

FlowSpec

KNOWLEDGE BASE - OCTOBER 2026

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> This document is an informative description of the standard Inter.link FlowSpec service. The applicable service order, Service Level Agreement (SLA), and Master Services Agreement (MSA) prevail in the event of any conflict.

01

Service overview

Inter.link FlowSpec is a separately ordered, customer-managed BGP FlowSpec filtering service. The customer advertises rules over existing BGP sessions. Rules that pass Inter.link validation are distributed to AS5405 edge routers, where they can drop, rate-limit, or accept matching customer-bound traffic.

FlowSpec does not include attack detection or managed mitigation. The customer is responsible for monitoring traffic, constructing and advertising rules, validating their effect, and withdrawing them when no longer required. DDoS Protection is a separate service with its own detection, diversion, and mitigation model.

FlowSpec is ordered through Sales and billed as a flat monthly add-on once per customer. It can be used across all of that customer's eligible IP Transit and FlexTunnel services. The current package and active-rule entitlement must be confirmed with Sales.

02

Eligible services and BGP delivery

UNDERLYING SERVICE	FLOWSPEC DELIVERY
IP Transit	Uses the service's existing IPv4 and IPv6 BGP sessions; available at every Inter.link point of presence (PoP)
FlexTunnel	Uses the tunnel's existing IPv4 and IPv6 BGP sessions; termination is limited to selected Inter.link routers

At least 10 Gbps of aggregate customer commitment is required within each underlying service type on which FlowSpec is used. IP Transit and FlexTunnel commitments are calculated separately.

FlowSpec uses MP-BGP on the underlying service's existing directly connected eBGP sessions. IPv4 rules are exchanged over the IPv4 session and IPv6 rules over the IPv6 session. No separate FlowSpec session is created, and ordinary unicast routes are not exchanged in the FlowSpec address families.

ATTRIBUTE	STANDARD BEHAVIOUR
Provider ASN	AS5405
IPv4 FlowSpec	AFI 1, SAFI 133, following RFC 8955
IPv6 FlowSpec	AFI 2, SAFI 133, following RFC 8956
Advertisement direction	Customer to Inter.link
External export	Customer rules are not exported outside AS5405
BGP settings	Inherited from the underlying IP Transit or FlexTunnel service

TCP MD5, GTSM and BFD follow the underlying service.

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Rule construction

One FlowSpec NLRI matches the intersection of all components it contains. Components must be unique and encoded in ascending component-type order. Every rule must contain a destination prefix; source-only rules are silently filtered.

IPv4 match components

COMPONENT	SUPPORT AND LIMITATIONS
Destination prefix	Mandatory and subject to customer authorization
Source prefix	Supported
IP protocol	Supported
Source or destination port	Supported, except with a positive `IsF` condition
Destination port	Supported, except with a positive `IsF` condition
Source port	Supported, except with a positive `IsF` condition
ICMP type and code	Supported
TCP flags	Supported except ECE, CWR, and NS
IP packet length	Supported
DSCP	Supported
Fragment state	Only `IsF` is supported

`IsF` matches only non-first IPv4 fragments, for which the transport-layer header is unavailable. A rule combining a positive `IsF` condition with Port, Destination Port, or Source Port is therefore silently filtered.

IPv6 match components

COMPONENT	SUPPORT AND LIMITATIONS
Destination IPv6 prefix	Mandatory and subject to customer authorization
Source IPv6 prefix	Supported
Next Header or upper-layer protocol	Supported
Source or destination port	Supported
Destination port	Supported
Source port	Supported
ICMPv6 type and code	Supported
TCP flags	Supported except ECE, CWR, and NS
IPv6 packet length	Not supported
DSCP	Supported
IPv6 fragment state	Not supported
IPv6 Flow Label	Not supported

Non-zero source-prefix or destination-prefix offsets are not supported. Rules containing them are silently filtered and not installed.

04

Actions and rate limiting

ACTION	STANDARD BEHAVIOUR
Rate limit	Supported in bytes per second, encoded as an IEEE-754 value
Drop	Supported by setting the byte rate to zero
Accept	Supported; traffic continues through normal forwarding and later policy stages
Packet-rate limit	Not supported
Redirect, DSCP rewrite, sampling, or logging	Not supported
Multiple actions in one rule	Not supported

A positive byte rate is hard-policed independently at each edge router rather than as an aggregate network-wide allowance. Unsupported actions, combinations, or rules are silently filtered and are not installed.

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Authorization and validation

FlowSpec rule authorization and validation follow the separate Routing Policies document.

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Enforcement and precedence

Accepted rules are propagated to every AS5405 edge router and applied as ACLs to customer-bound traffic entering the network. Separate overlapping rules use standard RFC 8955 precedence. Customer rules are not exported outside AS5405.

Packet handling follows this order:

1. Apply any matching FlowSpec rule at the receiving edge.
2. Evaluate an applicable DDoS diversion.
3. Apply routing.

A terminating result at an earlier stage prevents the packet from reaching a later stage. Rule installation and withdrawal are best effort.

Identical rules received over multiple service sessions remain effective while at least one session continues to advertise them. The customer must withdraw a rule when it is no longer required. Rules rejected because an entitlement was exceeded are not automatically reconsidered and must be advertised again.

07

Entitlement, acceptable use, and visibility

The rule entitlement applies customer-wide across all eligible IP Transit and FlexTunnel services. When the entitlement is exceeded, no additional rules are installed; existing rules and the BGP session remain active. There is no product-defined update-rate or numerical rule-size limit, but rule complexity must be kept low and service use remains subject to available platform resources.

FlowSpec is intended for temporary filtering of unwanted or attack traffic. Rules do not expire automatically, but continued use is subject to acceptable use and review by Inter.link.

Rules are created and withdrawn exclusively through BGP. No FlowSpec-specific state is exposed through the customer portal or API. Inter.link Support can inspect the internal installation date, but traffic counters are unavailable. Customers should provide the affected NLRI, timestamps, expected behaviour, and relevant traffic evidence.

The charge is independent of filtered traffic volume and ordinary variation in rule use within the ordered package. Unless otherwise agreed, billing starts when FlowSpec is provisioned and not before an associated new IP Transit or FlexTunnel service has also started billing.

08

Responsibilities

ACTIVITY	INTER.LINK	CUSTOMER
BGP service	Operates the provider BGP endpoint and distributes valid rules	Operates and secures the customer BGP endpoint
Rule authorization	Applies supported syntax, action, prefix, and entitlement policy	Advertises rules only for authorized prefixes
Rule lifecycle	Applies accepted advertisements and withdrawals on a best-effort basis	Monitors traffic and withdraws rules when no longer required
Rate limiting	Enforces accepted limits independently at each edge	Selects limits and assesses application and capacity impact
Validation	Can provide the internal installation date; traffic counters are unavailable	Verifies intended traffic behaviour and supplies evidence for troubleshooting
Security impact	May reject or withdraw rules to protect the service or platform	Remains responsible for rule correctness and false-positive impact

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Service levels and support

Availability and performance commitments, incident priorities, response and restoration targets, maintenance rules, exclusions, remedies, and service credits are defined exclusively in the applicable SLA. FlowSpec rule installation and withdrawal are best effort. Nothing in this informative specification changes those terms.

Need a hand?

Our network engineers are happy to help — reach out through the Inter.link Portal or visit inter.link.