SPF 설치 및 운영 지침서

2005. 9.

SPF	=				
	SPF				
	SPF		(Publishing SPF)	
		Bind DNS	SPF	(UNIX	, LINUX)3
		WINDOWS	2000/2003 DNS	SFP	4
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		check-auth	@verifier.port25.co	m	
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<	1 SPF	1>	5
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SPF

SPF

SPF	DNS	(Zone)	TXT RR(Resource Record)	
	DNS			•

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SPF	(Publishing SPF)			
		SPF	DNS	(Zone)	ТХТ
RR(Resources Record)			SPF RFC		
	. SPF				SPF
	SPF RFC(DRAFT-SCH	LITT-SPF-	CLASSIC-02)		SPF

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SPF	
http://spf.pobox.com/wizard.html	
http://www.anti-spamtools.org/SenderIDEmailPolicyTool/Default.aspx	

< 1. SPF

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SPF

SPF									
check-auth@verifier.port25.com									
	doma	in.com,	id 가 admin	admin@domain.com	L				
<u>check-au</u>	uth@verifier.	port25.co	<u>om</u>		(
admin@domain.cor	<u>n</u>)		SPF						
	"pass"		SPF가		•				
	<	2 SPF	2	>					
Bind DNS	SPF		(UNIX, LINUX)						

BIND	/var/named	BIND ZONE
	ZONE	

SPF 가 Name ex) /etc/init.d/named restart SPF ex) <u>check-auth@verifier.port25.com</u>

#						
	\$TTL 86400					
	@	IN	SOA	ns.example.com root.example.com(
			200508	1200 ; serial		
			10800	; refresh		
			3600	; retry		
			604800	; expire		
			86400)	; ttl		
		IN	NS	ns.example.com.		
		IN	MX	mx1.example.com		
	www	IN	А	192.168.1.100		
	mail	IN	А	192.168.1.101		
	example.com.	IN	тхт	v=spf1 a:mail.example.com -all"		
			가 SPF	=		
		~	< 3 SPF	= - ()>		
NDOWS	2000/2003 DNS		SFP			
	MMC(Mi	icrosoft	Managem	pent Console) DNS		
			managon			
-						
	->	->		-> DNS		
Forward lookup zones SPF						
	()			
				"Other New	Record"	

z, Ele Action View Window ← → 💽 📧 🗔 😭	Help		-82
L DNS	mandb-thit.com 9 rec	ord(s)	
	Name	Type 🛆	Data
Forward Lookup Zones	Imail Imail Im	Alias (CNAME) Alias (CNAME) Host (A) Mail Exchanger (MX) Name Server (NS) Name Server (NS) Name Server (NS) Start of Authority (SOA) er Data File) NAME) changer (MX)	[0]
	View	•	
	Arrange Icon Ling up Icon Properties	ns 🕨	
	Help		

< 1 SPF 1>



"Create Record"

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.

Resource Record Type	<u> ? ×</u>
Select a resource record type:	
Route Through (RT) Service Location (SRV) Signature (SIG)	
Text (TXT) Well Known Services (WKS) X.25	•
Description:	
Text (TXT) record. Holds a string of characters that serves as descriptive text to be associated with a specific DNS domain name The semantics of the actual descriptive text used as data with thi record type depends on the DNS domain where these records are located. (RFC 1035)	a. S
Create Record	ncel

< 2 SPF 2>

SPF Text 가 . "v=spf1 mx -all") New Resource Record ? × Text (TXT) Record name (uses parent domain if left blank): Eully qualified domain name (FQDN): .com. T<u>e</u>xt: v=spf1 mx -all . v ||► ОK Cancel

< 3 SPF 3>

Ok

(



< 4 SPF 4>

SPF

SPF가

check-auth@verifier.port25.com

```
_____
Summary of Results
                _____
mail-from check: pass
PRA check: pass
DomainKeys check: neutral (message not signed)
_____
Details:
_____
HELO hostname: sniper.kisa.or.kr
Source IP: 211.252.150.22
mail-from: joonkim@kisa.or.kr
PRA Header: from
PRA: joonkim@kisa.or.kr
SPF TXT record/s:
v=spf1 a:sniper.kisa.or.kr ~all
PRA TXT record/s:
v=spf1 a:sniper.kisa.or.kr ~all
Domain Key TXT record:
None
```

SPF

http://www.dnsstuff.com/pages/spf.htm

🗿 SPF Testing - Microsoft Internet Explorer	×
파일(E) 편집(E) 보기(V) 즐겨찾기(A) 도구(I) 도움말(H)	7
G 뒤로 • 🕑 · 🖹 🛃 🏠 🔎 검색 👷 즐겨찾기 🚱 🔗 • 🌺 🖸 • 🛄 🖓	
주소(D) 🕘 http://www.dnsstuff.com/pages/spf.htm 💽 🄁 이동 연결	»
SPF Tester	^
E-mail address (or domain or SPF string): IP mail is coming from: Lookup	
(C) Copyright 2000–2004 R. Scott Perry. All Rights Reserved.	~
🙆 완료 👘 🖉 인터넷	

5 SPF < >

SPF

SPF	가						S	SPF		
	MTA ¹ (Mai	I Transfer	Agent)							
					SF	۶F				(Content
Filteri	ng)					SMT	⁻ P ² da	itaフ	ŀ	
		가		. SPF ³	\$			S	endmail	
8.12		(milter)		(compile)					Sendmail	8.13
					. Po	stfix	:	2.1		SPF
		SPF		spf.pobox.c	om		Pol	icy	Daemon	
SPF							가			
				SPF						
		SPF								
Spa	mAssassin									
		3.0	SPF	=	(defau	ult)				
		(SPF)		MTA/						

¹ Mail Transfer Agent
 ² Simple Mail Transfer Protocol
 ³ Sender Policy Framework

	SPF				가
		SPF			가
SPF		SPF	가		(
).	MTA(Sendmail, Postfix, Qmail)	MTA	

.

SPF	(/u	sr/shai	e/Spamassass	in/50_s	scores.	cf)
# SPF						
# PATH /usr/sha	re/spai	massas	sin/			
ifplugin Mail::Spa	mAssa	ssin::P	lugin::SPF			
score SPF_PASS	-0.00	1 # SPF	=	(0.001	
endif # Mail::SpamAs	sassin	::Plugir	n::SPF			
	<	4	SPF		>	

MTA(Mail Transfer Agent)

4		SPF		milter	Ser	ndmail	
	Perl	Mark Kram	er	spf-m	ilter C		Jef
Poskanzer		spfmilter가		Perl	SPF	가	
			. C	libsp	of2		
				7	ŀ		_

Sendmail

- Perl based spf-milter
 - Α.

POSIX
Sendmail::Milter
Socket
Net::CIDR
Mail::SPF::Query
Mail::SRS
Getopt
Errno

< 5 spf-milter Perl >

B. Sendmail.mc (<u>http://www.cpan.org/</u>)

 #
 Sendmail.mc
 71
 .

 define(`confMILTER_LOG_LEVEL',`9')dnl

 define(`confMILTER_MACROS_HELO', confMILTER_MACROS_HELO`, {verify}')dnl

 INPUT_MAIL_FILTER(`spf-milter',`S=local:/var/spf-milter/spf-milter.sock,

 F=T,T=C:4m;S:4m;R:8m;E:10m')dnl

< 6 spf-milter Semdmail.mc >

C. Sendmail.cf

Sendmail.cf

-) > m4 < sendmail.mc > sendmail.cf
- D. spf-milter
 -) > /usr/local/perl-threaded/bin/perl /usr/local/spf/sendmail-milter.pl milter

E. Sendmail

) /etc/init.d/Sendmail restart

C based spfmilter

A. sendmail

>sendmail -d0.1 -bt < /dev/null | grep MILTER "MILTER"

B. libspf2

www.libspf2.org/download.html libspf2-1.2.5.tar.gz)./configure –enable-pthreads; make; make install

C. spfmilter

http://www.acme.com/software/spfmilter/ spfmilter-x.xx.tar.gz

)./configure; make; make install

D. sendmail.mc

가

INPUT_MAIL_FILTER(`spfmilter',`S=unix:/var/run/spfmilter.sock, T=S:8m;R:8m')

< 6 spfmilter Sendmail.mc >

E. sendmail.cf

endmail.cr) >m4 < sendmail.mc > sendmail.cf

F. SPF 가 fallback

/etc/mail/spfm	ilter-fallbac	k		
yahoo.* ptr:ya	ahoo.com –a	all		
.yahoo. ptr:	yahoo.com	- all		
fallback	SPF	가		SPF
가				

G. SPF

/etc/mail/spfmilter - white	elist
127.0.0.1 #	(local loopback interface)
192.168.64.0/24 #	
10.0.0/8	
192.68.1.0-192.68.1.2	55
192.68.0.0/16	

H. spfmilter

) # spfmilter unix:/var/run/spfmilter.sock

I. sendmail

) /etc/init.d/sendmail restart

J. SPF

SPF

spfmilter sendmail

Postfix

Α.

http://spf.pobox.com/downloadsmtpd-policy.pl.Sendmail Perl-based-filter.(Sendmail perl-based

)

B. Postfix

• /etc/postfix/master.cf /etc/postfix/main.cf

policy unix - n n - - spawn user=nobody argv=/usr/bin/perl /usr/libexec/postfix/smtpd-policy.pl

< 7 postfix master.cf

>

smtpd_recipient_restrictions =
...#
reject_unknown_sender_domain
reject_unauth_destination
check_policy_service unix:private/policy
...#

< 8 postfix main.cf >

C. Postfix

) /etc/init.d/postfix restart

Qmail

A. qmail SPF

http://spf.pobox.com/download qmail

Β.

) > patch -p1 < /path/to/qm	ail-spf- <version>.patch</version>	
<version></version>		1.02
qmail-spf-1.02.patch		

C. SPF

/var/qmail/control

spfbehavior

0: SPF	, SPF-Received	가	
1: SPF-Received	가,		
2: DNS	Temperr		
3: "fail"			
4: "Softfail"			
5: "neutral"			
6: "pass"			

MS Exchange

MS Exchange SPF GFI (www.gfi.com) MailEssential 10.1 SPF .

Α.

- Windows 2000/2003 Sever
 Advanced/Enterprise Server
- Microsoft Exchange 2000/2003
- В.
- GFI MailEssentials Exchange Server 2000/2003



< 6 GFI 1>

- C. SPF
 - GFI MailEssentials
 - Configuration "Sender Policy Framework"



< 7 GFI 2>

"Properties"

• Never, Low Medium High

eneral	Exceptions Actions Other
	The Sender Policy Framework (SPF) lights spam by detecting emails with forged senders.
Block	Jevel
Selec set th	t the block level you want configured for SPF. It is recommended to a level to 'medium'.
-	Medium Block messages which appear to have a forged sender (SPF fail and softfail)
	J-
5-++	

< 8 GFI 3>

HQA	
Eemove	
Henoye	
	Add . Renove

< 9 GFI 4>

•

Configure the action to pe Additional options are pre	erform when a spam message is detected, sent on the 'Other' tab.
C Delote	
Move to subfolder of user's mailbox. (Exchange only.)	[inbowSPF
C Eorward to email address:	administrator@biginarc.local
[™] Move to the specified folder.	
I ag email with the following te	st. SPEM
Use this option to move spam	to a user defined folder if not installed on an achine. See the manual for more
information.	

< 10 GFI 5>

• SPF



< 11 GFI 6>

SPF	SMTP		SMTP	
			. SPF	
	가	가		
	SPF			
				SPF
spf.pobc	x.com			

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- M. Wong and W. Schlitt "SPF Draft-schlitt-spf-classic-02"IETF RFC[pending], June 2005
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- Bryan Costales and Eric Allman "Sendmail" 3rd Ed Oreilly & Association, December 2002
- Bryan Costales and Marcia Flyn "Sendmail Milters" Addison-Wesley, 2005
- Meng Weng Wong "SPF: Sender Policy Framework" http://spf.pobox.com, August 2005
- Wayne Schlitt "libspf2 SPF Library Support" <u>http://www.libspf2.org</u>, August 2005
- Paul Howarth "city-fan.org mail software repository" <u>http://www.city-fan.org</u>, August 2005
- Mark ? " System Administrator" Asarian host.org, August 2005
- Jef Poskanzer "spfmilter SPF mail filter module"<u>http://www.acme.com/software/spfmilter</u> Aug. 2005
- Mark Kramer "A Sendmail LibMilter filter to block spam"<u>http://www.wanlink.com/spamilter</u> Aug. 2005
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ksrc@kisa.or.kr