



Port and Protocol Values

This appendix lists the port and protocol values used by the FWSM and contains these sections:

- [Specifying Port Values, page B-1](#)
- [Specifying Protocol Values, page B-5](#)

Specifying Port Values

You can use literal names instead of numerical port values in command syntax.

The FWSM permits the following TCP literal names: **bgp, chargen, cmd, citrix-ica, daytime, discard, domain, echo, exec, finger, ftp, ftp-data, gopher, h323, hostname, http, ident, irc, klogin, kshell, lpd, nntp, pop2, pop3, pptp, rpc, smtp, sqlnet, sunrpc, tacacs, talk, telnet, time, uucp, whois, and www.**

The FWSM uses port 1521 for SQL*Net. This is the default port used by Oracle for SQL*Net; however, this value does not agree with IANA port assignments.

The FWSM listens for RADIUS on ports 1645 and 1646. If your RADIUS server uses ports 1812 and 1813, you will need to reconfigure it to listen on ports 1645 and 1646.

To assign a port for DNS access, use **domain**, not **dns**. The **dns** keyword translates into the port value for **dnsix**.



Note

The FWSM drops DNS packets sent to UDP port 53 (usually used for DNS) that have a packet size larger than 512 bytes.

Permitted UDP literal names are **biff, bootpc, bootps, discard, dnsix, echo, mobile-ip, nameserver, netbios-dgm, netbios-ns, ntp, rip, snmp, snmptrap, sunrpc, syslog, tacacs, talk, tftp, time, who, and xdmcp.**

You can view port numbers online at this URL:

<http://www.iana.org/assignments/port-numbers>

[Table B-1](#) lists the port values and literal names.

Table B-1 Port Values and Literal Names

Literal	Value	Description
administratively-prohibited	93	
alternate-address	102	
aol	60	America Online
bgp	179	Border Gateway Protocol, RFC 1163
biff	512	Used by mail system to notify users that new mail is received
bootpc	68	Bootstrap Protocol Client
bootps	67	Bootstrap Protocol Server
chargen	19	Character Generator
citrix-ica	1494	Citrix Independent Computing Architecture (ICA) protocol
cmd	514	Similar to exec except that cmd has automatic authentication
conversion-error	120	
ctiqbe	14	
daytime	13	Day time, RFC 867
discard	9	Discard
DHCP server	67	
DHCP client	68	
dod-host-prohibited	92	
dod-net-prohibited	91	
domain	53	DNS (Domain Name System)
dnsix	195	DNSIX Session Management Module Audit Redirector
echo	7, 103	Echo
echo-reply	78	Echo reply
exec	512	Remote process execution
finger	79	Finger
ftp	21	File Transfer Protocol (control port)
ftp-data	20	File Transfer Protocol (data port)
general-parameter	110	
gopher	70	Gopher
h323	1720	H.323 call signaling
host-isolated	90	
hostname	101	NIC Host Name Server
host-precedence-unreachable	94	
host-tos-unreachable	89	
host-redirect		
host-tos-redirect	101	
host-unknown	87	

Table B-1 Port Values and Literal Names (continued)

Literal	Value	Description
host-unreachable	81	
https	62	
ident	113	Ident authentication service
imap4	63	
information-reply	116	
information-request	117	
irc	194	Internet Relay Chat protocol
isakmp	500	ISAKMP
kerberos	64	
klogin	543	KLOGIN
kshell	544	Korn Shell
ldap	65	
ldaps	66	
lpd	515	Line Printer Daemon—printer spooler
login	513	Remote login
lotusnotes	67	
mask-reply	118	
mask-request	117	
mobile-ip	434	Mobile IP-Agent
mobile-redirect	121	
nameserver	42	Host Name Server
netbios-dgm	138	NETBIOS Datagram Service
net-redirect	98	
net-tos-redirect	100	
net-tos-unreachable	88	
network-unknown	86	
nntp	119	Network News Transfer Protocol
netbios-ns	137	NETBIOS Name Service
netbios-ssn	68	Network Basic Input Output System
netreachable	80	
no-room-for-option	112	
ntp	123	Network Time Protocol
option-missing	111	
packet-too-big	84	
pcanywhere-data	69	
parameter-problem	109	

Table B-1 Port Values and Literal Names (continued)

Literal	Value	Description
pcanywhere-status	73	
pim-auto-rp	496	Protocol Independent Multicast, reverse path flooding, dense mode
pop2	109	Post Office Protocol—Version 2
pop3	110	Post Office Protocol—Version 3
port-unreachable	83	Port cannot be found
pptp	70	Point-to-Point Tunneling Protocol. RFC 2637 describes the PPTP protocol
precedence-unreachable	95	Precedence cannot be found
protocol-unreachable	82	Protocol cannot be found
radius	74, 1645, 1646	Remote Authentication Dial-In User Service
radius-acct	75	Remote Authentication Dial-In User Service
reassembly-timeout	108	Specifies the timeout for reassembly
redirect	97	Redirect
router-advertisement	104	Router sends advertisement
router-solicitation	105	Queries the router
rip	520	Routing Information Protocol
rpc	71	Remote Procedure Call
secureid-udp	76	Specifies UDP secure ID
sip	58	Session Initiation Protocol
skinny	59	Simple (Skinny) Client Control Protocol
smtp	25	Simple Mail Transport Protocol
snmp	161	Simple Network Management Protocol
snmptrap	162	Simple Network Management Protocol—Trap
source-route-failed	85	Route inactive
source-quench	96	Remove sourcing
sqlnet	1521	Structured Query Language Network
ssh	72	Secure shell
sunrpc	111	Sun RPC (Remote Procedure Call)
syslog	514	System Log
tacacs	49	TACACS+ (Terminal Access Controller Access Control System Plus)
talk	517	Talk
telnet	23	RFC 854 Telnet
tftp	69	Trivial File Transfer Protocol

Table B-1 Port Values and Literal Names (continued)

Literal	Value	Description
time	37	Time
time-exceeded	106	Time exceeded
timestamp-reply	114	Returns the time stamp
timestamp-request	113	Requests a time stamp
traceroute	119	Specifies trace routing
ttl-exceeded	107	TTL is exceeded
unreachable	79	Connection refused or inactive
uucp	540	UNIX-to-UNIX Copy Program
who	513	Who
whois	43	Who Is
www	80	World Wide Web
xmcp	177	X Display Manager Control Protocol, used to communicate between X terminals and workstations running UNIX

Specifying Protocol Values

You can specify protocols by numeric and literal values. Possible literal values are **ahp**, **eigrp**, **esp**, **gre**, **icmp**, **igmp**, **igrp**, **ip**, **ipinip**, **ipsec**, **nos**, **ospf**, **pcp**, **snp**, **tcp**, and **udp**.

You can view protocol numbers at this URL:

<http://www.iana.org/assignments/protocol-numbers>



Note

Many routing protocols use multicast packets to transmit their data. If you send routing protocols across the FWSM, configure the surrounding routers with the Cisco IOS software **neighbor** command. If routes on an unprotected interface are corrupted, the routes that are transmitted to the protected side of the firewall will corrupt routers there.

Table B-2 lists the numeric values and literal names for the protocols.

Table B-2 Protocol Numeric and Literal Values

Literal	Value	Description
ah	51	Authentication Header for IPv6, RFC 1826
eigrp	88	Enhanced Interior Gateway Routing Protocol
esp	50	Encapsulated Security Payload for IPv6, RFC 1827
gre	47	General Routing Encapsulation
icmp	1	Internet Control Message Protocol, RFC 792
igmp	2	Internet Group Management Protocol, RFC 1112
igrp	9	Interior Gateway Routing Protocol
ip	0	Internet Protocol

Table B-2 Protocol Numeric and Literal Values (continued)

Literal	Value	Description
ipinip	4	IP-in-IP encapsulation
nos	94	Network Operating System (Novell's NetWare)
ospf	89	Open Shortest Path First routing protocol, RFC 1247
pcp	108	Payload Compression Protocol
snp	109	Sitara Networks Protocol
tcp	6	Transmission Control Protocol, RFC 793
udp	17	User Datagram Protocol, RFC 768