This article describes the ACE appliance physical Gigabit Ethernet (GE) ports and how to troubleshoot port-related issues. Note that the ACE module has no external ports of its own and it relies on the back plane of the Catalyst 6500 series switch for communication with the rest of the network.

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## Troubleshooting ACE Appliance Ethernet Ports

There are four gigabit Ethernet (GE) ports in an ACE appliance with a full duplex throughput of 1 Gbps each. To check the status of a GE port, enter the following command:

```
switch/Admin# show interface gigabitEthernet 1/2

GigabitEthernet Port 1/2 is UP, line protocol is UP <---------------- If the GE port is down, the
                                                                       Cisco switch is not shutdow
                                                                       the physical connectivity b
 Hardware is ACE Appliance 1000Mb 802.3, address is 00:1b:24:93:21:cf
 MTU 9216 bytes
 Full-duplex, 1000Mb/s
 COS bits based QoS is disabled
 input flow-control is off, output flow-control is off
    26556020169 packets input, 4515905164244 bytes, 0 dropped
    Received 15932917284 broadcasts (99696635 multicasts)
    0 runts , 0 giants
    0 FCS/Align errors , 0 runt FCS, 0 giant FCS
    1 packets output, 64 bytes
    1 broadcast, 0 multicast, 0 control output packets
    0 underflow, 0 single collision, 0 multiple collision output packets
    0 excessive collision and dropped, 0 Excessive Deferral and dropped
```

## Configuring a Port Channel

You can assign VLANs directly under the physical interface or using a channel group. These can be trunked or access ports. For trunked ports, the default native VLAN is 1, which can you can change by entering the **switchport trunk native vlan number** command under the physical port or a channel group.

The following example shows how to configure a port channel in the ACE appliance:

```
interface port-channel 250
  switchport trunk native vlan 3
  switchport trunk allowed vlan 9,101-110,128,132,144,331,349
  no shutdown

or

interface port-channel 2
  switchport access vlan 5
  no shutdown

port-channel can be assigned to physical port using the channel-group command:
interface gigabitEthernet 1/2
  channel-group 250
  shutdown
```

By default, the load-balancing scheme is source-dest-mac. You can change it to destination-ip, destination mac, and so on using the **port-channel load-balance** command.

# Troubleshooting Port Channels

If the configured VLAN or BVI does not come up, verify that the assigned port-channel is up and that it is configured correctly on the 3750 or Catalyst 6500 series switch, and check the physical ports.

To check the status of the port channel, enter the following command:

```
switch/Admin# show interface port-channel 250

PortChannel 250:
---------------------------
Description:
mode: Trunk
native vlan: 0
status: (UP), load-balance scheme: src-dst-mac  <<< if the channel-group is up.

PortChannel 250 mapped phyport: 1/2 1/3 <<< the physical interfaces to which the channel-group is
PortChannel 250 mapped active phyport: 1/3  <<< from the above list, list of active interface.
PortChannel 250 allow vlan:  vlan<9>  vlan<101>-<110>  vlan<128>  vlan<132>  vlan<144>  vlan<331>
    33581781 packets input, 2333352580 bytes, 0 dropped
    Received 20430421 broadcasts (13005450 multicasts)
    0 runts , 0 giants
    0 FCS/Align errors , 0 runt FCS, 0 giant FCS
    10944303 packets output, 744212928 bytes
    10944285 broadcast, 18 multicast, 0 control output packets
    0 underflow, 0 single collision, 0 multiple collision output packets
    0 excessive collision and dropped, 0 Excessive Deferral and dropped
```

# Troubleshooting VLANs on the Physical Ports

The following example shows how to configure the VLANs on the physical ports:

```
interface gigabitEthernet 1/1
  switchport access vlan 77
  no shutdown

or

interface gigabitEthernet 1/1
  switchport trunk native vlan 3
  switchport trunk allowed vlan 77
  no shutdown
```

To check the list of VLANs that are up on the physical interface, enter the ?following command:

```
switch/Admin# show vlans
Vlans configured on physical port(s)
 vlan3  vlan5  vlan9-10  vlan30  vlan77  vlan101-110  vlan128  vlan132  vlan144
 vlan331  vlan349
```

Finally, to see that the specified VLAN is up, enter the following command:

```
switch/Admin# show interface vlan 77

vlan77 is up, administratively up
```

Configuring a Port Channel                                                                          3

```
Hardware type is VLAN
MAC address is 00:1b:24:78:b1:e8
Virtual MAC address is 00:0b:fc:fe:1b:15
Mode : routed
IP address is 77.5.0.11 netmask is 255.0.0.0
FT status is active
Description:not set
MTU: 1500 bytes
Last cleared: never
Last Changed: Thu Mar 18 13:27:20 2010
No of transitions: 1
Alias IP address not set
Peer IP address is 77.5.0.12 Peer IP netmask is 255.0.0.0
Assigned on the physical port, up on the physical port

   170 unicast packets input, 412878159 bytes
   2231611 multicast, 3730365 broadcast
   0 input errors, 0 unknown, 0 ignored, 0 unicast RPF drops
   105 unicast packets output, 2949996 bytes
   2 multicast, 45981 broadcast
   0 output errors, 0 ignored
```