


## 04-VLAN

level  
  
one

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# 1 VLAN

## vlan

Syntax	vlan WORD					
	no vlan					
Parameter	WORD WORD is the VLAN ID to be created/deleted, valid range is 1 to 4094, connect with ';' and '-'.					
Default	Only VLAN1 is set by default.					
Mode	Global Mode					
Usage	VLAN1 is the default VLAN and cannot be configured or deleted by the user. The maximal VLAN number is 4094. It should be noted that dynamic VLANs learnt by GVRP cannot be deleted by this command.					
Example	Create VLAN100 and enter the configuration mode for VLAN 100.Display the status for the current VLAN; Switch#config Switch(config)#vlan 100 Switch#show vlan					
	VLAN Name	Type	Media	Ports		
	-----					
	1	default	Static	ENET	Ethernet1/0/2	Ethernet1/0/3
					Ethernet1/0/4	Ethernet1/0/5
					Ethernet1/0/6	Ethernet1/0/7
					Ethernet1/0/8	Ethernet1/0/9
					Ethernet1/0/10	Ethernet1/0/11
					Ethernet1/0/12	Ethernet1/0/13
					Ethernet1/0/14	Ethernet1/0/15
					Ethernet1/0/16	Ethernet1/0/17
					Ethernet1/0/18	Ethernet1/0/19
					Ethernet1/0/20	Ethernet1/0/21
					Ethernet1/0/22	Ethernet1/0/23
					Ethernet1/0/24	Ethernet1/0/25
					Ethernet1/0/26	Ethernet1/0/27
					Ethernet1/0/28	
	100	VLAN0100	Static	ENET		
	Switch#					

## name (vlan)

<b>Syntax</b>	<b>name NAME</b> <b>no name</b>
<b>Parameter</b>	<b>NAME</b> specified name string.
<b>Default</b>	The default VLAN name is vlanXXX, where xxx is VID.

<b>Mode</b>	VLAN Configuration Mode.
<b>Usage</b>	The switch can specify names for different VLANs, making it easier for users to identify and manage VLANs.
<b>Example</b>	Specify the name of VLAN100 as 100 Switch#config Switch(config)# vlan 100 Switch(config-vlan100)#name 100 Switch# show vlan <pre> VLAN Name      Type      Media      Ports ----- 1    default    Static    ENET       Ethernet1/0/2    Ethernet1/0/3                         Ethernet1/0/4    Ethernet1/0/5                         Ethernet1/0/6    Ethernet1/0/7                         Ethernet1/0/8    Ethernet1/0/9                         Ethernet1/0/10   Ethernet1/0/11                         Ethernet1/0/12   Ethernet1/0/13                         Ethernet1/0/14   Ethernet1/0/15                         Ethernet1/0/16   Ethernet1/0/17                         Ethernet1/0/18   Ethernet1/0/19                         Ethernet1/0/20   Ethernet1/0/21                         Ethernet1/0/22   Ethernet1/0/23                         Ethernet1/0/24   Ethernet1/0/25                         Ethernet1/0/26   Ethernet1/0/27                         Ethernet1/0/28 100  100        Static    ENET Switch# </pre>

## switchport interface

<b>Syntax</b>	<b>switchport interface [ethernet   portchannel] [&lt;interface-name   interface-list&gt;]</b> <b>no switchport interface [ethernet   portchannel] [&lt;interface-name   interface-list&gt;]</b>								
<b>Parameter</b>	<table> <tr> <td><b>ethernet</b></td><td>Ethernet port to be added</td></tr> <tr> <td><b>portchannel</b></td><td>link-aggregation port to be added</td></tr> <tr> <td><b>interface-name</b></td><td>port name, such as e1/0/1. If this option is selected, ethernet or portchannel should not be.</td></tr> <tr> <td><b>interface-list</b></td><td>port list to be added or deleted, “;” and “-” are supported, for example: ethernet1/0/1;3;4-7;8.</td></tr> </table>	<b>ethernet</b>	Ethernet port to be added	<b>portchannel</b>	link-aggregation port to be added	<b>interface-name</b>	port name, such as e1/0/1. If this option is selected, ethernet or portchannel should not be.	<b>interface-list</b>	port list to be added or deleted, “;” and “-” are supported, for example: ethernet1/0/1;3;4-7;8.
<b>ethernet</b>	Ethernet port to be added								
<b>portchannel</b>	link-aggregation port to be added								
<b>interface-name</b>	port name, such as e1/0/1. If this option is selected, ethernet or portchannel should not be.								
<b>interface-list</b>	port list to be added or deleted, “;” and “-” are supported, for example: ethernet1/0/1;3;4-7;8.								
<b>Default</b>	A newly created VLAN contains no port by default.								
<b>Mode</b>	VLAN Mode								
<b>Usage</b>	Access ports are normal ports and can join a VLAN, but a port can only join one VLAN for a time.								
<b>Example</b>	Assign Ethernet port 1, 3, 4-7 of VLAN100.								

```

Switch#config
Switch(config)#vlan 100
Switch(config-vlan100)#switchport interface ethernet 1/0/1;3;4-7
Set the port Ethernet1/0/1 access vlan 100 successfully
Set the port Ethernet1/0/3 access vlan 100 successfully
Set the port Ethernet1/0/4 access vlan 100 successfully
Set the port Ethernet1/0/5 access vlan 100 successfully
Set the port Ethernet1/0/6 access vlan 100 successfully
Set the port Ethernet1/0/7 access vlan 100 successfully
Switch#show vlan

```

VLAN Name	Type	Media	Ports
1	default	Static	ENET
			Ethernet1/0/2 Ethernet1/0/8
			Ethernet1/0/9 Ethernet1/0/10
			Ethernet1/0/11 Ethernet1/0/12
			Ethernet1/0/13 Ethernet1/0/14
			Ethernet1/0/15 Ethernet1/0/16
			Ethernet1/0/17 Ethernet1/0/18
			Ethernet1/0/19 Ethernet1/0/20
			Ethernet1/0/21 Ethernet1/0/22
			Ethernet1/0/23 Ethernet1/0/24
			Ethernet1/0/25 Ethernet1/0/26
			Ethernet1/0/27 Ethernet1/0/28
100	VLAN0100	Static	ENET
			Ethernet1/0/1 Ethernet1/0/3
			Ethernet1/0/4 Ethernet1/0/5
			Ethernet1/0/6 Ethernet1/0/7

Switch#

## switchport forbidden vlan

<b>Syntax</b>	<b>switchport forbidden vlan (WORD   all   add WORD   except WORD   remove WORD )</b>										
<b>Parameter</b>	<table> <tr> <td><b>WORD</b></td><td>add the vlanList as forbidden vlan and cover the previous configuration</td></tr> <tr> <td><b>all</b></td><td>set all VLANs as forbidden vlan</td></tr> <tr> <td><b>add WORD</b></td><td>add vlanList to the current forbidden vlanList</td></tr> <tr> <td><b>except WORD</b></td><td>set all VLANs as forbidden vlan except vlanList</td></tr> <tr> <td><b>Remove WORD</b></td><td>remove vlan specified by vlanList from current forbidden vlanList</td></tr> </table>	<b>WORD</b>	add the vlanList as forbidden vlan and cover the previous configuration	<b>all</b>	set all VLANs as forbidden vlan	<b>add WORD</b>	add vlanList to the current forbidden vlanList	<b>except WORD</b>	set all VLANs as forbidden vlan except vlanList	<b>Remove WORD</b>	remove vlan specified by vlanList from current forbidden vlanList
<b>WORD</b>	add the vlanList as forbidden vlan and cover the previous configuration										
<b>all</b>	set all VLANs as forbidden vlan										
<b>add WORD</b>	add vlanList to the current forbidden vlanList										
<b>except WORD</b>	set all VLANs as forbidden vlan except vlanList										
<b>Remove WORD</b>	remove vlan specified by vlanList from current forbidden vlanList										
<b>Default</b>	Forbidden vlanList is empty										
<b>Mode</b>	Port mode										
<b>Usage</b>	<p>Tag the corresponding position for forbidden vlanList and clear allow vlanList flags in ports. A port leaves these VLANs if it joins them statically, and it sends message to GVRP module to enable corresponding registered machine of the port to enter forbidden mode.</p> <p><b>show running-config</b> display current setting</p>										

---

**Example**

Port quits the corresponding VLAN and the corresponding registered machine of GVRP to enter forbidden mode.

Switch#config

Switch(config)#interface ethernet 1/0/1

Switch(config-if-ethernet1/0/1)#switchport mode hybrid

Switch(config-if-ethernet1/0/1)#switchport forbidden vlan all

Set the port Ethernet1/0/1 mode Hybrid successfully

Switch#show running-config

!

no service password-encryption

!

hostname Switch

sysLocation Default

sysContact Default

!

username admin privilege 15 password 0 admin

!

authentication line console login local

!

!

!

!

snmp-server enable

!

!

!

!

!

!

!

!

!

vlan 1;100

!

Interface Ethernet1/0/1

switchport mode hybrid

switchport forbidden vlan 1-4094

!

Interface Ethernet1/0/2

!

Interface Ethernet1/0/3

switchport mode trunk

switchport trunk native vlan 100

!

Interface Ethernet1/0/4

!

Interface Ethernet1/0/5

!

Interface Ethernet1/0/6

---

	!
	Interface Ethernet1/0/7
	!
	Interface Ethernet1/0/8
	!
	Interface Ethernet1/0/9
	Switch#

## switchport mode

<b>Syntax</b>	<b>switchport mode ( access   hybrid   trunk   tunnel )</b>								
<b>Parameter</b>	<table> <tr> <td><b>access</b></td><td>Access port.</td></tr> <tr> <td><b>hybrid</b></td><td>Hybrid port.</td></tr> <tr> <td><b>trunk</b></td><td>Trunk port.</td></tr> <tr> <td><b>tunnel</b></td><td>Tunnel port.</td></tr> </table>	<b>access</b>	Access port.	<b>hybrid</b>	Hybrid port.	<b>trunk</b>	Trunk port.	<b>tunnel</b>	Tunnel port.
<b>access</b>	Access port.								
<b>hybrid</b>	Hybrid port.								
<b>trunk</b>	Trunk port.								
<b>tunnel</b>	Tunnel port.								
<b>Default</b>	The port is in Access mode by default.								
<b>Mode</b>	Port Mode.								
<b>Usage</b>	<p>Ports in trunk mode is called Trunk ports. Trunk ports can allow traffic of multiple VLANs to pass through. VLAN in different switches can be interconnected with the Trunk ports. Ports under access mode are called Access ports. An access port can be assigned to one and only one VLAN at a time. Hybrid ports can allow traffic of multiple VLANs to pass through, receive and send the packets of multiple VLANs, used to connect switch, or user's computer. When Hybrid ports and Trunk ports receive the data, the deal way is same, but the deal way is different in sending the data. Because Hybrid ports can allow the packets of multiple VLANs to send with no tag, however, Trunk ports can only allow the packets of the default VLAN to send with no tag. The attribute of ports can not directly convert between Hybrid and Trunk, it must configure to be access at first, then configure to be Hybrid or Trunk. When the Trunk or Hybrid attribute is cancelled, the port attribute restores the default (access) attribute and belongs to vlan1.</p> <p><b>show switchport interface</b> display setting</p>								
<b>Example</b>	<p>Set port 1 to hybrid mode.</p> <pre>Switch#config Switch(config)#interface ethernet 1/0/1 Switch(config-if-ethernet1/0/1)# switchport mode hybrid Set the port Ethernet1/0/1 mode Hybrid successfully Switch(config-if-ethernet1/0/1)#show switchport interface ethernet 1/0/1</pre> <pre>Ethernet1/0/1 Type :Universal Mode :Hybrid Port VID :1 Switch(config-if-ethernet1/0/1)#</pre>								



## switchport hybrid native vlan

<b>Syntax</b>	<b>switchport hybrid native vlan &lt;vlan-id&gt;</b> <b>no switchport hybrid native vlan</b>
<b>Parameter</b>	<b>&lt;vlan-id&gt;</b> VLAN ID (e.g. 100), PVID of Hybrid port.
<b>Default</b>	The default PVID of Hybrid port is 1.
<b>Mode</b>	Port Mode.
<b>Usage</b>	When an untagged frame enters a Hybrid port, it will be added a tag of the native PVID which is set by this command, and is forwarded to the native VLAN. <b>show switchport interface</b> display setting。
<b>Example</b>	Set the native vlan to 100 for a Hybrid port. Switch#config Switch(config) # interface ethernet 1/0/2 Switch(config-if-ethernet1/0/2)#switchport mode hybrid Switch(config-if-ethernet1/0/2)#switchport hybrid native vlan 100 Switch# show switchport interface ethernet 1/0/2  Ethernet1/0/2 Type :Universal Mode :Hybrid Port VID :100 Switch#

## switchport hybrid allowed vlan

<b>Syntax</b>	<b>switchport hybrid allowed vlan (WORD   all   add WORD   except WORD   remove WORD ) (tag   untag)</b> <b>no switchport hybrid allowed vlan</b>
<b>Parameter</b>	<b>WORD</b> Set vlan List to allowed vlan, and the late configuration will cover the previous configuration; <b>all</b> Set all VLANs to allowed vlan; <b>add WORD</b> Add vlanList to the existent allowed vlanList; <b>except WORD</b> Set all VLANs to allowed vlan except the configured vlanList; <b>Remove WORD</b> Delete the specific VLAN of vlanList from the existent allow vlanList; <b>tag</b> Join the specific VLAN with tag mode; <b>untag</b> Join the specific VLAN with untag mode.
<b>Default</b>	Deny all VLAN traffic to pass.
<b>Mode</b>	Port Mode.
<b>Usage</b>	The user can use this command to set the VLANs whose traffic allowed to pass through the Hybrid port, traffic of VLANs not included are prohibited. The difference between tag and untag mode by setting allowed vlan: set VLAN to untag mode, the frame sent via hybrid port without VLAN tag; set VLAN to tag mode, the frame sent via hybrid port with corresponding VLAN tag. The same VLAN can not be allowed with tag and untag mode by

	a Hybrid port at the same time. If configure the tag (or untag) allowed VLAN to untag (or tag) allowed VLAN, the last configuration will cover the previous. <b>show switchport interface</b> display setting。
<b>Example</b>	Set hybrid port allowed vlan 1,100 with tag mode Switch#config Switch(config)#interface ethernet 1/0/1 Switch(config-if-ethernet1/0/1)#switchport mode hybrid Set the port Ethernet1/0/1 mode Hybrid successfully Switch(config-if-ethernet1/0/1)#switchport hybrid allowed vlan 1;100 tag set the Hybrid port Ethernet1/0/1 tag allowed vlan successfully Switch#show switchport interface ethernet 1/0/1  Ethernet1/0/1 Type :Universal Mode :Hybrid Port VID :1 Hybrid tag allowed Vlan: 1;100 Switch#

## switchport access vlan

<b>Syntax</b>	<b>switchport access vlan &lt;valn-id&gt;</b> <b>no switchport access vlan</b>
<b>Parameter</b>	<b>&lt; valn-id &gt;</b> VLAN ID (e.g. 100),valid range is 1 to 4094.
<b>Default</b>	All ports belong to VLAN1 by default.
<b>Mode</b>	Port Mode.
<b>Usage</b>	Only ports in Access mode can join specified VLANs, and an Access port can only join one VLAN at a time. The “ <b>no switchport access vlan</b> ” command deletes the current port from the specified VLAN, and the port will be partitioned to VLAN1. show switchport interface display setting
<b>Example</b>	Add some Access port to VLAN100. Switch#config Switch(config)#interface ethernet 1/0/1 Switch(config-if-ethernet1/0/1)#switchport mode access Set the port Ethernet1/0/1 mode Access successfully Switch(config-if-ethernet1/0/1)# switchport access vlan 100 Set the port Ethernet1/0/1 access vlan 100 successfully Switch#show switchport interface ethernet 1/0/1  Ethernet1/0/1 Type :Universal Mode :Access Port VID :100 Switch#

## switchport trunk allowed vlan

<b>Syntax</b>	<b>switchport trunk allowed vlan (WORD   all   add WORD   except WORD   remove WORD ) (tag   untag)</b> <b>no switchport trunk allowed vlan</b>										
<b>Parameter</b>	<table><tr><td><b>WORD</b></td><td>specified VIDs ,the range from 1 to 4094;</td></tr><tr><td><b>all</b></td><td>all VIDs</td></tr><tr><td><b>add WORD</b></td><td>add assigned VIDs behind allow vlan;</td></tr><tr><td><b>except WORD</b></td><td>all VID add to allow vlan except assigned VIDs;</td></tr><tr><td><b>Remove WORD</b></td><td>delete assigned allow vlan from allow vlan list.</td></tr></table>	<b>WORD</b>	specified VIDs ,the range from 1 to 4094;	<b>all</b>	all VIDs	<b>add WORD</b>	add assigned VIDs behind allow vlan;	<b>except WORD</b>	all VID add to allow vlan except assigned VIDs;	<b>Remove WORD</b>	delete assigned allow vlan from allow vlan list.
<b>WORD</b>	specified VIDs ,the range from 1 to 4094;										
<b>all</b>	all VIDs										
<b>add WORD</b>	add assigned VIDs behind allow vlan;										
<b>except WORD</b>	all VID add to allow vlan except assigned VIDs;										
<b>Remove WORD</b>	delete assigned allow vlan from allow vlan list.										
<b>Default</b>	Trunk port allows all VLAN traffic by default.										
<b>Mode</b>	Port Mode.										
<b>Usage</b>	The user can use this command to set the VLAN traffic allowed to passthrough the Trunk port; traffic of VLANs not included are prohibited. <b>show switchport interface</b> display setting.										
<b>Example</b>	Set Trunk port to allow traffic of VLAN1, 3-5 Switch#config Switch(config)#interface ethernet 1/0/1 Switch(config-if-ethernet1/0/1)# switchport trunk allowed vlan 1;3-5 set the trunk port Ethernet1/0/1 allowed vlan successfully. Switch#show switchport interface ethernet 1/0/1  Ethernet1/0/1 Type :Universal Mode :Trunk Port VID :1 Trunk allowed Vlan: 1;3-5 Switch#										

## switchport trunk native vlan

<b>Syntax</b>	<b>switchport trunk native vlan &lt;vlan-id&gt;</b> <b>no switchport trunk allowed vlan</b>
<b>Parameter</b>	<b>&lt;vlan-id&gt;</b> PVID for Trunk port.
<b>Default</b>	The default PVID of Trunk port is 1.
<b>Mode</b>	Port Mode.
<b>Usage</b>	PVID concept is defined in 802.1Q. PVID in Trunk port is used to tag untagged frames. When an untagged frame enters a Trunk port, the port will tag the untagged frame with the native PVID set with this commands for VLAN forwarding. <b>show switchport interface</b> display setting
<b>Example</b>	Set the native VLAN for a Trunk port to 100. Switch#config Switch(config)#interface ethernet 1/0/3

	Switch(config-if-ethernet1/0/3)# switchport trunk native vlan 100 Set the port Ethernet1/0/3 native vlan 100 successfully Switch#show switchport interface ethernet 1/0/3  Ethernet1/0/3 Type :Universal Mode :Trunk Port VID :100 Trunk allowed Vlan: 1-4094 Switch#
--	--

## switchport mode trunk allow-null

<b>Syntax</b>	<b>switchport mode trunk allow-null</b>
<b>Parameter</b>	none
<b>Default</b>	access mode.
<b>Mode</b>	Port mode
<b>Usage</b>	Configure the port as trunk, enable it to leave all VLANs and clear allow-list. <b>show switchport interface</b> display setting
<b>Example</b>	Switch#config Switch(config)#interface ethernet 1/0/1 Switch(config-if-ethernet1/0/1)# switchport mode trunk allow-null Set the port Ethernet1/0/1 mode Trunk successfully Switch#show switchport interface ethernet 1/0/1  Ethernet1/0/1 Type :Universal Mode :Trunk Port VID :1 switchport mode trunk allow-null Switch#

## vlan ingress enable

<b>Syntax</b>	<b>vlan ingress enable</b> <b>no vlan ingress enable</b>
<b>Parameter</b>	none
<b>Default</b>	Enable VLAN ingress filtering function.
<b>Mode</b>	Port Mode.
<b>Usage</b>	After VLAN ingress filtering is enabled on the port, when the system receives data it will check source port first, and forwards the data to the destination port if it is the VLAN member port, or else drop the data.

	<b>show running-config</b> display setting
<b>Example</b>	<p>Disable VLAN ingress rules on the port.</p> <pre> Switch#config Switch(config)#interface ethernet 1/0/1 Switch(config-if-ethernet1/0/1)# no vlan ingress enable Switch# show running-config ! no service password-encryption ! hostname Switch sysLocation Default sysContact Default ! username admin privilege 15 password 0 admin ! authentication line console login local ! ! ! ! snmp-server enable ! ! ! ! ! ! ! ! ! vlan 1 ! Interface Ethernet1/0/1     no vlan ingress enable ! Interface Ethernet1/0/2 Switch# </pre>

## vlan-translation enable

<b>Syntax</b>	<b>vlan-translation enable</b> <b>no vlan-translation enable</b>
<b>Parameter</b>	none
<b>Default</b>	VLAN translation has not been enabled on the port by default.
<b>Mode</b>	Port Mode.
<b>Usage</b>	vlan-translation and dot1q-tunnel are mutually exclusive, it is recommended to enable

	vlan-translation on trunk port and manually disable port filtering. <b>show vlan-translation</b> display setting
<b>Example</b>	<p>Enable VLAN translation function on port1.</p> <pre>Switch#config Switch(config)#interface ethernet 1/0/1 Switch(config-if-ethernet1/0/1)# vlan-translation enable Switch# show vlan-translation Interface Ethernet1/0/1:     vlan-translation is enable, miss drop is not set Switch#</pre>

## vlan-translation

<b>Syntax</b>	<b>vlan-translation &lt;old-valn-id&gt; to &lt;new-vlan-id&gt; {in   out}</b> <b>no vlan-translation &lt;old-valn-id&gt; {in   out}</b>								
<b>Parameter</b>	<table> <tr> <td><b>old-valn-id</b></td><td>original VLAN ID</td></tr> <tr> <td><b>new-vlan-id</b></td><td>translated VLAN ID</td></tr> <tr> <td><b>in</b></td><td>ingress translation</td></tr> <tr> <td><b>out</b></td><td>outgress translation.</td></tr> </table>	<b>old-valn-id</b>	original VLAN ID	<b>new-vlan-id</b>	translated VLAN ID	<b>in</b>	ingress translation	<b>out</b>	outgress translation.
<b>old-valn-id</b>	original VLAN ID								
<b>new-vlan-id</b>	translated VLAN ID								
<b>in</b>	ingress translation								
<b>out</b>	outgress translation.								
<b>Default</b>	There is no VLAN translation relation.								
<b>Mode</b>	Port Mode.								
<b>Usage</b>	<p>The command is for configuring the translation relation of the VLAN translation function. The data packets will be matched according to the configured translation relations, and its VLAN ID will be changed to the one in the configured item once matched, while forward the packets of the original VLAN if not match. This command cannot be used with dot1q-tunnel enable at the same time.</p> <p><b>show vlan-translation</b> display setting</p>								
<b>Example</b>	<p>Move the VLAN100 data entered from the port1 to VLAN2 after ingress translation.</p> <pre>Switch#config Switch(config)#interface ethernet 1/0/1 Switch(config-if-ethernet1/0/1)# vlan-translation enable Switch(config-if-ethernet1/0/1)#vlan-translation 100 to 2 in Switch# show vlan-translation Interface Ethernet1/0/1:     vlan-translation is enable, miss drop is not set     vlan-translation 100 to 2 in Switch#</pre>								

## vlan-translation miss drop

<b>Syntax</b>	<b>vlan-translation miss drop {in out both}</b> <b>no vlan-translation miss drop {in out both}</b>				
<b>Parameter</b>	<table> <tr> <td><b>in</b></td><td>entrance</td></tr> <tr> <td><b>out</b></td><td>export</td></tr> </table>	<b>in</b>	entrance	<b>out</b>	export
<b>in</b>	entrance				
<b>out</b>	export				

	<b>both</b> two-way
<b>Default</b>	Not miss drop when translation failed.
<b>Mode</b>	Port Mode.
<b>Usage</b>	<p>During translate the mapping relation between original VID and present VID, if not configure related translation, the default is not packets miss. After using the command, it will miss data packets when translation failed.</p> <p><b>show vlan-translation</b> display setting</p>
<b>Example</b>	<p>set port 1 translation failed and miss packets in entrance.</p> <pre>Switch#config Switch(config)#interface ethernet 1/0/1 Switch(config-if-ethernet1/0/1)# vlan-translation enable Switch(config-if-ethernet1/0/1)#vlan-translation miss drop in Switch# show vlan-translation Interface Ethernet1/0/1:     vlan-translation is enable, miss drop is set in  Switch#</pre>

## dot1q-tunnel enable

<b>Syntax</b>	<b>dot1q-tunnel enable</b> <b>no dot1q-tunnel enable</b>
<b>Parameter</b>	none
<b>Default</b>	Dot1q-tunnel function disabled on the port by default.
<b>Mode</b>	Port Mode.
<b>Usage</b>	<p>After enabling dot1q-tunnel on the port, data packets without VLAN tag (referred to as tag) will be packed with a tag when entering through the port; those with tag will be packed with an external tag. The TPID in the tag is the global configuration TPID. its default value is 0x8100, and the VLAN ID is the VLAN ID the port belongs to. Data packets with double tags will be forwarded according to MAC address and external tag, till the external tag is removed when transmitted outside from the access port. Since the length of the data packet may be oversized when packed with external tag, it is recommended to use this command associating the Jumbo function. Normally this command is used on access ports. This command can not be used when vlan-translation is enabled.</p> <p><b>show dot1q-tunnel</b> display setting</p>
<b>Example</b>	<p>Join port1 into VLAN3, enable dot1q-tunnel function.</p> <pre>Switch#config Switch(config)#vlan 3 Switch(config-vlan3)#switchport interface ethernet 1/0/1 Switch(config-vlan3)#exit Switch(config)#interface ethernet 1/0/1 Switch(config-if-ethernet1/0/1)# dot1q-tunnel enable Switch# show dot1q-tunnel</pre>

	Interface Ethernet1/0/1: dot1q-tunnel is enable
	Switch#

## dot1q-tunnel selective enable

<b>Syntax</b>	<b>dot1q-tunnel selective enable</b> <b>no dot1q-tunnel selective enable</b>
<b>Parameter</b>	none
<b>Default</b>	Do not enable selective QinQ.
<b>Mode</b>	Port mode
<b>Usage</b>	Enable selective QinQ command should associates with hybrid mode, and it should not be used with dot1q-tunnel enable synchronously. <b>show running-config</b> display setting
<b>Example</b>	Enable dot1q-tunnel selective enable of port1. Switch#config Switch(config)#interface ethernet 1/0/1 Switch(config-if-ethernet1/0/1)# dot1q-tunnel selective enable Switch# show running-config ! no service password-encryption ! hostname Switch sysLocation Default sysContact Default ! username admin privilege 15 password 0 admin ! authentication line console login local ! ! ! ! ! ! snmp-server enable ! ! ! ! ! ! ! ! ! vlan 1;3 !



	Interface Ethernet1/0/1 dot1q-tunnel selective enable ! Interface Ethernet1/0/2 ! Interface Ethernet1/0/3 ! Switch#
--	--

## dot1q-tunnel selective s-vlan

<b>Syntax</b>	<b>dot1q-tunnel selective s-vlan &lt;s-vlan&gt; c-vlan &lt;c-vid-list&gt;</b> <b>no dot1q-tunnel selective s-vlan &lt;s-vlan&gt; c-vlan &lt;c-vid-list&gt;</b>
<b>Parameter</b>	<b>&lt;s-vlan&gt;</b> SP VLAN ID <b>&lt;c-vid-list&gt;</b> range of user's VLAN ID.
<b>Default</b>	There is no mapping relation.
<b>Mode</b>	Port mode
<b>Usage</b>	This command is used to configure the mapping relation for selective QinQ. If packets match the mapping relation, they will be tagged with SP vlan tag as the outer VLAN tag. <b>show running-config</b> display setting
<b>Example</b>	Packets of VLAN 3 through VLAN 5 are tagged with the tag of VLAN 1 as the outer VLAN tag on Ethernet1/0/1. Switch#config Switch(config)#interface ethernet 1/0/1 Switch(config-if-ethernet1/0/1)# dot1q-tunnel selective s-vlan 1 c-vlan 3-5 Switch(config-if-Ethernet1/0/1)# dot1q-tunnel selective enable Switch# show running-config ! no service password-encryption ! hostname Switch sysLocation Default sysContact Default ! username admin privilege 15 password 0 admin ! authentication line console login local ! ! ! ! snmp-server enable ! ! ! ! !

```

!
!
!
!
vlan 1;3
!
Interface Ethernet1/0/1
 dot1q-tunnel selective s-vlan 1 c-vlan 3-5
 dot1q-tunnel selective enable
!
Interface Ethernet1/0/2
!
Interface Ethernet1/0/3
!
Interface Ethernet1/0/4
!
Interface Ethernet1/0/5
!
Interface Ethernet1/0/6
Switch#

```

## garp timer join

<b>Syntax</b>	<b>garp timer join &lt;200-500&gt;</b>
<b>Parameter</b>	<b>&lt;200-500&gt;</b> millisecond
<b>Default</b>	200 ms
<b>Mode</b>	Global mode
<b>Usage</b>	Check whether the value satisfy the range. If so, modify the value of garp timer to the specified value, otherwise return a configuration error. <b>show garp timer</b> display setting
<b>Example</b>	Set the value of garp join timer as 210ms. Switch#config Switch(config)# garp timer join 210 Switch#show garp timer GARP join timer value is : 210 (ms) GARP leave timer value is : 600 (ms) GARP leaveall timer value is : 10000 (ms)  Switch#

## garp timer leave

<b>Syntax</b>	<b>garp timer leave &lt;500-1200&gt;</b>
<b>Parameter</b>	<b>&lt;500-1200&gt;</b> millisecond

<b>Default</b>	600ms
<b>Mode</b>	Global mode
<b>Usage</b>	Check whether the value satisfy the range. If so, modify the value of garp timer to the specified value, otherwise return a configuration error. <b>show garp timer</b> display setting
<b>Example</b>	Set the value of garp leave timer as 700ms. Switch#config Switch(config)#garp time leave 700 Switch#show garp timer GARP join timer value is : 210 (ms) GARP leave timer value is : 700 (ms) GARP leaveall timer value is : 10000 (ms) Switch#

## garp timer leaveall

<b>Syntax</b>	<b>garp timer leaveall &lt;5000-60000&gt;</b>
<b>Parameter</b>	<b>&lt;500-60000&gt;</b> millisecond
<b>Default</b>	10000ms
<b>Mode</b>	Global mode
<b>Usage</b>	Check whether the value satisfy the range. If so, modify the value of garp leaveAll timer to the specified value, otherwise return a configuration error. <b>show garp timer</b> display setting
<b>Example</b>	Set the value of garp leaveAll as 20000ms. Switch#config Switch(config)#garp time leaveall 20000 Switch(config)#show garp timer GARP join timer value is : 210 (ms) GARP leave timer value is : 700 (ms) GARP leaveall timer value is : 20000 (ms)  Switch#

## no garp timer

<b>Syntax</b>	<b>no garp timer (join   leave   leaveall)</b>
<b>Parameter</b>	<b>join</b> join timer
	<b>leave</b> leave timer
	<b>leaveall</b> leaveAll timer
<b>Default</b>	200   600   10000 milliseconds for join   leave   leaveall timer respectively.
<b>Mode</b>	Global mode

<b>Usage</b>	Check whether the default value satisfy the range. If so, modify the value of garp join   leave   leaveAll timer to the default value, otherwise return a configuration error. <b>show garp timer join</b> display setting
<b>Example</b>	Restore garp timer join to the default value. Switch#config Switch(config)# no garp timer join Switch(config)# show garp timer join GARP join timer value is : 200 (ms)  Switch#

## gvrp(Global)

<b>Syntax</b>	<b>gvrp</b> <b>no gvrp</b>
<b>Parameter</b>	none
<b>Default</b>	Disabled.
<b>Mode</b>	Global mode
<b>Usage</b>	Enable GVRP function globally and only in this way GVRP module can work normally. <b>show running-config</b> display setting
<b>Example</b>	Enable GVRP function globally. Switch#config Switch(config)#gvrp Switch(config)#show running-config ! no service password-encryption ! hostname Switch sysLocation Default sysContact Default ! username admin privilege 15 password 0 admin ! authentication line console login local ! ! ! ! ! snmp-server enable ! ! ! ! ! !

	!
	!
	vlan 1
	!
	gvrp
	!
	Interface Ethernet1/0/1
	Switch#

## gvrp(Port)

<b>Syntax</b>	<b>gvrp</b> <b>no gvrp</b>
<b>Parameter</b>	none
<b>Default</b>	Disabled
<b>Mode</b>	Port mode
<b>Usage</b>	GVRP function can only be enabled on trunk and hybrid ports, and enabling GVRP will return an error on access port. After GVRP enabled on port, this port will be added to GVRP (i.e. adding corresponding state machine to GVRP of the port). <b>show gvrp port-member</b> display setting
<b>Example</b>	Enable GVRP of port. Switch#config Switch(config)# interface ethernet 1/0/1 Switch(config-if-ethernet1/0/1)#switchport mode hybrid Set the port Ethernet1/0/1 mode Hybrid successfully Switch(config-if-ethernet1/0/1)#gvrp Switch#show gvrp port-member Ports which were enabled gvrp included: Ethernet1/0/1 Switch#

## private-vlan

<b>Syntax</b>	<b>private-vlan {primary   isolated   community}</b> <b>no private-vlan</b>
<b>Parameter</b>	<b>primary</b> set current VLAN to Primary VLAN <b>isolated</b> set current VLAN to Isolated VLAN <b>community</b> set current VLAN to Community VLAN
<b>Default</b>	Private VLAN is not configured by default.
<b>Mode</b>	VLAN mode
<b>Usage</b>	There are three Private VLANs: <b>Primary</b> VLAN, <b>Isolated</b> VLAN and <b>Community</b> VLAN. Ports in Primary there are three Private VLANs: Primary VLAN, Isolated VLAN and Community VLAN can communicate with ports of Isolated VLAN and Community VLAN

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related to this Primary VLAN; Ports in Isolated VLAN are isolated between each other and only communicate with ports in Primary VLAN they related to; ports in Community VLAN can communicate both with each other and with Primary VLAN ports they related to; there is no communication between ports in Community VLAN and port in Isolated VLAN.

Only VLANs containing empty Ethernet ports can be set to Private VLAN, and only the Private VLANs configured with associated private relationships can set the Access Ethernet ports their member ports. Normal VLAN will clear its Ethernet ports when set to Private VLAN.

It is to be noted Private VLAN messages will not be transmitted by GVRP.

**show vlan private-vlan** display setting

---

### Example

Set VLAN100, 200, 300 to private vlans, with respectively primary, Isolated, Community types.

Switch#config

Switch(config)#vlan 100;200;300

Switch(config)#vlan 100

Switch(config-vlan100)#private-vlan primary

Note:This will remove all the access ports from vlan 100

Switch(config-vlan100)#vlan 200

Switch(config-vlan200)#private-vlan isolated

Note:This will remove all the access ports from vlan 200

Switch(config-vlan200)#vlan 300

Switch(config-vlan300)#private-vlan community

Note:This will remove all the access ports from vlan 300

Switch# show vlan private-vlan

VLAN Name	Type	Asso VLAN Ports
100 VLAN0100	Primary	
200 VLAN0200	Isolate	
300 VLAN0300	Community	

Switch#

---

## private-vlan association

---

### Syntax

**private-vlan association <secondary-vlan-list>**

**no private-vlan association**

---

### Parameter

**<secondary-vlan-list>** Sets Secondary VLAN list which is associated to Primary VLAN. There are two types of Secondary VLAN: Isolated VLAN and Community VLAN. Users can set multiple Secondary VLANs by ','.

---

### Default

There is no Private VLAN association by default.

---

### Mode

VLAN Mode.

---

### Usage

This command can only used for Private VLAN. The ports in Secondary VLANs which are associated to Primary VLAN can communicate to the ports in Primary VLAN.

Before setting Private VLAN association, three types of Private VLANs should have no member ports; the Private VLAN with Private VLAN association can't be deleted. When users delete Private VLAN association, all the member ports in the Private VLANs whose

association is deleted are removed from the Private VLANs.

**show vlan private-vlan** display setting

**Example**

Associate Isolated VLAN200 and Community VLAN300 to Primary VLAN100.

Switch#config

Switch(config)# vlan 100

Switch(config-vlan100)#private-vlan association 200;300

Set vlan 100 associated vlan successfully

Switch(config-vlan100)#show vlan private-vlan

VLAN Name	Type	Asso VLAN Ports
-----------	------	-----------------

100	VLAN0100	Primary 200 300
-----	----------	-----------------

200	VLAN0200	Isolate 100
-----	----------	-------------

300	VLAN0300	Community 100
-----	----------	---------------

Switch#

## show dot1q-tunnel

**Syntax**

**Show dot1q-tunnel**

**Parameter**

none

**Default**

None.

**Mode**

Admin and Configuration Mode.

**Usage**

This command is used for displaying the information of the ports at dot1q-tunnel state.

**Example**

Display current dot1q-tunnel state.

Switch#show dot1q-tunnel

Interface Ethernet1/0/1:

dot1q-tunnel is enable

Switch#

## show garp timer

**Syntax**

**Show garp timer [join | leave | leaveall ]**

**Parameter**

<b>join</b>	join timer
-------------	------------

<b>leave</b>	leave timer
--------------	-------------

<b>leaveall</b>	leaveAll timer
-----------------	----------------

**Default**

200|600|10000 milliseconds for join | leave | leaveAll timer respectively.

**Mode**

Admin mode

**Usage**

Show the corresponding value of the timer specified in the command.

**Example**

Show the value of all garp timers currently.

Switch# show garp timer

GARP join timer value is : 200 (ms)  
 GARP leave timer value is : 600 (ms)  
 GARP leaveall timer value is : 10000 (ms)

Switch#

## show gvrp fsm information

Syntax	show gvrp fsm information interface (ethernet   port-channel   IFNAME)		
Parameter	ethernet	physical port	
	port-channel	aggregate port	
	IFNAME	port name	
Default	MT for registered machine and VO for request state machine.		
Mode	Admin mode		
Usage	Show the corresponding state of all registered machines and request state machines.		
Example	Show the state of all state machines.		
	Switch# show gvrp fsm information interface ethernet 1/0/1		
VA:Very anxious Active member, AA:Anxious Active member, QA:Quiet Active member			
VP:Very anxious Passive member, AP:Anxious Passive member, QP:Quiet Passive member			
VO:Very anxious Observer, AO:Anxious Observer, QO:Quiet Observer			
LA:Leaving Acitve member, LO:leaving Observer			
IN:In, LV:Leaving, MT:Empty			
INR:In Registration fixed, LVR:Leaveing Registration fixed, MTR:Empty Registration fixed			
INF:In, registration forbidden, LVF:Leaveing, registration forbidden, MTF:Empty, registration forbidden			
Ethernet1/0/1 gvrp fsm information:			
Index	VLANID	Applicant	Registrar
----	-----	-----	-----
1	1	Qa	MT
Switch#			

## show gvrp leaveAll fsm information

<b>Syntax</b>	<b>show gvrp leaveAll fsm information interface (ethernet   port-channel   IFNAME)</b>						
<b>Parameter</b>	<table> <tr> <td><b>ethernet</b></td><td>physical port</td></tr> <tr> <td><b>port-channel</b></td><td>aggregate port</td></tr> <tr> <td><b>IFNAME</b></td><td>port name</td></tr> </table>	<b>ethernet</b>	physical port	<b>port-channel</b>	aggregate port	<b>IFNAME</b>	port name
<b>ethernet</b>	physical port						
<b>port-channel</b>	aggregate port						
<b>IFNAME</b>	port name						
<b>Default</b>	Passive						
<b>Mode</b>	Admin mode						



<b>Usage</b>	Check the state of leaveAll state machine
<b>Example</b>	Show the state of leaveAll state machine on port. Switch# show gvrp fsm information interface ethernet 1/0/1 Interface                      LeaveAll fsm -----                      ----- Ethernet1/0/1                  Passive Switch#

## show gvrp leavetimer running information

<b>Syntax</b>	show gvrp leavetimer running information [vlan <1-4094>   interface (ethernet   port-channel   IFNAME)]
<b>Parameter</b>	<1-4094>                      Vlan tag ethernet                      physical port port-channel                  aggregate port IFNAME                        port name
<b>Default</b>	leavetimer is disabled.
<b>Mode</b>	Admin mode
<b>Usage</b>	Show running state and expiration time of each leave timer.
<b>Example</b>	Show running state and expiration time of each leave timer on current port. Switch# show gvrp leavetimer running information interface ethernet 1/0/1 VLANID              running state              expired time -----              -----              ----- Switch#

## show gvrp port-member

<b>Syntax</b>	show gvrp [active    port-member]
<b>Parameter</b>	active                      port is in active state
<b>Default</b>	GVRP is disabled on port.
<b>Mode</b>	Admin mode
<b>Usage</b>	Show all ports (enable GVRP) saved in GVRP.
<b>Example</b>	Show all ports with GVRP enabled. Switch#show gvrp port-member Ports which were enabled gvrp included: Ethernet1/0/1 Switch#

## show gvrp port registerd vlan

<b>Syntax</b>	show gvrp port [dynamic   static ] registerd vlan interface (Ethernet   port-channel   IFNAME)
<b>Parameter</b>	dynamic                      dynamic registration

	<b>static</b>	static registration
	<b>Ethernet</b>	physical port
	<b>port-channel</b>	aggregate port
	<b>port IFNAME</b>	port name
<b>Default</b>	No dynamic or static registration VLANs on port.	
<b>Mode</b>	Admin mode	
<b>Usage</b>	Show the corresponding VLANs of the registered machines by dynamic or static registration.	
<b>Example</b>	Show all dynamic or static registration VLANs on current port. Switch#show gvrp port registerd vlan interface ethernet 1/0/1 Current port dynamic registerd vlan included: Current port static registerd vlan included: Switch#	

## show gvrp timer running information

<b>Syntax</b>	<b>show gvrp timer (join   leaveall) running information interface (ethernet   port-channel   IFNAME)</b>	
<b>Parameter</b>	<b>join</b>	join timer
	<b>leaveall</b>	leaveAll timer
	<b>Ethernet</b>	physical port
	<b>port-channel</b>	aggregate port
	<b>port IFNAME</b>	port name
<b>Default</b>	Join timer is disabled and leaveAll timer is enabled	
<b>Mode</b>	Admin mode	
<b>Usage</b>	Check running state of join leaveAll timer on port.	
<b>Example</b>	Show running state and expiration time of each timer. Switch#show gvrp timer join running information interface ethernet 1/0/1 Current port' s jointimer running state is: UP Current port' s jointimer expired time is: 0.2 s Switch#	

## show gvrp vlan registerd port

<b>Syntax</b>	<b>show gvrp vlan &lt;1-4094&gt; registerd port</b>	
<b>Parameter</b>	<b>&lt;1-4094&gt;</b>	Vlan tag
<b>Default</b>	No ports with specified VLAN registered.	
<b>Mode</b>	admin mode	
<b>Usage</b>	none	
<b>Example</b>	Show all ports with current VLAN registered. Switch#show gvrp vlan 100 registerd port Ethernet1/0/3 (T) Ethernet1/0/4 (T) Ethernet1/0/5 (T) Ethernet1/0/6 (T) Ethernet1/0/7 (T) Ethernet1/0/8 (T)	

---

Ethernet1/0/9 (T) Ethernet1/0/10 (T)  
Switch#

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## show vlan

---

### Syntax

**show vlan [brief | summary] [id <vlan-id>] [name <vlan-name>] [internal usage [id <vlan-id> | name <vlan-name>]]**

---

### Parameter

<b>brief</b>	brief information;
<b>summary</b>	VLAN statistics
<b>&lt;vlan-id&gt;</b>	for VLAN ID of the VLAN to display status information, the valid range is 1 to 4094;
<b>&lt;vlan-name&gt;</b>	is the VLAN name for the VLAN to display status information, valid length is 1 to 11 characters.

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### Default

none

---

### Mode

Admin Mode and Configuration Mode.

---

### Usage

If no **<vlan-id>** or **<vlan-name>** is specified, then information for all VLANs in the switch will be displayed.

---

### Example

Display the status for the current VLAN; display statistics for the current VLAN.

Switch#show vlan

VLAN Name	Type	Media	Ports
1	default	Static	ENET
-----			
			Ethernet1/0/2 Ethernet1/0/3
			Ethernet1/0/4 Ethernet1/0/5
			Ethernet1/0/6 Ethernet1/0/7
			Ethernet1/0/8 Ethernet1/0/9
			Ethernet1/0/10 Ethernet1/0/11
			Ethernet1/0/12 Ethernet1/0/13
			Ethernet1/0/14 Ethernet1/0/15
			Ethernet1/0/16 Ethernet1/0/17
			Ethernet1/0/18 Ethernet1/0/19
			Ethernet1/0/20 Ethernet1/0/21
			Ethernet1/0/22 Ethernet1/0/23
			Ethernet1/0/24 Ethernet1/0/25
			Ethernet1/0/26 Ethernet1/0/27
			Ethernet1/0/28

Switch#show vlan summary

The max. Vlan entries: 4094

Existing Vlan:

Universal Vlan:

1

Private Vlan:

100 200 300

Total Existing Vlan:4

Switch#

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displayed information	Explanation
VLAN	VLAN ID
Name	VLAN name
Type	VLAN type, statically configured or dynamically learned.
Media	VLAN interface type: Ethernet
Ports	Access port within a VLAN

## show vlan-translation

<b>Syntax</b>	<b>show vlan-translation</b>
<b>Parameter</b>	None
<b>Default</b>	none
<b>Mode</b>	Admin and Configuration Mode.
<b>Usage</b>	Display the information of all the ports at VLAN-translation state.
<b>Example</b>	<p>Display current VLAN translation state information.</p> <p>Switch#show vlan-translation</p> <p>Interface Ethernet1/0/1:</p> <p style="padding-left: 40px;">vlan-translation is enable, miss drop is not set</p>

## vlan-translation n-to-1

<b>Syntax</b>	<b>vlan-translation n-to-1 &lt;WORD&gt; to &lt;new-vlan-id&gt;</b> <b>no vlan-translation n-to-1 &lt;WORD&gt;</b>				
<b>Parameter</b>	<table> <tr> <td><b>&lt;WORD&gt;</b></td><td>original VLAN ID, its range from 1 to 4094, connect them with ‘;’ and ‘-’. If there are two VLANs with different range are translated into different VLAN ID in the same port, two VLAN ranges should not be superposed.</td></tr> <tr> <td><b>&lt;new-vlan-id&gt;</b></td><td>translated VLAN ID, its range from 1 to 4094.</td></tr> </table>	<b>&lt;WORD&gt;</b>	original VLAN ID, its range from 1 to 4094, connect them with ‘;’ and ‘-’. If there are two VLANs with different range are translated into different VLAN ID in the same port, two VLAN ranges should not be superposed.	<b>&lt;new-vlan-id&gt;</b>	translated VLAN ID, its range from 1 to 4094.
<b>&lt;WORD&gt;</b>	original VLAN ID, its range from 1 to 4094, connect them with ‘;’ and ‘-’. If there are two VLANs with different range are translated into different VLAN ID in the same port, two VLAN ranges should not be superposed.				
<b>&lt;new-vlan-id&gt;</b>	translated VLAN ID, its range from 1 to 4094.				
<b>Default</b>	Disable				
<b>Mode</b>	Port mode				
<b>Usage</b>	<p>Multi-to-One VLAN translation is used to network edge to map multiple VLANs to one VLAN of backbone network. When data traffic returns from backbone network to network edge, it will restore VLAN of network edge to implement Multi-to-One VLAN translation and save VLAN resource of backbone network. Note: When using this function, the device must establish the original and the translated VLAN firstly, and enabling the downlink port of this function and the uplink port for connecting backbone network, which must be join in the original and the translated VLAN with tagged mode. This function should not be used with dot1q-tunnel and VLAN translation at the same time Note: Multi-to-One VLAN translation should be enabled after MAC learning.</p> <p><b>show vlan-translation n-to-1</b> display setting。</p>				
<b>Example</b>	On Ethernet 1/0/1, translate the data traffic from VLAN with the range between 1 to 5 into				

---

VLAN 100, and translate the data traffic (belongs to VLAN with the range between 1 to 5) out from VLAN100 into the corresponding VLAN ID, connect the uplink port of the backbone network as Ethernet 1/0/5.

Switch#config

Switch(config)#vlan 1;5;100

Switch(config)#vlan 2-4

Switch(config)#interface ethernet 1/0/1

Switch(config-if-ethernet1/0/1)#switchport mode trunk

Set the port Ethernet1/0/1 mode Trunk successfully

Switch(config-if-ethernet1/0/1)#vlan-translation n-to-1 1-5 to 100

Switch(config-if-ethernet1/0/1)#interface ethernet 1/0/5

Switch(config-if-ethernet1/0/5)#switchport mode trunk

Set the port Ethernet1/0/5 mode Trunk successfully

Switch#show vlan-translation n-to-1

Ethernet1/0/1:

vlan-translation n-to-1 enable

vlan-translation n-to-1 1-5 to 100

---

## show vlan-translation n-to-1

<b>Syntax</b>	<b>show vlan-translation n-to-1 &lt;interface-name&gt;</b>	
<b>Parameter</b>	<b>&lt;interface-name&gt;</b>	Specify the name of the port which will be shown. If there is no parameter, show all port configurations with this function.
<b>Default</b>	There is no Multi-to-One VLAN translation information.	
<b>Mode</b>	Admin mode.	
<b>Usage</b>	If appointed vlan when show, it will display the n-to-1 translation of specified vlan, if not appointed vlan, it will display all n-to-1 information.	
<b>Example</b>	Show all port configurations with Multi-to-One VLAN translation function. Switch#show vlan-translation n-to-1 Ethernet1/0/1: vlan-translation n-to-1 enable vlan-translation n-to-1 1-5 to 100	

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## dynamic-vlan mac-vlan prefer

<b>Syntax</b>	<b>dynamic-vlan mac-vlan prefer</b>	
<b>Parameter</b>	None	
<b>Default</b>	MAC-based VLAN is preferred by default.	
<b>Mode</b>	Global Mode.	
<b>Usage</b>	Configure the preference of dynamic-vlan on switch. The default priority sequence is MAC-based VLAN. IP-subnet-based VLAN. Protocol-based VLAN, namely the preferred order when several dynamic VLAN is available. After the IP-subnet-based VLAN is set to be preferred and the user wish to restore to preferring the MAC-based VLAN, please use this command.	

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	<b>show dynamic-vlan prefer</b> display setting。
<b>Example</b>	Set the MAC-based VLAN preferred. Switch#config Switch(config)#dynamic-vlan mac-vlan prefer Switch#show dynamic-vlan prefer Mac Vlan/Voice Vlan IP Subnet Vlan Protocol Vlan

## dynamic-vlan subnet-vlan prefer

<b>Syntax</b>	<b>dynamic-vlan subnet-vlan prefer</b>
<b>Parameter</b>	None
<b>Default</b>	MAC-based VLAN is preferred by default.
<b>Mode</b>	Global Mode.
<b>Usage</b>	Configure the preference of dynamic-vlan on switch. The default priority sequence is MAC-based VLAN. IP-subnet-based VLAN. Protocol-based VLAN, namely the preferred order when several dynamic VLAN is available. This command is used to set to preferring the IP-subnet-based VLAN. <b>show dynamic-vlan prefer</b> display setting。
<b>Example</b>	Set the IP-subnet-based VLAN preferred. Switch#config Switch(config)#dynamic-vlan subnet-vlan prefer Switch(config)#show dynamic-vlan prefer IP Subnet Vlan Mac Vlan/Voice Vlan Protocol Vlan

## mac-vlan vlan

Syntax	mac-vlan vlan <vlan-id> no mac-vlan vlan <vlan-id>																									
Parameter	<vlan-id>                      <vlan-id> is the number of the specified VLAN.																									
Default	No MAC VLAN is configured by default.																									
Mode	Global Mode.																									
Usage	Set specified VLAN for MAC VLAN. show mac-vlan display setting.																									
Example	Set VLAN100 to MAC VLAN. Switch#config Switch(config)#mac-vlan vlan 100 Switch#show vlan <table><tr><th>VLAN Name</th><th>Type</th><th>Media</th><th>Ports</th></tr><tr><td colspan="4">-----</td></tr><tr><td>1</td><td>default</td><td>Static</td><td>ENET</td><td>Ethernet1/0/1</td><td>Ethernet1/0/2</td></tr><tr><td></td><td></td><td></td><td></td><td>Ethernet1/0/3</td><td>Ethernet1/0/4</td></tr></table>						VLAN Name	Type	Media	Ports	-----				1	default	Static	ENET	Ethernet1/0/1	Ethernet1/0/2					Ethernet1/0/3	Ethernet1/0/4
VLAN Name	Type	Media	Ports																							
-----																										
1	default	Static	ENET	Ethernet1/0/1	Ethernet1/0/2																					
				Ethernet1/0/3	Ethernet1/0/4																					

	Ethernet1/0/5	Ethernet1/0/6
	Ethernet1/0/7	Ethernet1/0/8
	Ethernet1/0/9	Ethernet1/0/10
	Ethernet1/0/11	Ethernet1/0/12
	Ethernet1/0/13	Ethernet1/0/14
	Ethernet1/0/15	Ethernet1/0/16
	Ethernet1/0/17	Ethernet1/0/18
	Ethernet1/0/19	Ethernet1/0/20
	Ethernet1/0/21	Ethernet1/0/22
	Ethernet1/0/23	Ethernet1/0/24
	Ethernet1/0/25	Ethernet1/0/26
	Ethernet1/0/27	Ethernet1/0/28
100	VLAN0100	UserDynam ENET

## mac-vlan

Syntax	mac-vlan mac <mac-addrss> <mac-mask> vlan <vlan-id> priority <priority-id> no mac-vlan {mac <mac-addrss> <mac-mask> all}															
Parameter	<mac-addrss>/<mac-m		mac-address/mac-mask format:XX-XX-XX-XX-XX-XX													
	ask>															
	<vlan-id>		vlan-id is the ID of the VLAN with a valid range of 1~4094													
	<priority-id>		priority-id is the level of priority and is used in the VLAN tag with a valid range of 0~7													
Default	No MAC address joins the VLAN by default.															
Mode	Global Mode															
Usage	With this command user can add specified MAC address to specified VLAN. If there is a non VLAN label data packet enters from the switch port from the specified MAC address, it will be assigned with specified VLAN ID so sent enter specified VLAN. Their belonging VLAN are the same no matter which port did they enter through. The command does not have any interfere on the VLAN label data packet. show mac-vlan display setting															
Example	Add network device of MAC address as 00-03-0f-11-22-33 to VLAN 100. Switch#config Switch(config)#mac-vlan vlan 100 Switch(config)#mac-vlan mac 00-03-0f-11-22-33 ff-ff-ff-ff-ff-ff vlan 100 priority 0 Switch#show mac-vlan <table><tr><td>Mac-Address</td><td>Mac-Mask</td><td>VLAN_ID</td><td>Priority</td></tr><tr><td>-----</td><td>-----</td><td>-----</td><td>-----</td></tr><tr><td>00-03-0f-11-22-33</td><td>ff-ff-ff-ff-ff-ff</td><td>100</td><td>0</td></tr></table>				Mac-Address	Mac-Mask	VLAN_ID	Priority	-----	-----	-----	-----	00-03-0f-11-22-33	ff-ff-ff-ff-ff-ff	100	0
Mac-Address	Mac-Mask	VLAN_ID	Priority													
-----	-----	-----	-----													
00-03-0f-11-22-33	ff-ff-ff-ff-ff-ff	100	0													

## protocol-vlan

<b>Syntax</b>	<b>protocol-vlan mode (ethernetII   snap) etype &lt;etype-id&gt; vlan &lt;vlan-id&gt; [priority &lt;priority-id&gt;]</b> <b>protocol-vlan mode llc dsap &lt;dsap-id&gt; ssap &lt;ssap-id&gt; vlan &lt;vlan-id&gt;</b>
---------------	--

	<b>no protocol-vlan (mode ((ethernetII   snap) etype &lt;etype-id&gt; )   all} no protocol-vlan mode llc dsap &lt;dsap-id&gt; ssap &lt;ssap-id&gt;</b>																		
Parameter	<table><tr><td>&lt;etype-id&gt;</td><td>etype-id is the type of the packet protocol, with a valid range of 1536~65535;</td></tr><tr><td>&lt;vlan-id&gt;</td><td>vlan-id is the ID of VLAN, the valid range is 1~4094。</td></tr><tr><td>&lt;priority-id&gt;</td><td>priority-id is the priority, the range is 0~7</td></tr><tr><td>&lt;dsap-id&gt;/&lt;ssap-id&gt;</td><td>dsap-id is Dsap ID, ssap-id is Ssap ID, the range is 0-255</td></tr></table>	<etype-id>	etype-id is the type of the packet protocol, with a valid range of 1536~65535;	<vlan-id>	vlan-id is the ID of VLAN, the valid range is 1~4094。	<priority-id>	priority-id is the priority, the range is 0~7	<dsap-id>/<ssap-id>	dsap-id is Dsap ID, ssap-id is Ssap ID, the range is 0-255										
<etype-id>	etype-id is the type of the packet protocol, with a valid range of 1536~65535;																		
<vlan-id>	vlan-id is the ID of VLAN, the valid range is 1~4094。																		
<priority-id>	priority-id is the priority, the range is 0~7																		
<dsap-id>/<ssap-id>	dsap-id is Dsap ID, ssap-id is Ssap ID, the range is 0-255																		
Default	No protocol joined the VLAN by default																		
Mode	Global Mode																		
Usage	<p>The command adds specified protocol into specified VLAN. If there is any non VLAN label packet from specified protocol enters through the switch port, it will be assigned with specified VLAN ID and enter the specified VLAN. No matter which port the packets go through, their belonging VLAN is the same. The command will not interfere with VLAN labeled data packets. It is recommended to configure ARP protocol together with the IP protocol or else some application may be affected.</p> <p><b>show protocol -vlan</b> display setting。</p>																		
Example	<p>Assign the IP protocol data packet encapsulated by the EthernetII to VLAN200</p> <pre>Switch#config Switch(config)#protocol-vlan mode ethernetII etype 1536 vlan 200 Switch#show protocol-vlan</pre> <table><tr><td>Protocol_Type</td><td>VLAN_ID</td><td>Priority</td></tr><tr><td>-----</td><td>-----</td><td>-----</td></tr><tr><td>mode ethernetii etype 0x600</td><td>200</td><td>0</td></tr><tr><td>mode ethernetii etype 0x60e</td><td>1</td><td>7</td></tr><tr><td>mode snap etype 0x613</td><td>1</td><td>1</td></tr><tr><td>mode llc dsap 0x1 ssap 0x1</td><td>1</td><td>0</td></tr></table>	Protocol_Type	VLAN_ID	Priority	-----	-----	-----	mode ethernetii etype 0x600	200	0	mode ethernetii etype 0x60e	1	7	mode snap etype 0x613	1	1	mode llc dsap 0x1 ssap 0x1	1	0
Protocol_Type	VLAN_ID	Priority																	
-----	-----	-----																	
mode ethernetii etype 0x600	200	0																	
mode ethernetii etype 0x60e	1	7																	
mode snap etype 0x613	1	1																	
mode llc dsap 0x1 ssap 0x1	1	0																	

## show dynamic-vlan prefer

<b>Syntax</b>	<b>show dynamic-vlan prefer</b>
<b>Parameter</b>	None
<b>Default</b>	Mac Vlan/Voice Vlan
<b>Mode</b>	Admin Mode and Configuration Mode.
<b>Usage</b>	Display the dynamic VLAN preference.
<b>Example</b>	<p>Display current dynamic VLAN preference.</p> <pre>Switch#show dynamic-vlan prefer</pre> <p>Mac Vlan/Voice Vlan IP Subnet Vlan Protocol Vlan</p>

## show mac-vlan interface

<b>Syntax</b>	<b>show mac-vlan interface</b>
<b>Parameter</b>	None



<b>Default</b>	None
<b>Mode</b>	Admin Mode and other configuration Mode.
<b>Usage</b>	Display the ports of enabling MAC-based VLAN, the character in the bracket indicate the ports mode, A means Access port, T means Trunk port, H means Hybrid port.
<b>Example</b>	<p>Display the ports of enabling MAC-based VLAN currently.</p> <p>Switch#show mac-vlan</p> <p>Ports</p> <pre> ----- Ethernet1/0/1(A)   Ethernet1/0/2(A) Ethernet1/0/3(A)   Ethernet1/0/4(A) Ethernet1/0/5(A)   Ethernet1/0/6(A) Ethernet1/0/7(A)   Ethernet1/0/8(A) Ethernet1/0/9(A)   Ethernet1/0/10(A) Ethernet1/0/11(A)  Ethernet1/0/12(A) Ethernet1/0/13(A)  Ethernet1/0/14(A) Ethernet1/0/15(A)  Ethernet1/0/16(A) Ethernet1/0/17(A)  Ethernet1/0/18(A) Ethernet1/0/19(A)  Ethernet1/0/20(A) Ethernet1/0/21(A)  Ethernet1/0/22(A) Ethernet1/0/23(A)  Ethernet1/0/24(A) Ethernet1/0/25(A)  Ethernet1/0/26(A) Ethernet1/0/27(A)  Ethernet1/0/28(A) </pre>

## show protocol-vlan

<b>Syntax</b>	<b>show protocol-vlan</b>
<b>Parameter</b>	None
<b>Default</b>	None
<b>Mode</b>	Admin Mode and Configuration Mode
<b>Usage</b>	Display the configuration of Protocol-based VLAN on the switch.
<b>Example</b>	<p>Display the configuration of the current Protocol-based VLAN.</p> <p>Switch#show protocol-vlan</p> <pre> Protocol_Type          VLAN_ID      Priority ----- mode ethernetii etype 0x600      200          0 mode ethernetii etype 0x60e       1            7 mode snap etype 0x613             1            1 mode llc dsap 0x1    ssap 0x1     1            0 </pre>

## show subnet-vlan

<b>Syntax</b>	<b>show subnet-vlan</b>
<b>Parameter</b>	None
<b>Default</b>	None

Mode	Admin Mode and other Configuration Mode.												
Usage	Display the configuration of the IP-subnet-based VLAN on the switch.												
Example	Display the configuration of the current IP-subnet-based VLAN. Switch#show subnet-vlan <table><tr><td>IP-Address</td><td>Mask</td><td>VLAN_ID</td><td>Priority</td></tr><tr><td>-----</td><td>-----</td><td>-----</td><td></td></tr><tr><td>192.168.5.2</td><td>255.255.255.0</td><td>100</td><td>0</td></tr></table>	IP-Address	Mask	VLAN_ID	Priority	-----	-----	-----		192.168.5.2	255.255.255.0	100	0
IP-Address	Mask	VLAN_ID	Priority										
-----	-----	-----											
192.168.5.2	255.255.255.0	100	0										

## show subnet-vlan interface

<b>Syntax</b>	<b>show subnet-vlan interface</b>
<b>Parameter</b>	None
<b>Default</b>	None
<b>Mode</b>	Admin Mode and other Configuration Mode.
<b>Usage</b>	Display the port of enabling IP-subnet-based VLAN, the character in the bracket indicate the ports mode, A means Access port, T means Trunk port, H means Hybrid port.
<b>Example</b>	<p>Display the port of enabling IP-subnet-based VLAN currently.</p> <pre>Switch#show subnet-vlan interface</pre> <p>Ports</p> <pre>----- Ethernet1/0/1(A)  Ethernet1/0/2(A) Ethernet1/0/3(A)  Ethernet1/0/4(A) Ethernet1/0/5(A)  Ethernet1/0/6(A) Ethernet1/0/7(A)  Ethernet1/0/8(A) Ethernet1/0/9(A)  Ethernet1/0/10(A) Ethernet1/0/11(A) Ethernet1/0/12(A) Ethernet1/0/13(A) Ethernet1/0/14(A) Ethernet1/0/15(A) Ethernet1/0/16(A) Ethernet1/0/17(A) Ethernet1/0/18(A) Ethernet1/0/19(A) Ethernet1/0/20(A) Ethernet1/0/21(A) Ethernet1/0/22(A) Ethernet1/0/23(A) Ethernet1/0/24(A) Ethernet1/0/25(A) Ethernet1/0/26(A) Ethernet1/0/27(A) Ethernet1/0/28(A)</pre>

## subnet-vlan

<b>Syntax</b>	<b>subnet-vlan ip-address &lt;ipv4-addrss&gt; mask &lt;subnet-mask&gt; vlan &lt;vlan-id&gt; priority &lt;priority-id&gt;</b> <b>no subnet-vlan {ip-address &lt;ipv4-addrss&gt; mask &lt;subnet-mask&gt;   all}</b>
<b>Parameter</b>	<p><b>&lt;ipv4-addrss&gt;</b> ipv4-address is the IPv4 address shown in dotted decimal notation; the valid range of each section is 0~255;</p> <p><b>&lt;subnet-mask&gt;</b> subnet-mask is the subnet mask code shown in dotted decimal notation; the valid range of each section is 0~255;</p>

	<b>&lt;vlan-id&gt;</b>	vlan-id is the VLAN ID with a valid range of 1~4094																	
	<b>&lt;priority-id&gt;</b>	priority-id is the priority applied in the VLAN tag with a valid range of 0~7;																	
<b>Default</b>	No IP subnet joined the VLAN by default.																		
<b>Mode</b>	Global Mode.																		
<b>Usage</b>	This command is used for adding specified IP subnet to specified VLAN. When packet without VLAN label and from the specified IP subnet enters through the switch port, it will be matched with specified VLAN id and enters specified VLAN. These packets will always come to the same VLAN no matter through which port did they enter. This command will not interfere with VLAN labeled data packets. <b>show subnet-vlan</b> display setting.																		
<b>Example</b>	Add the network equipment with IP subnet of 192.168.1.1/24 to VLAN 300 Switch#config Switch(config)#vlan 300 Switch(config-vlan300)#exit Switch(config)#subnet-vlan ip-address 192.168.1.1 mask 255.255.255.0 vlan 300 priority 0 Switch(config)#show subnet-vlan <table><tr><td>IP-Address</td><td>Mask</td><td></td><td>VLAN_ID</td><td>Priority</td></tr><tr><td>-----</td><td>-----</td><td>----</td><td>-----</td><td></td></tr><tr><td>192.168.1.1</td><td>255.255.255.0</td><td></td><td>300</td><td>0</td></tr></table>				IP-Address	Mask		VLAN_ID	Priority	-----	-----	----	-----		192.168.1.1	255.255.255.0		300	0
IP-Address	Mask		VLAN_ID	Priority															
-----	-----	----	-----																
192.168.1.1	255.255.255.0		300	0															

## switchport mac-vlan enable

<b>Syntax</b>	<b>switchport mac-vlan enable</b> <b>no switchport mac-vlan enable</b>			
<b>Parameter</b>	none			
<b>Default</b>	The MAC-base VLAN function is enabled on the port by default.			
<b>Mode</b>	Port Mode.			
<b>Usage</b>	<p>After adding a MAC address to specified VLAN, the MAC-based VLAN function will be globally enabled. This command can disable the MAC-based VLAN function on specified port to meet special user applications.</p> <p><b>show mac-vlan interface</b> display setting。</p>			
<b>Example</b>	<p>Disable the MAC-based VLAN function on port1.</p> <pre>Switch#config Switch(config)#interface ethernet 1/0/1 Switch(config-if-ethernet1/0/1)#no switchport mac-vlan enable Switch(config-if-ethernet1/0/1)#show mac-vlan interface</pre> <p>Ports</p> <pre>----- Ethernet1/0/2(A)   Ethernet1/0/3(A) Ethernet1/0/4(A)   Ethernet1/0/5(A) Ethernet1/0/6(A)   Ethernet1/0/7(A) Ethernet1/0/8(A)   Ethernet1/0/9(A) Ethernet1/0/10(A)  Ethernet1/0/11(A) Ethernet1/0/12(A)  Ethernet1/0/13(A)</pre>			

	Ethernet1/0/14(A)	Ethernet1/0/15(A)
	Ethernet1/0/16(A)	Ethernet1/0/17(A)
	Ethernet1/0/18(A)	Ethernet1/0/19(A)
	Ethernet1/0/20(A)	Ethernet1/0/21(A)
	Ethernet1/0/22(A)	Ethernet1/0/23(A)
	Ethernet1/0/24(A)	Ethernet1/0/25(A)
	Ethernet1/0/26(A)	Ethernet1/0/27(A)
	Ethernet1/0/28(A)	

## switchport subnet-vlan enable

<b>Syntax</b>	<b>switchport subnet-vlan enable</b> <b>no switchport subnet-vlan enable</b>
<b>Parameter</b>	none
<b>Default</b>	The IP-subnet-based VLAN is enabled on the port by default.
<b>Mode</b>	Port Mode.
<b>Usage</b>	After adding the IP subnet to specified VLAN, the IP-subnet-based VLAN function will be globally enabled. This command can disable the IP-subnet-based VLAN function on specified port to meet special user applications. <b>show subnet-vlan interface</b> display setting.
<b>Example</b>	Disable the IP-subnet-based VLAN function on port2. Switch#config Switch(config)# interface ethernet 1/0/2 Switch(config-if-ethernet1/0/2)#no switchport subnet-vlan enable Switch(config-if-ethernet1/0/2)#show subnet-vlan interface Ports ----- Ethernet1/0/1(A)    Ethernet1/0/3(A) Ethernet1/0/4(A)    Ethernet1/0/5(A) Ethernet1/0/6(A)    Ethernet1/0/7(A) Ethernet1/0/8(A)    Ethernet1/0/9(A) Ethernet1/0/10(A)   Ethernet1/0/11(A) Ethernet1/0/12(A)   Ethernet1/0/13(A) Ethernet1/0/14(A)   Ethernet1/0/15(A) Ethernet1/0/16(A)   Ethernet1/0/17(A) Ethernet1/0/18(A)   Ethernet1/0/19(A) Ethernet1/0/20(A)   Ethernet1/0/21(A) Ethernet1/0/22(A)   Ethernet1/0/23(A) Ethernet1/0/24(A)   Ethernet1/0/25(A) Ethernet1/0/26(A)   Ethernet1/0/27(A) Ethernet1/0/28(A)

## show voice-vlan

<b>Syntax</b>	<b>show voice-vlan</b>
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<b>Parameter</b>	None			
<b>Default</b>	None			
<b>Mode</b>	Admin Mode and other Configuration Mode.			
<b>Usage</b>	Display Voice VLAN Configuration.			
<b>Example</b>	Display the Current Voice VLAN Configuration.			
	Switch#show subnet-vlan			
	IP-Address	Mask	VLAN_ID	Priority
	-----	-----	-----	
	192.168.5.2	255.255.255.0	100	0

## switchport voice-vlan enable

Syntax	switchport voice-vlan enable no switchport voice-vlan enable																																				
Parameter	none																																				
Default	Voice VLAN is enabled by default.																																				
Mode	Port Mode.																																				
Usage	When voice equipment is added to the Voice VLAN, the Voice VLAN is enabled globally by default. This command disables Voice VLAN on specified port to meet specified application of the user.  show voice-vlan display setting.																																				
Example	Disable the Voice VLAN function on port2. Switch#config Switch(config)# interface ethernet 1/0/2 Switch(config-if-ethernet1/0/2)# no switchport voice-vlan enable Switch(config-if-ethernet1/0/2)# show voice-vlan Voice VLAN ID:100 Ports  ----- <table><tr><td>Ethernet1/0/1(A)</td><td>Ethernet1/0/3(A)</td></tr><tr><td>Ethernet1/0/4(A)</td><td>Ethernet1/0/5(A)</td></tr><tr><td>Ethernet1/0/6(A)</td><td>Ethernet1/0/7(A)</td></tr><tr><td>Ethernet1/0/8(A)</td><td>Ethernet1/0/9(A)</td></tr><tr><td>Ethernet1/0/10(A)</td><td>Ethernet1/0/11(A)</td></tr><tr><td>Ethernet1/0/12(A)</td><td>Ethernet1/0/13(A)</td></tr><tr><td>Ethernet1/0/14(A)</td><td>Ethernet1/0/15(A)</td></tr><tr><td>Ethernet1/0/16(A)</td><td>Ethernet1/0/17(A)</td></tr><tr><td>Ethernet1/0/18(A)</td><td>Ethernet1/0/19(A)</td></tr><tr><td>Ethernet1/0/20(A)</td><td>Ethernet1/0/21(A)</td></tr><tr><td>Ethernet1/0/22(A)</td><td>Ethernet1/0/23(A)</td></tr><tr><td>Ethernet1/0/24(A)</td><td>Ethernet1/0/25(A)</td></tr><tr><td>Ethernet1/0/26(A)</td><td>Ethernet1/0/27(A)</td></tr><tr><td>Ethernet1/0/28(A)</td><td></td></tr></table> <table><tr><td>Voice name</td><td>Mac-Address</td><td>Mask</td><td>Priority</td></tr><tr><td>-----</td><td>-----</td><td>-----</td><td>-----</td></tr></table>	Ethernet1/0/1(A)	Ethernet1/0/3(A)	Ethernet1/0/4(A)	Ethernet1/0/5(A)	Ethernet1/0/6(A)	Ethernet1/0/7(A)	Ethernet1/0/8(A)	Ethernet1/0/9(A)	Ethernet1/0/10(A)	Ethernet1/0/11(A)	Ethernet1/0/12(A)	Ethernet1/0/13(A)	Ethernet1/0/14(A)	Ethernet1/0/15(A)	Ethernet1/0/16(A)	Ethernet1/0/17(A)	Ethernet1/0/18(A)	Ethernet1/0/19(A)	Ethernet1/0/20(A)	Ethernet1/0/21(A)	Ethernet1/0/22(A)	Ethernet1/0/23(A)	Ethernet1/0/24(A)	Ethernet1/0/25(A)	Ethernet1/0/26(A)	Ethernet1/0/27(A)	Ethernet1/0/28(A)		Voice name	Mac-Address	Mask	Priority	-----	-----	-----	-----
Ethernet1/0/1(A)	Ethernet1/0/3(A)																																				
Ethernet1/0/4(A)	Ethernet1/0/5(A)																																				
Ethernet1/0/6(A)	Ethernet1/0/7(A)																																				
Ethernet1/0/8(A)	Ethernet1/0/9(A)																																				
Ethernet1/0/10(A)	Ethernet1/0/11(A)																																				
Ethernet1/0/12(A)	Ethernet1/0/13(A)																																				
Ethernet1/0/14(A)	Ethernet1/0/15(A)																																				
Ethernet1/0/16(A)	Ethernet1/0/17(A)																																				
Ethernet1/0/18(A)	Ethernet1/0/19(A)																																				
Ethernet1/0/20(A)	Ethernet1/0/21(A)																																				
Ethernet1/0/22(A)	Ethernet1/0/23(A)																																				
Ethernet1/0/24(A)	Ethernet1/0/25(A)																																				
Ethernet1/0/26(A)	Ethernet1/0/27(A)																																				
Ethernet1/0/28(A)																																					
Voice name	Mac-Address	Mask	Priority																																		
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## voice-vlan

<b>Syntax</b>	<b>voice-vlan mac &lt;mac-address&gt; mask &lt;mac-mask&gt; priority &lt;priority-id&gt; [name &lt;voice-name&gt;]</b> <b>no voice-vlan {mac &lt;mac-address&gt; mask &lt;mac-mask&gt;   name &lt;voice-name&gt;   all}</b>								
<b>Parameter</b>	<table> <tr> <td><b>&lt;mac-address&gt;</b></td><td>Mac-address is the voice equipment MAC address, shown in "xx-xx-xx-xx-xx-xx" format;</td></tr> <tr> <td><b>&lt;mac-mask&gt;</b></td><td>mac-mask is the last eight digit of the mask code of the MAC address, the valid values are: 0xff, 0xfe, 0xfc, 0xf8, 0xf0, 0xe0, 0xc0, 0x80, 0x0;</td></tr> <tr> <td><b>&lt;priority-id&gt;</b></td><td>priority-id is the priority of the voice traffic, the valid range is 0–7;</td></tr> <tr> <td><b>&lt;voice-name&gt;</b></td><td>the voice-name is the name of the voice equipment, which is to facilitate the equipment management;</td></tr> </table>	<b>&lt;mac-address&gt;</b>	Mac-address is the voice equipment MAC address, shown in "xx-xx-xx-xx-xx-xx" format;	<b>&lt;mac-mask&gt;</b>	mac-mask is the last eight digit of the mask code of the MAC address, the valid values are: 0xff, 0xfe, 0xfc, 0xf8, 0xf0, 0xe0, 0xc0, 0x80, 0x0;	<b>&lt;priority-id&gt;</b>	priority-id is the priority of the voice traffic, the valid range is 0–7;	<b>&lt;voice-name&gt;</b>	the voice-name is the name of the voice equipment, which is to facilitate the equipment management;
<b>&lt;mac-address&gt;</b>	Mac-address is the voice equipment MAC address, shown in "xx-xx-xx-xx-xx-xx" format;								
<b>&lt;mac-mask&gt;</b>	mac-mask is the last eight digit of the mask code of the MAC address, the valid values are: 0xff, 0xfe, 0xfc, 0xf8, 0xf0, 0xe0, 0xc0, 0x80, 0x0;								
<b>&lt;priority-id&gt;</b>	priority-id is the priority of the voice traffic, the valid range is 0–7;								
<b>&lt;voice-name&gt;</b>	the voice-name is the name of the voice equipment, which is to facilitate the equipment management;								
<b>Default</b>	This command will add a specified voice equipment into the Voice VLAN, if a non VLAN labeled data packet from the specified voice equipment enters through the switch port, then no matter through which port the packet enters, it will belongs to Voice VLAN. The command will not interfere with the packets of VLAN labels.								
<b>Mode</b>	Global Mode.								
<b>Usage</b>	<p>This command will add a specified voice equipment into the Voice VLAN, if a non VLAN labeled data packet from the specified voice equipment enters through the switch port, then no matter through which port the packet enters, it will belongs to Voice VLAN. The command will not interfere with the packets of VLAN labels.</p> <p><b>show voice-vlan</b> display setting.</p>								
<b>Example</b>	<p>Add the 256 sets of voice equipments of the R&amp;D department with MAC address ranging from 00-03-0f-11-22-00 to 00-03-0f-11-22-ff to the Voice VLAN.</p> <pre>Switch#config Switch(config)#vlan 100 Switch(config-vlan100)#exit Switch(config)#voice-vlan vlan 100 Switch(config)#voice-vlan mac 00-03-0f-11-22-00 mask 0 priority 5 name R&amp;D Switch(config)#show voice-vlan Voice VLAN ID:100 Ports ----- Ethernet1/0/1(A)   Ethernet1/0/3(A) Ethernet1/0/4(A)   Ethernet1/0/5(A) Ethernet1/0/6(A)   Ethernet1/0/7(A) Ethernet1/0/8(A)   Ethernet1/0/9(A) Ethernet1/0/10(A)  Ethernet1/0/11(A) Ethernet1/0/12(A)  Ethernet1/0/13(A) Ethernet1/0/14(A)  Ethernet1/0/15(A) Ethernet1/0/16(A)  Ethernet1/0/17(A) Ethernet1/0/18(A)  Ethernet1/0/19(A) Ethernet1/0/20(A)  Ethernet1/0/21(A) Ethernet1/0/22(A)  Ethernet1/0/23(A) Ethernet1/0/24(A)  Ethernet1/0/25(A) Ethernet1/0/26(A)  Ethernet1/0/27(A)</pre>								

Ethernet1/0/28(A)			
Voice name	Mac-Address	Mask	Priority
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R&D	00-03-0f-11-22-00	00-00-00-00-00-00	5

## voice-vlan vlan

<b>Syntax</b>	<b>voice-vlan vlan &lt;vlan-id&gt;</b> <b>no voice-vlan</b>
<b>Parameter</b>	<b>&lt;vlan-id&gt;</b> Vlan id is the number of the specified VLAN.
<b>Default</b>	No Voice VLAN is configured by default.
<b>Mode</b>	Global Mode.
<b>Usage</b>	Set specified VLAN for Voice VLAN, There can be only one Voice VLAN at the same time. The voice VLAN can not be applied concurrently with MAC-based VLAN. <b>show voice-vlan</b> display setting.
<b>Example</b>	Set VLAN100 to Voice VLAN. Switch#config Switch(config)#vlan 100 Switch(config-vlan100)#exit Switch(config)#voice-vlan vlan 100 Switch(config)#show voice-vlan Voice VLAN ID:100 Ports ----- Ethernet1/0/1(A)    Ethernet1/0/3(A) Ethernet1/0/4(A)    Ethernet1/0/5(A) Ethernet1/0/6(A)    Ethernet1/0/7(A) Ethernet1/0/8(A)    Ethernet1/0/9(A) Ethernet1/0/10(A)   Ethernet1/0/11(A) Ethernet1/0/12(A)   Ethernet1/0/13(A) Ethernet1/0/14(A)   Ethernet1/0/15(A) Ethernet1/0/16(A)   Ethernet1/0/17(A) Ethernet1/0/18(A)   Ethernet1/0/19(A) Ethernet1/0/20(A)   Ethernet1/0/21(A) Ethernet1/0/22(A)   Ethernet1/0/23(A) Ethernet1/0/24(A)   Ethernet1/0/25(A) Ethernet1/0/26(A)   Ethernet1/0/27(A) Ethernet1/0/28(A) Voice name            Mac-Address            Mask            Priority -----            -----            -----            -----