SOX Vulnerability Assessment Report

Report Generated: December 15, 2015

1 Background

The Sarbanes-Oxley Act (SOX) holds corporate executives accountable for the information reported on key financial statements, and has made it mandatory for organizations to ensure their financial information is accurate, and systems generating the information are secure and reliable. This means developing policies and practices that ensure proper access controls, implementing effective patch management of financial systems and related architecture, and conducting vulnerability assessments and remediation activities to continuously monitor risk to target systems and content.

2 Introduction

On December 15, 2015, at 10:03 AM, a SOX assessment was conducted using the SAINT 8.9.28 vulnerability scanner. The results in the Summary section below document the findings from this scan, to include details about the host, vulnerabilities found, and Common Vulnerability Scoring System (CVSS) numerical score. This scan discovered a total of four live hosts and detected one critical problem, four areas of concern and 57 potential problems. The Summary and Details sections provide comprehensive information related to the vulnerabilities - to include content to assess risk and determine remediation.

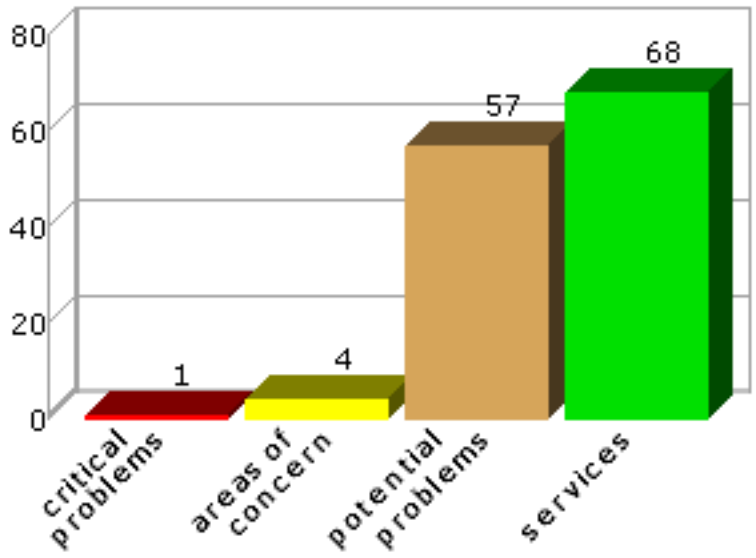
This vulnerability scan and assessment where executed to support the organization.s overall internal risk management practices, as well as facilitate provisions in Section 404 of the Sarbanes-Oxley Act, requiring management report annually on the effectiveness of internal controls for financial reporting and that external auditors confirm management's assessment.

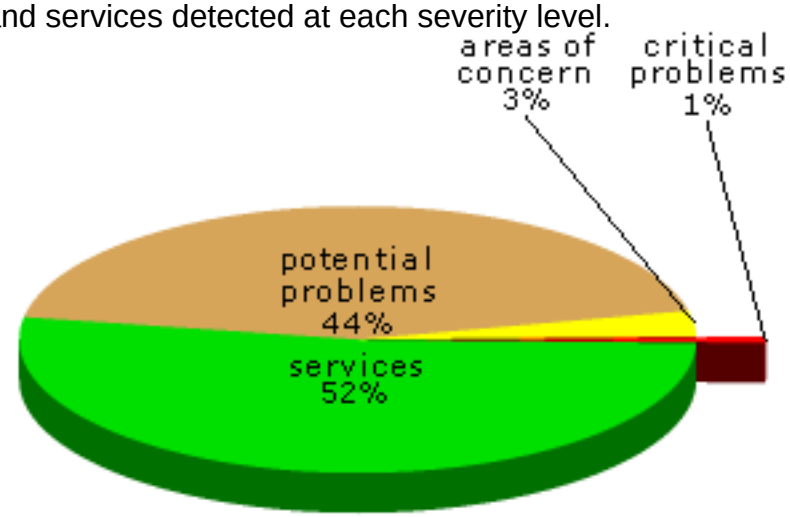
3 Summary

The sections below summarize the results of the scan.

3.1 Vulnerabilities by Severity

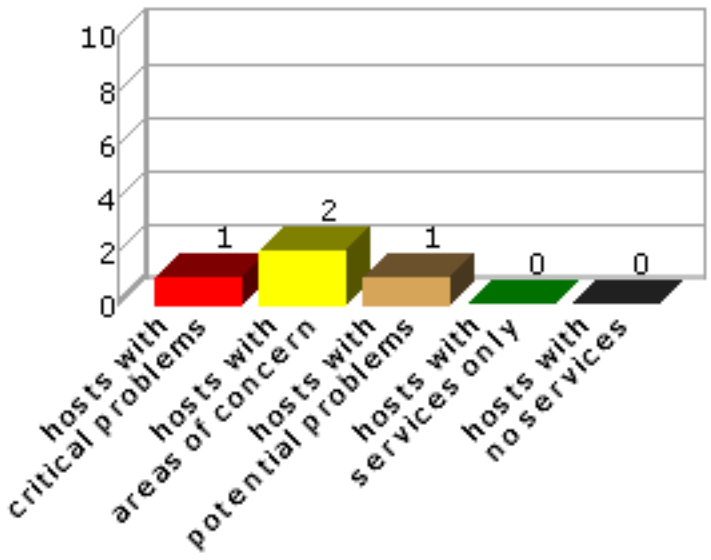
This section shows the overall number of vulnerabilities and services detected at each severity level.

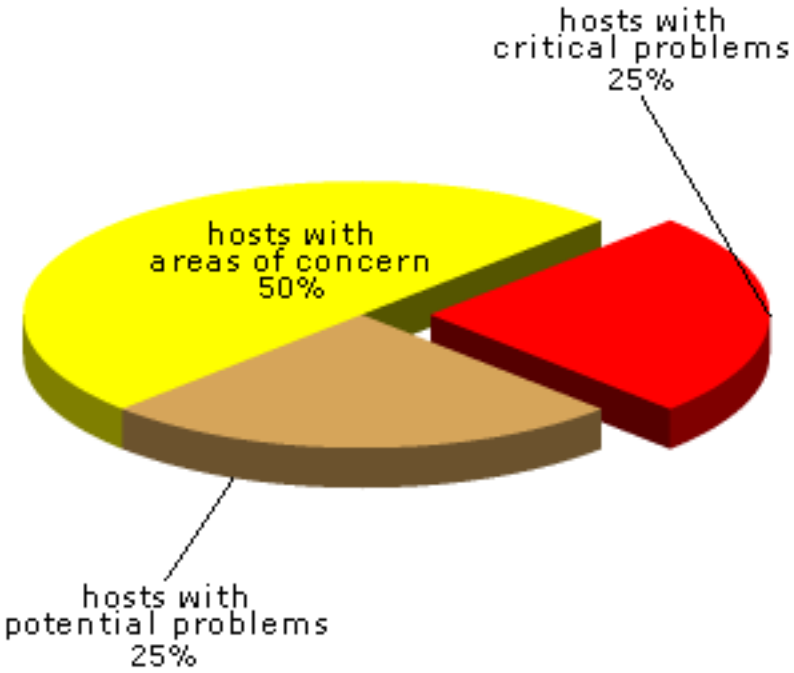




3.2 Hosts by Severity

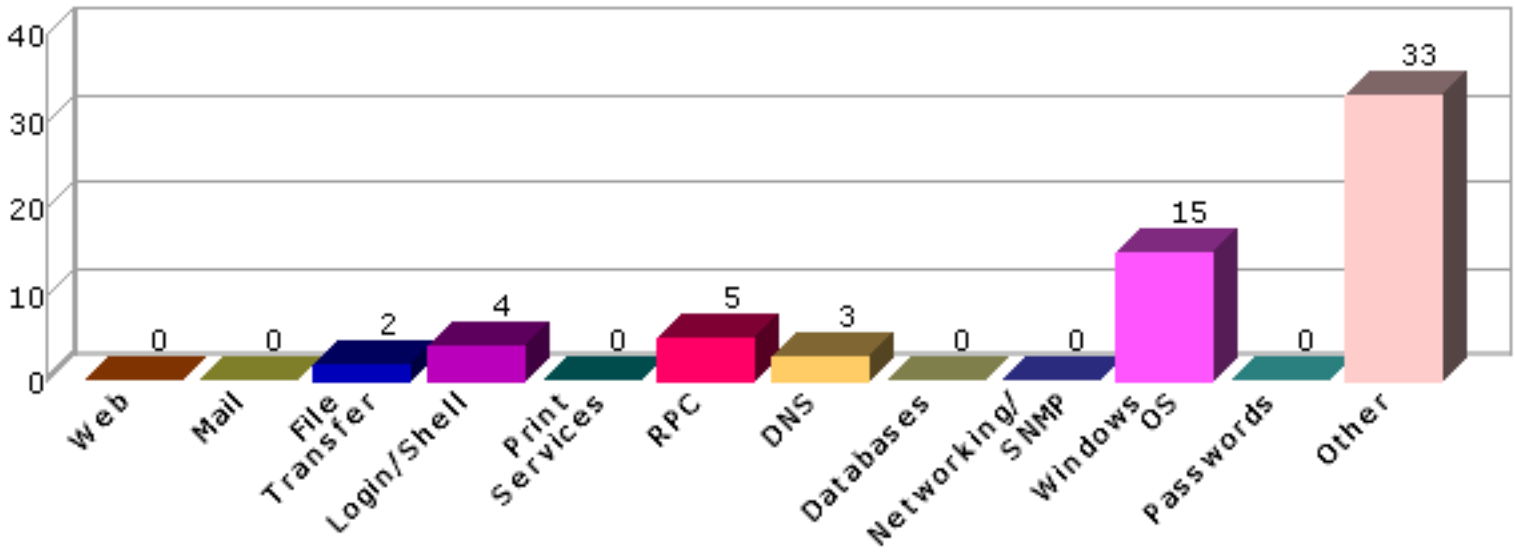
This section shows the overall number of hosts detected at each severity level. The severity level of a host is defined as the highest vulnerability severity level detected on that host.

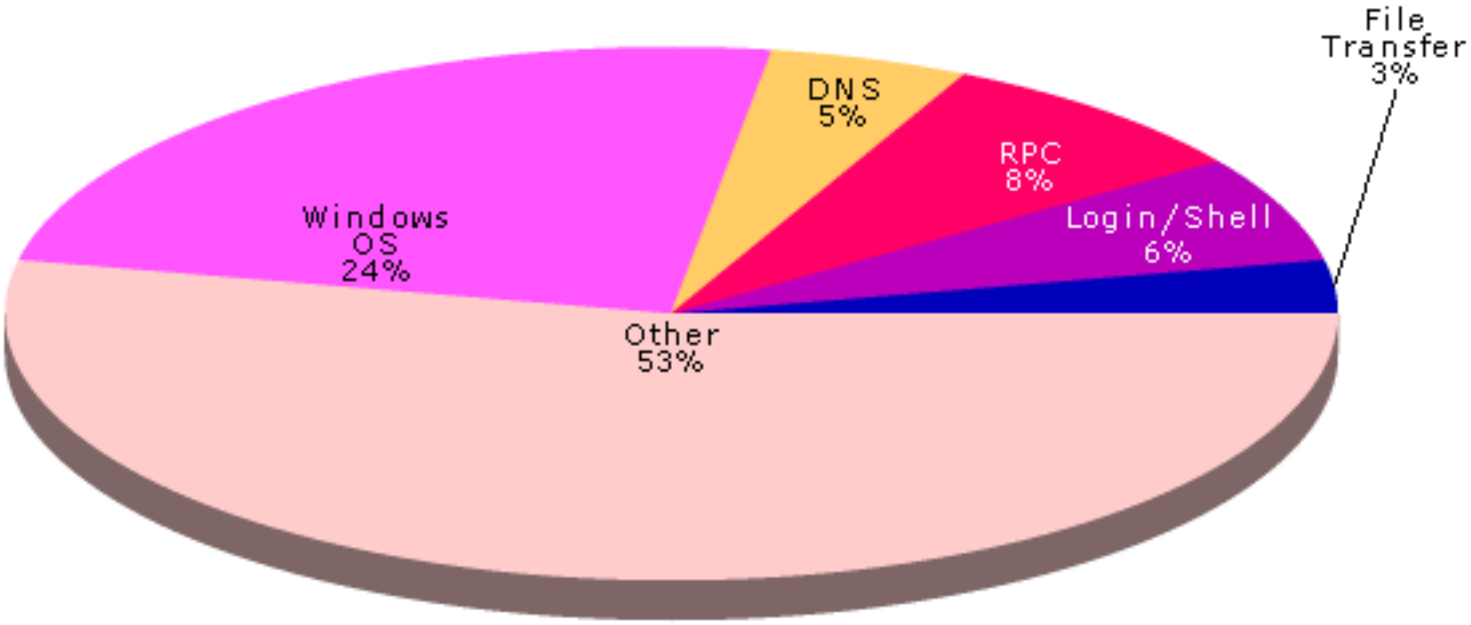




3.3 Vulnerabilities by Class

This section shows the number of vulnerabilities detected in each vulnerability class.





4 Overview

The following tables present an overview of the hosts discovered on the network and the vulnerabilities contained therein.

4.1 Host List

This table presents an overview of the hosts discovered on the network.

Host Name	Netbios Name	IP Address	Host Type	Critical Problems	Areas of Concern	Potential Problems
10.8.0.1		10.8.0.1	Cisco IOS 11.3	0	0	14
saintvm64.sainttest.local	SAINTVM64	10.8.0.35	Ubuntu 12.04	1	1	21
10.8.0.38	WIN7	10.8.0.38	Windows 7 SP1	0	1	8
win-iqf3u12cja5.sainttest.local	WIN-IQF3U12CJA5	10.8.0.150	Windows Server 2008 R2	0	2	14

4.2 Vulnerability List

This table presents an overview of the vulnerabilities detected on the network.

Host Name	Port	Severity	Vulnerability / Service	Class	CVE	Max. CVSSv2 Base Score
10.8.0.1	443 /tcp	potential	server is susceptible to BEAST attack	Other	CVE-2011-3389	4.3
10.8.0.1		potential	ICMP timestamp requests enabled	Other	CVE-1999-0524	0.0
10.8.0.1	443 /tcp	potential	weak RSA public key	Other		2.6
10.8.0.1	80/tcp	potential	Remote OS available	Other		2.6
10.8.0.1	22/tcp	potential	Remote OS available	Other		2.6
10.8.0.1	22/tcp	potential	SSH supports weak ciphers	Login /Shell		2.6
10.8.0.1	22/tcp	potential	SSH Protocol Version 1 Supported	Login /Shell	CVE-2001-0361 CVE-2001-1473	7.5
10.8.0.1	443 /tcp	potential	SSL certificate is self signed	Other		2.6
10.8.0.1	443 /tcp	potential	SSL certificate subject does not match target	Other		2.6
10.8.0.1	443 /tcp	potential	SSL server accepts weak ciphers	Other		2.6
10.8.0.1	443 /tcp	potential	SSL certificate is signed with weak hash function: MD5	Other	CVE-2004-2761	5.0
10.8.0.1	443 /tcp	potential	server is susceptible to SSL POODLE attack	Other	CVE-2014-3566	4.3
10.8.0.1	443 /tcp	potential	SSL/TLS server supports RC4 ciphers	Other	CVE-2013-2566 CVE-2015-2808	4.3
10.8.0.1	23/tcp	potential	telnet receives cleartext passwords	Login /Shell		2.6
10.8.0.1	22/tcp	service	SSH			
10.8.0.1	23/tcp	service	Telnet			
10.8.0.1	80/tcp	service	WWW			
10.8.0.1	443 /tcp	service	WWW (Secure)			

saintvm64.sainttest.local	139 /tcp	critical	vulnerability in Samba 3.6.3	Windows OS	CVE-2012-1182 CVE-2012-2111 CVE-2013-0454 CVE-2013-4124 CVE-2013-4408 CVE-2013-4475 CVE-2013-4496 CVE-2014-0178 CVE-2014-0244 CVE-2014-3493 CVE-2014-8143 CVE-2015-0240	10.0
saintvm64.sainttest.local	22/tcp	concern	OpenSSH 5.9p1 is vulnerable	Login /Shell	CVE-2010-5107 CVE-2014-1692 CVE-2014-2532 CVE-2014-2653 CVE-2015-5352 CVE-2015-5600	8.5
saintvm64.sainttest.local	5252 /tcp	potential	server is susceptible to BEAST attack	Other	CVE-2011-3389	4.3
saintvm64.sainttest.local		potential	ICMP timestamp requests enabled	Other	CVE-1999-0524	0.0
saintvm64.sainttest.local	139 /tcp	potential	NetBIOS share enumeration using null session	Windows OS		2.6
saintvm64.sainttest.local	139 /tcp	potential	Windows null session domain SID disclosure	Windows OS	CVE-2000-1200	5.0
saintvm64.sainttest.local	139 /tcp	potential	Windows null session host SID disclosure	Windows OS		2.6
saintvm64.sainttest.local	139 /tcp	potential	excessive null session access	Windows OS	CVE-2000-1200	5.0
saintvm64.sainttest.local	5252 /tcp	potential	weak RSA public key	Other		2.6
saintvm64.sainttest.local	22/tcp	potential	Remote OS available	Other		2.6
saintvm64.sainttest.local	47152 /tcp	potential	rpc.statd is enabled and may be vulnerable	RPC	CVE-1999-0018 CVE-1999-0019 CVE-1999-0210 CVE-1999-0493 CVE-2000-0666 CVE-2000-0800	10.0
saintvm64.sainttest.local	139 /tcp	potential	SMB digital signing is disabled	Windows OS		2.6
saintvm64.sainttest.local	5252 /tcp	potential	SSL certificate is self signed	Other		2.6
saintvm64.sainttest.local	5252 /tcp	potential	SSL certificate is signed with weak hash function: SHA1	Other		2.6
saintvm64.sainttest.local	5252 /tcp	potential	SSL/TLS server supports RC4 ciphers	Other	CVE-2013-2566 CVE-2015-2808	4.3
saintvm64.sainttest.local	111 /tcp	potential	The sunrpc portmapper service is running	Other	CVE-1999-0632	0.0
saintvm64.sainttest.local	111 /tcp	potential	sunrpc services may be vulnerable	RPC	CVE-2002-0391 CVE-2003-0028	10.0
saintvm64.sainttest.local	4242 /tcp	potential	TCP timestamp requests enabled	Other		2.6
saintvm64.sainttest.local	139 /tcp	potential	password complexity policy disabled	Windows OS	CVE-1999-0535	10.0
saintvm64.sainttest.local	139 /tcp	potential	weak account lockout policy (0)	Windows OS	CVE-1999-0582	5.0
saintvm64.sainttest.local	139 /tcp	potential	weak minimum password age policy (0 days)	Windows OS	CVE-1999-0535	10.0

saintvm64.sainttest.local	139 /tcp	potential	weak minimum password length policy (5)	Windows OS	CVE-1999-0535	10.0
saintvm64.sainttest.local	139 /tcp	potential	weak password history policy (0)	Windows OS	CVE-1999-0535	10.0
saintvm64.sainttest.local	5252 /tcp	service	5252/TCP			
saintvm64.sainttest.local	1414 /tcp	service	SAINT			
saintvm64.sainttest.local	139 /tcp	service	SMB			
saintvm64.sainttest.local	22/tcp	service	SSH			
saintvm64.sainttest.local	4242 /tcp	service	WWW (non-standard port 4242)			
saintvm64.sainttest.local	775 /tcp	service	entomb (775/TCP)			
saintvm64.sainttest.local	445 /tcp	service	microsoft-ds (445/TCP)			
saintvm64.sainttest.local	137 /udp	service	netbios-ns (137/UDP)			
saintvm64.sainttest.local	111 /tcp	service	sunrpc (111/TCP)			
saintvm64.sainttest.local	139 /tcp	info	Netbios Attribute: Master Browser			
saintvm64.sainttest.local	139 /tcp	info	Netbios Attribute: Messenger Service			
saintvm64.sainttest.local	139 /tcp	info	OS=[Unix] Server=[Samba 3.6.3]			
saintvm64.sainttest.local	111 /tcp	info	RPC service: 100000-2 portmapper (111/TCP)			
saintvm64.sainttest.local	111 /tcp	info	RPC service: 100000-2 portmapper (111/UDP)			
saintvm64.sainttest.local	111 /tcp	info	RPC service: 100000-3 portmapper (111/TCP)			
saintvm64.sainttest.local	111 /tcp	info	RPC service: 100000-3 portmapper (111/UDP)			
saintvm64.sainttest.local	111 /tcp	info	RPC service: 100000-4 portmapper (111/TCP)			
saintvm64.sainttest.local	111 /tcp	info	RPC service: 100000-4 portmapper (111/UDP)			
saintvm64.sainttest.local	111 /tcp	info	RPC service: 100007-1 ypbind (773/UDP)			
saintvm64.sainttest.local	111 /tcp	info	RPC service: 100007-1 ypbind (775/TCP)			
saintvm64.sainttest.local	111 /tcp	info	RPC service: 100007-2 ypbind (773/UDP)			
saintvm64.sainttest.local	111 /tcp	info	RPC service: 100007-2 ypbind (775/TCP)			
saintvm64.sainttest.local	111 /tcp	info	RPC service: 100024-1 status (34239/UDP)			
saintvm64.sainttest.local	111 /tcp	info	RPC service: 100024-1 status (47152/TCP)			
saintvm64.sainttest.local	139 /tcp	info	Share: print$			
saintvm64.sainttest.local	139 /tcp	info	User: nobody (501)			
saintvm64.sainttest.local	139 /tcp	info	lockout duration = 30m, reset = 30m, threshold = 0			

10.8.0.38	21/tcp	concern	vulnerable FileZilla server version: 0.9.41-beta	File Transfer	CVE-2014-0160 CVE-2014-0224	6.8
10.8.0.38	139 /tcp	potential	AV Information: Anti-virus software is not installed or its presence could not be checked	Other		2.6
10.8.0.38	3389 /tcp	potential	server is susceptible to BEAST attack	Other	CVE-2011-3389	4.3
10.8.0.38	21/tcp	potential	ftp receives cleartext password	File Transfer		2.6
10.8.0.38		potential	ICMP timestamp requests enabled	Other	CVE-1999-0524	0.0
10.8.0.38	3389	potential	Microsoft Terminal Server allows weak encryption	Other		2.6
10.8.0.38	139 /tcp	potential	SMB digital signing is disabled	Windows OS		2.6
10.8.0.38	3389 /tcp	potential	SSL/TLS server supports RC4 ciphers	Other	CVE-2013-2566 CVE-2015-2808	4.3
10.8.0.38	990 /tcp	potential	TCP timestamp requests enabled	Other		2.6
10.8.0.38	1026 /tcp	service	1026/TCP			
10.8.0.38	1027 /tcp	service	1027/TCP			
10.8.0.38	1033 /tcp	service	1033/TCP			
10.8.0.38	21/tcp	service	FTP			
10.8.0.38	139 /tcp	service	SMB			
10.8.0.38	5357 /tcp	service	WWW (non-standard port 5357)			
10.8.0.38	5985 /tcp	service	WWW (non-standard port 5985)			
10.8.0.38	1025 /tcp	service	blackjack (1025/TCP)			
10.8.0.38	135 /tcp	service	epmap (135/TCP)			
10.8.0.38	990 /tcp	service	ftps (990/TCP)			
10.8.0.38	1032 /tcp	service	iad3 (1032/TCP)			
10.8.0.38	445 /tcp	service	microsoft-ds (445/TCP)			
10.8.0.38	3389 /tcp	service	ms-wbt-server (3389/TCP)			
10.8.0.38	137 /udp	service	netbios-ns (137/UDP)			
10.8.0.38	1057 /tcp	service	startron (1057/TCP)			
10.8.0.38	139 /tcp	info	OS=[Windows 7 Professional 7601 Service Pack 1] Server=[Windows 7 Professional 6.1]			
win-iqf3u12cja5.sainttest.local		concern	DNS server allows zone transfers	DNS	CVE-1999-0532	0.0
win-iqf3u12cja5.sainttest.local	1048 /tcp	concern	NFS export list disclosure	RPC		2.6
win-iqf3u12cja5.sainttest.local	389 /tcp	potential	Possible buffer overflow in Active Directory	Windows OS		2.6

win-iqf3u12cja5.sainttest.local	139 /tcp	potential	AV Information: Anti-virus software is not installed or its presence could not be checked	Other		2.6
win-iqf3u12cja5.sainttest.local	53/tcp	potential	DNS server allows recursive queries	DNS		2.6
win-iqf3u12cja5.sainttest.local		potential	ICMP timestamp requests enabled	Other	CVE-1999-0524	0.0
win-iqf3u12cja5.sainttest.local	3269 /tcp	potential	scan may have been dynamically blocked by an IPS	Other		2.6
win-iqf3u12cja5.sainttest.local	389 /tcp	potential	Is your LDAP secure?	Other		2.6
win-iqf3u12cja5.sainttest.local	139 /tcp	potential	Windows null session domain SID disclosure	Windows OS	CVE-2000-1200	5.0
win-iqf3u12cja5.sainttest.local	139 /tcp	potential	Windows null session host SID disclosure	Windows OS		2.6
win-iqf3u12cja5.sainttest.local	3389	potential	Microsoft Terminal Server allows weak encryption	Other		2.6
win-iqf3u12cja5.sainttest.local	1039 /tcp	potential	rpc.statd is enabled and may be vulnerable	RPC	CVE-1999-0018 CVE-1999-0019 CVE-1999-0210 CVE-1999-0493 CVE-2000-0666 CVE-2000-0800	10.0
win-iqf3u12cja5.sainttest.local	111 /tcp	potential	The sunrpc portmapper service is running	Other	CVE-1999-0632	0.0
win-iqf3u12cja5.sainttest.local	111 /tcp	potential	sunrpc services may be vulnerable	RPC	CVE-2002-0391 CVE-2003-0028	10.0
win-iqf3u12cja5.sainttest.local	1030 /tcp	potential	TCP timestamp requests enabled	Other		2.6
win-iqf3u12cja5.sainttest.local	135 /tcp	potential	Windows DNS Server RPC Management Interface Buffer Overflow	DNS	CVE-2007-1748	10.0
win-iqf3u12cja5.sainttest.local	1026 /tcp	service	1026/TCP			
win-iqf3u12cja5.sainttest.local	1027 /tcp	service	1027/TCP			
win-iqf3u12cja5.sainttest.local	1029 /tcp	service	1029/TCP			
win-iqf3u12cja5.sainttest.local	1033 /tcp	service	1033/TCP			
win-iqf3u12cja5.sainttest.local	1039 /tcp	service	1039/TCP			
win-iqf3u12cja5.sainttest.local	1044 /tcp	service	1044/TCP			
win-iqf3u12cja5.sainttest.local	9389 /tcp	service	9389/TCP			
win-iqf3u12cja5.sainttest.local	53/tcp	service	DNS			
win-iqf3u12cja5.sainttest.local		service	NFS			
win-iqf3u12cja5.sainttest.local	139 /tcp	service	SMB			
win-iqf3u12cja5.sainttest.local	80/tcp	service	WWW			
win-iqf3u12cja5.sainttest.local	443 /tcp	service	WWW (Secure)			
win-iqf3u12cja5.sainttest.local	5985 /tcp	service	WWW (non-standard port 5985)			
win-iqf3u12cja5.sainttest.local	8059 /tcp	service	WWW (non-standard port 8059)			

win-iqf3u12cja5.sainttest.local	8082 /tcp	service	WWW (non-standard port 8082)
win-iqf3u12cja5.sainttest.local	1025 /tcp	service	blackjack (1025/TCP)
win-iqf3u12cja5.sainttest.local	1050 /tcp	service	cma (1050/TCP)
win-iqf3u12cja5.sainttest.local	53 /udp	service	domain (53/UDP)
win-iqf3u12cja5.sainttest.local	135 /tcp	service	epmap (135/TCP)
win-iqf3u12cja5.sainttest.local	593 /tcp	service	http-rpc-epmap (593/TCP)
win-iqf3u12cja5.sainttest.local	1030 /tcp	service	iad1 (1030/TCP)
win-iqf3u12cja5.sainttest.local	1031 /tcp	service	iad2 (1031/TCP)
win-iqf3u12cja5.sainttest.local	3260 /tcp	service	iscsi-target (3260/TCP)
win-iqf3u12cja5.sainttest.local	88/tcp	service	kerberos (88/TCP)
win-iqf3u12cja5.sainttest.local	464 /tcp	service	kpasswd (464/TCP)
win-iqf3u12cja5.sainttest.local	389 /tcp	service	ldap (389/TCP)
win-iqf3u12cja5.sainttest.local	4345 /tcp	service	m4-network-as (4345/TCP)
win-iqf3u12cja5.sainttest.local	445 /tcp	service	microsoft-ds (445/TCP)
win-iqf3u12cja5.sainttest.local	3389 /tcp	service	ms-wbt-server (3389/TCP)
win-iqf3u12cja5.sainttest.local	3268 /tcp	service	msft-gc (3268/TCP)
win-iqf3u12cja5.sainttest.local	3269 /tcp	service	msft-gc-ssl (3269/TCP)
win-iqf3u12cja5.sainttest.local	1047 /tcp	service	neod1 (1047/TCP)
win-iqf3u12cja5.sainttest.local	1048 /tcp	service	neod2 (1048/TCP)
win-iqf3u12cja5.sainttest.local	137 /udp	service	netbios-ns (137/UDP)
win-iqf3u12cja5.sainttest.local	1092 /tcp	service	obrpd (1092/TCP)
win-iqf3u12cja5.sainttest.local	1093 /tcp	service	proofd (1093/TCP)
win-iqf3u12cja5.sainttest.local	2049 /tcp	service	shilp (2049/TCP)
win-iqf3u12cja5.sainttest.local	636 /tcp	service	ssl-ldap (636/TCP)
win-iqf3u12cja5.sainttest.local	111 /tcp	service	sunrpc (111/TCP)
win-iqf3u12cja5.sainttest.local	4343 /tcp	service	unicall (4343/TCP)
win-iqf3u12cja5.sainttest.local	139 /tcp	info	Netbios Attribute: Domain Controller
win-iqf3u12cja5.sainttest.local	139 /tcp	info	Netbios Attribute: Master Browser
win-iqf3u12cja5.sainttest.local	139 /tcp	info	Netbios Attribute: Primary Domain Controller

win-iqf3u12cja5.sainttest.local	139 /tcp	info	OS=[Windows Server 2008 R2 Enterprise 7600] Server=[Windows Server 2008 R2 Enterprise 6.1]
win-iqf3u12cja5.sainttest.local	111 /tcp	info	RPC service: 100000-2 portmapper (111/TCP)
win-iqf3u12cja5.sainttest.local	111 /tcp	info	RPC service: 100000-2 portmapper (111/UDP)
win-iqf3u12cja5.sainttest.local	111 /tcp	info	RPC service: 100000-3 portmapper (111/TCP)
win-iqf3u12cja5.sainttest.local	111 /tcp	info	RPC service: 100000-3 portmapper (111/UDP)
win-iqf3u12cja5.sainttest.local	111 /tcp	info	RPC service: 100000-4 portmapper (111/TCP)
win-iqf3u12cja5.sainttest.local	111 /tcp	info	RPC service: 100000-4 portmapper (111/UDP)
win-iqf3u12cja5.sainttest.local	111 /tcp	info	RPC service: 100003-2 nfs (2049/TCP)
win-iqf3u12cja5.sainttest.local	111 /tcp	info	RPC service: 100003-2 nfs (2049/UDP)
win-iqf3u12cja5.sainttest.local	111 /tcp	info	RPC service: 100003-3 nfs (2049/TCP)
win-iqf3u12cja5.sainttest.local	111 /tcp	info	RPC service: 100003-3 nfs (2049/UDP)
win-iqf3u12cja5.sainttest.local	111 /tcp	info	RPC service: 100005-1 mountd (1048/TCP)
win-iqf3u12cja5.sainttest.local	111 /tcp	info	RPC service: 100005-1 mountd (1048/UDP)
win-iqf3u12cja5.sainttest.local	111 /tcp	info	RPC service: 100005-2 mountd (1048/TCP)
win-iqf3u12cja5.sainttest.local	111 /tcp	info	RPC service: 100005-2 mountd (1048/UDP)
win-iqf3u12cja5.sainttest.local	111 /tcp	info	RPC service: 100005-3 mountd (1048/TCP)
win-iqf3u12cja5.sainttest.local	111 /tcp	info	RPC service: 100005-3 mountd (1048/UDP)
win-iqf3u12cja5.sainttest.local	111 /tcp	info	RPC service: 100021-1 nlockmgr (1047/TCP)
win-iqf3u12cja5.sainttest.local	111 /tcp	info	RPC service: 100021-1 nlockmgr (1047/UDP)
win-iqf3u12cja5.sainttest.local	111 /tcp	info	RPC service: 100021-2 nlockmgr (1047/TCP)
win-iqf3u12cja5.sainttest.local	111 /tcp	info	RPC service: 100021-2 nlockmgr (1047/UDP)
win-iqf3u12cja5.sainttest.local	111 /tcp	info	RPC service: 100021-3 nlockmgr (1047/TCP)
win-iqf3u12cja5.sainttest.local	111 /tcp	info	RPC service: 100021-3 nlockmgr (1047/UDP)
win-iqf3u12cja5.sainttest.local	111 /tcp	info	RPC service: 100021-4 nlockmgr (1047/TCP)
win-iqf3u12cja5.sainttest.local	111 /tcp	info	RPC service: 100021-4 nlockmgr (1047/UDP)
win-iqf3u12cja5.sainttest.local	111 /tcp	info	RPC service: 100024-1 status (1039/TCP)
win-iqf3u12cja5.sainttest.local	111 /tcp	info	RPC service: 100024-1 status (1039/UDP)

5 Details

The following sections provide details on the specific vulnerabilities detected on each host.

5.1 10.8.0.1

IP Address: 10.8.0.1 **Host type:** Cisco IOS 11.3
Scan time: Dec 15 10:03:07 2015

server is susceptible to BEAST attack

Severity: Potential Problem **CVE:** CVE-2011-3389

Impact

A remote attacker with the ability to sniff network traffic could decrypt an encrypted session.

Resolution

Most browser vendors have released updates which prevent this attack, but some affected browsers still remain at this time, so it is still advisable also to fix the problem on the server side. SSLv3 and TLS 1.0 CBC ciphers should be disabled on the server as follows:

- **Apache:** Set the following directive in the Apache configuration file:

```
SSLCipherSuite RC4+RSA:!EXPORT:!LOW
```

- **IIS:** See See KB245030.

Note that disabling SSLv3 and TLS 1.0 entirely on the server may affect the usability of the web site, as some web browsers may not yet support TLS 1.1, and therefore isn't recommended.

Where can I read more about this?

Thai Duong wrote a detailed blog post about this attack, including a video demonstration.
Adam Langley wrote a helpful blog post that helps highlight concerns for both browser vendors and website hosts.
Rob VanderBrink of SANS Internet Storm Center posted a blog update detailing TLS 1.1/1.2 support in many common browsers as of September, 2011.
Eric Rescorla wrote a detailed blog post explaining how the attack works in detail and analyzing the security impact of this vulnerability.

Technical Details

Service: https
Server accepted SSLv3 CBC cipher: SSL3_CK_RSA_DES_64_CBC_SHA

ICMP timestamp requests enabled

Severity: Potential Problem **CVE:** CVE-1999-0524

Impact

A remote attacker could obtain sensitive information about the network.

Resolution

Configure the system or firewall not to allow ICMP timestamp requests (message type 13) or ICMP netmask requests (message type 17). Instructions for doing this on specific platforms are as follows:

Windows:
Block these message types using the Windows firewall as described in Microsoft TechNet.

Linux:
Use ipchains or iptables to filter ICMP netmask requests using the command:

```
ipchains -A input -p icmp --icmp-type address-mask-request -j DROP
```

Use ipchains or iptables to filter ICMP timestamp requests using the commands:

```
ipchains -A input -p icmp --icmp-type timestamp-request -j DROP
ipchains -A output -p icmp --icmp-type timestamp-reply -j DROP
```

To ensure that this change persists after the system reboots, put the above command into the system's boot-up script (typically **`/etc/rc.local`**).

Cisco:
Block ICMP message types 13 and 17 as follows:

```
deny icmp any any 13
deny icmp any any 17
```

Where can I read more about this?

For more information about ICMP, see RFC792.

Technical Details

Service: icmp
timestamp=833a3764

weak RSA public key

Severity: Potential Problem

Impact

A remote attacker with the ability to sniff network traffic could decrypt an encrypted session.

Resolution

Re-generate the RSA key pair with a minimum length of 2048 bits.

With OpenSSL, this can be done using the following commands:

```
openssl genrsa -out filename.pem 2048
openssl rsa -in filename.pem -pubout
```

Where can I read more about this?

For more information on RSA key length requirements, see Netcraft.

Technical Details

Service: https
key length = 1024

Remote OS available

Severity: Potential Problem

Impact

The ability to detect which operating system is running on a machine enables attackers to be more accurate in attacks.

Resolution

Including the operating system in service banners is usually unnecessary. Therefore, change the banners of the services which are running on accessible ports. This can be done by disabling unneeded services, modifying the banner in a service's source code or configuration file if possible, or using TCP wrappers to modify the banner as described in the Red Hat Knowledgebase.

Where can I read more about this?

An example of ways to remove the Remote OS and other information is at my digital life.

Technical Details

Service: http
Received:
Server: cisco-IOS

Remote OS available

Severity: Potential Problem

Impact

The ability to detect which operating system is running on a machine enables attackers to be more accurate in attacks.

Resolution

Including the operating system in service banners is usually unnecessary. Therefore, change the banners of the services which are running on accessible ports. This can be done by disabling unneeded services, modifying the banner in a service's source code or configuration file if possible, or using TCP wrappers to modify the banner as described in the Red Hat Knowledgebase.

Where can I read more about this?

An example of ways to remove the Remote OS and other information is at my digital life.

Technical Details

Service: ssh
Received:
SSH-1.99-Cisco-1.25

SSH supports weak ciphers

Severity: Potential Problem

Impact

A remote attacker with the ability to sniff network traffic could decrypt an encrypted session.

Resolution

Configure the SSH server not to support SSH1, and not to use the original DES encryption algorithm, or any other ciphers with a key length of less than 128 bits.

For OpenSSH servers, SSH1 can be disabled by placing the following line into the **`sshd_config`** file:

```
Protocol 2
```

The ciphers to use with the SSH2 protocol in OpenSSH or SSH Communications Security SSH Server can be specified using the **`Ciphers`** setting in the **`sshd_config`** or **`sshd2_config`** file. For more information see the SSH documentation. Note: all SSH2 ciphers currently supported by OpenSSH are already considered strong.

Where can I read more about this?

For more information on configuring SSH, see onlamp.com.

Technical Details

Service: ssh
Supported SSH1 ciphers: des 3des

SSH Protocol Version 1 Supported

Severity: Potential Problem **CVE:** CVE-2001-0361 CVE-2001-1473

Impact

SSH protocol version 1 has a number of known vulnerabilities. Support for version 1 or enabling SSH1 Fallback renders the machines vulnerable to these issues.

Resolution

Disable SSH1 support and SSH1 fallback. See vendor website for more information including SSH, F-Secure and OpenSSH.

For OpenSSH servers, SSH1 support and SSH1 fallback can be disabled by placing the following line in the **`sshd_config`** file:

```
Protocol 2
```

Where can I read more about this?

Some of the vulnerabilities in support for SSH Protocol 1 were reported in US-CERT Vulnerability Note VU#684820 and CIRC Bulletin M-017.

Technical Details

Service: ssh
Received:
22:ssh::SSH-1.99-Cisco-1.25

SSL certificate is self signed

Severity: Potential Problem

Impact

When a server's SSL certificate is invalid, clients cannot properly verify that the server is authentic, resulting in a lack of trust.

Resolution

For expired certificates, contact the issuer of your SSL certificate to renew your certificate.

For certificates where the subject does not match the target, change the registered DNS name of the site to match the certificate, or contact the issuer of your SSL certificate to get a corrected certificate.

Replace self-signed certificates with certificates issued by a trusted certificate authority.

For wildcard certificates, replace the wildcard certificates with certificates whose Common Names match the host they are intended to be used with.

Where can I read more about this?

For more information on certificates see the HOWTO.

Technical Details

Service: https
Issued To IOS-Self-Signed-Certificate-3563137889
Issued By IOS-Self-Signed-Certificate-3563137889

SSL certificate subject does not match target

Severity: Potential Problem

Impact

When a server's SSL certificate is invalid, clients cannot properly verify that the server is authentic, resulting in a lack of trust.

Resolution

For expired certificates, contact the issuer of your SSL certificate to renew your certificate.

For certificates where the subject does not match the target, change the registered DNS name of the site to match the certificate, or contact the issuer of your SSL certificate to get a corrected certificate.

Replace self-signed certificates with certificates issued by a trusted certificate authority.

For wildcard certificates, replace the wildcard certificates with certificates whose Common Names match the host they are intended to be used with.

Where can I read more about this?

For more information on certificates see the HOWTO.

Technical Details

Service: https
Certificate Issued To: IOS-Self-Signed-Certificate-3563137889

SSL server accepts weak ciphers

Severity: Potential Problem

Impact

A remote attacker with the ability to sniff network traffic could decrypt an encrypted session.

Resolution

For Apache mod_ssl web servers, use the **`SSLCipherSuite`** directive in the configuration file to specify strong ciphers only and disable SSLv2 and export ciphers.

For Microsoft IIS web servers, disable SSLv2 and any weak ciphers as described in Microsoft knowledge base articles 187498 and 245030.

For other types of web servers, consult the web server documentation.

Where can I read more about this?

For more information, see VNU Net: Weak Security Found in Many Web Servers.

Technical Details

Service: https
Supported ciphers: DES-CBC3-SHA:TLSv1/SSLv3:168-bit RC4-SHA:TLSv1/SSLv3:128-bit DES-CBC-SHA:TLSv1/SSLv3:56-bit

SSL certificate is signed with weak hash function: MD5

Severity: Potential Problem **CVE:** CVE-2004-2761

Impact

The SSL/TLS certificate is signed with a weak hash function. An attacker may be able to forge a SSL/TLS

certificate that would appear to be valid for the website. This may allow an attacker to perform a man-in-the-middle attack against the SSL-secured website.

Resolution

Sites using certificates signed using a vulnerable hash function should request replacement certificates signed with a more secure hash function. The offending certificates should be revoked if they have not yet expired.

Currently, the SHA-256 and SHA-512 hash functions have proven to be resistant against both collision and preimage attacks. It is advisable to use one of these hash functions at this time.

Because some legacy applications and users with outdated systems may not be able to support SHA-2, most CAs still default to using SHA-1 in an attempt to avoid user experience issues. If your CA of choice does not offer an option to use SHA-2, you may try generating a Certificate Signing Request (CSR) that specifics SHA-2 by using OpenSSL or Microsoft IIS Certificate Services.

Instructions on how to generate a SHA256 CSR can be found here.

Where can I read more about this?

Information regarding Cryptographic Hash Functions, including a summary of attack complexity against various hash functions, can be found on Wikipedia.

Details regarding the creation of a rogue Certificate Authority by exploiting vulnerabilities in the MD5 hash are provided by the Eindhoven University of Technology.

Technical Details

Service: https
OID: 0x2a864886f70d010104

server is susceptible to SSL POODLE attack

Severity: Potential Problem **CVE:** CVE-2014-3566

Impact

A remote attacker with the ability to sniff network traffic could decrypt an encrypted session.

Resolution

SSLv3 CBC ciphers should be disabled on the server as follows:

- **Apache:** Set the following directive in the Apache configuration file:

```
SSLCipherSuite RC4+RSA:!EXPORT:!LOW
```

- **IIS:** See See KB245030.

Note that disabling SSLv3 entirely is another alternative, but may affect the usability of the web site. The **TLS_FALLBACK_SCSV** mechanism can also be used to mitigate the vulnerability if it is supported by both the client and the server.

To fix the vulnerability in the TLS implementation in F5 devices, see SOL15882.

Where can I read more about this?

The POODLE attack was described in The POODLE Bites: Exploiting the SSL 3.0 Fallback.

The POODLE attack against TLS implementations was reported by ImperialViolet.

Technical Details

Service: https
Server accepted SSLv3 CBC cipher: SSL3_CK_RSA_DES_64_CBC_SHA

SSL/TLS server supports RC4 ciphers

Severity: Potential Problem **CVE:** CVE-2013-2566 CVE-2015-2808

Impact

A remote attacker with the ability to sniff network traffic could decrypt an encrypted session.

Resolution

For Apache mod_ssl web servers, add **`!RC4`** to the **`SSLCipherSuite`** directive in the configuration file to disable RC4 ciphers.

For Microsoft IIS web servers, disable RC4 ciphers as described in Microsoft knowledge base article 245030.

For other types of web servers, consult the web server documentation to find out how to disable RC4 ciphers.

Where can I read more about this?

For more information on the Invariance Weakness and Bar Mitzvah attack, see Security Affairs and Imperva's paper, Attacking SSL when using RC4.

For more information on the ciphertext bias weakness, see the blog post Attack of the Week: RC4 is kind of broken in TLS.

Technical Details

Service: https
Server accepted SSL 3.0 RC4 cipher: SSL3_CK_RSA_RC4_128_MD5

telnet receives cleartext passwords

Severity: Potential Problem

Impact

Passwords could be stolen if an attacker is able to capture network traffic to and from the telnet server.

Resolution

Disable the telnet service and use a more secure protocol such as SSH to access the computer remotely. If telnet cannot be disabled, restrict access using iptables or TCP Wrappers such that only addresses on a local, trusted network can connect.

Where can I read more about this?

For more information, see Protocols - The Problem With Cleartext.

Technical Details

Service: telnet
telnet service is enabled

SSH

Severity: Service

Technical Details

SSH-1.99-Cisco-1.25

Telnet

Severity: Service

Technical Details

WWW

Severity: Service

Technical Details

HTTP/1.1 401 Unauthorized
Date: Tue, 15 Dec 2015 14:53:22 GMT
Server: cisco-IOS
Accept-Ranges: none
WWW-Authenticate: Basic realm="level_15 or view_access"
401

WWW (Secure)

Severity: Service

Technical Details

\022\003\000\000J\002\000\000F\003\000Vp)\136\199D\003\191\175\190f\235\169\157\184@\0215\12
7\138\242N(\214:\241*\158\175 \179G
2\214\239\232\249\128\209\192+.?\168\0245\129\253\185\002T\216\248p\215\253\233\226\157\187<E\
128\156\000

5.2 saintvm64.sainttest.local

IP Address: 10.8.0.35
Scan time: Dec 15 10:03:08 2015

Host type: Ubuntu 12.04
Netbios Name: SAINTVM64

vulnerability in Samba 3.6.3

Severity: Critical Problem

CVE: CVE-2012-1182 CVE-2012-2111 CVE-2013-0454 CVE-2013-4124

CVE-2013-4408 CVE-2013-4475
CVE-2013-4496 CVE-2014-0178
CVE-2014-0244 CVE-2014-3493
CVE-2014-8143 CVE-2015-0240

Impact

A remote attacker could create accounts, read part of the credentials file, execute arbitrary commands, cause a denial of service, write to arbitrary files, gain elevated privileges, or disable logging of failed login attempts in a brute-force password attack.

Resolution

Upgrade to Samba 3.6.35 for 3.6.x, 4.0.25 for 4.0.x, 4.1.17 for 4.1.x, or higher when available.

Alternatively, apply a fix from your operating system vendor.

Where can I read more about this?

A list of all reported vulnerabilities affecting Samba is available from Samba.

The unexpected code execution in smbd was reported in Samba Security CVE-2015-0240.

The Active Directory Domain Controller Privilege Elevation was reported in Samba Security CVE-2014-8143.

The Samba two denial of service vulnerabilities were reported in Samba Security CVE-2014-0244 and Samba Security CVE-2014-3493.

The Samba uninitialized memory information disclosure vulnerability was reported in Samba Security CVE-2014-0178.

The Samba DCE-RPC packets handling buffer overflow vulnerability was reported in Secunia Advisory SA55966 and Samba Security CVE-2013-4496.

The Samba insecure file permissions and security bypass vulnerabilities were reported in Secunia Advisory SA55638.

The Packet Handling Denial of Service vulnerability was reported in Secunia Advisory SA54347.

The Samba CIFS attribute handling vulnerability was reported in Secunia Advisory SA52854.

The LSA RPC "take ownership" Privilege Security Bypass vulnerability was reported in Secunia Advisory SA48976.

The unauthenticated remote code execution vulnerability was reported in a Samba announcement.

The 3.x Multiple Unspecified Remote vulnerabilities were reported in Bugtraq ID 36250.

Technical Details

Service: netbios-ssn
Received: Samba 3.6.3

OpenSSH 5.9p1 is vulnerable

Severity: Area of Concern **CVE:** CVE-2010-5107 CVE-2014-1692 CVE-2014-2532 CVE-2014-2653 CVE-2015-5352 CVE-2015-5600

Impact

Updated 09/04/15

Impact

This document describes some vulnerabilities in the OpenSSH cryptographic login program. Outdated versions of OpenSSH may allow a malicious user to log in as another user, to insert arbitrary commands into a session, or to gain remote root access to the OpenSSH server.

Resolution

Upgrade to OpenSSH version 7.1 or higher when available, or install a fix from your operating system vendor.

Where can I read more about this?

The OpenSSH keyboard-interactive authentication vulnerability was reported in OpenSSH Vulnerability Exposes Servers to Brute Force Attacks.

The XSECURITY restrictions bypass vulnerability was reported in OpenSSH Release 6.9.

The OpenSSH Client Rejected `HostCertificate` Handling Vulnerability and The OpenSSH `"child_set_env()"` Security Bypass Vulnerability were reported in DSA-2894-1.

The OpenSSH Connection Saturation Remote DoS vulnerability was reported in the oss-security list and as Bugtraq ID 58162.

Technical Details

Service: ssh

server is susceptible to BEAST attack

Severity: Potential Problem **CVE:** CVE-2011-3389

Impact

A remote attacker with the ability to sniff network traffic could decrypt an encrypted session.

Resolution

Most browser vendors have released updates which prevent this attack, but some affected browsers still remain at this time, so it is still advisable also to fix the problem on the server side. SSLv3 and TLS 1.0 CBC ciphers should be disabled on the server as follows:

- **Apache:** Set the following directive in the Apache configuration file:

```
SSLCipherSuite RC4+RSA:!EXPORT:!LOW
```

- **IIS:** See See KB245030.

Note that disabling SSLv3 and TLS 1.0 entirely on the server may affect the usability of the web site, as some web browsers may not yet support TLS 1.1, and therefore isn't recommended.

Where can I read more about this?

Thai Duong wrote a detailed blog post about this attack, including a video demonstration.
Adam Langley wrote a helpful blog post that helps highlight concerns for both browser vendors and website hosts.
Rob VanderBrink of SANS Internet Storm Center posted a blog update detailing TLS 1.1/1.2 support in many common browsers as of September, 2011.
Eric Rescorla wrote a detailed blog post explaining how the attack works in detail and analyzing the security impact of this vulnerability.

Technical Details

Service: 5252:TCP
Server accepted TLS 1.0 CBC cipher: TLS_RSA_WITH_3DES_EDE_CBC_SHA

ICMP timestamp requests enabled

Severity: Potential Problem **CVE:** CVE-1999-0524

Impact

A remote attacker could obtain sensitive information about the network.

Resolution

Configure the system or firewall not to allow ICMP timestamp requests (message type 13) or ICMP netmask requests (message type 17). Instructions for doing this on specific platforms are as follows:

Windows:
Block these message types using the Windows firewall as described in Microsoft TechNet.

Linux:
Use ipchains or iptables to filter ICMP netmask requests using the command:

```
ipchains -A input -p icmp --icmp-type address-mask-request -j DROP
```

Use ipchains or iptables to filter ICMP timestamp requests using the commands:

```
ipchains -A input -p icmp --icmp-type timestamp-request -j DROP
ipchains -A output -p icmp --icmp-type timestamp-reply -j DROP
```

To ensure that this change persists after the system reboots, put the above command into the system's boot-up script (typically **`/etc/rc.local`**).

Cisco:
Block ICMP message types 13 and 17 as follows:

```
deny icmp any any 13
```

deny icmp any any 17

Where can I read more about this?

For more information about ICMP, see RFC792.

Technical Details

Service: icmp
timestamp=033af722

NetBIOS share enumeration using null session

Severity: Potential Problem

Impact

A remote attacker could gain a list of shared resources or user names on the system.

Resolution

Mitigating this vulnerability will require editing the registry. The **regedt32** command can be used for this purpose. Keep in mind that erroneous changes to the registry could leave the system in an unstable and unbootable state, so use due caution and have a working system backup and repair disk before editing the registry.

The privileges of null sessions can be limited by changing the following registry value:

Hive: **HKEY_LOCAL_MACHINE**
Key: **SYSTEM/CurrentControlSet/Control/LSA**
Value: **RestrictAnonymous**
Type: **REG_DWORD**

Setting this value to **1** will partially limit the amount of information which is available through a null session, but will still allow access to some sensitive information, including the user account list. On Windows 2000 and XP, this value can also be set to **2** for greater protection. However, a value of **2** could also disable some critical Windows networking functions, so this setting is recommended only for Internet servers, and should be thoroughly tested.

Windows XP and later also support a registry value called **RestrictAnonymousSAM**, which, if set to **1**, prevents enumeration of accounts using a null session.

In addition to the above changes, it is also advisable to block access to the NetBIOS ports at the firewall or gateway router. There is usually no reason why a user outside the local network would have a legitimate need for NetBIOS access. NetBIOS runs on ports 135, 137, 138, and 139 (TCP and UDP).

Where can I read more about this?

For more information about using the **RestrictAnonymous** registry value to limit the privileges of null sessions, see Microsoft Knowledge Base articles Q143474 and Q246261.

Technical Details

Service: netbios-ssn

Shares: print$

Windows null session domain SID disclosure

Severity: Potential Problem **CVE:** CVE-2000-1200

Impact

A remote attacker could gain a list of shared resources or user names on the system.

Resolution

Mitigating this vulnerability will require editing the registry. The **regedt32** command can be used for this purpose. Keep in mind that erroneous changes to the registry could leave the system in an unstable and unbootable state, so use due caution and have a working system backup and repair disk before editing the registry.

The privileges of null sessions can be limited by changing the following registry value:

Hive: **HKEY_LOCAL_MACHINE**
Key: **SYSTEM/CurrentControlSet/Control/LSA**
Value: **RestrictAnonymous**
Type: **REG_DWORD**

Setting this value to **1** will partially limit the amount of information which is available through a null session, but will still allow access to some sensitive information, including the user account list. On Windows 2000 and XP, this value can also be set to **2** for greater protection. However, a value of **2** could also disable some critical Windows networking functions, so this setting is recommended only for Internet servers, and should be thoroughly tested.

Windows XP and later also support a registry value called **RestrictAnonymousSAM**, which, if set to **1**, prevents enumeration of accounts using a null session.

In addition to the above changes, it is also advisable to block access to the NetBIOS ports at the firewall or gateway router. There is usually no reason why a user outside the local network would have a legitimate need for NetBIOS access. NetBIOS runs on ports 135, 137, 138, and 139 (TCP and UDP).

Where can I read more about this?

For more information about using the **RestrictAnonymous** registry value to limit the privileges of null sessions, see Microsoft Knowledge Base articles Q143474 and Q246261.

Technical Details

Service: netbios-ssn
Domain SID = S-1-5-21-2796322588-1385680984-3600811486

Windows null session host SID disclosure

Severity: Potential Problem

Impact

A remote attacker could gain a list of shared resources or user names on the system.

Resolution

Mitigating this vulnerability will require editing the registry. The **regedt32** command can be used for this purpose. Keep in mind that erroneous changes to the registry could leave the system in an unstable and unbootable state, so use due caution and have a working system backup and repair disk before editing the registry.

The privileges of null sessions can be limited by changing the following registry value:

Hive: **HKEY_LOCAL_MACHINE**
Key: **SYSTEM/CurrentControlSet/Control/LSA**
Value: **RestrictAnonymous**
Type: **REG_DWORD**

Setting this value to **1** will partially limit the amount of information which is available through a null session, but will still allow access to some sensitive information, including the user account list. On Windows 2000 and XP, this value can also be set to **2** for greater protection. However, a value of **2** could also disable some critical Windows networking functions, so this setting is recommended only for Internet servers, and should be thoroughly tested.

Windows XP and later also support a registry value called **RestrictAnonymousSAM**, which, if set to **1**, prevents enumeration of accounts using a null session.

In addition to the above changes, it is also advisable to block access to the NetBIOS ports at the firewall or gateway router. There is usually no reason why a user outside the local network would have a legitimate need for NetBIOS access. NetBIOS runs on ports 135, 137, 138, and 139 (TCP and UDP).

Where can I read more about this?

For more information about using the **RestrictAnonymous** registry value to limit the privileges of null sessions, see Microsoft Knowledge Base articles Q143474 and Q246261.

Technical Details

Service: netbios-ssn
Host SID = S-1-1459638016-4915282-5374023-5570639-80

excessive null session access

Severity: Potential Problem **CVE:** CVE-2000-1200

Impact

A remote attacker could gain a list of shared resources or user names on the system.

Resolution

Mitigating this vulnerability will require editing the registry. The **regedt32** command can be used for this purpose. Keep in mind that erroneous changes to the registry could leave the system in an unstable and unbootable state, so use due caution and have a working system backup and repair disk before editing the registry.

The privileges of null sessions can be limited by changing the following registry value:

Hive: **HKEY_LOCAL_MACHINE**
Key: **SYSTEM/CurrentControlSet/Control/LSA**
Value: **RestrictAnonymous**
Type: **REG_DWORD**

Setting this value to **1** will partially limit the amount of information which is available through a null session, but will still allow access to some sensitive information, including the user account list. On Windows 2000 and XP, this value can also be set to **2** for greater protection. However, a value of **2** could also disable some critical Windows networking functions, so this setting is recommended only for Internet servers, and should be thoroughly tested.

Windows XP and later also support a registry value called **RestrictAnonymousSAM**, which, if set to **1**, prevents enumeration of accounts using a null session.

In addition to the above changes, it is also advisable to block access to the NetBIOS ports at the firewall or gateway router. There is usually no reason why a user outside the local network would have a legitimate need for NetBIOS access. NetBIOS runs on ports 135, 137, 138, and 139 (TCP and UDP).

Where can I read more about this?

For more information about using the **RestrictAnonymous** registry value to limit the privileges of null sessions, see Microsoft Knowledge Base articles Q143474 and Q246261.

Technical Details

Service: netbios-ssn
Got user list: nobody

weak RSA public key

Severity: Potential Problem

Impact

A remote attacker with the ability to sniff network traffic could decrypt an encrypted session.

Resolution

Re-generate the RSA key pair with a minimum length of 2048 bits.

With OpenSSL, this can be done using the following commands:

```
openssl genrsa -out filename.pem 2048
openssl rsa -in filename.pem -pubout
```

Where can I read more about this?

For more information on RSA key length requirements, see Netcraft.

Technical Details

Service: 5252:TCP
key length = 1024

Remote OS available

Severity: Potential Problem

Impact

The ability to detect which operating system is running on a machine enables attackers to be more accurate in attacks.

Resolution

Including the operating system in service banners is usually unnecessary. Therefore, change the banners of the services which are running on accessible ports. This can be done by disabling unneeded services, modifying the banner in a service's source code or configuration file if possible, or using TCP wrappers to modify the banner as described in the Red Hat Knowledgebase.

Where can I read more about this?

An example of ways to remove the Remote OS and other information is at my digital life.

Technical Details

Service: ssh
Received:
SSH-2.0-OpenSSH_5.9p1 Debian-5ubuntu1.4

rpc.statd is enabled and may be vulnerable

Severity: Potential Problem

CVE: CVE-1999-0018 CVE-1999-0019 CVE-1999-0210 CVE-1999-0493 CVE-2000-0666 CVE-2000-0800

Impact

Several vulnerabilities in **`statd`** permit attackers to gain root privileges. They can be exploited by local users. They can also be exploited remotely without the intruder requiring a valid local account if **`statd`** is accessible via the network.

Resolution

One resolution to this vulnerability is to install vendor patches as they become available. For the format string bug, SUSE users should obtain the **`nfs-utils`** and package, version 0.1.9.1 or higher, from their vendor. For the String parsing error bug, Linux users should obtain the **`nfs-utils`** or **`knfsdi`** or **`linuxnfs`** packages, more detail information, please refer to SUSE Security Announcement web site. For the **`SM_MON`** buffer overflow, UnixWare users should obtain the patch.

Also, if **`NFS`** is not being used, there is no need to run **`statd`** and it can be disabled. The **`statd`** (or **`rpc.statd`**) program is often started in the system initialization scripts (such as /etc/rc* or /etc/rc*.d/*). If you do not require **`statd`** it should be commented out from the initialization scripts. In addition, any currently running **`statd`** processes should be identified using **ps(1)** and then terminated using **kill(1)**.

Where can I read more about this?

More information about the **`statd/automountd`** vulnerability is available in CERT Advisory 1999-05. You

may read more about the **statd** buffer overflow in CERT Advisory 1997-26. The String parsing error vulnerability detail information can be found in CVE Details. The format string vulnerability was discussed in vendor bulletins from Red Hat, Debian, Mandrake, Trustix, and Conectiva, as well as CERT Advisory 2000.17. The **SM_MON** buffer overflow was announced in Caldera Security Advisory 2001-SCO.6. The file creation and removal vulnerability was discussed in CERT Advisory 1996-09.

Technical Details

Service: 47152:TCP

SMB digital signing is disabled

Severity: Potential Problem

Impact

If the SMB signing is disabled, malicious attackers could sniff the network traffic and could perform a man in the middle attack to gain sensitive information.

Resolution

Refer to Microsoft Technet Library in Local Policies, Microsoft network server: Digitally sign communications (if client agrees).

Where can I read more about this?

For more information about SMB signing configuration, see, SMB Protocol Package Exchange Scenario.

Technical Details

Service: netbios
NEGOTIATE_SECURITY_SIGNATURES_ENABLED=0

SSL certificate is self signed

Severity: Potential Problem

Impact

When a server's SSL certificate is invalid, clients cannot properly verify that the server is authentic, resulting in a lack of trust.

Resolution

For expired certificates, contact the issuer of your SSL certificate to renew your certificate.

For certificates where the subject does not match the target, change the registered DNS name of the site to match the certificate, or contact the issuer of your SSL certificate to get a corrected certificate.

Replace self-signed certificates with certificates issued by a trusted certificate authority.

For wildcard certificates, replace the wildcard certificates with certificates whose Common Names match the host they are intended to be used with.

Where can I read more about this?

For more information on certificates see the HOWTO.

Technical Details

Service: 5252:TCP
Issued To SAINTVM64
Issued By SAINTVM64

SSL certificate is signed with weak hash function: SHA1

Severity: Potential Problem

Impact

The SSL/TLS certificate is signed with a weak hash function. An attacker may be able to forge a SSL/TLS certificate that would appear to be valid for the website. This may allow an attacker to perform a man-in-the-middle attack against the SSL-secured website.

Resolution

Sites using certificates signed using a vulnerable hash function should request replacement certificates signed with a more secure hash function. The offending certificates should be revoked if they have not yet expired.

Currently, the SHA-256 and SHA-512 hash functions have proven to be resistant against both collision and preimage attacks. It is advisable to use one of these hash functions at this time.

Because some legacy applications and users with outdated systems may not be able to support SHA-2, most CAs still default to using SHA-1 in an attempt to avoid user experience issues. If your CA of choice does not offer an option to use SHA-2, you may try generating a Certificate Signing Request (CSR) that specifics SHA-2 by using OpenSSL or Microsoft IIS Certificate Services.

Instructions on how to generate a SHA256 CSR can be found here.

Where can I read more about this?

Information regarding Cryptographic Hash Functions, including a summary of attack complexity against various hash functions, can be found on Wikipedia.

Details regarding the creation of a rogue Certificate Authority by exploiting vulnerabilities in the MD5 hash are provided by the Eindhoven University of Technology.

Technical Details

Service: 5252:TCP
OID: 0x2a864886f70d010105

SSL/TLS server supports RC4 ciphers

Severity: Potential Problem **CVE:** CVE-2013-2566 CVE-2015-2808

Impact

A remote attacker with the ability to sniff network traffic could decrypt an encrypted session.

Resolution

For Apache mod_ssl web servers, add **!RC4** to the **SSLCipherSuite** directive in the configuration file to disable RC4 ciphers.

For Microsoft IIS web servers, disable RC4 ciphers as described in Microsoft knowledge base article 245030.

For other types of web servers, consult the web server documentation to find out how to disable RC4 ciphers.

Where can I read more about this?

For more information on the Invariance Weakness and Bar Mitzvah attack, see Security Affairs and Imperva's paper, Attacking SSL when using RC4.

For more information on the ciphertext bias weakness, see the blog post Attack of the Week: RC4 is kind of broken in TLS.

Technical Details

Service: 5252:TCP
Server accepted TLS 1.0 RC4 cipher: TLS_RSA_WITH_RC4_128_MD5

The sunrpc portmapper service is running

Severity: Potential Problem **CVE:** CVE-1999-0632

Impact

The sunrpc portmapper service is an unsecured protocol that tells clients which port corresponds to each RPC service. Access to port 111 allows the calling client to query and identify the ports where the needed server is running.

Resolution

Disable all unnecessary RPC services, which are typically enabled in /etc/inetd.conf and in the system boot scripts, /etc/rc*, and to block high numbered ports at the network perimeter except for those which are needed.

Where can I read more about this?

More information can be obtained in, NVD for CVE-1999-0632.

Technical Details

Service: sunrpc
port 111/tcp is open

sunrpc services may be vulnerable

Severity: Potential Problem **CVE:** CVE-2002-0391 CVE-2003-0028

Impact

If an affected service is running, a remote attacker could execute arbitrary commands with *root* privileges.

Resolution

See CERT Advisories 2002-25 and 2003-10 for patch or upgrade information from your vendor. Note that it will be necessary to recompile statically linked applications after installing the patch or upgrade.

It would also be advisable to disable all unnecessary RPC services, which are typically enabled in **`/etc/inetd.conf`** and in the system boot scripts, **`/etc/rc*`**, and to block high numbered ports at the network perimeter except for those which are needed. Of particular importance are **`rpc.cmsd`**, **`dmispd`**, and **`kadmind`**, which are known to be exploitable and should be disabled or blocked.

Where can I read more about this?

These vulnerabilities were reported in CERT Advisories 2002-25 and 2003-10.

Technical Details

Service: sunrpc

TCP timestamp requests enabled

Severity: Potential Problem

Impact

A remote attacker could possibly determine the amount of time since the computer was last booted.

Resolution

TCP timestamps are generally only useful for testing, and support for them should be disabled if not needed.

To disable TCP timestamps on Linux, add the following line to the **`/etc/sysctl.conf`** file:

```
net.ipv4.tcp_timestamps = 0
```

To disable TCP timestamps on Windows, set the following registry value:

Key: `HKEY_LOCAL_MACHINE\System\CurrentControlSet\Services\Tcpip\Parameters`
Value: `Tcp1323Opts`
Data: 0 or 1

To disable TCP timestamps on Cisco, use the following command:

```
no ip tcp timestamp
```

Where can I read more about this?

More information on TCP timestamps and round-trip time measurement is available in RFC1323 and Microsoft Article 224829.

Technical Details

Service: 4242:TCP
timestamp=3047638581; uptime guess=140d 12h 46m 26s

password complexity policy disabled

Severity: Potential Problem **CVE:** CVE-1999-0535

Impact

Weak password policies could make it easier for an attacker to gain unauthorized access to user accounts.

Resolution

Edit the account policy, which is found in the *Local Security Policy* under *Administrative Tools* on most systems.

Change the account policy settings to the recommended values. In a typical organization, these are:

- Minimum password length: 8 characters
- Enforce password history: 24 passwords remembered
- Maximum password age: 42 days
- Minimum password age: 2 days
- Password complexity requirements: Enabled
- Account lockout threshold: 3 invalid logon attempts

Note that if there is an *Effective Setting* in the local security policy, it is this setting which is used. This setting can only be changed on the domain controller.

Where can I read more about this?

See Microsoft's Step-by-Step Guide to Enforcing Strong Password Policies and Account Passwords and Policies.

Technical Details

Service: netbios-ssn

weak account lockout policy (0)

Severity: Potential Problem **CVE:** CVE-1999-0582

Impact

Weak password policies could make it easier for an attacker to gain unauthorized access to user accounts.

Resolution

Edit the account policy, which is found in the *Local Security Policy* under *Administrative Tools* on most systems.

Change the account policy settings to the recommended values. In a typical organization, these are:

- Minimum password length: 8 characters
- Enforce password history: 24 passwords remembered
- Maximum password age: 42 days
- Minimum password age: 2 days
- Password complexity requirements: Enabled

- Account lockout threshold: 3 invalid logon attempts

Note that if there is an *Effective Setting* in the local security policy, it is this setting which is used. This setting can only be changed on the domain controller.

Where can I read more about this?

See Microsoft's Step-by-Step Guide to Enforcing Strong Password Policies and Account Passwords and Policies.

Technical Details

Service: netbios-ssn
0 > 3 or 0 = 0

weak minimum password age policy (0 days)

Severity: Potential Problem **CVE:** CVE-1999-0535

Impact

Weak password policies could make it easier for an attacker to gain unauthorized access to user accounts.

Resolution

Edit the account policy, which is found in the *Local Security Policy* under *Administrative Tools* on most systems.

Change the account policy settings to the recommended values. In a typical organization, these are:

- Minimum password length: 8 characters
- Enforce password history: 24 passwords remembered
- Maximum password age: 42 days
- Minimum password age: 2 days
- Password complexity requirements: Enabled
- Account lockout threshold: 3 invalid logon attempts

Note that if there is an *Effective Setting* in the local security policy, it is this setting which is used. This setting can only be changed on the domain controller.

Where can I read more about this?

See Microsoft's Step-by-Step Guide to Enforcing Strong Password Policies and Account Passwords and Policies.

Technical Details

Service: netbios-ssn
0 < 2

weak minimum password length policy (5)

Severity: Potential Problem **CVE:** CVE-1999-0535

Impact

Weak password policies could make it easier for an attacker to gain unauthorized access to user accounts.

Resolution

Edit the account policy, which is found in the *Local Security Policy* under *Administrative Tools* on most systems.

Change the account policy settings to the recommended values. In a typical organization, these are:

- Minimum password length: 8 characters
- Enforce password history: 24 passwords remembered
- Maximum password age: 42 days
- Minimum password age: 2 days
- Password complexity requirements: Enabled
- Account lockout threshold: 3 invalid logon attempts

Note that if there is an *Effective Setting* in the local security policy, it is this setting which is used. This setting can only be changed on the domain controller.

Where can I read more about this?

See Microsoft's Step-by-Step Guide to Enforcing Strong Password Policies and Account Passwords and Policies.

Technical Details

Service: netbios-ssn
5 < 8

weak password history policy (0)

Severity: Potential Problem **CVE:** CVE-1999-0535

Impact

Weak password policies could make it easier for an attacker to gain unauthorized access to user accounts.

Resolution

Edit the account policy, which is found in the *Local Security Policy* under *Administrative Tools* on most systems.

Change the account policy settings to the recommended values. In a typical organization, these are:

- Minimum password length: 8 characters
- Enforce password history: 24 passwords remembered
- Maximum password age: 42 days
- Minimum password age: 2 days
- Password complexity requirements: Enabled
- Account lockout threshold: 3 invalid logon attempts

Note that if there is an *Effective Setting* in the local security policy, it is this setting which is used. This setting can only be changed on the domain controller.

Where can I read more about this?

See Microsoft's Step-by-Step Guide to Enforcing Strong Password Policies and Account Passwords and Policies.

Technical Details

Service: netbios-ssn
0 < 24

5252/TCP

Severity: Service

Technical Details

\021\003\000\000\002\002(

SAINT

Severity: Service

Technical Details

HTTP/1.0 500 PHP Error
Server: SAINT/8.9.28
X-Content-Type-Options: nosniff
X-Frame-Options: SAMEORIGIN
Set-Cookie: SAINTsessionid=ufvdbkquvttln07qk6b5ble8j6; path=/;

SMB

Severity: Service

Technical Details

SSH

Severity: Service

Technical Details

SSH-2.0-OpenSSH_5.9p1 Debian-5ubuntu1.4

WWW (non-standard port 4242)

Severity: Service

Technical Details

HTTP/1.1 404 Not Found
Content-Type: text/html
Date: Tue, 15 Dec 2015 14:54:08 GMT
Server: localhost
not

entomb (775/TCP)

Severity: Service

Technical Details

microsoft-ds (445/TCP)

Severity: Service

Technical Details

netbios-ns (137/UDP)

Severity: Service

Technical Details

sunrpc (111/TCP)

Severity: Service

Technical Details

5.3 10.8.0.38

IP Address: 10.8.0.38
Scan time: Dec 15 10:03:08 2015

Host type: Windows 7 SP1
Netbios Name: WIN7

vulnerable FileZilla server version: 0.9.41-beta

Severity: Area of Concern **CVE:** CVE-2014-0160 CVE-2014-0224

Impact

Vulnerabilities in FileZilla FTP server allow for a denial of service or attackers to obtain sensitive information.

Resolution

Upgrade to version 0.9.45 or higher.

Where can I read more about this?

The OpenSSL SSL/TLS handshake vulnerability was reported in FileZilla Server Version 0.9.45.

The OpenSSL vulnerability was reported in FileZilla Server Version 0.9.44.

Technical Details

Service: ftp
Received: 220-FileZilla Server version 0.9.41 beta

AV Information: Anti-virus software is not installed or its presence could not be checked

Severity: Potential Problem

Impact

The system may be susceptible to viruses, worms, and other types of malware.

Resolution

Install and enable anti-virus software. Turn on automatic updates and periodic scans. Enable logging.

If an anti-virus server or manager is present, make sure that all clients can communicate with it so that the client is as up to date as possible and can send crucial information to the master installation.

If more information is needed about the anti-virus software running on the network and a server or manager is present, it is a good place to look for information about the anti-virus clients.

If more than one instance of anti-virus software is installed on a system, remove all but one. Multiple anti-virus programs may interfere with each other and cause the system to run poorly.

Where can I read more about this?

For additional information about viruses and anti-virus products, see Virus Bulletin.

Technical Details

Service: netbios
no registry access

server is susceptible to BEAST attack

Severity: Potential Problem **CVE:** CVE-2011-3389

Impact

A remote attacker with the ability to sniff network traffic could decrypt an encrypted session.

Resolution

Most browser vendors have released updates which prevent this attack, but some affected browsers still remain at this time, so it is still advisable also to fix the problem on the server side. SSLv3 and TLS 1.0 CBC ciphers should be disabled on the server as follows:

- **Apache:** Set the following directive in the Apache configuration file:

```
SSLCipherSuite RC4+RSA:!EXPORT:!LOW
```

- **IIS:** See See KB245030.

Note that disabling SSLv3 and TLS 1.0 entirely on the server may affect the usability of the web site, as some web browsers may not yet support TLS 1.1, and therefore isn't recommended.

Where can I read more about this?

Thai Duong wrote a detailed blog post about this attack, including a video demonstration.
Adam Langley wrote a helpful blog post that helps highlight concerns for both browser vendors and website hosts.
Rob VanderBrink of SANS Internet Storm Center posted a blog update detailing TLS 1.1/1.2 support in

many common browsers as of September, 2011.
Eric Rescorla wrote a detailed blog post explaining how the attack works in detail and analyzing the security impact of this vulnerability.

Technical Details

Service: ms-wbt-server
Server accepted TLS 1.0 CBC cipher: TLS_RSA_WITH_AES_128_CBC_SHA

ftp receives cleartext password

Severity: Potential Problem

Impact

Passwords could be stolen if an attacker is able to capture network traffic to and from the FTP server.

Resolution

Disable the FTP server and use a more secure program such as SCP or SFTP to transfer files. If FTP cannot be disabled, restrict access using iptables or TCP Wrappers such that only addresses on a local, trusted network can connect.

Where can I read more about this?

For more information, see Protocols - The Problem With Cleartext.

Technical Details

Service: ftp
Received:
220-FileZilla Server version 0.9.41 beta
220-written by Tim Kosse (Tim.Kosse@gmx.de)
220 Please visit http://sourceforge.net/projects/filezilla/
500 Syntax error, command unrecognized.
221 Goodbye

ICMP timestamp requests enabled

Severity: Potential Problem **CVE:** CVE-1999-0524

Impact

A remote attacker could obtain sensitive information about the network.

Resolution

Configure the system or firewall not to allow ICMP timestamp requests (message type 13) or ICMP netmask requests (message type 17). Instructions for doing this on specific platforms are as follows:

Windows:
Block these message types using the Windows firewall as described in Microsoft TechNet.

Linux:
Use ipchains or iptables to filter ICMP netmask requests using the command:

pre> ipchains -A input -p icmp --icmp-type address-mask-request -j DROP

Use ipchains or iptables to filter ICMP timestamp requests using the commands:

```
ipchains -A input -p icmp --icmp-type timestamp-request -j DROP
ipchains -A output -p icmp --icmp-type timestamp-reply -j DROP
```

To ensure that this change persists after the system reboots, put the above command into the system's boot-up script (typically **`/etc/rc.local`**).

Cisco:
Block ICMP message types 13 and 17 as follows:

```
deny icmp any any 13
deny icmp any any 17
```

Where can I read more about this?

For more information about ICMP, see RFC792.

Technical Details

Service: icmp
timestamp=385e3e03

Microsoft Terminal Server allows weak encryption

Severity: Potential Problem

Impact

An attacker who is able to monitor the network between the client and server could decrypt the desktop session.

Resolution

From the Terminal Services Configuration application, change the *Encryption Level* setting in the connection's properties to *High*. This will require clients to use the maximum key strength.

Where can I read more about this?

For more information on securing remote desktop sessions, see Microsoft Article ID 816594.

Technical Details

Service: 3389
ENCRYPTION_LEVEL_CLIENT_COMPATIBLE

SMB digital signing is disabled

Severity: Potential Problem

Impact

If the SMB signing is disabled, malicious attackers could sniff the network traffic and could perform a man in

the middle attack to gain sensitive information.

Resolution

Refer to Microsoft Technet Library in Local Policies, Microsoft network server: Digitally sign communications (if client agrees).

Where can I read more about this?

For more information about SMB signing configuration, see, SMB Protocol Package Exchange Scenario.

Technical Details

Service: netbios
NEGOTIATE_SECURITY_SIGNATURES_ENABLED=0

SSL/TLS server supports RC4 ciphers

Severity: Potential Problem **CVE:** CVE-2013-2566 CVE-2015-2808

Impact

A remote attacker with the ability to sniff network traffic could decrypt an encrypted session.

Resolution

For Apache mod_ssl web servers, add **`!RC4`** to the **`SSLCipherSuite`** directive in the configuration file to disable RC4 ciphers.

For Microsoft IIS web servers, disable RC4 ciphers as described in Microsoft knowledge base article 245030.

For other types of web servers, consult the web server documentation to find out how to disable RC4 ciphers.

Where can I read more about this?

For more information on the Invariance Weakness and Bar Mitzvah attack, see Security Affairs and Imperva's paper, Attacking SSL when using RC4.

For more information on the ciphertext bias weakness, see the blog post Attack of the Week: RC4 is kind of broken in TLS.

Technical Details

Service: ms-wbt-server
Server accepted TLS 1.0 RC4 cipher: TLS_RSA_WITH_RC4_128_SHA

TCP timestamp requests enabled

Severity: Potential Problem

Impact

A remote attacker could possibly determine the amount of time since the computer was last booted.

Resolution

TCP timestamps are generally only useful for testing, and support for them should be disabled if not needed.

To disable TCP timestamps on Linux, add the following line to the **`/etc/sysctl.conf`** file:

```
net.ipv4.tcp_timestamps = 0
```

To disable TCP timestamps on Windows, set the following registry value:

Key: `HKEY_LOCAL_MACHINE\System\CurrentControlSet\Services\Tcpip\Parameters`
Value: `Tcp1323Opts`
Data: 0 or 1

To disable TCP timestamps on Cisco, use the following command:

```
no ip tcp timestamp
```

Where can I read more about this?

More information on TCP timestamps and round-trip time measurement is available in RFC1323 and Microsoft Article 224829.

Technical Details

Service: ftps
timestamp=724804939; uptime guess=83d 21h 20m 49s

1026/TCP

Severity: Service

Technical Details

1027/TCP

Severity: Service

Technical Details

1033/TCP

Severity: Service

Technical Details

FTP

Severity: Service

Technical Details

220-FileZilla Server version 0.9.41 beta

SMB

Severity: Service

Technical Details

\131\000\000\001\143

WWW (non-standard port 5357)

Severity: Service

Technical Details

HTTP/1.1 503 Service Unavailable
Content-Type: text/html; charset=us-ascii
Server: Microsoft-HTTPAPI/2.0
Date: Tue, 15 Dec 2015 14:52:00 GMT
Connection: close
Content-Length:

WWW (non-standard port 5985)

Severity: Service

Technical Details

HTTP/1.1 404 Not Found
Content-Type: text/html; charset=us-ascii
Server: Microsoft-HTTPAPI/2.0
Date: Tue, 15 Dec 2015 14:52:00 GMT
Connection: close
Content-Length:

blackjack (1025/TCP)

Severity: Service

Technical Details

epmap (135/TCP)

Severity: Service

Technical Details

ftps (990/TCP)

Severity: Service

Technical Details

\022\003\001\000J\002\000\000F\003\001Vp)\025\252\137\001:\023J96!\178\220\201\193\160\153\131\
235\250U\152\016\187/\229\176\006d)
}^\150\216\200\156\128K\219\014q\136\140\242\245\225\011\248b\239\019\177\177\248\127
/\181\247\211qC\135\0005\000\022\003\001\005\211\011\000\005\207\000\005\204\000\005\2010\130\
005\1970\130\003\173\160\003\002\001\002\002\001\0000\006\t*\134H\134\247\001\001\005\005\000
0\129\1651\0190\017\006\003U\004\003\019

iad3 (1032/TCP)

Severity: Service

Technical Details

microsoft-ds (445/TCP)

Severity: Service

Technical Details

ms-wbt-server (3389/TCP)

Severity: Service

Technical Details

\022\003\001\003H\002\000\000F\003\001Vp)\025\215Q\166\172\229+\172\140\004o\254L\180A\255\
134\175{<\189\209\199s\153\031\153\221F
B\031\000\000\029`i\163\216^\180OZ<O\140\193\210\180\128\243\031\148\157\193\226\21734\198[n\
000
/\000\011\000\002\246\000\002\243\000\002\2400\130\002\2360\130\001\212\160\003\002\001\002\0
02\016\024\146\203\189\225\209c\143G@\246w\0186\153\1960\006\t*\134H\134\247\001\001\005\005\
0000\0311\0290\027\006\003U\004\003\019\020Win7.SAINTtest.local0\030\023150817183448Z\023160216
183448Z0\0311\0290\027\006\003U\004\003\019\020Win7.SAINTtest.local0\130\001"0\006\t*\134H\134\
247\001\001\001\005\000\003\130\001\015\0000\130\001

netbios-ns (137/UDP)

Severity: Service

Technical Details

startron (1057/TCP)

Severity: Service

Technical Details

5.4 win-iqf3u12cja5.sainttest.local

IP Address: 10.8.0.150
Scan time: Dec 15 10:03:08 2015

Host type: Windows Server 2008 R2
Netbios Name: WIN-IQF3U12CJA5

DNS server allows zone transfers

Severity: Area of Concern **CVE:** CVE-1999-0532

Impact

Attackers could collect information about the domain.

Resolution

Configure the primary DNS server to allow zone transfers only from secondary DNS servers. In BIND, this can be done in an **`allow-transfer`** block in the **`options`** section of the **`named.conf`** file.

Where can I read more about this?

Information on DNS zone transfers can be found here.

Information on securing DNS can be found here.

Technical Details

Service: dns
Received:
; <<>> DiG 9.8.1-P1 <<>> @win-iqf3u12cja5.sainttest.local SAINTTEST.local axfr
; (1 server found)
;; global options: +cmd
SAINTTEST.local.\x093600\x09IN\x09SOA\x09win-iqf3u12cja5.SAINTTEST.local.
hostmaster.SAINTTEST.local. 4889 900 600 86400 3600
SAINTTEST.local.\x09600\x09IN\x09A\x0910.8.0.150
SAINTTEST.local.\x093600\x09IN\x09NS\x09win-iqf3u12cja5.SAINTTEST.local.
_gc._tcp.Default-First-Site-Name._sites.SAINTTEST.local. 600 IN\x09SRV 0 100 3268
win-iqf3u12cja5.sainttest.local.
_kerberos._tcp.Default-First-Site-Name._sites.SAINTTEST.local. 600 IN SRV 0 100 88
win-iqf3u12cja5.sainttest.local.
_ldap._tcp.Default-First-Site-Name._sites.SAINTTEST.local. 600 IN SRV 0 100 389
win-iqf3u12cja5.sainttest.local.
_gc._tcp.SAINTTEST.local. 600\x09IN\x09SRV\x090 100 3268 win-iqf3u12cja5.sainttest.local.
_kerberos._tcp.SAINTTEST.local.\x09600 IN\x09SRV\x090 100 88 win-iqf3u12cja5.sainttest.local.
_kpasswd._tcp.SAINTTEST.local. 600 IN\x09SRV\x090 100 464 win-iqf3u12cja5.sainttest.local.
_ldap._tcp.SAINTTEST.local. 600\x09IN\x09SRV\x090 100 389 win-iqf3u12cja5.sainttest.local.

NFS export list disclosure

Severity: Area of Concern

Impact

A remote attacker could view the list of exported file systems, which may contain sensitive information about the target's file system and trusted hosts.

Resolution

Disable the NFS service if it is not needed. If it is needed, block access to the mountd service at the firewall.

Where can I read more about this?

See Wikipedia for more information about NFS.

Technical Details

Service: 1048:TCP
Sent:
/sbin/showmount -e win-iqf3u12cja5.sainttest.local
Received:
Export list for win-iqf3u12cja5.sainttest.local:

Possible buffer overflow in Active Directory

Severity: Potential Problem

Impact

A remote attacker could crash the Active Directory service and force a reboot of the server. It may also be possible to execute commands on the server.

Resolution

Install the patches referenced in Microsoft Security Bulletin 15-096.

Where can I read more about this?

For more information, see Microsoft Security Bulletins 07-039, 08-003, 08-035, 08-060, 09-018, 09-066, and 15-096.

Technical Details

Service: ldap

AV Information: Anti-virus software is not installed or its presence could not be checked

Severity: Potential Problem

Impact

The system may be susceptible to viruses, worms, and other types of malware.

Resolution

Install and enable anti-virus software. Turn on automatic updates and periodic scans. Enable logging.

If an anti-virus server or manager is present, make sure that all clients can communicate with it so that the client is as up to date as possible and can send crucial information to the master installation.

If more information is needed about the anti-virus software running on the network and a server or manager is present, it is a good place to look for information about the anti-virus clients.

If more than one instance of anti-virus software is installed on a system, remove all but one. Multiple anti-virus programs may interfere with each other and cause the system to run poorly.

Where can I read more about this?

For additional information about viruses and anti-virus products, see Virus Bulletin.

Technical Details

Service: netbios
no registry access

DNS server allows recursive queries

Severity: Potential Problem

Impact

Allowing recursive queries may make the DNS server more susceptible to denial-of-service and cache poisoning attacks.

Resolution

Disable recursive queries on the DNS server.

For Windows DNS servers, this can be done by checking *Disable Recursion* from Start -> Control Panel -> Administrative Tools -> DNS -> Properties -> Advanced -> Server Options.

For BIND DNS servers, add the following line to the *options* section of the **`named.conf`** file:

```
recursion no;
```

Where can I read more about this?

For more information about the risks of recursive queries, see the Go Daddy Help Center.

Technical Details

Service: domain
Recursion Available flag = 1

ICMP timestamp requests enabled

Severity: Potential Problem **CVE:** CVE-1999-0524

Impact

A remote attacker could obtain sensitive information about the network.

Resolution

Configure the system or firewall not to allow ICMP timestamp requests (message type 13) or ICMP netmask requests (message type 17). Instructions for doing this on specific platforms are as follows:

Windows:
Block these message types using the Windows firewall as described in Microsoft TechNet.

Linux:
Use ipchains or iptables to filter ICMP netmask requests using the command:

```
ipchains -A input -p icmp --icmp-type address-mask-request -j DROP
```

Use ipchains or iptables to filter ICMP timestamp requests using the commands:

```
ipchains -A input -p icmp --icmp-type timestamp-request -j DROP
ipchains -A output -p icmp --icmp-type timestamp-reply -j DROP
```

To ensure that this change persists after the system reboots, put the above command into the system's boot-up script (typically **`/etc/rc.local`**).

Cisco:
Block ICMP message types 13 and 17 as follows:

```
deny icmp any any 13
deny icmp any any 17
```

Where can I read more about this?

For more information about ICMP, see RFC792.

Technical Details

Service: icmp
timestamp=20273303

scan may have been dynamically blocked by an IPS

Severity: Potential Problem

Impact

The scan results may be inconclusive.

Resolution

Temporarily disable the Intrusion Prevention System or configure an exception for the scanner's IP address before starting the scan.

Where can I read more about this?

See pages 14-15 of the PCI DSS ASV Program Guide for more information on handling interference from an IPS during compliance scanning.

Technical Details

Service: 3269:TCP
port became closed during scan

Is your LDAP secure?

Severity: Potential Problem

Impact

If an application uses a vulnerable implementation of LDAP, an attacker could cause a denial of service or execute arbitrary commands.

Resolution

See CERT Advisory 2001-18 for information on obtaining a patch for your application. OpenLDAP 2.x users may also need to fix a separate set of vulnerabilities which were reported in SuSE Security Announcement 2002:047. Consult your vendor for a fix.

If a patch is not available, then ports 389 and 636, TCP and UDP, should be blocked at the network

perimeter until a patch can be applied.

Where can I read more about this?

For more information, see CERT Advisory 2001-18 and SuSE Security Announcement 2002:047.

Technical Details

Service: ldap

Windows null session domain SID disclosure

Severity: Potential Problem **CVE:** CVE-2000-1200

Impact

A remote attacker could gain a list of shared resources or user names on the system.

Resolution

Mitigating this vulnerability will require editing the registry. The **regedt32** command can be used for this purpose. Keep in mind that erroneous changes to the registry could leave the system in an unstable and unbootable state, so use due caution and have a working system backup and repair disk before editing the registry.

The privileges of null sessions can be limited by changing the following registry value:

Hive: **HKEY_LOCAL_MACHINE**
Key: **SYSTEM/CurrentControlSet/Control/LSA**
Value: **RestrictAnonymous**
Type: **REG_DWORD**

Setting this value to **1** will partially limit the amount of information which is available through a null session, but will still allow access to some sensitive information, including the user account list. On Windows 2000 and XP, this value can also be set to **2** for greater protection. However, a value of **2** could also disable some critical Windows networking functions, so this setting is recommended only for Internet servers, and should be thoroughly tested.

Windows XP and later also support a registry value called **RestrictAnonymousSAM**, which, if set to **1**, prevents enumeration of accounts using a null session.

In addition to the above changes, it is also advisable to block access to the NetBIOS ports at the firewall or gateway router. There is usually no reason why a user outside the local network would have a legitimate need for NetBIOS access. NetBIOS runs on ports 135, 137, 138, and 139 (TCP and UDP).

Where can I read more about this?

For more information about using the **RestrictAnonymous** registry value to limit the privileges of null sessions, see Microsoft Knowledge Base articles Q143474 and Q246261.

Technical Details

Service: netbios-ssn
Domain SID = S-1-5-21-1092970315-2611599247-3581362680

Windows null session host SID disclosure

Severity: Potential Problem

Impact

A remote attacker could gain a list of shared resources or user names on the system.

Resolution

Mitigating this vulnerability will require editing the registry. The **regedt32** command can be used for this purpose. Keep in mind that erroneous changes to the registry could leave the system in an unstable and unbootable state, so use due caution and have a working system backup and repair disk before editing the registry.

The privileges of null sessions can be limited by changing the following registry value:

Hive: **HKEY_LOCAL_MACHINE**
Key: **SYSTEM/CurrentControlSet/Control/LSA**
Value: **RestrictAnonymous**
Type: **REG_DWORD**

Setting this value to **1** will partially limit the amount of information which is available through a null session, but will still allow access to some sensitive information, including the user account list. On Windows 2000 and XP, this value can also be set to **2** for greater protection. However, a value of **2** could also disable some critical Windows networking functions, so this setting is recommended only for Internet servers, and should be thoroughly tested.

Windows XP and later also support a registry value called **RestrictAnonymousSAM**, which, if set to **1**, prevents enumeration of accounts using a null session.

In addition to the above changes, it is also advisable to block access to the NetBIOS ports at the firewall or gateway router. There is usually no reason why a user outside the local network would have a legitimate need for NetBIOS access. NetBIOS runs on ports 135, 137, 138, and 139 (TCP and UDP).

Where can I read more about this?

For more information about using the **RestrictAnonymous** registry value to limit the privileges of null sessions, see Microsoft Knowledge Base articles Q143474 and Q246261.

Technical Details

Service: netbios-ssn
Host SID = S-1-5-21-1092970315-2611599247-3581362680

Microsoft Terminal Server allows weak encryption

Severity: Potential Problem

Impact

An attacker who is able to monitor the network between the client and server could decrypt the desktop session.

Resolution

From the Terminal Services Configuration application, change the *Encryption Level* setting in the connection's properties to *High*. This will require clients to use the maximum key strength.

Where can I read more about this?

For more information on securing remote desktop sessions, see Microsoft Article ID 816594.

Technical Details

Service: 3389
ENCRYPTION_LEVEL_CLIENT_COMPATIBLE

rpc.statd is enabled and may be vulnerable

Severity: Potential Problem

CVE: CVE-1999-0018 CVE-1999-0019 CVE-1999-0210 CVE-1999-0493 CVE-2000-0666 CVE-2000-0800

Impact

Several vulnerabilities in **`statd`** permit attackers to gain root privileges. They can be exploited by local users. They can also be exploited remotely without the intruder requiring a valid local account if **`statd`** is accessible via the network.

Resolution

One resolution to this vulnerability is to install vendor patches as they become available. For the format string bug, SUSE users should obtain the **`nfs-utils`** and package, version 0.1.9.1 or higher, from their vendor. For the String parsing error bug, Linux users should obtain the **`nfs-utils`** or **`knfsdi`** or **`linuxnfs`** packages, more detail information, please refer to SUSE Security Announcement web site. For the **`SM_MON`** buffer overflow, UnixWare users should obtain the patch.

Also, if **`NFS`** is not being used, there is no need to run **`statd`** and it can be disabled. The **`statd`** (or **`rpc.statd`**) program is often started in the system initialization scripts (such as /etc/rc* or /etc/rc*.d/*). If you do not require **`statd`** it should be commented out from the initialization scripts. In addition, any currently running **`statd`** processes should be identified using **ps(1)** and then terminated using **kill(1)**.

Where can I read more about this?

More information about the **`statd/automountd`** vulnerability is available in CERT Advisory 1999-05. You may read more about the **`statd`** buffer overflow in CERT Advisory 1997-26. The String parsing error vulnerability detail information can be found in CVE Details. The format string vulnerability was discussed in vendor bulletins from Red Hat, Debian, Mandrake, Trustix, and Conectiva, as well as CERT Advisory 2000.17. The **`SM_MON`** buffer overflow was announced in Caldera Security Advisory 2001-SCO.6. The file creation and removal vulnerability was discussed in CERT Advisory 1996-09.

Technical Details

Service: 1039:TCP

The sunrpc portmapper service is running

Severity: Potential Problem **CVE:** CVE-1999-0632

Impact

The sunrpc portmapper service is an unsecured protocol that tells clients which port corresponds to each RPC service. Access to port 111 allows the calling client to query and identify the ports where the needed server is running.

Resolution

Disable all unnecessary RPC services, which are typically enabled in /etc/inetd.conf and in the system boot scripts, /etc/rc*, and to block high numbered ports at the network perimeter except for those which are needed.

Where can I read more about this?

More information can be obtained in, NVD for CVE-1999-0632.

Technical Details

Service: sunrpc
port 111/tcp is open

sunrpc services may be vulnerable

Severity: Potential Problem **CVE:** CVE-2002-0391 CVE-2003-0028

Impact

If an affected service is running, a remote attacker could execute arbitrary commands with *root* privileges.

Resolution

See CERT Advisories 2002-25 and 2003-10 for patch or upgrade information from your vendor. Note that it will be necessary to recompile statically linked applications after installing the patch or upgrade.

It would also be advisable to disable all unnecessary RPC services, which are typically enabled in **`/etc/inetd.conf`** and in the system boot scripts, **`/etc/rc*`**, and to block high numbered ports at the network perimeter except for those which are needed. Of particular importance are **`rpc.cmsd`**, **`dmispd`**, and **`kadmind`**, which are known to be exploitable and should be disabled or blocked.

Where can I read more about this?

These vulnerabilities were reported in CERT Advisories 2002-25 and 2003-10.

Technical Details

Service: sunrpc

TCP timestamp requests enabled

Severity: Potential Problem

Impact

A remote attacker could possibly determine the amount of time since the computer was last booted.

Resolution

TCP timestamps are generally only useful for testing, and support for them should be disabled if not needed.

To disable TCP timestamps on Linux, add the following line to the **`/etc/sysctl.conf`** file:

```
net.ipv4.tcp_timestamps = 0
```

To disable TCP timestamps on Windows, set the following registry value:

Key: `HKEY_LOCAL_MACHINE\System\CurrentControlSet\Services\Tcpip\Parameters`
Value: `Tcp1323Opts`
Data: 0 or 1

To disable TCP timestamps on Cisco, use the following command:

```
no ip tcp timestamp
```

Where can I read more about this?

More information on TCP timestamps and round-trip time measurement is available in RFC1323 and Microsoft Article 224829.

Technical Details

Service: iad1
timestamp=50845754; uptime guess=5d 21h 14m 17s

Windows DNS Server RPC Management Interface Buffer Overflow

Severity: Potential Problem **CVE:** CVE-2007-1748

Impact

The Windows DNS Server has a vulnerability that allows for remote code execution.

Resolution

Apply the patch referenced in Microsoft Security Bulletin 15-127.

Windows Server 2008 and Windows Server 2008 R2 users should apply the patch referenced in Microsoft Security Bulletin 09-008.

For the management interface buffer overflow, remote management over RPC can be disabled by setting the value of `RpcProtocol` in `HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\DNS\Parameters` to 4. Setting this value to 0 will disable all DNS RPC functionality and will protect against both local and remote attempts to exploit the vulnerability.

Where can I read more about this?

For more information on specific vulnerabilities, see Microsoft Security Bulletins 07-029, 07-062, 09-008, 11-058, 12-017, and 15-127. The DNS server RPC management interface buffer overflow was reported in US-CERT Vulnerability Note VU#555920 and Secunia Advisory SA24871.

Technical Details

Service: 135:TCP
Windows DNS Server port open

1026/TCP

Severity: Service

Technical Details

1027/TCP

Severity: Service

Technical Details

1029/TCP

Severity: Service

Technical Details

1033/TCP

Severity: Service

Technical Details

1039/TCP

Severity: Service

Technical Details

1044/TCP

Severity: Service

Technical Details

9389/TCP

Severity: Service

Technical Details

\008Ihttp://schemas.microsoft.com/ws/2006/05/framing/faults/UnsupportedVersion

DNS

Severity: Service

Technical Details

\002\000\002\000\128\001\000\000\000\000\000\000\000\000\000\000\000\000\000\000\000\000\000\000\000\000\
000\000\000\000\000\000\000\000\000\000\000\000\000\000\000\000\000\000\000\000zz\000\000\000\000\000\000\000\
000\000\000\000\000\000\000\000\000\000\000\000\000\000\000\000\000\000\000\000\000\002\000\0
00\000\000\000\000\000\000\000\000\000\000\000\000\000\000\000\000\000\000\000\000\000\000\000\000\000\00
0\000\000\000\000\000\0001596\000\000\000\000\000\000\000\000\000\000\000\000\000\000\000\000\000\000\000\
000\000\000\000\000\000\000\000\000\000\000\004\003\001\006

NFS

Severity: Service

Technical Details

1048:TCP

SMB

Severity: Service

Technical Details

\131\000\000\001\143

WWW

Severity: Service

Technical Details

HTTP/1.1 503 Service Unavailable
Content-Type: text/html; charset=us-ascii
Server: Microsoft-HTTPAPI/2.0
Date: Tue, 15 Dec 2015 14:52:13 GMT
Connection: close
Content-Length:

WWW (Secure)

Severity: Service

Technical Details

WWW (non-standard port 5985)

Severity: Service

Technical Details

HTTP/1.1 404 Not Found
Content-Type: text/html; charset=us-ascii
Server: Microsoft-HTTPAPI/2.0
Date: Tue, 15 Dec 2015 14:52:18 GMT
Connection: close
Content-Length:

WWW (non-standard port 8059)

Severity: Service

Technical Details

HTTP/1.1 503 Service Unavailable
Content-Type: text/html; charset=us-ascii
Server: Microsoft-HTTPAPI/2.0
Date: Tue, 15 Dec 2015 14:52:20 GMT
Connection: close
Content-Length:

WWW (non-standard port 8082)

Severity: Service

Technical Details

HTTP/1.1 503 Service Unavailable
Content-Type: text/html; charset=us-ascii
Server: Microsoft-HTTPAPI/2.0
Date: Tue, 15 Dec 2015 14:52:20 GMT
Connection: close
Content-Length:

blackjack (1025/TCP)

Severity: Service

Technical Details

cma (1050/TCP)

Severity: Service

Technical Details

domain (53/UDP)

Severity: Service

Technical Details

epmap (135/TCP)

Severity: Service

Technical Details

http-rpc-epmap (593/TCP)

Severity: Service

Technical Details

ncacn_http/1.0

iad1 (1030/TCP)

Severity: Service

Technical Details

ncacn_http/1.0

iad2 (1031/TCP)

Severity: Service

Technical Details

iscsi-target (3260/TCP)

Severity: Service

Technical Details

kerberos (88/TCP)

Severity: Service

Technical Details

kpasswd (464/TCP)

Severity: Service

Technical Details

ldap (389/TCP)

Severity: Service

Technical Details

m4-network-as (4345/TCP)

Severity: Service

Technical Details

microsoft-ds (445/TCP)

Severity: Service

Technical Details

ms-wbt-server (3389/TCP)

Severity: Service

Technical Details

msft-gc (3268/TCP)

Severity: Service

Technical Details

msft-gc-ssl (3269/TCP)

Severity: Service

Technical Details

neod1 (1047/TCP)

Severity: Service

Technical Details

neod2 (1048/TCP)

Severity: Service

Technical Details

netbios-ns (137/UDP)

Severity: Service

Technical Details

obrpd (1092/TCP)

Severity: Service

Technical Details

proofd (1093/TCP)

Severity: Service

Technical Details

shilp (2049/TCP)

Severity: Service

Technical Details

ssl-ldap (636/TCP)

Severity: Service

Technical Details

sunrpc (111/TCP)

Severity: Service

Technical Details

unicall (4343/TCP)

Severity: Service

Technical Details

Scan Session: SOX compliance scan; Scan Policy: SOX; Scan Data Set: 15 December 2015 10:03