

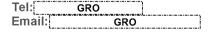
PCI DSS – Quarterly ASV Scan – Detailed Report

Post Office Limited

Fujitsu

October 2015 - Version 1.0

Prepared by: Alex Blood Lead Technical Account Manager





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Report Introduction

On completion of the PCI DSS ASV Scans conducted for Post Office Limited, NCC Group is pleased to present the findings in this report. This report aims to concisely outline the results collected during testing and to define specific actions Post Office Limited may take in order to mitigateissues identified and bring the systems in line with the PCI DSS requirements.

Definitions of Risk Ratings

NCC Group have adopted the Common Vulnerability Scoring System. CVSS is a vendor independent, industry open standard. It is designed to convey vulnerability severity, help determine urgency and priority of response. The table below gives a key to the icons and symbols used through this report to provide aclear and concise risk scoring system.

It is designed to convey vulnerability severity, help determine urgency and priority of response. The table below gives a key to the icons and symbols used through this report to provide a clear and concise risk scoring system.

It should be stressed that the overall business risk posed by any of the issues found in any test is outside our remt. This means that some risk may be reported as high from a technical perspective but may, as a result of other controls unknown to us, be considered acceptable.

CVSS Score	Severity	Description	Symbol	Implication
7.0 Through 10.0	High	Trojan horses, Remote command execution, File read exploit, directory browsing and Denial of Service (DoS) where command execution is possible	×	An area or finding where HIGH/MEDIUM attention is required, and there may be significant risk
4.0 Through 6.9	Medium	Sensitive information can be obtained by hackers on configuration.		These are not compliant with the PCI DSS
0.0 Through 3.9	Low	Information can be obtained by hackers on configuration		An area or finding that should be noted by IT Security management and appropriate action taken.

Certainty Definition	Description
Proven Vulnerable	There is evidence that this is 100% genuine issue. This evidence is provided in the probe output section.
Version Vulnerable	From the information gathered during the scan, this vulnerability cannot be verified without exploitation or without evidence that the system is patched or configured securely.
Potentially Vulnerable	This is where evidence of the vulnerability is found but cannot be confirmed as accurate.



Report Details and Quality Assurance

Quality Assurance

	Document Details
Document Name	Post Office Limited_PCI Report_Oct_FJ_2015.docx
Date	02 October 2015
NCC Group Document Reference	POFF-049

Version	Date	Author	QSA Review
0.1	02 October 2015	Alex Blood	
1.0	02 October 2015		Thomas McDonald

Document Usage

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ASV Scan Report Attestation of Scan Compliance



Scan Customer Information			Approved Scanning Vendor Information						
Company: Post Office Limited			Company: NCC Group – Managed Security Services – PCI ASV						
Contact: Richard Miller Title: Technical Security Assurance Manager			Contact: Alex Blood	Contact: Alex Blood Title: Qualified ASV Employee (QAE 900-518			(QAE 900-518)		
Telephone: GRO E-Mail: GRO Tele			Telephone: GRO E-Mail: GRO						
Business Address:		• •			Business Address:	NCC Group Manchester Techn Oxford Road Manchester M1 7EF	nology Centre		
URL:	URL: www.postoffice.co.uk			URL:	www.nccgroup.co	m			

Attestations

Scan Customer Attestation

Post Office Limited attests on 01 October 2015 that this scan includes all components which should be in scope for PCI DSS, any component considered outof-scope for this scan is properly segmented from my cardholder data environment, and any evidence submitted to the ASV to resolve scan exceptions is accurate and complete. Post Office Limited also acknowledges the following:

- 1. Proper scoping of this external scan is my responsibility, and
- 2. This scan result only indicates whether or not my scanned systems are compliant with the external vulnerability scan requirement of PCI DSS; this scan result does not represent my overall compliance status with PCI DSS or provide any indication of compliance with other PCI DSS requirements.

ASV Attestation

This scan and report was prepared and conducted by NCC Group – Managed Security Services – PCI ASV under certificate number 3928-01-09, according to internal processes that meet PCI DSS requirement 11.2 and the PCI DSS ASV Program Guide.

NCC Group – Managed Security Services – PCI ASV attests that the PCI DSS scan process was followed, including a manual or automated Quality Assurance process with customer boarding and scoping practices, review of results for anomalies, and review and correction of

- 1. Disputed or incomplete results,
- 2. False positives and
- Active scan interference.

This report and any exceptions were reviewed by Alex Blood. QAE 900-518, Signed:



ASV Scan Report Attestation of Scan Compliance



Status and Scope of Testing

Post Office Limited requested that NCC Group perform a PCI DSS ASV scan on the following infrastructure and applications which have been identified as being in scope of PCI DSS. This assessment involved the following IP addresses and applications:

- Number of unique components scanned: 14
- Number of identified failing vulnerabilities: 0
- Number of components found by ASV but not scanned because scan customer confirmed components were out of scope:0
- This assessment commenced on the 01 October 2015. This Certificate expires 90 days from reportdate (30 December 2015).
- NCC Group has determined that Post Office Limited is COMPLIANT with the PCI scan validation requirement.

This assessment involved the following IP addresses and applications:

IP Address	Hostname
194.176.201.49-49 194.176.201.53-53 194.176.219.225-227 194.176.219.241-245 62.60.125.113-113 62.60.125.97-99	None





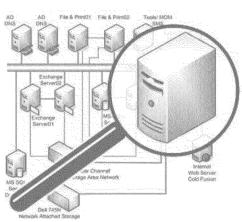




PCI ASV Scanning Methodology

NCC Group performed an ASV scan of the scoped network infrastructure and applications. Specifically the work included:

- Discovery and network footprint phase; using scanning tools to locate live hosts, services and web applications within target IP range. Techniques and coverage include but are not limited to:-
- Common UDP and full 65535 TCP Port Scanning Service enumeration is conducted using port scanning tools such as NMAP with advanced settings to ensure
 maximum service detection including:
 - Stack fingerprinting and TCP sequence prediction to identify operating systems and services
 - Public Service banner Identification
 - Network Mapping
- Network layer testing of all live hosts and services identified with focus on the follow areas :-
 - Routers and Firewalls
 - Operating Systems
 - DNS and Mail servers
 - Databases and Web servers
 - Application Servers
 - Patching Issues
 - Common Services
 - Wireless Access Points
 - SSL/TLS
 - Backdoors
 - Remote Access
- OWASP Top 10 and other advanced web application layer testing, including Point of Sale Software, with a specific focus on thefollowing areas:-
 - SQL Injection
 - Cross-Site Scripting (XSS)
 - Default Passwords
- Provision of high-level management and detailed technical reports, including a compliance status statement and recommendations for improvement
- No buffer overflow or brute force testing was carried out which could result in denial of service conditions or use of excessive bandwidth.











Executive Summary

PCI DSS ASV Compliance Test results

	Comprehensive Co	Scan Information	
Scan Customer Company:	Post Office Limited	ASV Company:	NCC Group - Managed Security Services - PCI ASV
Date Scan Was Completed:	01 October 2015	Scan Expiration Date:	30 December 2015

The severity levels of the vulnerabilities found within live hosts are detailed below:

URL/IP Address	Highest CVSS Base Score	Severity Rating	Compliance Status	Page
62.60.125.97	0.0	S LOW	PASS	10
62.60.125.98	0.0	low	PASS	10
62.60.125.99	0.0	E LOW	PASS	10
62.60.125.113	0.0	Low	PASS	11
194.176.201.49	0.0	low	PASS	11
194.176.201.53	0.0	low	PASS	11
194.176.219.225	0.0	low	PASS	11
194.176.219.226	0.0	o Low	PASS	11
194.176.219.227	0.0	O LOW	PASS	11
194.176.219.241	0.0	o Low	PASS	11
194.176.219.242	0.0	low	PASS	11
194.176.219.243	0.0	 Low	PASS	11
194.176.219.244	0.0	low	PASS	11
194.176.219.245	0.0	 Low	PASS	11

Hosts where the operating system has been identified are:

IP Address	Operating System	Architecture	Vendor Certainty
		1	



Executive Summary

No Hosts Could be Fingerprinted

Note: Hosts not listed above were not able to be fingerprinted.



The table below outlines all identified vulnerabilities for each scanned host along with the risk of said vulnerability.

Please see the vulnerability details section regarding CVSS Score amendment notes when Exceptions, False Positives, or Compensating Controls have been provided to the ASV.

Please note that Denial of Service (DoS) issue are reported below as required however these are not marked as a Fail asper the PCI ASV programme guidelines. However it is strongly recommended that all DoS issues be addressed to further enhance the security of your network perimeter. One exception to not recording DoS issues as a PCI ASV FAIL is where a DoS issue is co-present with another separate significant issue for a given vulnerability single vulnerability. By way of an example in several vulnerabilities a DoS issue or a Remote Code Execution issue may be possible a outcome for the identified single vulnerability. In this example case as remote code execution is also possible as an alternative to the DoS outcome the issue remains in force, there are many other examples where DoS issues co-exist as outcomes with other significant weaknesses as described above and in these cases they will be recorded as a PCI ASV FAIL.

62.60.125.97							
Severity Level	CVSS Base Score	Compliance Status	Port	Service	Vulnerability Name	Exceptions, False Positives, or Compensating Controls, Noted by ASV for Vulnerability	Page
Low	0.0	PASS	N/A	N/A	ICMP timestamp response (CVE-1999-0524)	None Noted.	16
O LOW	0.0	PASS	161/udp	SNMP	SNMP v2 GetBulk Traffic Amplification	None Noted.	16

62.60.125.98							
Severity Level	CVSS Base Score	Compliance Status	Port	Service	Vulnerability Name	Exceptions, False Positives, or Compensating Controls, Noted by ASV for Vulnerability	Page
 LOW	0.0	PASS	N/A	N/A	ICMP timestamp response (CVE-1999-0524)	None Noted.	17
 Low	0.0	PASS	161/udp	SNMP	SNMP v2 GetBulk Traffic Amplification	None Noted.	17

62.60.1	62.60.125.99						
Severity Level	CVSS Base Score	Compliance Status	Port	Service	Vulnerability Name	Exceptions, False Positives, or Compensating Controls, Noted by ASV for Vulnerability	Page
Low	0.0	PASS	N/A	N/A	ICMP timestamp response (CVE-1999-0524)	None Noted.	18
Low	0.0	PASS	161/udp	SNMP	SNMP v2 GetBulk Traffic Amplification	None Noted.	18



62.60.12	25.113						
Severity Level	CVSS Base Score	Compliance Status	Port	Service	Vulnerability Name	Exceptions, False Positives, or Compensating Controls, Noted by ASV for Vulnerability	Page
Low	0.0	PASS	N/A	N/A	ICMP timestamp response (CVE-1999-0524)	None Noted.	19
Low	0.0	PASS	161/udp	SNMP	SNMP v2 GetBulk Traffic Amplification	None Noted.	19
194.176	5.201.49 - N	o issues Fo	ound				
194.176	5.201.53 - N	o issues Fo	ound				Ø
194.176	5.219.225 -	No issues f	Found				0
194.176	5.219.226 -	No issues f	Found				
194.176	5.219.227 -	No issues l	Found				
194.176	5.219.241 -	No issues I	Found				
194.176	5.219.242 -	No issues f	Found				
194.176	5.219.243 -	No issues I	Found				
194.176	5.219.244 -	No issues I	Found				
194.176	5.219.245 -	No issues f	Found				









Special Notes:

Special Notes:	Notes	Item Noted	Scan customers declaration that software is implemented securely (see next column if not implemented securely)	Scan customers description of actions taken to either: 1) remove the software or 2) implement security controls to secure the software
62.60.125.97	SNMP Service with potential risk requiring action or explanation on port: 161/udp found. Note to scan customer: Due to increased risk to the cardholder data environment when remote access software is present, please 1) justify the business need for this software to the ASV and 2) confirm it is either implemented securely per Appendix D or disabled/removed. Please consult your ASV if you have questions about this Special Note.	Remote Management		
62.60.125.98	SNMP Service with potential risk requiring action or explanation on port: 161/udp found. Note to scan customer: Due to increased risk to the cardholder data environment when remote access software is present, please 1) justify the business need for this software to the ASV and 2) confirm it is either implemented securely per Appendix D or disabled/removed. Please consult your ASV if you have questions about this Special Note.	Remote Management		
62.60.125.99	SNMP Service with potential risk requiring action or explanation on port: 161/udp found. Note to scan customer: Due to increased risk to the cardholder data environment when remote access software is present, please 1) justify the business need for this software to the ASV and 2) confirm it is either implemented securely per Appendix D or disabled/removed. Please consult your ASV if you have questions about this Special Note.	Remote Management		
62.60.125.113	SNMP Service with potential risk requiring action or explanation on port: 161/udp found. Note to scan customer: Due to increased risk to the cardholder data environment when remote access software is present, please 1) justify the business need for this software to the ASV and 2) confirm it is either implemented securely per Appendix D or disabled/removed. Please consult your ASV if you have questions about this Special Note.	Remote Management		









194.176.219.225	ISAKMP Service with potential risk requiring action or explanation on port: 500/udp found.	VPN
194.176.219.225	unknown Service with potential risk requiring action or explanation on port: 10000/tcp found. Note to scan customer: Due to increased risk to the cardholder data environment when remote access software is present, please 1) justify the business need for this software to the ASV and 2) confirm it is either implemented securely per Appendix D or disabled/ removed. Please consult your ASV if you have questions about this Special Note.	Remote Administration
194.176.219.226	ISAKMP Service with potential risk requiring action or explanation on port: 500/udp found.	VPN
194.176.219.226	unknown Service with potential risk requiring action or explanation on port: 10000/tcp found. Note to scan customer: Due to increased risk to the cardholder data environment when remote access software is present, please 1) justify the business need for this software to the ASV and 2) confirm it is either implemented securely per Appendix D or disabled/ removed. Please consult your ASV if you have questions about this Special Note.	Remote Administration
194.176.219.227	ISAKMP Service with potential risk requiring action or explanation on port: 500/udp found.	VPN
194.176.219.227	unknown Service with potential risk requiring action or explanation on port: 10000/tcp found. Note to scan customer: Due to increased risk to the cardholder data environment when remote access software is present, please 1) justify the business need for this software to the ASV and 2) confirm it is either implemented securely per Appendix D or disabled/ removed. Please consult your ASV if you have questions about this Special Note.	Remote Administration
194.176.219.241	ISAKMP Service with potential risk requiring action or explanation on port: 500/udp found.	VPN
194.176.219.241	unknown Service with potential risk requiring action or explanation on port: 10000/tcp found. Note to scan customer: Due to increased risk to the cardholder data environment when remote access software is present, please 1) justify the business need for this software to the ASV and 2) confirm it is either implemented securely per Appendix D or disabled/ removed. Please consult your ASV if you have questions about this Special Note.	Remote Administration
194.176.219.242	ISAKMP Service with potential risk requiring action or explanation on	VPN









	port: 500/udp found.	
194.176.219.242	unknown Service with potential risk requiring action or explanation on port: 10000/tcp found. Note to scan customer: Due to increased risk to the cardholder data environment when remote access software is present, please 1) justify the business need for this software to the ASV and 2) confirm it is either implemented securely per Appendix D or disabled/ removed. Please consult your ASV if you have questions about this Special Note.	Remote Administration
194.176.219.243	ISAKMP Service with potential risk requiring action or explanation on port: 500/udp found.	VPN
194.176.219.243	unknown Service with potential risk requiring action or explanation on port: 10000/tcp found. Note to scan customer: Due to increased risk to the cardholder data environment when remote access software is present, please 1) justify the business need for this software to the ASV and 2) confirm it is either implemented securely per Appendix D or disabled/ removed. Please consult your ASV if you have questions about this Special Note.	Remote Administration
194.176.219.244	ISAKMP Service with potential risk requiring action or explanation on port: 500/udp found.	VPN
194.176.219.244	unknown Service with potential risk requiring action or explanation on port: 10000/tcp found. Note to scan customer: Due to increased risk to the cardholder data environment when remote access software is present, please 1) justify the business need for this software to the ASV and 2) confirm it is either implemented securely per Appendix D or disabled/ removed. Please consult your ASV if you have questions about this Special Note.	Remote Administration
194.176.219.245	ISAKMP Service with potential risk requiring action or explanation on port: 500/udp found.	VPN
194.176.219.245	unknown Service with potential risk requiring action or explanation on port: 10000/tcp found. Note to scan customer: Due to increased risk to the cardholder data environment when remote access software is present, please 1) justify the business need for this software to the ASV and 2) confirm it is either implemented securely per Appendix D or disabled/ removed. Please consult your ASV if you have questions about this Special Note.	Remote Administration







Note to Customer: Due to increased risk to the cardholder data environment when the presence of certain software, configurations that may pose a risk to the scan customers environment due to insecure implementation, information disclosure or potential exploit rather than an exploitable vulnerability. Examples of such are:

- Browsing of Directories on Web Servers,
- Remote access such as VPN and SSH,
- Point-of-Sale (POS) Software

For each above special notes in the above table we require documentation of:

- The declared business need for the software,
- A declaration that the software is implemented with strong security controls as well as the details that comprise those controls as per Appendix D of the PCI ASV Program Guide 3
- Any actions taken, including removal, to secure the software as well as the details that comprise those controls.



Host Compliance Status

62.60.125.97



ICMP timestamp res	•	0	49%
Port:	N/A	Compliance Status:	S PASS
CVSS Base Score:	0.0 (AV:N/AC:L/AU:N/C:N/I:N/A:N) □	Severity Level:	Low
	es, or Compensating Controls. Noted by the ASV for rovided by the Scan Customer specific to this instance of		
Description:			
	against some systems to exploit weak time -based rando n be accurately fingerprinted by analyzing their response		and time. This information In addition, the versions of
some operating systems ca	n be accurately fingerprinted by analyzing their response	es to invalid ICMP timestamp requests.	In addition, the versions of
some operating systems ca	n be accurately fingerprinted by analyzing their response of the control of the c		In addition, the versions of
References: CVE-1999-0524	n be accurately fingerprinted by analyzing their response of the control of the c	es to invalid ICMP timestamp requests.	In addition, the versions of
References: CVE-1999-0524 XF:icmp-timestamp(322)	n be accurately fingerprinted by analyzing their response of the second	es to invalid ICMP timestamp requests.	In addition, the versions of
References: CVE-1999-0524 XF:icmp-timestamp(322) Probe Output	n be accurately fingerprinted by analyzing their response of the second	es to invalid ICMP timestamp requests.	In addition, the versions of

Port:	161/udp	Compliance Status:	S PASS
CVSS Base Score:	0.0 (AV:N/AC:L/AU:N/C:N/I:N/A:N)	Severity Level:	 Low
	s, or Compensating Controls. Noted by the ASV fo vided by the Scan Customer specific to this instance o		
Description:			
response can be 6x the size assets, typically in the form o	ion requests a number of GetNext responses to be retuing of the request, and because SNMP utilizes UDP, this confident of the service (DRDoS) attactions.	an be used to conduct traffic amplification	
response can be 6x the size of assets, typically in the form of	of the request, and because SNMP utilizes UDP, this o	an be used to conduct traffic amplification	
response can be 6x the size assets, typically in the form o	of the request, and because SNMP utilizes UDP, this o	an be used to conduct traffic amplification	
response can be 6x the size assets, typically in the form o	of the request, and because SNMP utilizes UDP, this o	an be used to conduct traffic amplification	
response can be 6x the size assets, typically in the form of References: CERT:TA14-017A	of the request, and because SNMP utilizes UDP, this o	an be used to conduct traffic amplification	
response can be 6x the size assets, typically in the form of References: CERT:TA14-017A Probe Output	of the request, and because SNMP utilizes UDP, this o	an be used to conduct traffic amplification	



Host Compliance Status

62.60.125.98



ICMP timestamp resp	oonse - (Proven Vulnerable)		
Port:	N/A	Compliance Status:	PASS
CVSS Base Score:	0.0 (AV:N/AC:L/AU:N/C:N/I:N/A:N) ♂	Severity Level:	LOW
	s, or Compensating Controls. Noted by the ASV for ovided by the Scan Customer specific to this instance of		
Description:			
could theoretically be used a	to an ICMP timestamp request. The ICMP timestamp resigainst some systems to exploit weak time -based rando be accurately fingerprinted by analyzing their responses	m number generators in other services.	
CVE-1999-0524 &	OSVDB:95	XF:icmp-netmask(3	nev [3]
XF:icmp-timestamp(322)	<u>034DB.33</u> 0	Ar.idily-nethiask(5)	<u>50)</u>
Probe Output	aweikanahahahahahahahahahahahah		aman jakana
Able to determine remote sy	stem time.		
Solution		ราย เราะ เล่า เล่า เล่า เล่า เล่า เล่า เล่า เล่า	Page
			raye

SNMP v2 GetBulk Traffic Amplification - (Potentially Vulnerable)					
Port:	161/udp	Compliance Status:	PASS		
CVSS Base Score:	0.0 (AV:N/AC:L/AU:N/C:N/I:N/A:N) [™]	Severity Level:	Low		

Exceptions, False Positives, or Compensating Controls. Noted by the ASV for this Vulnerability: No additional information provided by the Scan Customer specific to this instance of the Vulnerability.

Description:

An SNMP v2 GetBulk operation requests a number of GetNext responses to be returned in a single response. Depending on the MIB is in use, the response can be 6x the size of the request, and because SNMP utilizes UDP, this can be used to conduct traffic amplification attacks against other assets, typically in the form of distributed reflected denial of service (DRDoS) attacks.

References:

CERT:TA14-017A

Probe Output

Running SNMP service

Solution	Page
The Solution/Recommendation for this issue is located on page:	25



Host Compliance Status

62.60.125.99



D	N1/A	O	
Port:	N/A	Compliance Status:	S PASS
CVSS Base Score:	0.0 (AV:N/AC:L/AU:N/C:N/I:N/A:N)	Severity Level:	LOW
	ives, or Compensating Controls. Noted by the ASV for provided by the Scan Customer specific to this instance of		-
Description:			
	d against some systems to exploit weak time -based rando can be accurately fingerprinted by analyzing their response:		. In addition, the versions
some operating systems of			. In addition, the versions
some operating systems of References:	can be accurately fingerprinted by analyzing their responses	s to invalid TICMP timestamp requests.	
References: CVE-1999-0524	can be accurately fingerprinted by analyzing their responses OSVDB:95		
	can be accurately fingerprinted by analyzing their responses OSVDB:95	s to invalid TICMP timestamp requests.	
References: CVE-1999-0524 XF:icmp-timestamp(322) Systems of the control of t	oan be accurately fingerprinted by analyzing their responses OSVDB:95	s to invalid TICMP timestamp requests.	
References: CVE-1999-0524 XF:icmp-timestamp(322) Probe Output	oan be accurately fingerprinted by analyzing their responses OSVDB:95	s to invalid TICMP timestamp requests.	

SNMP v2 GetBulk Traffic Amplification - (Potentially Vulnerable)					
Port:	161/udp	Compliance Status:	PASS		
CVSS Base Score:	0.0 (AV:N/AC:L/AU:N/C:N/I:N/A:N) [™]	Severity Level:	Low		

Exceptions, False Positives, or Compensating Controls. Noted by the ASV for this Vulnerability: No additional information provided by the Scan Customer specific to this instance of the Vulnerability.

Description:

An SNMP v2 GetBulk operation requests a number of GetNext responses to be returned in a single response. Depending on the MIB is in use, the response can be 6x the size of the request, and because SNMP utilizes UDP, this can be used to conduct traffic amplification attacks against other assets, typically in the form of distributed reflected denial of service (DRDoS) attacks.

References:

CERT:TA14-017A

Probe Output

Running SNMP service

Solution	Page
The Solution/Recommendation for this issue is located on page:	25



Host Compliance Status

62.60.125.113



Port:	N/A	Compliance Status:	PASS
CVSS Base Score:	0.0 (AV:N/AC:L/AU:N/C:N/I:N/A:N)	Severity Level:	Low
	es, or Compensating Controls. Noted by the ASV for to ovided by the Scan Customer specific to this instance of		
Description:			
	against some systems to exploit weak time -based randorn be accurately fingerprinted by analyzing their responses		
~=			
CVE-1999-0524	OSVDB:95	XF:icmp-netmask(3	<u>06)</u> ♂
		XF:icmp-netmask(3	₀₆₎
XF:icmp-timestamp(322)		XF:icmp-netmask(3	0 <u>6)</u>
XF:icmp-timestamp(322) ぴ Probe Output		XF:icmp-netmask(3	<u>06)</u>
XF:icmp-timestamp(322) Probe Output Able to determine remote sy		XF:icmp-netmask(3	og G
Solution		XF:icmp-netmask(3	
XF:icmp-timestamp(322) Probe Output Able to determine remote sy Solution The Solution/Recommendat	ystem time.		Page
XF:icmp-timestamp(322) Probe Output Able to determine remote sy Solution The Solution/Recommendat	ystem time. tion for this issue is located on page:		Page

Description:

An SNMP v2 GetBulk operation requests a number of GetNext responses to be returned in a single response. Depending on the MIB s in use, the response can be 6x the size of the request, and because SNMP utilizes UDP, this can be used to conduct traffic amplification attacks against other assets, typically in the form of distributed reflected denial of service (DRDoS) attacks.

References:

CERT:TA14-017A

Probe Output

Running SNMP service

Solution Section Section Section (Section Section Sect	Page
The Solution/Recommendation for this issue is located on page:	25



Host Compliance Status 194.176.201.49

No issues were identified on this host.

Host Compliance Status
194.176.201.53

No issues were identified on this host.

Host Compliance Status
194.176.219.225

No issues were identified on this host.

Host Compliance Status
194.176.219.226

No issues were identified on this host.

Host Compliance Status
194.176.219.227

No issues were identified on this host.

Host Compliance Status
194.176.219.241

No issues were identified on this host.

Host Compliance Status
194.176.219.242

No issues were identified on this host.



Host Compliance Status	
194.176.219.243	

No issues were identified on this host.

Host Compliance Status
194.176.219.244

No issues were identified on this host.



No issues were identified on this host.



The below solutions are provided to aid resolving vulnerabilities identified in the above report. Please note the severity is rated per the PCI ASV Guidelines CVSSv2 rating system and may not in all cases be the rating applied per host vulnerability when Exceptions, False Positives, or Compensating Controls have been noted by the ASV.

PCI Impact	Solution	Page Number
(2)	ICMP timestamp response	23
0	SNMP v2 GetBulk Traffic Amplification	25









CVSS Base Score:

0.0 (AV:N/AC:L/AU:N/C:N/I:N/A:N)

PCI Impact:

PASS

Severity Level:

LOW

Description

The remote host responded to an ICMP timestamp request. The ICMP timestamp response contains the remote host's date and time. This information could theoretically be used against some systems to exploit weak time -based random number generators in other services. In addition, the versions of some operating systems can be accurately fingerprinted by analyzing their responses to invalid ICMP timestamp requests.

Solution

HP-UX

Execute the following command: ndd -set /dev/ip ip_respond_to_timestamp_broadcast 0 The easie st and most effective solution is to configure your firewall to block incoming and outgoing ICMP packets with ICMP types 13 (timestamp reguest) and 14 (timestamp response).

Cisco IOS

Use ACLs to block ICMP types 13 and 14. For example: deny icmp any any 13 deny icmp any any 14 Note that it is generally pref erable to use ACLs that block everything by default and then selectively allow certain types of traffic in. For example, block ever rything and then only allow ICMP unreachable, ICMP echo reply, ICMP time exceeded, and ICMP source quench: permit icmp any any unreachable permit icmp any any echo-reply permit icmp any any time-exceeded permit icmp any any source-quench The easiest and most effective solution is to configure your firewall to block incoming and outgoing ICMP packets with ICMP types 13 (timestamp request) and 14 (timestamp response).

SGI Irix

IRIX does not offer a way to disable ICMP timestamp responses. Therefore, you should block ICMP on the affected host using ipfilterd, and/or block it at any external firewalls. The easiest and most effective solution is to configure your firewall to block incoming and outgoing ICMP packets with ICMP types 13 (timestamp request) and 14 (timestamp response).

Linux

Linux offers neither a sysctl nor a /proc/sys/net/ipv4 interface to disable ICMP timestamp responses. Therefore, you should b lock ICMP on the affected host using iptables, and/or block it at the firewall. For exa mple: ipchains -A input -p icmp --icmp-type timestamp-request -j DROP ipchains -A output -p icmp --icmp-type timestamp-reply -j DROP The easiest and most effective solution is to configure your firewall to block incoming and outgoing ICMP packets with ICMP types 13 (timestamp request) and 14 (timestamp response).

Microsoft Windows NT, Microsoft Windows NT Workstation, Microsoft Windows NT Server, Microsoft Windows NT Advanced Server, Microsoft Windows NT Server, Enterprise Edition, Microsoft Windows NT Server, Terminal Server Edition

Windows NT 4 does not provide a way to block ICMP packets. Therefore, you should block them at the firewall. The easiest and most effective solution is to configure your firewall to block incoming and outgoing ICMP packets with ICMP types 13 (timestamp re quest) and 14 (timestamp response).

OpenBSD

Set the "net.inet.icmp.tstamprepl" sysctl variable to 0. sysctl -w net.inet.icmp.tstamprepl=0 The easiest and most effective solution is to configure your firewall to block incoming and outgoing ICMP pac kets with ICMP types 13 (timestamp request) and 14 (timestamp response).

Cisco PIX

A properly configured PIX firewall should never respond to ICMP packets on its external interface. In PIX Software versions 4 .1(6) until 5.2.1, ICMP traffic to the PIX's internal interface is permitted; the PIX cannot be configured to NOT respond. Beginning in PIX Software version 5.2.1, ICMP is still permitted on the internal interface by default, but ICMP responses from its internal interfaces can be disabled with the icmp command, as follows, where <inside> is the name of the internal interface: icmp deny any 13 <inside> icmp deny any 14 <inside> Don't forget to sav e the configuration when you are finished. See Cisco's support document (http://www.cisco.com/warp/pu blic/110/31.html) Handling ICMP Pings with the PIX Firewall for more information. The easiest and most effective solution is to configure your firewall to block incoming and outgoing ICMP p ackets with ICMP types 13 (timestamp request) and 14 (timestamp re sponse).

Sun Solaris

Execute the following commands: /usr/sbin/ndd -set /dev/ip ip_respond_to_timestamp 0 /usr/sbin/ndd -set /dev/ip ip_respond_to_timestamp_broadcast 0 The easiest and most effective solution is to configure your firewall to block incoming and outgoing ICMP packets with ICMP types 13 (timestamp request) and 14 (timestamp response).

Microsoft Windows 2000, Microsoft Windows 2000 Professional, Microsoft Windows 2000 Server, Microsoft Windows 2000 Advanced S erver, Microsoft Windows 2000 Datacenter Server

Use the IPSec filter feature to define and apply an IP filter list that blocks ICMP types 13 and 14. Note that the standard TCP/IP blocking capability under the "Networking and Dialup Connections" control panel is NOT capable of blocking ICMP (only TCP and UDP). The IPSec fil ter features, while they may seem strictly related to the IPSec standards, will allow you to selectively block these ICMP packets. See





(http://support.microsoft.com/kb/313190) for more information. The easiest and most effective solution is to configure your firewall to block incoming and outgoing ICMP packets with ICMP types 13 (timestamp request) and 14 (timestamp response).

Microsoft Windows XP, Microsoft Windows XP Home, Microsoft Windows XP Professional, Microsoft Windows Server 2003, Microsoft Windows Server 2003, Standard Edition, Microsoft Windows Server 2003, Enterprise Edition, Microsoft Windows Server 2003, Datacenter Edition, Microsoft Windows Server 2003, Web Edition, Microsoft Windows Small Business Server 2003

ICMP timestamp responses can be disabled by deselecting the "allow incoming times tamp request" option in the ICMP configuration panel of Windows Firewall. Go to the Network Connections control panel. Right click on the network adapter and select "properties", or select the internet adapter and select File->Properties. Select the "Advanced" tab. In the Windows Firewall box, select "Settings". Select the "General" tab. Enable the firewall by selecting the "on (recommended)" option. Select the "Advanced" tab. In the ICMP box, select "Settings". Desele ct (uncheck) the "Allow incoming timestamp request" option. Select "OK" to exit the ICMP Settings dialog and save the settings. Select "OK" to exit the Windows Firewall dialog and save the settings. Select "OK" to exit the internet adapter dialog. For more information, see: (http://www.microsoft.com/resources/documentation/windows/xp/all/proddocs/en -us/hnw_understanding_firewall.mspx?mfr=true)

Microsoft Windows Vista, Microsoft Windows Vista Home, Basic Edition, Microsoft Windows Vista Home, Basic N Edition, Microsoft t Windows Vista Home, Premium Edition, Microsoft Windows Vista Ultimate Edition, Microsoft Windows Vista Enterprise Edition, Microsoft Windows Vista Business Edition, Microsoft Windows Vista Business N Edition, Microsoft Windows Vista Starter Edition, Microsoft Windo ws Server 2008, Microsoft Windows Server 2008 Standard Edition, Microsoft Windows Server 2008 Enterprise Edition, Microsoft Windows Server 2008 Datacenter Edit ion, Microsoft Windows Server 2008 HPC Edition, Microsoft Windows Server 2008 Web Edition, Microsoft Windows Server 2008 Storage Edition, Microsoft Windows Server 2008 Web Edition, Microsoft Windows Server 2008 Notes and Microsoft Windows No Windows Small Business Server 2008, Microsoft Windows Essential Business Server 2008

ICMP timestamp responses can be disabled via the netsh command line utility. Go to the Windows Control Panel. Selec t "Windows Firewall". In the Windows Firewall box, select "Change Settings". Enable the firewall by selecting the "on (recommended)" option. Open a Comm and Prompt. Enter "netsh firewall set icmpsetting 13 disable" For more information, see: (http://www.microsoft.com/resources/documentation/windows/xp/all/proddocs/en -us/hnw understanding firewall.mspx?mfr=true)

Disable ICMP timestamp replies for the device. If the device does not support this level of configuration, the easiest and mo st effective solution is to configure your firewall to block incoming and outgoing ICMP packets with ICMP types 13 (timestamp request) and 14 (timestamp response).

References		
CVE-1999-0524 ♂	OSVDB:95	XF:icmp-netmask(306) ☑
XF:icmp-timestamp(322)		
Affected Hosts		
62.60.125.113 	<u>62.60.125.97</u>	62.60.125.98 '
62.60.125.99 		



SNMP v2 GetBulk Traffic Amplification				
0V00 Page 6	0.0 / 0.1 / 0	PCI Impact:	PASS	
CVSS Base Score:	0.0 (AV:N/AC:L/AU:N/C:N/I:N/A:N)	Severity Level:	LOW	
Description				
An SNMP v2 GetBulk operation requests a number of GetNext responses to be returned in a single response. Depending on the MIBs in use, the response can be 6x the size of the request, and because SNMP utilizes UDP, this can be used to conduct traffic amplification attacks against other assets, typically in the form of distributed reflected denial of service (DRDoS) attacks.				
Solution				
Restrict access to the SNMP service to only trusted assets				
References (A) A final test of contains the final policy in the final test of contains the final policy in				
<u>CERT:TA14-017A</u>				
Affected Hosts				
62.60.125.113 Z	<u>62.60.125.97</u>	<u>62.60.125.98</u>		
62.60.125.99				

Open Ports List

IP Address	Open Ports
62.60.125.97	161/udp (SNMP)
62.60.125.98	161/udp (SNMP)
62.60.125.99	161/udp (SNMP)
62.60.125.113	161/udp (SNMP)
194.176.201.49	
194.176.201.53	
194.176.219.225	500/udp (ISAKMP) 10000/tcp (unknown)
194.176.219.226	500/udp (ISAKMP) 10000/tcp (unknown)
194.176.219.227	500/udp (ISAKMP) 10000/tcp (unknown)
194.176.219.241	500/udp (ISAKMP) 10000/tcp (unknown)
194.176.219.242	500/udp (ISAKMP) 10000/tcp (unknown)
194.176.219.243	500/udp (ISAKMP) 10000/tcp (unknown)
194.176.219.244	500/udp (ISAKMP) 10000/tcp (unknown)
194.176.219.245	500/udp (ISAKMP) 10000/tcp (unknown)

Additional Information Gathered

IP:Port/Protocol	Vendor	Product	Version	Certainty
No Additional Information Gathered				