

The Anatomy of Access Lists

The Standard IP Access List

List #	Rule	Pattern Definition	
		Source Address	Wild Card Mask
access-list nn	permit or deny	xxx.xxx.xxx.xxx	ccc.ccc.ccc.ccc
Allowed Range for Standard List is 1-99	Specify the nature of this line: permit or deny.	The IP address of the source of the packet.	This mask must be applied to the source to determine which bits are significant. 0 in the mask is apply, 1 in the mask is ignore. (AKA inverse mask)

The Extended IP Access List

Note: Shaded sections below are *optional*. They are used only when the protocol specified is TCP or UDP.

List #	Rule	Pattern Definition						
		Protocol	Source Address	Source Mask	Destination Address	Destination Mask	Operator	Port#
access-list nnn	permit or deny	see below	sss.sss.sss.sss	ccc.ccc.ccc.ccc	ttt.ttt.ttt.ttt	rrr.rrr.rrr.rrr	see below (TCP or UDP)	ppp (TCP or UDP)
Allowed Range is 100-199	Choose one only	ICP, ICMP, TCP, UDP, etc.	IP address of packet's source.	0 = apply 1 = ignore.	IP address of packet's destination.	0 = apply 1 = ignore	eq for = gt for > lt for < neq for ≠	see table on back

The Standard IPX Access List

List #	Rule	Pattern Definition	
		Source Address	Destination Address
access-list nnn	permit or deny	xxx	ccc
Range for Standard IPX 800-899	Choose one only	The IPX address of the source of the packet.	The IPX address of the destination of the packet.

Common Port Numbers Filtered Using IP Extended Access Lists

Protocol	Port Number	Protocol Name
TCP	20	File Transfer Protocol (FTP) <i>data</i>
TCP	21	File Transfer Protocol (FTP) <i>program</i>
TCP	23	Telnet
TCP	25	Simple Mail Transfer Protocol (SMTP)
UDP	53	Domain Name Service (DNS)
UDP	69	Trivial File Transfer Protocol (TFTP)
TCP	80	Hypertext Transfer Protocol (HTTP)
UDP	161, 162	Simple Network Management Protocol (SNMP)

Protocols With Access Lists Specified By Numbers

Protocol	Range
IP	1 to 99
Extended IP	100 to 199
XNS	400 to 499
Extended XNS	500 to 599
AppleTalk	600 to 699
IPX	800 to 899
Extended IPX	900 to 999
IPX SAP	1000 to 1099
Standard VINES	1 to 100
Extended VINES	101 to 200
Simple VINES	201 to 300