

Comware V7 ACL NETCONF XML API Configuration Reference

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ACL

ACL/Groups

This table contains ACL information.

XML structure

```
<ACL>
  <Groups>
    <Group>
      <GroupType></GroupType>
      <GroupID></GroupID>
      <MatchOrder></MatchOrder>
      <Step></Step>
      <Name></Name>
      <Description></Description>
    </Group>
  </Groups>
</ACL>
```

Table description

Item	Description
Feature name	ACL
Table name	Groups
Table type	Multi-instance table
Row name	Group
Restrictions	None
Support for row creation and deletion	Yes

Columns

Column name	Column description	Column type	Data type and restrictions	Remarks
GroupType	ACL type	Index	Enumeration: • 1—IPv4. • 2—IPv6.	N/A

Column name	Column description	Column type	Data type and restrictions	Remarks
GroupID	ACL number	Index	Unsigned integer. Value range: 2000 to 5999.	The value range depends on the GroupType column. 2000 to 5999 if GroupType is 1. - IPv4 basic ACL: 2000 to 2999. - IPv4 advanced ACL: 3000 to 3999. - Ethernet frame header ACL: 4000 to 4999. - User-defined ACL: 5000 to 5999. 2000 to 3999 if GroupType is 2. - IPv6 basic ACL: 2000 to 2999. - IPv6 advanced ACL: 3000 to 3999.
MatchOrder	Order in which the rules are sorted	N/A	Enumeration: 1—Config (default). In this order, rules are sorted in ascending order of rule ID. 2—Auto. In this order, rules are sorted in depth-first order.	The match order can only be modified for ACLs that do not contain any rules. The match order can only be config for user-defined ACLs.
Step	ACL rule numbering step	N/A	Unsigned integer. Value range: 1 to 20. Default: 5.	The rule numbering step for user-defined ACLs can only be 5.
Name	ACL name	N/A	String, case-insensitive. Length: 1 to 63 characters. The string must start with an English letter.	By default, no name is specified for an ACL. The ACL name cannot be all. After an ACL is created with a name, its name cannot be modified.
Description	ACL description	N/A	String, case-sensitive. Length: 1 to 127 characters.	By default, an ACL has no description.

ACL/IPv4BasicRules

This table contains information about IPv4 basic ACL rules.

XML structure

```
<ACL>
  <IPv4BasicRules>
    <Rule>
```

```

    <GroupID></GroupID>
    <RuleID></RuleID>
    <Action></Action>
    <SrcAny></SrcAny>
    <SrcIPv4>
        <SrcIPv4Addr></SrcIPv4Addr>
        <SrcIPv4Wildcard></SrcIPv4Wildcard>
    </SrcIPv4>
    <Fragment></Fragment>
    <TimeRange></TimeRange>
    <VRF></VRF>
    <Counting></Counting>
    <Logging></Logging>
    <Comment></Comment>
</Rule>
</IPv4BasicRules>
</ACL>

```

Table description

Item	Description
Feature name	ACL
Table name	IPv4BasicRules
Table type	Multi-instance table
Row name	Rule
Restrictions	None
Support for row creation and deletion	Yes

Columns

Column name	Column description	Column type	Data type and restrictions	Remarks
GroupID	ACL number.	Index	Unsigned integer. Value range: 2000 to 2999.	You must create an ACL first before you create, merge, or replace rules for it.
RuleID	Rule ID.	Index	Unsigned integer. Value range: 0 to 65535. The value 65535 is an invalid rule ID.	If you set this column to 65535, the system automatically assigns a new rule ID. This rule ID is the nearest higher multiple of the numbering step to the current highest rule ID, starting from 0.

Column name	Column description	Column type	Data type and restrictions	Remarks
Action	Action on packets matching the rule.	N/A	Enumeration: 1—Deny. 2—Permit.	You cannot specify an action when you remove or delete a rule. You must specify an action when you replace a rule, or when you merge or create a rule that does not exist.
SrcAny	Whether a rule matches any source IP addresses.	N/A	Boolean: true—Matches any source IP addresses (default). false—Matches the specified source IP address.	This column must be configured together with the SrcIPv4 column.
SrcIPv4	Source IPv4 information.	Data structure	Members include: - SrcIPv4Addr. - SrcIPv4Wildcard.	This column must be configured together with the SrcAny column. The two members must both be specified.
SrcIPv4Addr	Source IPv4 address.	N/A	String, dotted decimal notation.	Example: 1.1.1.1. This column is available when the SrcAny column is false. It must be empty when the SrcAny column is true.
SrcIPv4Wildcard	Wildcard mask for the source IPv4 address.	N/A	String, dotted decimal notation.	Example: 255.255.255.0. This column is available when the SrcAny column is false. It must be empty when the SrcAny column is true.
Fragment	Whether a rule matches only non-first fragments.	N/A	Boolean: true—Matches only non-first fragments. false—Matches both fragments and non-fragments (default).	N/A
TimeRange	Time range.	N/A	String, case-insensitive. Length: 1 to 32 characters. The string must start with an English letter.	It cannot be the word all .
VRF	VRF.	N/A	String, case-sensitive. Length: 1 to 31 characters.	N/A
Counting	Whether to count the rule	N/A	Boolean: true—Counts the rule	N/A

Column name	Column description	Column type	Data type and restrictions	Remarks
	matches.		matches. • false—Does not count the rule matches (default).	
Logging	Whether to log rule match events.	N/A	Boolean: • true—Logs rule match events. • false—Does not log rule match events (default).	N/A
Comment	Rule comment.	N/A	String, case-sensitive. Length: 1 to 127 characters.	A comment can only be configured for an existing rule. When the MatchOrder column is 2 , you can modify only the comment for a rule.

ACL/IPv6BasicRules

This table contains information about IPv6 basic ACL rules.

XML structure

```

<ACL>
  <IPv6BasicRules>
    <Rule>
      <GroupID></GroupID>
      <RuleID></RuleID>
      <Action></Action>
      <SrcAny></SrcAny>
      <SrcIPv6>
        <SrcIPv6Addr></SrcIPv6Addr>
        <SrcIPv6Prefix></SrcIPv6Prefix>
      </SrcIPv6>
      <RoutingTypeAny></RoutingTypeAny>
      <RoutingTypeValue></RoutingTypeValue>
      <Fragment></Fragment>
      <TimeRange></TimeRange>
      <VRF></VRF>
      <Counting></Counting>
      <Logging></Logging>
      <Comment></Comment>
    </Rule>
  </IPv6BasicRules>
</ACL>

```

Table description

Item	Description
Feature name	ACL
Table name	IPv6BasicRules
Table type	Multi-instance table
Row name	Rule
Restrictions	None
Support for row creation and deletion	Yes

Columns

Column name	Column description	Column type	Data type and restrictions	Remarks
GroupID	ACL number.	Index	Unsigned integer. Value range: 2000 to 2999.	You must create an ACL first before you create, merge, or replace rules for it.
RuleID	Rule ID.	Index	Unsigned integer. Value range: 0 to 65535. The value 65535 is an invalid rule ID.	If you set this column to 65535, the system automatically assigns a new rule ID. This rule ID is the nearest higher multiple of the numbering step to the current highest rule ID, starting from 0.
Action	Action on packets matching the rule.	N/A	Enumeration: 1—Deny. 2—Permit.	You cannot specify an action when you remove or delete a rule. You must specify an action when you replace a rule, or when you merge or create a rule that does not exist.
SrcAny	Whether a rule matches any source IP addresses.	N/A	Boolean: - true—Matches any source IPv6 addresses (default). - false—Matches the specified source IPv6 address.	This column must be configured together with the SrcIPv6 column.
SrcIPv6	Source IPv6 information.	Data structure	Members include: - SrcIPv6Addr. - SrcIPv6Prefix.	This column must be configured together with the SrcAny column. The two members must both be specified.
SrcIPv6Ad	Source IPv6	N/A	Hexadecimal string,	Example: 1:1::1:1.

Column name	Column description	Column type	Data type and restrictions	Remarks
dr	address.		colon-separated.	This column is available when the SrcAny column is false . It must be empty when the SrcAny column is true .
SrcIPv6Prefix	Length of the source IPv6 address prefix.	N/A	Unsigned integer. Value range: 1 to 128.	This column is available when the SrcAny column is false . It must be empty when the SrcAny column is true .
RoutingTypeAny	Whether a rule matches any types of routing header.	N/A	Boolean: true—Matches any types of routing header. false—Matches the specified type of routing header (default).	This column and the RoutingTypeValue column cannot both be configured.
RoutingTypeValue	Routing header type.	N/A	Unsigned integer. Value range: 0 to 255.	This column and the RoutingTypeAny column cannot both be configured.
Fragment	Whether a rule matches only non-first fragments.	N/A	Boolean: true—Matches only non-first fragments. false—Matches both fragments and non-fragments (default).	N/A
TimeRange	Time range.	N/A	String, case-insensitive. Length: 1 to 32 characters. The string must start with an English letter.	It cannot be the word all .
VRF	VRF.	N/A	String, case-sensitive. Length: 1 to 31 characters.	N/A
Counting	Whether to count the rule matches.	N/A	Boolean: true—Counts the rule matches. false—Does not count the rule matches (default).	N/A
Logging	Whether to log rule match events.	N/A	Boolean: true—Logs rule match events. false—Does not log rule match events (default).	N/A
Comment	Rule comment.	N/A	String, case-sensitive. Length: 1 to 127 characters.	A comment can only be configured for an existing rule. When the MatchOrder column is 2 , you can modify only the comment for a rule.

ACL/IPv4AdvanceRules

This table contains information about IPv4 advanced ACL rules.

XML structure

```
<ACL>
  <IPv4AdvanceRules>
    <Rule>
      <GroupID></GroupID>
      <RuleID></RuleID>
      <Action></Action>
      <ProtocolType></ProtocolType>
      <SrcAny></SrcAny>
      <SrcIPv4>
        <SrcIPv4Addr></SrcIPv4Addr>
        <SrcIPv4Wildcard></SrcIPv4Wildcard>
      </SrcIPv4>
      <DstAny></DstAny>
      <DstIPv4>
        <DstIPv4Addr></DstIPv4Addr>
        <DstIPv4Wildcard></DstIPv4Wildcard>
      </DstIPv4>
      <DSCP></DSCP>
      <Precedence></Precedence>
      <TOS></TOS>
      <SrcPort>
        <SrcPortOp></SrcPortOp>
        <SrcPortValue1></SrcPortValue1>
        <SrcPortValue2></SrcPortValue2>
      </SrcPort>
      <DstPort>
        <DstPortOp></DstPortOp>
        <DstPortValue1></DstPortValue1>
        <DstPortValue2></DstPortValue2>
      </DstPort>
      <TcpFlag>
        <ACK></ACK>
        <FIN></FIN>
        <PSH></PSH>
        <RST></RST>
        <SYN></SYN>
        <URG></URG>
      </TcpFlag>
      <Established></Established>
      <ICMP>
        <ICMPType></ICMPType>
```

```

        <ICMPCode></ICMPCode>
    </ICMP>
    <Fragment></Fragment>
    <TimeRange></TimeRange>
    <VRF></VRF>
    <Counting></Counting>
    <Logging></Logging>
    <Comment></Comment>
</Rule>
</IPv4AdvanceRules>
</ACL>

```

Table description

Item	Description
Feature name	ACL
Table name	IPv4AdvanceRules
Table type	Multi-instance table
Row name	Rule
Restrictions	None
Support for row creation and deletion	Yes

Columns

Column name	Column description	Column type	Data type and restrictions	Remarks
GroupID	ACL number.	Index	Unsigned integer. Value range: 3000 to 3999.	You must create an ACL first before you create, merge, or replace rules for it.
RuleID	Rule ID.	Index	Unsigned integer. Value range: 0 to 65535. The value 65535 is an invalid rule ID.	If you set this column to 65535, the system automatically assigns a new rule ID. This rule ID is the nearest higher multiple of the numbering step to the current highest rule ID, starting from 0.
Action	Action on packets matching the rule.	N/A	Enumeration: 1—Deny. 2—Permit.	You cannot specify an action when you remove or delete a rule. You must specify an action when you replace a rule, or when you merge or create a rule that does not exist.

Column name	Column description	Column type	Data type and restrictions	Remarks
ProtocolType	Protocol type.	N/A	Unsigned integer. Value range: 0 to 256. The value 256 represents all IPv4 protocols.	You cannot specify a protocol type when you remove or delete a rule. You must specify a protocol type when you replace a rule, or when you merge or create a rule that does not exist.
SrcAny	Whether a rule matches any source IP addresses.	N/A	Boolean: true—Matches any source IP addresses (default). false—Matches the specified source IP address.	This column must be configured together with the SrcIPv4 column.
SrcIPv4	Source IPv4 information.	Data structure	Members include: - SrcIPv4Addr. - SrcIPv4Wildcard.	This column must be configured together with the SrcAny column. The two members must both be specified.
SrcIPv4Addr	Source IPv4 address.	N/A	String, dotted decimal notation.	Example: 1.1.1.1. This column is available when the SrcAny column is false . It must be empty when the SrcAny column is true .
SrcIPv4Wildcard	Wildcard mask for the source IPv4 address.	N/A	String, dotted decimal notation.	Example: 255.255.255.0. This column is available when the SrcAny column is false . It must be empty when the SrcAny column is true .
DstAny	Whether a rule matches any destination IP addresses.	N/A	Boolean: true—Matches any destination IP addresses (default). false—Matches the specified destination IP address.	This column must be configured together with the DstIPv4 column.
DstIPv4	Destination IPv4 information.	Data structure	Members include: - DstIPv4Addr. - DstIPv4Wildcard.	This column must be configured together with the DstAny column. The two members must both be specified.
DstIPv4Addr	Destination IPv4 address.	N/A	String, dotted decimal notation.	Example: 1.1.1.1. This column is available when the DstAny column is

Column name	Column description	Column type	Data type and restrictions	Remarks
				false. It must be empty when the DstAny column is true .
DstIPv4Wildcard	Wildcard mask for the destination IPv4 address.	N/A	String, dotted decimal notation.	Example: 255.255.255.0. This column is available when the DstAny column is false . It must be empty when the DstAny column is true .
DSCP	DSCP priority.	N/A	Unsigned integer. Value range: 0 to 63.	N/A
Precedence	IP precedence.	N/A	Unsigned integer. Value range: 0 to 7.	The DSCP priority and the IP precedence cannot both be specified.
TOS	ToS preference.	N/A	Unsigned integer. Value range: 0 to 15.	The DSCP priority and the ToS precedence cannot both be specified.
SrcPort	Source port information.	Data structure	Members include: • SrcPortOp. • SrcPortValue1. • SrcPortValue2.	Only the TCP and UDP protocols support this column. The members must be all specified.
SrcPortOp	Source port operator.	N/A	Enumeration: • 1—lt (lower than). • 2—eq (equal to). • 3—gt (greater than). • 4—neq (not equal to). • 5—range (inclusive range).	N/A
SrcPortValue1	Start source port.	N/A	Unsigned integer. Value range: 0 to 65535.	N/A
SrcPortValue2	End source port.	N/A	Unsigned integer. Value range: 0 to 65536.	When SrcPortOp is 5 , the value range is 0 to 65535. Otherwise, it can only be 65536. The value 65536 indicates that the end source port is not available.
DstPort	Destination port information.	Data structure	Members include: • DstPortOp. • DstPortValue1. • DstPortValue2.	Only the TCP and UDP protocols support this column. The members must be all specified.
DstPortOp	Destination port operator.	N/A	Enumeration: • 1—lt (lower than).	N/A

Column name	Column description	Column type	Data type and restrictions	Remarks
			2—eq (equal to). 3—gt (greater than). 4—neq (not equal to). 5—range (inclusive range).	
DstPortValue1	Start destination port.	N/A	Unsigned integer. Value range: 0 to 65535.	N/A
DstPortValue2	End destination port.	N/A	Unsigned integer. Value range: 0 to 65536.	When DstPortOp is 5 , the value range is 0 to 65535. Otherwise, it can only be 65536. The value 65536 indicates that the end destination port is not available.
TcpFlag	TCP flags.	Data structure.	Members include: - ACK. - FIN. - PSH. - RST. - SYN. - URG.	N/A
ACK	ACK flag in a TCP packet.	N/A	Unsigned integer. Value range: 0 or 1. 0—ACK flag is not set. 1—ACK flag is set.	Only the TCP protocol supports this column.
FIN	FIN flag in a TCP packet.	N/A	Unsigned integer. Value range: 0 or 1. 0—FIN flag is not set. 1—FIN flag is set.	Only the TCP protocol supports this column.
PSH	PSH flag in a TCP packet.	N/A	Unsigned integer. Value range: 0 or 1. 0—PSH flag is not set. 1—PSH flag is set.	Only the TCP protocol supports this column.
RST	RST flag in a TCP packet.	N/A	Unsigned integer. Value range: 0 or 1. 0—RST flag is not set. 1—RST flag is set.	Only the TCP protocol supports this column.
SYN	SYN flag in a TCP packet.	N/A	Unsigned integer. Value range: 0 or 1. 0—SYN flag is not set. 1—SYN flag is set.	Only the TCP protocol supports this column.
URG	URG flag in a TCP packet.	N/A	Unsigned integer. Value range: 0 or 1.	Only the TCP protocol supports this column.

Column name	Column description	Column type	Data type and restrictions	Remarks
			0—URG flag is not set. 1—URG flag is set.	
Established	Whether a rule matches flags indicating the established status of a TCP connection.	N/A	Boolean: true—Matches the flags. false—Ignores the flags.	Only the TCP protocol supports this column. On a router, the rule matches TCP connection packets with the ACK or RST flag set. On a switch, the availability and usage of this column depend on the device model. This column and the TcpFlag column cannot both be configured.
ICMP	ICMP messages.	N/A	Members include: - ICMPType. - ICMPCode.	The members must both be specified.
ICMPType	Type of ICMP messages.	N/A	Unsigned integer. Value range: 0 to 255.	Only the ICMP protocol supports this column.
ICMPCode	Code of ICMP messages.	N/A	Unsigned integer. Value range: 0 to 256. The value 256 indicates that no ICMP message code is specified.	Only the ICMP protocol supports this column.
Fragment	Whether a rule matches only non-first fragments.	N/A	Boolean: true—Matches only non-first fragments. false—Matches both fragments and non-fragments (default).	N/A
TimeRange	Time range.	N/A	String, case-insensitive. Length: 1 to 32 characters. The string must start with an English letter.	It cannot be the word all .
VRF	VRF.	N/A	String, case-sensitive. Length: 1 to 31 characters.	N/A
Counting	Whether to count the rule matches.	N/A	Boolean: true—Counts the rule matches. false—Does not count the rule matches (default).	N/A
Logging	Whether to log rule match events.	N/A	Boolean: true—Logs rule match events.	N/A

Column name	Column description	Column type	Data type and restrictions	Remarks
			false—Does not log rule match events (default).	
Comment	Rule comment.	N/A	String, case-sensitive. Length: 1 to 127 characters.	A comment can only be configured for an existing rule. When the MatchOrder column is 2, you can modify only the comment for a rule.

ACL/IPv6AdvanceRules

This table contains information about IPv6 advanced ACL rules.

XML structure

```

<ACL>
  <IPv6AdvanceRules>
    <Rule>
      <GroupID></GroupID>
      <RuleID></RuleID>
      <Action></Action>
      <ProtocolType></ProtocolType>
      <SrcAny></SrcAny>
      <SrcIPv6>
        <SrcIPv6Addr></SrcIPv6Addr>
        <SrcIPv6Prefix></SrcIPv6Prefix>
      </SrcIPv6>
      <DstAny></DstAny>
      <DstIPv6>
        <DstIPv6Addr></DstIPv6Addr>
        <DstIPv6Prefix></DstIPv6Prefix>
      </DstIPv6>
      <DSCP></DSCP>
      <FlowLabel></FlowLabel>
      <RoutingTypeAny></RoutingTypeAny>
      <RoutingTypeValue></RoutingTypeValue>
      <SrcPort>
        <SrcPortOp></SrcPortOp>
        <SrcPortValue1></SrcPortValue1>
        <SrcPortValue2></SrcPortValue2>
      </SrcPort>
      <DstPort>
        <DstPortOp></DstPortOp>
        <DstPortValue1></DstPortValue1>

```



```

        <DstPortValue2></DstPortValue2>
    </DstPort>
    <TcpFlag>
        <ACK></ACK>
        <FIN></FIN>
        <PSH></PSH>
        <RST></RST>
        <SYN></SYN>
        <URG></URG>
    </TcpFlag>
    <Established></Established>
    <ICMP6>
        <ICMP6Type></ICMP6Type>
        <ICMP6Code></ICMP6Code>
    </ICMP6>
    <Fragment></Fragment>
    <HopTypeAny></HopTypeAny>
    <HopTypeValue></HopTypeValue>
    <TimeRange></TimeRange>
    <VRF></VRF>
    <Counting></Counting>
    <Logging></Logging>
    <Comment></Comment>
</Rule>
</IPv6AdvanceRules>
</ACL>

```

Table description

Item	Description
Feature name	ACL
Table name	IPv6AdvanceRules
Table type	Multi-instance table
Row name	Rule
Restrictions	None
Support for row creation and deletion	Yes

Columns

Column name	Column description	Column type	Data type and restrictions	Remarks
GroupID	ACL number.	Index	Unsigned integer. Value range: 3000 to 3999.	You must create an ACL first before you create, merge, or replace rules for it.

Column name	Column description	Column type	Data type and restrictions	Remarks
RuleID	Rule ID.	Index	Unsigned integer. Value range: 0 to 65535. The value 65535 is an invalid rule ID.	If you set this column to 65535, the system automatically assigns a new rule ID. This rule ID is the nearest higher multiple of the numbering step to the current highest rule ID, starting from 0.
Action	Action on packets matching the rule.	N/A	Enumeration: 1—Deny. 2—Permit.	You cannot specify an action when you remove or delete a rule. You must specify an action when you replace a rule, or when you merge or create a rule that does not exist.
ProtocolType	Protocol type.	N/A	Unsigned integer. Value range: 0 to 256. The value 256 represents all IPv6 protocols.	You cannot specify a protocol type when you remove or delete a rule. You must specify a protocol type when you replace a rule, or when you merge or create a rule that does not exist.
SrcAny	Whether a rule matches any source IPv6 addresses.	N/A	Boolean: true—Matches any source IPv6 addresses (default). false—Matches the specified source IPv6 address.	This column must be configured together with the SrcIPv6 column.
SrcIPv6	Source IPv6 information.	Data structure	Members include: - SrcIPv6Addr. - SrcIPv6Prefix.	This column must be configured together with the SrcAny column. The two members must both be specified.
SrcIPv6Addr	Source IPv6 address.	N/A	Hexadecimal string, colon-separated.	Example: 1:1::1:1. This column is available when the SrcAny column is false . It must be empty when the SrcAny column is true .
SrcIPv6Prefix	Length of the source IPv6 address prefix.	N/A	Unsigned integer. Value range: 1 to 128.	This column is available when the SrcAny column is false . It must be empty when the SrcAny column is true .
DstAny	Whether a rule matches any	N/A	Boolean:	This column must be configured together with

Column name	Column description	Column type	Data type and restrictions	Remarks
	destination IPv6 addresses.		true—Matches any destination IPv6 addresses (default). false—Matches the specified destination IPv6 address.	the DstIPv6 column.
DstIPv6	Destination IPv6 information.	Data structure	Members include: - DstIPv6Addr. - DstIPv6Prefix.	This column must be configured together with the DstAny column. The two members must both be specified.
DstIPv6Addr	Destination IPv6 address.	N/A	Hexadecimal string, colon-separated.	Example: 1:1::1:1. This column is available when the DstAny column is false . It must be empty when the DstAny column is true .
DstIPv6Prefix	Length of the destination IPv6 address prefix.	N/A	Unsigned integer. Value range: 1 to 128.	This column is available when the DstAny column is false . It must be empty when the DstAny column is true .
DSCP	DSCP priority.	N/A	Unsigned integer. Value range: 0 to 63.	N/A
FlowLabel	Flow label value in an IPv6 packet header.	N/A	Unsigned integer. Value range: 0 to 1048575.	N/A
RoutingTypeAny	Whether a rule matches any types of routing header.	N/A	Boolean: true—Matches any types of routing header. false—Matches the specified type of routing header (default).	This column and the RoutingTypeValue column cannot both be configured.
RoutingTypeValue	Routing header type.	N/A	Unsigned integer. Value range: 0 to 255.	This column and the RoutingTypeAny column cannot both be configured.
SrcPort	Source port information.	Data structure	Members include: - SrcPortOp. - SrcPortValue1. - SrcPortValue2.	Only the TCP and UDP protocols support this column. The members must be all specified.
SrcPortOp	Source port operator.	N/A	Enumeration: 1—lt (lower than). 2—eq (equal to). 3—gt (greater than). 4—neq (not equal to).	N/A

Column name	Column description	Column type	Data type and restrictions	Remarks
			• 5—range (inclusive range).	
SrcPortValue1	Start source port.	N/A	Unsigned integer. Value range: 0 to 65535.	N/A
SrcPortValue2	End source port.	N/A	Unsigned integer. Value range: 0 to 65536.	When SrcPortOp is 5 , the value range is 0 to 65535. Otherwise, it can only be 65536. The value 65536 indicates that the end source port is not available.
DstPort	Destination port information.	Data structure	Members include: • DstPortOp. • DstPortValue1. • DstPortValue2.	Only the TCP and UDP protocols support this column. The members must be all specified.
DstPortOp	Destination port operator.	N/A	Enumeration: • 1—lt (lower than). • 2—eq (equal to). • 3—gt (greater than). • 4—neq (not equal to). • 5—range (inclusive range).	N/A
DstPortValue1	Start destination port.	N/A	Unsigned integer. Value range: 0 to 65535.	N/A
DstPortValue2	End destination port.	N/A	Unsigned integer. Value range: 0 to 65536.	When DstPortOp is 5 , the value range is 0 to 65535. Otherwise, it can only be 65536. The value 65536 indicates that the end destination port is not available.
TcpFlag	TCP flags.	Data structure.	Members include: • ACK. • FIN. • PSH. • RST. • SYN. • URG.	N/A
ACK	ACK flag in a TCP packet.	N/A	Unsigned integer. Value range: 0 or 1. • 0—ACK flag is not set. • 1—ACK flag is set.	Only the TCP protocol supports this column.
FIN	FIN flag in a TCP packet.	N/A	Unsigned integer. Value range: 0 or 1.	Only the TCP protocol supports this column.

Column name	Column description	Column type	Data type and restrictions	Remarks
			0—FIN flag is not set. 1—FIN flag is set.	
PSH	PSH flag in a TCP packet.	N/A	Unsigned integer. Value range: 0 or 1. 0—PSH flag is not set. 1—PSH flag is set.	Only the TCP protocol supports this column.
RST	RST flag in a TCP packet.	N/A	Unsigned integer. Value range: 0 or 1. 0—RST flag is not set. 1—RST flag is set.	Only the TCP protocol supports this column.
SYN	SYN flag in a TCP packet.	N/A	Unsigned integer. Value range: 0 or 1. 0—SYN flag is not set. 1—SYN flag is set.	Only the TCP protocol supports this column.
URG	URG flag in a TCP packet.	N/A	Unsigned integer. Value range: 0 or 1. 0—URG flag is not set. 1—URG flag is set.	Only the TCP protocol supports this column.
Established	Whether a rule matches flags indicating the established status of a TCP connection.	N/A	Boolean: - true—Matches the flags. - false—Ignores the flags.	Only the TCP protocol supports this column. On a router, the rule matches TCP connection packets with the ACK or RST flag set. On a switch, the availability and usage of this column depend on the device model. This column and the TcpFlag column cannot both be configured.
ICMP6	ICMPv6 messages.	N/A	Members include: - ICMP6Type. - ICMP6Code.	The members must both be specified.
ICMP6Type	Type of ICMPv6 messages.	N/A	Unsigned integer. Value range: 0 to 255.	Only the ICMPv6 protocol supports this column.
ICMP6Code	Code of ICMPv6 messages.	N/A	Unsigned integer. Value range: 0 to 256. The value 256 indicates that no ICMPv6 message code is specified.	Only the ICMPv6 protocol supports this column.
Fragment	Whether a rule matches only non-first	N/A	Boolean: true—Matches only non-first fragments.	N/A

Column name	Column description	Column type	Data type and restrictions	Remarks
	fragments.		false—Matches both fragments and non-fragments (default).	
HopTypeAny	Whether a rule matched any types of Hop-by-Hop Options header.	N/A	Boolean: true—Matches any types of Hop-by-Hop Options header. false—Matches the specified type of Hop-by-Hop Options header (default).	This column and the HopTypeValue column cannot both be configured.
HopTypeValue	Type of Hop-by-Hop Options header.	N/A	Unsigned integer. Value range: 0 to 255.	This column and the HopTypeAny column cannot both be configured.
TimeRange	Time range.	N/A	String, case-insensitive. Length: 1 to 32 characters. The string must start with an English letter.	It cannot be the word all .
VRF	VRF.	N/A	String, case-sensitive. Length: 1 to 31 characters.	N/A
Counting	Whether to count the rule matches.	N/A	Boolean: true—Counts the rule matches. false—Does not count the rule matches (default).	N/A
Logging	Whether to log rule match events.	N/A	Boolean: true—Logs rule match events. false—Does not log rule match events (default).	N/A
Comment	Rule comment.	N/A	String, case-sensitive. Length: 1 to 127 characters.	A comment can only be configured for an existing rule. When the MatchOrder column is 2 , you can modify only the comment for a rule.

ACL/MACRules

This table contains information about Ethernet frame header ACL rules.

XML structure

```
<ACL>
  <MACRules>
    <Rule>
      <GroupID></GroupID>
      <RuleID></RuleID>
      <Action></Action>
      <SrcMACAddr>
        <SrcMACAddress></SrcMACAddress>
        <SrcMACMask></SrcMACMask>
      </SrcMACAddr>
      <DstMACAddr>
        <DstMACAddress></DstMACAddress>
        <DstMACMask></DstMACMask>
      </DstMACAddr>
      <COS></COS>
      <Protocol>
        <ProtocolType></ProtocolType>
        <ProtocolTypeMask></ProtocolTypeMask>
      </Protocol>
      <LSAP>
        <LSAPType></LSAPType>
        <LSAPTypeMask></LSAPTypeMask>
      </LSAP>
      <TimeRange></TimeRange>
      <Counting></Counting>
      <Comment></Comment>
    </Rule>
  </MACRules>
</ACL>
```

Table description

Item	Description
Feature name	ACL
Table name	MACRules
Table type	Multi-instance table
Row name	Rule
Restrictions	None
Support for row creation and deletion	Yes

Columns

Column name	Column description	Column type	Data type and restrictions	Remarks
GroupID	ACL number.	Index	Unsigned integer. Value range: 4000 to 4999.	You must create an ACL first before you create, merge, or replace rules for it.
RuleID	Rule ID.	Index	Unsigned integer. Value range: 0 to 65535. The value 65535 is an invalid rule ID.	If you set this column to 65535, the system automatically assigns a new rule ID. This rule ID is the nearest higher multiple of the numbering step to the current highest rule ID, starting from 0.
Action	Action on packets matching the rule.	N/A	Enumeration: 1—Deny. 2—Permit.	You cannot specify an action when you remove or delete a rule. You must specify an action when you replace a rule, or when you merge or create a rule that does not exist.
SrcMACAddr	Information about the source MAC address.	Data structure	Members include: - SrcMACAddress. - SrcMACMask.	The members must both be specified.
SrcMACAddress	Source MAC address.	N/A	Six groups of two hexadecimal digits, hyphen-separated.	Example: 00-0c-af-e3-5d-c0.
SrcMACMask	Mask of the source MAC address.	N/A	Six groups of two hexadecimal digits, hyphen-separated.	Example: ff-ff-ff-ff-ff-ff.
DstMACAddr	Information about the destination MAC address.	Data structure	Members include: - DstMACAddress. - DstMACMask.	The members must both be specified.
DstMACAddress	Destination MAC address.	N/A	Six groups of two hexadecimal digits, hyphen-separated.	Example: 00-0c-af-e3-5d-c0.
DstMACMask	Mask of the destination MAC address.	N/A	Six groups of two hexadecimal digits, hyphen-separated.	Example: ff-ff-ff-ff-ff-ff.
COS	802.1p priority.	N/A	Unsigned integer. Value range: 0 to 7.	N/A
Protocol	Link layer protocol.	Data structure	Members include: ProtocolType.	The members must both be specified.

Column name	Column description	Column type	Data type and restrictions	Remarks
			ProtocolTypeMask.	This column and the LSAP column cannot both be configured.
ProtocolType	Type of the link layer protocol.	N/A	Hexadecimal string. Length: 1 to 4 characters. Value range: 0 to FFFF.	Values of link layer protocol types are assigned by IANA.
ProtocolTypeMask	Mask of the link layer protocol type.	N/A	Hexadecimal string. Length: 1 to 4 characters. Value range: 0 to FFFF.	N/A
LSAP	LSAP.	Data structure	Members include: - LSAPType. - LSAPTypeMask.	The members must both be specified. This column and the Protocol column cannot both be configured.
LSAPType	Type of LSAP.	N/A	Hexadecimal string. Length: 1 to 4 characters. Value range: 0 to FFFF.	N/A
LSAPTypeMask	Mask of the LSAP type.	N/A	Hexadecimal string. Length: 1 to 4 characters. Value range: 0 to FFFF.	N/A
TimeRange	Time range.	N/A	String, case-insensitive. Length: 1 to 32 characters. The string must start with an English letter.	It cannot be the word all .
Counting	Whether to count the rule matches.	N/A	Boolean: true—Counts the rule matches. false—Does not count the rule matches (default).	N/A
Comment	Rule comment.	N/A	String, case-sensitive. Length: 1 to 127 characters.	A comment can only be configured for an existing rule. When the MatchOrder column is 2 , you can modify only the comment for a rule.

ACL/PfilterDefAction

This table contains information about the default global packet filter actions.

XML structure

```
<ACL>
  <PfilterDefAction>
    <DefaultAction></DefaultAction>
  </PfilterDefAction>
</ACL>
```

Table description

Item	Description
Feature name	ACL
Table name	PfilterDefAction
Table type	Single-instance table
Row name	N/A
Restrictions	None
Support for row creation and deletion	No

Columns

Column name	Column description	Column type	Data type and restrictions
DefaultAction	Default packet filter action	N/A	Enumeration: • 1—Permit (default). • 2—Deny.

ACL/PfilterApply

This table contains information about packet filter application.

XML structure

```
<ACL>
  <PfilterApply>
    <Pfilter>
      <AppObjType></AppObjType>
      <AppObjIndex></AppObjIndex>
      <AppDirection></AppDirection>
      <AppAcIType></AppAcIType>
      <AppAcIGroup></AppAcIGroup>
      <HardCount></HardCount>
    </Pfilter>
  </PfilterApply>
</ACL>
```

```

    </PfilterApply>
  </ACL>

```

Table description

Item	Description
Feature name	ACL
Table name	PfilterApply
Table type	Multi-instance table
Row name	Pfilter
Restrictions	None
Support for row creation and deletion	Yes

Columns

Column name	Column description	Column type	Data type and restrictions	Remarks
AppObjType	Type of the application object.	Index	Enumeration: 1—Interface. 2—VLAN. 3—Global.	Support for the specified type depends on the device model.
AppObjIndex	Index of the application object.	Index	Unsigned integer. Value range: 0 to 4294967295.	The value depends on the AppObjType column. - Interface index if AppObjType is 1. - VLAN ID in the range of 1 to 4094 if AppObjType is 2. - The value is 0 if AppObjType is 3.
AppDirection	Application direction.	Index	Enumeration: 1—Inbound. 2—Outbound.	N/A
AppAclType	ACL type.	Index	Enumeration: 1—IPv4 ACL. 2—IPv6 ACL. 3—Ethernet frame header ACL. 4—ACL with the default action.	- Type 4 is a special ACL. - Type 3 is not supported in the current software version, and is reserved for future support.
AppAclGroup	ACL name or number.	Index	ACL name: Case-insensitive string of 1 to 63 characters. ACL number:	An ACL name must start with an English letter and cannot be all. The value range depends

Column name	Column description	Column type	Data type and restrictions	Remarks
			0 or an unsigned integer in the range of 2000 to 5999.	on the AppAcIType column. 2000 to 5999 if AppAcIType is 1. 2000 to 3999 if AppAcIType is 2. 0 if AppAcIType is 4.
HardCount	Whether to count rule matches in hardware for the ACL.	N/A	Enumeration: 1—Enable. 2—Disable.	Support for this function depends on the device model. Global default action and VLAN default action do not support this function.

ACL/UserRules

This table contains information about user-defined ACL rules.

XML structure

```

<ACL>
  <UserRules>
    <Rule>
      <GroupID></GroupID>
      <RuleID></RuleID>
      <Action></Action>
      <L2Rule>
        <L2RuleString></L2RuleString>
        <L2RuleMask></L2RuleMask>
        <L2Offset></L2Offset>
      </L2Rule>
      <IPv4Rule>
        <IPv4RuleString></IPv4RuleString>
        <IPv4RuleMask></IPv4RuleMask>
        <IPv4Offset></IPv4Offset>
      </IPv4Rule>
      <IPv6Rule>
        <IPv6RuleString></IPv6RuleString>
        <IPv6RuleMask></IPv6RuleMask>
        <IPv6Offset></IPv6Offset>
      </IPv6Rule>
      <L4Rule>
        <L4RuleString></L4RuleString>
        <L4RuleMask></L4RuleMask>
        <L4Offset></L4Offset>
      </L4Rule>
    </Rule>
  </UserRules>
</ACL>

```

```

    </L4Rule>
    <TimeRange></TimeRange>
    <Counting></Counting>
    <Comment></Comment>
  </Rule>
</UserRules>
</ACL>

```

Table description

Item	Description
Feature name	ACL
Table name	UserRules
Table type	Multi-instance table
Row name	Rule
Restrictions	None
Support for row creation and deletion	Yes

Columns

Column name	Column description	Column type	Data type and restrictions	Remarks
GroupID	ACL number.	Index	Unsigned integer. Value range: 5000 to 5999.	You must create an ACL first before you create, merge, or replace rules for it.
RuleID	Rule ID.	Index	Unsigned integer. Value range: 0 to 65535. The value 65535 is an invalid rule ID.	If you set this column to 65535, the system automatically assigns a new rule ID. This rule ID is the nearest higher multiple of the numbering step to the current highest rule ID, starting from 0.
Action	Action on packets matching the rule.	N/A	Enumeration: 1—Deny. 2—Permit.	You cannot specify an action when you remove or delete a rule. You must specify an action when you replace a rule, or when you merge or create a rule that does not exist.
L2Rule	Specifies that the offset is relative to the beginning of the Layer 2 frame	Data structure	Members include: - L2RuleString. - L2RuleMask.	The members must all be specified.

Column name	Column description	Column type	Data type and restrictions	Remarks
	header.		L2Offset.	
L2RuleString	String for the match pattern.	N/A	Hexadecimal string. Length: 0 to the device-specific upper limit.	The length must be an even number.
L2RuleMask	Match pattern mask.	N/A	Hexadecimal string. Length: 0 to the device-specific upper limit.	The length must be an even number, and equal to that of the match pattern string.
L2Offset	Offset in bytes after which the match operation begins.	N/A	Unsigned integer. Value range: 0 to the device-specific upper limit.	N/A
IPv4Rule	Specifies that the offset is relative to the beginning of the IPv4 header.	Data structure	Members include: - IPv4RuleString. - IPv4RuleMask. - IPv4Offset.	The members must all be specified.
IPv4RuleString	String for the match pattern.	N/A	Hexadecimal string. Length: 0 to the device-specific upper limit.	The length must be an even number.
IPv4RuleMask	Match pattern mask.	N/A	Hexadecimal string. Length: 0 to the device-specific upper limit.	The length must be an even number, and equal to that of the match pattern string.
IPv4Offset	Offset in bytes after which the match operation begins.	N/A	Unsigned integer. Value range: 0 to the device-specific upper limit.	N/A
IPv6Rule	Specifies that the offset is relative to the beginning of the IPv6 header.	Data structure	Members include: - IPv6RuleString. - IPv6RuleMask. - IPv6Offset.	The members must all be specified.
IPv6RuleString	String for the match pattern.	N/A	Hexadecimal string. Length: 0 to the device-specific upper limit.	The length must be an even number.
IPv6RuleMask	Match pattern mask.	N/A	Hexadecimal string. Length: 0 to the device-specific upper limit.	The length must be an even number, and equal to that of the match pattern string.
IPv6Offset	Specifies an offset in bytes after which the match operation begins.	N/A	Unsigned integer. Value range: 0 to the device-specific upper limit.	N/A
L4Rule	Specifies that the offset is relative to the beginning of the Layer 4	Data structure	Members include: - L4RuleString. - L4RuleMask.	The members must all be specified.

Column name	Column description	Column type	Data type and restrictions	Remarks
	header.		L4Offset.	
L4RuleString	String for the match pattern.	N/A	Hexadecimal string. Length: 0 to the device-specific upper limit.	The length must be an even number.
L4RuleMask	Match pattern mask.	N/A	Hexadecimal string. Length: 0 to the device-specific upper limit.	The length must be an even number, and equal to that of the match pattern string.
L4Offset	Specifies an offset in bytes after which the match operation begins.	N/A	Unsigned integer. Value range: 0 to the device-specific upper limit.	N/A
TimeRange	Time range.	N/A	String, case-insensitive. Length: 1 to 32 characters. The string must start with an English letter.	It cannot be the word all .
Counting	Whether to count the rule matches.	N/A	Boolean: true—Counts the rule matches. false—Does not count the rule matches (default).	N/A
Comment	Rule comment.	N/A	String, case-sensitive. Length: 1 to 127 characters.	A comment can only be configured for an existing rule.

ACL/ZonePairPfilterApply

This table contains information about packet filter application for zone-pair.

XML structure

```

<ACL>
  <ZonePairPfilterApply>
    <Pfilter>
      <SrcZone></SrcZone>
      <DestZone></DestZone>
      <AclType></AclType>
      <AclGroup></AclGroup>
    </Pfilter>
  </ZonePairPfilterApply>
</ACL>

```

Table description

Item	Description
Feature name	ACL
Table name	ZonePairPfilterApply
Table type	Multi-instance table
Row name	Pfilter
Restrictions	None
Support for row creation and deletion	Yes

Columns

Column name	Column description	Column type	Data type and restrictions	Remarks
SrcZone	Name of the source zone.	Index	String, case insensitive. Length: 1 to 31 characters.	Cannot contain midline(-).
DestZone	Name of the destination zone.	Index	String, case insensitive. Length: 1 to 31 characters.	Cannot contain midline(-).
AcIType	ACL type.	Index	Enumeration: • 1—IPv4 ACL. • 2—IPv6 ACL. • 3—Ethernet frame header ACL.	Type 3 is not supported in the current software version, and is reserved for future support.
AcIGroup	ACL name or number.	Index	• ACL name: Case-insensitive string of 1 to 63 characters. • ACL number: An unsigned integer in the range of 2000 to 5999.	An ACL name must start with an English letter and cannot be all. The value range depends on the AppAcIType column. • 2000 to 5999 if AppAcIType is 1. • 2000 to 3999 if AppAcIType is 2.