

Chapter-4

Basic Service



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Chapter 4 Basic Service

Basic services include VLAN, management IP, Layer 2 multicast, STP, LACP and other functions.

4.1 VLAN Configuration

VLAN configuration can create VLANs and bind ports

4.1.1 Static VLAN

1. Click Config->Basic Service->VLAN Configuration->Static VLAN

2. This page can add, modify, delete, and add description information for VLANs.

VLAN	Status	Member Ports	Static Tag Ports	Static Untag Ports	Dynamic Tag Ports
1	static	e0/0/1-e0/1/6		e0/0/1-e0/1/6	

Figure 4-1

4.1.2 VLAN Port

1. Click Config->Basic Service->VLAN Configuration->VLAN Port 2. This page configures the default VLAN and mode of the port.

Port	PVID(1-4094)	Mode	Tag Vlan List	Untag Vlan List
eth0/0/1	1	hybrid		1
eth0/0/2	1	hybrid		1

Figure 4-2

4.2 IP and Route Configuration

IP and route configuration include VLAN interface and static route.

4.2.1 MGMT IP Configuration

1. Click Config->Basic Service->IP and Route Configuration->MGMT IP Configuration
2. This page configures the management IP of the Switch. The default management IP is 192.168.168.1.

The screenshot shows the 'MGMT IP Address Configuration' page. On the left is a navigation menu with the following items: System Management, Port Management, Basic Service (expanded), VLAN Configuration (expanded), Static VLAN, VLAN Port, IP and Route Configuration (expanded), and MGMT IP Configuration (selected). The main content area has a title bar 'MGMT IP Address Configuration' and two input fields: 'IP Address' with the value '192.168.168.1' and 'Mask' with the value '255.255.255.0'. Below the fields are two buttons: 'Refresh' and 'Config'.

Figure 4-3

4.2.2 VLAN IP Configuration

1. Click Config->Basic Service->IP and Route Configuration->VLAN IP Configuration
2. This page can add, modify and delete VLAN interface.

The screenshot shows the 'VLAN IP' configuration page. The left navigation menu is similar to Figure 4-3, but 'VLAN IP Configuration' is selected. The main content area has a title bar 'VLAN IP' and a table with the following fields: 'Interface Name' with a 'New...' dropdown, 'VLAN ID' with an empty input field, 'IP address' with an empty input field, and 'Subnet mask' with an empty input field. Below the table are four buttons: 'Refresh', 'New', 'Apply', and 'Delete'.

Figure 4-4

4.2.3 Static Route Configuration

1. Click Config->Basic Service->IP and Route Configuration->Static Route Configuration

2. This page displays, adds and deletes static routes.

Figure 4-5

4.3 Multicast

4.3.1 Multicast Configuration

1. Click Config->Basic Service->Multicast->Multicast Configuration 2. This page can add, modify and delete static multicast groups.

Figure 4-6

4.3.2 IGMP Configuration

1. Click Config->Basic Service->Multicast->IGMP Configuration

2. This page configures IGMP snooping.

System Management	Igmp-snooping Enable	enable
Port Management	Apply	
Basic Service	Advance Settings	
VLAN Configuration	IGMP-Snooping Report-suppression	enable
Static VLAN	Max Response Time (1-100 seconds)	10
VLAN Port	Host Aging Time (10-1000000 seconds)	300
IP and Route Config...	IGMP-Snooping Route-port Forward	disable
MGMT IP Configuration	Router Port Timeout (10-1000000 seconds)	300
VLAN IP Configuration	Router Port Age	enable
Static Route Configuration	Denied VLAN	<input type="text"/> Add Delete (VLAN ID range : 1~4094,input vlan list such as 8,9,11-15)
Multicast	Denied VLAN List	
Multicast Configuration	Default Group Policy	permit
IGMP Configuration	IGMP-Snooping Querier	disable
STP Configuration	Querier VLAN	<input type="text"/> Add Delete (VLAN ID range : 1~4094,input vlan list such as 8,9,11-15)
LACP Configuration	Querier VLAN List	1
MAC Configuration	Querier Source IP	<input type="text" value="1.1.1.1"/>
SNMP Configuration	Max Query Respond Time (1-25 seconds)	10
DHCP Configuration	Query Interval (1-30000 seconds)	60
	Igmp Version	2
	Refresh Modify	

Figure 4-7

4.4 STP Configuration

STP (Spanning Tree Protocol) is a part of the IEEE 802.1D bridge protocol. The standard STP implementation can eliminate network broadcast storms caused by network cyclic connections, eliminate cyclic connections caused by mistakes or accidents, and also provide network services. Possibility of backup connection.

4.4.1 Global Configuration

1. Click Config->Basic Service->Stp Configuration->Global Configuration

2. This page configures the global STP and displays STP status.

Static VLAN	Bridge Settings
VLAN Port	Priority (0-61440, in steps of 4096) <input type="text" value="32768"/>
IP and Route Config...	Hello Time (1-10 sec.) <input type="text" value="2"/>
VLAN IP Configuration	Forward Delay (4-30 sec.) <input type="text" value="15"/>
Static Route Configuration	Max Age (6-40 sec.) <input type="text" value="20"/>
Multicast	Modify
STP Configuration	STP Status
Global Configuration	Bridge ID 32768 00:00:00:00:33
Port Configuration	Root Bridge ID 32768 00:00:00:00:33
LACP Configuration	Root Port 0
	Path Cost To Root Bridge 0

Figure 4-8

4.4.2 STP/RSTP Port Configuration

1. Click Config->Basic Service->Stp Configuration->STP/RSTP Port Configuration
2. This page configures the STP status, path cost, and priority. The priority of the port must be an integer multiple of 16.

Static VLAN	Port STP Settings					
VLAN Port	Port	STP State	Port Role	Path Cost (1-200000000)	Priority (0-240)	Port State
IP and Route Config...	<input type="text" value="eth0/0/1"/>	<input type="text" value="enable"/>	disabledPort	<input type="text" value="20000"/>	<input type="text" value="128"/>	DOWN
VLAN IP Configuration	Refresh Modify					
Static Route Configuration	eth0/0/1	enable	designatedPort	20000	128	DOWN
Multicast	eth0/0/2	enable	designatedPort	20000	128	DOWN
STP Configuration	eth0/0/3	enable	designatedPort	20000	128	DOWN
Global Configuration	eth0/0/4	enable	designatedPort	20000	128	DOWN
Port Configuration	eth0/0/5	enable	designatedPort	20000	128	DOWN
LACP Configuration	eth0/0/6	enable	designatedPort	20000	128	DOWN
	eth0/0/7	enable	designatedPort	20000	128	DOWN
	eth0/0/8	enable	designatedPort	20000	128	DOWN
	eth0/0/9	enable	designatedPort	20000	128	DOWN

Figure 4-9

4.5 LACP Configuration

LACP is the aggregation of multiple ports together to form an aggregation group to achieve traffic load sharing among member ports. When a link is unavailable, the link traffic will automatically switch to another link to ensure uninterrupted business traffic. An aggregation group is like a port.

4.5.1 Status Display

1. Click Config->Basic Service->LACP Configuration->Status Display 2. This page displays LACP configuration information.

Link Aggregation Status					
Group ID	Enabled Ports	Synchronized Ports	Aggregator ID	Criteria	Status
T0	-	-	-	-	-
T1	1-2	1	1	-	static
T2	-	-	-	-	-
T3	-	-	-	-	-
T4	-	-	-	-	-
T5	-	-	-	-	-
T6	-	-	-	-	-
T7	-	-	-	-	-

Figure 4-10

4.5.2 LACP Configuration

1. Click Config->Basic Service->LACP Configuration->LACP Configuration
 2. This page configures LACP. Only ports with the same VLAN can be configured in the same group.

Link Aggregation Settings		
Criteria	src-mac	
Apply		
Port	Group ID	LACP Mode
e0/0/1	none	none
e0/0/2	none	none
e0/0/3	none	none
e0/0/4	none	none
e0/1/1	none	none
e0/1/2	none	none
e0/1/3	none	none
e0/1/4	none	none
Apply Reset		

Figure 4-11

4.5.3 Protocol Control

1. Click Config->Basic Service->LACP Configuration->Protocol Control

2. This page activates the LACP group and configures the port priority.

Link Aggregation Control Protocol	
System Priority	32768
Group ID	LACP Active
T0	<input type="checkbox"/>
T1	<input checked="" type="checkbox"/>
T2	<input type="checkbox"/>
T3	<input type="checkbox"/>
T4	<input type="checkbox"/>
T5	<input type="checkbox"/>
T6	<input type="checkbox"/>
T7	<input type="checkbox"/>
Port	Port Priority
*	<input type="text"/>
1	128

Figure 4-12

4.6 MAC Configuration

MAC configuration is used to add and delete port-MAC bind.

4.6.1 Port Binding Display

1. Click Config->Basic Service->MAC Configuration->Port Binding Display 2. This page displays port-MAC binding status information.

Port-MAC Binding Outline			
Port	Port-MAC Binding	Port	Port-MAC Binding
e0/0/1	disable	e0/0/2	disable
e0/0/3	disable	e0/0/4	disable
e0/1/1	disable	e0/1/2	disable
e0/1/3	disable	e0/1/4	disable
epon0/2/1	disable	epon0/2/2	disable
epon0/2/3	disable	epon0/2/4	disable

Figure 4-13

4.6.2 Port Binding Configuration

1. Click Config->Basic Service->MAC Configuration->Port Binding Configuration

2. This page can configure port-MAC binding

Figure 4-14

4.7 SNMP Configuration

SNMP (Simple Network Management Protocol) is a network management standard based on the TCP/IP protocol suite, and is a standard protocol for managing network nodes in an IP network.

4.7.1 Community Configuration

1. Click Config->Basic Service->MAC Configuration->Port Binding Configuration

2. This page configures the SNMP community name (the default is iso).

ID	Name (1-20 characters)	Access Privilege	Status	View (0-32 characters)
1	test	Read-only	Active	iso
1	test	Read-only	Active	iso

Figure 4-15

4.7.2 Trap Configuration

1. Click Config->Basic Service->SNMP Configuration->Trap Configuration

2. This page configures the Trap.

ID (support max 8 entries)	Trap Target IP Address	Community (1-20 characters)	SNMP Version
1	1.1.1.2	test	v2
1	1.1.1.2	test	v2

Figure 4-16

4.8 DHCP Configuration

4.8.1 DHCP Snooping

1. Click Config->Basic Service->DHCP Configuration->DHCP Snooping->DHCP snooping Setting

2. This page configures DHCP snooping, option82, trust port, etc. After enabling DHCP snooping, the trust port must be configured.

DHCP Snooping Trust Port Settings	
Dhcp-snooping Enable	<input type="text" value="disable"/>
Option82 Control	<input type="text" value="disable"/>
<input type="button" value="Refresh"/> <input type="button" value="Modify"/>	
Port	Trust
eth0/0/1	<input type="checkbox"/>
eth0/0/2	<input type="checkbox"/>
eth0/0/3	<input type="checkbox"/>
eth0/0/4	<input type="checkbox"/>
eth0/0/5	<input type="checkbox"/>
eth0/0/6	<input type="checkbox"/>
eth0/0/7	<input type="checkbox"/>
eth0/0/8	<input type="checkbox"/>

Figure 4-17

4.8.2 IP-MacBinding

1. Click Config->Basic Service->DHCP Configuration->IP-Mac Binding

2. This page configures the IP and MAC binding function, this function needs to be used with DHCP snooping.

Figure 4-18

4.8.3 DHCP Server&Relay

- 1.Click Config->Basic Service->DHCP configuration->DHCP Server&Relay
- 2.This page configures DHCP server and relay.

Figure 4-19