ip		

dscp <value>		`ip dscp cs1`
		`ip dscp != cs1`
		`ip dscp 0x38`
		`ip dscp != 0x20`
		`ip dscp {cs0, cs1, cs2, cs3, cs4, af11, af12, af13}`

length <length>	Общая длина пакета	`ip length 232`
		`ip length != 233`
		`ip length 333-435`
		`ip length != 333-453`
		`ip length { 333, 553, 673, 838 }`

id <id>	IP ID	`ip id 22`
		`ip id != 233`
		`ip id 33-45`
		`ip id != 33-45`
		`ip id { 33, 55, 67, 88 }`

frag-off <value>	Смещение фрагментации	`ip frag-off 222`
		`ip frag-off != 233`
		`ip frag-off 33-45`
		`ip frag-off != 33-45`
		`ip frag-off { 33, 55, 67, 88 }`

ttl <ttl>	Time to live	`ip ttl 0`
		`ip ttl 233`
		`ip ttl 33-55`
		`ip ttl != 45-50`
		`ip ttl { 43, 53, 45 }`
		`ip ttl { 33-55 }`

protocol <protocol>	Протокол верхнего уровня	`ip protocol tcp`
		`ip protocol 6`
		`ip protocol != tcp`
		`ip protocol { icmp, esp, ah, comp, udp, udplite, tcp, dccp, sctp }`

checksum <checksum>	IP header checksum	`ip checksum 13172`
		`ip checksum 22`
		`ip checksum != 233`
		`ip checksum 33-45`
		`ip checksum != 33-45`
		`ip checksum { 33, 55, 67, 88 }`
		`ip checksum { 33-55 }`

saddr <ip source address>	Адрес источника / Source address	`ip saddr 192.168.2.0/24`
		`ip saddr != 192.168.2.0/24`
		`ip saddr 192.168.3.1 ip daddr 192.168.3.100`
		`ip saddr != 1.1.1.1`
		`ip saddr 1.1.1.1`
		`ip saddr & 0xff == 1`
		`ip saddr & 0.0.0.255 < 0.0.0.127`

daddr <ip destination address>	Адрес назначения / Destination address	`ip daddr 192.168.0.1`
		`ip daddr != 192.168.0.1`
		`ip daddr 192.168.0.1-192.168.0.250`
		`ip daddr 10.0.0.0-10.255.255.255`
		`ip daddr 172.16.0.0-172.31.255.255`
		`ip daddr 192.168.3.1-192.168.4.250`
		`ip daddr != 192.168.0.1-192.168.0.250`
		`ip daddr { 192.168.0.1-192.168.0.250 }`
		`ip daddr { 192.168.5.1, 192.168.5.2, 192.168.5.3 }`

version <version>	Ip Header version	`ip version 4`
hdrlength <header length>	IP header length	`ip hdrlength 0` `ip hdrlength 15`

ip6		

dscp <value>		`ip6 dscp cs1`
		`ip6 dscp != cs1`
		`ip6 dscp 0x38`
		`ip6 dscp != 0x20`
		`ip6 dscp {cs0, cs1, cs2, cs3, cs4, cs5, cs6, cs7}`

flowlabel <label>	Flow label	`ip6 flowlabel 22`
		`ip6 flowlabel != 233`
		`ip6 flowlabel { 33, 55, 67, 88 }`
		`ip6 flowlabel { 33-55 }`

length <length>	Payload length	`ip6 length 232`
		`ip6 length != 233`
		`ip6 length 333-435`
		`ip6 length != 333-453`
		`ip6 length { 333, 553, 673, 838}`

nexthdr <header>	Тип следующего заголовка (Номер вышестоящего протокола) / Next header type (Upper layer protocol number)	`ip6 nexthdr {esp, udp, ah, comp, udplite, tcp, dccp, sctp, icmpv6}`
		`ip6 nexthdr esp`
		`ip6 nexthdr != esp`
		`ip6 nexthdr { 33-44 }`
		`ip6 nexthdr 33-44`
		`ip6 nexthdr != 33-44`

hoplimit <hoplimit>	Hop limit	`ip6 hoplimit 1`
		`ip6 hoplimit != 233`
		`ip6 hoplimit 33-45`
		`ip6 hoplimit != 33-45`
		`ip6 hoplimit {33, 55, 67, 88}`
		`ip6 hoplimit {33-55}`

saddr <ip source address>	Адрес источника / Source Address	`ip6 saddr 1234:1234:1234:1234:1234:1234:1234:1234`
		`ip6 saddr ::1234:1234:1234:1234:1234:1234:1234`
		`ip6 saddr ::/64`
		`ip6 saddr ::1 ip6 daddr ::2`

daddr <ip destination address>	Адрес назначения / Destination Address	`ip6 daddr 1234:1234:1234:1234:1234:1234:1234:1234` `ip6 daddr != ::1234:1234:1234:1234:1234:1234:1234-1234:1234::1234:1234:1234:1234:1234`
version <version>	IP header version	`ip6 version 6`

tcp		

dport <destination port>	Порт назначения / Destination port	`tcp dport 22`
		`tcp dport != 33-45`
		`tcp dport { 33-55 }`
		`tcp dport {telnet, http, https }`
		`tcp dport vmap { 22:accept, 23:drop }`
		`tcp dport vmap { 25:accept, 28:drop }`

sport < source port>	Порт источника / Source port	`tcp sport 22`
		`tcp sport != 33-45`
		`tcp sport { 33, 55, 67, 88}`
		`tcp sport { 33-55}`
		`tcp sport vmap { 25:accept, 28:drop }`
		`tcp sport 1024 tcp dport 22`

sequence <value>	Порядковый номер / Sequence number	`tcp sequence 22` `tcp sequence != 33-45`

ackseq <value>	Номер подтверждения / Acknowledgement number	`tcp ackseq 22`
		`tcp ackseq != 33-45`
		`tcp ackseq { 33, 55, 67, 88 }`
		`tcp ackseq { 33-55 }`

flags <flags>	TCP flags	`tcp flags { fin, syn, rst, psh, ack, urg, ecn, cwr}`
		`tcp flags cwr`
		`tcp flags != cwr`

window <value>	Window	`tcp window 22`
		`tcp window != 33-45`
		`tcp window { 33, 55, 67, 88 }`
		`tcp window { 33-55 }`

checksum <checksum>	IP header checksum	`tcp checksum 22`
		`tcp checksum != 33-45`
		`tcp checksum { 33, 55, 67, 88 }`
		`tcp checksum { 33-55 }`

urgptr <pointer>	Urgent pointer	`tcp urgptr 22`
		`tcp urgptr != 33-45`
		`tcp urgptr { 33, 55, 67, 88 }`

doff <offset>	Data offset	`tcp doff 8`

udp		

dport <destination port>	Порт назначения / Destination port	`udp dport 22`
		`udp dport != 33-45`
		`udp dport { 33-55 }`
		`udp dport {telnet, http, https }`
		`udp dport vmap { 22 : accept, 23 : drop }`
		`udp dport vmap { 25:accept, 28:drop }`

sport < source port>	Порт источника / Source port	`udp sport 22`
		`udp sport != 33-45`
		`udp sport { 33, 55, 67, 88}`
		`udp sport { 33-55}`
		`udp sport vmap { 25:accept, 28:drop }`
		`udp sport 1024 tcp dport 22`

length <length>	Total packet length	`udp length 6666`
		`udp length != 50-65`
		`udp length { 50, 65 }`
		`udp length { 35-50 }`

checksum <checksum>	UDP checksum	udp checksum 22 udp checksum != 33-45 udp checksum { 33, 55, 67, 88 } udp checksum { 33-55 }

ah		
hdrlength <length>	Длина заголовка аутентификации / AH header length	ah hdrlength 11-23 ah hdrlength != 11-23 ah hdrlength {11, 23, 44 }
reserved <value>		ah reserved 22 ah reserved != 33-45 ah reserved {23, 100 } ah reserved { 33-55 }
spi <value>		ah spi 111 ah spi != 111-222 ah spi {111, 122 }
sequence <sequence>	Порядковый номер / Sequence Number	ah sequence 123 ah sequence {23, 25, 33} ah sequence != 23-33

esp		
spi <value>		esp spi 111 esp spi != 111-222 esp spi {111, 122 }
sequence <sequence>	Порядковый номер / Sequence Number	esp sequence 123 esp sequence {23, 25, 33} esp sequence != 23-33

icmp		
type <type>	ICMP packet type	icmp type {echo-reply, destination-unreachable, source-quench, redirect, echo-request, time-exceeded, parameter-problem, timestamp-request, timestamp-reply, info-request, info-reply, address-mask-request, address-mask-reply, router-advertisement, router-solicitation}
code	ICMP packet code	icmp code 111 icmp code != 33-55 icmp code { 2, 4, 54, 33, 56}

checksum <value>	ICMP packet checksum	`icmp checksum 12343`
		`icmp checksum != 11-343`
		`icmp checksum { 1111, 222, 343 }`

id <value>	ICMP packet id	`icmp id 12343`
		`icmp id != 11-343`
		`icmp id { 1111, 222, 343 }`

sequence <value>	ICMP packet sequence	`icmp sequence 12343`
		`icmp sequence != 11-343`
		`icmp sequence { 1111, 222, 343 }`

mtu <value>	ICMP packet mtu	`icmp mtu 12343`
		`icmp mtu != 11-343`
		`icmp mtu { 1111, 222, 343 }`

gateway <value>	ICMP packet gateway	`icmp gateway 12343`
		`icmp gateway != 11-343`
		`icmp gateway { 1111, 222, 343 }`

icmpv6		
type <type>	ICMPv6 packet type	`icmpv6 type {destination-unreachable, packet-too-big, time-exceeded, echo-request, echo-reply, mld-listener-query, mld-listener-report, mld-listener-reduction, nd-router-solicit, nd-router-advert, nd-neighbor-solicit, nd-neighbor-advert, nd-redirect, parameter-problem, router-renumbering}`

code <code>	ICMPv6 packet code	`icmpv6 code 4`
		`icmpv6 code 3-66`
		`icmpv6 code {5, 6, 7}`

checksum <value>	ICMPv6 packet checksum	`icmpv6 checksum 12343`
		`icmpv6 checksum != 11-343`
		`icmpv6 checksum { 1111, 222, 343 }`

id <value>	ICMPv6 packet id	`icmpv6 id 12343`
		`icmpv6 id != 11-343`
		`icmpv6 id { 1111, 222, 343 }`

sequence <value>	ICMPv6 packet sequence	`icmpv6 sequence 12343`
		`icmpv6 sequence != 11-343`
		`icmpv6 sequence { 1111, 222, 343 }`

mtu <value>	ICMPv6 packet mtu	`icmpv6 mtu 12343`
		`icmpv6 mtu != 11-343`
		`icmpv6 mtu { 1111, 222, 343 }`

max-delay <value>	ICMPv6 packet max delay	`icmpv6 max-delay 33-45`
		`icmpv6 max-delay != 33-45`
		`icmpv6 max-delay {33, 55, 67, 88}`

ether		
saddr <mac address>	MAC-адрес источника / Source mac address	`ether saddr 00:0f:54:0c:11:04`
type <type>		`ether type vlan`

vlan		
id <value>	Vlan tag ID	`vlan id 4094` `vlan id 0`
cfi <value>		`vlan cfi 0` `vlan cfi 1`
pcp <value>		`vlan pcp 7` `vlan pcp 3`

arp		
ptype <value>	Тип полезной нагрузки / Payload type	`arp ptype 0x0800`

htype <value>	Тип заголовка / Header type	`arp htype 1`
		`arp htype != 33-45`
		`arp htype { 33, 55, 67, 88}`

hlen <length>	Длина заголовка / Header Length	`arp hlen 1`
		`arp hlen != 33-45`
		`arp hlen { 33, 55, 67, 88}`

plen <length>	Payload length	`arp plen 1`
		`arp plen != 33-45`
		`arp plen { 33, 55, 67, 88}`

operation <value>		`arp operation {nak, inreply, inrequest, rreply, rrequest, reply, request}`

ct		

state <state>	Состояние соединения / State of the connection	`ct state { new, established, related, untracked }`
		`ct state != related`
		`ct state established`
		`ct state 8`

direction <value>	Направление пакета относительно соединения / Direction of the packet relative to the connection	`ct direction original`
		
		`ct direction != original`
		
		`ct direction {reply, original}`

status <status>	Статус соединения / Status of the connection	`ct status expected`
		`ct status != expected`
		`ct status {expected,seen-reply,assured,confirmed,snat,dnat,dying}`

mark [set]	Mark of the connection	`ct mark 0`
		`ct mark or 0x23 == 0x11`
		`ct mark or 0x3 != 0x1`
		`ct mark and 0x23 == 0x11`
		`ct mark and 0x3 != 0x1`
		`ct mark xor 0x23 == 0x11`
		`ct mark xor 0x3 != 0x1`
		`ct mark 0x00000032`
		`ct mark != 0x00000032`
		`ct mark 0x00000032-0x00000045`
		`ct mark != 0x00000032-0x00000045`
		`ct mark {0x32, 0x2222, 0x42de3}`
		`ct mark {0x32-0x2222, 0x4444-0x42de3}`
		`ct mark set 0x11 xor 0x1331`
		`ct mark set 0x11333 and 0x11`
		`ct mark set 0x12 or 0x11`
		`ct mark set 0x11`
		`ct mark set mark`
		`ct mark set mark map { 1 : 10, 2 : 20, 3 : 30 }`

expiration	Срок действия подключения / Connection expiration time	`ct expiration 30`
		`ct expiration 30s`
		`ct expiration != 233`
		`ct expiration != 3m53s`
		`ct expiration 33-45`
		`ct expiration 33s-45s`
		`ct expiration != 33-45`
		`ct expiration != 33s-45s`
		`ct expiration {33, 55, 67, 88}`
		`ct expiration { 1m7s, 33s, 55s, 1m28s}`

helper "<helper>"	Помощник, связанный с подключением / Helper associated with the connection	`ct helper "ftp"`
[original | reply] bytes <value>		`ct original bytes > 100000` `ct bytes > 100000`
[original | reply] packets <value>		`ct reply packets < 100`

[original | reply] ip saddr <ip source address>	Исходный адрес подключения для данного направления	`ct original ip saddr 192.168.0.1`
		`ct reply ip saddr 192.168.0.1`
		`ct original ip saddr 192.168.1.0/24`
		`ct reply ip saddr 192.168.1.0/24`

[original | reply] ip daddr <ip destination address>	Адрес назначения подключения для данного направления	`ct original ip daddr 192.168.0.1`
		`ct reply ip daddr 192.168.0.1`
		`ct original ip daddr 192.168.1.0/24`
		`ct reply ip daddr 192.168.1.0/24`

[original | reply] l3proto <protocol>		`ct original l3proto ipv4`
[original | reply] protocol <protocol>	Протокол уровня 4 соединения для данного направления	`ct original protocol 6`
[original | reply] proto-dst <port>		`ct original proto-dst 22`
[original | reply] proto-src <port>		`ct reply proto-src 53`

meta		

iifname <input interface name>	Имя входящего интерфейса (локально) / Input interface name	`meta iifname "eth0"`
		`meta iifname != "eth0"`
		`meta iifname {"eth0", "lo"}`
		`meta iifname "eth*"`

oifname <output interface name>	Имя исходящего интерфейса (локально) / Output interface name	`meta oifname "eth0"`
		`meta oifname != "eth0"`
		`meta oifname {"eth0", "lo"}`
		`meta oifname "eth*"`

iif <input interface index>	Индекс входящего интерфейса (локально) / Input interface index	`meta iif eth0` `meta iif != eth0`

oif <output interface index>	Индекс исходящего интерфейса (локально) / Output interface index	`meta oif lo`
		`meta oif != lo`
		`meta oif {eth0, lo}`

iiftype <input interface type>	Тип входящего интерфейса (локально) / Input interface type	`meta iiftype {ether, ppp, ipip, ipip6, loopback, sit, ipgre}`
		`meta iiftype != ether`
		`meta iiftype ether`

oiftype <output interface type>	Тип исходящего интерфейса (локально) / Output interface hardware type	`meta oiftype {ether, ppp, ipip, ipip6, loopback, sit, ipgre}`
		`meta oiftype != ether`
		`meta oiftype ether`

length <length>	Длина пакета в байтах / Length of the packet in bytes	`meta length 1000`
		`meta length != 1000`
		`meta length > 1000`
		`meta length 33-45`
		`meta length != 33-45`
		`meta length { 33, 55, 67, 88 }`
		`meta length { 33-55, 67-88 }`

protocol <protocol>	Протокол / ethertype protocol	`meta protocol ip`
		`meta protocol != ip`
		`meta protocol { ip, arp, ip6, vlan }`

nfproto <protocol>		`meta nfproto ipv4`
		`meta nfproto != ipv6`
		`meta nfproto { ipv4, ipv6 }`

l4proto <protocol>		`meta l4proto 22`
		`meta l4proto != 233`
		`meta l4proto 33-45`
		`meta l4proto { 33, 55, 67, 88 }`
		`meta l4proto { 33-55 }`

mark [set] <mark>	Packet mark	`meta mark 0x4`
		`meta mark 0x00000032`
		`meta mark and 0x03 == 0x01`
		`meta mark and 0x03 != 0x01`
		`meta mark != 0x10`
		`meta mark or 0x03 == 0x01`
		`meta mark or 0x03 != 0x01`
		`meta mark xor 0x03 == 0x01`
		`meta mark xor 0x03 != 0x01`
		`meta mark set 0xffffffc8 xor 0x16`
		`meta mark set 0x16 and 0x16`
		`meta mark set 0xfffffffe9 or 0x16`
		`meta mark set 0xfffffffde and 0x16`
		`meta mark set 0x32 or 0xfffff`
		`meta mark set 0xfffe xor 0x16`

priority [set] <priority>	tc class id	`meta priority none`
		`meta priority 0x1:0x1`
		`meta priority 0x1:0xffff`
		`meta priority 0xffff:0xffff`
		`meta priority set 0x1:0x1`
		`meta priority set 0x1:0xffff`
		`meta priority set 0xffff:0xffff`

skuid <user id>	UID associated with originating socket	`meta skuid {bin, root, daemon}`
		`meta skuid root`
		`meta skuid != root`
		`meta skuid lt 3000`
		`meta skuid gt 3000`
		`meta skuid eq 3000`
		`meta skuid 3001-3005`
		`meta skuid != 2001-2005`
		`meta skuid { 2001-2005 }`

skgid <group id>	GID associated with originating socket	`meta skgid {bin, root, daemon}`
		`meta skgid root`
		`meta skgid != root`
		`meta skgid lt 3000`
		`meta skgid gt 3000`
		`meta skgid eq 3000`
		`meta skgid 3001-3005`
		`meta skgid != 2001-2005`
		`meta skgid { 2001-2005 }`

rtclassid <class>	Routing realm	`meta rtclassid cosmos`

pkttype <type>	Packet type	`meta pkttype broadcast`
		`meta pkttype != broadcast`
		`meta pkttype { broadcast, unicast, multicast}`

cpu <cpu index>	CPU ID	`meta cpu 1`
		`meta cpu != 1`
		`meta cpu 1-3`
		`meta cpu != 1-2`
		`meta cpu { 2,3 }`
		`meta cpu { 2-3, 5-7 }`

iifgroup <input group>	Группа входящего интерфейса (локально) / Input interface group	`meta iifgroup 0`
		`meta iifgroup != 0`
		`meta iifgroup default`
		`meta iifgroup != default`
		`meta iifgroup {default}`
		`meta iifgroup { 11,33 }`
		`meta iifgroup {11-33}`

oifgroup <group>	Группа исходящего интерфейса (локально) / Output interface group	`meta oifgroup 0`
		`meta oifgroup != 0`
		`meta oifgroup default`
		`meta oifgroup != default`
		`meta oifgroup {default}`
		`meta oifgroup { 11,33 }`
		`meta oifgroup {11-33}`

cgroup <group>		`meta cgroup 1048577`
		`meta cgroup != 1048577`
		`meta cgroup { 1048577, 1048578 }`
		`meta cgroup 1048577-1048578`
		`meta cgroup != 1048577-1048578`
		`meta cgroup {1048577-1048578}`