

VLAN & Trunks – Cheat Sheet (Network Walks) – Part-2 v2



VLAN Tagging

“A method used by Trunk links to carry the multiple VLANs traffic separately, is called VLAN Tagging”

VLAN Tagging Protocols	
802.1Q (dot1q)	IEEE Standard & Open Source
ISL (Inter Switch Link)	Cisco proprietary Protocol
LANE (LAN Emulation)	LANE (LAN EMULATION), 802.10 – IEEE (for FDDI)

802.1Q It is the most important Layer2 Protocol. It is:

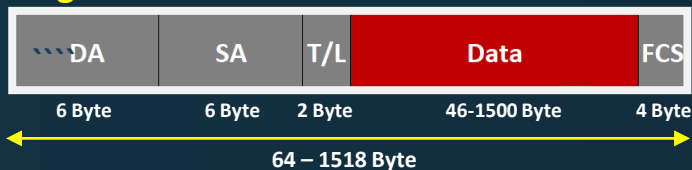
“A standard Protocol for VLAN tagging on an IEEE 802.3 Ethernet network”

Adds a TAG in original Ethernet Frame between the SMAC & TLV fields.

802.1Q & ISL Frame Format

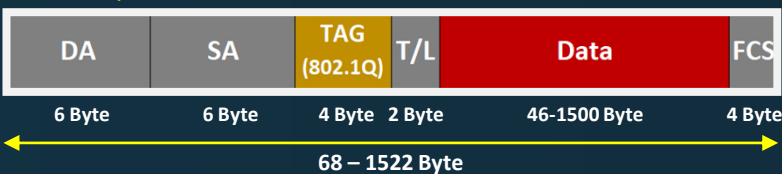


Original Ethernet II Frame



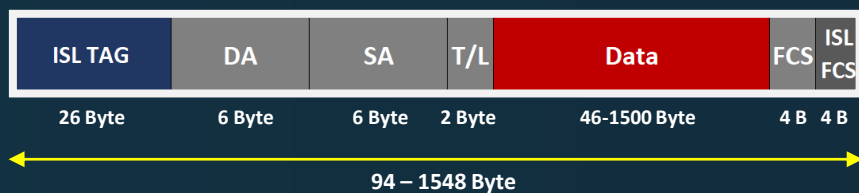
Vs

802.1Q Ethernet Frame



Vs

ISL Ethernet Frame



www.networkwalks.com

*Important Points



- ✓ Trunk Ports are always TAGGED
- ✓ Access Ports are always untagged
- ✓ All VLANs, except the native VLAN are tagged on Trunk Links
- ✓ VLAN Tagging is needed when a single link needs to carry traffic for more than one VLAN
- ✓ Ethernet VLAN devices treat all untagged frames as belonging to the native LAN by default
- ✓ The native LAN is always 1 by default, although administrators can change this default number
- ✓ VLAN Cross Connect (CC) is a mechanism used to create Switched VLANs
- ✓ The maximum range of VLAN is 4096 because the TAG length in 802.1Q frame is only 12 bits



VLAN Membership Types

These two methods decide how a switch will associate its ports with VLANs

Static Membership	Dynamic Membership
<ul style="list-style-type: none">✓ Most common method✓ Most secure method✓ Membership remains permanent	<ul style="list-style-type: none">✓ Less secure method✓ Mobility supported✓ Membership is not permanent

www.networkwalks.com



Your Feedback, Comments are always Welcomed: info@networkwalks.com



New batch of Cisco **CCNA** is starting.

Enrol today with us for quality training: info@networkwalks.com

Visit our website & **You Tube** Channel for more **FREE** resources like:

- ✓ Cheatsheets, Interview Questions & Answers, Quiz, VCE exams & much more
- ✓ Labs & workbooks (Packet Tracer, GNS3, EVE-NG, ...)

Network Walks Training Academy (www.networkwalks.com)