Aerohive Networks Inc.

HiveOS\_PortManagement\_TestCase

Revision History

|  |  |  |  |
| --- | --- | --- | --- |
| Version | Date | Author | Description |
| 0.1 | 09/19/2012 | Xiaoxing Tu | Initial version |
| 0.2 | 09/24/2012 | Xiaoxing Tu | Add some configurations in speed/duplex testing |
| 0.3 | 11/26/2012 | Xiaoxing Tu | Add port-channel test cases |
| 0.4 | 02/27/2013 | Xiaoxing Tu | Add Mac PC connection with SW test case, see 6.9.1 section; |
| 0.5 | 03/12/2013 | Xiaoxing Tu | Modify MTU default value to 1500; |

[1. Introduction 6](#_Toc350864053)

[2. Test Objectives 6](#_Toc350864054)

[3. Test Acceptance Criterion from Development 7](#_Toc350864055)

[4. Product Pass Criterion 7](#_Toc350864056)

[5. Test Bed/Topo Design 7](#_Toc350864057)

[6. Test Case 8](#_Toc350864058)

[6.1. Solution 8](#_Toc350864059)

[6.2. Function Test Case 8](#_Toc350864060)

[6.2.1. Admin State Configuration 8](#_Toc350864061)

[6.2.1.1. Disable/Enable Interface on BASE-T Port 8](#_Toc350864062)

[6.2.1.2. Disable/Enable Interface on SFP Port 9](#_Toc350864063)

[6.2.2. Speed and Duplex Configuration 10](#_Toc350864064)

[6.2.2.1. The combination of Speed and Duplex on BASE-T Port 10](#_Toc350864065)

[6.2.2.2. The combination of Speed and Duplex on BASE-T Port 11](#_Toc350864066)

[6.2.2.3. The configuration of Speed and Duplex on BASE-T Port 12](#_Toc350864067)

[6.2.2.4. Speed and Duplex on SFP Port 13](#_Toc350864068)

[6.2.2.5. The configuration of Speed and Duplex on SFP Port 13](#_Toc350864069)

[6.2.3. Flow Control Configuration 14](#_Toc350864070)

[6.2.3.1. Flow Control Tx Enabled on BASE-T Port 14](#_Toc350864071)

[6.2.3.2. Flow Control Rx Enabled on BASE-T Port 17](#_Toc350864072)

[6.2.3.3. Flow Control Tx Disabled on BASE-T Port 21](#_Toc350864073)

[6.2.3.4. Flow Control Rx Disabled on BASE-T Port \_\_\_PortMgt\_Function\_FlowControl\_04 24](#_Toc350864074)

[6.2.3.5. Flow Control is Auto on BASE-T Port and Enabled on IxNetwork 27](#_Toc350864075)

[6.2.3.6. Flow Control is Auto on BASE-T Port and disabled on IxNetwork 30](#_Toc350864076)

[6.2.3.7. Flow Control is Auto on BASE-T Port and IxExplore 32](#_Toc350864077)

[6.2.3.8. Flow Control Tx Enabled on SFP Port 34](#_Toc350864078)

[6.2.3.9. Flow Control Rx Enabled on SFP Port 38](#_Toc350864079)

[6.2.3.10. Flow Control Configuration on BASE-T Port 42](#_Toc350864080)

[6.2.3.11. Flow Control Configuration on SFP Port 42](#_Toc350864081)

[6.2.3.12. Show Flow Control Info on All Ports 43](#_Toc350864082)

[6.2.4. Auto MDIX Configuration 44](#_Toc350864083)

[6.2.4.1. Enable/Disable Auto-MDIX on BASE-T Port 44](#_Toc350864084)

[6.2.5. Debounce Timer Configuration 44](#_Toc350864085)

[6.2.5.1. Debounce Timer Configured on BASE-T Port 44](#_Toc350864086)

[6.2.5.2. Disable Debounce Timer on BASE-T Port 45](#_Toc350864087)

[6.2.5.3. Debounce Timer Configured on SFP Port 46](#_Toc350864088)

[6.2.5.4. Disable Debounce Timer on SFP Port 46](#_Toc350864089)

[6.2.6. MTU Configuration 47](#_Toc350864090)

[6.2.6.1. Default MTU Configured on BASE-T Port with Access mode 47](#_Toc350864091)

[6.2.6.2. Default MTU Configured on BASE-T Port with Trunk mode 48](#_Toc350864092)

[6.2.6.3. Default MTU Configured on SFP Port with Access mode 50](#_Toc350864093)

[6.2.6.4. Default MTU Configured on SFP port with Trunk mode 52](#_Toc350864094)

[6.2.6.5. MTU Configured on BASE-T Port with Access mode 54](#_Toc350864095)

[6.2.6.6. MTU Configured on BASE-T Port with Trunk mode 55](#_Toc350864096)

[6.2.6.7. MTU Configured on SFP Port with Access mode 57](#_Toc350864097)

[6.2.6.8. MTU Configured on SFP Port with Trunk mode 59](#_Toc350864098)

[6.2.6.9. MTU Configured as odd number 60](#_Toc350864099)

[6.2.7. Interface Description Configuration 61](#_Toc350864100)

[6.2.7.1. Interface Description Configuration on BASE-T Port 61](#_Toc350864101)

[6.2.7.2. Interface Description Configuration on SFP Port 62](#_Toc350864102)

[6.2.7.3. Description Configuration on port-channel 63](#_Toc350864103)

[6.2.7.4. Show Interface Description on All Ports 63](#_Toc350864104)

[6.2.8. Port Statistics 64](#_Toc350864105)

[6.2.8.1. Octets and Unicast/Multicase/Broadcast stats on BASE-T Port 64](#_Toc350864106)

[6.2.8.2. Octets and Unicast/Multicase/Broadcast Frames stats on SFP Port 66](#_Toc350864107)

[6.2.8.3. Excessive Collision stats on BASE-T Port 67](#_Toc350864108)

[6.2.8.4. Undersize stats on BASE-T Port 68](#_Toc350864109)

[6.2.8.5. Undersize stats on SFP Port 69](#_Toc350864110)

[6.2.8.6. Oversize stats on BASE-T Port 70](#_Toc350864111)

[6.2.8.7. Oversize stats on SFP Port 71](#_Toc350864112)

[6.2.8.8. Bad Octets/CRC stats on BASE-T Port 72](#_Toc350864113)

[6.2.8.9. Bad Octets/CRC Stats on SFP Port 73](#_Toc350864114)

[6.2.8.10. Overruns stats on BASE-T Port 74](#_Toc350864115)

[6.2.8.11. Rx Error Frame stats on BASE-T Port 75](#_Toc350864116)

[6.2.9. Port Channel 75](#_Toc350864117)

[6.2.9.1. Port Channel\_01 on BASE-T Port 75](#_Toc350864118)

[6.2.9.2. Port Channel\_02 on BASE-T Port 76](#_Toc350864119)

[6.2.9.3. Port Channel\_01 on SFP Port 77](#_Toc350864120)

[6.2.9.4. Port Channel\_02 on SFP Port 78](#_Toc350864121)

[6.2.9.5. Check Port Channel Config 79](#_Toc350864122)

[6.2.9.6. Disable/Enable Port Channel 79](#_Toc350864123)

[6.2.10. Port Loopback test 80](#_Toc350864124)

[6.2.10.1. BASE-T port Loopback Test 80](#_Toc350864125)

[6.2.10.2. BASE-T and SFP port Loopback Test 81](#_Toc350864126)

[6.3. Stress Test Case 83](#_Toc350864127)

[6.4. Longevity Test Case 83](#_Toc350864128)

[6.5. Performance Test Case 83](#_Toc350864129)

[6.6. Capacity Test Case 83](#_Toc350864130)

[6.7. Compatibility Test Case 83](#_Toc350864131)

[6.8. Negative Test Case 83](#_Toc350864132)

[6.9. Other Test Case 83](#_Toc350864133)

[6.9.1. Connection check with Mac PC 83](#_Toc350864134)

[6.9.1.1. Rebooting SW 83](#_Toc350864135)

[6.9.1.2. Plugging and unplug cable 84](#_Toc350864136)

[6.9.1.3. Change Speed and duplex on Mac PC 84](#_Toc350864137)

[6.10. CLI Management (Automation Status: Yes/No) 85](#_Toc350864138)

[6.11. GUI Management-HiveManager 85](#_Toc350864139)

[6.12. GUI Management-HiveUI 85](#_Toc350864140)

[7. Reference 85](#_Toc350864141)

Glossary and Abbreviations

GE: Gigabit Ethernet;

MDIX: Medium Dependent Interface crossover

MTU: Maximum Transmission Unit;

SFP: Small Form-factor Pluggables;

# Introduction

Chesapeake switch is a family of 24/48 ports switch/router targeting Aerohive sweet spots – distributed branch networks and verticals. Chesapeake switch is a key product in fulfilling Aerohive’s vision of simplifying the wired/wireless network. Chesapeake switch can be offered as following type of devices:

* All-in-one branch device - Single device that operates as a Router, Switch, Radius Server, DHCP Server, VPN client and Firewall/NAT.
* Remote location managed switch - Simple device that is a managed switch at a remote site – with routing/tunnel up to the corporate.
* A fully managed switch for the low-end of the market - 24p Layer2/Layer3 switch with a few PoE ports, VLANs, uplink routing and QoS.

Chesapeake switch family will have following variations:

* SW2000-24 – 24 Copper GE ports, 4 Fiber SFP GE ports, 8 802.3af/at ports
* SW2000-24p – 24 Copper GE ports, 4 Fiber SFP+ 10GE ports, 24 802.3af/at ports, dual power supply capability, one power supply can support 12 802.3at ports
* SW2000-48p - 48 Copper GE ports, 4 Fiber SFP+ 10GE ports, 48 802.3af/at ports, dual power supply capability, one power supply can support 24 802.3at ports

Following types of ports are supported on Chesapeake switch:

* 10/100/1000 BASE-T ports – 24 or 48 GE copper ports.
* SFP GE ports – 4 fiber GE ports or
* SFP+ 10GE ports – 4 fiber 10GE ports.

SFP ports supports following modes:

* 1000 BASE-SX
* 1000 BASE-LX

SFP+ ports supports following modes:

* 1000 BASE-SX
* 1000 BASE-LX
* 10G BASE-SR
* 10G BASE-LR

Each port is assigned a unique MAC address.

# Test Objectives

1. Verify Admin state configured on BASE-T ports and SFP GE or SFP+ 10GE ports;
2. Verify 10/100/1000 BASE-T ports support all speed options (10/100/1000/auto) and all duplex options (auto, half, and full).
3. Verify Auto MDIX works well on 10/100/1000 BASE-T ports;
4. Verify SFP GE Port only support 1G speed option and full duplex option;
5. Verify SFP+ 10GE ports support 10G speed option and full duplex option;
6. Verify Flow Control works well on 10/100/1000 BASE-T ports and SFP GE/SFP+ 10GE ports;
7. Verify Debounce timer works well on 10/100/1000 BASE-T ports and SFP GE/SFP+ 10GE ports;
8. Verify MTU is specified for all ports;
9. Verify the port status is correctly showed, the following statuses are available:

* Admin state
* Link status
* Speed
* Duplex
* Flow Control
* Auto MDIX (if port is 10/100/1000 BASE-T Port)
* MTU

1. Verify add/show the description for all ports;
2. Verify Port statistics on the specified port, support following statistics items:

* Received statistics:
  + - * octets
      * unicast frames
      * broadcast frames
      * multicast frames
      * bad octets
      * bad CRC
      * rx error frames
      * undersize
      * oversize
      * overruns
* Transmitted statistics:
  + - * octets
      * unicast frames
      * broadcast frames
      * multicast frames
      * excessive collision

# Test Acceptance Criterion from Development

* Approved – MRD

The link to MRD

* Approved – Functional Specifications

The link to function spec

* Approved – Unit Test Plans

The link to unit test report of dev

# Product Pass Criterion

Meet all objects in marketing requirement or function spec which may include key function objectives, capacity objectives, performance objectives and so on.

# Test Bed/Topo Design

<List topo and topo ID>

# Test Case

## Solution

## Function Test Case

### Admin State Configuration

#### Disable/Enable Interface on BASE-T Port

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | PortMgt\_Function\_AdminState\_01 | | |
| Priority | High | Automation Flag | Yes/No/NA |
| Topology to use | Switch  IxExplore | | |
| Description | Verify Admin state configured on BASE-T ports; | | |
| Platform Dependence |  | | |
| Pre-condition | 1. Switch is configured by default; 2. The Link is up on switch and IxExplore; | | |
| Test procedure | 1. Run CLI “show interface <eth1/x>” to check admin state, see result 1; 2. Run CLI “interface < eth1/x> shutdown” to disable admin state; 3. Run CLI “show interface <eth1/x>” to check admin state, see result 2; 4. Run CLI “no interface < eth1/x> shutdown” to enable admin state; 5. Run CLI “show interface <eth1/x>” to check admin state, see result 1; | | |
| Expect result | 1. The Admin State is enable and Link is up on both switch and IxExplore;   AH-66e500#show interface eth1/21  Port Name: eth1/21  Admin state: enable; Link status: up;     1. The Admin State is disable and Link is down on both switch and IxExplore;   AH-66e500#show interface eth1/21  Port Name: eth1/21  Admin state: disable; Link status: down; | | |
| Test Result |  | | |
| Comment |  | | |

#### Disable/Enable Interface on SFP Port

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | PortMgt\_Function\_AdminState\_02 | | |
| Priority | High | Automation Flag | Yes/No/NA |
| Topology to use | Switch  IxExplore | | |
| Description | Verify Admin state configured on SFP ports; | | |
| Platform Dependence |  | | |
| Pre-condition | 1. Switch is configured by default; 2. Change Port’s phy mode to fiber on IxExplore:      1. The Link is up on switch and IxExplore; | | |
| Test procedure | 1. Run CLI “show interface <eth1/x>” to check admin state, see result 1; 2. Run CLI “interface <eth1/x> shutdown” to disable admin state; 3. Run CLI “show interface <sfp/x>” to check admin state, see result 2; 4. Run CLI “no interface <sfp/x> shutdown” to enable admin state; 5. Run CLI “show interface <sfp/x>” to check admin state, see result 1; | | |
| Expect result | 1. The Admin State is enable and Link is up on both switch and IxNetwork;   AH-66e500#sh in eth1/25  Port Name: eth1/25  Admin state: enable; Link status: up;   1. The Admin State is disable and Link is down on both switch and IxNetwork;   AH-66e500#in eth1/25 shutdown  AH-66e500#sh in eth1/25  Port Name: eth1/25  Admin state: disable; Link status: down; | | |
| Test Result |  | | |
| Comment |  | | |

### Speed and Duplex Configuration

#### The combination of Speed and Duplex on BASE-T Port

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | PortMgt\_Function\_SpeedDuplex\_011 | | |
| Priority | Accept | Automation Flag | Yes/No/NA |
| Topology to use | Switch  IxExplore | | |
| Description | Verify Speed and Duplex configured on BASE-T ports if AutoNegotiation is enabled only on IxExplore; | | |
| Platform Dependence |  | | |
| Pre-condition | 1. Switch is configured by default(Speed/Duplex is auto/auto); 2. IxExplore is configured as below:      1. The Link is up on switch and IxNetwork; | | |
| Test procedure | 1. Run CLI “show interface < eth1/x>” to check speed and duplex, see result 1; 2. Follow table 1 to configure speed and duplex for switch by using CLIs “interface < eth1/x> speed [10/100/1000/auto]” and “interface < eth1/x> duplex [full/half/auto]” ; 3. Follow table 1 to check the link state and speed/duplex on IxNetwork and switch by using CLI “show interface < eth1/x>”; 4. Run “no interface < eth1/x> speed” and “no interface < eth1/x> duplex”to configure speed/duplex as auto/auto by default; 5. Run CLI “show interface < eth1/x>” to check speed and duplex, see result 1; | | |
| Expect result | 1. Speed/Duplex is 1000/Full, Link is up after negotiation; 2. Table1;  |  |  |  |  |  | | --- | --- | --- | --- | --- | | Configuration | | Result | | | | IxNetwork | Switch(Speed/Duplex) | Link Status | IxExplore | Switch(Speed/Duplex) | | Auto:10M/Half | Auto/Auto | Up | 10M/Half | 10M/Half | | Auto:10M/Full | Auto/Auto | Up | 10M/Full | 10M/Full | | Auto:100M/Half | Auto/Auto | Up | 100M/Half | 100M/Half | | Auto:100M/Full | Auto/Auto | Up | 100M/Full | 100M/Full | | Auto:1000M | Auto/Auto | Up | 1000M | 1000M/Full | | Auto:All | Auto/Auto | Up | 1000M | 1000M/Full | | Auto:All | 10M/Half | Up | 10M/Half | 10M/Half | | Auto:All | 10M/Full | Up | 10M/Half | 10M/Full | | Auto:All | 100M/Half | Up | 100M/Half | 100M/Half | | Auto:All | 100M/Full | Up | 100M/Half | 100M/Full | | Auto:All | 1000M/Full | Up | 1000M/full | 1000M/Full | | | |
| Test Result |  | | |
| Comment |  | | |

#### The combination of Speed and Duplex on BASE-T Port

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | PortMgt\_Function\_SpeedDuplex\_012 | | |
| Priority | Accept | Automation Flag | Yes/No/NA |
| Topology to use | Switch  IxNetwork | | |
| Description | Verify Speed and Duplex configured on BASE-T ports if AutoNegotiate is diabled on IxExplore; | | |
| Platform Dependence |  | | |
| Pre-condition | 1. Switch is configured by default(Speed/Duplex is auto/auto); 2. The AutoNegotiate is unchecked on IxNetwork; | | |
| Test procedure | 1. Follow table 1 to configure speed/duplex type for IxNetwork and switch by using CLIs “interface < eth1/x> speed [10/100/1000/auto]” and “interface < eth1/x> duplex [full/half/auto]” ; 2. Follow table 1 to check the link state and speed/duplex on IxNetwork and switch by using CLI “show interface < eth1/x>”; | | |
| Expect result | 1. Table1;  |  |  |  |  |  | | --- | --- | --- | --- | --- | | Configuration | | Result | | | | IxNetwork | Switch(Speed/Duplex) | Link Status | IxNetwork | Switch(Speed/Duplex) | | 10M/Half | 10M/Half | Up | 10M/Half | 10M/Half | | Auto/Auto | Up | 10M/Half | 10M/Half | | 10M/Full | 10M/Full | Up | 10M/Full | 10M/Full | | Auto/Auto | Up | 10M/Full | 10M/Half | | 100M/Half | 100M/Half | Up | 100M/Half | 100M/Half | | Auto/Auto | Up | 100M/Half | 100M/Half | | 100M/Full | 100M/Full | Up | 100M/Full | 100M/Full | | Auto/Auto | Up | 100M/Full | 100M/Half | | 1000M | 1000M/Full | Up | 1000M/Full | 1000M/Full | | Auto/Auto | Up | 1000M/Full | 1000M/Full | | | |
| Test Result |  | | |
| Comment |  | | |

#### The configuration of Speed and Duplex on BASE-T Port

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | PortMgt\_Function\_SpeedDuplex\_013 | | |
| Priority | Middle | Automation Flag | Yes/No/NA |
| Topology to use |  | | |
| Description | Verify the Speed and Duplex configuration that they are auto together and if speed is configured as 1000Mbps then the duplex is configured as full only on BASE-T ports; | | |
| Platform Dependence |  | | |
| Pre-condition | 1. Switch is configured by default; 2. Shutdown interface:   interface < eth1/x> shutdown | | |
| Test procedure | 1. Run CLI “sh in < eth1/x>” to check the default speed and duplex, see result 1; 2. Run CLI “interface < eth1/x> speed 10” ,see result 2; 3. Run CLI “interface < eth1/x> speed auto”, see result 1; 4. Run CLI “interface < eth1/x> speed 100” ,see result 2; 5. Run CLI “interface < eth1/x> duplex auto”, see result 1; 6. Run CLI “interface < eth1/x> duplex [full/half/]”, see result 3; 7. Run CLI “interface < eth1/x> speed 1000” and “interface < eth1/x> duplex half, see result 4; | | |
| Expect result | 1. The default speed and duplex are auto together; 2. The duplex of < eth1/x> is configured as full; 3. Deny the CLI, the speed and duplex and flow-control are still auto/auto;   AH-66e500# in eth1/21 duplex full  Warning: Please turn off speed auto-neg first.  ERROR: Invalid parameter(s)   1. Deny “interface < eth1/x> duplex half”, the duplex is still full; | | |
| Test Result |  | | |
| Comment |  | | |

#### Speed and Duplex on SFP Port

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | PortMgt\_Function\_SpeedDuplex\_014 | | |
| Priority | High | Automation Flag | Yes/No/NA |
| Topology to use | Switch  IxNetwork | | |
| Description | Verify Speed and Duplex configured on SFP GE ports. | | |
| Platform Dependence |  | | |
| Pre-condition | 1. Switch is configured by default(Speed/Duplex is auto/auto); 2. Auto\_Negotiate on Fiber port of IxExplore; | | |
| Test procedure | 1. Run CLI “show interface < eth1/x>” to check link status and speed/duplex, see result 1; | | |
| Expect result | 1. Speed is 1000Mbps and duplex is full, Link is up;   AH-66e500#sh in eth1/25  Port Name: eth1/25  Admin state: enable; Link status: up;  MAC address: 08ea:4466:e519;  Duplex=full; Speed=1G; | | |
| Test Result |  | | |
| Comment |  | | |

#### The configuration of Speed and Duplex on SFP Port

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | PortMgt\_Function\_SpeedDuplex\_015 | | |
| Priority | Middle | Automation Flag | Yes/No/NA |
| Topology to use |  | | |
| Description | Verify the Speed and Duplex configuration that they are auto together and if auto-Negotiate is off, then speed/duplex is only 1000/full on SFP port; | | |
| Platform Dependence |  | | |
| Pre-condition | 1. Switch is configured by default; 2. Shutdown interface:   interface < eth1/x> shutdown | | |
| Test procedure | 1. Run CLI “show in eth1/x “ to check the default speed and duplex, see result 1; 2. Run CLI “interface < eth1/x> speed [10/100]” ,see result 2; 3. Run CLI “interface < eth1/x> speed 1000” and “interface < eth1/x> duplex half, see result 3; 4. Run CLI “interface <eth1/x> duplex auto”, see result 1; 5. Run CLI “interface < eth1/x> speed 1000”, see result 4; 6. Run CLI “interface < eth1/x> speed auto”, see result 1; | | |
| Expect result | 1. The default speed and duplex are auto together; 2. Deny the CLI, the speed and duplex and flow-control are still auto/auto;   AH-66e500#in eth1/25 speed 100  Error: Not support on sfp.  ERROR: Invalid parameter(s)  AH-66e500#in eth1/25 speed 10  Error: Not support on sfp.  ERROR: Invalid parameter(s)   1. Deny “interface < eth1/x> duplex half”, the duplex is still full;   AH-66e500#in eth1/25 duplex half  Error: Not support on sfp.  ERROR: Invalid parameter(s)   1. the duplex is full; | | |
| Test Result |  | | |
| Comment |  | | |

### Flow Control Configuration

#### Flow Control Tx Enabled on BASE-T Port

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | PortMgt\_Function\_FlowControl\_01 | | |
| Priority | Accept | Automation Flag | Yes/No/NA |
| Topology to use | Switch  IxExplore  Link2-2  Link1-1 | | |
| Description | Verify Flow Control Tx is enabled on BASE-T port on switch; | | |
| Platform Dependence |  | | |
| Pre-condition | 1. Reset switch by default; 2. Configure 100M/Full on Port 1 of switch and port 1 of IxExplore via Auto-Negotiation;      1. Configure 10M/Full on Port 2 of switch and port 2 of IxExplore via Auto-Negotiation;      1. Configure flow control as Auto-Negotiate on IxExplore:      1. Port 1 and 2 of switch is within the same vlan:   AH-66e500#vlan 2  AH-66e500#in eth1/21 switchport access vlan 2  AH-66e500#in eth1/22 switchport access vlan 2 | | |
| Test procedure | 1. Enable Flow control on port 1 switch by using CLI “interface < eth1/x> flow-control enable”;   AH-66e500#in eth1/1 flow-control enable   1. Run CLI “show interface < eth1/x>” to check link status and flow control on Port 1, see result 1; 2. Send traffic from the port 1 of IxExplore to Port 2 through switch;      1. Open statistic view to check Pause frame is received on Port 1 of IxExplore, see result 2; 2. Check the frame rate on Port 1 and 2 of IxExplore, see result 2; 3. Run CLI “no interface < eth1/x> flow-control” to configure flow control by default; 4. Run CLI “show interface <eth1/x> flowcontrol ” to check flow-control , see result 3; | | |
| Expect result | 1. Link is up and flow control is enabled on Port 1;   AH-66e500#sh in eth1/1 flowcontrol  Port Send FlowControl Receive FlowControl  Admin Oper Admin Oper  ------------------- ----- ----- ----- -----  eth1/1 on on on on  AH-66e500#sh in eth1/1  Port Name: eth1/1  Admin state: enable; Link status: up;  MAC address: 08ea:4466:e516;  Duplex=full; Speed=100M;  Auto MDIX=enalbe; MTU=1500;  Flow Control Rx: on; Flow Control Tx: on;   1. Pause frames are received on Port 1 of IxExplore:     (10Mbps/8bit) /(8byte(Preamble)+12byte(Frame Gap) + 256byte(Frame size))=4529frame/s   1. The flow control is disable;   AH-66e500#sh in eth1/21 flowcontrol  Port Send FlowControl Receive FlowControl  Admin Oper Admin Oper  ------------------- ----- ----- ----- -----  eth1/21 off off off off | | |
| Test Result |  | | |
| Comment |  | | |

#### Flow Control Rx Enabled on BASE-T Port

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | PortMgt\_Function\_FlowControl\_02 | | |
| Priority | Accept | Automation Flag | Yes/No/NA |
| Topology to use | Switch  IxExplore  Link2-2  Link1-1 | | |
| Description | Verify Flow Control Rx is enabled on BASE-T port on switch; | | |
| Platform Dependence |  | | |
| Pre-condition | 1. Configure 100M/Full on Port 1 of switch and port 1 of IxExplore via Auto-Negotiation;      1. Configure 100M/Full on Port 2 of switch and port 2 of IxExplore via Auto-Negotiation;      1. Configure flow control as Auto-Negotiate on IxExplore:      1. Port 1 and 2 of switch is within the same vlan:   AH-66e500#vlan 2  AH-66e500#in eth1/21 switchport access vlan 2  AH-66e500#in eth1/22 switchport access vlan 2 | | |
| Test procedure | 1. Enable Flow control on port 2 switch by using CLI “interface < eth1/x> flow-control enable”;   AH-66e500#in eth1/2 flow-control enable   1. Run CLI “show interface < eth1/x>” to check link status and flow control on Port 2, see result 1; 2. Send IPv4/UDP traffic from the port 1 of IxExplore to Port 2 through switch;      1. Open statistic view to check frame Tx/Rx rate on Port 1 and 2 of IxExplore, see result 2; 2. Send Pause Control frame from port 2 of IxExplore to port 1 through switch;        1. Check Frame Tx/Rx Rate on Port 1 and 2 of IxExplore, see result 3; | | |
| Expect result | 1. Link is up and flow control is enabled on Port 1;   AH-66e500#sh in eth1/2 flowcontrol  Port Send FlowControl Receive FlowControl  Admin Oper Admin Oper  ------------------- ----- ----- ----- -----  eth1/2 on on on on  AH-66e500#sh in eth1/2  Port Name: eth1/2  Admin state: enable; Link status: up;  MAC address: 08ea:4466:e516;  Duplex=full; Speed=100M;  Auto MDIX=enalbe; MTU=1500;  Flow Control Rx: on; Flow Control Tx: on;   1. The Frame Tx/Rx rate corresponds to 100Mpbs on Port 1 and 2 of IxExplore:     100Mbps/8bit/((8byte(preamble)+12byte(frame gap)+256byte(frame size))=45290frame/s   1. The Frame Tx/Rx rate is decreasing; | | |
| Test Result |  | | |
| Comment |  | | |

#### Flow Control Tx Disabled on BASE-T Port

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | PortMgt\_Function\_FlowControl\_03 | | |
| Priority | Middle | Automation Flag | Yes/No/NA |
| Topology to use | Switch  IxExplore  Link2-2  Link1-1 | | |
| Description | Verify Flow Control Tx is disabled on BASE-T port on switch; | | |
| Platform Dependence |  | | |
| Pre-condition | 1. Reset switch by default; 2. Configure 100M/Full on Port 1 of switch and port 1 of IxExplore via Auto-Negotiation;      1. Configure 10M/Full on Port 2 of switch and port 2 of IxExplore via Auto-Negotiation;      1. Configure flow control as Auto-Negotiate on IxExplore:      1. Port 1 and 2 of switch is within the same vlan:   AH-66e500#vlan 2  AH-66e500#in eth1/21 switchport access vlan 2  AH-66e500#in eth1/22 switchport access vlan 2 | | |
| Test procedure | 1. Disable Flow control on port 1 of switch by using CLI “interface < eth1/x> flow-control disable”;   AH-66e500#in eth1/1 flow-control disable   1. Run CLI “show interface < eth1/x>” to check link status and flow control on Port 1, see result 1; 2. Send traffic from the port 1 of IxExplore to Port 2 through switch;      1. Open statistic view to check no Pause frame is received on Port 1 of IxExplore, see result 2; 2. Check the frame rate on Port 1 and 2 of IxExplore, see result 2; 3. Run CLI “no interface < eth1/x> flow-control” to configure flow control by default; 4. Run CLI “show interface <eth1/x> flowcontrol ” to check flow-control , see result 3; | | |
| Expect result | 1. Link is up and flow control is disabled on Port 1;   AH-66e500#sh in eth1/1 flowcontrol  Port Send FlowControl Receive FlowControl  Admin Oper Admin Oper  ------------------- ----- ----- ----- -----  eth1/1 off off off off  AH-66e500#sh in eth1/1  Port Name: eth1/1  Admin state: enable; Link status: up;  MAC address: 08ea:4466:e516;  Duplex=full; Speed=100M;  Auto MDIX=enalbe; MTU=1500;  Flow Control Rx: off; Flow Control Tx: off;   1. No Pause frames are received on Port 1 of IxExplore:      1. The flow control is diable;   AH-66e500#sh in eth1/21 flowcontrol  Port Send FlowControl Receive FlowControl  Admin Oper Admin Oper  ------------------- ----- ----- ----- -----  eth1/21 off off off off | | |
| Test Result |  | | |
| Comment |  | | |

#### Flow Control Rx Disabled on BASE-T Port \_\_\_PortMgt\_Function\_FlowControl\_04

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | PortMgt\_Function\_FlowControl\_04 | | |
| Priority | Middle | Automation Flag | Yes/No/NA |
| Topology to use | Switch  IxExplore  Link2-2  Link1-1 | | |
| Description | Verify Flow Control Rx is Disabled on BASE-T port on switch; | | |
| Platform Dependence |  | | |
| Pre-condition | 1. Configure 100M/Full on Port 1 of switch and port 1 of IxExplore via Auto-Negotiation;      1. Configure 100M/Full on Port 2 of switch and port 2 of IxExplore via Auto-Negotiation;      1. Configure flow control as Auto-Negotiate on IxExplore:      1. Port 1 and 2 of switch is within the same vlan:   AH-66e500#vlan 2  AH-66e500#in eth1/21 switchport access vlan 2  AH-66e500#in eth1/22 switchport access vlan 2 | | |
| Test procedure | 1. Disable Flow control on port 2 switch by using CLI “interface < eth1/x> flow-control disable”;   AH-66e500#in eth1/2 flow-control diable   1. Run CLI “show interface < eth1/x>” to check link status and flow control on Port 2, see result 1; 2. Send IPv4/UDP traffic from the port 1 of IxExplore to Port 2 through switch;      1. Open statistic view to check frame Tx/Rx rate on Port 1 and 2 of IxExplore, see result 2; 2. Send Pause Control frame from port 2 of IxExplore to port 1 through switch;        1. Check Frame Tx/Rx Rate on Port 1 and 2 of IxExplore, see result 3; | | |
| Expect result | 1. Link is up and flow control is enabled on Port 1;   AH-66e500#sh in eth1/2 flowcontrol  Port Send FlowControl Receive FlowControl  Admin Oper Admin Oper  ------------------- ----- ----- ----- -----  eth1/2 off off off off  AH-66e500#sh in eth1/2  Port Name: eth1/2  Admin state: enable; Link status: up;  MAC address: 08ea:4466:e516;  Duplex=full; Speed=100M;  Auto MDIX=enalbe; MTU=1500;  Flow Control Rx: off; Flow Control Tx: off;   1. The Frame Tx/Rx rate corresponds to 100Mpbs on Port 1 and 2 of IxExplore:      1. The Frame Tx/Rx rate still keep the frame rate of 100Mbps; | | |
| Test Result |  | | |
| Comment |  | | |

#### Flow Control is Auto on BASE-T Port and Enabled on IxNetwork

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | PortMgt\_Function\_FlowControl\_05 | | |
| Priority | Low | Automation Flag | Yes/No/NA |
| Topology to use | Switch  IxNetwork  Link2-2  Link1-1 | | |
| Description | Verify Flow Control is auto on BASE-T port on switch and enabled on IxNetwork. | | |
| Platform Dependence |  | | |
| Pre-condition | 1. Configure 100M/Full on Port 1 of switch and port 1 of IxNetwork via Auto-Negotiation;      1. Configure 10M/Full on Port 2 of switch and port 2 of IxExplore via Auto-Negotiation;      1. Configure flow control as Enable on Port 1 of IxNetwork:      1. Port 1 and 2 of switch is within the same vlan:   AH-66e500#vlan 2  AH-66e500#in eth1/21 switchport access vlan 2  AH-66e500#in eth1/22 switchport access vlan 2 | | |
| Test procedure | 1. Set Flow control as auto on port 1 switch by using CLI “interface < eth1/x> flow-control auto”;   AH-66e500#in eth1/1 flow-control auto   1. Run CLI “show interface < eth1/x>” to check link status and flow control on Port 1, see result 1; 2. Send traffic from the port 1 of IxExplore to Port 2 through switch;      1. Open port statistics view to check the frame rate on Port 1 and 2 of IxExplore, see result 2; | | |
| Expect result | 1. Link is up and flow control is enabled on Port 1;   AH-66e500#sh in eth1/1 flowcontrol  Port Send FlowControl Receive FlowControl  Admin Oper Admin Oper  ------------------- ----- ----- ----- -----  eth1/1 auto on auto on  AH-66e500#sh in eth1/1  Port Name: eth1/1  Admin state: enable; Link status: up;  MAC address: 08ea:4466:e516;  Duplex=full; Speed=100M;  Auto MDIX=enalbe; MTU=1500;  Flow Control Rx: on; Flow Control Tx: on;   1. The frame Tx and Rx rate correspond to 10Mbps on port 1 and 2: | | |
| Test Result |  | | |
| Comment |  | | |

#### Flow Control is Auto on BASE-T Port and disabled on IxNetwork

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | PortMgt\_Function\_FlowControl\_06 | | |
| Priority | Middle | Automation Flag | Yes/No/NA |
| Topology to use | Switch  IxNetwork  Link2-2  Link1-1 | | |
| Description | Verify Flow Control is auto on BASE-T port on switch and disabled on IxNetwork. | | |
| Platform Dependence |  | | |
| Pre-condition | 1. Configure 100M/Full on Port 1 of switch and port 1 of IxNetwork via Auto-Negotiation;      1. Configure 10M/Full on Port 2 of switch and port 2 of IxExplore via Auto-Negotiation;      1. Configure flow control as Enable on Port 1 of IxNetwork:      1. Port 1 and 2 of switch is within the same vlan:   AH-66e500#vlan 2  AH-66e500#in eth1/21 switchport access vlan 2  AH-66e500#in eth1/22 switchport access vlan 2 | | |
| Test procedure | 1. Set Flow control as auto on port 1 switch by using CLI “interface < eth1/x> flow-control auto”;   AH-66e500#in eth1/1 flow-control auto   1. Run CLI “show interface < eth1/x>” to check link status and flow control on Port 1, see result 1; 2. Send traffic from the port 1 of IxExplore to Port 2 through switch;      1. Open port statistics view to check the frame rate on Port 1 and 2 of IxExplore, see result 2; | | |
| Expect result | 1. Link is up and flow control is enabled on Port 1;   AH-66e500#sh in eth1/1 flowcontrol  Port Send FlowControl Receive FlowControl  Admin Oper Admin Oper  ------------------- ----- ----- ----- -----  eth1/1 auto off auto off  AH-66e500#sh in eth1/1  Port Name: eth1/1  Admin state: enable; Link status: up;  MAC address: 08ea:4466:e516;  Duplex=full; Speed=100M;  Auto MDIX=enalbe; MTU=1500;  Flow Control Rx: off; Flow Control Tx: off;   1. The Frame Tx rate corresponds to 100Mbps on port 1 and the frame Rx rate corresponds to 10Mbps on port 2: | | |
| Test Result |  | | |
| Comment |  | | |

#### Flow Control is Auto on BASE-T Port and IxExplore

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | PortMgt\_Function\_FlowControl\_07 | | |
| Priority | Middle | Automation Flag | Yes/No/NA |
| Topology to use | Switch  IxExplore  Link2-2  Link1-1 | | |
| Description | Verify Flow Control is Auto on BASE-T port on switch and IxExplore. | | |
| Platform Dependence |  | | |
| Pre-condition | 1. Configure 100M/Full on Port 1 of switch and port 1 of IxExplore via Auto-Negotiation;      1. Configure 10M/Full on Port 2 of switch and port 2 of IxExplore via Auto-Negotiation;      1. Configure flow control as Auto-Negotiate on IxExplore:      1. Port 1 and 2 of switch is within the same vlan:   AH-66e500#vlan 2  AH-66e500#in eth1/21 switchport access vlan 2  AH-66e500#in eth1/22 switchport access vlan 2 | | |
| Test procedure | 1. Set Flow control as auto on port 1 switch by using CLI “interface < eth1/x> flow-control auto”;   AH-66e500#in eth1/1 flow-control auto   1. Run CLI “show interface < eth1/x>” to check link status and flow control on Port 1, see result 1; 2. Send traffic from the port 1 of IxExplore to Port 2 through switch;      1. Open statistic view to check Pause frame is received on Port 1 of IxExplore, see result 2; 2. Check the frame rate on Port 1 and 2 of IxExplore, see result 2; | | |
| Expect result | 1. Link is up and flow control is enabled on Port 1;   AH-66e500#sh in eth1/1 flowcontrol  Port Send FlowControl Receive FlowControl  Admin Oper Admin Oper  ------------------- ----- ----- ----- -----  eth1/1 auto on auto on  AH-66e500#sh in eth1/1  Port Name: eth1/1  Admin state: enable; Link status: up;  MAC address: 08ea:4466:e516;  Duplex=full; Speed=100M;  Auto MDIX=enalbe; MTU=1500;  Flow Control Rx: on; Flow Control Tx: on;   1. Pause frames are received on Port 1 of IxExplore: | | |
| Test Result |  | | |
| Comment |  | | |

#### Flow Control Tx Enabled on SFP Port

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | PortMgt\_Function\_FlowControl\_08 | | |
| Priority | Accept | Automation Flag | Yes/No/NA |
| Topology to use | Switch  IxExplore  Link2-2(BASE-T)  Link1-1(SFP) | | |
| Description | Verify Flow Control Tx is enabled on SFP port on switch; | | |
| Platform Dependence |  | | |
| Pre-condition | 1. Reset switch by default; 2. Configure 1000M/Full on ETH1/25 of switch and port 1 of IxExplore via Auto-Negotiation;      1. Configure 100M/Full on Port 2 (BASE-T Port) of switch and port 2 of IxExplore via Auto-Negotiation;      1. Configure flow control as Auto-Negotiate on IxExplore:      1. Port 1 and 2 of switch is within the same vlan:   AH-66e500#vlan 2  AH-66e500#in eth1/25 switchport access vlan 2  AH-66e500#in eth1/26 switchport access vlan 2 | | |
| Test procedure | 1. Enable Flow control on ETH1/25 on switch by using CLI   AH-66e500#in eth1/25 flow-control enable   1. Run CLI “show interface eth1/25 flow-control” to check link status and flow control on Port 1, see result 1; 2. Send traffic from the port 1 of IxExplore to Port 2 through switch;      1. Open statistic view to check Pause frame is received on Port 1 of IxExplore, see result 2; 2. Check the frame rate on Port 1 and 2 of IxExplore, see result 2; 3. Run CLI “no interface < eth1/x> flow-control” to configure flow control by default; 4. Run CLI “show interface <eth1/x> flowcontrol ” to check flow-control , see result 3; | | |
| Expect result | 1. Link is up and flow control is enabled on Port 1;   AH-66e500#sh in eth1/25 flowcontrol  Port Send FlowControl Receive FlowControl  Admin Oper Admin Oper  ------------------- ----- ----- ----- -----  eth1/25 on on on on  AH-66e500#sh in eth1/25  Port Name: eth1/25  Admin state: enable; Link status: up;  MAC address: 08ea:4466:e519;  Duplex=full; Speed=1G;  Auto MDIX=disable; MTU=1500;  Flow Control Rx: on; Flow Control Tx: on;   1. Pause frames are received on Port 1 of IxExplore:     (100Mbps/8bit) /(8byte(Preamble)+12byte(Frame Gap) + 256byte(Frame size))=45290frame/s   1. The flow control is auto;   AH-66e500#sh in eth1/21 flowcontrol  Port Send FlowControl Receive FlowControl  Admin Oper Admin Oper  ------------------- ----- ----- ----- -----  eth1/21 auto on auto on  No Flow-Control frames are received on Port1 of IxExplore; | | |
| Test Result |  | | |
| Comment |  | | |

#### Flow Control Rx Enabled on SFP Port

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | PortMgt\_Function\_FlowControl\_09 | | |
| Priority | Accept | Automation Flag | Yes/No/NA |
| Topology to use | Switch  IxExplore  Link2-2(SFP)  Switch | | |
| Description | Verify Flow Control Rx is enabled on SFP port on switch; | | |
| Platform Dependence |  | | |
| Pre-condition | 1. Configure 1000M/Full on Port 1 and 2 of switch and IxExplore via Auto-Negotiation;      1. Configure flow control as Auto-Negotiate on IxExplore:      1. Port 1 and 2 of switch is within the same vlan:   AH-66e500#vlan 2  AH-66e500#in eth1/25 switchport access vlan 2  AH-66e500#in eth1/26 switchport access vlan 2 | | |
| Test procedure | 1. Enable Flow control on port 2 switch by using CLI   AH-66e500#in eth1/26 flow-control enable   1. Run CLI “show interface eth1/26” to check link status and flow control on Port 2, see result 1; 2. Send IPv4/UDP traffic from the port 1 of IxExplore to Port 2 through switch;      1. Open statistic view to check frame Tx/Rx rate on Port 1 and 2 of IxExplore, see result 2; 2. Send Pause Control frame from port 2 of IxExplore to port 1 through switch;        1. Check Frame Tx/Rx Rate on Port 1 and 2 of IxExplore, see result 3; 2. Run CLI “no interface < eth1/x> flow-control” to configure flow control by default; 3. Run CLI “show interface <eth1/x> flowcontrol ” to check flow-control , see result 4; | | |
| Expect result | 1. Link is up and flow control is enabled on Port 2;   AH-66e500#sh in eth1/26 flowcontrol  Port Send FlowControl Receive FlowControl  Admin Oper Admin Oper  ------------------- ----- ----- ----- -----  eth1/26 on on on on  AH-66e500#sh in eth1/26  Port Name: eth1/26  Admin state: enable; Link status: up;  MAC address: 08ea:4466:e51a;  Duplex=full; Speed=1G;  Auto MDIX=disable; MTU=1500;  Flow Control Rx: on; Flow Control Tx: on;   1. The Frame Tx/Rx rate corresponds to 1000Mpbs on Port 1 and 2 of IxExplore:     1000Mbps/8bit/((8byte(preamble)+12byte(frame gap)+256byte(frame size))=452900frame/s   1. The Frame Tx/Rx rate is decreasing;      1. Flow-control is disabled, frame rate on port 1 and 2 is back to the 452900. | | |
| Test Result |  | | |
| Comment |  | | |

#### Flow Control Configuration on BASE-T Port

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | PortMgt\_Function\_FlowControl\_10 | | |
| Priority | Middle | Automation Flag | Yes/No/NA |
| Topology to use |  | | |
| Description | Verify the flow-control configuration can be auto/enable/disable; | | |
| Platform Dependence |  | | |
| Pre-condition | 1. Switch is configured by default; 2. Shutdown interface:   interface < eth1/x> shutdown | | |
| Test procedure | 1. Run CLI “sh in < eth1/x>” to check the default flow-control, see result 1; 2. Run CLI “interface < eth1/x> flow-control [enable/disable/auto], see result 2; 3. Run CLI “interface < eth1/x> speed 100”; 4. Run CLI “interface < eth1/x> flow-control [enable/disable], see result 3; 5. Run CLI “interface < eth1/x> flow-control auto, see result 4; | | |
| Expect result | 1. The default flow-control is disable; 2. The flow-control of < eth1/x> is configured as [enable/disable/auto]; 3. The flow-control of < eth1/x> is configured as [enable/disable]; 4. Speed/duplex/flow-control are auto; | | |
| Test Result |  | | |
| Comment |  | | |

#### Flow Control Configuration on SFP Port

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | PortMgt\_Function\_FlowControl\_11 | | |
| Priority | Middle | Automation Flag | Yes/No/NA |
| Topology to use |  | | |
| Description | Verify the flow-control configuration can be enable/disable; | | |
| Platform Dependence |  | | |
| Pre-condition | 1. Switch is configured by default; 2. Shutdown interface:   interface < eth1/x> shutdown | | |
| Test procedure | 1. Run CLI “sh in < eth1/x>” to check the default flow-control, see result 1; 2. Run CLI “interface < eth1/x> flow-control [enable/disable], see result 2; 3. Run CLI “interface < eth1/x> speed 1000”; 4. Run CLI “interface < eth1/x> flow-control [enable/disable], see result 3; 5. Run CLI “interface < eth1/x> flow-control auto, see result 4; | | |
| Expect result | 1. The default flow-control is disable; 2. The flow-control of < eth1/x> is configured as [enable/disable]; 3. The flow-control of < eth1/x> is configured as [enable/disable]; 4. Deny the CLI; | | |
| Test Result |  | | |
| Comment |  | | |

#### Show Flow Control Info on All Ports

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | PortMgt\_Function\_FlowControl\_12 | | |
| Priority | Low | Automation Flag | Yes/No/NA |
| Topology to use |  | | |
| Description | Verify flow-control info on all ports are showed correctly; | | |
| Platform Dependence |  | | |
| Pre-condition | 1. Switch is configured by default; | | |
| Test procedure | 1. Run CLI “interface < eth1/x|eth1/x> flow-control [auto|enable|disable] ” to configure flow control for 24 Ethernet Ports and 4 SFP ports ; 2. Run CLI “show interface <eth1/x|eth1/x> flowcontrol ” to check flow-control on all ports, see result 1; 3. Run CLI “show interface flowcontrol” to check flow control of all ports, see result 1; | | |
| Expect result | 1. Display the correct flow control for each port;   AH-66e500#no in eth1/21 flow-control  AH-66e500# sh in eth1/21 flowcontrol  Port Send FlowControl Receive FlowControl  Admin Oper Admin Oper  ------------------- ----- ----- ----- -----  eth1/21 auto on auto on  AH-66e500#in eth1/21 flow-control enable  AH-66e500# sh in eth1/21 flowcontrol  Port Send FlowControl Receive FlowControl  Admin Oper Admin Oper  ------------------- ----- ----- ----- -----  eth1/21 on on on on  AH-66e500#in eth1/21 flow-control disable  AH-66e500# sh in eth1/21 flowcontrol  Port Send FlowControl Receive FlowControl  Admin Oper Admin Oper  ------------------- ----- ----- ----- -----  eth1/21 off off off off | | |
| Test Result |  | | |
| Comment |  | | |

### Auto MDIX Configuration

#### Enable/Disable Auto-MDIX on BASE-T Port

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | PortMgt\_Function\_AutoMDIX\_01 | | |
| Priority | Middle | Automation Flag | Yes/No/NA |
| Topology to use | Switch1  Switch2 | | |
| Description | Verify Auto MDIX configured on BASE-T ports; | | |
| Platform Dependence |  | | |
| Pre-condition | 1. Switches are configured by default; 2. Use straight cable to connect the 2 switches; | | |
| Test procedure | 1. Follow the table to enable or disable auto-mdix by running CLI “interface <eth1/x> auto-mdix enable” and “no interface <eth1/x> auto-mdix enable”;  |  |  |  |  | | --- | --- | --- | --- | | No. | Switch 1 | Switch 2 | Link | | 1 | enable | enable | Up | | 2 | enable | disable | Up | | 3 | disable | disable | Down | | 4 | disable | enable | Up | | | |
| Expect result | 1. Follow the table to check Auto-MDIX and Link status on the 2 switches; | | |
| Test Result |  | | |
| Comment |  | | |

### Debounce Timer Configuration

#### Debounce Timer Configured on BASE-T Port

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | PortMgt\_Function\_DebounceTimer\_01 | | |
| Priority | high | Automation Flag | Yes/No/NA |
| Topology to use | Switch  IxNetwork | | |
| Description | Verify Debounce Timer configured on BASE-T ports; | | |
| Platform Dependence |  | | |
| Pre-condition | 1. Switch is configured by default; 2. The Link between Switch and IxNetwork is up on BASE-T Port; | | |
| Test procedure | 1. Run CLI “show interface <eth1/x>” to check Debounce timer, see result 1; 2. Run CLI “interface < eth1/x> link-debounce 3” to configure Debounce timer as 3 seconds; 3. Run CLI “show interface <eth1/x>” to check Debounce timer, see result 2; 4. Unplug the cable to check the link state within 3s, see result 3; 5. Wait above 3s, check the link state, see result 4; 6. Plug in cable, check link state, see result 5; 7. Run CLI “no interface < eth1/x> link-debounce” to disable Debounce timer; 8. Run CLI “show interface <eth1/x>” to check Debounce timer, see result 1; | | |
| Expect result | 1. The Debounce timer is 0 (disabled) and Link is up; 2. The Debounce timer is 3 second and Link is up; 3. The link keeps up in 3s; 4. The link is down; 5. The link is not up in 3s after plugging in cable, after 3s, the link is up; | | |
| Test Result |  | | |
| Comment |  | | |

#### Disable Debounce Timer on BASE-T Port

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | PortMgt\_Function\_DebounceTimer\_02 | | |
| Priority | Middle | Automation Flag | Yes/No/NA |
| Topology to use | Switch  IxNetwork | | |
| Description | Verify Debounce Timer disabled on BASE-T ports; | | |
| Platform Dependence |  | | |
| Pre-condition | 1. Switch is configured by default; 2. The Link between Switch and IxNetwork is up on BASE-T Port; | | |
| Test procedure | 1. Run CLI “interface < eth1/x> link-debounce 0” to configure Debounce timer as 0ms; 2. Run CLI “show interface <eth1/x>” to check Debounce timer, see result 1; 3. Plug out the cable to check the link state, see result 2; 4. Plug in cable, check link state, see result 3; | | |
| Expect result | 1. The Debounce timer is 0 (disabled) and Link is up; 2. The link is down right after unplugging the cable; 3. The link is up right after plugging in the cable; | | |
| Test Result |  | | |
| Comment |  | | |

#### Debounce Timer Configured on SFP Port

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | PortMgt\_Function\_DebounceTimer\_03 | | |
| Priority | Middle | Automation Flag | Yes/No/NA |
| Topology to use | Switch  IxNetwork | | |
| Description | Verify Debounce Timer configured on SFP ports; | | |
| Platform Dependence |  | | |
| Pre-condition | 1. Switch is configured by default; 2. The Link between Switch and IxNetwork is up on SFP Port; | | |
| Test procedure | 1. Run CLI “show interface <eth1/x>” to check Debounce timer, see result 1; 2. Run CLI “interface < eth1/x> link-debounce 5000” to configure Debounce timer as 5000ms; 3. Run CLI “show interface <eth1/x>” to check Debounce timer, see result 2; 4. Plug out the fiber cable to check the link state within 5s, see result 3; 5. Wait above 5s, check the link state, see result 4; 6. Plug in the fiber cable, check link state, see result 5; 7. Run CLI “no interface < eth1/x> link-debounce” to disable Debounce timer; 8. Run CLI “show interface <eth1/x>” to check Debounce timer, see result 1; | | |
| Expect result | 1. The Debounce timer is 0 (disabled) and Link is up; 2. The Debounce timer is 5000ms and Link is up; 3. The link keeps up in 5s; 4. The link is down; 5. The link is not up in 5s after plugging in cable, after 5s, the link is up; | | |
| Test Result |  | | |
| Comment |  | | |

#### Disable Debounce Timer on SFP Port

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | PortMgt\_Function\_DebounceTimer\_04 | | |
| Priority | Middle | Automation Flag | Yes/No/NA |
| Topology to use | Switch  IxNetwork | | |
| Description | Verify Debounce Timer disabled on SFP ports; | | |
| Platform Dependence |  | | |
| Pre-condition | 1. Switch is configured by default; 2. The Link between Switch and IxNetwork is up on SFP Port; | | |
| Test procedure | 1. Run CLI “show interface <eth1/x>” to check Debounce timer, see result 1; 2. Run CLI “interface < eth1/x> link-debounce 0” to configure Debounce timer as 0ms; 3. Run CLI “show interface <eth1/x>” to check Debounce timer, see result 1; 4. Plug out the fiber cable to check the link state, see result 2; 5. Plug in the fiber cable, check link state, see result 3; | | |
| Expect result | 1. The Debounce timer is 0 (disabled) and Link is up; 2. The link is down right after plugging out the cable; 3. The link is up right after plugging in the cable; | | |
| Test Result |  | | |
| Comment |  | | |

### MTU Configuration

#### Default MTU Configured on BASE-T Port with Access mode

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | PortMgt\_Function\_MTU\_01 | | |
| Priority | High | Automation Flag | Yes/No/NA |
| Topology to use | Switch  IxNetwork  Link2-2  Link1-1 | | |
| Description | Verify default MTU (1500) configured on BASE-T ports with access mode; | | |
| Platform Dependence |  | | |
| Pre-condition | 1. Switch is configured by default; 2. The Links between Switch and IxNetwork are up on BASE-T Port; 3. The port 1 and 2 on switch is access mode by default; 4. 2 ports belong to the same vlan;   Vlan 3  interface eth1/17 switchport access vlan 3  interface eth1/18 switchport access vlan 3  AH-66f680#sh vlan id 3  VLAN 3: enable!  VLAN ID VLAN Name PORT TYPE  -------------------------------------------------------------------------------  3 VLAN3 eth1/17 access  3 VLAN3 eth1/18 access | | |
| Test procedure | 1. Run CLI “show interface <eth1/x>” to check MTUs on Port 1 and 2 of switch, see result 1; 2. On IxExplore, send 100 IPv4 UDP packets with frame size 1522 (the default MTU + 22(fixed value)) from Port 1 to Port 2 of IXIA through switch, see result 2;      1. Send 100 IPv4 UDP packets with frame size 1523 from Port 1 to Port 2 of IXIA through switch, see result 3; | | |
| Expect result | 1. The MTUs are 1500 bytes and 2 Links are up; 2. The 100 IPv4 UDP packets packets can be received on Port 2 of IXIA through switch;   Sys-SR2024-01#sh in eth1/17  Received statistics:  octets 153600;  unicast frames: 100; broadcast frames: 0; multicast frames: 0;  bad octets: 0; bad CRC: 0; rx error frames: 0;  undersize: 0; oversize: 0; overruns: 0;  Sys-SR2024-01#sh in eth1/18  Transmitted statistics:  octets: 155562;  unicast frames: 100; broadcast frames: 0; multicast frames: 16;  excessive collision: 0;     1. The IPv4 UDP packets packets cannot be received on Port 2 of IXIA because the frame size 1523 is larger than 1522 (1500 + 22);   Sys-SR2024-01#sh in eth1/17  Received statistics:  octets 0;  unicast frames: 0; broadcast frames: 0; multicast frames: 0;  bad octets: 152200; bad CRC: 0; rx error frames: 0;  undersize: 0; oversize: 100; overruns: 0; | | |
| Test Result |  | | |
| Comment |  | | |

#### Default MTU Configured on BASE-T Port with Trunk mode

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | PortMgt\_Function\_MTU\_02 | | |
| Priority | High | Automation Flag | Yes/No/NA |
| Topology to use | Switch  IxExplore  Link2-2  Link1-1 | | |
| Description | Verify default MTU (1500) configured on BASE-T ports with trunk mode; | | |
| Platform Dependence |  | | |
| Pre-condition | 1. Switch is configured by default; 2. The Links between Switch and IxNetwork are up on BASE-T Port; 3. The port 1 and 2 on switch is trunk mode by CLI:   vlan 3  interface eth1/17 switchport mode trunk  no interface eth1/17 switchport trunk allow vlan all  interface eth1/17 switchport trunk allow vlan 3  interface eth1/18 switchport mode trunk  no interface eth1/18 switchport trunk allow vlan all  interface eth1/18 switchport trunk allow vlan 3  AH-66f680#sh vlan id 3  VLAN 3: enable!  VLAN ID VLAN Name PORT TYPE  -------------------------------------------------------------------------------  3 VLAN3 eth1/17 trunk  3 VLAN3 eth1/18 trunk | | |
| Test procedure | 1. Run CLI “show interface <eth1/x>” to check MTUs on Port 1 and 2 of switch, see result 1; 2. On IxExplore, send 100 IPv4 UDP packets with vlan tag is 3 and frame size 1536 from Port 1 to Port 2 of IXIA through switch, see result 2;        1. Send 100 IPv4 UDP packets with frame size 1523 from Port 1 to Port 2 of IXIA through switch, see result 3; | | |
| Expect result | 1. The MTUs are 1500 bytes and 2 Links are up; 2. The 100 IPv4 UDP packets packets can be received on Port 2 of IXIA through switch;   Sys-SR2024-01#sh in eth1/17  Received statistics:  octets 153600;  unicast frames: 100; broadcast frames: 0; multicast frames: 0;  bad octets: 0; bad CRC: 0; rx error frames: 0;  undersize: 0; oversize: 0; overruns: 0;  Sys-SR2024-01#sh in eth1/18  Transmitted statistics:  octets: 155808;  unicast frames: 100; broadcast frames: 0; multicast frames: 18;  excessive collision: 0;     1. The IPv4 UDP packets packets cannot be received on Port 2 of IXIA because the frame size is larger than 1522 (1500 + 22);   Sys-SR2024-01#sh in eth1/17  Received statistics:  octets 0;  unicast frames: 0; broadcast frames: 0; multicast frames: 0;  bad octets: 152200; bad CRC: 0; rx error frames: 0;  undersize: 0; oversize: 100; overruns: 0;  Sys-SR2024-01#sh in eth1/18  Transmitted statistics:  octets: 2085;  unicast frames: 0; broadcast frames: 0; multicast frames: 17;  excessive collision: 0; | | |
| Test Result |  | | |
| Comment |  | | |

#### Default MTU Configured on SFP Port with Access mode

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | PortMgt\_Function\_MTU\_03 | | |
| Priority | Middle | Automation Flag | Yes/No/NA |
| Topology to use | Switch  IxExplore  Link2-2  Link1-1 | | |
| Description | Verify default MTU configured on SFP ports with access mode; | | |
| Platform Dependence |  | | |
| Pre-condition | 1. Switch is configured by default; 2. The Links between Switch and IxNetwork are up on SFP Port; 3. The port 1 and 2 on switch is access mode by default;   Vlan 3  interface eth1/25 switchport access vlan 3  interface eth1/26 switchport access vlan 3 | | |
| Test procedure | 1. Run CLI “show interface <eth1/x>” to check MTUs on Port 1 and 2 of switch, see result 1; 2. On IxExplore, send IPv4 UDP packets with frame size 1522 from Port 1 to Port 2 of IXIA through switch, see result 2;      1. Send IPv4 UDP packets with frame size 1523 from Port 1 to Port 2 of IXIA through switch, see result 3; | | |
| Expect result | 1. The MTUs are 1500 bytes and 2 Links are up; 2. The 100 IPv4 UDP packets packets can be received on Port 2 of IXIA through switch;   Sys-SR2024-01#sh in eth1/25  Received statistics:  octets 152200;  unicast frames: 100; broadcast frames: 0; multicast frames: 0;  bad octets: 0; bad CRC: 0; rx error frames: 0;  undersize: 0; oversize: 0; overruns: 0;  Sys-SR2024-01#sh in eth1/26  Transmitted statistics:  octets: 154584;  unicast frames: 100; broadcast frames: 0; multicast frames: 8;  excessive collision: 0;     1. The IPv4 UDP packets packets cannot be received on Port 2 of IXIA because the frame size is larger than 1522 (1500 + 22);   Sys-SR2024-01#sh in eth1/25  Received statistics:  octets 153700;  unicast frames: 100; broadcast frames: 0; multicast frames: 0;  bad octets: 153600; bad CRC: 0; rx error frames: 0;  undersize: 0; oversize: 100; overruns: 0;  Sys-SR2024-01#sh in eth1/26  Transmitted statistics:  octets: 1828;  unicast frames: 0; broadcast frames: 0; multicast frames: 42;  excessive collision: 0; | | |
| Test Result |  | | |
| Comment |  | | |

#### Default MTU Configured on SFP port with Trunk mode

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | PortMgt\_Function\_MTU\_04 | | |
| Priority | Middle | Automation Flag | Yes/No/NA |
| Topology to use | Switch  IxExplore  Link2-2  Link1-1 | | |
| Description | Verify default MTU configured on SFP ports with trunk mode; | | |
| Platform Dependence |  | | |
| Pre-condition | 1. Switch is configured by default; 2. The Links between Switch and IxNetwork are up on BASE-T Port; 3. The port 1 and 2 on switch is trunk mode by CLI;   vlan 3  interface eth1/25 switchport mode trunk  no interface eth1/25 switchport trunk allow vlan all  interface eth1/25 switchport trunk allow vlan 3  interface eth1/26 switchport mode trunk  no interface eth1/26 switchport trunk allow vlan all  interface eth1/26 switchport trunk allow vlan 3 | | |
| Test procedure | 1. Run CLI “show interface <eth1/x>” to check MTUs on Port 1 and 2 of switch, see result 1; 2. On IxExplore, send IPv4 UDP packets with vlan tag is 3 and frame size 1536 from Port 1 to Port 2 of IXIA through switch, see result 2;        1. Send IPv4 UDP packets with frame size 1523 from Port 1 to Port 2 of IXIA through switch, see result 3; | | |
| Expect result | 1. The MTUs are 1500 bytes and 2 Links are up; 2. The 100 IPv4 UDP packets packets can be received on Port 2 of IXIA through switch;   Sys-SR2024-01#sh in eth1/25  Received statistics:  octets 152200;  unicast frames: 100; broadcast frames: 0; multicast frames: 0;  bad octets: 0; bad CRC: 0; rx error frames: 0;  undersize: 0; oversize: 0; overruns: 0;  Sys-SR2024-01#sh in eth1/26  Transmitted statistics:  octets: 155808;  unicast frames: 100; broadcast frames: 0; multicast frames: 18;  excessive collision: 0;     1. The IPv4 UDP packets packets cannot be received on Port 2 of IXIA because the frame size is larger than 1522 (1500 + 22);   Sys-SR2024-01#sh in eth1/25  Received statistics:  octets 0;  unicast frames: 0; broadcast frames: 0; multicast frames: 0;  bad octets: 152200; bad CRC: 0; rx error frames: 0;  undersize: 0; oversize: 100; overruns: 0;  Sys-SR2024-01#sh in eth1/26  Transmitted statistics:  octets: 2085;  unicast frames: 0; broadcast frames: 0; multicast frames: 17;  excessive collision: 0; | | |
| Test Result |  | | |
| Comment |  | | |

#### MTU Configured on BASE-T Port with Access mode

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | PortMgt\_Function\_MTU\_05 | | |
| Priority | Middle | Automation Flag | Yes/No/NA |
| Topology to use | Switch  IxExplore  Link2-2  Link1-1 | | |
| Description | Verify MTU configured on BASE-T ports with access mode; | | |
| Platform Dependence |  | | |
| Pre-condition | 1. Switch is configured by default; 2. The Links between Switch and IxNetwork are up on BASE-T Port; 3. The port 1 and 2 on switch is access mode by default; 4. 2 ports belong to the same vlan;   interface eth1/17 switchport access vlan 3  interface eth1/18 switchport access vlan 3 | | |
| Test procedure | 1. Run CLI “interface mtu 9600” to configure MTU as 9600 bytes; 2. Run CLI “show interface <eth1/x>” to check MTUs on Port 1 and 2 of switch, see result 1; 3. On IxExplore, send 100 IPv4 UDP packets with frame size 9622 from Port 1 to Port 2 of IXIA through switch, see result 2;      1. Send IPv4 UDP packets with frame size 9623 from Port 1 to Port 2 of IXIA through switch, see result 3; | | |
| Expect result | 1. The MTUs are 9600 bytes and 2 Links are up; 2. The 100 IPv4 UDP packets packets can be received on Port 2 of IXIA through switch;   Sys-SR2024-01#sh in eth1/17  Received statistics:  octets 962200;  unicast frames: 100; broadcast frames: 0; multicast frames: 0;  bad octets: 0; bad CRC: 0; rx error frames: 0;  undersize: 0; oversize: 0; overruns: 0;  Sys-SR2024-01#sh in eth1/18  Transmitted statistics:  octets: 976311;  unicast frames: 100; broadcast frames: 0; multicast frames: 133;  excessive collision: 0;     1. The 100 IPv4 UDP packets packets cannot be received on Port 2 of IXIA because the frame size is larger than 9622;   Sys-SR2024-01#sh in eth1/17  Received statistics:  octets 0;  unicast frames: 0; broadcast frames: 0; multicast frames: 0;  bad octets: 962200; bad CRC: 0; rx error frames: 0;  undersize: 0; oversize: 100; overruns: 0;  Sys-SR2024-01#sh in eth1/18  Transmitted statistics:  octets: 1470;  unicast frames: 0; broadcast frames: 0; multicast frames: 12;  excessive collision: 0; | | |
| Test Result |  | | |
| Comment |  | | |

#### MTU Configured on BASE-T Port with Trunk mode

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | PortMgt\_Function\_MTU\_06 | | |
| Priority | Middle | Automation Flag | Yes/No/NA |
| Topology to use | Switch  IxExplore  Link2-2  Link1-1 | | |
| Description | Verify MTU configured on BASE-T ports with trunk mode; | | |
| Platform Dependence |  | | |
| Pre-condition | 1. Switch is configured by default; 2. The Links between Switch and IxNetwork are up on BASE-T Port; 3. The port 1 and 2 on switch is trunk mode by CLI:   vlan 3  interface eth1/17 switchport mode trunk  no interface eth1/17 switchport trunk allow vlan all  interface eth1/17 switchport trunk allow vlan 3  interface eth1/18 switchport mode trunk  no interface eth1/18 switchport trunk allow vlan all  interface eth1/18 switchport trunk allow vlan 3 | | |
| Test procedure | 1. Run CLI “interface mtu 9600” to configure MTU as 9600 bytes; 2. On IxExplore, send 100 IPv4 UDP packets with vlan tag is 3 and frame size 9600 from Port 1 to Port 2 of IXIA through switch, see result 2;        1. Send 100 IPv4 UDP packets with frame size 9623 from Port 1 to Port 2 of IXIA through switch, see result 3; | | |
| Expect result | 1. The MTUs are 9600 bytes and 2 Links are up; 2. The 100 IPv4 UDP packets packets can be received on Port 2 of IXIA through switch;   Sys-SR2024-01#sh in eth1/17  Received statistics:  octets 962200;  unicast frames: 100; broadcast frames: 0; multicast frames: 0;  bad octets: 0; bad CRC: 0; rx error frames: 0;  undersize: 0; oversize: 0; overruns: 0;  Sys-SR2024-01#sh in eth1/18  Transmitted statistics:  octets: 964539;  unicast frames: 100; broadcast frames: 0; multicast frames: 37;  excessive collision: 0;     1. The 100 IPv4 UDP packets packets cannot be received on Port 2 of IXIA because the frame size is larger than 9622 (9600 + 22);   Sys-SR2024-01#sh in eth1/17  Received statistics:  octets 0;  unicast frames: 0; broadcast frames: 0; multicast frames: 0;  bad octets: 962200; bad CRC: 0; rx error frames: 0;  undersize: 0; oversize: 100; overruns: 0;  Sys-SR2024-01#sh in eth1/18  Transmitted statistics:  octets: 2085;  unicast frames: 0; broadcast frames: 0; multicast frames: 17;  excessive collision: 0; | | |
| Test Result |  | | |
| Comment |  | | |

#### MTU Configured on SFP Port with Access mode

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | PortMgt\_Function\_MTU\_07 | | |
| Priority | Middle | Automation Flag | Yes/No/NA |
| Topology to use | Switch  IxExplore  Link2-2  Link1-1 | | |
| Description | Verify MTU configured on SFP ports with access mode; | | |
| Platform Dependence |  | | |
| Pre-condition | 1. Switch is configured by default; 2. The Links between Switch and IxNetwork are up on SFP Port; 3. The port 1 and 2 on switch is access mode by default; | | |
| Test procedure | 1. Run CLI “interface mtu 9600” to configure MTU as 9600 bytes; 2. Run CLI “show interface <eth1/x>” to check MTUs on Port 1 and 2 of switch, see result 1; 3. On IxExplore, send 100 IPv4 UDP packets with frame size 9622 from Port 1 to Port 2 of IXIA through switch, see result 2;      1. Send IPv4 UDP packets with frame size 9623 from Port 1 to Port 2 of IXIA through switch, see result 3; | | |
| Expect result | 1. The MTUs are 9622 bytes and 2 Links are up; 2. The IPv4 UDP packets packets can be received on Port 2 of IXIA through switch;   Sys-SR2024-01#sh in eth1/25  Received statistics:  octets 962200;  unicast frames: 100; broadcast frames: 0; multicast frames: 0;  bad octets: 0; bad CRC: 0; rx error frames: 0;  undersize: 0; oversize: 0; overruns: 0;  Sys-SR2024-01#sh in eth1/26  Transmitted statistics:  octets: 961949;  unicast frames: 100; broadcast frames: 0; multicast frames: 16;  excessive collision: 0;     1. The IPv4 UDP packets packets cannot be received on Port 2 of IXIA because the frame size is larger than 9622;   Sys-SR2024-01#sh in eth1/25  Received statistics:  octets 0;  unicast frames: 0; broadcast frames: 0; multicast frames: 0;  bad octets: 962200; bad CRC: 0; rx error frames: 0;  undersize: 0; oversize: 100; overruns: 0;  Sys-SR2024-01#sh in eth1/26  Transmitted statistics:  octets: 1826;  unicast frames: 0; broadcast frames: 0; multicast frames: 15;  excessive collision: 0; | | |
| Test Result |  | | |
| Comment |  | | |

#### MTU Configured on SFP Port with Trunk mode

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | PortMgt\_Function\_MTU\_08 | | |
| Priority | Middle | Automation Flag | Yes/No/NA |
| Topology to use | Switch  IxExplore  Link2-2  Link1-1 | | |
| Description | Verify MTU configured on SFP ports with trunk mode; | | |
| Platform Dependence |  | | |
| Pre-condition | 1. Switch is configured by default; 2. The Links between Switch and IxNetwork are up on BASE-T Port; 3. The port 1 and 2 on switch is trunk mode by CLI;   vlan 3  interface eth1/25 switchport mode trunk  no interface eth1/25 switchport trunk allow vlan all  interface eth1/25 switchport trunk allow vlan 3  interface eth1/26 switchport mode trunk  no interface eth1/26 switchport trunk allow vlan all  interface eth1/26 switchport trunk allow vlan 3 | | |
| Test procedure | 1. Run CLI “interface mtu 9600” to configure MTU as 9600 bytes; 2. Run CLI “show interface <eth1/x>” to check MTUs on Port 1 and 2 of switch, see result 1; 3. On IxExplore, send IPv4 UDP packets with vlan tag is 3 and frame size 9600 from Port 1 to Port 2 of IXIA through switch, see result 2;        1. Send IPv4 UDP packets with frame size 9623 from Port 1 to Port 2 of IXIA through switch, see result 3; | | |
| Expect result | 1. The MTUs are 9600 bytes and 2 Links are up; 2. The 100 IPv4 UDP packets packets can be received on Port 2 of IXIA through switch;   Sys-SR2024-01#sh in eth1/25  Received statistics:  octets 962200;  unicast frames: 100; broadcast frames: 0; multicast frames: 0;  bad octets: 0; bad CRC: 0; rx error frames: 0;  undersize: 0; oversize: 0; overruns: 0;  Sys-SR2024-01#sh in eth1/26  Transmitted statistics:  octets: 963652;  unicast frames: 100; broadcast frames: 0; multicast frames: 30;  excessive collision: 0;   1. The IPv4 UDP packets packets cannot be received on Port 2 of IXIA because the frame size is larger than 9622;   Sys-SR2024-01#sh in eth1/25  Received statistics:  octets 0;  unicast frames: 0; broadcast frames: 0; multicast frames: 0;  bad octets: 962200; bad CRC: 0; rx error frames: 0;  undersize: 0; oversize: 100; overruns: 0;  Sys-SR2024-01#sh in eth1/26  Transmitted statistics:  octets: 2195;  unicast frames: 0; broadcast frames: 0; multicast frames: 18;  excessive collision: 0; | | |
| Test Result |  | | |
| Comment |  | | |

### Interface Description Configuration

#### Interface Description Configuration on BASE-T Port

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | PortMgt\_Function\_PortDescription\_01 | | |
| Priority | Middle | Automation Flag | Yes/No/NA |
| Topology to use |  | | |
| Description | Verify interface description configured on BASE-T ports; | | |
| Platform Dependence |  | | |
| Pre-condition | 1. Switch is configured by default; | | |
| Test procedure | 1. Run CLI “show interface <eth1/x> description” to check the default description, see result 1; 2. Run CLI ‘interface < eth1/x> description “this is an Ethernet Interface”’ to add the description for this port; 3. Run CLI “show interface <eth1/x> description” to check the description, see result 2; 4. Run CLI “no interface < eth1/x> description” to set the description by default; 5. Run CLI “show interface <eth1/x> description” to check the description, see result 1; | | |
| Expect result | 1. The default description is empty;   AH-66e500#show interface eth1/21 description  Interface Description  ------------------- ----------------  eth1/21   1. The description is “this is an Ethernet Interface”;   AH-66e500#show interface eth1/21 description  Interface Description  ------------------- ----------------  eth1/21 this is an Ethernet Interface | | |
| Test Result |  | | |
| Comment |  | | |

#### Interface Description Configuration on SFP Port

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | PortMgt\_Function\_PortDescription\_02 | | |
| Priority | Middle | Automation Flag | Yes/No/NA |
| Topology to use |  | | |
| Description | Verify interface description configured on SFP ports; | | |
| Platform Dependence |  | | |
| Pre-condition | 1. Switch is configured by default; | | |
| Test procedure | 1. Run CLI “show interface <eth1/x> description” to check the default description, see result 1; 2. Run CLI “interface < eth1/x> description “this is an SFP GE Interface” ” to add the description for this port; 3. Run CLI “show interface <eth1/x> description” to check the description, see result 2; 4. Run CLI “no interface < eth1/x> description” to set the description by default; 5. Run CLI “show interface <eth1/x> description” to check the description, see result 1; | | |
| Expect result | 1. The default description is empty;   AH-66e500#show interface eth1/25 description  Interface Description  ------------------- ----------------  eth1/25   1. The description is “this is an SFP GE Interface”;   AH-66e500#show interface eth1/25 description  Interface Description  ------------------- ----------------  eth1/25 this is an SFP GE Interface | | |
| Test Result |  | | |
| Comment |  | | |

#### Description Configuration on port-channel

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | PortMgt\_Function\_PortDescription\_03 | | |
| Priority | Middle | Automation Flag | Yes/No/NA |
| Topology to use |  | | |
| Description | Verify description configured on port-channel; | | |
| Platform Dependence |  | | |
| Pre-condition | 1. Switch is configured by default; 2. New a port-channel:   AH-66e500#port-channel 1 | | |
| Test procedure | 1. Run CLI “show interface <port-channelx> description” to check the default description, see result 1; 2. Run CLI “interface < port-channelx > description “this is a port channel” ” to add the description for this port; 3. Run CLI “show interface < port-channelx > description” to check the description, see result 2; 4. Run CLI “no interface < port-channelx > description” to set the description by default; 5. Run CLI “show interface < port-channelx > description” to check the description, see result 1; | | |
| Expect result | 1. The default description is empty;   AH-66e500#show in port-channel1 description  Interface Description  ------------------- ----------------  port-channel1   1. The description is “this is a port channel”;   AH-66e500#show interface port-channel1 description  Interface Description  ------------------- ----------------  port-channel1 this is a port channel | | |
| Test Result |  | | |
| Comment |  | | |

#### Show Interface Description on All Ports

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | PortMgt\_Function\_PortDescription\_04 | | |
| Priority | Low | Automation Flag | Yes/No/NA |
| Topology to use |  | | |
| Description | Verify interface descriptions on all ports are showed correctly; | | |
| Platform Dependence |  | | |
| Pre-condition | 1. Switch is configured by default; | | |
| Test procedure | 1. Run CLI “interface < eth1/x> description <string> ” to add the description for 24 Ethernet Ports ; 2. Run CLI “interface < eth1/x> description <string> ” to add the description for 4 SFP Ports ; 3. Run CLI “show interface description” to check the descriptions of all ports, see result 1; | | |
| Expect result | 1. List correctly the descriptions of all ports, see details in CLI result; | | |
| Test Result |  | | |
| Comment |  | | |

### Port Statistics

#### Octets and Unicast/Multicase/Broadcast stats on BASE-T Port

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | PortMgt\_Function\_PortStats\_01 | | |
| Priority | High | Automation Flag | Yes/No/NA |
| Topology to use | Switch  IxExplore  Link2-2  Link1-1 | | |
| Description | Verify Octets/UcastPkts/McastPkts/BacstPkts stats on BASE-T port. | | |
| Platform Dependence |  | | |
| Pre-condition | 1. Switch is configured by default; 2. Link1-1 and Link2-2 are up; 3. Port 1 and 2 of switch are included in the same vlan ID:   vlan 2  interface eth1/1 switchport access vlan 2  interface eth1/2 switchport access vlan 2 | | |
| Test procedure | 1. Run CLI “clear interface <eth1/x> counters” on port 1 and 2 to clear all counters, see result 1; 2. Send 100 Unicast/Multicase/Broadcast frames with size 100/200/300bytes from port 1 to port 2 on IxExplore;     And 200 Unicast/Multicase/Broadcast frames with size 100/200/300bytes from port 2 to port 1 on IxExplore     1. Run CLI “show interface <eth1/x> counters” on port 1 and port 2 of switch , see result 2; | | |
| Expect result | 1. All counters are zero;   AH-66e500#sh in eth1/1 counters  Port InOctets InUcastPkts InMcastPkts InBacstPkts  ------------------- ---------------- ---------------- ---------------- ----------------  eth1/1 0 0 0 0  Port OutOctets OutUcastPkts OutMcastPkts OutBacstPkts  ------------------- ---------------- ---------------- ---------------- ----------------  eth1/1 0 0 0 0  AH-66e500#sh in eth1/2 counters  Port InOctets InUcastPkts InMcastPkts InBacstPkts  ------------------- ---------------- ---------------- ---------------- ----------------  eth1/2 0 0 0 0  Port OutOctets OutUcastPkts OutMcastPkts OutBacstPkts  ------------------- ---------------- ---------------- ---------------- ----------------  eth1/2 0 0 0 0   1. Octets and UcastPkts/McastPkts/BacstPkts are as below:   AH-66e500#sh in eth1/1 counters  Port InOctets InUcastPkts InMcastPkts InBacstPkts  ------------------- ---------------- ---------------- ---------------- ----------------  eth1/1 60000 100 100 100  Port OutOctets OutUcastPkts OutMcastPkts OutBacstPkts  ------------------- ---------------- ---------------- ---------------- ----------------  eth1/1 120000 200 200 200  AH-66e500#sh in eth1/2 counters  Port InOctets InUcastPkts InMcastPkts InBacstPkts  ------------------- ---------------- ---------------- ---------------- ----------------  eth1/2 120000 200 200 200  Port OutOctets OutUcastPkts OutMcastPkts OutBacstPkts  ------------------- ---------------- ---------------- ---------------- ----------------  eth1/2 60000 100 100 100 | | |
| Test Result |  | | |
| Comment |  | | |

#### Octets and Unicast/Multicase/Broadcast Frames stats on SFP Port

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | PortMgt\_Function\_PortStats\_02 | | |
| Priority | Middle | Automation Flag | Yes/No/NA |
| Topology to use | Switch  IxExplore  Link2-2  Link1-1 | | |
| Description | Verify Octets/UcastPkts/McastPkts/BacstPkts stats on SFP port. | | |
| Platform Dependence |  | | |
| Pre-condition | 1. Switch is configured by default; 2. Link1-1 and Link2-2 are up; 3. Port 1 and 2 of switch are included in the same vlan ID:   vlan 2  interface eth1/25 switchport access vlan 2  interface eth1/26 switchport access vlan 2 | | |
| Test procedure | 1. Run CLI “clear interface <eth1/x> counters” on port 1 and 2 to clear all counters, see result 1; 2. Send 100 Unicast/Multicase/Broadcast frames with size 100/200/300bytes from port 1 to port 2 on IxExplore;     And 200 Unicast/Multicase/Broadcast frames with size 100/200/300bytes from port 2 to port 1 on IxExplore     1. Run CLI “show interface <eth1/x> counters” on port 1 and port 2 of switch , see result 2; | | |
| Expect result | 1. All counters are zero;   AH-66e500#sh in eth1/25 counters  Port InOctets InUcastPkts InMcastPkts InBacstPkts  ------------------- ---------------- ---------------- ---------------- ----------------  eth1/25 0 0 0 0  Port OutOctets OutUcastPkts OutMcastPkts OutBacstPkts  ------------------- ---------------- ---------------- ---------------- ----------------  eth1/25 0 0 0 0  AH-66e500#sh in eth1/26 counters  Port InOctets InUcastPkts InMcastPkts InBacstPkts  ------------------- ---------------- ---------------- ---------------- ----------------  eth1/26 0 0 0 0  Port OutOctets OutUcastPkts OutMcastPkts OutBacstPkts  ------------------- ---------------- ---------------- ---------------- ----------------  eth1/26 0 0 0 0   1. Octets and UcastPkts/McastPkts/BacstPkts are as below:   AH-66e500#sh in eth1/25 counters  Port InOctets InUcastPkts InMcastPkts InBacstPkts  ------------------- ---------------- ---------------- ---------------- ----------------  eth1/25 60000 100 100 100  Port OutOctets OutUcastPkts OutMcastPkts OutBacstPkts  ------------------- ---------------- ---------------- ---------------- ----------------  eth1/25 120000 200 200 200  AH-66e500#sh in eth1/26 counters  Port InOctets InUcastPkts InMcastPkts InBacstPkts  ------------------- ---------------- ---------------- ---------------- ----------------  eth1/26 120000 200 200 200  Port OutOctets OutUcastPkts OutMcastPkts OutBacstPkts  ------------------- ---------------- ---------------- ---------------- ----------------  eth1/26 60000 100 100 100 | | |
| Test Result |  | | |
| Comment |  | | |

#### Excessive Collision stats on BASE-T Port

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | PortMgt\_Function\_PortStats\_03 | | |
| Priority | Middle | Automation Flag | Yes/No/NA |
| Topology to use | Switch  IxNetwork  Link2-2  Link1-1 | | |
| Description | Verify excessive collision stats on BASE-T port. | | |
| Platform Dependence |  | | |
| Pre-condition | 1. Switch is configured by default; 2. Link1-1 and Link2-2 are up with 100M/half; | | |
| Test procedure | 1. Run CLI “clear interface <eth1/x> counters” on port 1 and 2 to clear all counters, see result 1; 2. Follow topology to send traffic with 100Mbps speed to port 1 and 2 of switch; 3. Run CLI “show interface <eth1/x> counters” on port 1 and port 2 to check excessive collision stats; | | |
| Expect result | 1. All counters are zero; 2. The excessive collision stats should be larger than zero; | | |
| Test Result |  | | |
| Comment |  | | |

#### Undersize stats on BASE-T Port

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | PortMgt\_Function\_PortStats\_04 | | |
| Priority | Middle | Automation Flag | Yes/No/NA |
| Topology to use | Switch  IxNetwork  Link2-2  Link1-1 | | |
| Description | Verify undersize stats on BASE-T port. | | |
| Platform Dependence |  | | |
| Pre-condition | 1. Switch is configured by default; 2. Link1-1 and Link2-2 are up; 3. Port 1 and 2 of switch are included in the same vlan ID:   vlan 2  interface eth1/1 switchport access vlan 2  interface eth1/2 switchport access vlan 2 | | |
| Test procedure | 1. Run CLI “clear interface <eth1/x> counters” on port 1 to clear all counters, see result 1; 2. Send 100 63-bytes (min ~63) frames to port 1 of switch;      1. Run CLI “show interface <eth1/x> counters” on port 1 to check undersize stats, see result 2; 2. Check No undersize frame is transmitted to port 2 of IxExplore, see result 3; | | |
| Expect result | 1. All counters are zero;   AH-66e500#sh in eth1/1  Received statistics:  octets 0;  unicast frames: 0; broadcast frames: 0; multicast frames: 0;  bad octets: 0; bad CRC: 0; rx error frames: 0;  undersize: 0; oversize: 0; overruns: 0;   1. The undersize stats should be around 100 frames;   AH-66e500#sh in eth1/1  Received statistics:  octets 0;  unicast frames: 0; broadcast frames: 0; multicast frames: 0;  bad octets: 6300; bad CRC: 0; rx error frames: 0;  undersize: 100; oversize: 0; overruns: 0;   1. No undersize frame is transmitted to port 2 of IxExplore; | | |
| Test Result |  | | |
| Comment |  | | |

#### Undersize stats on SFP Port

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | PortMgt\_Function\_PortStats\_05 | | |
| Priority | Middle | Automation Flag | Yes/No/NA |
| Topology to use | Switch  IxNetwork  Link2-2  Link1-1 | | |
| Description | Verify undersize stats on SFP port. | | |
| Platform Dependence |  | | |
| Pre-condition | 1. Switch is configured by default; 2. Link1-1 and Link2-2 are up; 3. Port 1 and 2 of switch are included in the same vlan ID:   vlan 2  interface eth1/25 switchport access vlan 2  interface eth1/26 switchport access vlan 2 | | |
| Test procedure | 1. Run CLI “clear interface <eth1/x> counters” on port 1 to clear all counters, see result 1; 2. Send 100 63-bytes (min ~63) frames to port 1 of switch;      1. Run CLI “show interface <eth1/x> counters” on port 1 to check undersize stats, see result 2; 2. Check No undersize frame is transmitted to port 2 of IxExplore, see result 3; | | |
| Expect result | 1. All counters are zero;   AH-66e500#sh in eth1/25  Received statistics:  octets 0;  unicast frames: 0; broadcast frames: 0; multicast frames: 0;  bad octets: 0; bad CRC: 0; rx error frames: 0;  undersize: 0; oversize: 0; overruns: 0;   1. The undersize stats should be around 100 frames;   AH-66e500#sh in eth1/25  Received statistics:  octets 0;  unicast frames: 0; broadcast frames: 0; multicast frames: 0;  bad octets: 6300; bad CRC: 0; rx error frames: 0;  undersize: 100; oversize: 0; overruns: 0;   1. No undersize frame is transmitted to port 2 of IxExplore; | | |
| Test Result |  | | |
| Comment |  | | |

#### Oversize stats on BASE-T Port

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | PortMgt\_Function\_PortStats\_06 | | |
| Priority | Middle | Automation Flag | Yes/No/NA |
| Topology to use | Switch  IxExplore  Link2-2  Link1-1 | | |
| Description | Verify oversize stats on BASE-T port. | | |
| Platform Dependence |  | | |
| Pre-condition | 1. Switch is configured by default; 2. Link1-1 and Link2-2 are up; 3. Port 1 and 2 of switch are included in the same vlan ID:   vlan 2  interface eth1/1 switchport access vlan 2  interface eth1/2 switchport access vlan 2 | | |
| Test procedure | 1. Run CLI “clear interface <eth1/x> counters” on port 1 to clear all counters, see result 1; 2. Send 100 1537-bytes (assume MTU=1536 ) frames from IXIA to port 1 of switch; 3. Run CLI “show interface <eth1/x> counters” on port 1 to check undersize stats; 4. Check no oversize transmitted to port 2 of IxExplore, see result 3; | | |
| Expect result | 1. All counters are zero; 2. The oversize stats should be around 100 frames;   AH-66e500#sh in eth1/1  Received statistics:  octets 0;  unicast frames: 0; broadcast frames: 0; multicast frames: 0;  bad octets: 153600; bad CRC: 0; rx error frames: 0;  undersize: 0; oversize: 100; overruns: 0;   1. no oversize transmitted to port 2 of IxExplore; | | |
| Test Result |  | | |
| Comment |  | | |

#### Oversize stats on SFP Port

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | PortMgt\_Function\_PortStats\_07 | | |
| Priority | Middle | Automation Flag | Yes/No/NA |
| Topology to use | Switch  IxExplore  Link2-2  Link1-1 | | |
| Description | Verify oversize stats on SFP port. | | |
| Platform Dependence |  | | |
| Pre-condition | 1. Switch is configured by default; 2. Link1-1 and Link2-2 are up; 3. Port 1 and 2 of switch are included in the same vlan ID:   vlan 2  interface eth1/25 switchport access vlan 2  interface eth1/26 switchport access vlan 2 | | |
| Test procedure | 1. Run CLI “clear interface <eth1/x> counters” on port 1 to clear all counters, see result 1; 2. Send 100 1537-bytes (assume MTU=1536 ) frames from IXIA to port 1 of switch; 3. Run CLI “show interface <eth1/x> counters” on port 1 to check undersize stats, see result 2; 4. Check no oversize transmitted to port 2 of IxExplore, see result 3; | | |
| Expect result | 1. All counters are zero; 2. The oversize stats should be around 100 frames;   AH-66e500#sh in eth1/1  Received statistics:  octets 0;  unicast frames: 0; broadcast frames: 0; multicast frames: 0;  bad octets: 153600; bad CRC: 0; rx error frames: 0;  undersize: 0; oversize: 100; overruns: 0;   1. no oversize transmitted to port 2 of IxExplore; | | |
| Test Result |  | | |
| Comment |  | | |

#### Bad Octets/CRC stats on BASE-T Port

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | PortMgt\_Function\_PortStats\_08 | | |
| Priority | High | Automation Flag | Yes/No/NA |
| Topology to use | Switch  IxExplore  Link2-2  Link1-1 | | |
| Description | Verify Bad Octets/CRC stats on BASE-T port. | | |
| Platform Dependence |  | | |
| Pre-condition | 1. Switch is configured by default; 2. Link1-1 and Link2-2 are up; 3. Port 1 and 2 of switch are included in the same vlan ID:   vlan 2  interface eth1/1 switchport access vlan 2  interface eth1/2 switchport access vlan 2 | | |
| Test procedure | 1. Run CLI “clear interface <eth1/x> counters” on port 1 to clear all counters, see result 1; 2. Send 100 100-bytes Bad CRC frames from IXIA to port 1 of switch;        1. Run CLI “show interface <eth1/x> counters” on port 1 to check undersize stats; | | |
| Expect result | 1. All counters are zero; 2. The Bad Octets/CRC/ and Rx Error Frame stats should be 10000/100;   AH-66e500#sh in eth1/1  Received statistics:  octets 0;  unicast frames: 0; broadcast frames: 0; multicast frames: 0;  bad octets: 10000; bad CRC: 100; rx error frames: 0;  undersize: 0; oversize: 0; overruns: 0; | | |
| Test Result |  | | |
| Comment |  | | |

#### Bad Octets/CRC Stats on SFP Port

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | PortMgt\_Function\_PortStats\_09 | | |
| Priority | Middle | Automation Flag | Yes/No/NA |
| Topology to use | Switch  IxExplore  Link2-2  Link1-1 | | |
| Description | Verify Bad Octets/CRC stats on SFP port. | | |
| Platform Dependence |  | | |
| Pre-condition | 1. Switch is configured by default; 2. Link1-1 and Link2-2 are up; 3. Port 1 and 2 of switch are included in the same vlan ID:   vlan 2  interface eth1/1 switchport access vlan 2  interface eth1/2 switchport access vlan 2 | | |
| Test procedure | 1. Run CLI “clear interface <eth1/x> counters” on port 1 to clear all counters, see result 1; 2. Send 100 100-bytes Bad CRC frames from IXIA to port 1 of switch;        1. Run CLI “show interface <eth1/x> counters” on port 1 to check undersize stats; | | |
| Expect result | 1. All counters are zero; 2. The Bad Octets/CRC/ and Rx Error Frame stats should be 10000/100;   AH-66e500#sh in eth1/25  Received statistics:  octets 0;  unicast frames: 0; broadcast frames: 0; multicast frames: 0;  bad octets: 10000; bad CRC: 100; rx error frames: 0;  undersize: 0; oversize: 0; overruns: 0; | | |
| Test Result |  | | |
| Comment |  | | |

#### Overruns stats on BASE-T Port

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | PortMgt\_Function\_PortStats\_10 | | |
| Priority | Middle | Automation Flag | Yes/No/NA |
| Topology to use | Switch  IxNetwork  Link2-2  Link1-1 | | |
| Description | Verify overruns stats on BASE-T port. | | |
| Platform Dependence |  | | |
| Pre-condition | 1. Switch is configured by default; 2. Link1-1 and Link2-2 are up; | | |
| Test procedure |  | | |
| Expect result |  | | |
| Test Result |  | | |
| Comment | **Overruns** - The total number of frames discarded as this port was overloaded with incoming packets, and could not keep up with the inflow; | | |

#### Rx Error Frame stats on BASE-T Port

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | PortMgt\_Function\_PortStats\_11 | | |
| Priority | Middle | Automation Flag | Yes/No/NA |
| Topology to use | Switch  IxNetwork  Link2-2  Link1-1 | | |
| Description | Verify Rx Error Frame stats on BASE-T port. | | |
| Platform Dependence |  | | |
| Pre-condition | 1. Switch is configured by default; 2. Link1-1 and Link2-2 are up; | | |
| Test procedure |  | | |
| Expect result |  | | |
| Test Result |  | | |
| Comment | All frames should end on an 8-bit boundary, but problems on the network could cause the number of bits to deviate from the multiple of 8. | | |

### Port Channel

#### Port Channel\_01 on BASE-T Port

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | PortMgt\_Function\_PortChannel\_01 | | |
| Priority | Middle | Automation Flag | Yes/No/NA |
| Topology to use |  | | |
| Description | Verify the different BASE-T ports are aggregated into one port channel; | | |
| Platform Dependence |  | | |
| Pre-condition | 1. There are 4 eth ports with the different configurations:   eth1/20 08ea:4466:e514 enable D full 100M disable enable 1500  eth1/21 08ea:4466:e516 enable D half 10M enable enable 1500  eth1/22 08ea:4466:e515 enable D full 1G disable enable 1500  eth1/23 08ea:4466:e517 disable D auto auto disable enable 1500   1. Create a port channel:   AH-66e500#port-channel 1 | | |
| Test procedure | 1. Configure this port channel as 1000/full/enable;   interface port-channel1 speed 1000  interface port-channel1 duplex full  interface port-channel1 flow-control enable   1. Add the 4 ports into this port channel, see result 1;   AH-66e500#in eth1/20 port-channel 1  AH-66e500#in eth1/21 port-channel 1  AH-66e500#in eth1/22 port-channel 1  AH-66e500#in eth1/23 port-channel 1   1. Check the 4 ports settings, see result 2; 2. Try to re-configure the 4 ports, see result 3; | | |
| Expect result | 1. The 4 ports are aggregated into this port channel:   AH-66e500#sh port-channel 1  Aggregation ID: 1, Aggregation Type: Manual  Index Port LinkState if\_mode  ---------------------------------------------------  1 eth1/20 down access  2 eth1/21 down access  3 eth1/22 down access  4 eth1/23 down access   1. The 4 ports settings are 1000/full/enable; 2. Re-configuring 4 ports are not allowed;   AH-66e500# in eth1/20 speed 10  Error: This port is in port channel 1.  ERROR: Invalid parameter(s) | | |
| Test Result |  | | |
| Comment |  | | |

#### Port Channel\_02 on BASE-T Port

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | PortMgt\_Function\_PortChannel\_02 | | |
| Priority | Middle | Automation Flag | Yes/No/NA |
| Topology to use |  | | |
| Description | Verify the different BASE-T ports are aggregated into one port channel; | | |
| Platform Dependence |  | | |
| Pre-condition | 1. There are 4 eth ports with the different configurations:   eth1/20 08ea:4466:e514 enable D full 100M disable enable 1500  eth1/21 08ea:4466:e516 enable D half 10M enable enable 1500  eth1/22 08ea:4466:e515 enable D full 1G disable enable 1500  eth1/23 08ea:4466:e517 disable D auto auto disable enable 1500   1. Create a port channel:   AH-66e500#port-channel 1 | | |
| Test procedure | 1. Configure this port channel as auto/auto/auto; 2. Add the 4 ports into this port channel, see result 1;   AH-66e500#in eth1/20 port-channel 1  AH-66e500#in eth1/21 port-channel 1  AH-66e500#in eth1/22 port-channel 1  AH-66e500#in eth1/23 port-channel 1   1. Check the 4 ports settings, see result 2; 2. Try to re-configure the 4 ports, see result 3; | | |
| Expect result | 1. The 4 ports are aggregated into this port channel:   AH-66e500#sh port-channel 1  Aggregation ID: 1, Aggregation Type: Manual  Index Port LinkState if\_mode  ---------------------------------------------------  1 eth1/20 down access  2 eth1/21 down access  3 eth1/22 down access  4 eth1/23 down access   1. The 4 ports settings are auto/auto/auto; 2. Re-configuring 4 ports are not allowed;   AH-66e500# in eth1/20 speed 10  Error: This port is in port channel 1.  ERROR: Invalid parameter(s) | | |
| Test Result |  | | |
| Comment |  | | |

#### Port Channel\_01 on SFP Port

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | PortMgt\_Function\_PortChannel\_03 | | |
| Priority | Middle | Automation Flag | Yes/No/NA |
| Topology to use |  | | |
| Description | Verify the different SFP ports are aggregated into one port channel; | | |
| Platform Dependence |  | | |
| Pre-condition | 1. There are 2 SFP ports with the different configurations:   eth1/25 08ea:4466:e519 enable D full 1G disable disable 1500  eth1/26 08ea:4466:e51a enable D auto auto disable disable 1500   1. Create a port channel:   AH-66e500#port-channel 2 | | |
| Test procedure | 1. Configure this port channel as 1000/full/enable;   interface port-channel2 speed 1000  interface port-channel2 duplex full  interface port-channel2 flow-control enable   1. Add the 2 SFP ports into this port channel, see result 1;   AH-66e500#in eth1/25 port-channel 2  AH-66e500#in eth1/26 port-channel 2   1. Check the 2 ports settings, see result 2; 2. Try to re-configure the 2 ports, see result 3; | | |
| Expect result | 1. The 4 ports are aggregated into this port channel:   AH-66e500#sh port-channel 2  Aggregation ID: 2, Aggregation Type: Manual  Index Port LinkState if\_mode  ---------------------------------------------------  1 eth1/25 down access  2 eth1/26 down access   1. The 2 SFP ports settings are1000/full/enable; 2. Re-configuring 2 ports are not allowed;   AH-66e500#in eth1/25 speed 1000  Error: This port is in port channel 2.  ERROR: Invalid parameter(s) | | |
| Test Result |  | | |
| Comment |  | | |

#### Port Channel\_02 on SFP Port

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | PortMgt\_Function\_PortChannel\_04 | | |
| Priority | Middle | Automation Flag | Yes/No/NA |
| Topology to use |  | | |
| Description | Verify the different SFP ports are aggregated into one port channel; | | |
| Platform Dependence |  | | |
| Pre-condition | 1. There are 2 SFP ports with the different configurations:   eth1/25 08ea:4466:e519 enable D full 1G disable disable 1500  eth1/26 08ea:4466:e51a enable D auto auto disable disable 1500   1. Create a port channel:   AH-66e500#port-channel 2 | | |
| Test procedure | 1. Configure this port channel as auto/auto/enable;   interface port-channel2 speed auto  interface port-channel2 flow-control enable   1. Add the 2 SFP ports into this port channel, see result 1;   AH-66e500#in eth1/25 port-channel 2  AH-66e500#in eth1/26 port-channel 2   1. Check the 2 ports settings, see result 2; 2. Try to re-configure the 2 ports, see result 3; | | |
| Expect result | 1. The 4 ports are aggregated into this port channel:   AH-66e500#sh port-channel 2  Aggregation ID: 2, Aggregation Type: Manual  Index Port LinkState if\_mode  ---------------------------------------------------  1 eth1/25 down access  2 eth1/26 down access   1. The 2 SFP ports settings are auto/auto/enable; 2. Re-configuring 2 ports are not allowed;   AH-66e500#in eth1/25 speed 1000  Error: This port is in port channel 2.  ERROR: Invalid parameter(s) | | |
| Test Result |  | | |
| Comment |  | | |

#### Check Port Channel Config

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | PortMgt\_Function\_PortChannel\_05 | | |
| Priority | Middle | Automation Flag | Yes/No/NA |
| Topology to use |  | | |
| Description | Verify no any configurations of port channel if this port channel has been deleted. | | |
| Platform Dependence |  | | |
| Pre-condition |  | | |
| Test procedure | 1. Follow “PortMgt\_Function\_PortChannel\_01” case to create a port channel; 2. Delete this port channel via CLI:   switche480#no port-channel 1   1. Check this port channel and its member port via CLI, see result 1;   switche480#show interface   1. Check the running-config, see result 2; 2. Follow “PortMgt\_Function\_PortChannel\_03” to repeat step 2~4; | | |
| Expect result | 1. This port channel has been deleted and those member port keep the configurations same as previous when they are in the port-channel; 2. All configurations related the port-channel are clear in running-config; | | |
| Test Result |  | | |
| Comment |  | | |

#### Disable/Enable Port Channel

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | PortMgt\_Function\_PortChannel\_06 | | |
| Priority | Middle | Automation Flag | Yes/No/NA |
| Topology to use |  | | |
| Description | Verify Port channel can be enabled and disabled. | | |
| Platform Dependence |  | | |
| Pre-condition |  | | |
| Test procedure | 1. Create a port channel;   AH-66e500#port-channel 1   1. Add 2 eth ports which are up into this port channel:   AH-66e500#in eth1/23 port-channel 1  AH-66e500#in eth1/24 port-channel 1   1. Check this port channel, see result 1; 2. Disable the port channel:   AH-66e500#in portchannel1 shutdown   1. Check this port channel, see result 2; 2. Enable the port channel:   AH-66e500#no in portchannel1 shutdown   1. Check this port channel, see result 1; | | |
| Expect result | 1. This port channel is up and its mac is the one of eth1/23; 2. This port channel is down; | | |
| Test Result |  | | |
| Comment |  | | |

### Port Loopback test

#### BASE-T port Loopback Test

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | PortMgt\_Function\_Loopback\_01 | | |
| Priority | Middle | Automation Flag | Yes/No/NA |
| Topology to use |  | | |
| Description | Verify no any packets lost in the BASE-T port loopback Test. | | |
| Platform Dependence |  | | |
| Pre-condition | 1. Switch enters u-boot mode; 2. Follow the topo to connect cables, all cables ‘length are 100m ;   (note: we only have one cable to IXIA is 100m) | | |
| Test procedure | 1. Execute dhpc u-boot command to link up all ports:   SR2000>> dhcp  Port 1 has link up.  MAC address 'eth1addr' is undefined, using default.  GND: PP-SDMA iface is used (TxMode = Sync)[#RxQ:#Desc=1:128; #TxQ:#Desc=1:128].  BOOTP broadcast 1  DHCP client bound to address 10.155.31.27   1. Execute diag\_setPVE u-boot command to set private VLAN on all ports   SR2000>> diag\_setPVE   1. On IxExplore, send the traffic as following:      1. Check the sent/received packets, see result 1; | | |
| Expect result | 1. No any packets are lost: | | |
| Test Result |  | | |
| Comment |  | | |

#### BASE-T and SFP port Loopback Test

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | PortMgt\_Function\_Loopback\_02 | | |
| Priority | Middle | Automation Flag | Yes/No/NA |
| Topology to use |  | | |
| Description | Verify no any packets lost in the BASE-T and SFP port loopback Test. | | |
| Platform Dependence |  | | |
| Pre-condition | 1. Switch enters u-boot mode; 2. Follow the topo to connect cables, all cables ‘length are 100m ;   (note: we only have one cable to IXIA is 100m) | | |
| Test procedure | 1. Execute dhpc u-boot command to link up all ports:   SR2000>> dhcp  Port 1 has link up.  MAC address 'eth1addr' is undefined, using default.  GND: PP-SDMA iface is used (TxMode = Sync)[#RxQ:#Desc=1:128; #TxQ:#Desc=1:128].  BOOTP broadcast 1  DHCP client bound to address 10.155.31.27   1. Execute diag\_setPVE\_SFP u-boot command to set private VLAN on all ports   SR2000>> diag\_setPVE\_SFP   1. On IxExplore, send the traffic as following:      1. Check the sent/received packets, see result 1; | | |
| Expect result | 1. No any packets are lost: | | |
| Test Result |  | | |
| Comment |  | | |

## Stress Test Case

## Longevity Test Case

## Performance Test Case

## Capacity Test Case

## Compatibility Test Case

## Negative Test Case

## Other Test Case

### Connection check with Mac PC

#### Rebooting SW

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | PortMgt\_Other\_MacPC\_01 | | |
| Priority | Low | Automation Flag | Yes/No/NA |
| Topology to use | SW 🡨--🡪 Mac PC | | |
| Description | Verify the link between Mac PC and SW is up once rebooting SW. | | |
| Platform Dependence |  | | |
| Pre-condition | 1. Connect Mac PC to SW; | | |
| Test procedure | 1. Reboot SW; 2. After SW is up, check the connection status between Mac PC and SW; | | |
| Expect result | 1. The connection should be up once SW is up, no long delay; | | |
| Test Result |  | | |
| Comment |  | | |

#### Plugging and unplug cable

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | PortMgt\_Other\_MacPC\_02 | | |
| Priority | Low | Automation Flag | Yes/No/NA |
| Topology to use | SW 🡨--🡪 Mac PC | | |
| Description | Verify the link between Mac PC and SW is up when plugging cable and down when unplugging cable. | | |
| Platform Dependence |  | | |
| Pre-condition | 1. Connect Mac PC to SW; 2. The connection is up; | | |
| Test procedure | 1. Repeat unplugging and plugging cable, check the connection status; | | |
| Expect result | 1. the connection between Mac PC and SW is up when plugging cable and down when unplugging cable; | | |
| Test Result |  | | |
| Comment | The connection should be up once cable is plugged, no long delay; | | |

#### Change Speed and duplex on Mac PC

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | PortMgt\_Other\_MacPC\_03 | | |
| Priority | Low | Automation Flag | Yes/No/NA |
| Topology to use | SW 🡨--🡪 Mac PC | | |
| Description | Verify the link between Mac PC and SW is up once changing speed and duplex on Mac PC. | | |
| Platform Dependence |  | | |
| Pre-condition | 1. Reset config on SW; 2. Connect Mac PC to SW; 3. The connection is up; | | |
| Test procedure | 1. Open Network Preference on Mac PC; 2. Select Ethernet connection, click “Advanced” to go to “Hardware” tab; 3. Change configure as Manually; 4. Change speed/duplex to 10M/full,10M/half,100M/full,100M/half,1000M/full; 5. Click “ok” and “Apply” to check the connection; | | |
| Expect result | 1. the connection between Mac PC and SW is up for each speed/duplex pair; | | |
| Test Result |  | | |
| Comment | The connection should be up once speed/duplex change is done, no long delay; | | |

## CLI Management (Automation Status: Yes/No)

<firstly, list all cli that this feature has one by one>

<CLI test case>

## GUI Management-HiveManager

## GUI Management-HiveUI

<List HiveUI test case or test log>

# Reference

[1] Aerohive\_FS\_Port\_management

[2] CLI\_review\_Port\_management