**ISL vs. 802.1Q**

(Ref: <https://supportforums.cisco.com/discussion/10424691/difference-between-isl-and-dot1q>)

VLAN identifier is a special tag that is encapsulated in an Ethernet frame. There are two main types of encapsulation protocols called ISL (Inter Switch Link) which is Cisco proprietary protocol and 802.1q which is an IEEE Standard.

**ISL**

* ISL is an Cisco proprietary protocol.
* Supports up to 1000 Vlans
* Original frame is encapsulated and a new header is inserted during encapsulation process.
* A 26 byte header and a 4 byte FCS (frame check sequence) are inserted. Hence a total of 30 Bytes of overhead.
* ISL tags frames from native Vlans.
* ISL is less preferred in networks because of its high overhead value which is added to each Ethernet frame.

**802.1q**

* It is an IEEE Standard.
* 802.1q supports 4096 Vlans.
* IN 802.1q encapsulation process, a 4 byte tag is inserted into original frame and FCS (Frame Check Sequence) is re-calculated.
* 802.1q does not tag frames from native Vlans.

***Note :***

***Cisco 1900 seriea switches uses ISL and Cisco 2900 series and others use 802.1 q by default.***