

Comware V7 APR NETCONF XML API Configuration Reference

Contents

APR.....	1
APR/GeneralPortMappings	1
XML structure.....	1
Table description	1
Columns.....	2
APR/Ipv4PortMappings.....	3
XML structure.....	3
Table description	4
Columns.....	4
APR/Ipv6PortMappings.....	6
XML structure.....	6
Table description	6
Columns.....	7
APR/Ipv4SubnetPortMappings	8
XML structure.....	9
Table description	9
Columns.....	10
APR/Ipv6SubnetPortMappings	11
XML structure.....	11
Table description	12
Columns.....	12
APR/ Ipv4ACLPortMappings	13
XML structure.....	13
Table description	14
Columns.....	14
APR/ Ipv6ACLPortMappings	15
XML structure.....	16
Table description	16
Columns.....	16
APR/AppGroups	17
XML structure.....	18
Table description	18
Columns.....	18
APR/AppGroupMembers.....	19
XML structure.....	19
Table description	19
Columns.....	19
APR/StatisticOnInterfaces	20
XML structure.....	20
Table description	20
Columns.....	21

APR

APR/GeneralPortMappings

This table contains informations about port mappings.

XML structure

```
<APR>
  <GeneralPortMappings>
    <PortMapping>
      <PortNumber></PortNumber>
      <L4ProtocolID></L4ProtocolID>
      <AppName></AppName>
    </PortMapping>
  </GeneralPortMappings>
</APR>
```

Table description

Item	Description
Feature name	APR
Table name	GeneralPortMappings
Table type	Multi-instance table
Row name	PortMapping
Restrictions	None

Columns

Column name	Column description	Column type	Data type and restrictions	Remarks
PortNumber	Port number	Index	Unsigned integer. Value range: 0 to 65535.	If the destination port of a packet matches a general port mapping, APR recognizes the packet as the specified application protocol's packet. If two port mappings are configured with the same port number and transport layer protocol, but with different application protocols, the most recent configuration takes effect.
L4ProtocolID	Transport layer portocol ID	Index	Enumeration: • 6—TCP. • 17—UDP. • 33—DCCP. • 132—SCTP. • 136—UDP-Lite.	This index can be null. If no transport layer protocol is specified, all the transport layer protocol packets and that have the specified port are recognized as the specified application protocol's packets. A mapping with the transport layer protocol specified has a higher priority than one without it.

Column name	Column description	Column type	Data type and restrictions	Remarks
AppName	Application layer protocol name	N/A	String, case-insensitive. Length: 1 to 63 characters.	Valid characters include digits, letters, hyphens (-), and underlines (_), but can't be "invalid" and "other". The application layer protocol name must be standard and can be identified by the equipment. It can be predefined port mapping application name or the application name which doesn't exist, but the user defined application will be created at the same time. This column is affirmatively chosen item.
Support for row creation and deletion			Yes	

APR/Ipv4PortMappings

This table contains informations about IPv4 address-based host-port mappings.

XML structure

```

<APR>
  <Ipv4PortMappings>
    <PortMapping>
      <PortNumber></PortNumber>
      <L4ProtocolID></L4ProtocolID>
      <VRF></VRF>
      <StartIpv4Address></StartIpv4Address>
      <EndIpv4Address></EndIpv4Address>
      <AppName></AppName>
    </PortMapping>
  </Ipv4PortMappings>
</APR>

```

Table description

Item	Description
Feature name	APR
Table name	Ipv4PortMappings
Table type	Multi-instance table
Row name	PortMapping
Restrictions	None
Support for row creation and deletion	Yes

Columns

Column name	Column description	Column type	Data type and restrictions	Remarks
PortNumber	Port number	Index	Unsigned integer. Value range: 0 to 65535.	If the destination port of these packets matches a port mapping for packets destined for the specified IP address or IP subnet, APR recognizes them as the specified application protocol's packets. If two port mappings are configured with the same port number, transport layer protocol, and IP address or IP address ranges, but with different application protocols, the most recent configuration takes effect.
L4ProtocolID	Transport layer protocol ID	Index	Enumeration: • 6—TCP. • 17—UDP. • 33—DCCP. • 132—SCTP. • 136—UDP-Lite.	This index can be null. If no transport layer protocol is specified, all the transport layer protocol packets and that have the specified port are recognized as the specified application protocol's packets. A mapping with the transport layer protocol specified has a higher priority than one without it.

Column name	Column description	Column type	Data type and restrictions	Remarks
VRF	VRF.	Index	String, case-sensitive. Length: 1 to 31 characters.	If you configure a mapping for the public network, do not specify this option.
StartIpv4Address	Start IPv4 address	Index	String, dotted decimal notation.	Example: 1.1.1.1. To specify only one IP address, provide only the start IP address. To specify a range of IP addresses, provide both the start and end IP addresses, and make sure the end IP address is bigger than the start IP address. No overlapping of IP addresses is tolerable for the host-port mappings configured with the same application protocol, port number, and transport layer protocol.
EndIpv4Address	End IPv4 address	Index	String, dotted decimal notation.	Example: 1.1.1.6. This index can be null. Valid characters include digits, letters, hyphens (-), and underlines (_), but can't be "invalid" and "other". The application layer protocol name must be standard and can be identified by the equipment. It can be predefined port mapping application name or the application name which doesn't exist, but the user defined application will be created at the same time. This column is affirmatively chosen item.
AppName	Application layer protocol name	N/A	String, case-insensitive. Length: 1 to 63 characters.	

APR/Ipv6PortMappings

This table contains informations about IPv6 address-based host-port mappings.

XML structure

```
<APR>
  <Ipv6PortMappings>
    <PortMapping>
      <PortNumber></PortNumber>
      <L4ProtocolID></L4ProtocolID>
      <VRF></VRF>
      <StartIpv6Address></StartIpv6Address>
      <EndIpv6Address></EndIpv6Address>
      <AppName></AppName>
    </PortMapping>
  </Ipv6PortMappings>
</APR>
```

Table description

Item	Description
Feature name	APR
Table name	Ipv6PortMappings
Table type	Multi-instance table
Row name	PortMapping
Restrictions	None
Support for row creation and deletion	Yes

Columns

Column name	Column description	Column type	Data type and restrictions	Remarks
PortNumber	Port number	Index	Unsigned integer. Value range: 0 to 65535.	If the destination port of these packets matches a port mapping for packets destined for the specified IP address or IP subnet, APR recognizes them as the specified application protocol's packets. If two port mappings are configured with the same port number, transport layer protocol, and IP address or IP address ranges, but with different application protocols, the most recent configuration takes effect.
L4ProtocolID	Transport layer protocol ID	Index	Enumeration: • 6—TCP. • 17—UDP. • 33—DCCP. • 132—SCTP. • 136—UDP-Lite.	This index can be null. If no transport layer protocol is specified, all the transport layer protocol packets and that have the specified port are recognized as the specified application protocol's packets. A mapping with the transport layer protocol specified has a higher priority than one without it.
VRF	VRF.	Index	String, case-sensitive. Length: 1 to 31 characters.	If you configure a mapping for the public network, do not specify this option.

Column name	Column description	Column type	Data type and restrictions	Remarks
StartIpv6Address	Start IPv6 address	Index	Hexadecimal string, colon-separated.	Example: 1:1::1:1. To specify only one IP address, provide only the start IP address. To specify a range of IP addresses, provide both the start and end IP addresses, and make sure the end IP address is bigger than the start IP address. No overlapping of IP addresses is tolerable for the host-port mappings configured with the same application protocol, port number, and transport layer protocol.
EndIpv6Address	End IPv6 address	Index	Hexadecimal string, colon-separated..	Example: 1:1::1:6. This index can be null.
AppName	Application layer protocol name	N/A	String, case-insensitive. Length: 1 to 63 characters.	Valid characters include digits, letters, hyphens (-), and underlines (_), but can't be "invalid" and "other". The application layer protocol name must be standard and can be identified by the equipment. It can be predefined port mapping application name or the application name which doesn't exist, but the user defined application will be created at the same time. This column is affirmatively chosen item.

APR/Ipv4SubnetPortMappings

This table contains informations about IPv4 subnet-based host-port mappings.

XML structure

```
<APR>
  <Ipv4SubnetPortMappings>
    <PortMapping>
      <PortNumber></PortNumber>
      <L4ProtocolID></L4ProtocolID>
      <VRF></VRF>
      <Ipv4Address></Ipv4Address>
      <Ipv4PrefixLength></Ipv4PrefixLength>
      <AppName></AppName>
    </PortMapping>
  </Ipv4SubnetPortMappings>
</APR>
```

Table description

Item	Description
Feature name	APR
Table name	Ipv4SubnetPortMappings
Table type	Multi-instance table
Row name	PortMapping
Restrictions	None
Support for row creation and deletion	Yes

Columns

Column name	Column description	Column type	Data type and restrictions	Remarks
PortNumber	Port number	Index	Unsigned integer. Value range: 0 to 65535.	If the destination port of these packets matches a port mapping for packets destined for the specified subnet, APR recognizes them as the specified application protocol's packets. If two port mappings are configured with the same port number, transport layer protocol, and subnet, but with different application protocols, the most recent configuration takes effect.
L4ProtocolID	Transport layer protocol ID	Index	Enumeration: • 6—TCP. • 17—UDP. • 33—DCCP. • 132—SCTP. • 136—UDP-Lite.	This index can be null. If no transport layer protocol is specified, all the transport layer protocol packets and that have the specified port are recognized as the specified application protocol's packets. A mapping with the transport layer protocol specified has a higher priority than one without it.
VRF	VRF.	Index	String, case-sensitive. Length: 1 to 31 characters.	If you configure a mapping for the public network, do not specify this option.
Ipv4Address	IPv4 address	Index	String, dotted decimal notation.	Example: 1.1.1.1. APR uses a very precise method to match the packets. If multiple subnet-based mappings are applied to packets and these subnets overlap, APR matches the packets destined for the overlapped segment with the port mapping of the subnet that has the smallest range.

Column name	Column description	Column type	Data type and restrictions	Remarks
Ipv4PrefixLength	Length of the IPv4 address mask.	Index	Unsigned integer. Value range: 1 to 32.	N/A
AppName	Application layer protocol name	N/A	String, case-insensitive. Length: 1 to 63 characters.	Valid characters include digits, letters, hyphens (-), and underlines (_), but can't be "invalid" and "other". The application layer protocol name must be standard and can be identified by the equipment. It can be predefined port mapping application name or the application name which doesn't exist, but the user defined application will be created at the same time. This column is affirmatively chosen item.

APR/Ipv6SubnetPortMappings

This table contains informations about IPv6 subnet-based host-port mappings.

XML structure

```

<APR>
  <Ipv6SubnetPortMappings>
    <PortMapping>
      <PortNumber></PortNumber>
      <L4ProtocolID></L4ProtocolID>
      <VRF></VRF>
      <Ipv6Address></Ipv6Address>
      <Ipv6PrefixLength></Ipv6PrefixLength>
      <AppName></AppName>
    </PortMapping>
  </Ipv6SubnetPortMappings>
</APR>

```

Table description

Item	Description
Feature name	APR
Table name	Ipv6SubnetPortMappings
Table type	Multi-instance table
Row name	PortMapping
Restrictions	None
Support for row creation and deletion	Yes

Columns

Column name	Column description	Column type	Data type and restrictions	Remarks
PortNumber	Port number	Index	Unsigned integer. Value range: 0 to 65535.	If the destination port of these packets matches a port mapping for packets destined for the specified subnet, APR recognizes them as the specified application protocol's packets. If two port mappings are configured with the same port number, transport layer protocol, and subnet, but with different application protocols, the most recent configuration takes effect.
L4ProtocolID	Transport layer portocol ID	Index	Enumeration: • 6—TCP. • 17—UDP. • 33—DCCP. • 132—SCTP. • 136—UDP-Lite.	This index can be null. If no transport layer protocol is specified, all the transport layer protocol packets and that have the specified port are recognized as the specified application protocol's packets. A mapping with the transport layer protocol specified has a higher priority than one without it.

Column name	Column description	Column type	Data type and restrictions	Remarks
VRF	VRF.	Index	String, case-sensitive. Length: 1 to 31 characters.	If you configure a mapping for the public network, do not specify this option.
Ipv6Address	IPv6 address	Index	Hexadecimal string, colon-separated.	Example: 1:1::1:1. APR uses a very precise method to match the packets. If multiple subnet-based mappings are applied to packets and these subnets overlap, APR matches the packets destined for the overlapped segment with the port mapping of the subnet that has the smallest range.
Ipv6PrefixLength	Length of the IPv6 address prefix.	Index	Unsigned integer. Value range: 1 to 128.	N/A
AppName	Application layer protocol name	N/A	String, case-insensitive. Length: 1 to 63 characters.	Valid characters include digits, letters, hyphens (-), and underlines (_), but can't be "invalid" and "other". The application layer protocol name must be standard and can be identified by the equipment. It can be predefined port mapping application name or the application name which doesn't exist, but the user defined application will be created at the same time. This column is affirmatively chosen item.

APR/ Ipv4ACLPortMappings

This table contains informations about IPv4 ACL-based host-port mappings.

XML structure

```
<APR>
```

```

<Ipv4ACLPortMappings>
  <PortMapping>
    <PortNumber></PortNumber>
    <L4ProtocolID></L4ProtocolID>
    <ACLNumber></ACLNumber>
    <AppName></AppName>
  </PortMapping>
</Ipv4ACLPortMappings>
</APR>

```

Table description

Item	Description
Feature name	APR
Table name	Ipv4ACLPortMappings
Table type	Multi-instance table
Row name	PortMapping
Restrictions	None
Support for row creation and deletion	Yes

Columns

Column name	Column description	Column type	Data type and restrictions	Remarks
PortNumber	Port number	Index	Unsigned integer. Value range: 0 to 65535.	If the destination port of these packets matches a port mapping for packets matching the specified ACL, APR recognizes them as the specified application protocol's packets. If two port mappings are configured with the same port number, transport layer protocol, and ACL, but with different application protocols, the most recent configuration takes effect.

Column name	Column description	Column type	Data type and restrictions	Remarks
L4ProtocolID	Transport layer portocol ID specified to the application layer protocol	Index	Enumeration: • 6—TCP. • 17—UDP. • 33—DCCP. • 132—SCTP. • 136—UDP-Lite.	This index can be null. If no transport layer protocol is specified, all the transport layer protocol packets and that have the specified port are recognized as the specified application protocol's packets. A mapping with the transport layer protocol specified has a higher priority than one without it.
ACLNumber	ACL number	Index	Unsigned integer. Value range: 2000 to 2999.	If the destination port of the packet that matches against the specified ACL maps with an application layer protocol, the packet is recognized as the corresponding application layer protocol packet.
AppName	Application layer protocol name	N/A	String, case-insensitive. Length: 1 to 63 characters.	Valid characters include digits, letters, hyphens (-), and underlines (_), but can't be "invalid" and "other". The application layer protocol name must be standard and can be identified by the equipment. It can be predefined port mapping application name or the application name which doesn't exist, but the user defined application will be created at the same time. This column is affirmatively chosen item.

APR/ Ipv6ACLPortMappings

This table contains informations about IPv6 ACL-based host-port mappings.

XML structure

```
<APR>
  <Ipv6ACLPortMappings>
    <PortMapping>
      <PortNumber></PortNumber>
      <L4ProtocolID></L4ProtocolID>
      <ACLNumber></ACLNumber>
      <AppName></AppName>
    </PortMapping>
  </Ipv6ACLPortMappings>
</APR>
```

Table description

Item	Description
Feature name	APR
Table name	Ipv6ACLPortMappings
Table type	Multi-instance table
Row name	PortMapping
Restrictions	None
Support for row creation and deletion	Yes

Columns

Column name	Column description	Column type	Data type and restrictions	Remarks
PortNumber	Port number	Index	Unsigned integer. Value range: 0 to 65535.	If the destination port of these packets matches a port mapping for packets matching the specified ACL, APR recognizes them as the specified application protocol's packets. If two port mappings are configured with the same port number, transport layer protocol, and ACL, but with different application protocols, the most recent configuration takes effect.

Column name	Column description	Column type	Data type and restrictions	Remarks
L4ProtocolID	Transport layer portocol ID specified to the application layer protocol	Index	Enumeration: • 6—TCP. • 17—UDP. • 33—DCCP. • 132—SCTP. • 136—UDP-Lite.	This index can be null. If no transport layer protocol is specified, all the transport layer protocol packets and that have the specified port are recognized as the specified application protocol's packets. A mapping with the transport layer protocol specified has a higher priority than one without it.
ACLNumber	ACL number	Index	Unsigned integer. Value range: 2000 to 2999.	If the destination port of the packet that matches against the specified ACL maps with an application layer protocol, the packet is recognized as the corresponding application layer protocol packet.
AppName	Application layer protocol name	N/A	String, case-insensitive. Length: 1 to 63 characters.	Valid characters include digits, letters, hyphens (-), and underlines (_), but can't be "invalid" and "other". The application layer protocol name must be standard and can be identified by the equipment. It can be predefined port mapping application name or the application name which doesn't exist, but the user defined application will be created at the same time. This column is affirmatively chosen item.

APR/AppGroups

This table contains informations about the user-defined application groups.

XML structure

```
<APR>
  <AppGroups>
    <GroupInfo>
      <GroupName></GroupName>
      <Description></Description>
    </GroupInfo>
  </AppGroups>
</APR>
```

Table description

Item	Description
Feature name	APR
Table name	AppGroups
Table type	Multi-instance table
Row name	GroupInfo
Restrictions	None
Support for row creation and deletion	Yes

Columns

Column name	Column description	Column type	Data type and restrictions	Remarks
GroupName	Predefined or user-defined application group name	Index	String, case-insensitive. Length: 1 to 63 characters.	Valid characters include digits, letters, hyphens (-), and underlines (_). Names, such as "invalid" or "other" are not allowed. You can create up to 65536 application groups on the device.
Description	Description for the application group	N/A	String, case-sensitive. Length: 1 to 127 characters.	Blank space can be included in <i>Description</i> . The default description of the user-defined application group is "User defined group".

APR/AppGroupMembers

This table contains the application protocols included in an user-defined application group.

XML structure

```
<APR>
  <AppGroupMembers>
    <GroupMember>
      <GroupName></GroupName>
      <AppName></AppName>
    </GroupMember>
  </AppGroupMembers>
</APR>
```

Table description

Item	Description
Feature name	APR
Table name	AppGroupMembers
Table type	Multi-instance table
Row name	GroupMember
Restrictions	None
Support for row creation and deletion	Yes

Columns

Column name	Column description	Column type	Data type and restrictions	Remarks
GroupName	User-defined application group name	Index	String, case-insensitive. Length: 1 to 63 characters.	Valid characters include digits, letters, hyphens (-), and underlines (_). Names, such as "invalid" or "other" are not allowed. You can create up to 65536 application groups on the device.

Column name	Column description	Column type	Data type and restrictions	Remarks
AppName	Predefined or user-defined application protocol name which is added to the application group	Index	String, case-insensitive. Length: 1 to 63 characters.	Valid characters include digits, letters, hyphens (-), and underlines (_), but can't be "invalid" and "other". The application layer protocol name must be standard and can be identified by the equipment. A maximum of 65535 user-defined application protocols can be added to an application group. If you add a nonexistent application protocol to the application group, the system first creates the protocol before adding it to the application group. Whether the device can recognize the packets of this protocol depends on your configuration.

APR/StatisticOnInterfaces

This table contains the interfaces where statistic is enabled.

XML structure

```

<APR>
  <StatisticOnInterfaces>
    <Interface>
      <IfIndex></IfIndex>
      <Direction></Direction>
      <EnableStatistic></EnableStatistic>
    </Interface>
  </StatisticOnInterfaces>
</APR>

```

Table description

Item	Description
Feature name	APR

Table name	StatisticOnInterfaces
Table type	Multi-instance table
Row name	Interface
Restrictions	None
Support for row creation and deletion	No

Columns

Column name	Column description	Column type	Data type and restrictions	Remarks
IfIndex	Interface index	Index	Unsigned integer.	This column can only be 3 layer interface except loopback, NULL, FC, FCB and encrypt interface.
Direction	The direction of the interface	Index	- Enumeration: 0—Inbound. 1—Outbound.	N/A
EnableStatistic	Whether enable statistic for the interface	N/A	- Boolean: - true—YES. - false—NO (default).	N/A