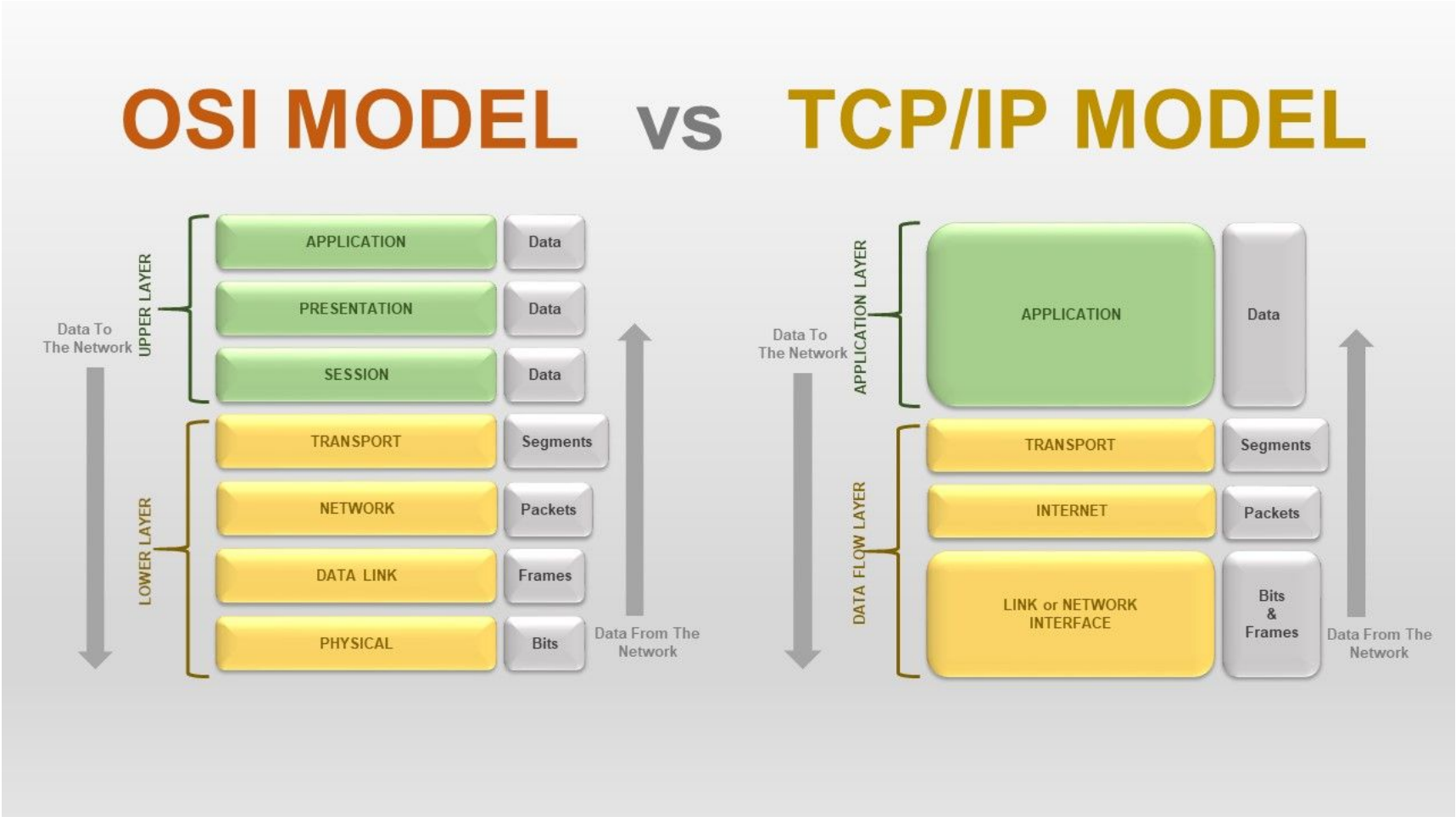
REDES IP – Metro Ethernet

SI.TRA.TEL - 2019

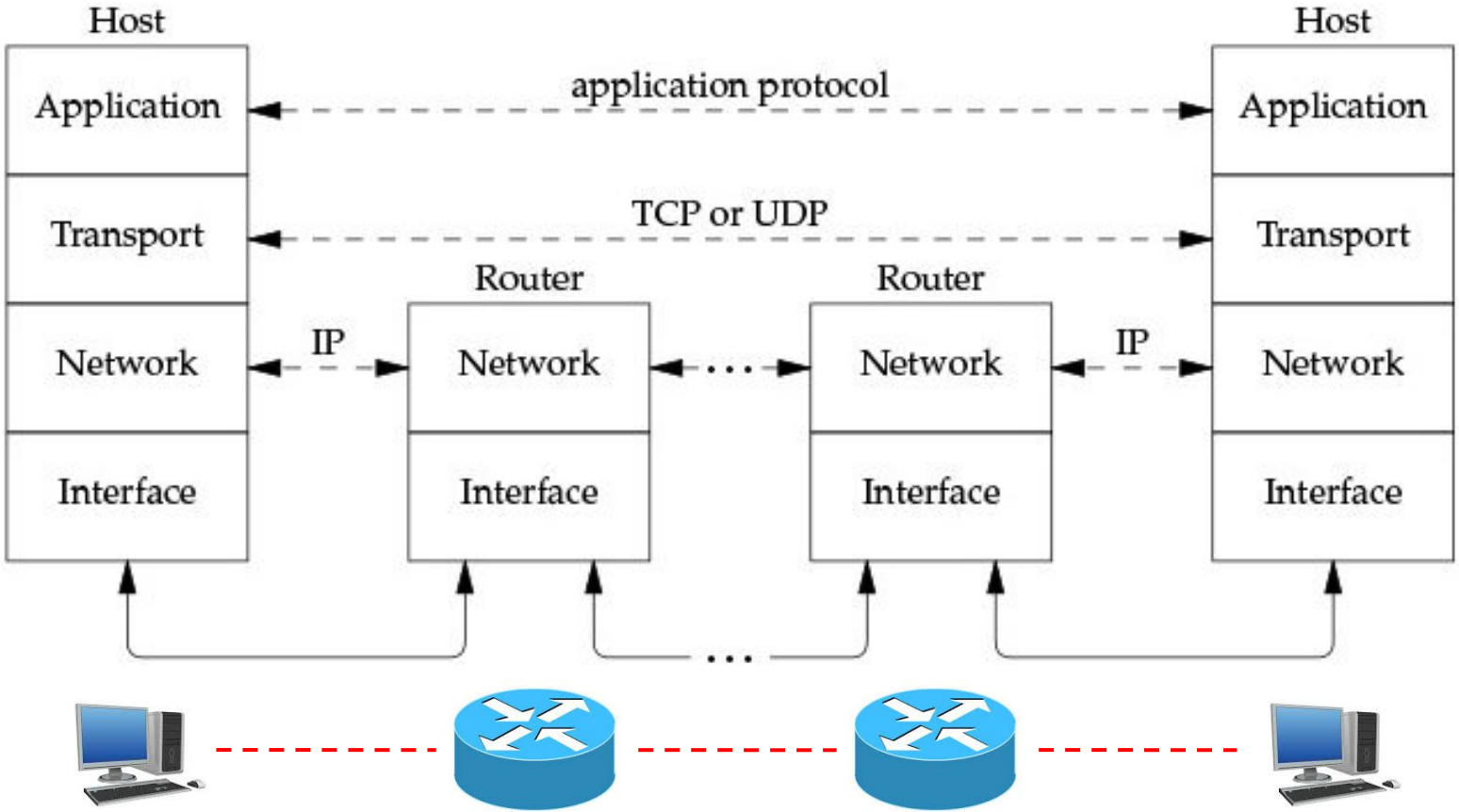
CONCEPTOS BÁSICOS

Factores de Forma

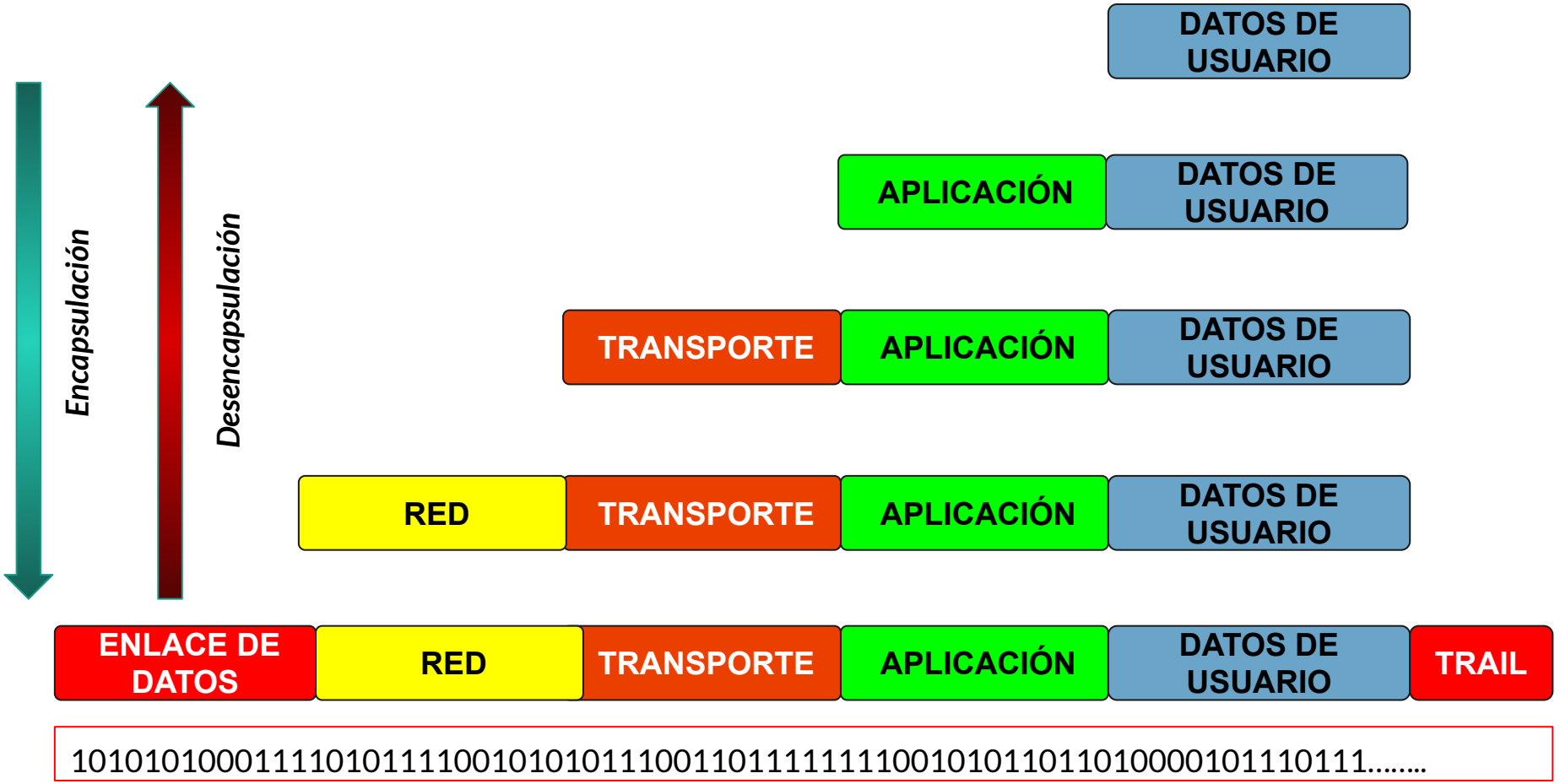
Modelos OSI y TCP/IP



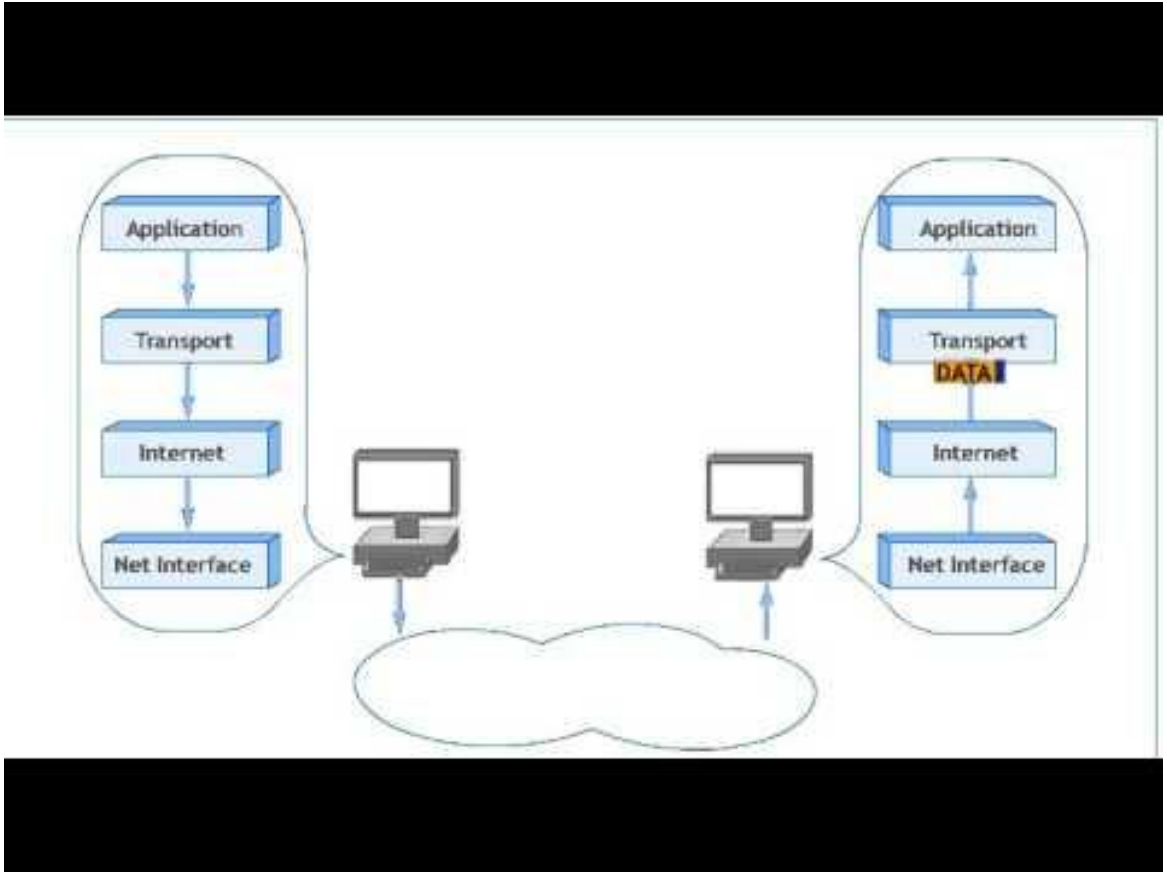
Modelos OSI y TCP/IP



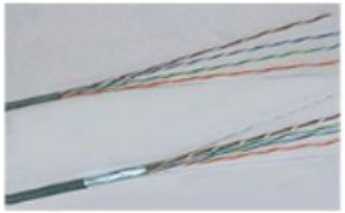
Protocolos y Encapsulación



Modelos OSI y TCP/IP

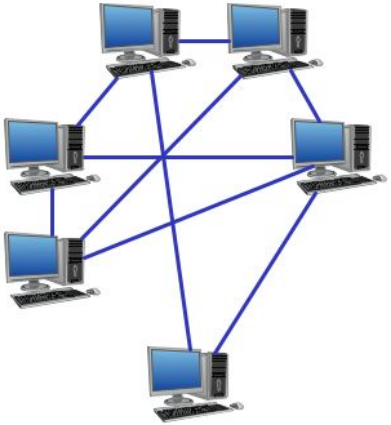


Capa Física

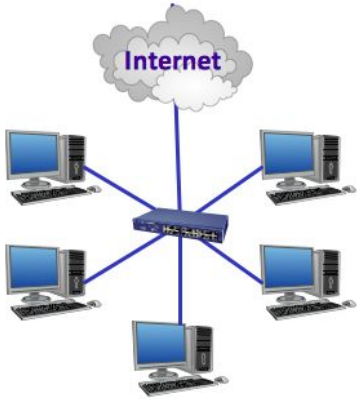
Cobre		
Fibra óptica		
Tecnología inalámbrica		

Clasificacion de Redes

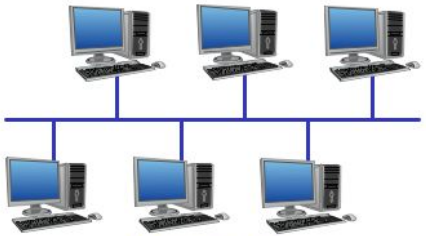
Fully Connected Network Topology



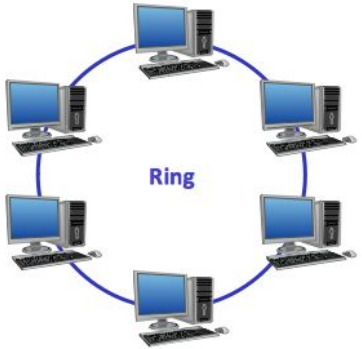
Mesh Network Topology



Star Network Topology

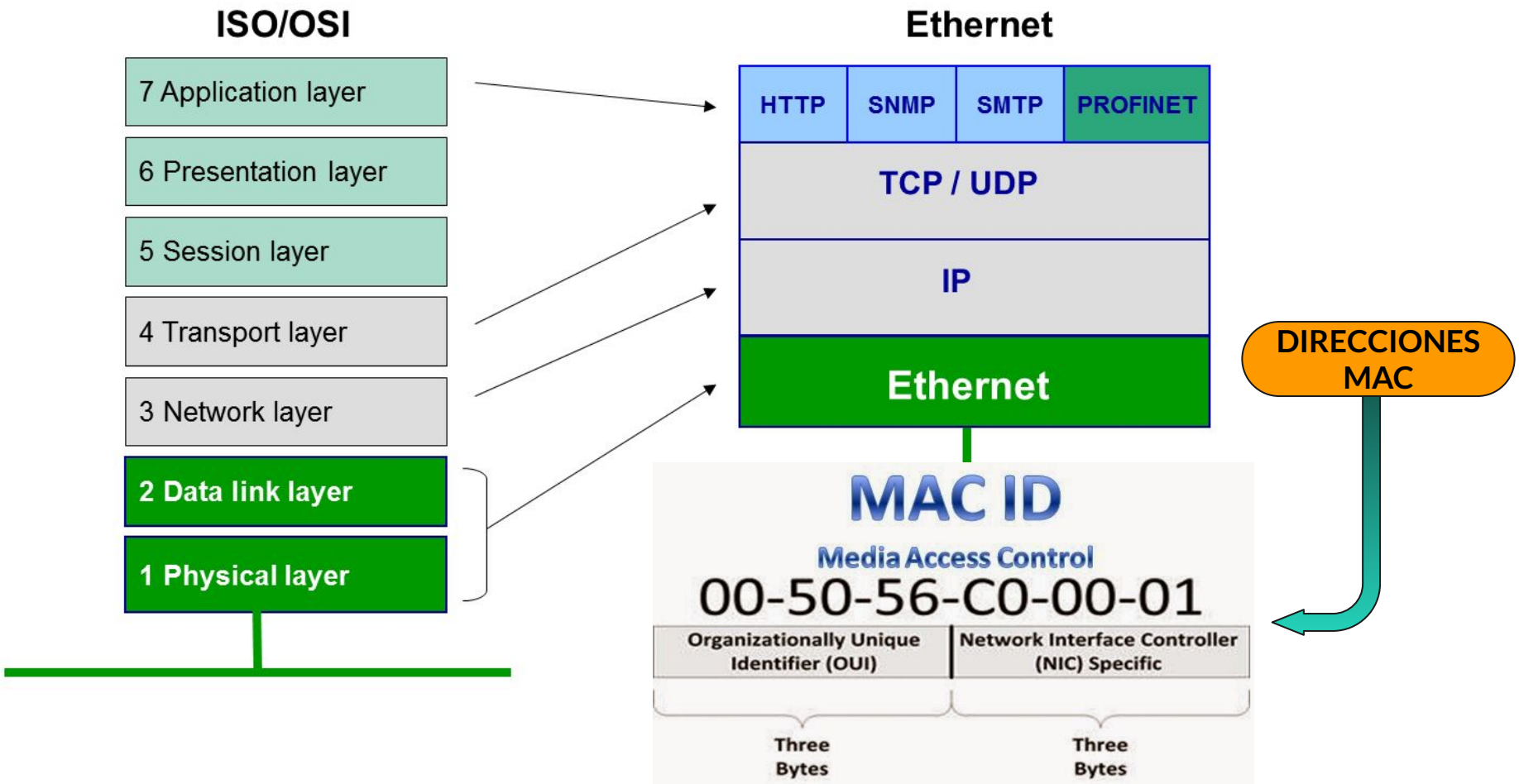


Common Bus Topology

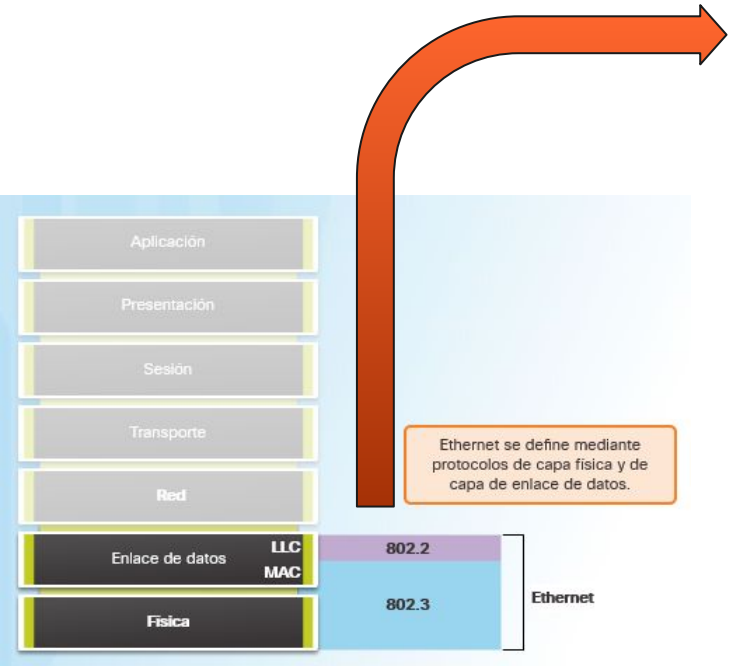


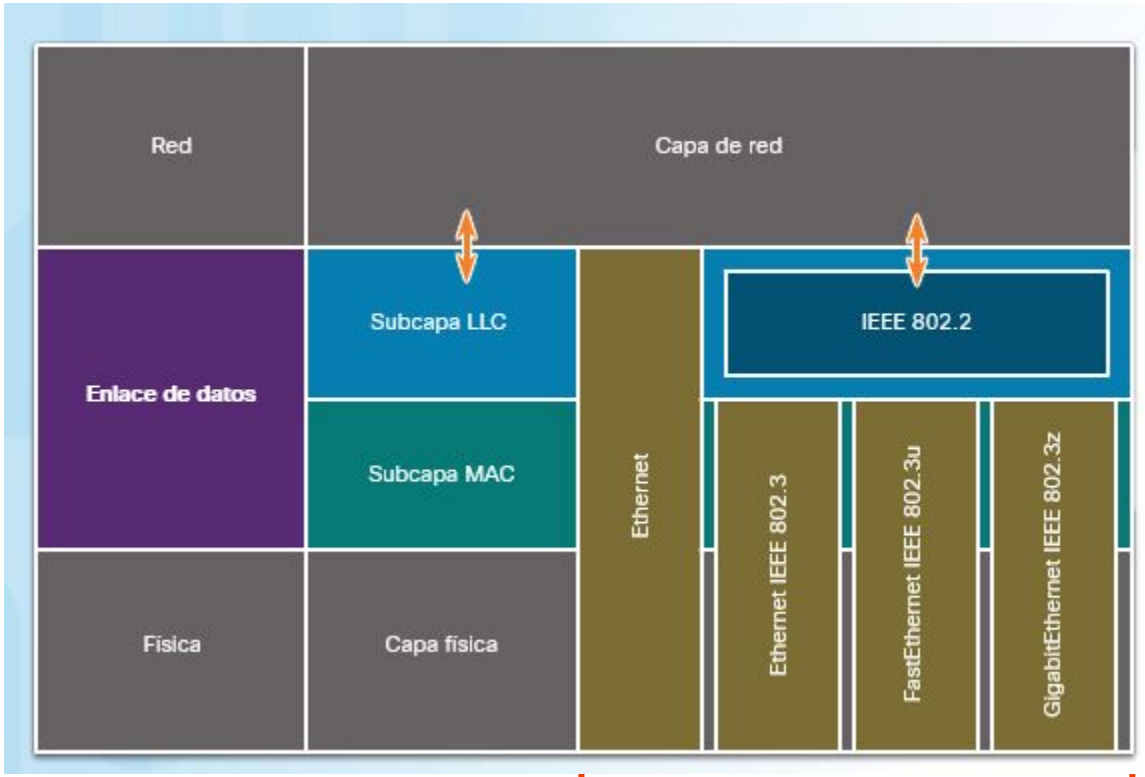
Ring Network Topology

Protocolo Ethernet



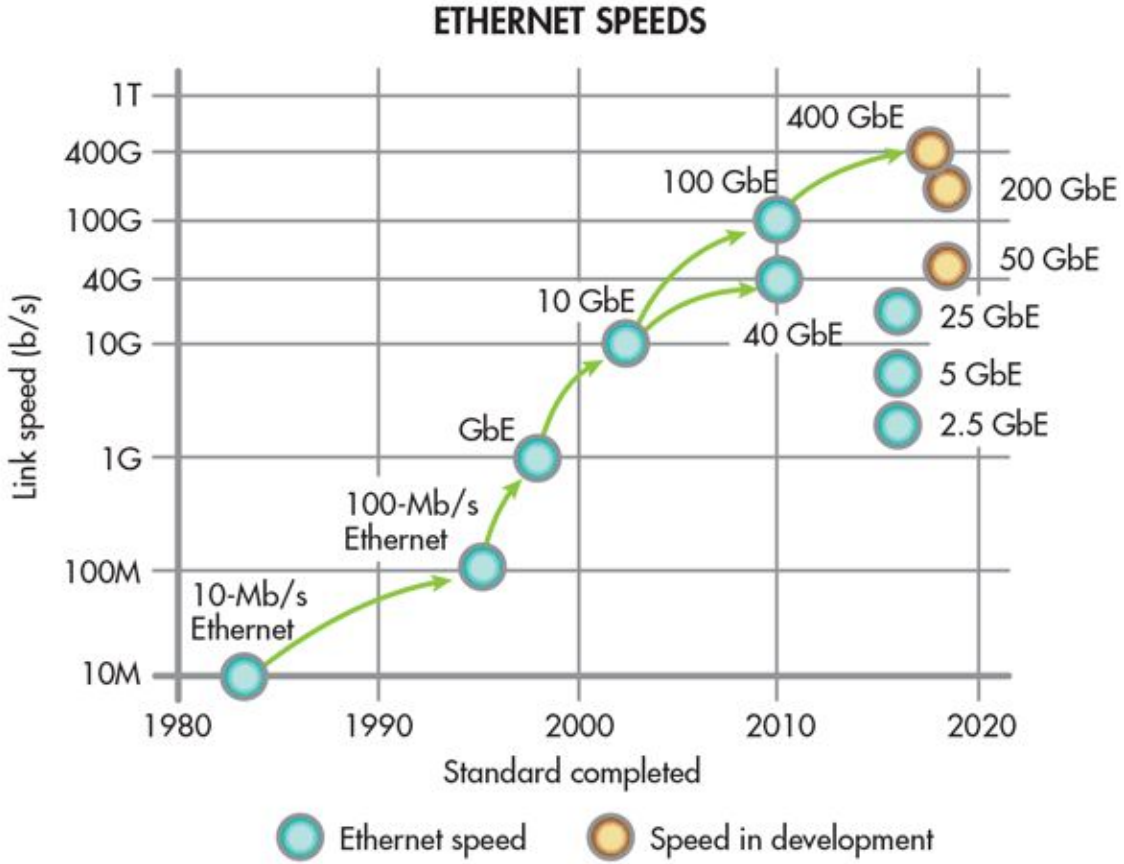
Protocolo Ethernet





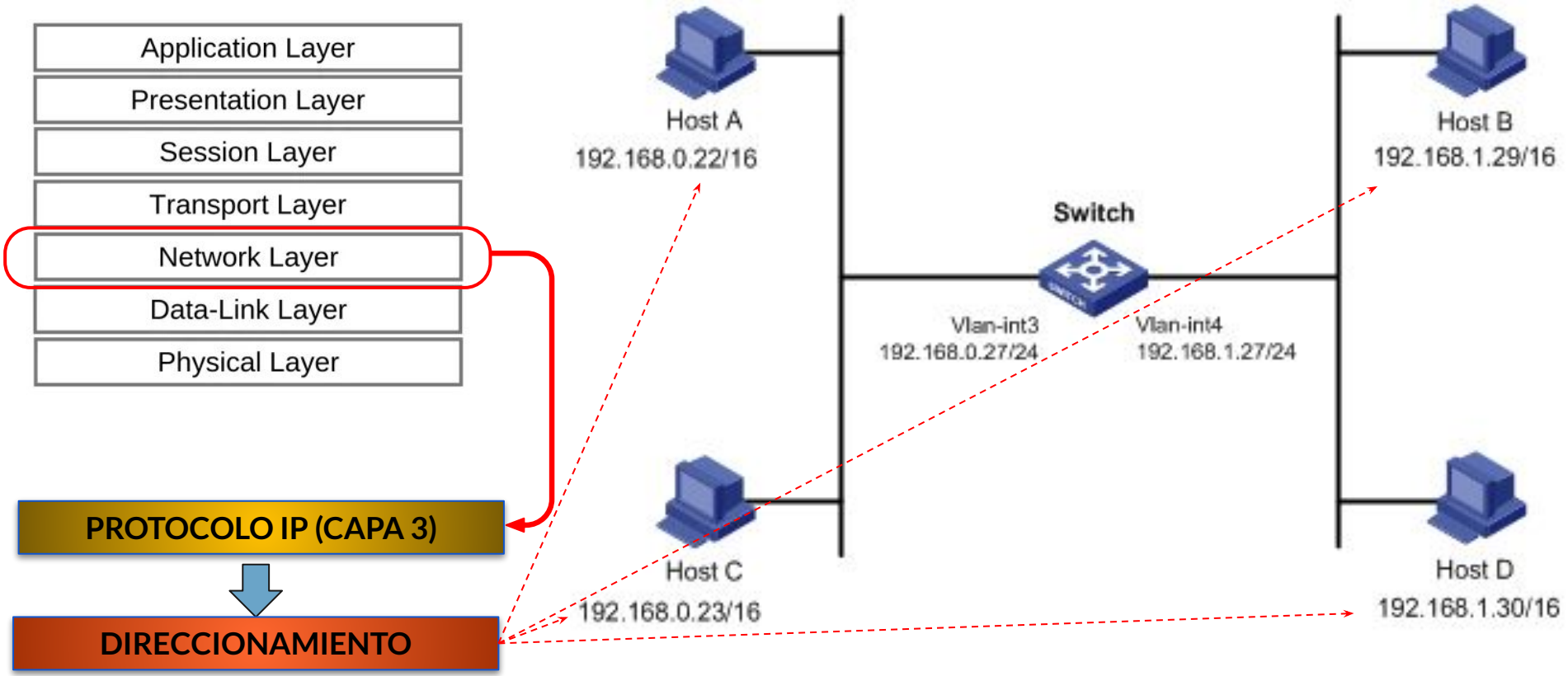
MÚLTIPLES VARIANTES DEL PROTOCOLO

Protocolo Ethernet



PROTOCOLO Y ENRUTAMIENTO IP

Protocolo IP



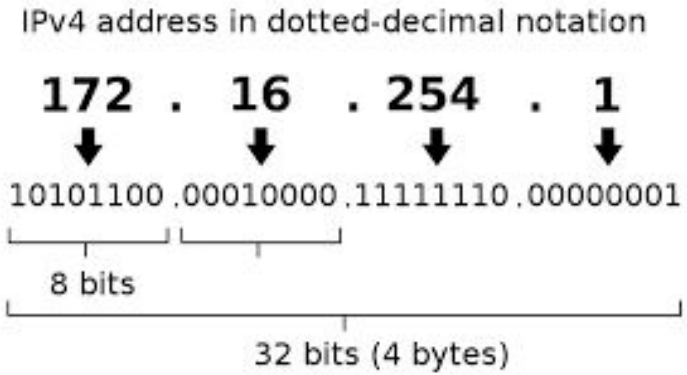
Direccionamiento IP

Protocolo adoptado por Internet y la mayoría de las redes domésticas

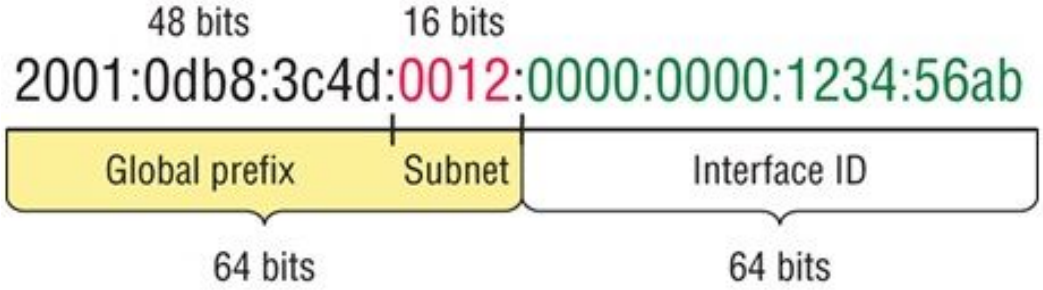
Altamente compatible con otros protocolos del mercado.

Coexisten en la actualidad 2 versiones:

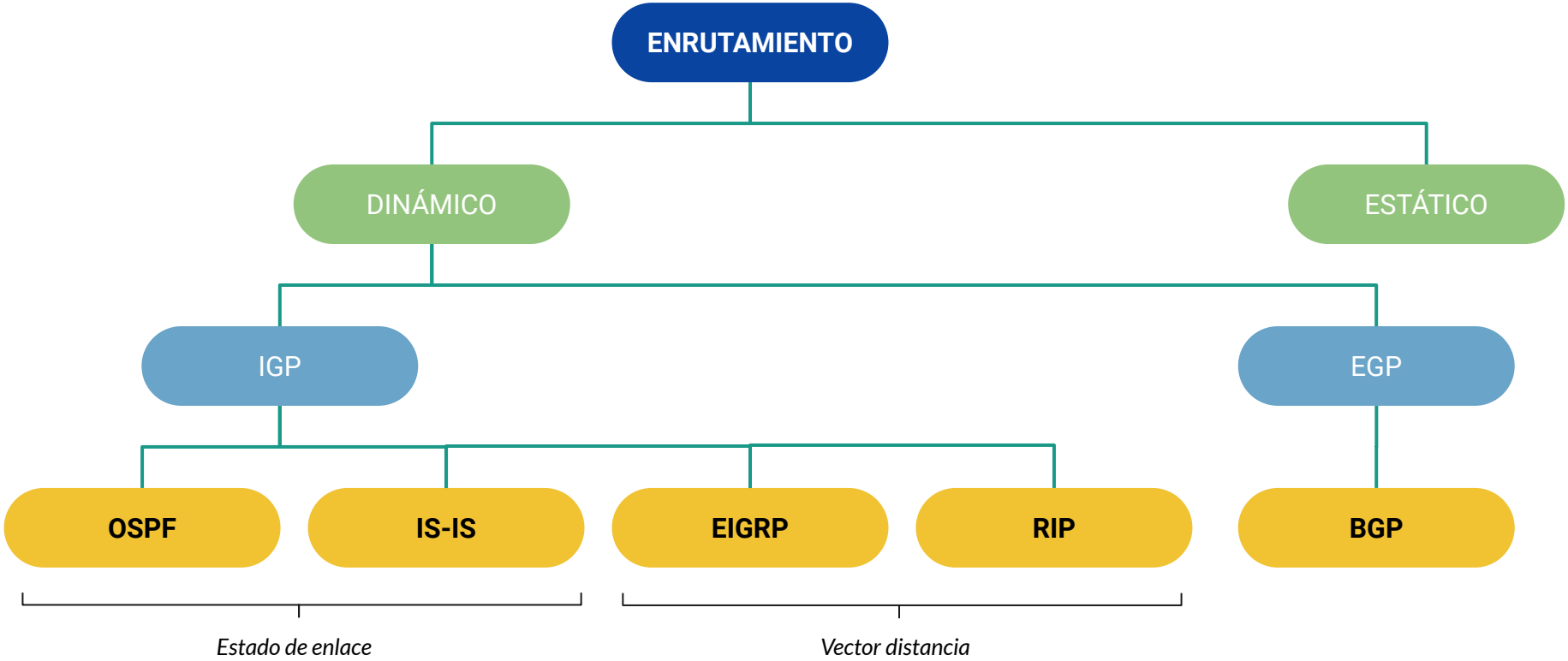
IPv4



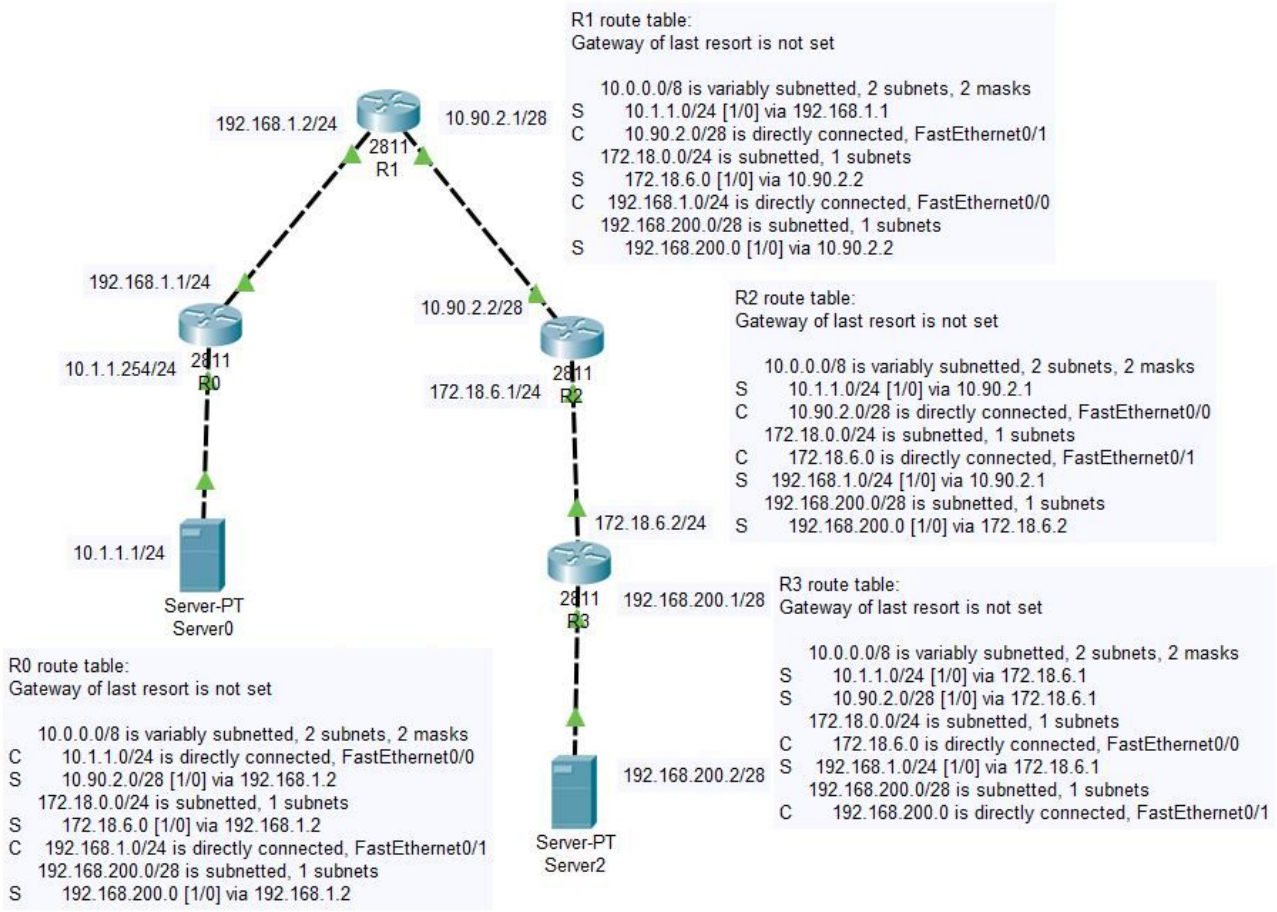
IPv6



Enrutamiento IP



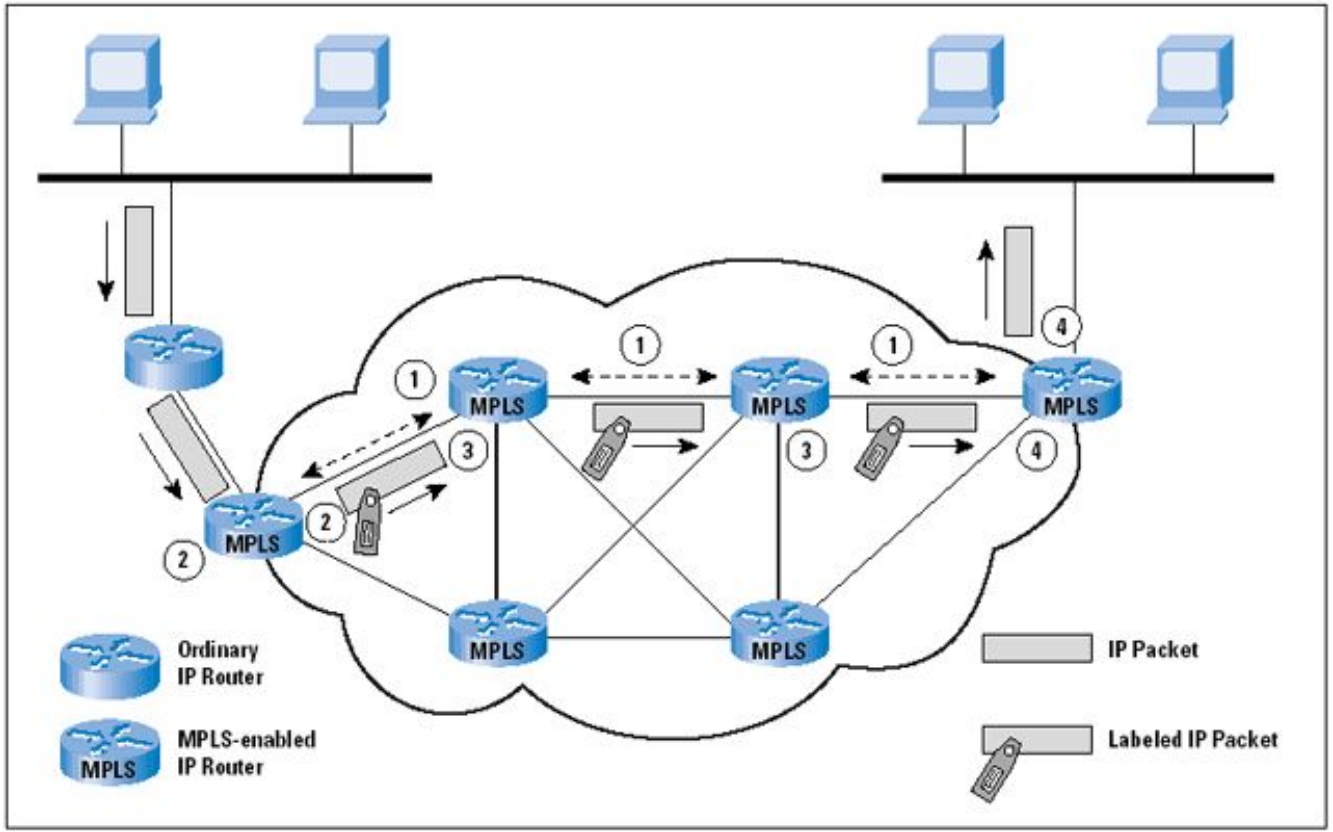
Enrutamiento IP



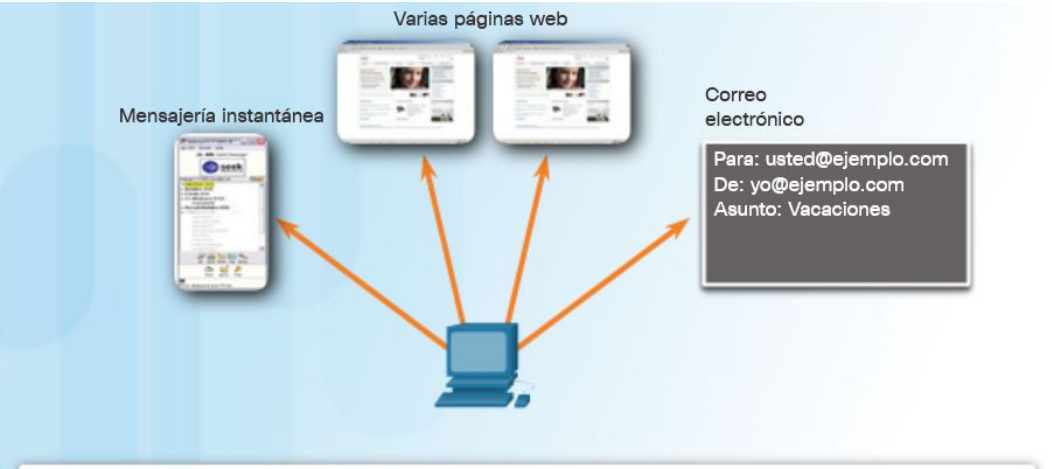
PROTOCOLOS DE CAPA 4 Y SUPERIORES

MPLS

Figure 1: MPLS Operation



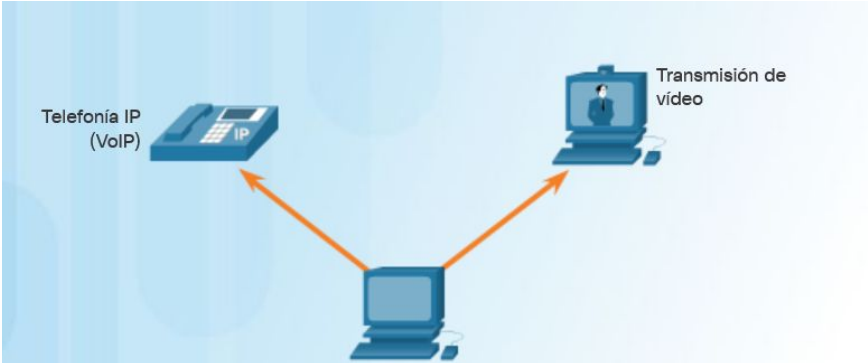
Protocolo TCP y UDP



- **El establecimiento de una sesión** garantiza que la aplicación está lista para recibir los datos.
- **La entrega en el mismo orden** garantiza que los segmentos se rearmen en el orden correcto.
- La **entrega confiable** implica el reenvío de segmentos perdidos para que se reciban los datos en forma completa.
- **El control de flujo** garantiza que el receptor puede procesar los datos recibidos.

TCP

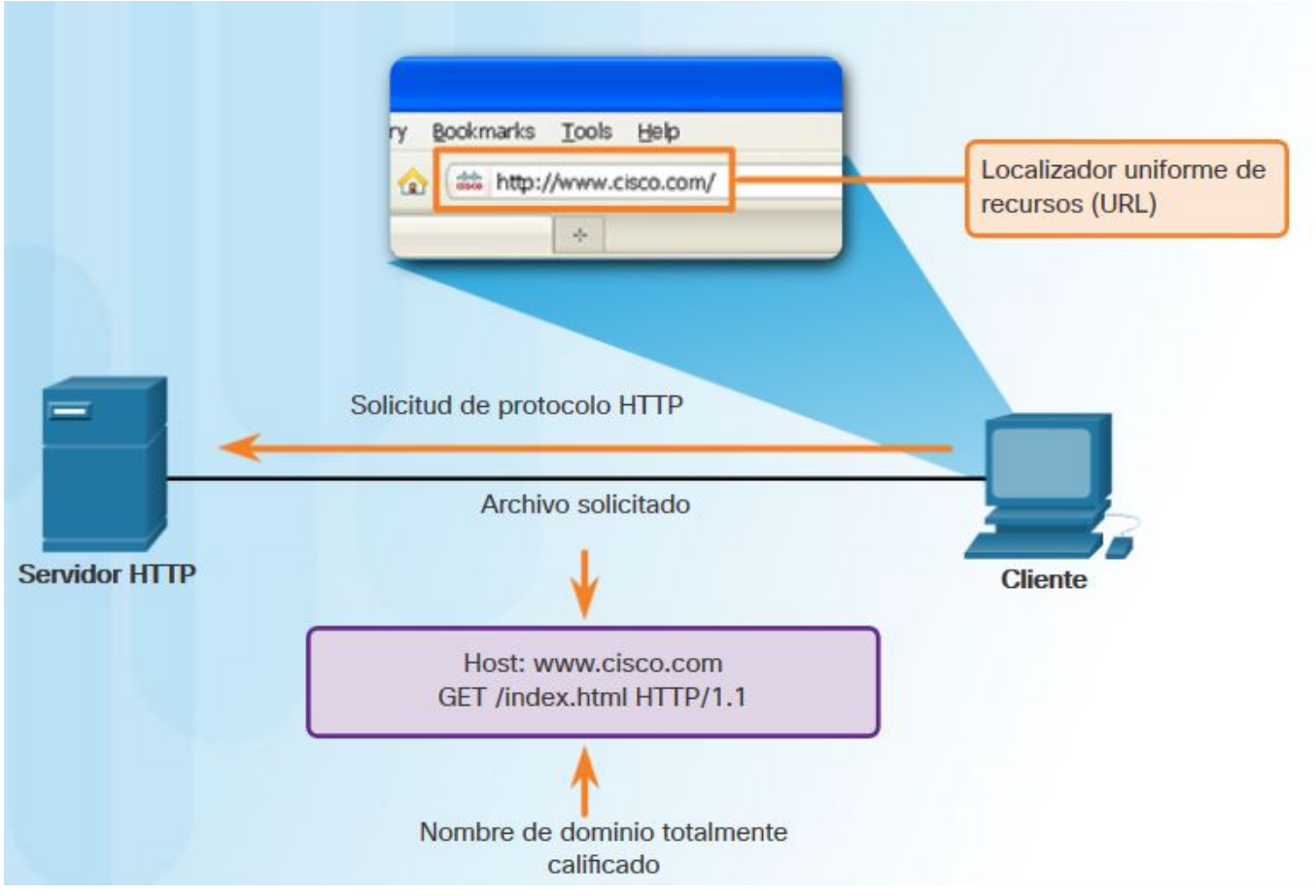
UDP



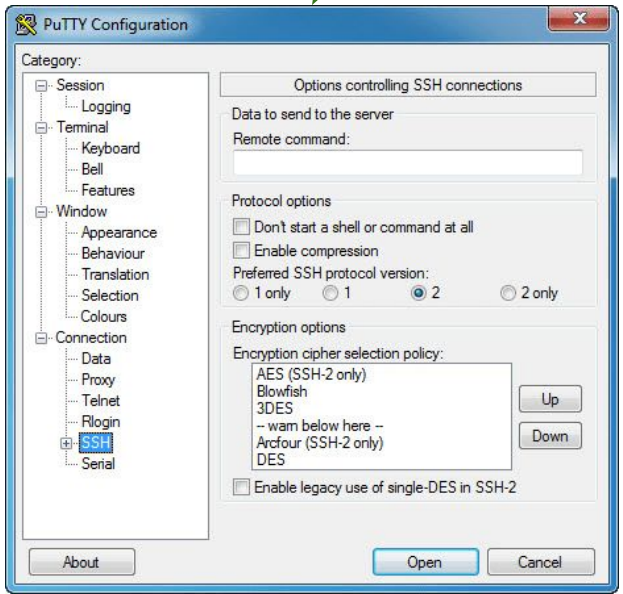
Características de UDP

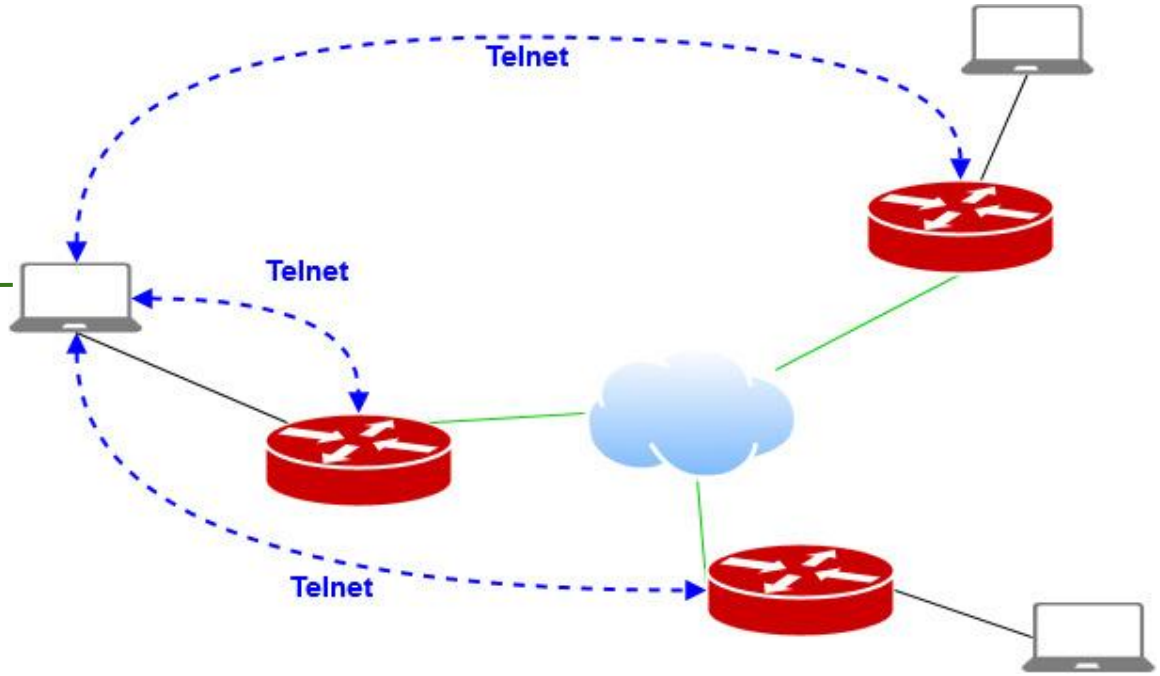
- Los datos se reconstruyen en el orden en que se recibieron.
- Los segmentos perdidos no se vuelven a enviar.
- No hay establecimiento de sesión.
- No le informa al emisor sobre la disponibilidad de recursos.

Protocolo HTTP

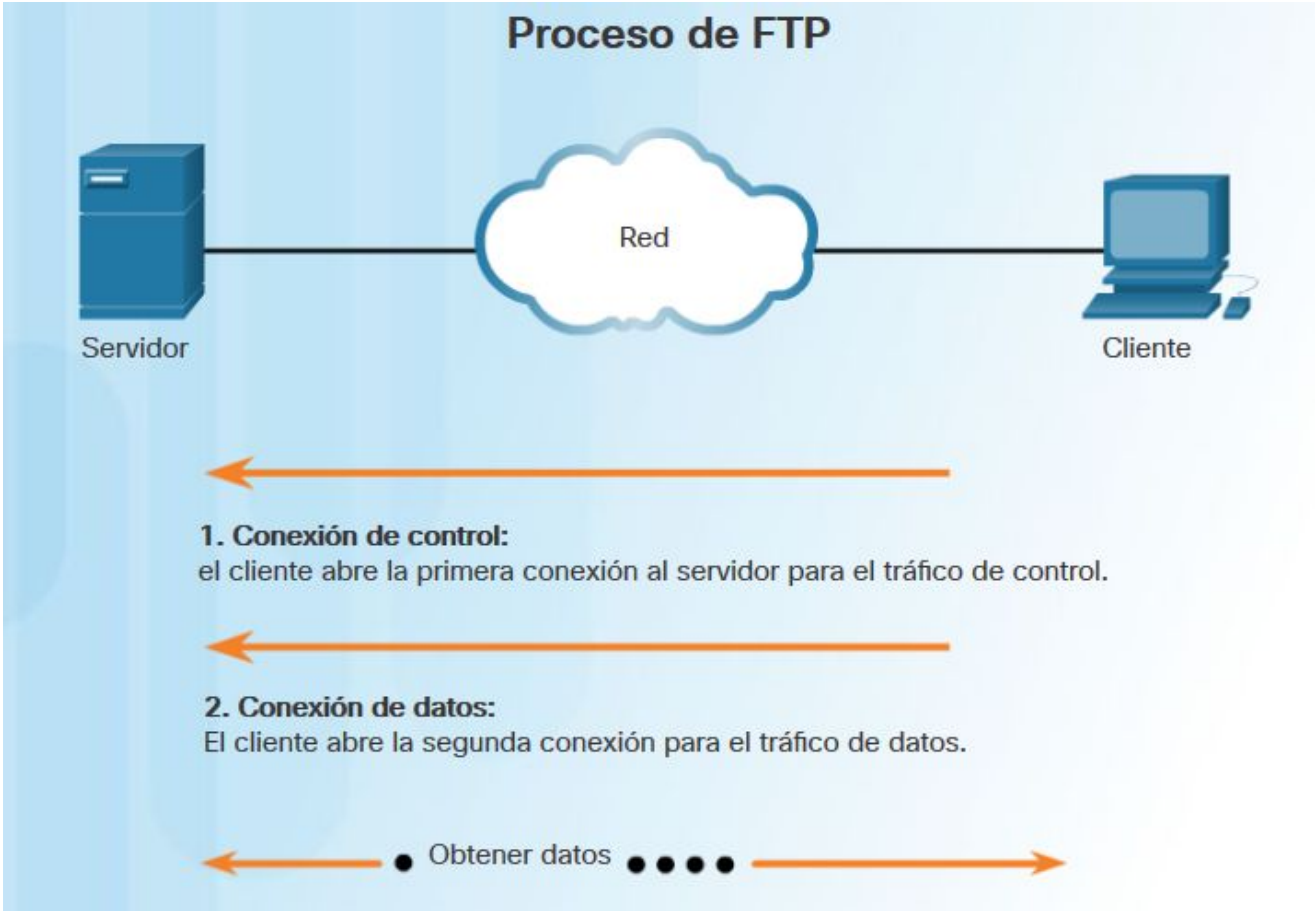


Protocolo Telnet/SSH

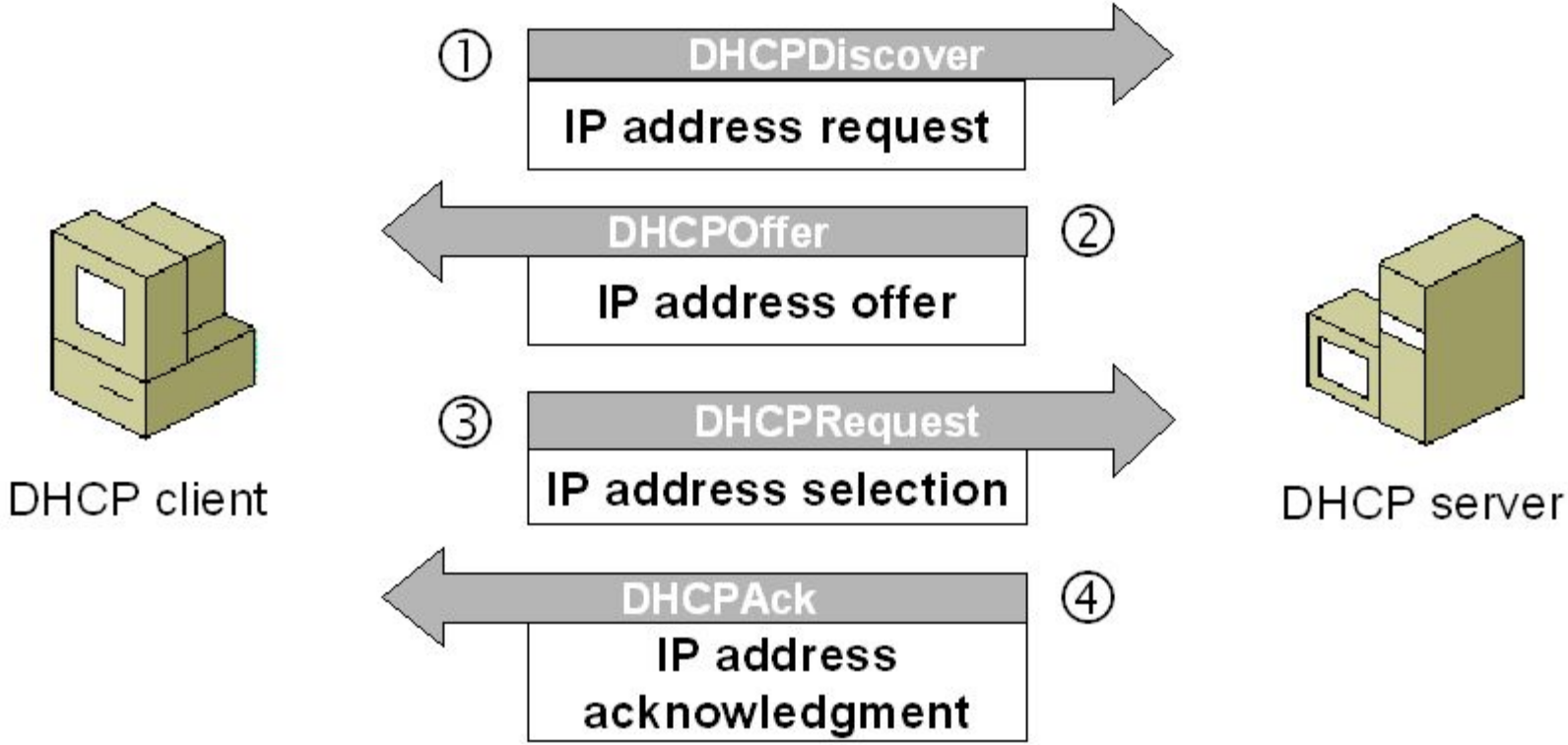




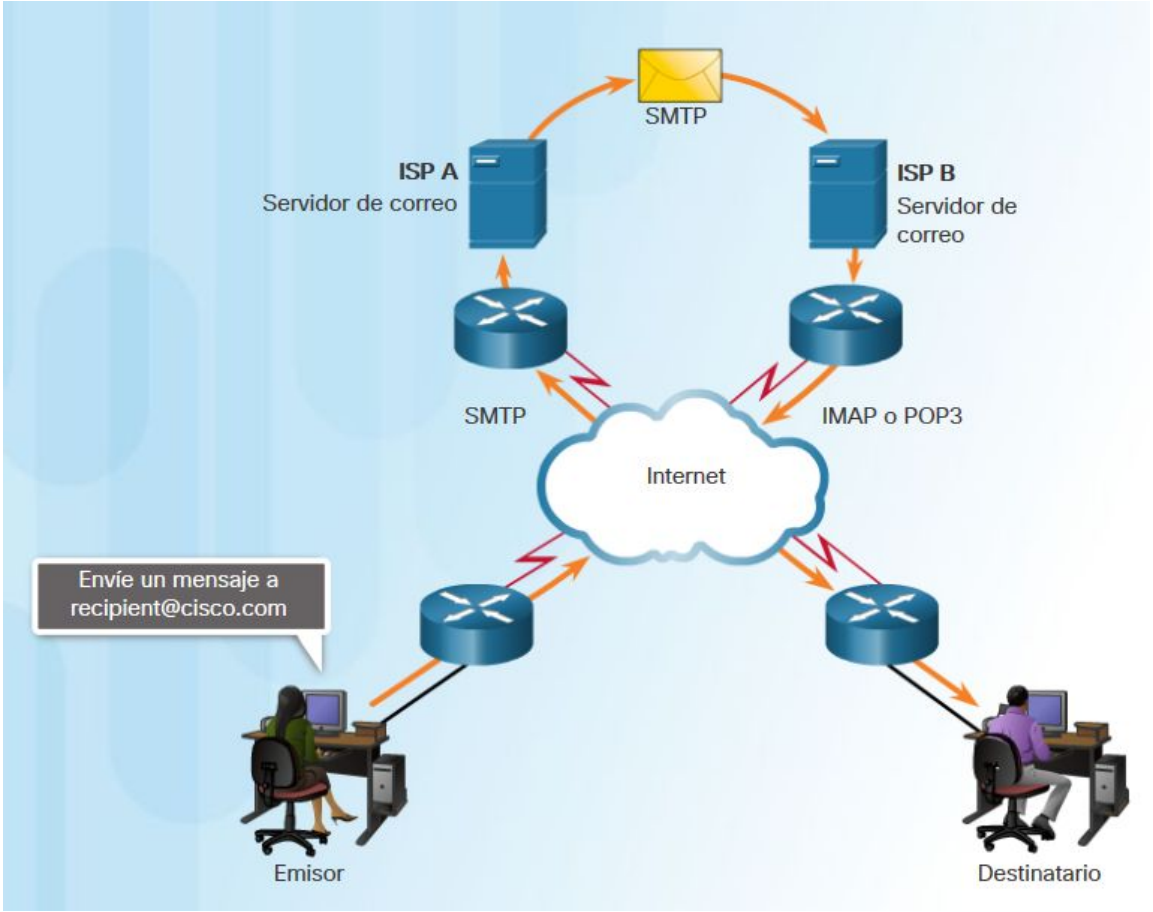
Protocolo FTP



Protocolo DHCP



Protocolo SMTP, POP, IMAP



Protocolo DNS