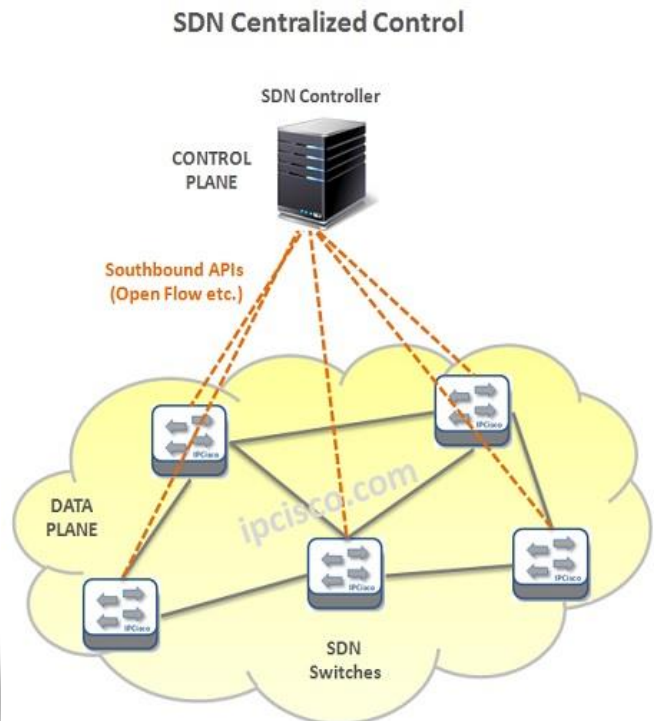
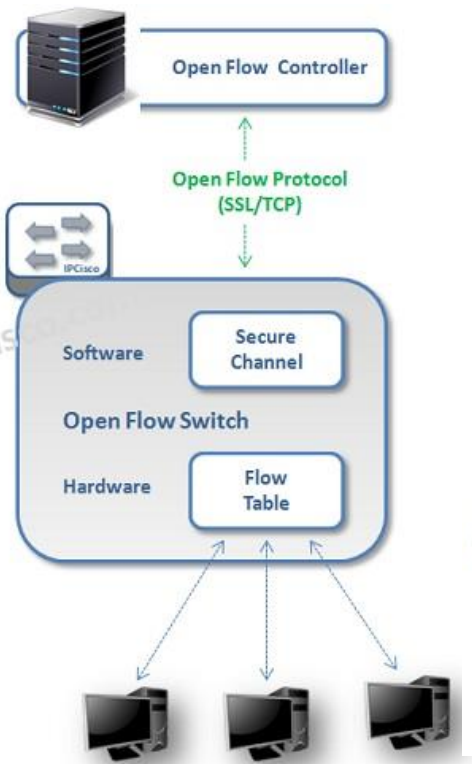
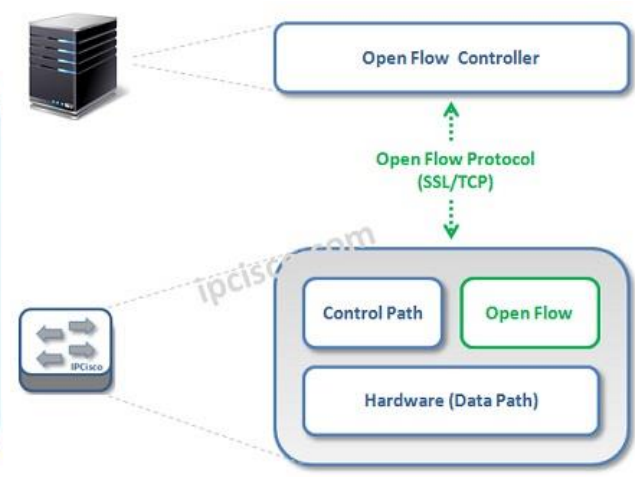
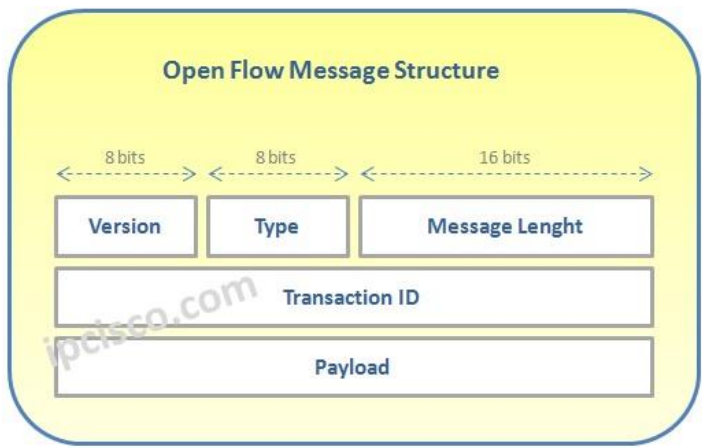
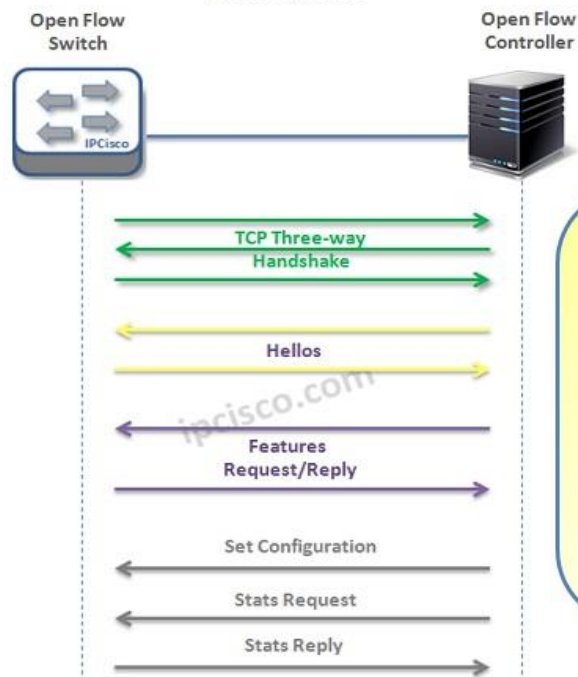


OPEN FLOW Cheat Sheet

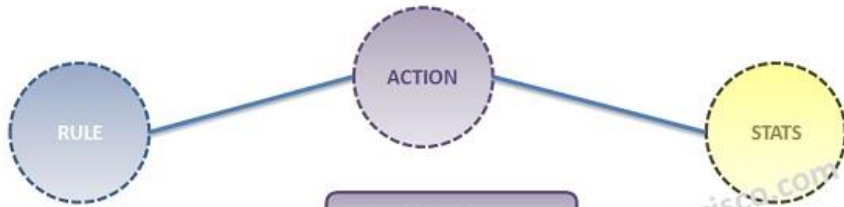
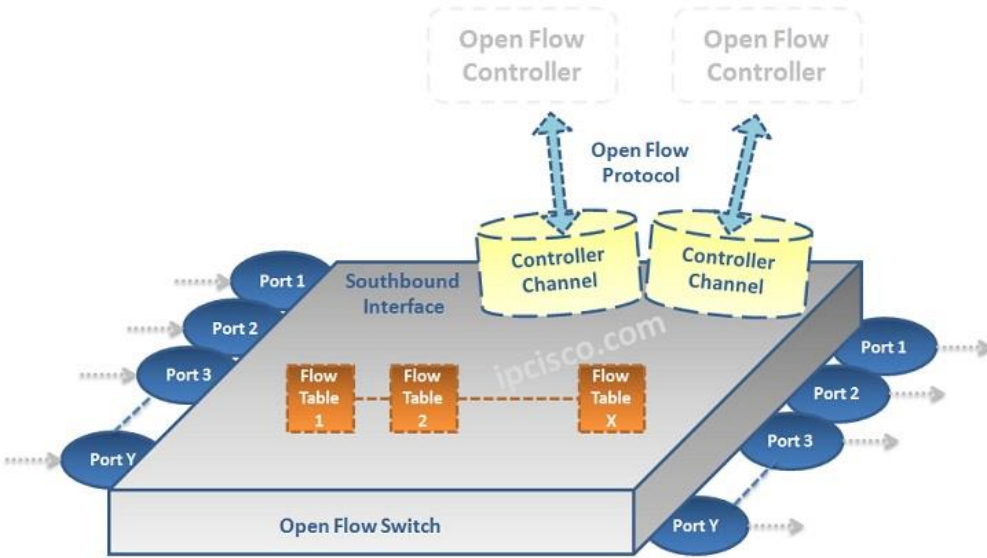
- Standard based Layer 2 Protocol
- Used on Southbound Interface
- Manuplates Forwarding Plane devices
- Open Flow Common Roles:
 - Seperation of Control and Data planes.
 - Provide centralization of the control.
 - Provide Flow based control mechanism
- Open Flow supports three message types :
 - Controller to Switch
 - Asynchronous



Open Flow Connection Establishment



OPEN FLOW Cheat Sheet

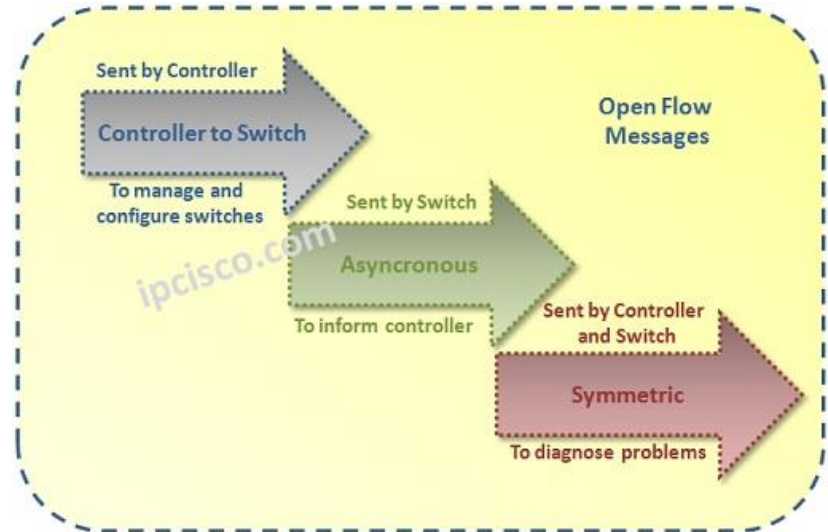
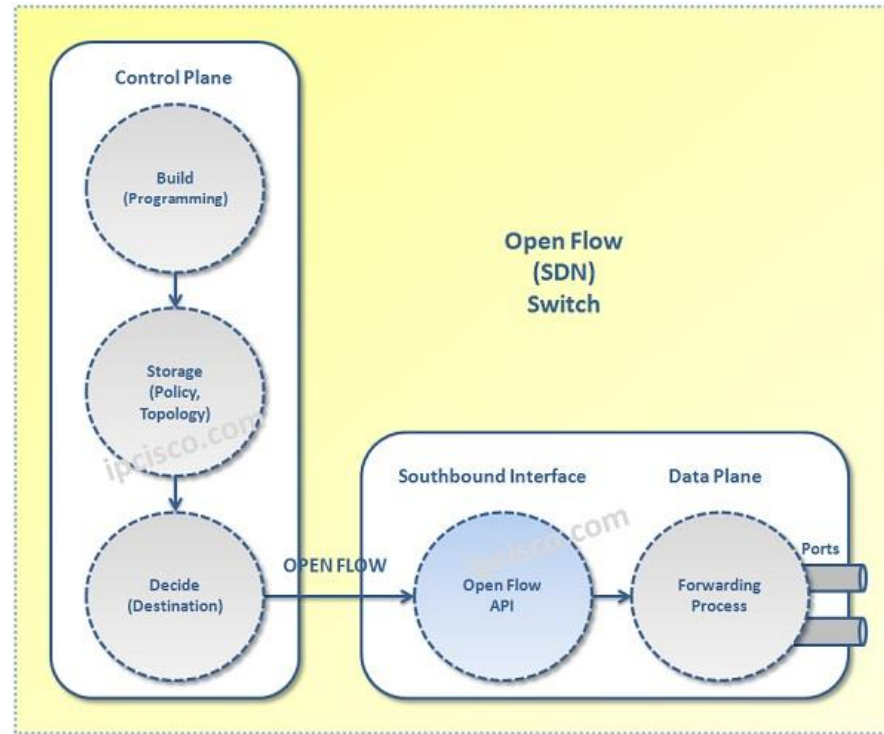


Switch Port	VLAN PCP	IP Prot.
MAC Dest.	IP Source	IP ToS
Eth Typ	VLAN ID	IP Dest.
MAC Source	TCP S. Port	TCP D. Port

Header Fields

- Forward Packets
- Forward Controller
- Drop Packet
- Send Normal Processing
- Modify Fields
- Any Extensions....

- Counter
- Priority
- Time Out



OPEN FLOW Cheat Sheet

Message Category	Message	Message Type	Direction	Process
Conf.	Hello	Symmetric	Controller->Switch	"Here is my Version Number!"
	Hello	Symmetric	Switch->Controller	"Here is Verision Number, that I support!"
	Features Request	Control/Switch	Controller->Switch	"Which ports are available?"
	Set Config	Control/Switch	Controller->Switch	"Could you send Flow Expirations?"
	Features Reply	Control/Switch	Switch->Controller	"Here are the available ports / supported actions!"
	Port Status	Asynchronous	Switch->Controller	Informing Controller about some features.
Flow	Packet-In	Asynchronous	Switch->Controller	"There is no match in Flow Table for this Flow!"
	Packet-Out	Control/Switch	Controller->Switch	"Send packet out to these ports!"
	Flow-Mod	Control/Switch	Controller->Switch	"Add this Flow to the Flow Table!"
	Flow-Expired	Control/Switch	Switch->Controller	Flow timed out after being inactive for a period.