 'netsh int tcp set global timestamps=disabled' Starting with Windows Server 2008 and Vista, the timestamp can not be completely disabled. The default behavior of the TCP/IP stack on this Systems is to not use the Timestamp options when initiating TCP connections, but use them if the TCP peer that is initiating communication includes them in their synchronize (SYN) segment.

See also: http://www.microsoft.com/en-us/download/details.aspx?id=9152

# Affected Software/OS

TCP/IPv4 implementations that implement RFC1323.

 $\dots$  continues on next page  $\dots$ 

### Vulnerability Insight

The remote host implements TCP timestamps, as defined by RFC1323.

# **Vulnerability Detection Method**

Special IP packets are forged and sent with a little delay in between to the target IP. The responses are searched for a timestamps. If found, the timestamps are reported.

Details: TCP timestamps OID:1.3.6.1.4.1.25623.1.0.80091 Version used: \$Revision: 5309 \$

# References

Other:

URL:http://www.ietf.org/rfc/rfc1323.txt

[ return to 127.0.0.34 ]

# $2.16 \quad 127.0.0.25$

Host scan start Tue Feb 21 15:24:50 2017 UTC Host scan end Tue Feb 21 16:27:44 2017 UTC

Service (Port)	Threat Level
$445/\mathrm{tcp}$	High
$135/\mathrm{tcp}$	Medium
3389/tcp	Medium
general/tcp	Low

# 2.16.1 High 445/tcp

# High (CVSS: 0.0)

NVT: SMBv1 enabled (Remote Check)

### Summary

The remote Windows host is prone to an unspecified remote code execution vulnerability in SMBv1 protocol.

This NVT has been replaced by NVT 'Microsoft Windows SMB Server Multiple Vulnerabilities-Remote (4013389)' (OID: 1.3.6.1.4.1.25623.1.0.810810).

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

# Solution

Solution type: Workaround

Disable SMB v1 and/or block all versions of SMB at the network boundary by blocking TCP port 445 with related protocols on UDP ports 137-138 and TCP port 139, for all boundary devices.

# Vulnerability Insight

The remote Windows host is supporting SMBv1 and is therefore prone to an unspecified remote code execution vulnerability. This vulnerability is related to the 'Shadow Brokers' group.

# Log Method

Details: SMBv1 enabled (Remote Check)

OID:1.3.6.1.4.1.25623.1.0.140151 Version used: \$Revision: 5222 \$

#### References

#### Other:

URL:https://www.us-cert.gov/ncas/current-activity/2017/01/16/SMB-Security-Best

←-Practices

URL:https://support.microsoft.com/en-us/kb/2696547 URL:https://support.microsoft.com/en-us/kb/204279

URL:https://technet.microsoft.com/en-us/library/security/MS17-010

# High (CVSS: 10.0)

NVT: Microsoft Windows SMB Server NTLM Multiple Vulnerabilities (971468)

#### Summary

This host is missing a critical security update according to Microsoft Bulletin MS10-012.

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

Successful exploitation will allow remote attackers to execute arbitrary code or cause a denial of service or bypass the authentication mechanism via brute force technique. Impact Level: System/Application

# Solution

### Solution type: VendorFix

Run Windows Update and update the listed hot fixes or download and update mentioned hot fixes in the advisory from the below link, http://www.microsoft.com/technet/security/bulletin/ms10-012.mspx

### Affected Software/OS

Microsoft Windows 7 Microsoft Windows 2000 Service Pack and prior Microsoft Windows XP Service Pack 3 and prior Microsoft Windows Vista Service Pack 2 and prior Microsoft Windows Server 2003 Service Pack 2 and prior Microsoft Windows Server 2008 Service Pack 2 and prior

# Vulnerability Insight

- An input validation error exists while processing SMB requests and can be exploited to cause a buffer overflow via a specially crafted SMB packet. - An error exists in the SMB implementation while parsing SMB packets during the Negotiate phase causing memory corruption via a specially crafted SMB packet. - NULL pointer dereference error exists in SMB while verifying the 'share' and 'servername' fields in SMB packets causing denial of service. - A lack of cryptographic entropy when the SMB server generates challenges during SMB NTLM authentication and can be exploited to bypass the authentication mechanism.

# Vulnerability Detection Method

Details: Microsoft Windows SMB Server NTLM Multiple Vulnerabilities (971468)

OID:1.3.6.1.4.1.25623.1.0.902269 Version used: \$Revision: 5136 \$

#### References

CVE: CVE-2010-0020, CVE-2010-0021, CVE-2010-0022, CVE-2010-0231

Other:

URL:http://secunia.com/advisories/38510/
URL:http://support.microsoft.com/kb/971468

URL:http://www.vupen.com/english/advisories/2010/0345

URL:http://www.microsoft.com/technet/security/bulletin/ms10-012.mspx

### High (CVSS: 10.0)

NVT: Microsoft Windows SMB2 Negotiation Protocol Remote Code Execution Vulnerability

#### Summary

This host is missing a critical security update according to Microsoft Bulletin MS09-050.

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

# Impact

An attacker can exploit this issue to execute code with SYSTEM-level privileges failed exploit attempts will likely cause denial-of-service conditions.

Impact Level: System

# Solution

Solution type: VendorFix

# Affected Software/OS

- Windows 7 RC
- Windows Vista and
- Windows 2008 Server

### Vulnerability Insight

Multiple vulnerabilities exists,

- A denial of service vulnerability exists in the way that Microsoft Server Message Block (SMB) Protocol software handles specially crafted SMB version 2 (SMBv2) packets.
- ... continues on next page ...

- Unauthenticated remote code execution vulnerability exists in the way that Microsoft Server Message Block (SMB) Protocol software handles specially crafted SMB packets.

# **Vulnerability Detection Method**

Details: Microsoft Windows SMB2 Negotiation Protocol Remote Code Execution Vulnerability

OID:1.3.6.1.4.1.25623.1.0.900965 Version used: \$Revision: 5074 \$

#### References

CVE: CVE-2009-2526, CVE-2009-2532, CVE-2009-3103

BID:36299 Other:

URL: http://www.microsoft.com/technet/security/bulletin/MS09-050.mspx

#### Note

This is a sample note on this scan result which I would like to see for any othe  $\hookrightarrow$ r occurance of

this vulnerability, regardless of the task or host.

Last modified: Thu Mar 23 16:52:39 2017 UTC

[ return to 127.0.0.25 ]

# 2.16.2 Medium 135/tcp

### Medium (CVSS: 5.0)

NVT: DCE/RPC and MSRPC Services Enumeration Reporting

### Summary

Distributed Computing Environment / Remote Procedure Calls (DCE/RPC) or MSRPC services running on the remote host can be enumerated by connecting on port 135 and doing the appropriate queries.

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

# Impact

An attacker may use this fact to gain more knowledge about the remote host.

### Solution

Solution type: Mitigation

Filter incoming traffic to this ports.

### **Vulnerability Detection Method**

Details: DCE/RPC and MSRPC Services Enumeration Reporting

OID:1.3.6.1.4.1.25623.1.0.10736 Version used: \$Revision: 4998 \$

[ return to 127.0.0.25 ]

# 2.16.3 Medium 3389/tcp

Medium (CVSS: 4.3)

NVT: SSL/TLS: Report Weak Cipher Suites

# Summary

This routine reports all Weak SSL/TLS cipher suites accepted by a service.

NOTE: No severity for SMTP services with 'Opportunistic TLS' and weak cipher suites on port 25/tcp is reported. If too strong cipher suites are configured for this service the alternative would be to fall back to an even more insecure clear text communication.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

### Solution

Solution type: Mitigation

The configuration of this services should be changed so that it does not accept the listed weak cipher suites anymore.

Please see the references for more resources supporting you with this task.

# Vulnerability Insight

These rules are applied for the evaluation of the cryptographic strength:

- RC4 is considered to be weak (CVE-2013-2566, CVE-2015-2808).
- Ciphers using 64 bit or less are considered to be vulnerable to brute force methods and therefore considered as weak (CVE-2015-4000).
- 1024 bit RSA authentication is considered to be insecure and therefore as weak.
- Any cipher considered to be secure for only the next 10 years is considered as medium
- Any other cipher is considered as strong

# Vulnerability Detection Method

Details: SSL/TLS: Report Weak Cipher Suites

OID:1.3.6.1.4.1.25623.1.0.103440 Version used: \$Revision: 4863 \$

# References

CVE: CVE-2013-2566, CVE-2015-2808, CVE-2015-4000

Other:

 $\label{lem:url:https://www.bsi.bund.de/SharedDocs/Warnmeldungen/DE/CB/warnmeldung_cb-k16-$$$$$\hookrightarrow 1465\_update_6.html$ 

URL:https://bettercrypto.org/

URL:https://mozilla.github.io/server-side-tls/ssl-config-generator/

#### Medium (CVSS: 4.0)

NVT: SSL/TLS: Certificate Signed Using A Weak Signature Algorithm

#### Summary

The remote service is using a SSL/TLS certificate in the certificate chain that has been signed using a cryptographically weak hashing algorithm.

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Mitigation

Servers that use SSL/TLS certificates signed with a weak SHA-1, MD5, MD4 or MD2 hashing algorithm will need to obtain new SHA-2 signed SSL/TLS certificates to avoid web browser SSL/TLS certificate warnings.

#### Vulnerability Insight

The following hashing algorithms used for signing SSL/TLS certificates are considered cryptographically weak and not secure enough for ongoing use:

- Secure Hash Algorithm 1 (SHA-1)
- Message Digest 5 (MD5)
- Message Digest 4 (MD4)
- Message Digest 2 (MD2)

Beginning as late as January 2017 and as early as June 2016, browser developers such as Microsoft and Google will begin warning users when visiting web sites that use SHA-1 signed Secure Socket Layer (SSL) certificates.

NOTE: The script preference allows to set one or more custom SHA-1 fingerprints of CA certificates which are trusted by this routine. The fingerprints needs to be passed comma-separated and case-insensitive:

Fingerprint1

or

fingerprint 1, Fingerprint 2

# Vulnerability Detection Method

Check which hashing algorithm was used to sign the remote SSL/TLS certificate. Details: SSL/TLS: Certificate Signed Using A Weak Signature Algorithm OID: 1.3.6.1.4.1.25623.1.0.105880

Version used: \$Revision: 4781 \$

# References

Other:

URL:https://blog.mozilla.org/security/2014/09/23/phasing-out-certificates-with  $\hookrightarrow$ -sha-1-based-signature-algorithms/

2 RESULTS PER HOST

[ return to 127.0.0.25 ]

# 2.16.4 Low general/tcp

Low (CVSS: 2.6)

# Summary

The remote host implements TCP timestamps and therefore allows to compute the uptime.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

A side effect of this feature is that the uptime of the remote host can sometimes be computed.

### Solution

# Solution type: Mitigation

To disable TCP timestamps on linux add the line 'net.ipv4.tcp\_timestamps = 0' to /etc/sysctl.conf. Execute 'sysctl-p' to apply the settings at runtime.

To disable TCP timestamps on Windows execute 'netsh int tcp set global timestamps=disabled' Starting with Windows Server 2008 and Vista, the timestamp can not be completely disabled. The default behavior of the TCP/IP stack on this Systems is to not use the Timestamp options when initiating TCP connections, but use them if the TCP peer that is initiating communication includes them in their synchronize (SYN) segment.

See also: http://www.microsoft.com/en-us/download/details.aspx?id=9152

### Affected Software/OS

TCP/IPv4 implementations that implement RFC1323.

# Vulnerability Insight

The remote host implements TCP timestamps, as defined by RFC1323.

#### **Vulnerability Detection Method**

Special IP packets are forged and sent with a little delay in between to the target IP. The responses are searched for a timestamps. If found, the timestamps are reported.

Details: TCP timestamps OID:1.3.6.1.4.1.25623.1.0.80091 Version used: \$Revision: 5309 \$

# References

Other:

URL:http://www.ietf.org/rfc/rfc1323.txt

[ return to 127.0.0.25 ]

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#### 2.17 127.0.0.36

Host scan start Tue Feb 21 15:24:51 2017 UTC Host scan end Tue Feb 21 16:27:23 2017 UTC

Service (Port)	Threat Level
$445/\mathrm{tcp}$	High
$135/\mathrm{tcp}$	Medium
general/tcp	Low

# 2.17.1 High 445/tcp

High (CVSS: 0.0)

NVT: SMBv1 enabled (Remote Check)

### Summary

The remote Windows host is prone to an unspecified remote code execution vulnerability in SMBv1 protocol.

This NVT has been replaced by NVT 'Microsoft Windows SMB Server Multiple Vulnerabilities-Remote (4013389)' (OID: 1.3.6.1.4.1.25623.1.0.810810).

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Workaround

Disable SMB v1 and/or block all versions of SMB at the network boundary by blocking TCP port 445 with related protocols on UDP ports 137-138 and TCP port 139, for all boundary devices.

### Vulnerability Insight

The remote Windows host is supporting SMBv1 and is therefore prone to an unspecified remote code execution vulnerability. This vulnerability is related to the 'Shadow Brokers' group.

# Log Method

Details: SMBv1 enabled (Remote Check)

OID:1.3.6.1.4.1.25623.1.0.140151 Version used: \$Revision: 5222 \$

# References

#### Other:

URL:https://www.us-cert.gov/ncas/current-activity/2017/01/16/SMB-Security-Best

 $\hookrightarrow$ -Practices

URL:https://support.microsoft.com/en-us/kb/2696547 URL:https://support.microsoft.com/en-us/kb/204279

URL:https://technet.microsoft.com/en-us/library/security/MS17-010

[ return to 127.0.0.36 ]

2 RESULTS PER HOST 145

## 2.17.2 Medium 135/tcp

#### Medium (CVSS: 5.0)

NVT: DCE/RPC and MSRPC Services Enumeration Reporting

## Summary

Distributed Computing Environment / Remote Procedure Calls (DCE/RPC) or MSRPC services running on the remote host can be enumerated by connecting on port 135 and doing the appropriate queries.

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

An attacker may use this fact to gain more knowledge about the remote host.

#### Solution

Solution type: Mitigation

Filter incoming traffic to this ports.

## Vulnerability Detection Method

Details: DCE/RPC and MSRPC Services Enumeration Reporting

OID:1.3.6.1.4.1.25623.1.0.10736 Version used: \$Revision: 4998 \$

[ return to 127.0.0.36 ]

## 2.17.3 Low general/tcp

#### Low (CVSS: 2.6)

NVT: TCP timestamps

# Summary

The remote host implements TCP timestamps and therefore allows to compute the uptime.

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

# Impact

A side effect of this feature is that the uptime of the remote host can sometimes be computed.

# Solution

## Solution type: Mitigation

To disable TCP timestamps on linux add the line 'net.ipv4.tcp\_timestamps = 0' to /etc/sysctl.conf. Execute 'sysctl-p' to apply the settings at runtime.

 $To\ disable\ TCP\ timestamps on\ Windows\ execute\ 'netsh\ int\ tcp\ set\ global\ timestamps = disabled'$ 

Starting with Windows Server 2008 and Vista, the timestamp can not be completely disabled. The default behavior of the TCP/IP stack on this Systems is to not use the Timestamp options when initiating TCP connections, but use them if the TCP peer that is initiating communication includes them in their synchronize (SYN) segment.

See also: http://www.microsoft.com/en-us/download/details.aspx?id=9152

#### Affected Software/OS

TCP/IPv4 implementations that implement RFC1323.

#### Vulnerability Insight

The remote host implements TCP timestamps, as defined by RFC1323.

# Vulnerability Detection Method

Special IP packets are forged and sent with a little delay in between to the target IP. The responses are searched for a timestamps. If found, the timestamps are reported.

Details: TCP timestamps OID:1.3.6.1.4.1.25623.1.0.80091 Version used: \$Revision: 5309 \$

#### References

Other:

URL:http://www.ietf.org/rfc/rfc1323.txt

[ return to 127.0.0.36 ]

## 2.18 127.0.0.47

Host scan start Tue Feb 21 15:43:02 2017 UTC Host scan end Tue Feb 21 17:34:06 2017 UTC

Service (Port)	Threat Level
$445/\mathrm{tcp}$	High
general/tcp	Low

# 2.18.1 High 445/tcp

# High (CVSS: 0.0)

NVT: SMBv1 enabled (Remote Check)

# Summary

The remote Windows host is prone to an unspecified remote code execution vulnerability in SMBv1 protocol.

This NVT has been replaced by NVT 'Microsoft Windows SMB Server Multiple Vulnerabilities-Remote (4013389)' (OID: 1.3.6.1.4.1.25623.1.0.810810).

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... continued from previous page ...

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## Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

## Solution type: Workaround

Disable SMB v1 and/or block all versions of SMB at the network boundary by blocking TCP port 445 with related protocols on UDP ports 137-138 and TCP port 139, for all boundary devices.

## Vulnerability Insight

The remote Windows host is supporting SMBv1 and is therefore prone to an unspecified remote code execution vulnerability. This vulnerability is related to the 'Shadow Brokers' group.

#### Log Method

Details: SMBv1 enabled (Remote Check)

OID:1.3.6.1.4.1.25623.1.0.140151 Version used: \$Revision: 5222 \$

#### References

#### Other:

URL:https://www.us-cert.gov/ncas/current-activity/2017/01/16/SMB-Security-Best

 $\hookrightarrow$ -Practices

URL:https://support.microsoft.com/en-us/kb/2696547 URL:https://support.microsoft.com/en-us/kb/204279

URL:https://technet.microsoft.com/en-us/library/security/MS17-010

[ return to 127.0.0.47 ]

#### 2.18.2 Low general/tcp

## Low (CVSS: 2.6)

NVT: TCP timestamps

# Summary

The remote host implements TCP timestamps and therefore allows to compute the uptime.

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

# Impact

A side effect of this feature is that the uptime of the remote host can sometimes be computed.

## Solution

## Solution type: Mitigation

To disable TCP timestamps on linux add the line 'net.ipv4.tcp\_timestamps = 0' to /etc/sysctl.conf. Execute 'sysctl-p' to apply the settings at runtime.

To disable TCP timestamps on Windows execute 'netsh int tcp set global timestamps=disabled'

Starting with Windows Server 2008 and Vista, the timestamp can not be completely disabled. The default behavior of the TCP/IP stack on this Systems is to not use the Timestamp options when initiating TCP connections, but use them if the TCP peer that is initiating communication includes them in their synchronize (SYN) segment.

See also: http://www.microsoft.com/en-us/download/details.aspx?id=9152

## Affected Software/OS

TCP/IPv4 implementations that implement RFC1323.

## Vulnerability Insight

The remote host implements TCP timestamps, as defined by RFC1323.

## Vulnerability Detection Method

Special IP packets are forged and sent with a little delay in between to the target IP. The responses are searched for a timestamps. If found, the timestamps are reported.

Details: TCP timestamps OID:1.3.6.1.4.1.25623.1.0.80091 Version used: \$Revision: 5309 \$

#### References

Other:

URL:http://www.ietf.org/rfc/rfc1323.txt

[ return to 127.0.0.47 ]

# $2.19 \quad 127.0.0.8$

Host scan start Tue Feb 21 16:13:58 2017 UTC Host scan end Tue Feb 21 16:57:23 2017 UTC

Service (Port)	Threat Level
$445/\mathrm{tcp}$	High
$636/\mathrm{tcp}$	High
$135/{ m tcp}$	Medium
$3268/\mathrm{tcp}$	Medium
443/tcp	Medium
$3389/\mathrm{tcp}$	Medium
389/tcp	Medium
$3269/\mathrm{tcp}$	Medium
$636/\mathrm{tcp}$	Medium
general/tcp	Low

# $\mathbf{2.19.1} \quad \mathbf{High} \,\, \mathbf{445/tcp}$

2 RESULTS PER HOST 149

# High (CVSS: 0.0)

NVT: SMBv1 enabled (Remote Check)

#### Summary

The remote Windows host is prone to an unspecified remote code execution vulnerability in SMBv1 protocol.

This NVT has been replaced by NVT 'Microsoft Windows SMB Server Multiple Vulnerabilities-Remote (4013389)' (OID: 1.3.6.1.4.1.25623.1.0.810810).

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Workaround

Disable SMB v1 and/or block all versions of SMB at the network boundary by blocking TCP port 445 with related protocols on UDP ports 137-138 and TCP port 139, for all boundary devices.

#### Vulnerability Insight

The remote Windows host is supporting SMBv1 and is therefore prone to an unspecified remote code execution vulnerability. This vulnerability is related to the 'Shadow Brokers' group.

## Log Method

Details: SMBv1 enabled (Remote Check)

OID:1.3.6.1.4.1.25623.1.0.140151 Version used: \$Revision: 5222 \$

#### References

Other:

 $\label{local_urrent_activity_2017_01_16_SMB_Security_Best} $$ \hookrightarrow -\operatorname{Practices} $$$ 

URL:https://support.microsoft.com/en-us/kb/2696547 URL:https://support.microsoft.com/en-us/kb/204279

 ${\tt URL:https://technet.microsoft.com/en-us/library/security/MS17-010}$ 

[ return to 127.0.0.8 ]

# 2.19.2 High 636/tcp

# High (Overridden from Medium)

NVT: Use LDAP search request to retrieve information from NT Directory Services

## Summary

It is possible to disclose LDAP information.

Description:

The directory base of the remote server is set to NULL. This allows information to be enumerated without any prior knowledge of the directory structure.

 $\dots$  continues on next page  $\dots$ 

#### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

# Solution type: Workaround

If pre-Windows 2000 compatibility is not required, remove pre-Windows 2000 compatibility as follows:

- start cmd.exe
- execute the command: net localgroup 'Pre-Windows 2000 Compatible Access' everyone /delete
- restart the remote host

#### Vulnerability Detection Method

 $\operatorname{Details}$ : Use LDAP search request to retrieve information from NT Directory Services

OID:1.3.6.1.4.1.25623.1.0.12105 Version used: \$Revision: 5190 \$

[ return to 127.0.0.8 ]

## 2.19.3 Medium 135/tcp

#### Medium (CVSS: 5.0)

NVT: DCE/RPC and MSRPC Services Enumeration Reporting

## Summary

Distributed Computing Environment / Remote Procedure Calls (DCE/RPC) or MSRPC services running on the remote host can be enumerated by connecting on port 135 and doing the appropriate queries.

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

# Impact

An attacker may use this fact to gain more knowledge about the remote host.

# Solution

Solution type: Mitigation

Filter incoming traffic to this ports.

#### Vulnerability Detection Method

Details: DCE/RPC and MSRPC Services Enumeration Reporting

OID:1.3.6.1.4.1.25623.1.0.10736 Version used: \$Revision: 4998 \$ 2 RESULTS PER HOST 151

## 2.19.4 Medium 3268/tcp

Medium (CVSS: 5.0)

NVT: Use LDAP search request to retrieve information from NT Directory Services

# Summary

It is possible to disclose LDAP information.

Description:

The directory base of the remote server is set to NULL. This allows information to be enumerated without any prior knowledge of the directory structure.

## Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Workaround

If pre-Windows 2000 compatibility is not required, remove pre-Windows 2000 compatibility as follows:

- start cmd.exe
- execute the command: net localgroup 'Pre-Windows 2000 Compatible Access' everyone / delete
- restart the remote host

#### **Vulnerability Detection Method**

 $\operatorname{Details}$ : Use LDAP search request to retrieve information from NT Directory Services

OID:1.3.6.1.4.1.25623.1.0.12105 Version used: \$Revision: 5190 \$

[ return to 127.0.0.8 ]

# 2.19.5 Medium 443/tcp

Medium (CVSS: 5.0)

NVT: SSL/TLS: Report Vulnerable Cipher Suites for HTTPS

# Summary

This routine reports all  $\mathrm{SSL}/\mathrm{TLS}$  cipher suites accepted by a service where attack vectors exists only on HTTPS services.

## Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Mitigation

The configuration of this services should be changed so that it does not accept the listed cipher suites anymore.

Please see the references for more resources supporting you with this task.

# Affected Software/OS

Services accepting vulnerable SSL/TLS cipher suites via HTTPS.

## Vulnerability Insight

These rules are applied for the evaluation of the vulnerable cipher suites:

- 64-bit block cipher 3DES vulnerable to the SWEET32 attack (CVE-2016-2183).

# Vulnerability Detection Method

Details: SSL/TLS: Report Vulnerable Cipher Suites for HTTPS

OID:1.3.6.1.4.1.25623.1.0.108031 Version used: \$Revision: 5232 \$

#### References

CVE: CVE-2016-2183, CVE-2016-6329

Other:

URL:https://bettercrypto.org/

URL:https://mozilla.github.io/server-side-tls/ssl-config-generator/

URL:https://sweet32.info/

## Medium (CVSS: 4.3)

NVT: SSL/TLS: SSLv3 Protocol CBC Cipher Suites Information Disclosure Vulnerability (POO-DLE)

#### Summary

This host is prone to an information disclosure vulnerability.

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

Successful exploitation will allow a man-in-the-middle attackers gain access to the plain text data stream.

## Solution

**Solution type:** Mitigation Possible Mitigations are:

- Disable SSLv3
- Disable cipher suites supporting CBC cipher modes
- Enable TLS\_FALLBACK\_SCSV if the service is providing TLSv1.0+

## Vulnerability Insight

The flaw is due to the block cipher padding not being deterministic and not covered by the Message Authentication Code

# Vulnerability Detection Method

Evaluate previous collected information about this service.

 ${
m Details:}$  SSL/TLS: SSLv3 Protocol CBC Cipher Suites Information Disclosure Vulnerability .

 $\hookrightarrow$  . .

OID:1.3.6.1.4.1.25623.1.0.802087 Version used: \$Revision: 4749 \$

#### References

CVE: CVE-2014-3566

BID:70574 Other:

URL:https://www.openssl.org/~bodo/ssl-poodle.pdf

URL:https://www.imperialviolet.org/2014/10/14/poodle.html

URL: https://www.dfranke.us/posts/2014-10-14-how-poodle-happened.html

URL: http://googleonlinesecurity.blogspot.in/2014/10/this-poodle-bites-exploit

 $\hookrightarrow$ ing-ssl-30.html

Medium (CVSS: 4.3)

NVT: SSL/TLS: Report Weak Cipher Suites

#### Summary

This routine reports all Weak SSL/TLS cipher suites accepted by a service.

NOTE: No severity for SMTP services with 'Opportunistic TLS' and weak cipher suites on port 25/tcp is reported. If too strong cipher suites are configured for this service the alternative would be to fall back to an even more insecure cleartext communication.

## Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Mitigation

The configuration of this services should be changed so that it does not accept the listed weak cipher suites anymore.

Please see the references for more resources supporting you with this task.

# Vulnerability Insight

These rules are applied for the evaluation of the cryptographic strength:

- RC4 is considered to be weak (CVE-2013-2566, CVE-2015-2808).
- Ciphers using 64 bit or less are considered to be vulnerable to brute force methods and therefore considered as weak (CVE-2015-4000).
- 1024 bit RSA authentication is considered to be insecure and therefore as weak.
- Any cipher considered to be secure for only the next 10 years is considered as medium
- Any other cipher is considered as strong

#### Vulnerability Detection Method

Details: SSL/TLS: Report Weak Cipher Suites

OID: 1.3.6.1.4.1.25623.1.0.103440

Version used: \$Revision: 4863 \$

#### References

CVE: CVE-2013-2566, CVE-2015-2808, CVE-2015-4000

Other:

URL:https://www.bsi.bund.de/SharedDocs/Warnmeldungen/DE/CB/warnmeldung\_cb-k16-

 $\hookrightarrow$  1465\_update\_6.html

URL:https://bettercrypto.org/

URL:https://mozilla.github.io/server-side-tls/ssl-config-generator/

#### Medium (CVSS: 4.3)

NVT: SSL/TLS: Deprecated SSLv2 and SSLv3 Protocol Detection

#### Summary

It was possible to detect the usage of the deprecated SSLv2 and/or SSLv3 protocol on this system.

## Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

An attacker might be able to use the known cryptographic flaws to eavesdrop the connection between clients and the service to get access to sensitive data transferred within the secured connection.

## Solution

## Solution type: Mitigation

It is recommended to disable the deprecated SSLv2 and/or SSLv3 protocols in favor of the TLSv1+ protocols. Please see the references for more information.

# ${\bf Affected\ Software/OS}$

All services providing an encrypted communication using the SSLv2 and/or SSLv3 protocols.

# Vulnerability Insight

The SSLv2 and SSLv3 protocols containing known cryptographic flaws like:

- Padding Oracle On Downgraded Legacy Encryption (POODLE, CVE-2014-3566)
- Decrypting RSA with Obsolete and Weakened eNcryption (DROWN, CVE-2016-0800)

## Vulnerability Detection Method

Check the used protocols of the services provided by this system.

Details: SSL/TLS: Deprecated SSLv2 and SSLv3 Protocol Detection

OID:1.3.6.1.4.1.25623.1.0.111012 Version used: \$Revision: 4686 \$

#### References

CVE: CVE-2016-0800, CVE-2014-3566

#### Other:

URL:https://www.enisa.europa.eu/activities/identity-and-trust/library/delivera  $\hookrightarrow$ bles/algorithms-key-sizes-and-parameters-report

URL:https://bettercrypto.org/

URL:https://mozilla.github.io/server-side-tls/ssl-config-generator/

URL:https://drownattack.com/

URL: https://www.imperialviolet.org/2014/10/14/poodle.html

The SSL/TLS service uses Diffie-Hellman groups with insufficient strength (key size < 2048).

## Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

An attacker might be able to decrypt the SSL/TLS communication offline.

#### Solution

Solution type: Workaround

Deploy (Ephemeral) Elliptic-Curve Diffie-Hellman (ECDHE) or use a 2048-bit or stronger Diffie-Hellman group. (see https://weakdh.org/sysadmin.html).

For Apache Web Servers: Beginning with version 2.4.7, mod ssl will use DH parameters which include primes with lengths of more than 1024 bits.

# Vulnerability Insight

The Diffie-Hellman group are some big numbers that are used as base for the DH computations. They can be, and often are, fixed. The security of the final secret depends on the size of these parameters. It was found that 512 and 768 bits to be weak, 1024 bits to be breakable by really powerful attackers like governments.

# Vulnerability Detection Method

Checks the DHE temporary public key size.

Details: SSL/TLS: Diffie-Hellman Key Exchange Insufficient DH Group Strength Vulnerabili.

 $\hookrightarrow$  . .

OID:1.3.6.1.4.1.25623.1.0.106223 Version used: \$Revision: 4739 \$

#### References

Other:

URL:https://weakdh.org/

URL:https://weakdh.org/sysadmin.html

[ return to 127.0.0.8 ]

# 2.19.6 Medium 3389/tcp

Medium (CVSS: 4.3)

NVT: SSL/TLS: Report Weak Cipher Suites

#### Summary

This routine reports all Weak SSL/TLS cipher suites accepted by a service.

NOTE: No severity for SMTP services with 'Opportunistic TLS' and weak cipher suites on port 25/tcp is reported. If too strong cipher suites are configured for this service the alternative would be to fall back to an even more insecure cleartext communication.

## Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Mitigation

The configuration of this services should be changed so that it does not accept the listed weak cipher suites anymore.

Please see the references for more resources supporting you with this task.

# Vulnerability Insight

These rules are applied for the evaluation of the cryptographic strength:

- RC4 is considered to be weak (CVE-2013-2566, CVE-2015-2808).
- Ciphers using 64 bit or less are considered to be vulnerable to brute force methods and therefore considered as weak (CVE-2015-4000).
- 1024 bit RSA authentication is considered to be insecure and therefore as weak.
- Any cipher considered to be secure for only the next 10 years is considered as medium
- Any other cipher is considered as strong

## Vulnerability Detection Method

Details: SSL/TLS: Report Weak Cipher Suites

OID:1.3.6.1.4.1.25623.1.0.103440 Version used: \$Revision: 4863 \$

#### References

CVE: CVE-2013-2566, CVE-2015-2808, CVE-2015-4000

Other:

 $\label{lem:url:https://www.bsi.bund.de/SharedDocs/Warnmeldungen/DE/CB/warnmeldung_cb-k16-$$$$$\hookrightarrow 1465\_update_6.html$ 

URL:https://bettercrypto.org/

URL:https://mozilla.github.io/server-side-tls/ssl-config-generator/

#### Medium (CVSS: 4.0)

NVT: SSL/TLS: Certificate Signed Using A Weak Signature Algorithm

#### Summary

The remote service is using a SSL/TLS certificate in the certificate chain that has been signed using a cryptographically weak hashing algorithm.

## Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Mitigation

Servers that use SSL/TLS certificates signed with a weak SHA-1, MD5, MD4 or MD2 hashing algorithm will need to obtain new SHA-2 signed SSL/TLS certificates to avoid web browser SSL/TLS certificate warnings.

#### Vulnerability Insight

The following hashing algorithms used for signing SSL/TLS certificates are considered cryptographically weak and not secure enough for ongoing use:

- Secure Hash Algorithm 1 (SHA-1)
- Message Digest 5 (MD5)
- Message Digest 4 (MD4)
- Message Digest 2 (MD2)

Beginning as late as January 2017 and as early as June 2016, browser developers such as Microsoft and Google will begin warning users when visiting web sites that use SHA-1 signed Secure Socket Layer (SSL) certificates.

NOTE: The script preference allows to set one or more custom SHA-1 fingerprints of CA certificates which are trusted by this routine. The fingerprints needs to be passed comma-separated and case-insensitive:

Fingerprint1

or

fingerprint 1, Fingerprint 2

## **Vulnerability Detection Method**

Check which hashing algorithm was used to sign the remote  ${\rm SSL/TLS}$  certificate. Details:  ${\rm SSL/TLS}$ : Certificate Signed Using A Weak Signature Algorithm

OID:1.3.6.1.4.1.25623.1.0.105880 Version used: \$Revision: 4781 \$

# References

Other:

URL:https://blog.mozilla.org/security/2014/09/23/phasing-out-certificates-with  $\hookrightarrow$ -sha-1-based-signature-algorithms/

# $\overline{\text{Medium (CVSS: 4.0)}}$

NVT: SSL/TLS: Diffie-Hellman Key Exchange Insufficient DH Group Strength Vulnerability

#### Summary

The SSL/TLS service uses Diffie-Hellman groups with insufficient strength (key size < 2048).

## Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### **Impact**

An attacker might be able to decrypt the SSL/TLS communication offline.

#### Solution

Solution type: Workaround

Deploy (Ephemeral) Elliptic-Curve Diffie-Hellman (ECDHE) or use a 2048-bit or stronger Diffie-Hellman group. (see https://weakdh.org/sysadmin.html).

For Apache Web Servers: Beginning with version 2.4.7, mod\_ssl will use DH parameters which include primes with lengths of more than 1024 bits.

## Vulnerability Insight

The Diffie-Hellman group are some big numbers that are used as base for the DH computations. They can be, and often are, fixed. The security of the final secret depends on the size of these parameters. It was found that 512 and 768 bits to be weak, 1024 bits to be breakable by really powerful attackers like governments.

## **Vulnerability Detection Method**

Checks the DHE temporary public key size.

Details: SSL/TLS: Diffie-Hellman Key Exchange Insufficient DH Group Strength Vulnerabili.

 $\hookrightarrow$  . .

OID:1.3.6.1.4.1.25623.1.0.106223 Version used: \$Revision: 4739 \$

## References

Other:

URL:https://weakdh.org/

URL:https://weakdh.org/sysadmin.html

[ return to 127.0.0.8 ]

# 2.19.7 Medium 389/tcp

#### Medium (CVSS: 5.0)

 ${
m NVT}$ : Use LDAP search request to retrieve information from  ${
m NT}$  Directory Services

#### Summary

It is possible to disclose LDAP information.

Description:

The directory base of the remote server is set to NULL. This allows information to be enumerated without any prior knowledge of the directory structure.

## Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

 $\dots$  continues on next page  $\dots$ 

#### Solution

#### Solution type: Workaround

If pre-Windows 2000 compatibility is not required, remove pre-Windows 2000 compatibility as follows:

- start cmd.exe
- execute the command: net localgroup 'Pre-Windows 2000 Compatible Access' everyone / delete
- restart the remote host

## Vulnerability Detection Method

Details: Use LDAP search request to retrieve information from NT Directory Services

OID:1.3.6.1.4.1.25623.1.0.12105 Version used: \$Revision: 5190 \$

[ return to 127.0.0.8 ]

# 2.19.8 Medium 3269/tcp

# Medium (CVSS: 5.0)

NVT: Use LDAP search request to retrieve information from NT Directory Services

## Summary

It is possible to disclose LDAP information.

Description:

The directory base of the remote server is set to NULL. This allows information to be enumerated without any prior knowledge of the directory structure.

#### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

## Solution type: Workaround

If pre-Windows 2000 compatibility is not required, remove pre-Windows 2000 compatibility as follows:

- start cmd.exe
- execute the command: net localgroup 'Pre-Windows 2000 Compatible Access' everyone /delete
- restart the remote host

# Vulnerability Detection Method

 $\operatorname{Details}$ : Use LDAP search request to retrieve information from NT Directory Services

OID:1.3.6.1.4.1.25623.1.0.12105 Version used: \$Revision: 5190 \$ 2 RESULTS PER HOST

Medium (CVSS: 4.3)

NVT: SSL/TLS: SSLv3 Protocol CBC Cipher Suites Information Disclosure Vulnerability (POO-DLE)

## Summary

This host is prone to an information disclosure vulnerability.

## Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

Successful exploitation will allow a man-in-the-middle attackers gain access to the plain text data stream.

#### Solution

**Solution type:** Mitigation Possible Mitigations are:

- Disable SSLv3
- Disable cipher suites supporting CBC cipher modes
- Enable TLS FALLBACK SCSV if the service is providing TLSv1.0+

#### Vulnerability Insight

The flaw is due to the block cipher padding not being deterministic and not covered by the Message Authentication Code

## **Vulnerability Detection Method**

Evaluate previous collected information about this service.

Details: SSL/TLS: SSLv3 Protocol CBC Cipher Suites Information Disclosure Vulnerability .

 $\hookrightarrow$  . .

OID:1.3.6.1.4.1.25623.1.0.802087 Version used: \$Revision: 4749 \$

#### References

CVE: CVE-2014-3566

BID:70574 Other:

URL:https://www.openssl.org/~bodo/ssl-poodle.pdf

URL:https://www.imperialviolet.org/2014/10/14/poodle.html

 ${\tt URL:https://www.dfranke.us/posts/2014-10-14-how-poodle-happened.html}$ 

URL: http://googleonlinesecurity.blogspot.in/2014/10/this-poodle-bites-exploit

 $\hookrightarrow$ ing-ssl-30.html

# Medium (CVSS: 4.3)

NVT: SSL/TLS: Deprecated SSLv2 and SSLv3 Protocol Detection

## Summary

It was possible to detect the usage of the deprecated SSLv2 and/or SSLv3 protocol on this system.

## Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

## Impact

An attacker might be able to use the known cryptographic flaws to eavesdrop the connection between clients and the service to get access to sensitive data transferred within the secured connection.

#### Solution

Solution type: Mitigation

It is recommended to disable the deprecated SSLv2 and/or SSLv3 protocols in favor of the TLSv1+ protocols. Please see the references for more information.

## Affected Software/OS

All services providing an encrypted communication using the SSLv2 and/or SSLv3 protocols.

## Vulnerability Insight

The SSLv2 and SSLv3 protocols containing known cryptographic flaws like:

- Padding Oracle On Downgraded Legacy Encryption (POODLE, CVE-2014-3566)
- Decrypting RSA with Obsolete and Weakened eNcryption (DROWN, CVE-2016-0800)

## Vulnerability Detection Method

Check the used protocols of the services provided by this system.

Details: SSL/TLS: Deprecated SSLv2 and SSLv3 Protocol Detection

OID:1.3.6.1.4.1.25623.1.0.111012 Version used: \$Revision: 4686 \$

## References

CVE: CVE-2016-0800, CVE-2014-3566

Other:

URL:https://www.enisa.europa.eu/activities/identity-and-trust/library/delivera

 $\hookrightarrow$ bles/algorithms-key-sizes-and-parameters-report

URL:https://bettercrypto.org/

URL:https://mozilla.github.io/server-side-tls/ssl-config-generator/

URL:https://drownattack.com/

URL:https://www.imperialviolet.org/2014/10/14/poodle.html

## Medium (CVSS: 4.3)

NVT: SSL/TLS: Report Weak Cipher Suites

#### Summary

This routine reports all Weak SSL/TLS cipher suites accepted by a service.

NOTE: No severity for SMTP services with 'Opportunistic TLS' and weak cipher suites on port 25/tcp is reported. If too strong cipher suites are configured for this service the alternative would be to fall back to an even more insecure cleartext communication.

## Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

## Solution

Solution type: Mitigation

The configuration of this services should be changed so that it does not accept the listed weak cipher suites anymore.

Please see the references for more resources supporting you with this task.

#### Vulnerability Insight

These rules are applied for the evaluation of the cryptographic strength:

- RC4 is considered to be weak (CVE-2013-2566, CVE-2015-2808).
- Ciphers using 64 bit or less are considered to be vulnerable to brute force methods and therefore considered as weak (CVE-2015-4000).
- 1024 bit RSA authentication is considered to be insecure and therefore as weak.
- Any cipher considered to be secure for only the next 10 years is considered as medium
- Any other cipher is considered as strong

# **Vulnerability Detection Method**

Details: SSL/TLS: Report Weak Cipher Suites

OID:1.3.6.1.4.1.25623.1.0.103440 Version used: \$Revision: 4863 \$

# References

CVE: CVE-2013-2566, CVE-2015-2808, CVE-2015-4000

Other:

URL:https://www.bsi.bund.de/SharedDocs/Warnmeldungen/DE/CB/warnmeldung\_cb-k16-

 $\hookrightarrow$  1465 update 6.html

URL:https://bettercrypto.org/

URL:https://mozilla.github.io/server-side-tls/ssl-config-generator/

#### Medium (CVSS: 4.0)

NVT: SSL/TLS: Diffie-Hellman Key Exchange Insufficient DH Group Strength Vulnerability

## Summary

The SSL/TLS service uses Diffie-Hellman groups with insufficient strength (key size < 2048).

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

# Impact

An attacker might be able to decrypt the SSL/TLS communication offline.

#### Solution

Solution type: Workaround

Deploy (Ephemeral) Elliptic-Curve Diffie-Hellman (ECDHE) or use a 2048-bit or stronger Diffie-Hellman group. (see https://weakdh.org/sysadmin.html).

For Apache Web Servers: Beginning with version 2.4.7, mod\_ssl will use DH parameters which include primes with lengths of more than 1024 bits.

## Vulnerability Insight

The Diffie-Hellman group are some big numbers that are used as base for the DH computations. They can be, and often are, fixed. The security of the final secret depends on the size of these parameters. It was found that 512 and 768 bits to be weak, 1024 bits to be breakable by really powerful attackers like governments.

## Vulnerability Detection Method

Checks the DHE temporary public key size.

Details: SSL/TLS: Diffie-Hellman Key Exchange Insufficient DH Group Strength Vulnerabili.

OID:1.3.6.1.4.1.25623.1.0.106223 Version used: \$Revision: 4739 \$

#### References

Other:

URL:https://weakdh.org/

URL:https://weakdh.org/sysadmin.html

[ return to 127.0.0.8 ]

## 2.19.9 Medium 636/tcp

Medium (CVSS: 4.3)

NVT: SSL/TLS: Report Weak Cipher Suites

#### Summary

This routine reports all Weak SSL/TLS cipher suites accepted by a service.

NOTE: No severity for SMTP services with 'Opportunistic TLS' and weak cipher suites on port 25/tcp is reported. If too strong cipher suites are configured for this service the alternative would be to fall back to an even more insecure cleartext communication.

#### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Mitigation

The configuration of this services should be changed so that it does not accept the listed weak cipher suites anymore.

Please see the references for more resources supporting you with this task.

#### Vulnerability Insight

These rules are applied for the evaluation of the cryptographic strength:

- RC4 is considered to be weak (CVE-2013-2566, CVE-2015-2808).
- Ciphers using 64 bit or less are considered to be vulnerable to brute force methods and therefore considered as weak (CVE-2015-4000).
- 1024 bit RSA authentication is considered to be insecure and therefore as weak.
- Any cipher considered to be secure for only the next 10 years is considered as medium
- Any other cipher is considered as strong

## Vulnerability Detection Method

Details: SSL/TLS: Report Weak Cipher Suites

OID:1.3.6.1.4.1.25623.1.0.103440 Version used: \$Revision: 4863 \$

#### References

CVE: CVE-2013-2566, CVE-2015-2808, CVE-2015-4000

Other:

URL: https://www.bsi.bund.de/SharedDocs/Warnmeldungen/DE/CB/warnmeldung\_cb-k16-

 $\hookrightarrow$  1465\_update\_6.html

URL:https://bettercrypto.org/

URL:https://mozilla.github.io/server-side-tls/ssl-config-generator/

## Medium (CVSS: 4.3)

NVT: SSL/TLS: SSLv3 Protocol CBC Cipher Suites Information Disclosure Vulnerability (POO-DLE)

#### Summary

This host is prone to an information disclosure vulnerability.

#### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

## Impact

Successful exploitation will allow a man-in-the-middle attackers gain access to the plain text data stream.

# Solution

Solution type: Mitigation Possible Mitigations are:

- Disable SSLv3
- Disable cipher suites supporting CBC cipher modes
- Enable TLS FALLBACK SCSV if the service is providing TLSv1.0+

# Vulnerability Insight

The flaw is due to the block cipher padding not being deterministic and not covered by the Message Authentication Code

## Vulnerability Detection Method

Evaluate previous collected information about this service.

Details: SSL/TLS: SSLv3 Protocol CBC Cipher Suites Information Disclosure Vulnerability .

ightarrow . .

OID:1.3.6.1.4.1.25623.1.0.802087 Version used: \$Revision: 4749 \$

#### References

CVE: CVE-2014-3566

BID:70574 Other:

URL:https://www.openssl.org/~bodo/ssl-poodle.pdf

URL: https://www.imperialviolet.org/2014/10/14/poodle.html

URL: https://www.dfranke.us/posts/2014-10-14-how-poodle-happened.html

URL: http://googleonlinesecurity.blogspot.in/2014/10/this-poodle-bites-exploit

 $\hookrightarrow$ ing-ssl-30.html

#### Medium (CVSS: 4.3)

NVT: SSL/TLS: Deprecated SSLv2 and SSLv3 Protocol Detection

#### Summary

It was possible to detect the usage of the deprecated SSLv2 and/or SSLv3 protocol on this system.

## Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

An attacker might be able to use the known cryptographic flaws to eavesdrop the connection between clients and the service to get access to sensitive data transferred within the secured connection.

# Solution

Solution type: Mitigation

It is recommended to disable the deprecated SSLv2 and/or SSLv3 protocols in favor of the TLSv1+ protocols. Please see the references for more information.

#### Affected Software/OS

All services providing an encrypted communication using the SSLv2 and/or SSLv3 protocols.

#### Vulnerability Insight

The SSLv2 and SSLv3 protocols containing known cryptographic flaws like:

- Padding Oracle On Downgraded Legacy Encryption (POODLE, CVE-2014-3566)

- Decrypting RSA with Obsolete and Weakened eNcryption (DROWN, CVE-2016-0800)

## Vulnerability Detection Method

Check the used protocols of the services provided by this system.

Details: SSL/TLS: Deprecated SSLv2 and SSLv3 Protocol Detection

OID:1.3.6.1.4.1.25623.1.0.111012 Version used: \$Revision: 4686 \$

#### References

CVE: CVE-2016-0800, CVE-2014-3566

Other

URL:https://www.enisa.europa.eu/activities/identity-and-trust/library/delivera

 $\hookrightarrow \texttt{bles/algorithms-key-sizes-and-parameters-report}$ 

URL:https://bettercrypto.org/

URL: https://mozilla.github.io/server-side-tls/ssl-config-generator/

URL:https://drownattack.com/

URL:https://www.imperialviolet.org/2014/10/14/poodle.html

# Medium (CVSS: 4.0)

NVT: SSL/TLS: Diffie-Hellman Key Exchange Insufficient DH Group Strength Vulnerability

#### Summary

The SSL/TLS service uses Diffie-Hellman groups with insufficient strength (key size < 2048).

#### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

# Impact

An attacker might be able to decrypt the SSL/TLS communication offline.

## Solution

Solution type: Workaround

Deploy (Ephemeral) Elliptic-Curve Diffie-Hellman (ECDHE) or use a 2048-bit or stronger Diffie-Hellman group. (see https://weakdh.org/sysadmin.html).

For Apache Web Servers: Beginning with version 2.4.7, mod\_ssl will use DH parameters which include primes with lengths of more than 1024 bits.

#### Vulnerability Insight

The Diffie-Hellman group are some big numbers that are used as base for the DH computations. They can be, and often are, fixed. The security of the final secret depends on the size of these parameters. It was found that 512 and 768 bits to be weak, 1024 bits to be breakable by really powerful attackers like governments.

#### Vulnerability Detection Method

Checks the DHE temporary public key size.

Details: SSL/TLS: Diffie-Hellman Key Exchange Insufficient DH Group Strength Vulnerabili.

 $\hookrightarrow$  . .

OID:1.3.6.1.4.1.25623.1.0.106223 Version used: \$Revision: 4739 \$

#### References

Other:

URL:https://weakdh.org/

URL:https://weakdh.org/sysadmin.html

[ return to 127.0.0.8 ]

## 2.19.10 Low general/tcp

Low (CVSS: 2.6) NVT: TCP timestamps

#### Summary

The remote host implements TCP timestamps and therefore allows to compute the uptime.

## Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

A side effect of this feature is that the uptime of the remote host can sometimes be computed.

#### Solution

Solution type: Mitigation

To disable TCP timestamps on linux add the line 'net.ipv4.tcp\_timestamps = 0' to /etc/sysctl.conf. Execute 'sysctl-p' to apply the settings at runtime.

To disable TCP timestamps on Windows execute 'netsh int tcp set global timestamps=disabled' Starting with Windows Server 2008 and Vista, the timestamp can not be completely disabled. The default behavior of the TCP/IP stack on this Systems is to not use the Timestamp options when initiating TCP connections, but use them if the TCP peer that is initiating communication includes them in their synchronize (SYN) segment.

See also: http://www.microsoft.com/en-us/download/details.aspx?id=9152

#### Affected Software/OS

TCP/IPv4 implementations that implement RFC1323.

#### Vulnerability Insight

The remote host implements TCP timestamps, as defined by RFC1323.

#### Vulnerability Detection Method

Special IP packets are forged and sent with a little delay in between to the target IP. The responses are searched for a timestamps. If found, the timestamps are reported.

Details: TCP timestamps

OID:1.3.6.1.4.1.25623.1.0.80091 Version used: \$Revision: 5309 \$

#### References

Other:

URL:http://www.ietf.org/rfc/rfc1323.txt

[ return to 127.0.0.8 ]

#### $2.20 \quad 127.0.0.35$

Host scan start Tue Feb 21 15:24:51 2017 UTC Host scan end Tue Feb 21 15:35:23 2017 UTC

Service (Port)	Threat Level			
$445/\mathrm{tcp}$	High			
m general/tcp	High			

## 2.20.1 High 445/tcp

## High (CVSS: 0.0)

NVT: SMBv1 enabled (Remote Check)

## Summary

The remote Windows host is prone to an unspecified remote code execution vulnerability in SMBv1 protocol.

This NVT has been replaced by NVT 'Microsoft Windows SMB Server Multiple Vulnerabilities-Remote (4013389)' (OID: 1.3.6.1.4.1.25623.1.0.810810).

## Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Workaround

Disable SMB v1 and/or block all versions of SMB at the network boundary by blocking TCP port 445 with related protocols on UDP ports 137-138 and TCP port 139, for all boundary devices.

# Vulnerability Insight

The remote Windows host is supporting SMBv1 and is therefore prone to an unspecified remote code execution vulnerability. This vulnerability is related to the 'Shadow Brokers' group.

#### Log Method

Details: SMBv1 enabled (Remote Check)

OID:1.3.6.1.4.1.25623.1.0.140151 Version used: \$Revision: 5222 \$

#### References

#### Other:

URL:https://www.us-cert.gov/ncas/current-activity/2017/01/16/SMB-Security-Best

 $\hookrightarrow$ -Practices

URL:https://support.microsoft.com/en-us/kb/2696547 URL:https://support.microsoft.com/en-us/kb/204279

URL:https://technet.microsoft.com/en-us/library/security/MS17-010

[ return to 127.0.0.35 ]

# 2.20.2 High general/tcp

# High (CVSS: 10.0)

# NVT: OS End Of Life Detection

## Summary

OS End Of Life Detection

The Operating System on the remote host has reached the end of life and should not be used anymore.

## Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

## Solution

Solution type: Mitigation

## Vulnerability Detection Method

Details: OS End Of Life Detection OID:1.3.6.1.4.1.25623.1.0.103674 Version used: \$Revision: 4111 \$

[ return to 127.0.0.35 ]

## $2.21 \quad 127.0.0.39$

Service (Port)	Threat Level
$445/\mathrm{tcp}$	High
$135/{ m tcp}$	Medium
3389/tcp	Medium
general/tcp	Low

# 2.21.1 High 445/tcp

High (CVSS: 0.0)

NVT: SMBv1 enabled (Remote Check)

#### Summary

The remote Windows host is prone to an unspecified remote code execution vulnerability in SMBv1 protocol.

This NVT has been replaced by NVT 'Microsoft Windows SMB Server Multiple Vulnerabilities-Remote (4013389)' (OID: 1.3.6.1.4.1.25623.1.0.810810).

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Workaround

Disable SMB v1 and/or block all versions of SMB at the network boundary by blocking TCP port 445 with related protocols on UDP ports 137-138 and TCP port 139, for all boundary devices.

## Vulnerability Insight

The remote Windows host is supporting SMBv1 and is therefore prone to an unspecified remote code execution vulnerability. This vulnerability is related to the 'Shadow Brokers' group.

## Log Method

Details: SMBv1 enabled (Remote Check)

OID:1.3.6.1.4.1.25623.1.0.140151 Version used: \$Revision: 5222 \$

## References

Other:

 $\label{eq:url:https://www.us-cert.gov/ncas/current-activity/2017/01/16/SMB-Security-Best $$\hookrightarrow$-Practices$ 

URL:https://support.microsoft.com/en-us/kb/2696547 URL:https://support.microsoft.com/en-us/kb/204279

URL:https://technet.microsoft.com/en-us/library/security/MS17-010

[ return to 127.0.0.39 ]

# 2.21.2 Medium 135/tcp

Medium (CVSS: 5.0)

NVT: DCE/RPC and MSRPC Services Enumeration Reporting

## Summary

Distributed Computing Environment / Remote Procedure Calls (DCE/RPC) or MSRPC services running on the remote host can be enumerated by connecting on port 135 and doing the appropriate queries.

# **Vulnerability Detection Result**

Vulnerability was detected according to the Vulnerability Detection Method.

#### **Impact**

An attacker may use this fact to gain more knowledge about the remote host.

## Solution

Solution type: Mitigation

Filter incoming traffic to this ports.

# Vulnerability Detection Method

Details: DCE/RPC and MSRPC Services Enumeration Reporting

OID:1.3.6.1.4.1.25623.1.0.10736 Version used: \$Revision: 4998 \$

[ return to 127.0.0.39 ]

# 2.21.3 Medium 3389/tcp

#### Medium (CVSS: 4.3)

NVT: SSL/TLS: Report Weak Cipher Suites

# Summary

This routine reports all Weak SSL/TLS cipher suites accepted by a service.

NOTE: No severity for SMTP services with 'Opportunistic TLS' and weak cipher suites on port 25/tcp is reported. If too strong cipher suites are configured for this service the alternative would be to fall back to an even more insecure clear text communication.

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

# Solution

Solution type: Mitigation

The configuration of this services should be changed so that it does not accept the listed weak cipher suites anymore.

Please see the references for more resources supporting you with this task.

# Vulnerability Insight

These rules are applied for the evaluation of the cryptographic strength:

- RC4 is considered to be weak (CVE-2013-2566, CVE-2015-2808).
- Ciphers using 64 bit or less are considered to be vulnerable to brute force methods and therefore considered as weak (CVE-2015-4000).
- ... continues on next page ...

- 1024 bit RSA authentication is considered to be insecure and therefore as weak.
- Any cipher considered to be secure for only the next 10 years is considered as medium
- Any other cipher is considered as strong

# Vulnerability Detection Method

Details: SSL/TLS: Report Weak Cipher Suites

OID:1.3.6.1.4.1.25623.1.0.103440 Version used: \$Revision: 4863 \$

#### References

CVE: CVE-2013-2566, CVE-2015-2808, CVE-2015-4000

Other:

URL:https://www.bsi.bund.de/SharedDocs/Warnmeldungen/DE/CB/warnmeldung\_cb-k16-

 $\hookrightarrow$  1465\_update\_6.html

URL:https://bettercrypto.org/

URL:https://mozilla.github.io/server-side-tls/ssl-config-generator/

[ return to 127.0.0.39 ]

# 2.21.4 Low general/tcp

#### Low (CVSS: 2.6)

NVT: TCP timestamps

## Summary

The remote host implements TCP timestamps and therefore allows to compute the uptime.

## Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

## Impact

A side effect of this feature is that the uptime of the remote host can sometimes be computed.

## Solution

# Solution type: Mitigation

To disable TCP timestamps on linux add the line 'net.ipv4.tcp\_timestamps = 0' to /etc/sysctl.conf. Execute 'sysctl-p' to apply the settings at runtime.

To disable TCP timestamps on Windows execute 'netsh int tcp set global timestamps=disabled' Starting with Windows Server 2008 and Vista, the timestamp can not be completely disabled.

The default behavior of the TCP/IP stack on this Systems is to not use the Timestamp options when initiating TCP connections, but use them if the TCP peer that is initiating communication includes them in their synchronize (SYN) segment.

See also: http://www.microsoft.com/en-us/download/details.aspx?id=9152

## Affected Software/OS

TCP/IPv4 implementations that implement RFC1323.

#### Vulnerability Insight

The remote host implements TCP timestamps, as defined by RFC1323.

## Vulnerability Detection Method

Special IP packets are forged and sent with a little delay in between to the target IP. The responses are searched for a timestamps. If found, the timestamps are reported.

Details: TCP timestamps OID:1.3.6.1.4.1.25623.1.0.80091 Version used: \$Revision: 5309 \$

# References

Other:

URL:http://www.ietf.org/rfc/rfc1323.txt

[ return to 127.0.0.39 ]

# $2.22 \quad 127.0.0.2$

Host scan start Tue Feb 21 15:24:58 2017 UTC Host scan end Tue Feb 21 16:21:25 2017 UTC

Service (Port)	Threat Level		
$445/\mathrm{tcp}$	High		
$3389/\mathrm{tcp}$	Medium		
$135/\mathrm{tcp}$	Medium		
general/tcp	Low		

# 2.22.1 High 445/tcp

# High (CVSS: 0.0)

NVT: SMBv1 enabled (Remote Check)

## Summary

The remote Windows host is prone to an unspecified remote code execution vulnerability in SMBv1 protocol.

This NVT has been replaced by NVT 'Microsoft Windows SMB Server Multiple Vulnerabilities-Remote (4013389)' (OID: 1.3.6.1.4.1.25623.1.0.810810).

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

## Solution

Solution type: Workaround

2 RESULTS PER HOST

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Disable SMB v1 and/or block all versions of SMB at the network boundary by blocking TCP port 445 with related protocols on UDP ports 137-138 and TCP port 139, for all boundary devices.

## Vulnerability Insight

The remote Windows host is supporting SMBv1 and is therefore prone to an unspecified remote code execution vulnerability. This vulnerability is related to the 'Shadow Brokers' group.

## Log Method

Details: SMBv1 enabled (Remote Check)

OID:1.3.6.1.4.1.25623.1.0.140151 Version used: \$Revision: 5222 \$

#### References

#### Other:

URL:https://www.us-cert.gov/ncas/current-activity/2017/01/16/SMB-Security-Best

 $\hookrightarrow$ -Practices

URL:https://support.microsoft.com/en-us/kb/2696547 URL:https://support.microsoft.com/en-us/kb/204279

URL:https://technet.microsoft.com/en-us/library/security/MS17-010

[ return to 127.0.0.2 ]

# 2.22.2 Medium 3389/tcp

## Medium (CVSS: 4.3)

NVT: SSL/TLS: Report Weak Cipher Suites

#### Summary

This routine reports all Weak SSL/TLS cipher suites accepted by a service.

NOTE: No severity for SMTP services with 'Opportunistic TLS' and weak cipher suites on port 25/tcp is reported. If too strong cipher suites are configured for this service the alternative would be to fall back to an even more insecure cleartext communication.

#### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Mitigation

The configuration of this services should be changed so that it does not accept the listed weak cipher suites anymore.

Please see the references for more resources supporting you with this task.

#### Vulnerability Insight

These rules are applied for the evaluation of the cryptographic strength:

- RC4 is considered to be weak (CVE-2013-2566, CVE-2015-2808).

- Ciphers using 64 bit or less are considered to be vulnerable to brute force methods and therefore considered as weak (CVE-2015-4000).
- 1024 bit RSA authentication is considered to be insecure and therefore as weak.
- Any cipher considered to be secure for only the next 10 years is considered as medium
- Any other cipher is considered as strong

#### **Vulnerability Detection Method**

Details: SSL/TLS: Report Weak Cipher Suites

OID:1.3.6.1.4.1.25623.1.0.103440 Version used: \$Revision: 4863 \$

## References

CVE: CVE-2013-2566, CVE-2015-2808, CVE-2015-4000

Other

URL:https://www.bsi.bund.de/SharedDocs/Warnmeldungen/DE/CB/warnmeldung\_cb-k16-

 $\hookrightarrow$ 1465\_update\_6.html

URL:https://bettercrypto.org/

URL:https://mozilla.github.io/server-side-tls/ssl-config-generator/

#### Medium (CVSS: 4.0)

NVT: SSL/TLS: Certificate Signed Using A Weak Signature Algorithm

#### Summary

The remote service is using a SSL/TLS certificate in the certificate chain that has been signed using a cryptographically weak hashing algorithm.

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

## Solution

Solution type: Mitigation

Servers that use SSL/TLS certificates signed with a weak SHA-1, MD5, MD4 or MD2 hashing algorithm will need to obtain new SHA-2 signed SSL/TLS certificates to avoid web browser SSL/TLS certificate warnings.

## Vulnerability Insight

The following hashing algorithms used for signing SSL/TLS certificates are considered cryptographically weak and not secure enough for ongoing use:

- Secure Hash Algorithm 1 (SHA-1)
- Message Digest 5 (MD5)
- Message Digest 4 (MD4)
- Message Digest 2 (MD2)

Beginning as late as January 2017 and as early as June 2016, browser developers such as Microsoft and Google will begin warning users when visiting web sites that use SHA-1 signed Secure Socket Layer (SSL) certificates.

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NOTE: The script preference allows to set one or more custom SHA-1 fingerprints of CA certificates which are trusted by this routine. The fingerprints needs to be passed comma-separated and case-insensitive:

Fingerprint1

or

fingerprint1, Fingerprint2

# Vulnerability Detection Method

Check which hashing algorithm was used to sign the remote  $\mathrm{SSL}/\mathrm{TLS}$  certificate. Details:  $\mathrm{SSL}/\mathrm{TLS}$ : Certificate Signed Using A Weak Signature Algorithm

OID:1.3.6.1.4.1.25623.1.0.105880 Version used: \$Revision: 4781 \$

## References

Other:

URL:https://blog.mozilla.org/security/2014/09/23/phasing-out-certificates-with  $\hookrightarrow$ -sha-1-based-signature-algorithms/

# Medium (CVSS: 4.0)

NVT: SSL/TLS: Diffie-Hellman Key Exchange Insufficient DH Group Strength Vulnerability

#### Summary

The SSL/TLS service uses Diffie-Hellman groups with insufficient strength (key size < 2048).

#### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

# Impact

An attacker might be able to decrypt the SSL/TLS communication offline.

## Solution

Solution type: Workaround

Deploy (Ephemeral) Elliptic-Curve Diffie-Hellman (ECDHE) or use a 2048-bit or stronger Diffie-Hellman group. (see https://weakdh.org/sysadmin.html).

For Apache Web Servers: Beginning with version 2.4.7, mod\_ssl will use DH parameters which include primes with lengths of more than 1024 bits.

#### Vulnerability Insight

The Diffie-Hellman group are some big numbers that are used as base for the DH computations. They can be, and often are, fixed. The security of the final secret depends on the size of these parameters. It was found that 512 and 768 bits to be weak, 1024 bits to be breakable by really powerful attackers like governments.

#### Vulnerability Detection Method

Checks the DHE temporary public key size.

Details: SSL/TLS: Diffie-Hellman Key Exchange Insufficient DH Group Strength Vulner abili.

 $\hookrightarrow$  . .

OID:1.3.6.1.4.1.25623.1.0.106223 Version used: \$Revision: 4739 \$

#### References

Other:

URL:https://weakdh.org/

URL:https://weakdh.org/sysadmin.html

[ return to 127.0.0.2 ]

# 2.22.3 Medium 135/tcp

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NVT: DCE/RPC and MSRPC Services Enumeration Reporting

#### Summary

Distributed Computing Environment / Remote Procedure Calls (DCE/RPC) or MSRPC services running on the remote host can be enumerated by connecting on port 135 and doing the appropriate queries.

## Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

An attacker may use this fact to gain more knowledge about the remote host.

## Solution

Solution type: Mitigation

Filter incoming traffic to this ports.

#### **Vulnerability Detection Method**

Details: DCE/RPC and MSRPC Services Enumeration Reporting

OID:1.3.6.1.4.1.25623.1.0.10736 Version used: \$Revision: 4998 \$

[ return to 127.0.0.2 ]

## 2.22.4 Low general/tcp

Low (CVSS: 2.6)

NVT: TCP timestamps

# Summary

The remote host implements TCP timestamps and therefore allows to compute the uptime.

#### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

A side effect of this feature is that the uptime of the remote host can sometimes be computed.

## Solution

## Solution type: Mitigation

To disable TCP timestamps on linux add the line 'net.ipv4.tcp\_timestamps = 0' to /etc/sysctl.conf. Execute 'sysctl-p' to apply the settings at runtime.

To disable TCP timestamps on Windows execute 'netsh int tcp set global timestamps=disabled' Starting with Windows Server 2008 and Vista, the timestamp can not be completely disabled.

The default behavior of the TCP/IP stack on this Systems is to not use the Timestamp options when initiating TCP connections, but use them if the TCP peer that is initiating communication includes them in their synchronize (SYN) segment.

See also: http://www.microsoft.com/en-us/download/details.aspx?id=9152

# Affected Software/OS

TCP/IPv4 implementations that implement RFC1323.

#### Vulnerability Insight

The remote host implements TCP timestamps, as defined by RFC1323.

#### Vulnerability Detection Method

Special IP packets are forged and sent with a little delay in between to the target IP. The responses are searched for a timestamps. If found, the timestamps are reported.

Details: TCP timestamps OID:1.3.6.1.4.1.25623.1.0.80091 Version used: \$Revision: 5309 \$

#### References

Other:

URL:http://www.ietf.org/rfc/rfc1323.txt

[ return to 127.0.0.2 ]

# $2.23 \quad 127.0.0.6$

Host scan start Tue Feb 21 15:58:23 2017 UTC Host scan end Tue Feb 21 16:42:51 2017 UTC

Service (Port)	Threat Level
$22/\mathrm{tcp}$	High
$9390/\mathrm{tcp}$	Medium

 $\dots$  (continues)  $\dots$ 

	/ 11			
	(continued)	) .		

Service (Port)	Threat Level
$22/\mathrm{tcp}$	Medium
$443/\mathrm{tcp}$	Medium
m general/tcp	Low
$22/\mathrm{tcp}$	Low

# 2.23.1 High 22/tcp

## High (CVSS: 7.5)

NVT: SSH Brute Force Logins With Default Credentials Reporting

## Summary

It was possible to login into the remote SSH server using default credentials.

As the NVT 'SSH Brute Force Logins with default Credentials' (OID: 1.3.6.1.4.1.25623.1.0.108013) might run into a timeout the actual reporting of this vulnerability takes place in this NVT instead. The script preference 'Report timeout' allows you to configure if such an timeout is reported.

## Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

## Solution

Solution type: Mitigation

Change the password as soon as possible.

## Vulnerability Detection Method

Try to login with a number of known default credentials via the SSH protocol. Details: SSH Brute Force Logins With Default Credentials Reporting

OID:1.3.6.1.4.1.25623.1.0.103239 Version used: \$Revision: 4508 \$

[ return to 127.0.0.6 ]

# 2.23.2 Medium 9390/tcp

Medium (CVSS: 5.0)

NVT: SSL/TLS: Certificate Expired

#### Summary

The remote server's SSL/TLS certificate has already expired.

## Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Mitigation

Replace the SSL/TLS certificate by a new one.

## Vulnerability Insight

This script checks expiry dates of certificates associated with SSL/TLS-enabled services on the target and reports whether any have already expired.

## Vulnerability Detection Method

Details: SSL/TLS: Certificate Expired

OID:1.3.6.1.4.1.25623.1.0.103955 Version used: \$Revision: 4765 \$

#### Medium (CVSS: 4.0)

NVT: SSL/TLS: Certificate Signed Using A Weak Signature Algorithm

## Summary

The remote service is using a SSL/TLS certificate in the certificate chain that has been signed using a cryptographically weak hashing algorithm.

#### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

## Solution

Solution type: Mitigation

Servers that use SSL/TLS certificates signed with a weak SHA-1, MD5, MD4 or MD2 hashing algorithm will need to obtain new SHA-2 signed SSL/TLS certificates to avoid web browser SSL/TLS certificate warnings.

## Vulnerability Insight

The following hashing algorithms used for signing SSL/TLS certificates are considered cryptographically weak and not secure enough for ongoing use:

- Secure Hash Algorithm 1 (SHA-1)
- Message Digest 5 (MD5)
- Message Digest 4 (MD4)
- Message Digest 2 (MD2)

Beginning as late as January 2017 and as early as June 2016, browser developers such as Microsoft and Google will begin warning users when visiting web sites that use SHA-1 signed Secure Socket Layer (SSL) certificates.

NOTE: The script preference allows to set one or more custom SHA-1 fingerprints of CA certificates which are trusted by this routine. The fingerprints needs to be passed comma-separated and case-insensitive:

Fingerprint 1

or

fingerprint 1, Fingerprint 2

## **Vulnerability Detection Method**

Check which hashing algorithm was used to sign the remote SSL/TLS certificate. Details: SSL/TLS: Certificate Signed Using A Weak Signature Algorithm

OID:1.3.6.1.4.1.25623.1.0.105880 Version used: \$Revision: 4781 \$

#### References

Other:

URL:https://blog.mozilla.org/security/2014/09/23/phasing-out-certificates-with

→-sha-1-based-signature-algorithms/

[ return to 127.0.0.6 ]

## 2.23.3 Medium 22/tcp

#### Medium (CVSS: 4.3)

NVT: SSH Weak Encryption Algorithms Supported

### Summary

The remote SSH server is configured to allow weak encryption algorithms.

## Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

### Solution

Solution type: Mitigation

Disable the weak encryption algorithms.

## Vulnerability Insight

The 'arcfour' cipher is the Arcfour stream cipher with 128-bit keys. The Arcfour cipher is believed to be compatible with the RC4 cipher [SCHNEIER]. Arcfour (and RC4) has problems with weak keys, and should not be used anymore.

The 'none' algorithm specifies that no encryption is to be done. Note that this method provides no confidentiality protection, and it is NOT RECOMMENDED to use it.

A vulnerability exists in SSH messages that employ CBC mode that may allow an attacker to recover plaintext from a block of ciphertext.

### **Vulnerability Detection Method**

Check if remote ssh service supports Arcfour, none or CBC ciphers.

 $\label{eq:Details: SSH Weak Encryption Algorithms Supported} Details: \ SSH \ \textit{Weak Encryption Algorithms Supported}$ 

OID:1.3.6.1.4.1.25623.1.0.105611 Version used: \$Revision: 4490 \$

#### References

Other:

URL:https://tools.ietf.org/html/rfc4253#section-6.3

URL:https://www.kb.cert.org/vuls/id/958563

[ return to 127.0.0.6 ]

# 2.23.4 Medium 443/tcp

Medium (CVSS: 5.0)

NVT: SSL/TLS: Certificate Expired

#### Summary

The remote server's SSL/TLS certificate has already expired.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

## Solution

Solution type: Mitigation

Replace the SSL/TLS certificate by a new one.

#### Vulnerability Insight

This script checks expiry dates of certificates associated with SSL/TLS-enabled services on the target and reports whether any have already expired.

### Vulnerability Detection Method

Details: SSL/TLS: Certificate Expired

OID:1.3.6.1.4.1.25623.1.0.103955 Version used: \$Revision: 4765 \$

#### Medium (CVSS: 4.0)

NVT: SSL/TLS: Certificate Signed Using A Weak Signature Algorithm

## Summary

The remote service is using a SSL/TLS certificate in the certificate chain that has been signed using a cryptographically weak hashing algorithm.

## Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

### Solution

Solution type: Mitigation

Servers that use SSL/TLS certificates signed with a weak SHA-1, MD5, MD4 or MD2 hashing algorithm will need to obtain new SHA-2 signed SSL/TLS certificates to avoid web browser SSL/TLS certificate warnings.

## Vulnerability Insight

The following hashing algorithms used for signing SSL/TLS certificates are considered cryptographically weak and not secure enough for ongoing use:

- Secure Hash Algorithm 1 (SHA-1)

- Message Digest 5 (MD5)
- Message Digest 4 (MD4)
- Message Digest 2 (MD2)

Beginning as late as January 2017 and as early as June 2016, browser developers such as Microsoft and Google will begin warning users when visiting web sites that use SHA-1 signed Secure Socket Layer (SSL) certificates.

NOTE: The script preference allows to set one or more custom SHA-1 fingerprints of CA certificates which are trusted by this routine. The fingerprints needs to be passed comma-separated and case-insensitive:

Fingerprint1

or

fingerprint1,Fingerprint2

## Vulnerability Detection Method

Check which hashing algorithm was used to sign the remote SSL/TLS certificate. Details: SSL/TLS: Certificate Signed Using A Weak Signature Algorithm

OID:1.3.6.1.4.1.25623.1.0.105880 Version used: \$Revision: 4781 \$

#### References

Other:

 $\label{localization} \begin{tabular}{ll} URL:https://blog.mozilla.org/security/2014/09/23/phasing-out-certificates-with $$\hookrightarrow-sha-1-based-signature-algorithms/$ \end{tabular}$ 

[ return to 127.0.0.6 ]

## 2.23.5 Low general/tcp

## Low (CVSS: 2.6)

NVT: TCP timestamps

### Summary

The remote host implements TCP timestamps and therefore allows to compute the uptime.

## Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

### Impact

A side effect of this feature is that the uptime of the remote host can sometimes be computed.

## Solution

## Solution type: Mitigation

To disable TCP timestamps on linux add the line 'net.ipv4.tcp\_timestamps = 0' to /etc/sysctl.conf. Execute 'sysctl-p' to apply the settings at runtime.

To disable TCP timestamps on Windows execute 'netsh int tcp set global timestamps=disabled' Starting with Windows Server 2008 and Vista, the timestamp can not be completely disabled.

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The default behavior of the TCP/IP stack on this Systems is to not use the Timestamp options when initiating TCP connections, but use them if the TCP peer that is initiating communication includes them in their synchronize (SYN) segment.

See also: http://www.microsoft.com/en-us/download/details.aspx?id=9152

## Affected Software/OS

TCP/IPv4 implementations that implement RFC1323.

## Vulnerability Insight

The remote host implements TCP timestamps, as defined by RFC1323.

## Vulnerability Detection Method

Special IP packets are forged and sent with a little delay in between to the target IP. The responses are searched for a timestamps. If found, the timestamps are reported.

Details: TCP timestamps OID:1.3.6.1.4.1.25623.1.0.80091 Version used: \$Revision: 5309 \$

### References

Other:

URL:http://www.ietf.org/rfc/rfc1323.txt

[ return to 127.0.0.6 ]

## 2.23.6 Low 22/tcp

#### Low (CVSS: 2.6)

NVT: SSH Weak MAC Algorithms Supported

## Summary

The remote SSH server is configured to allow weak MD5 and/or 96-bit MAC algorithms.

## Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

## Solution

**Solution type:** Mitigation Disable the weak MAC algorithms.

## Vulnerability Detection Method

Details: SSH Weak MAC Algorithms Supported

OID:1.3.6.1.4.1.25623.1.0.105610 Version used: \$Revision: 4490 \$

[ return to 127.0.0.6 ]

### 2.24 127.0.0.3

Host scan start Tue Feb 21 15:58:36 2017 UTC Host scan end Tue Feb 21 16:57:15 2017 UTC

Service (Port)	Threat Level
$22/\mathrm{tcp}$	High
$443/\mathrm{tcp}$	Medium
$9390/\mathrm{tcp}$	Medium
general/tcp	Low

## 2.24.1 High 22/tcp

### High (CVSS: 7.5)

NVT: SSH Brute Force Logins With Default Credentials Reporting

### Summary

It was possible to login into the remote SSH server using default credentials.

As the NVT 'SSH Brute Force Logins with default Credentials' (OID: 1.3.6.1.4.1.25623.1.0.108013) might run into a timeout the actual reporting of this vulnerability takes place in this NVT instead. The script preference 'Report timeout' allows you to configure if such an timeout is reported.

## Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Mitigation

Change the password as soon as possible.

# Vulnerability Detection Method

Try to login with a number of known default credentials via the SSH protocol. Details: SSH Brute Force Logins With Default Credentials Reporting

OID:1.3.6.1.4.1.25623.1.0.103239 Version used: \$Revision: 4508 \$

[ return to 127.0.0.3 ]

## 2.24.2 Medium 443/tcp

Medium (CVSS: 4.0)

NVT: SSL/TLS: Certificate Signed Using A Weak Signature Algorithm

## Summary

The remote service is using a SSL/TLS certificate in the certificate chain that has been signed using a cryptographically weak hashing algorithm.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

### Solution

Solution type: Mitigation

Servers that use SSL/TLS certificates signed with a weak SHA-1, MD5, MD4 or MD2 hashing algorithm will need to obtain new SHA-2 signed SSL/TLS certificates to avoid web browser SSL/TLS certificate warnings.

### Vulnerability Insight

The following hashing algorithms used for signing SSL/TLS certificates are considered cryptographically weak and not secure enough for ongoing use:

- Secure Hash Algorithm 1 (SHA-1)
- Message Digest 5 (MD5)
- Message Digest 4 (MD4)
- Message Digest 2 (MD2)

Beginning as late as January 2017 and as early as June 2016, browser developers such as Microsoft and Google will begin warning users when visiting web sites that use SHA-1 signed Secure Socket Layer (SSL) certificates.

NOTE: The script preference allows to set one or more custom SHA-1 fingerprints of CA certificates which are trusted by this routine. The fingerprints needs to be passed comma-separated and case-insensitive:

Fingerprint1

or

fingerprint1,Fingerprint2

# Vulnerability Detection Method

Check which hashing algorithm was used to sign the remote SSL/TLS certificate. Details: SSL/TLS: Certificate Signed Using A Weak Signature Algorithm

OID:1.3.6.1.4.1.25623.1.0.105880 Version used: \$Revision: 4781 \$

## References

Other:

 $\label{localization} \begin{tabular}{ll} URL: https://blog.mozilla.org/security/2014/09/23/phasing-out-certificates-with $$\hookrightarrow-sha-1-based-signature-algorithms/$ \end{tabular}$ 

[ return to 127.0.0.3 ]

## 2.24.3 Medium 9390/tcp

Medium (CVSS: 4.0)

 ${
m NVT:~SSL/TLS:~Certificate~Signed~Using~A~Weak~Signature~Algorithm}$ 

# Summary

The remote service is using a SSL/TLS certificate in the certificate chain that has been signed using a cryptographically weak hashing algorithm.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

### Solution

Solution type: Mitigation

Servers that use SSL/TLS certificates signed with a weak SHA-1, MD5, MD4 or MD2 hashing algorithm will need to obtain new SHA-2 signed SSL/TLS certificates to avoid web browser SSL/TLS certificate warnings.

### Vulnerability Insight

The following hashing algorithms used for signing SSL/TLS certificates are considered cryptographically weak and not secure enough for ongoing use:

- Secure Hash Algorithm 1 (SHA-1)
- Message Digest 5 (MD5)
- Message Digest 4 (MD4)
- Message Digest 2 (MD2)

Beginning as late as January 2017 and as early as June 2016, browser developers such as Microsoft and Google will begin warning users when visiting web sites that use SHA-1 signed Secure Socket Layer (SSL) certificates.

NOTE: The script preference allows to set one or more custom SHA-1 fingerprints of CA certificates which are trusted by this routine. The fingerprints needs to be passed comma-separated and case-insensitive:

Fingerprint1

or

fingerprint 1, Fingerprint 2

## **Vulnerability Detection Method**

Check which hashing algorithm was used to sign the remote  $\mathrm{SSL}/\mathrm{TLS}$  certificate. Details:  $\mathrm{SSL}/\mathrm{TLS}$ : Certificate Signed Using A Weak Signature Algorithm

OID:1.3.6.1.4.1.25623.1.0.105880 Version used: \$Revision: 4781 \$

### References

Other:

URL:https://blog.mozilla.org/security/2014/09/23/phasing-out-certificates-with  $\hookrightarrow$ -sha-1-based-signature-algorithms/

[ return to 127.0.0.3 ]

## 2.24.4 Low general/tcp

### Low (CVSS: 2.6) NVT: TCP timestamps

#### Summary

The remote host implements TCP timestamps and therefore allows to compute the uptime.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

A side effect of this feature is that the uptime of the remote host can sometimes be computed.

#### Solution

### Solution type: Mitigation

To disable TCP timestamps on linux add the line 'net.ipv4.tcp\_timestamps = 0' to /etc/sysctl.conf. Execute 'sysctl-p' to apply the settings at runtime.

To disable TCP timestamps on Windows execute 'netsh int tcp set global timestamps=disabled' Starting with Windows Server 2008 and Vista, the timestamp can not be completely disabled. The default behavior of the TCP/IP stack on this Systems is to not use the Timestamp options when initiating TCP connections, but use them if the TCP peer that is initiating communication includes them in their synchronize (SYN) segment.

See also: http://www.microsoft.com/en-us/download/details.aspx?id=9152

### Affected Software/OS

TCP/IPv4 implementations that implement RFC1323.

## Vulnerability Insight

The remote host implements TCP timestamps, as defined by RFC1323.

## Vulnerability Detection Method

Special IP packets are forged and sent with a little delay in between to the target IP. The responses are searched for a timestamps. If found, the timestamps are reported.

Details: TCP timestamps OID:1.3.6.1.4.1.25623.1.0.80091 Version used: \$Revision: 5309 \$

# References

Other:

URL:http://www.ietf.org/rfc/rfc1323.txt

[ return to 127.0.0.3 ]

## $2.25 \quad 127.0.0.43$

Host scan start Tue Feb 21 16:23:30 2017 UTC Host scan end Tue Feb 21 17:04:31 2017 UTC

Service (Port)	Threat Level
$22/\mathrm{tcp}$	High

## 2.25.1 High 22/tcp

## High (CVSS: 7.5)

NVT: SSH Brute Force Logins With Default Credentials Reporting

#### Summary

It was possible to login into the remote SSH server using default credentials.

As the NVT 'SSH Brute Force Logins with default Credentials' (OID: 1.3.6.1.4.1.25623.1.0.108013) might run into a timeout the actual reporting of this vulnerability takes place in this NVT instead. The script preference 'Report timeout' allows you to configure if such an timeout is reported.

## Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Mitigation

Change the password as soon as possible.

## **Vulnerability Detection Method**

Try to login with a number of known default credentials via the SSH protocol. Details: SSH Brute Force Logins With Default Credentials Reporting

OID:1.3.6.1.4.1.25623.1.0.103239 Version used: \$Revision: 4508 \$

[ return to 127.0.0.43 ]

### $2.26 \quad 127.0.0.28$

Host scan start Tue Feb 21 15:24:41 2017 UTC Host scan end Tue Feb 21 18:02:20 2017 UTC

Service (Port)	Threat Level
$22/\mathrm{tcp}$	High
general/tcp	Low

## 2.26.1 High 22/tcp

# High (CVSS: 7.5)

NVT: SSH Brute Force Logins With Default Credentials Reporting

### Summary

It was possible to login into the remote SSH server using default credentials.

As the NVT 'SSH Brute Force Logins with default Credentials' (OID: 1.3.6.1.4.1.25623.1.0.108013) might run into a timeout the actual reporting of this vulnerability takes place in this NVT instead. The script preference 'Report timeout' allows you to configure if such an timeout is reported.

## Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Mitigation

Change the password as soon as possible.

### Vulnerability Detection Method

Try to login with a number of known default credentials via the SSH protocol. Details: SSH Brute Force Logins With Default Credentials Reporting

OID:1.3.6.1.4.1.25623.1.0.103239 Version used: \$Revision: 4508 \$

[ return to 127.0.0.28 ]

# 2.26.2 Low general/tcp

# Low (CVSS: 2.6)

### Summary

The remote host implements TCP timestamps and therefore allows to compute the uptime.

## Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

A side effect of this feature is that the uptime of the remote host can sometimes be computed.

#### Solution

Solution type: Mitigation

To disable TCP timestamps on linux add the line 'net.ipv4.tcp\_timestamps = 0' to /etc/sysctl.conf. Execute 'sysctl-p' to apply the settings at runtime.

To disable TCP timestamps on Windows execute 'netsh int tcp set global timestamps=disabled' Starting with Windows Server 2008 and Vista, the timestamp can not be completely disabled. The default behavior of the TCP/IP stack on this Systems is to not use the Timestamp options when initiating TCP connections, but use them if the TCP peer that is initiating communication includes them in their synchronize (SYN) segment.

 $See \ also: \ http://www.microsoft.com/en-us/download/details.aspx?id=9152$ 

# ${\bf Affected\ Software/OS}$

TCP/IPv4 implementations that implement RFC1323.

## Vulnerability Insight

The remote host implements TCP timestamps, as defined by RFC1323.

## Vulnerability Detection Method

Special IP packets are forged and sent with a little delay in between to the target IP. The responses are searched for a timestamps. If found, the timestamps are reported.

Details: TCP timestamps OID:1.3.6.1.4.1.25623.1.0.80091 Version used: \$Revision: 5309 \$

#### References

Other:

URL:http://www.ietf.org/rfc/rfc1323.txt

[ return to 127.0.0.28 ]

## $2.27 \quad 127.0.0.32$

Host scan start Tue Feb 21 16:04:02 2017 UTC Host scan end Tue Feb 21 16:49:36 2017 UTC

Service (Port)	Threat Level
$22/\mathrm{tcp}$	High
general/tcp	Low

### 2.27.1 High 22/tcp

## High (CVSS: 7.5)

NVT: SSH Brute Force Logins With Default Credentials Reporting

## Summary

It was possible to login into the remote SSH server using default credentials.

As the NVT 'SSH Brute Force Logins with default Credentials' (OID: 1.3.6.1.4.1.25623.1.0.108013) might run into a timeout the actual reporting of this vulnerability takes place in this NVT instead. The script preference 'Report timeout' allows you to configure if such an timeout is reported.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Mitigation

Change the password as soon as possible.

## Vulnerability Detection Method

Try to login with a number of known default credentials via the SSH protocol. Details: SSH Brute Force Logins With Default Credentials Reporting

OID:1.3.6.1.4.1.25623.1.0.103239 Version used: \$Revision: 4508 \$

[ return to 127.0.0.32 ]

### 2.27.2 Low general/tcp

Low (CVSS: 2.6) NVT: TCP timestamps

#### Summary

The remote host implements TCP timestamps and therefore allows to compute the uptime.

## Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

A side effect of this feature is that the uptime of the remote host can sometimes be computed.

#### Solution

## Solution type: Mitigation

To disable TCP timestamps on linux add the line 'net.ipv4.tcp\_timestamps = 0' to /etc/sysctl.conf. Execute 'sysctl-p' to apply the settings at runtime.

To disable TCP timestamps on Windows execute 'netsh int tcp set global timestamps=disabled' Starting with Windows Server 2008 and Vista, the timestamp can not be completely disabled. The default behavior of the TCP/IP stack on this Systems is to not use the Timestamp options when initiating TCP connections, but use them if the TCP peer that is initiating communication includes them in their synchronize (SYN) segment.

See also: http://www.microsoft.com/en-us/download/details.aspx?id=9152

#### Affected Software/OS

TCP/IPv4 implementations that implement RFC1323.

### Vulnerability Insight

The remote host implements TCP timestamps, as defined by RFC1323.

#### **Vulnerability Detection Method**

Special IP packets are forged and sent with a little delay in between to the target IP. The responses are searched for a timestamps. If found, the timestamps are reported.

Details: TCP timestamps

OID:1.3.6.1.4.1.25623.1.0.80091 Version used: \$Revision: 5309 \$

#### References

Other:

URL:http://www.ietf.org/rfc/rfc1323.txt

[ return to 127.0.0.32 ]

### $2.28 \quad 127.0.0.5$

Host scan start Tue Feb 21 15:54:03 2017 UTC Host scan end Tue Feb 21 16:44:32 2017 UTC

Service (Port)	Threat Level
$901/\mathrm{tcp}$	High
$22/\mathrm{tcp}$	Medium
$22/\mathrm{tcp}$	Low
general/tcp	Low

## 2.28.1 High 901/tcp

## High (CVSS: 7.2)

NVT: Detect SWAT server port

## Summary

SWAT (Samba Web Administration Tool) is running on this port.

SWAT allows Samba users to change their passwords, and offers to the sysadmin an easy-to-use GUI to configure Samba.

However, it is not recommended to let SWAT be accessed by the world, as it allows an intruder to attempt to brute force some accounts passwords.

In addition to this, the traffic between SWAT and web clients is not ciphered, so an eavesdropper can gain clear text passwords easily.

## Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

## Solution

Solution type: Workaround

Disable SWAT access from the outside network by making your firewall filter this port. If you do not need SWAT, disable it by commenting the relevant /etc/inetd.conf line.

## **Vulnerability Detection Method**

Details: Detect SWAT server port OID:1.3.6.1.4.1.25623.1.0.10273

Version used: \$Revision: 3362 \$

References

CVE: CVE-2000-0935

BID:1872

[ return to 127.0.0.5 ]

## 2.28.2 Medium 22/tcp

Medium (CVSS: 4.3)

NVT: SSH Weak Encryption Algorithms Supported

#### Summary

The remote SSH server is configured to allow weak encryption algorithms.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

## Solution

Solution type: Mitigation

Disable the weak encryption algorithms.

### Vulnerability Insight

The 'arcfour' cipher is the Arcfour stream cipher with 128-bit keys. The Arcfour cipher is believed to be compatible with the RC4 cipher [SCHNEIER]. Arcfour (and RC4) has problems with weak keys, and should not be used anymore.

The 'none' algorithm specifies that no encryption is to be done. Note that this method provides no confidentiality protection, and it is NOT RECOMMENDED to use it.

A vulnerability exists in SSH messages that employ CBC mode that may allow an attacker to recover plaintext from a block of ciphertext.

## Vulnerability Detection Method

Check if remote ssh service supports Arcfour, none or CBC ciphers.

Details: SSH Weak Encryption Algorithms Supported

OID:1.3.6.1.4.1.25623.1.0.105611 Version used: \$Revision: 4490 \$

## References

Other:

URL:https://tools.ietf.org/html/rfc4253#section-6.3

URL:https://www.kb.cert.org/vuls/id/958563

[ return to 127.0.0.5 ]

## 2.28.3 Low 22/tcp

#### Low (CVSS: 2.6)

NVT: SSH Weak MAC Algorithms Supported

#### Summary

The remote SSH server is configured to allow weak MD5 and/or 96-bit MAC algorithms.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

## Solution

**Solution type:** Mitigation Disable the weak MAC algorithms.

### **Vulnerability Detection Method**

Details: SSH Weak MAC Algorithms Supported

OID:1.3.6.1.4.1.25623.1.0.105610 Version used: \$Revision: 4490 \$

[ return to 127.0.0.5 ]

## 2.28.4 Low general/tcp

#### Low (CVSS: 2.6)

NVT: TCP timestamps

#### Summary

The remote host implements TCP timestamps and therefore allows to compute the uptime.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

A side effect of this feature is that the uptime of the remote host can sometimes be computed.

#### Solution

Solution type: Mitigation

To disable TCP timestamps on linux add the line 'net.ipv4.tcp\_timestamps = 0' to /etc/sysctl.conf. Execute 'sysctl-p' to apply the settings at runtime.

To disable TCP timestamps on Windows execute 'netsh int tcp set global timestamps=disabled' Starting with Windows Server 2008 and Vista, the timestamp can not be completely disabled. The default behavior of the TCP/IP stack on this Systems is to not use the Timestamp options when initiating TCP connections, but use them if the TCP peer that is initiating communication

 $See \ also: \ http://www.microsoft.com/en-us/download/details.aspx?id=9152$ 

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includes them in their synchronize (SYN) segment.

## Affected Software/OS

TCP/IPv4 implementations that implement RFC1323.

## Vulnerability Insight

The remote host implements TCP timestamps, as defined by RFC1323.

## Vulnerability Detection Method

Special IP packets are forged and sent with a little delay in between to the target IP. The responses are searched for a timestamps. If found, the timestamps are reported.

Details: TCP timestamps OID:1.3.6.1.4.1.25623.1.0.80091 Version used: \$Revision: 5309 \$

#### References

Other:

URL:http://www.ietf.org/rfc/rfc1323.txt

[ return to 127.0.0.5 ]

## $2.29 \quad 127.0.0.38$

Host scan start Tue Feb 21 15:24:45 2017 UTC Host scan end Tue Feb 21 15:55:50 2017 UTC

Service (Port)	Threat Level
$901/\mathrm{tcp}$	High
$22/\mathrm{tcp}$	Medium
general/tcp	Low
$22/\mathrm{tcp}$	Low

## $\mathbf{2.29.1} \quad \mathbf{High} \,\, \mathbf{901/tcp}$

## High (CVSS: 7.2)

NVT: Detect SWAT server port

#### Summary

SWAT (Samba Web Administration Tool) is running on this port.

SWAT allows Samba users to change their passwords, and offers to the sysadmin an easy-to-use GUI to configure Samba.

However, it is not recommended to let SWAT be accessed by the world, as it allows an intruder to attempt to brute force some accounts passwords.

In addition to this, the traffic between SWAT and web clients is not ciphered, so an eavesdropper can gain clear text passwords easily.

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## Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Workaround

Disable SWAT access from the outside network by making your firewall filter this port. If you do not need SWAT, disable it by commenting the relevant /etc/inetd.conf line.

### Vulnerability Detection Method

Details: Detect SWAT server port OID:1.3.6.1.4.1.25623.1.0.10273 Version used: \$Revision: 3362 \$

#### References

CVE: CVE-2000-0935

BID:1872

[ return to 127.0.0.38 ]

## 2.29.2 Medium 22/tcp

#### Modium (CVSS: 4.2)

NVT: SSH Weak Encryption Algorithms Supported

### Summary

The remote SSH server is configured to allow weak encryption algorithms.

#### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Mitigation

Disable the weak encryption algorithms.

## Vulnerability Insight

The 'arcfour' cipher is the Arcfour stream cipher with 128-bit keys. The Arcfour cipher is believed to be compatible with the RC4 cipher [SCHNEIER]. Arcfour (and RC4) has problems with weak keys, and should not be used anymore.

The 'none' algorithm specifies that no encryption is to be done. Note that this method provides no confidentiality protection, and it is NOT RECOMMENDED to use it.

A vulnerability exists in SSH messages that employ CBC mode that may allow an attacker to recover plaintext from a block of ciphertext.

## Vulnerability Detection Method

Check if remote ssh service supports Arcfour, none or CBC ciphers.

Details: SSH Weak Encryption Algorithms Supported

OID:1.3.6.1.4.1.25623.1.0.105611 Version used: \$Revision: 4490 \$

### References

Other:

URL:https://tools.ietf.org/html/rfc4253#section-6.3

URL:https://www.kb.cert.org/vuls/id/958563

[ return to 127.0.0.38 ]

### 2.29.3 Low general/tcp

Low (CVSS: 2.6) NVT: TCP timestamps

#### Summary

The remote host implements TCP timestamps and therefore allows to compute the uptime.

## Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

A side effect of this feature is that the uptime of the remote host can sometimes be computed.

#### Solution

Solution type: Mitigation

To disable TCP timestamps on linux add the line 'net.ipv4.tcp\_timestamps = 0' to /etc/sysctl.conf. Execute 'sysctl-p' to apply the settings at runtime.

To disable TCP timestamps on Windows execute 'netsh int tcp set global timestamps=disabled' Starting with Windows Server 2008 and Vista, the timestamp can not be completely disabled. The default behavior of the TCP/IP stack on this Systems is to not use the Timestamp options when initiating TCP connections, but use them if the TCP peer that is initiating communication includes them in their synchronize (SYN) segment.

See also: http://www.microsoft.com/en-us/download/details.aspx?id=9152

#### Affected Software/OS

TCP/IPv4 implementations that implement RFC1323.

### Vulnerability Insight

The remote host implements TCP timestamps, as defined by RFC1323.

#### Vulnerability Detection Method

Special IP packets are forged and sent with a little delay in between to the target IP. The responses are searched for a timestamps. If found, the timestamps are reported.

Details: TCP timestamps

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OID:1.3.6.1.4.1.25623.1.0.80091 Version used: \$Revision: 5309 \$

# References

Other:

URL:http://www.ietf.org/rfc/rfc1323.txt

[ return to 127.0.0.38 ]

## 2.29.4 Low 22/tcp

Low (CVSS: 2.<u>6)</u>

NVT: SSH Weak MAC Algorithms Supported

### Summary

The remote SSH server is configured to allow weak MD5 and/or 96-bit MAC algorithms.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

### Solution

**Solution type:** Mitigation Disable the weak MAC algorithms.

# **Vulnerability Detection Method**

Details: SSH Weak MAC Algorithms Supported

OID:1.3.6.1.4.1.25623.1.0.105610 Version used: \$Revision: 4490 \$

[ return to 127.0.0.38 ]

## $2.30 \quad 127.0.0.41$

Host scan start Tue Feb 21 15:24:38 2017 UTC Host scan end Tue Feb 21 16:02:04 2017 UTC

Service (Port)	Threat Level
$443/\mathrm{tcp}$	Medium
$22/\mathrm{tcp}$	Medium

# 2.30.1 Medium 443/tcp

Medium (CVSS: 6.8)

NVT: SSL/TLS: OpenSSL CCS Man in the Middle Security Bypass Vulnerability

#### Summary

OpenSSL is prone to security-bypass vulnerability.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

Successfully exploiting this issue may allow attackers to obtain sensitive information by conducting a man-in-the-middle attack. This may lead to other attacks.

#### Solution

**Solution type:** VendorFix Updates are available.

### Affected Software/OS

OpenSSL before 0.9.8za, 1.0.0 before 1.0.0m and 1.0.1 before 1.0.1h

#### Vulnerability Insight

OpenSSL does not properly restrict processing of ChangeCipherSpec messages, which allows man-in-the-middle attackers to trigger use of a zero-length master key in certain OpenSSL-to-OpenSSL communications, and consequently hijack sessions or obtain sensitive information, via a crafted TLS handshake, aka the 'CCS Injection' vulnerability.

## Vulnerability Detection Method

Send two SSL ChangeCipherSpec request and check the response.

Details: SSL/TLS: OpenSSL CCS Man in the Middle Security Bypass Vulnerability

OID:1.3.6.1.4.1.25623.1.0.105042 Version used: \$Revision: 4679 \$

## ${\bf References}$

CVE: CVE-2014-0224

BID:67899 Other:

URL:http://www.securityfocus.com/bid/67899

URL:http://openssl.org/

### Medium (CVSS: 5.0)

 ${
m NVT:~SSL/TLS:~Report~Vulnerable~Cipher~Suites~for~HTTPS}$ 

#### Summary

This routine reports all SSL/TLS cipher suites accepted by a service where attack vectors exists only on HTTPS services.

## Vulnerability Detection Result

 $\dots$  continues on next page  $\dots$ 

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Mitigation

The configuration of this services should be changed so that it does not accept the listed cipher suites anymore.

Please see the references for more resources supporting you with this task.

## Affected Software/OS

Services accepting vulnerable SSL/TLS cipher suites via HTTPS.

## Vulnerability Insight

These rules are applied for the evaluation of the vulnerable cipher suites:

- 64-bit block cipher 3DES vulnerable to the SWEET32 attack (CVE-2016-2183).

# Vulnerability Detection Method

Details: SSL/TLS: Report Vulnerable Cipher Suites for HTTPS

OID:1.3.6.1.4.1.25623.1.0.108031 Version used: \$Revision: 5232 \$

#### References

CVE: CVE-2016-2183, CVE-2016-6329

Other:

URL:https://bettercrypto.org/

URL: https://mozilla.github.io/server-side-tls/ssl-config-generator/

URL:https://sweet32.info/

## Medium (CVSS: 4.3)

NVT: SSL/TLS: Deprecated SSLv2 and SSLv3 Protocol Detection

### Summary

It was possible to detect the usage of the deprecated SSLv2 and/or SSLv3 protocol on this system.

## Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

An attacker might be able to use the known cryptographic flaws to eavesdrop the connection between clients and the service to get access to sensitive data transferred within the secured connection.

## Solution

## Solution type: Mitigation

It is recommended to disable the deprecated SSLv2 and/or SSLv3 protocols in favor of the TLSv1+ protocols. Please see the references for more information.

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... continued from previous page ...

## Affected Software/OS

All services providing an encrypted communication using the SSLv2 and/or SSLv3 protocols.

## Vulnerability Insight

The SSLv2 and SSLv3 protocols containing known cryptographic flaws like:

- Padding Oracle On Downgraded Legacy Encryption (POODLE, CVE-2014-3566)
- Decrypting RSA with Obsolete and Weakened eNcryption (DROWN, CVE-2016-0800)

## Vulnerability Detection Method

Check the used protocols of the services provided by this system.

Details: SSL/TLS: Deprecated SSLv2 and SSLv3 Protocol Detection

OID:1.3.6.1.4.1.25623.1.0.111012 Version used: \$Revision: 4686 \$

#### References

CVE: CVE-2016-0800, CVE-2014-3566

Other:

URL: https://www.enisa.europa.eu/activities/identity-and-trust/library/delivera

⇔bles/algorithms-key-sizes-and-parameters-report

URL:https://bettercrypto.org/

URL: https://mozilla.github.io/server-side-tls/ssl-config-generator/

URL:https://drownattack.com/

URL:https://www.imperialviolet.org/2014/10/14/poodle.html

# Medium (CVSS: 4.0)

NVT: SSL/TLS: Certificate Signed Using A Weak Signature Algorithm

#### Summary

The remote service is using a SSL/TLS certificate in the certificate chain that has been signed using a cryptographically weak hashing algorithm.

## Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

# Solution

Solution type: Mitigation

Servers that use SSL/TLS certificates signed with a weak SHA-1, MD5, MD4 or MD2 hashing algorithm will need to obtain new SHA-2 signed SSL/TLS certificates to avoid web browser SSL/TLS certificate warnings.

## Vulnerability Insight

The following hashing algorithms used for signing SSL/TLS certificates are considered cryptographically weak and not secure enough for ongoing use:

- Secure Hash Algorithm 1 (SHA-1)
- Message Digest 5 (MD5)
- Message Digest 4 (MD4)
- ... continues on next page ...

## - Message Digest 2 (MD2)

Beginning as late as January 2017 and as early as June 2016, browser developers such as Microsoft and Google will begin warning users when visiting web sites that use SHA-1 signed Secure Socket Layer (SSL) certificates.

NOTE: The script preference allows to set one or more custom SHA-1 fingerprints of CA certificates which are trusted by this routine. The fingerprints needs to be passed comma-separated and case-insensitive:

Fingerprint1

or

fingerprint1, Fingerprint2

### Vulnerability Detection Method

Check which hashing algorithm was used to sign the remote SSL/TLS certificate. Details: SSL/TLS: Certificate Signed Using A Weak Signature Algorithm

OID:1.3.6.1.4.1.25623.1.0.105880 Version used: \$Revision: 4781 \$

### References

Other:

URL:https://blog.mozilla.org/security/2014/09/23/phasing-out-certificates-with  $\hookrightarrow$ -sha-1-based-signature-algorithms/

[ return to 127.0.0.41 ]

### 2.30.2 Medium 22/tcp

#### Medium (CVSS: 4.3)

NVT: SSH Weak Encryption Algorithms Supported

#### Summary

The remote SSH server is configured to allow weak encryption algorithms.

## Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

## Solution

Solution type: Mitigation

Disable the weak encryption algorithms.

### Vulnerability Insight

The 'arcfour' cipher is the Arcfour stream cipher with 128-bit keys. The Arcfour cipher is believed to be compatible with the RC4 cipher [SCHNEIER]. Arcfour (and RC4) has problems with weak keys, and should not be used anymore.

The 'none' algorithm specifies that no encryption is to be done. Note that this method provides no confidentiality protection, and it is NOT RECOMMENDED to use it.

 $\dots continues\ on\ next\ page\ \dots$ 

A vulnerability exists in SSH messages that employ CBC mode that may allow an attacker to recover plaintext from a block of ciphertext.

## Vulnerability Detection Method

Check if remote ssh service supports Arcfour, none or CBC ciphers.

Details: SSH Weak Encryption Algorithms Supported

OID:1.3.6.1.4.1.25623.1.0.105611 Version used: \$Revision: 4490 \$

### References

Other:

URL:https://tools.ietf.org/html/rfc4253#section-6.3

URL:https://www.kb.cert.org/vuls/id/958563

[ return to 127.0.0.41 ]

## $2.31 \quad 127.0.0.27$

Host scan start Tue Feb 21 16:27:15 2017 UTC Host scan end Tue Feb 21 17:58:01 2017 UTC

Service (Port)	Threat Level
$22/\mathrm{tcp}$	Medium
3871/tcp	Medium
$22/\mathrm{tcp}$	Low
general/tcp	Low

## 2.31.1 Medium 22/tcp

#### Medium (CVSS: 4.3)

NVT: SSH Weak Encryption Algorithms Supported

## Summary

The remote SSH server is configured to allow weak encryption algorithms.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

### Solution

Solution type: Mitigation

Disable the weak encryption algorithms.

## Vulnerability Insight

The 'arcfour' cipher is the Arcfour stream cipher with 128-bit keys. The Arcfour cipher is believed to be compatible with the RC4 cipher [SCHNEIER]. Arcfour (and RC4) has problems with weak keys, and should not be used anymore.

The 'none' algorithm specifies that no encryption is to be done. Note that this method provides no confidentiality protection, and it is NOT RECOMMENDED to use it.

A vulnerability exists in SSH messages that employ CBC mode that may allow an attacker to recover plaintext from a block of ciphertext.

## Vulnerability Detection Method

Check if remote ssh service supports Arcfour, none or CBC ciphers.

Details: SSH Weak Encryption Algorithms Supported

OID:1.3.6.1.4.1.25623.1.0.105611 Version used: \$Revision: 4490 \$

#### References

Other:

URL:https://tools.ietf.org/html/rfc4253#section-6.3

URL:https://www.kb.cert.org/vuls/id/958563

[ return to 127.0.0.27 ]

## 2.31.2 Medium 3871/tcp

Medium (CVSS: 6.8)

NVT: SSL/TLS: OpenSSL CCS Man in the Middle Security Bypass Vulnerability

## Summary

OpenSSL is prone to security-bypass vulnerability.

## Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

## Impact

Successfully exploiting this issue may allow attackers to obtain sensitive information by conducting a man-in-the-middle attack. This may lead to other attacks.

#### Solution

**Solution type:** VendorFix Updates are available.

## Affected Software/OS

OpenSSL before 0.9.8za, 1.0.0 before 1.0.0m and 1.0.1 before 1.0.1h

## Vulnerability Insight

OpenSSL does not properly restrict processing of ChangeCipherSpec messages, which allows man-in-the-middle attackers to trigger use of a zero-length master key in certain OpenSSL-to-OpenSSL communications, and consequently hijack sessions or obtain sensitive information, via a crafted TLS handshake, aka the 'CCS Injection' vulnerability.

### Vulnerability Detection Method

Send two SSL ChangeCipherSpec request and check the response.

Details: SSL/TLS: OpenSSL CCS Man in the Middle Security Bypass Vulnerability

OID:1.3.6.1.4.1.25623.1.0.105042 Version used: \$Revision: 4679 \$

#### References

CVE: CVE-2014-0224

BID:67899 Other:

URL:http://www.securityfocus.com/bid/67899

URL:http://openssl.org/

### Medium (CVSS: 4.3)

NVT: SSL/TLS: Report Weak Cipher Suites

#### Summary

This routine reports all Weak SSL/TLS cipher suites accepted by a service.

NOTE: No severity for SMTP services with 'Opportunistic TLS' and weak cipher suites on port 25/tcp is reported. If too strong cipher suites are configured for this service the alternative would be to fall back to an even more insecure clear text communication.

## Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

## Solution

Solution type: Mitigation

The configuration of this services should be changed so that it does not accept the listed weak cipher suites anymore.

Please see the references for more resources supporting you with this task.

## Vulnerability Insight

These rules are applied for the evaluation of the cryptographic strength:

- RC4 is considered to be weak (CVE-2013-2566, CVE-2015-2808).
- Ciphers using 64 bit or less are considered to be vulnerable to brute force methods and therefore considered as weak (CVE-2015-4000).
- 1024 bit RSA authentication is considered to be insecure and therefore as weak.
- Any cipher considered to be secure for only the next 10 years is considered as medium
- Any other cipher is considered as strong

## Vulnerability Detection Method

Details: SSL/TLS: Report Weak Cipher Suites

OID:1.3.6.1.4.1.25623.1.0.103440 Version used: \$Revision: 4863 \$

#### References

CVE: CVE-2013-2566, CVE-2015-2808, CVE-2015-4000

Other:

URL:https://www.bsi.bund.de/SharedDocs/Warnmeldungen/DE/CB/warnmeldung\_cb-k16-

 $\hookrightarrow$  1465\_update\_6.html

URL:https://bettercrypto.org/

URL:https://mozilla.github.io/server-side-tls/ssl-config-generator/

#### Medium (CVSS: 4.3)

NVT: SSL/TLS: Deprecated SSLv2 and SSLv3 Protocol Detection

#### Summary

It was possible to detect the usage of the deprecated SSLv2 and/or SSLv3 protocol on this system.

#### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

### Impact

An attacker might be able to use the known cryptographic flaws to eavesdrop the connection between clients and the service to get access to sensitive data transferred within the secured connection.

## Solution

## Solution type: Mitigation

It is recommended to disable the deprecated SSLv2 and/or SSLv3 protocols in favor of the TLSv1+ protocols. Please see the references for more information.

#### Affected Software/OS

All services providing an encrypted communication using the SSLv2 and/or SSLv3 protocols.

## Vulnerability Insight

The SSLv2 and SSLv3 protocols containing known cryptographic flaws like:

- Padding Oracle On Downgraded Legacy Encryption (POODLE, CVE-2014-3566)
- Decrypting RSA with Obsolete and Weakened eNcryption (DROWN, CVE-2016-0800)

## Vulnerability Detection Method

Check the used protocols of the services provided by this system.

Details: SSL/TLS: Deprecated SSLv2 and SSLv3 Protocol Detection

OID:1.3.6.1.4.1.25623.1.0.111012 Version used: \$Revision: 4686 \$

## References

CVE: CVE-2016-0800, CVE-2014-3566

Other:

URL:https://www.enisa.europa.eu/activities/identity-and-trust/library/delivera

\$\times \text{bles}/\text{algorithms-key-sizes-and-parameters-report} \text{URL:https://bettercrypto.org/} \text{URL:https://mozilla.github.io/server-side-tls/ssl-config-generator/} \text{URL:https://drownattack.com/} \text{URL:https://drownattack.com/} \text{URL:https://www.imperialviolet.org/2014/10/14/poodle.html}

#### Medium (CVSS: 4.0)

NVT: SSL/TLS: Certificate Signed Using A Weak Signature Algorithm

#### Summary

The remote service is using a SSL/TLS certificate in the certificate chain that has been signed using a cryptographically weak hashing algorithm.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Mitigation

Servers that use SSL/TLS certificates signed with a weak SHA-1, MD5, MD4 or MD2 hashing algorithm will need to obtain new SHA-2 signed SSL/TLS certificates to avoid web browser SSL/TLS certificate warnings.

### Vulnerability Insight

The following hashing algorithms used for signing SSL/TLS certificates are considered cryptographically weak and not secure enough for ongoing use:

- Secure Hash Algorithm 1 (SHA-1)
- Message Digest 5 (MD5)
- Message Digest 4 (MD4)
- Message Digest 2 (MD2)

Beginning as late as January 2017 and as early as June 2016, browser developers such as Microsoft and Google will begin warning users when visiting web sites that use SHA-1 signed Secure Socket Layer (SSL) certificates.

NOTE: The script preference allows to set one or more custom SHA-1 fingerprints of CA certificates which are trusted by this routine. The fingerprints needs to be passed comma-separated and case-insensitive:

Fingerprint 1

or

fingerprint1,Fingerprint2

### Vulnerability Detection Method

Check which hashing algorithm was used to sign the remote SSL/TLS certificate. Details: SSL/TLS: Certificate Signed Using A Weak Signature Algorithm OID: 1.3.6.1.4.1.25623.1.0.105880

Version used: \$Revision: 4781 \$

#### References

Other:

URL:https://blog.mozilla.org/security/2014/09/23/phasing-out-certificates-with  $\hookrightarrow$ -sha-1-based-signature-algorithms/

[ return to 127.0.0.27 ]

## 2.31.3 Low 22/tcp

Low (CVSS: 2.6)

NVT. SSH Weak MAC Algorithms Supported

### Summary

The remote SSH server is configured to allow weak MD5 and/or 96-bit MAC algorithms.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

### Solution

**Solution type:** Mitigation Disable the weak MAC algorithms.

## Vulnerability Detection Method

Details: SSH Weak MAC Algorithms Supported

OID:1.3.6.1.4.1.25623.1.0.105610 Version used: \$Revision: 4490 \$

[ return to 127.0.0.27 ]

## 2.31.4 Low general/tcp

Low (CVSS: 2.6)

NVT: TCP timestamps

#### Summary

The remote host implements TCP timestamps and therefore allows to compute the uptime.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

## Impact

A side effect of this feature is that the uptime of the remote host can sometimes be computed.

#### Solution

Solution type: Mitigation

To disable TCP timestamps on linux add the line 'net.ipv4.tcp\_timestamps = 0' to /etc/sysctl.conf. Execute 'sysctl-p' to apply the settings at runtime.

To disable TCP timestamps on Windows execute 'netsh int tcp set global timestamps=disabled' Starting with Windows Server 2008 and Vista, the timestamp can not be completely disabled. The default behavior of the TCP/IP stack on this Systems is to not use the Timestamp options when initiating TCP connections, but use them if the TCP peer that is initiating communication includes them in their synchronize (SYN) segment.

See also: http://www.microsoft.com/en-us/download/details.aspx?id=9152

## Affected Software/OS

TCP/IPv4 implementations that implement RFC1323.

## Vulnerability Insight

The remote host implements TCP timestamps, as defined by RFC1323.

## **Vulnerability Detection Method**

Special IP packets are forged and sent with a little delay in between to the target IP. The responses are searched for a timestamps. If found, the timestamps are reported.

Details: TCP timestamps OID:1.3.6.1.4.1.25623.1.0.80091 Version used: \$Revision: 5309 \$

#### References

Other:

URL:http://www.ietf.org/rfc/rfc1323.txt

[ return to 127.0.0.27 ]

## $2.32 \quad 127.0.0.15$

Host scan start Tue Feb 21 16:27:44 2017 UTC Host scan end Tue Feb 21 17:16:01 2017 UTC

Service (Port)	Threat Level
$22/\mathrm{tcp}$	Medium
$443/\mathrm{tcp}$	Medium
m general/tcp	Low
$22/\mathrm{tcp}$	Low

## 2.32.1 Medium 22/tcp

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## Medium (CVSS: 4.3)

NVT: SSH Weak Encryption Algorithms Supported

#### Summary

The remote SSH server is configured to allow weak encryption algorithms.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Mitigation

Disable the weak encryption algorithms.

#### Vulnerability Insight

The 'arcfour' cipher is the Arcfour stream cipher with 128-bit keys. The Arcfour cipher is believed to be compatible with the RC4 cipher [SCHNEIER]. Arcfour (and RC4) has problems with weak keys, and should not be used anymore.

The 'none' algorithm specifies that no encryption is to be done. Note that this method provides no confidentiality protection, and it is NOT RECOMMENDED to use it.

A vulnerability exists in SSH messages that employ CBC mode that may allow an attacker to recover plaintext from a block of ciphertext.

## **Vulnerability Detection Method**

Check if remote ssh service supports Arcfour, none or CBC ciphers.

Details: SSH Weak Encryption Algorithms Supported

OID:1.3.6.1.4.1.25623.1.0.105611 Version used: \$Revision: 4490 \$

# References

Other:

URL:https://tools.ietf.org/html/rfc4253#section-6.3

URL:https://www.kb.cert.org/vuls/id/958563

[ return to 127.0.0.15 ]

## 2.32.2 Medium 443/tcp

### Medium (CVSS: 5.0)

NVT: SSL/TLS: Report Vulnerable Cipher Suites for HTTPS

### Summary

This routine reports all SSL/TLS cipher suites accepted by a service where attack vectors exists only on HTTPS services.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Mitigation

The configuration of this services should be changed so that it does not accept the listed cipher suites anymore.

Please see the references for more resources supporting you with this task.

### Affected Software/OS

Services accepting vulnerable SSL/TLS cipher suites via HTTPS.

#### Vulnerability Insight

These rules are applied for the evaluation of the vulnerable cipher suites:

- 64-bit block cipher 3DES vulnerable to the SWEET32 attack (CVE-2016-2183).

## Vulnerability Detection Method

Details: SSL/TLS: Report Vulnerable Cipher Suites for HTTPS

OID:1.3.6.1.4.1.25623.1.0.108031 Version used: \$Revision: 5232 \$

#### References

CVE: CVE-2016-2183, CVE-2016-6329

Other:

URL:https://bettercrypto.org/

URL: https://mozilla.github.io/server-side-tls/ssl-config-generator/

URL:https://sweet32.info/

#### Medium (CVSS: 4.3)

NVT: SSL/TLS: Report Weak Cipher Suites

### Summary

This routine reports all Weak SSL/TLS cipher suites accepted by a service.

NOTE: No severity for SMTP services with 'Opportunistic TLS' and weak cipher suites on port 25/tcp is reported. If too strong cipher suites are configured for this service the alternative would be to fall back to an even more insecure cleartext communication.

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

# Solution

Solution type: Mitigation

The configuration of this services should be changed so that it does not accept the listed weak cipher suites anymore.

Please see the references for more resources supporting you with this task.

## Vulnerability Insight

These rules are applied for the evaluation of the cryptographic strength:

- RC4 is considered to be weak (CVE-2013-2566, CVE-2015-2808).
- Ciphers using 64 bit or less are considered to be vulnerable to brute force methods and therefore considered as weak (CVE-2015-4000).
- 1024 bit RSA authentication is considered to be insecure and therefore as weak.
- Any cipher considered to be secure for only the next 10 years is considered as medium
- Any other cipher is considered as strong

## **Vulnerability Detection Method**

Details: SSL/TLS: Report Weak Cipher Suites

OID:1.3.6.1.4.1.25623.1.0.103440 Version used: \$Revision: 4863 \$

#### References

CVE: CVE-2013-2566, CVE-2015-2808, CVE-2015-4000

Other:

URL:https://www.bsi.bund.de/SharedDocs/Warnmeldungen/DE/CB/warnmeldung\_cb-k16-

 $\hookrightarrow$ 1465\_update\_6.html

URL:https://bettercrypto.org/

URL:https://mozilla.github.io/server-side-tls/ssl-config-generator/

#### Medium (CVSS: 4.0)

NVT: SSL/TLS: Certificate Signed Using A Weak Signature Algorithm

### Summary

The remote service is using a SSL/TLS certificate in the certificate chain that has been signed using a cryptographically weak hashing algorithm.

## Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

### Solution

Solution type: Mitigation

Servers that use SSL/TLS certificates signed with a weak SHA-1, MD5, MD4 or MD2 hashing algorithm will need to obtain new SHA-2 signed SSL/TLS certificates to avoid web browser SSL/TLS certificate warnings.

## Vulnerability Insight

The following hashing algorithms used for signing SSL/TLS certificates are considered cryptographically weak and not secure enough for ongoing use:

- Secure Hash Algorithm 1 (SHA-1)
- Message Digest 5 (MD5)
- Message Digest 4 (MD4)
- Message Digest 2 (MD2)

Beginning as late as January 2017 and as early as June 2016, browser developers such as Microsoft and Google will begin warning users when visiting web sites that use SHA-1 signed Secure Socket Layer (SSL) certificates.

NOTE: The script preference allows to set one or more custom SHA-1 fingerprints of CA certificates which are trusted by this routine. The fingerprints needs to be passed comma-separated and case-insensitive:

Fingerprint1

or

fingerprint1, Fingerprint2

### **Vulnerability Detection Method**

Check which hashing algorithm was used to sign the remote SSL/TLS certificate. Details: SSL/TLS: Certificate Signed Using A Weak Signature Algorithm

OID:1.3.6.1.4.1.25623.1.0.105880 Version used: \$Revision: 4781 \$

### References

Other:

 $\label{localization} \begin{tabular}{ll} URL:https://blog.mozilla.org/security/2014/09/23/phasing-out-certificates-with $$\hookrightarrow-sha-1-based-signature-algorithms/$ \end{tabular}$ 

[ return to 127.0.0.15 ]

### 2.32.3 Low general/tcp

# Low (CVSS: 2.6)

NVT: TCP timestamps

#### Summary

The remote host implements TCP timestamps and therefore allows to compute the uptime.

#### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

A side effect of this feature is that the uptime of the remote host can sometimes be computed.

### Solution

## Solution type: Mitigation

To disable TCP timestamps on linux add the line 'net.ipv4.tcp\_timestamps = 0' to /etc/sysctl.conf. Execute 'sysctl-p' to apply the settings at runtime.

To disable TCP timestamps on Windows execute 'netsh int tcp set global timestamps=disabled' Starting with Windows Server 2008 and Vista, the timestamp can not be completely disabled.

The default behavior of the TCP/IP stack on this Systems is to not use the Timestamp options when initiating TCP connections, but use them if the TCP peer that is initiating communication includes them in their synchronize (SYN) segment.

See also: http://www.microsoft.com/en-us/download/details.aspx?id=9152

## Affected Software/OS

TCP/IPv4 implementations that implement RFC1323.

### Vulnerability Insight

The remote host implements TCP timestamps, as defined by RFC1323.

### Vulnerability Detection Method

Special IP packets are forged and sent with a little delay in between to the target IP. The responses are searched for a timestamps. If found, the timestamps are reported.

Details: TCP timestamps OID:1.3.6.1.4.1.25623.1.0.80091 Version used: \$Revision: 5309 \$

## References

Other:

URL:http://www.ietf.org/rfc/rfc1323.txt

[ return to 127.0.0.15 ]

## 2.32.4 Low 22/tcp

# Low (CVSS: 2.6)

NVT: SSH Weak MAC Algorithms Supported

#### Summary

The remote SSH server is configured to allow weak MD5 and/or 96-bit MAC algorithms.

# Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

## Solution

Solution type: Mitigation Disable the weak MAC algorithms.

# Vulnerability Detection Method

 $\operatorname{Details:}$  SSH Weak MAC Algorithms Supported

OID:1.3.6.1.4.1.25623.1.0.105610 Version used: \$Revision: 4490 \$

[ return to 127.0.0.15 ]

## $2.33 \quad 127.0.0.17$

Service (Port)	Threat Level
$135/\mathrm{tcp}$	Medium
$3389/\mathrm{tcp}$	Medium
general/tcp	Low

## 2.33.1 Medium 135/tcp

### Medium (CVSS: 5.0)

NVT: DCE/RPC and MSRPC Services Enumeration Reporting

#### Summary

Distributed Computing Environment / Remote Procedure Calls (DCE/RPC) or MSRPC services running on the remote host can be enumerated by connecting on port 135 and doing the appropriate queries.

## Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

### Impact

An attacker may use this fact to gain more knowledge about the remote host.

### Solution

Solution type: Mitigation

Filter incoming traffic to this ports.

### **Vulnerability Detection Method**

Details: DCE/RPC and MSRPC Services Enumeration Reporting

OID:1.3.6.1.4.1.25623.1.0.10736 Version used: \$Revision: 4998 \$

[ return to 127.0.0.17 ]

## 2.33.2 Medium 3389/tcp

#### Medium (CVSS: 4.3)

NVT: SSL/TLS: Report Weak Cipher Suites

## Summary

This routine reports all Weak SSL/TLS cipher suites accepted by a service.

NOTE: No severity for SMTP services with 'Opportunistic TLS' and weak cipher suites on port 25/tcp is reported. If too strong cipher suites are configured for this service the alternative would be to fall back to an even more insecure clear text communication.

## Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Mitigation

The configuration of this services should be changed so that it does not accept the listed weak cipher suites anymore.

Please see the references for more resources supporting you with this task.

### Vulnerability Insight

These rules are applied for the evaluation of the cryptographic strength:

- RC4 is considered to be weak (CVE-2013-2566, CVE-2015-2808).
- Ciphers using 64 bit or less are considered to be vulnerable to brute force methods and therefore considered as weak (CVE-2015-4000).
- 1024 bit RSA authentication is considered to be insecure and therefore as weak.
- Any cipher considered to be secure for only the next 10 years is considered as medium
- Any other cipher is considered as strong

### Vulnerability Detection Method

Details: SSL/TLS: Report Weak Cipher Suites

OID:1.3.6.1.4.1.25623.1.0.103440 Version used: \$Revision: 4863 \$

#### References

CVE: CVE-2013-2566, CVE-2015-2808, CVE-2015-4000

Other:

URL:https://www.bsi.bund.de/SharedDocs/Warnmeldungen/DE/CB/warnmeldung\_cb-k16-

 $\hookrightarrow$  1465\_update\_6.html

URL:https://bettercrypto.org/

URL:https://mozilla.github.io/server-side-tls/ssl-config-generator/

#### Medium (CVSS: 4.0)

NVT: SSL/TLS: Certificate Signed Using A Weak Signature Algorithm

### Summary

The remote service is using a SSL/TLS certificate in the certificate chain that has been signed using a cryptographically weak hashing algorithm.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Mitigation

Servers that use SSL/TLS certificates signed with a weak SHA-1, MD5, MD4 or MD2 hashing algorithm will need to obtain new SHA-2 signed SSL/TLS certificates to avoid web browser SSL/TLS certificate warnings.

### Vulnerability Insight

The following hashing algorithms used for signing SSL/TLS certificates are considered cryptographically weak and not secure enough for ongoing use:

- Secure Hash Algorithm 1 (SHA-1)
- Message Digest 5 (MD5)
- Message Digest 4 (MD4)
- Message Digest 2 (MD2)

Beginning as late as January 2017 and as early as June 2016, browser developers such as Microsoft and Google will begin warning users when visiting web sites that use SHA-1 signed Secure Socket Layer (SSL) certificates.

NOTE: The script preference allows to set one or more custom SHA-1 fingerprints of CA certificates which are trusted by this routine. The fingerprints needs to be passed comma-separated and case-insensitive:

Fingerprint1

or

fingerprint1,Fingerprint2

### **Vulnerability Detection Method**

Check which hashing algorithm was used to sign the remote SSL/TLS certificate. Details: SSL/TLS: Certificate Signed Using A Weak Signature Algorithm

OID:1.3.6.1.4.1.25623.1.0.105880 Version used: \$Revision: 4781 \$

#### References

Other:

URL:https://blog.mozilla.org/security/2014/09/23/phasing-out-certificates-with  $\hookrightarrow$ -sha-1-based-signature-algorithms/

[ return to 127.0.0.17 ]

### 2.33.3 Low general/tcp

### Low (CVSS: 2.6) NVT: TCP timestamps

### Summary

The remote host implements TCP timestamps and therefore allows to compute the uptime.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

### Impact

A side effect of this feature is that the uptime of the remote host can sometimes be computed.

### Solution

Solution type: Mitigation

To disable TCP timestamps on linux add the line 'net.ipv4.tcp\_timestamps = 0' to /etc/sysctl.conf. Execute 'sysctl-p' to apply the settings at runtime.

To disable TCP timestamps on Windows execute 'netsh int tcp set global timestamps=disabled' Starting with Windows Server 2008 and Vista, the timestamp can not be completely disabled.

The default behavior of the TCP/IP stack on this Systems is to not use the Timestamp options when initiating TCP connections, but use them if the TCP peer that is initiating communication includes them in their synchronize (SYN) segment.

See also: http://www.microsoft.com/en-us/download/details.aspx?id=9152

### Affected Software/OS

TCP/IPv4 implementations that implement RFC1323.

#### Vulnerability Insight

The remote host implements TCP timestamps, as defined by RFC1323.

### Vulnerability Detection Method

Special IP packets are forged and sent with a little delay in between to the target IP. The responses are searched for a timestamps. If found, the timestamps are reported.

Details: TCP timestamps OID:1.3.6.1.4.1.25623.1.0.80091 Version used: \$Revision: 5309 \$

### References

Other:

URL:http://www.ietf.org/rfc/rfc1323.txt

[ return to 127.0.0.17 ]

### $2.34 \quad 127.0.0.19$

Host scan start Tue Feb 21 15:24:56 2017 UTC Host scan end Tue Feb 21 16:03:58 2017 UTC

Service (Port)	Threat Level
80/tcp	Medium
$22/\mathrm{tcp}$	Medium
general/tcp	Low
$22/\mathrm{tcp}$	Low

### 2.34.1 Medium 80/tcp

Medium (CVSS: 5.0

NVT: Acme thttpd and mini\_httpd Terminal Escape Sequence in Logs Command Injection Vulnerability

### Summary

Acme 'thttpd' and 'mini\_httpd' are prone to a command-injection vulnerability because they fail to adequately sanitize user-supplied input in logfiles.

Attackers can exploit this issue to execute arbitrary commands in a terminal.

This issue affects thttpd 2.25b and mini httpd 1.19 other versions may also be affected.

#### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Vulnerability Detection Method

Details: Acme thttpd and mini\_httpd Terminal Escape Sequence in Logs Command Injection V.

 $\hookrightarrow$  . .

OID:1.3.6.1.4.1.25623.1.0.100447 Version used: \$Revision: 3207 \$

#### References

CVE: CVE-2009-4490, CVE-2009-4491

BID:37714 Other:

URL:http://www.securityfocus.com/bid/37714
URL:http://www.acme.com/software/mini\_httpd/
URL:http://www.acme.com/software/thttpd/

URL:http://www.securityfocus.com/archive/1/508830

[ return to 127.0.0.19 ]

### 2.34.2 Medium 22/tcp

#### Medium (CVSS: 4.3)

NVT: SSH Weak Encryption Algorithms Supported

#### Summary

The remote SSH server is configured to allow weak encryption algorithms.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

### Solution

Solution type: Mitigation

Disable the weak encryption algorithms.

### Vulnerability Insight

The 'arcfour' cipher is the Arcfour stream cipher with 128-bit keys. The Arcfour cipher is believed to be compatible with the RC4 cipher [SCHNEIER]. Arcfour (and RC4) has problems with weak keys, and should not be used anymore.

 $\dots$  continues on next page  $\dots$ 

The 'none' algorithm specifies that no encryption is to be done. Note that this method provides no confidentiality protection, and it is NOT RECOMMENDED to use it.

A vulnerability exists in SSH messages that employ CBC mode that may allow an attacker to recover plaintext from a block of ciphertext.

### Vulnerability Detection Method

Check if remote ssh service supports Arcfour, none or CBC ciphers.

Details: SSH Weak Encryption Algorithms Supported

OID:1.3.6.1.4.1.25623.1.0.105611 Version used: \$Revision: 4490 \$

#### References

Other:

URL:https://tools.ietf.org/html/rfc4253#section-6.3

URL:https://www.kb.cert.org/vuls/id/958563

[ return to 127.0.0.19 ]

### 2.34.3 Low general/tcp

# Low (CVSS: 2.6)

#### Summary

The remote host implements TCP timestamps and therefore allows to compute the uptime.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

### Impact

A side effect of this feature is that the uptime of the remote host can sometimes be computed.

### Solution

Solution type: Mitigation

To disable TCP timestamps on linux add the line 'net.ipv4.tcp\_timestamps = 0' to /etc/sysctl.conf. Execute 'sysctl-p' to apply the settings at runtime.

To disable TCP timestamps on Windows execute 'netsh int tcp set global timestamps=disabled' Starting with Windows Server 2008 and Vista, the timestamp can not be completely disabled. The default behavior of the TCP/IP stack on this Systems is to not use the Timestamp options when initiating TCP connections, but use them if the TCP peer that is initiating communication includes them in their synchronize (SYN) segment.

See also: http://www.microsoft.com/en-us/download/details.aspx?id=9152

### Affected Software/OS

TCP/IPv4 implementations that implement RFC1323.

 $\dots$  continues on next page  $\dots$ 

### Vulnerability Insight

The remote host implements TCP timestamps, as defined by RFC1323.

### Vulnerability Detection Method

Special IP packets are forged and sent with a little delay in between to the target IP. The responses are searched for a timestamps. If found, the timestamps are reported.

Details: TCP timestamps OID:1.3.6.1.4.1.25623.1.0.80091 Version used: \$Revision: 5309 \$

### References

Other:

URL:http://www.ietf.org/rfc/rfc1323.txt

[ return to 127.0.0.19 ]

### 2.34.4 Low 22/tcp

## Low (CVSS: 2.6)

NVT: SSH Weak MAC Algorithms Supported

#### Summary

The remote SSH server is configured to allow weak MD5 and/or 96-bit MAC algorithms.

#### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Mitigation Disable the weak MAC algorithms.

### Vulnerability Detection Method

 $\operatorname{Details}:$  SSH Weak MAC Algorithms Supported

OID:1.3.6.1.4.1.25623.1.0.105610 Version used: \$Revision: 4490 \$

[ return to 127.0.0.19 ]

### $2.35 \quad 127.0.0.12$

Host scan start Tue Feb 21 15:56:50 2017 UTC Host scan end Tue Feb 21 18:04:20 2017 UTC

Service (Port)	Threat Level
$22/\mathrm{tcp}$	Medium
general/tcp	Low
$22/\mathrm{tcp}$	Low

### 2.35.1 Medium 22/tcp

Medium (CVSS: 4.3)

NVT: SSH Weak Encryption Algorithms Supported

#### Summary

The remote SSH server is configured to allow weak encryption algorithms.

#### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Mitigation

Disable the weak encryption algorithms.

### Vulnerability Insight

The 'arcfour' cipher is the Arcfour stream cipher with 128-bit keys. The Arcfour cipher is believed to be compatible with the RC4 cipher [SCHNEIER]. Arcfour (and RC4) has problems with weak keys, and should not be used anymore.

The 'none' algorithm specifies that no encryption is to be done. Note that this method provides no confidentiality protection, and it is NOT RECOMMENDED to use it.

A vulnerability exists in SSH messages that employ CBC mode that may allow an attacker to recover plaintext from a block of ciphertext.

### Vulnerability Detection Method

Check if remote ssh service supports Arcfour, none or CBC ciphers.

Details: SSH Weak Encryption Algorithms Supported

OID:1.3.6.1.4.1.25623.1.0.105611 Version used: \$Revision: 4490 \$

### References

Other:

URL:https://tools.ietf.org/html/rfc4253#section-6.3

URL:https://www.kb.cert.org/vuls/id/958563

[ return to 127.0.0.12 ]

### 2.35.2 Low general/tcp

2 RESULTS PER HOST

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Low (CVSS: 2.6) NVT: TCP timestamps

#### Summary

The remote host implements TCP timestamps and therefore allows to compute the uptime.

#### **Vulnerability Detection Result**

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

A side effect of this feature is that the uptime of the remote host can sometimes be computed.

#### Solution

Solution type: Mitigation

To disable TCP timestamps on linux add the line 'net.ipv4.tcp\_timestamps = 0' to /etc/sysctl.conf. Execute 'sysctl-p' to apply the settings at runtime.

To disable TCP timestamps on Windows execute 'netsh int tcp set global timestamps=disabled' Starting with Windows Server 2008 and Vista, the timestamp can not be completely disabled. The default behavior of the TCP/IP stack on this Systems is to not use the Timestamp options when initiating TCP connections, but use them if the TCP peer that is initiating communication includes them in their synchronize (SYN) segment.

See also: http://www.microsoft.com/en-us/download/details.aspx?id=9152

### Affected Software/OS

TCP/IPv4 implementations that implement RFC1323.

### Vulnerability Insight

The remote host implements TCP timestamps, as defined by RFC1323.

### **Vulnerability Detection Method**

Special IP packets are forged and sent with a little delay in between to the target IP. The responses are searched for a timestamps. If found, the timestamps are reported.

Details: TCP timestamps OID:1.3.6.1.4.1.25623.1.0.80091 Version used: \$Revision: 5309 \$

### References

Other:

URL:http://www.ietf.org/rfc/rfc1323.txt

[ return to 127.0.0.12 ]

### 2.35.3 Low 22/tcp

Low (CVSS: 2.6)

NVT: SSH Weak MAC Algorithms Supported

#### Summary

The remote SSH server is configured to allow weak MD5 and/or 96-bit MAC algorithms.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

### Solution

Solution type: Mitigation

Disable the weak MAC algorithms.

### Vulnerability Detection Method

Details: SSH Weak MAC Algorithms Supported

OID:1.3.6.1.4.1.25623.1.0.105610 Version used: \$Revision: 4490 \$

[ return to 127.0.0.12 ]

### $2.36 \quad 127.0.0.42$

Service (Port)	Threat Level
$22/\mathrm{tcp}$	Medium
$443/\mathrm{tcp}$	Medium
$22/\mathrm{tcp}$	Low

### 2.36.1 Medium 22/tcp

#### Medium (CVSS: 4.3)

NVT: SSH Weak Encryption Algorithms Supported

### Summary

The remote SSH server is configured to allow weak encryption algorithms.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Mitigation

Disable the weak encryption algorithms.

### Vulnerability Insight

The 'arcfour' cipher is the Arcfour stream cipher with 128-bit keys. The Arcfour cipher is believed to be compatible with the RC4 cipher [SCHNEIER]. Arcfour (and RC4) has problems with weak keys, and should not be used anymore.

The 'none' algorithm specifies that no encryption is to be done. Note that this method provides no confidentiality protection, and it is NOT RECOMMENDED to use it.

A vulnerability exists in SSH messages that employ CBC mode that may allow an attacker to recover plaintext from a block of ciphertext.

### Vulnerability Detection Method

Check if remote ssh service supports Arcfour, none or CBC ciphers.

Details: SSH Weak Encryption Algorithms Supported

OID:1.3.6.1.4.1.25623.1.0.105611 Version used: \$Revision: 4490 \$

#### References

Other:

URL:https://tools.ietf.org/html/rfc4253#section-6.3

URL:https://www.kb.cert.org/vuls/id/958563

[ return to 127.0.0.42 ]

### 2.36.2 Medium 443/tcp

Medium (CVSS: 4.3)

NVT: SSL/TLS: SSLv3 Protocol CBC Cipher Suites Information Disclosure Vulnerability (POO-DLE)

### Summary

This host is prone to an information disclosure vulnerability.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

Successful exploitation will allow a man-in-the-middle attackers gain access to the plain text data stream.

### Solution

**Solution type:** Mitigation Possible Mitigations are:

- Disable SSLv3
- Disable cipher suites supporting CBC cipher modes
- Enable TLS FALLBACK SCSV if the service is providing TLSv1.0+

### Vulnerability Insight

The flaw is due to the block cipher padding not being deterministic and not covered by the Message Authentication Code

### Vulnerability Detection Method

Evaluate previous collected information about this service.

Details: SSL/TLS: SSLv3 Protocol CBC Cipher Suites Information Disclosure Vulnerability .

ightarrow . .

OID:1.3.6.1.4.1.25623.1.0.802087 Version used: \$Revision: 4749 \$

#### References

CVE: CVE-2014-3566

BID:70574 Other:

URL:https://www.openssl.org/~bodo/ssl-poodle.pdf

URL: https://www.imperialviolet.org/2014/10/14/poodle.html

URL: https://www.dfranke.us/posts/2014-10-14-how-poodle-happened.html

URL: http://googleonlinesecurity.blogspot.in/2014/10/this-poodle-bites-exploit

 $\hookrightarrow$ ing-ssl-30.html

#### Medium (CVSS: 4.3)

NVT: SSL/TLS: Deprecated SSLv2 and SSLv3 Protocol Detection

#### Summary

It was possible to detect the usage of the deprecated SSLv2 and/or SSLv3 protocol on this system.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

An attacker might be able to use the known cryptographic flaws to eavesdrop the connection between clients and the service to get access to sensitive data transferred within the secured connection.

### Solution

Solution type: Mitigation

It is recommended to disable the deprecated SSLv2 and/or SSLv3 protocols in favor of the TLSv1+ protocols. Please see the references for more information.

#### Affected Software/OS

All services providing an encrypted communication using the SSLv2 and/or SSLv3 protocols.

#### Vulnerability Insight

The SSLv2 and SSLv3 protocols containing known cryptographic flaws like:

- Padding Oracle On Downgraded Legacy Encryption (POODLE, CVE-2014-3566)

- Decrypting RSA with Obsolete and Weakened eNcryption (DROWN, CVE-2016-0800)

#### **Vulnerability Detection Method**

Check the used protocols of the services provided by this system.

Details: SSL/TLS: Deprecated SSLv2 and SSLv3 Protocol Detection

OID:1.3.6.1.4.1.25623.1.0.111012 Version used: \$Revision: 4686 \$

#### References

CVE: CVE-2016-0800, CVE-2014-3566

Other

URL:https://www.enisa.europa.eu/activities/identity-and-trust/library/delivera

 $\hookrightarrow \texttt{bles/algorithms-key-sizes-and-parameters-report}$ 

URL:https://bettercrypto.org/

URL: https://mozilla.github.io/server-side-tls/ssl-config-generator/

URL:https://drownattack.com/

URL:https://www.imperialviolet.org/2014/10/14/poodle.html

### Medium (CVSS: 4.3)

NVT: SSL/TLS: Report Weak Cipher Suites

#### Summary

This routine reports all Weak SSL/TLS cipher suites accepted by a service.

NOTE: No severity for SMTP services with 'Opportunistic TLS' and weak cipher suites on port 25/tcp is reported. If too strong cipher suites are configured for this service the alternative would be to fall back to an even more insecure cleartext communication.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

### Solution

Solution type: Mitigation

The configuration of this services should be changed so that it does not accept the listed weak cipher suites anymore.

Please see the references for more resources supporting you with this task.

### Vulnerability Insight

These rules are applied for the evaluation of the cryptographic strength:

- RC4 is considered to be weak (CVE-2013-2566, CVE-2015-2808).
- Ciphers using 64 bit or less are considered to be vulnerable to brute force methods and therefore considered as weak (CVE-2015-4000).
- 1024 bit RSA authentication is considered to be insecure and therefore as weak.
- Any cipher considered to be secure for only the next 10 years is considered as medium
- Any other cipher is considered as strong

### Vulnerability Detection Method

Details: SSL/TLS: Report Weak Cipher Suites

 $\dots$  continues on next page  $\dots$ 

OID:1.3.6.1.4.1.25623.1.0.103440 Version used: \$Revision: 4863 \$

#### References

CVE: CVE-2013-2566, CVE-2015-2808, CVE-2015-4000

Other:

URL:https://www.bsi.bund.de/SharedDocs/Warnmeldungen/DE/CB/warnmeldung\_cb-k16-

 $\hookrightarrow$  1465\_update\_6.html

URL:https://bettercrypto.org/

URL:https://mozilla.github.io/server-side-tls/ssl-config-generator/

#### Medium (CVSS: 4.0)

NVT: SSL/TLS: Certificate Signed Using A Weak Signature Algorithm

### Summary

The remote service is using a SSL/TLS certificate in the certificate chain that has been signed using a cryptographically weak hashing algorithm.

#### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Mitigation

Servers that use SSL/TLS certificates signed with a weak SHA-1, MD5, MD4 or MD2 hashing algorithm will need to obtain new SHA-2 signed SSL/TLS certificates to avoid web browser SSL/TLS certificate warnings.

### Vulnerability Insight

The following hashing algorithms used for signing SSL/TLS certificates are considered cryptographically weak and not secure enough for ongoing use:

- Secure Hash Algorithm 1 (SHA-1)
- Message Digest 5 (MD5)
- Message Digest 4 (MD4)
- Message Digest 2 (MD2)

Beginning as late as January 2017 and as early as June 2016, browser developers such as Microsoft and Google will begin warning users when visiting web sites that use SHA-1 signed Secure Socket Layer (SSL) certificates.

NOTE: The script preference allows to set one or more custom SHA-1 fingerprints of CA certificates which are trusted by this routine. The fingerprints needs to be passed comma-separated and case-insensitive:

Fingerprint1

or

fingerprint1, Fingerprint2

### Vulnerability Detection Method

Check which hashing algorithm was used to sign the remote SSL/TLS certificate. Details: SSL/TLS: Certificate Signed Using A Weak Signature Algorithm

 $\dots$  continues on next page  $\dots$ 

OID:1.3.6.1.4.1.25623.1.0.105880 Version used: \$Revision: 4781 \$

#### References

Other:

URL:https://blog.mozilla.org/security/2014/09/23/phasing-out-certificates-with  $\hookrightarrow$ -sha-1-based-signature-algorithms/

[ return to 127.0.0.42 ]

### 2.36.3 Low 22/tcp

#### Low (CVSS: 26)

NVT: SSH Weak MAC Algorithms Supported

### Summary

The remote SSH server is configured to allow weak MD5 and/or 96-bit MAC algorithms.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

**Solution type:** Mitigation Disable the weak MAC algorithms.

### Vulnerability Detection Method

Details: SSH Weak MAC Algorithms Supported

OID:1.3.6.1.4.1.25623.1.0.105610 Version used: \$Revision: 4490 \$

[ return to 127.0.0.42 ]

### $2.37 \quad 127.0.0.40$

Service (Port)	Threat Level
$22/\mathrm{tcp}$	Medium
general/tcp	Low
$22/\mathrm{tcp}$	Low

### $\mathbf{2.37.1}\quad \mathbf{Medium}\ \mathbf{22}/\mathbf{tcp}$

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### Medium (CVSS: 4.3)

NVT: SSH Weak Encryption Algorithms Supported

#### Summary

The remote SSH server is configured to allow weak encryption algorithms.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Mitigation

Disable the weak encryption algorithms.

#### Vulnerability Insight

The 'arcfour' cipher is the Arcfour stream cipher with 128-bit keys. The Arcfour cipher is believed to be compatible with the RC4 cipher [SCHNEIER]. Arcfour (and RC4) has problems with weak keys, and should not be used anymore.

The 'none' algorithm specifies that no encryption is to be done. Note that this method provides no confidentiality protection, and it is NOT RECOMMENDED to use it.

A vulnerability exists in SSH messages that employ CBC mode that may allow an attacker to recover plaintext from a block of ciphertext.

### **Vulnerability Detection Method**

Check if remote ssh service supports Arcfour, none or CBC ciphers.

Details: SSH Weak Encryption Algorithms Supported

OID:1.3.6.1.4.1.25623.1.0.105611 Version used: \$Revision: 4490 \$

### References

Other:

URL:https://tools.ietf.org/html/rfc4253#section-6.3

URL:https://www.kb.cert.org/vuls/id/958563

[ return to 127.0.0.40 ]

#### 2.37.2 Low general/tcp

#### Low (CVSS: 2.6) NVT: TCP timestami

#### Summary

The remote host implements TCP timestamps and therefore allows to compute the uptime.

#### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

### ${\bf Impact}$

A side effect of this feature is that the uptime of the remote host can sometimes be computed.

#### Solution

### Solution type: Mitigation

To disable TCP timestamps on linux add the line 'net.ipv4.tcp\_timestamps = 0' to /etc/sysctl.conf. Execute 'sysctl-p' to apply the settings at runtime.

To disable TCP timestamps on Windows execute 'netsh int tcp set global timestamps=disabled' Starting with Windows Server 2008 and Vista, the timestamp can not be completely disabled. The default behavior of the TCP/IP stack on this Systems is to not use the Timestamp options when initiating TCP connections, but use them if the TCP peer that is initiating communication includes them in their synchronize (SYN) segment.

See also: http://www.microsoft.com/en-us/download/details.aspx?id=9152

### Affected Software/OS

TCP/IPv4 implementations that implement RFC1323.

#### Vulnerability Insight

The remote host implements TCP timestamps, as defined by RFC1323.

#### **Vulnerability Detection Method**

Special IP packets are forged and sent with a little delay in between to the target IP. The responses are searched for a timestamps. If found, the timestamps are reported.

Details: TCP timestamps OID:1.3.6.1.4.1.25623.1.0.80091 Version used: \$Revision: 5309 \$

#### References

Other:

URL:http://www.ietf.org/rfc/rfc1323.txt

[ return to 127.0.0.40 ]

### 2.37.3 Low 22/tcp

#### Low (CVSS: 2.6)

NVT: SSH Weak MAC Algorithms Supported

#### Summary

The remote SSH server is configured to allow weak MD5 and/or 96-bit MAC algorithms.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

**Solution type:** Mitigation Disable the weak MAC algorithms.

### Vulnerability Detection Method

Details: SSH Weak MAC Algorithms Supported

OID:1.3.6.1.4.1.25623.1.0.105610 Version used: \$Revision: 4490 \$

[ return to 127.0.0.40 ]

#### $2.38 \quad 127.0.0.11$

Service (Port)	Threat Level
$22/\mathrm{tcp}$	Medium
general/tcp	Low
$22/\mathrm{tcp}$	Low

### 2.38.1 Medium 22/tcp

#### Medium (CVSS: 4.3)

NVT: SSH Weak Encryption Algorithms Supported

#### Summary

The remote SSH server is configured to allow weak encryption algorithms.

#### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Mitigation

Disable the weak encryption algorithms.

### Vulnerability Insight

The 'arcfour' cipher is the Arcfour stream cipher with 128-bit keys. The Arcfour cipher is believed to be compatible with the RC4 cipher [SCHNEIER]. Arcfour (and RC4) has problems with weak keys, and should not be used anymore.

The 'none' algorithm specifies that no encryption is to be done. Note that this method provides no confidentiality protection, and it is NOT RECOMMENDED to use it.

A vulnerability exists in SSH messages that employ CBC mode that may allow an attacker to recover plaintext from a block of ciphertext.

### Vulnerability Detection Method

Check if remote ssh service supports Arcfour, none or CBC ciphers.

Details: SSH Weak Encryption Algorithms Supported

OID:1.3.6.1.4.1.25623.1.0.105611 Version used: \$Revision: 4490 \$

#### References

Other:

URL:https://tools.ietf.org/html/rfc4253#section-6.3

URL:https://www.kb.cert.org/vuls/id/958563

[ return to 127.0.0.11 ]

### 2.38.2 Low general/tcp

# Low (CVSS: 2.6)

#### Summary

The remote host implements TCP timestamps and therefore allows to compute the uptime.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

A side effect of this feature is that the uptime of the remote host can sometimes be computed.

### Solution

Solution type: Mitigation

To disable TCP timestamps on linux add the line 'net.ipv4.tcp\_timestamps = 0' to /etc/sysctl.conf. Execute 'sysctl-p' to apply the settings at runtime.

To disable TCP timestamps on Windows execute 'netsh int tcp set global timestamps=disabled' Starting with Windows Server 2008 and Vista, the timestamp can not be completely disabled. The default behavior of the TCP/IP stack on this Systems is to not use the Timestamp options when initiating TCP connections, but use them if the TCP peer that is initiating communication includes them in their synchronize (SYN) segment.

See also: http://www.microsoft.com/en-us/download/details.aspx?id=9152

### Affected Software/OS

TCP/IPv4 implementations that implement RFC1323.

### Vulnerability Insight

The remote host implements TCP timestamps, as defined by RFC1323.

### Vulnerability Detection Method

Special IP packets are forged and sent with a little delay in between to the target IP. The responses are searched for a timestamps. If found, the timestamps are reported.

Details: TCP timestamps OID:1.3.6.1.4.1.25623.1.0.80091

Version used: \$Revision: 5309 \$

#### References

Other:

URL:http://www.ietf.org/rfc/rfc1323.txt

[ return to 127.0.0.11 ]

### 2.38.3 Low 22/tcp

## Low (CVSS: 2.6)

NVT: SSH Weak MAC Algorithms Supported

### Summary

The remote SSH server is configured to allow weak MD5 and/or 96-bit MAC algorithms.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

### Solution

Solution type: Mitigation Disable the weak MAC algorithms.

### Vulnerability Detection Method

Details: SSH Weak MAC Algorithms Supported

OID:1.3.6.1.4.1.25623.1.0.105610 Version used: \$Revision: 4490 \$

[ return to 127.0.0.11 ]

#### $2.39 \quad 127.0.0.37$

Service (Port)	Threat Level
$80/\mathrm{tcp}$	Medium
$22/\mathrm{tcp}$	Medium
$22/\mathrm{tcp}$	Low
general/tcp	Low

### 2.39.1 Medium 80/tcp

2 RESULTS PER HOST

### Medium (CVSS: 4.3)

NVT: Apache Web Server ETag Header Information Disclosure Weakness

#### Summary

A weakness has been discovered in Apache web servers that are configured to use the FileETag directive.

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#### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

Exploitation of this issue may provide an attacker with information that may be used to launch further attacks against a target network.

### Solution

OpenBSD has released a patch that addresses this issue. Inode numbers returned from the server are now encoded using a private hash to avoid the release of sensitive information.

Novell has released TID10090670 to advise users to apply the available workaround of disabling the directive in the configuration file for Apache releases on NetWare. Please see the attached Technical Information Document for further details.

#### Vulnerability Detection Method

Due to the way in which Apache generates ETag response headers, it may be possible for an attacker to obtain sensitive information regarding server files. Specifically, ETag header fields returned to a client contain the file's inode number.

Details: Apache Web Server ETag Header Information Disclosure Weakness

OID:1.3.6.1.4.1.25623.1.0.103122 Version used: \$Revision: 3022 \$

### ${\bf References}$

CVE: CVE-2003-1418

BID:6939 Other:

URL:https://www.securityfocus.com/bid/6939

URL:http://httpd.apache.org/docs/mod/core.html#fileetag

URL:http://www.openbsd.org/errata32.html

URL:http://support.novell.com/docs/Tids/Solutions/10090670.html

[ return to 127.0.0.37 ]

#### 2.39.2 Medium 22/tcp

### Medium (CVSS: 4.3)

NVT: SSH Weak Encryption Algorithms Supported

#### Summary

The remote SSH server is configured to allow weak encryption algorithms.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Mitigation

Disable the weak encryption algorithms.

#### Vulnerability Insight

The 'arcfour' cipher is the Arcfour stream cipher with 128-bit keys. The Arcfour cipher is believed to be compatible with the RC4 cipher [SCHNEIER]. Arcfour (and RC4) has problems with weak keys, and should not be used anymore.

The 'none' algorithm specifies that no encryption is to be done. Note that this method provides no confidentiality protection, and it is NOT RECOMMENDED to use it.

A vulnerability exists in SSH messages that employ CBC mode that may allow an attacker to recover plaintext from a block of ciphertext.

#### **Vulnerability Detection Method**

Check if remote ssh service supports Arcfour, none or CBC ciphers.

Details: SSH Weak Encryption Algorithms Supported

OID:1.3.6.1.4.1.25623.1.0.105611 Version used: \$Revision: 4490 \$

#### References

Other:

URL:https://tools.ietf.org/html/rfc4253#section-6.3

URL:https://www.kb.cert.org/vuls/id/958563

[ return to 127.0.0.37 ]

#### $2.39.3 \quad Low \ 22/tcp$

#### Low (CVSS: 2.6)

NVT: SSH Weak MAC Algorithms Supported

#### Summary

The remote SSH server is configured to allow weak MD5 and/or 96-bit MAC algorithms.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Mitigation

Disable the weak MAC algorithms.

### Vulnerability Detection Method

Details: SSH Weak MAC Algorithms Supported

OID:1.3.6.1.4.1.25623.1.0.105610 Version used: \$Revision: 4490 \$

[ return to 127.0.0.37 ]

### 2.39.4 Low general/tcp

Low (CVSS: 2.6) NVT: TCP timestamps

#### Summary

The remote host implements TCP timestamps and therefore allows to compute the uptime.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

A side effect of this feature is that the uptime of the remote host can sometimes be computed.

#### Solution

### Solution type: Mitigation

To disable TCP timestamps on linux add the line 'net.ipv4.tcp\_timestamps = 0' to /etc/sysctl.conf. Execute 'sysctl-p' to apply the settings at runtime.

To disable TCP timestamps on Windows execute 'netsh int tcp set global timestamps=disabled' Starting with Windows Server 2008 and Vista, the timestamp can not be completely disabled. The default behavior of the TCP/IP stack on this Systems is to not use the Timestamp options when initiating TCP connections, but use them if the TCP peer that is initiating communication includes them in their synchronize (SYN) segment.

 $See \ also: \ http://www.microsoft.com/en-us/download/details.aspx?id=9152$ 

#### Affected Software/OS

TCP/IPv4 implementations that implement RFC1323.

#### Vulnerability Insight

The remote host implements TCP timestamps, as defined by RFC1323.

#### Vulnerability Detection Method

Special IP packets are forged and sent with a little delay in between to the target IP. The responses are searched for a timestamps. If found, the timestamps are reported.

Details: TCP timestamps OID:1.3.6.1.4.1.25623.1.0.80091 Version used: \$Revision: 5309 \$

### References

Other:

... continued from previous page ...
URL:http://www.ietf.org/rfc/rfc1323.txt

[ return to 127.0.0.37 ]

### $2.40 \quad 127.0.0.21$

Host scan start Tue Feb 21 16:21:43 2017 UTC Host scan end Tue Feb 21 17:59:33 2017 UTC

Service (Port)	Threat Level
$22/\mathrm{tcp}$	Medium
m general/tcp	Low
$22/\mathrm{tcp}$	Low

### 2.40.1 Medium 22/tcp

#### Medium (CVSS: 4.3)

NVT: SSH Weak Encryption Algorithms Supported

#### Summary

The remote SSH server is configured to allow weak encryption algorithms.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

### Solution

Solution type: Mitigation

Disable the weak encryption algorithms.

### Vulnerability Insight

The 'arcfour' cipher is the Arcfour stream cipher with 128-bit keys. The Arcfour cipher is believed to be compatible with the RC4 cipher [SCHNEIER]. Arcfour (and RC4) has problems with weak keys, and should not be used anymore.

The 'none' algorithm specifies that no encryption is to be done. Note that this method provides no confidentiality protection, and it is NOT RECOMMENDED to use it.

A vulnerability exists in SSH messages that employ CBC mode that may allow an attacker to recover plaintext from a block of ciphertext.

#### Vulnerability Detection Method

Check if remote ssh service supports Arcfour, none or CBC ciphers.

Details: SSH Weak Encryption Algorithms Supported

OID:1.3.6.1.4.1.25623.1.0.105611 Version used: \$Revision: 4490 \$

#### References

Other:

URL:https://tools.ietf.org/html/rfc4253#section-6.3

URL:https://www.kb.cert.org/vuls/id/958563

[ return to 127.0.0.21 ]

### 2.40.2 Low general/tcp

Low (CVSS: 2.6) NVT: TCP timestamps

#### Summary

The remote host implements TCP timestamps and therefore allows to compute the uptime.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

A side effect of this feature is that the uptime of the remote host can sometimes be computed.

#### Solution

Solution type: Mitigation

To disable TCP timestamps on linux add the line 'net.ipv4.tcp\_timestamps = 0' to /etc/sysctl.conf. Execute 'sysctl-p' to apply the settings at runtime.

To disable TCP timestamps on Windows execute 'netsh int tcp set global timestamps=disabled' Starting with Windows Server 2008 and Vista, the timestamp can not be completely disabled. The default behavior of the TCP/IP stack on this Systems is to not use the Timestamp options when initiating TCP connections, but use them if the TCP peer that is initiating communication includes them in their synchronize (SYN) segment.

 $See \ also: \ http://www.microsoft.com/en-us/download/details.aspx?id=9152$ 

#### Affected Software/OS

TCP/IPv4 implementations that implement RFC1323.

#### Vulnerability Insight

The remote host implements TCP timestamps, as defined by RFC1323.

#### **Vulnerability Detection Method**

Special IP packets are forged and sent with a little delay in between to the target IP. The responses are searched for a timestamps. If found, the timestamps are reported.

Details: TCP timestamps OID:1.3.6.1.4.1.25623.1.0.80091 Version used: \$Revision: 5309 \$

### References

Other:

URL:http://www.ietf.org/rfc/rfc1323.txt

[ return to 127.0.0.21 ]

## $\mathbf{2.40.3}\quad \mathbf{Low}\ \mathbf{22/tcp}$

Low (CVSS: 2.6)

NVT: SSH Weak MAC Algorithms Supported

### Summary

The remote SSH server is configured to allow weak MD5 and/or 96-bit MAC algorithms.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Mitigation

Disable the weak MAC algorithms.

### Vulnerability Detection Method

Details: SSH Weak MAC Algorithms Supported

OID:1.3.6.1.4.1.25623.1.0.105610 Version used: \$Revision: 4490 \$

 $[ \ \mathrm{return} \ \mathrm{to} \ 127.0.0.21 \ ]$ 

### $2.41 \quad 127.0.0.16$

Host scan start Tue Feb 21 15:55:50 2017 UTC Host scan end Tue Feb 21 16:23:22 2017 UTC

Service (Port)	Threat Level
$22/\mathrm{tcp}$	Medium
$22/\mathrm{tcp}$	Low
general/tcp	Low

### 2.41.1 Medium 22/tcp

Medium (CVSS: 4.3)

NVT: SSH Weak Encryption Algorithms Supported

### Summary

The remote SSH server is configured to allow weak encryption algorithms.

 $\dots$  continues on next page  $\dots$ 

#### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Mitigation

Disable the weak encryption algorithms.

#### Vulnerability Insight

The 'arcfour' cipher is the Arcfour stream cipher with 128-bit keys. The Arcfour cipher is believed to be compatible with the RC4 cipher [SCHNEIER]. Arcfour (and RC4) has problems with weak keys, and should not be used anymore.

The 'none' algorithm specifies that no encryption is to be done. Note that this method provides no confidentiality protection, and it is NOT RECOMMENDED to use it.

A vulnerability exists in SSH messages that employ CBC mode that may allow an attacker to recover plaintext from a block of ciphertext.

#### **Vulnerability Detection Method**

Check if remote ssh service supports Arcfour, none or CBC ciphers.

Details: SSH Weak Encryption Algorithms Supported

OID:1.3.6.1.4.1.25623.1.0.105611 Version used: \$Revision: 4490 \$

#### References

Other:

URL:https://tools.ietf.org/html/rfc4253#section-6.3

URL:https://www.kb.cert.org/vuls/id/958563

[ return to 127.0.0.16 ]

#### $2.41.2 \quad Low \ 22/tcp$

#### Low (CVSS: 2.6)

NVT: SSH Weak MAC Algorithms Supported

#### Summary

The remote SSH server is configured to allow weak MD5 and/or 96-bit MAC algorithms.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Mitigation

Disable the weak MAC algorithms.

### Vulnerability Detection Method

 $\dots continues\ on\ next\ page\ \dots$ 

Details: SSH Weak MAC Algorithms Supported

OID:1.3.6.1.4.1.25623.1.0.105610 Version used: \$Revision: 4490 \$

[ return to 127.0.0.16 ]

### 2.41.3 Low general/tcp

Low (CVSS: 2.6) NVT: TCP timestamps

#### Summary

The remote host implements TCP timestamps and therefore allows to compute the uptime.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

A side effect of this feature is that the uptime of the remote host can sometimes be computed.

#### Solution

### Solution type: Mitigation

To disable TCP timestamps on linux add the line 'net.ipv4.tcp\_timestamps = 0' to /etc/sysctl.conf. Execute 'sysctl-p' to apply the settings at runtime.

To disable TCP timestamps on Windows execute 'netsh int tcp set global timestamps=disabled' Starting with Windows Server 2008 and Vista, the timestamp can not be completely disabled. The default behavior of the TCP/IP stack on this Systems is to not use the Timestamp options when initiating TCP connections, but use them if the TCP peer that is initiating communication includes them in their synchronize (SYN) segment.

 $See also: \ http://www.microsoft.com/en-us/download/details.aspx?id=9152$ 

#### Affected Software/OS

TCP/IPv4 implementations that implement RFC1323.

#### Vulnerability Insight

The remote host implements TCP timestamps, as defined by RFC1323.

#### Vulnerability Detection Method

Special IP packets are forged and sent with a little delay in between to the target IP. The responses are searched for a timestamps. If found, the timestamps are reported.

Details: TCP timestamps OID:1.3.6.1.4.1.25623.1.0.80091 Version used: \$Revision: 5309 \$

### References

Other:

URL:http://www.ietf.org/rfc/rfc1323.txt

[ return to 127.0.0.16 ]

#### $2.42 \quad 127.0.0.24$

Host scan start Tue Feb 21 15:24:42 2017 UTC Host scan end Tue Feb 21 15:51:39 2017 UTC

Service (Port)	Threat Level
443/tcp	Medium

### 2.42.1 Medium 443/tcp

Medium (CVSS: 4.0)

 ${
m NVT:\,SSL/TLS:\,Diffie-Hellman\,\,Key\,\,Exchange\,\,Insufficient\,\,DH\,\,Group\,\,Strength\,\,Vulnerability}$ 

#### Summary

The SSL/TLS service uses Diffie-Hellman groups with insufficient strength (key size < 2048).

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

An attacker might be able to decrypt the SSL/TLS communication offline.

#### Solution

Solution type: Workaround

Deploy (Ephemeral) Elliptic-Curve Diffie-Hellman (ECDHE) or use a 2048-bit or stronger Diffie-Hellman group. (see https://weakdh.org/sysadmin.html).

For Apache Web Servers: Beginning with version 2.4.7, mod\_ssl will use DH parameters which include primes with lengths of more than 1024 bits.

### Vulnerability Insight

The Diffie-Hellman group are some big numbers that are used as base for the DH computations. They can be, and often are, fixed. The security of the final secret depends on the size of these parameters. It was found that 512 and 768 bits to be weak, 1024 bits to be breakable by really powerful attackers like governments.

### Vulnerability Detection Method

Checks the DHE temporary public key size.

Details: SSL/TLS: Diffie-Hellman Key Exchange Insufficient DH Group Strength Vulnerabili.

OID:1.3.6.1.4.1.25623.1.0.106223 Version used: \$Revision: 4739 \$

### References

Other:

URL:https://weakdh.org/

URL:https://weakdh.org/sysadmin.html

### Medium (CVSS: 4.0)

NVT: SSL/TLS: Certificate Signed Using A Weak Signature Algorithm

#### Summary

The remote service is using a SSL/TLS certificate in the certificate chain that has been signed using a cryptographically weak hashing algorithm.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Solution

Solution type: Mitigation

Servers that use SSL/TLS certificates signed with a weak SHA-1, MD5, MD4 or MD2 hashing algorithm will need to obtain new SHA-2 signed SSL/TLS certificates to avoid web browser SSL/TLS certificate warnings.

### Vulnerability Insight

The following hashing algorithms used for signing SSL/TLS certificates are considered cryptographically weak and not secure enough for ongoing use:

- Secure Hash Algorithm 1 (SHA-1)
- Message Digest 5 (MD5)
- Message Digest 4 (MD4)
- Message Digest 2 (MD2)

Beginning as late as January 2017 and as early as June 2016, browser developers such as Microsoft and Google will begin warning users when visiting web sites that use SHA-1 signed Secure Socket Layer (SSL) certificates.

NOTE: The script preference allows to set one or more custom SHA-1 fingerprints of CA certificates which are trusted by this routine. The fingerprints needs to be passed comma-separated and case-insensitive:

Fingerprint 1

or

fingerprint1, Fingerprint2

#### Vulnerability Detection Method

Check which hashing algorithm was used to sign the remote SSL/TLS certificate. Details: SSL/TLS: Certificate Signed Using A Weak Signature Algorithm

OID:1.3.6.1.4.1.25623.1.0.105880 Version used: \$Revision: 4781 \$

#### References

Other:

 $\dots$  continues on next page  $\dots$ 

URL:https://blog.mozilla.org/security/2014/09/23/phasing-out-certificates-with 
→-sha-1-based-signature-algorithms/

[ return to 127.0.0.24 ]

### $2.43 \quad 127.0.0.45$

Host scan start Tue Feb 21 15:24:38 2017 UTC Host scan end Tue Feb 21 16:26:17 2017 UTC

Service (Port)	Threat Level
general/tcp	Low

### 2.43.1 Low general/tcp

#### Low (CVSS: 3.5)

NVT: VMSA-2016-003: VMware ESXi updates address a cross-site scripting issue (remote check)

### Summary

VMware product updates address a critical glibc security vulnerability

#### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

### Solution

Solution type: VendorFix Apply the missing patch(es).

### Affected Software/OS

 $ESXi\ 6.0\ without\ patch\ ESXi600-201611102-SG\ ESXi\ 5.5\ without\ patch\ ESXi550-201612102-SG$ 

### Vulnerability Insight

The ESXi Host Client contains a vulnerability that may allow for stored cross-site scripting (XSS). The issue can be introduced by an attacker that has permission to manage virtual machines through ESXi Host Client or by tricking the vSphere administrator to import a specially crafted VM. The issue may be triggered on the system from where ESXi Host Client is used to manage the specially crafted VM.

#### Vulnerability Detection Method

Check the build number

Details: VMSA-2016-003: VMware ESXi updates address a cross-site scripting issue (remote.

 $\hookrightarrow$  . .

OID:1.3.6.1.4.1.25623.1.0.140101 Version used: \$Revision: 4945 \$

#### References

CVE: CVE-2016-7463

Other:

URL: http://www.vmware.com/security/advisories/VMSA-2016-0023.html

### Low (CVSS: 2.6) NVT: TCP timestamp

#### Summary

The remote host implements TCP timestamps and therefore allows to compute the uptime.

#### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

### Impact

A side effect of this feature is that the uptime of the remote host can sometimes be computed.

#### Solution

### Solution type: Mitigation

To disable TCP timestamps on linux add the line 'net.ipv4.tcp\_timestamps = 0' to /etc/sysctl.conf. Execute 'sysctl-p' to apply the settings at runtime.

To disable TCP timestamps on Windows execute 'netsh int tcp set global timestamps=disabled' Starting with Windows Server 2008 and Vista, the timestamp can not be completely disabled. The default behavior of the TCP/IP stack on this Systems is to not use the Timestamp options when initiating TCP connections, but use them if the TCP peer that is initiating communication includes them in their synchronize (SYN) segment.

See also: http://www.microsoft.com/en-us/download/details.aspx?id=9152

#### Affected Software/OS

TCP/IPv4 implementations that implement RFC1323.

### Vulnerability Insight

The remote host implements TCP timestamps, as defined by RFC1323.

### Vulnerability Detection Method

Special IP packets are forged and sent with a little delay in between to the target IP. The responses are searched for a timestamps. If found, the timestamps are reported.

Details: TCP timestamps OID:1.3.6.1.4.1.25623.1.0.80091 Version used: \$Revision: 5309 \$

#### References

Other:

URL:http://www.ietf.org/rfc/rfc1323.txt

[ return to 127.0.0.45 ]

#### $2.44 \quad 127.0.0.30$

Host scan start Tue Feb 21 15:35:31 2017 UTC Host scan end Tue Feb 21 16:31:13 2017 UTC

Service (Port)	Threat Level
general/tcp	Low

### 2.44.1 Low general/tcp

## Low (CVSS: 2.6)

### Summary

The remote host implements TCP timestamps and therefore allows to compute the uptime.

#### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

A side effect of this feature is that the uptime of the remote host can sometimes be computed.

### Solution

### Solution type: Mitigation

To disable TCP timestamps on linux add the line 'net.ipv4.tcp\_timestamps = 0' to /etc/sysctl.conf. Execute 'sysctl-p' to apply the settings at runtime.

To disable TCP timestamps on Windows execute 'netsh int tcp set global timestamps=disabled' Starting with Windows Server 2008 and Vista, the timestamp can not be completely disabled. The default behavior of the TCP/IP stack on this Systems is to not use the Timestamp options when initiating TCP connections, but use them if the TCP peer that is initiating communication includes them in their synchronize (SYN) segment.

See also: http://www.microsoft.com/en-us/download/details.aspx?id=9152

#### Affected Software/OS

TCP/IPv4 implementations that implement RFC1323.

### Vulnerability Insight

The remote host implements TCP timestamps, as defined by RFC1323.

### Vulnerability Detection Method

Special IP packets are forged and sent with a little delay in between to the target IP. The responses are searched for a timestamps. If found, the timestamps are reported.

Details: TCP timestamps OID:1.3.6.1.4.1.25623.1.0.80091 Version used: \$Revision: 5309 \$

### References

...continued from previous page...

Other:
URL:http://www.ietf.org/rfc/rfc1323.txt

[ return to 127.0.0.30 ]

### $2.45 \quad 127.0.0.48$

Host scan start Tue Feb 21 15:51:39 2017 UTC Host scan end Tue Feb 21 17:34:35 2017 UTC

Service (Port)	Threat Level
m general/tcp	Low

#### 2.45.1 Low general/tcp

## Low (CVSS: 2.6)

NVT: TCP timestamps

### Summary

The remote host implements TCP timestamps and therefore allows to compute the uptime.

#### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

#### Impact

A side effect of this feature is that the uptime of the remote host can sometimes be computed.

### Solution

### Solution type: Mitigation

To disable TCP timestamps on linux add the line 'net.ipv4.tcp\_timestamps = 0' to /etc/sysctl.conf. Execute 'sysctl-p' to apply the settings at runtime.

To disable TCP timestamps on Windows execute 'netsh int tcp set global timestamps=disabled' Starting with Windows Server 2008 and Vista, the timestamp can not be completely disabled.

The default behavior of the TCP/IP stack on this Systems is to not use the Timestamp options when initiating TCP connections, but use them if the TCP peer that is initiating communication includes them in their synchronize (SYN) segment.

See also: http://www.microsoft.com/en-us/download/details.aspx?id=9152

#### Affected Software/OS

TCP/IPv4 implementations that implement RFC1323.

#### Vulnerability Insight

The remote host implements TCP timestamps, as defined by RFC1323.

### **Vulnerability Detection Method**

Special IP packets are forged and sent with a little delay in between to the target IP. The responses are searched for a timestamps. If found, the timestamps are reported.

Details: TCP timestamps OID:1.3.6.1.4.1.25623.1.0.80091 Version used: \$Revision: 5309 \$

### References

Other:

URL:http://www.ietf.org/rfc/rfc1323.txt

[ return to 127.0.0.48 ]

### $2.46 \quad 127.0.0.18$

Host scan start Tue Feb 21 16:27:44 2017 UTC Host scan end Tue Feb 21 17:07:05 2017 UTC

Service (Port)	Threat Level
general/tcp	Low

#### 2.46.1 Low general/tcp

#### Low (CVSS: 2.6)

NVT: TCP timestamps

#### Summary

The remote host implements TCP timestamps and therefore allows to compute the uptime.

### Vulnerability Detection Result

Vulnerability was detected according to the Vulnerability Detection Method.

### Impact

A side effect of this feature is that the uptime of the remote host can sometimes be computed.

### Solution

Solution type: Mitigation

To disable TCP timestamps on linux add the line 'net.ipv4.tcp\_timestamps = 0' to /etc/sysctl.conf. Execute 'sysctl-p' to apply the settings at runtime.

To disable TCP timestamps on Windows execute 'netsh int tcp set global timestamps=disabled' Starting with Windows Server 2008 and Vista, the timestamp can not be completely disabled. The default behavior of the TCP/IP stack on this Systems is to not use the Timestamp options when initiating TCP connections, but use them if the TCP peer that is initiating communication

See also: http://www.microsoft.com/en-us/download/details.aspx?id=9152

includes them in their synchronize (SYN) segment.

### Affected Software/OS

TCP/IPv4 implementations that implement RFC1323.

### Vulnerability Insight

The remote host implements TCP timestamps, as defined by RFC1323.

### Vulnerability Detection Method

Special IP packets are forged and sent with a little delay in between to the target IP. The responses are searched for a timestamps. If found, the timestamps are reported.

Details: TCP timestamps OID:1.3.6.1.4.1.25623.1.0.80091 Version used: \$Revision: 5309 \$

### References

Other:

URL:http://www.ietf.org/rfc/rfc1323.txt

[ return to 127.0.0.18 ]

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