

## Understanding How Firewall Filters Test a Packet's Protocol

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When examining match conditions, JUNOS software for EX-series switches tests only the field that is specified. The software does not implicitly test the IP header to determine whether a packet is an IP packet. Therefore, in some cases, you should specify **protocol** field match conditions in conjunction with other match conditions to ensure that the filters are performing the expected matches.

If you specify a protocol match condition or a match of the ICMP type or TCP flags field, there is no implied protocol match. For the following match conditions, you should explicitly specify the protocol match condition in the same term:

- **destination-port**—Specify the match **protocol tcp** or **protocol udp**.
- **source-port**—Specify the match **protocol tcp** or **protocol udp**.

If you do not specify the protocol when using the preceding fields, design your filters carefully to ensure that they perform the expected matches. For example, if you specify a match of **destination-port ssh**, the switch deterministically matches any packets that have a value of **22** in the two-byte field that is two bytes beyond the end of the IP header without ever checking the IP protocol field.

### Related Topics

- Firewall Filters for EX-series Switches Overview
- Understanding Firewall Filter Match Conditions
- Example: Configuring Firewall Filters for Port, VLAN, and Router Traffic on EX-series Switches

