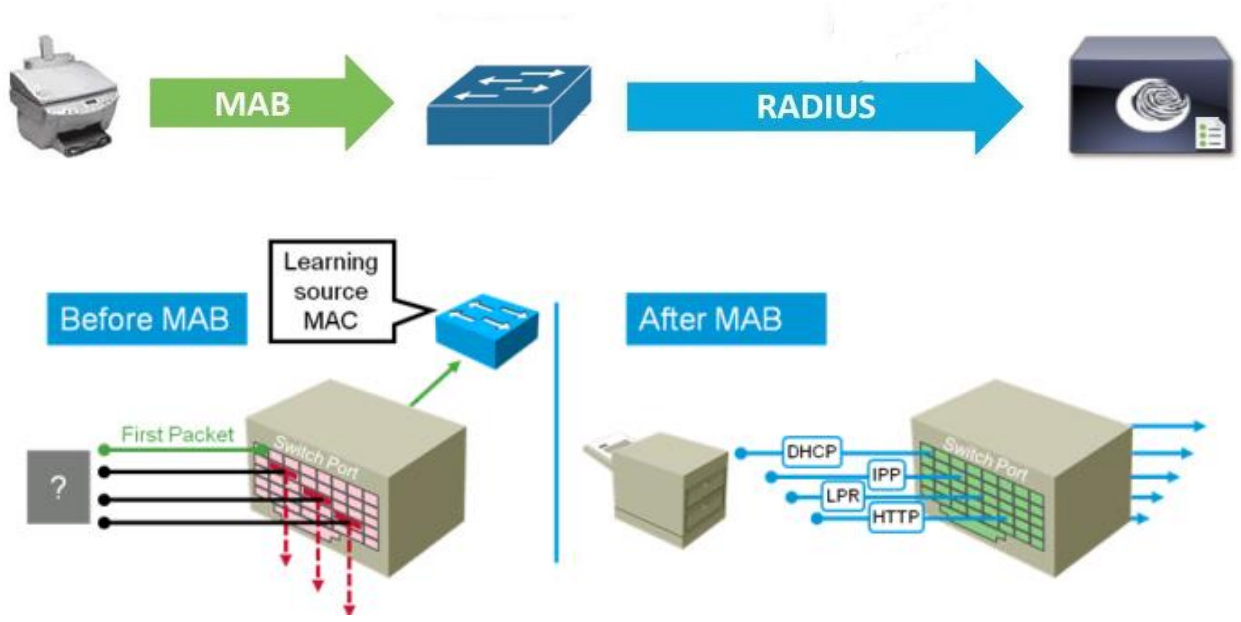
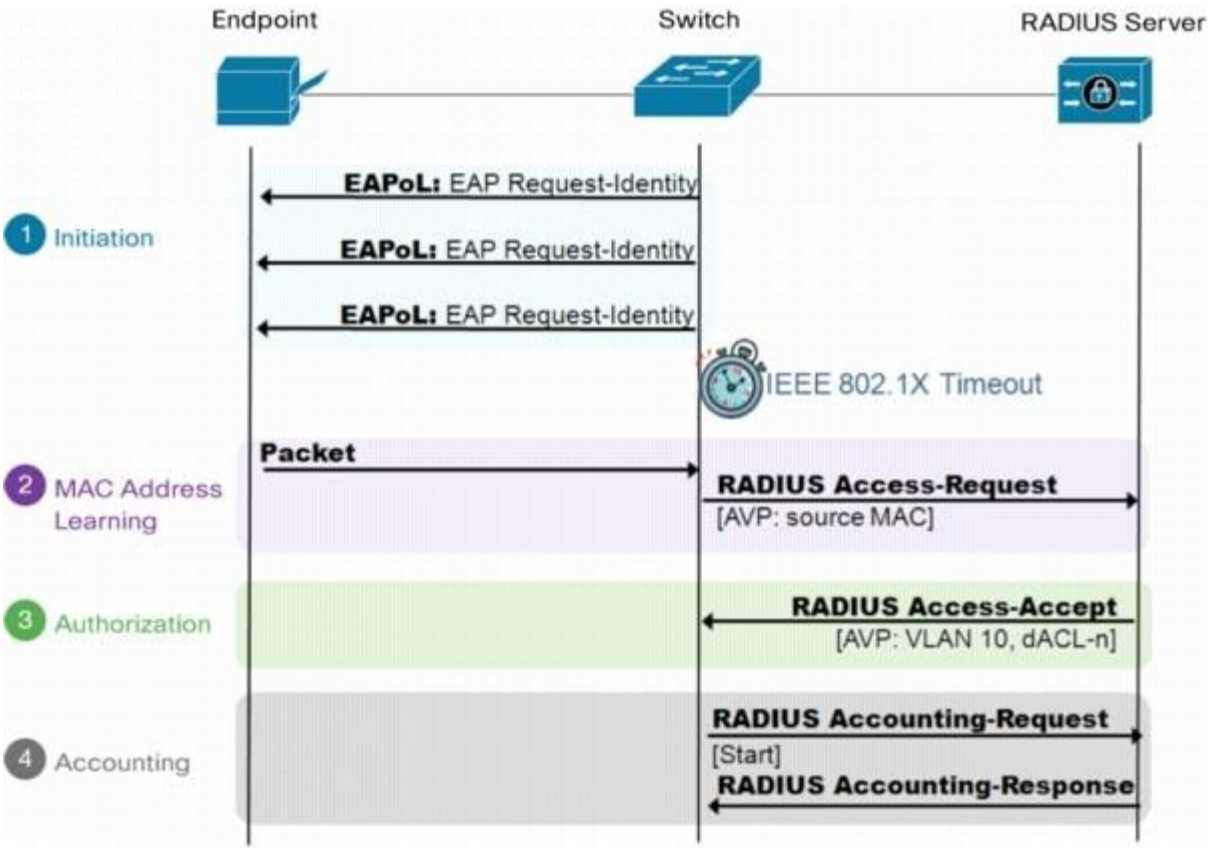
Implement MAB:

- MAB is term, which is stands for Media Access Control Authentication Bypass.
- MAB allow controlling devices to access the Network at OSI Reference Model Layer 2.
- Authentication server performs authentication lookup using MAC address as a credential.
- MAC Authentication Bypass feature is a MAC-address-based authentication mechanism.
- MAB can be implemented over devices, which do not support 802.1x authentication.
- MAB is used to authenticate non-802.1x capable devices such as printers, IP phones.
- MAB is working over MAC address it is independent of Usernames and passwords.
- MAB can also be implemented over the IEEE 802.1x (Dot1x) supported end devices.
- MAB is not secure authentication method compared to other authentication methods.
- MAB is not a strong authentication process it can be overcome by MAC address spoofing.
- When enable MAB on switchport, switch drops all frames except first frame to learn MAC.
- Once the switch has learned the Media Access Control address of the connected device.
- The Switch then contacts and authentication server to check if it permits the MAC address.
- ISE authenticate MAB devices either based on Calling Station ID or Username & Password.
- If Process Host Lookup is enabled, then Authentication is done based on Calling Station ID.
- If Process Host Lookup is disabled, then Authentication is done on username & password.
- By default, Media Access Control only supports a single endpoint (device) per switchport.
- MAB also supports dynamic values from your RADIUS server such as ACL or VLAN etc.
- Media Access Control Authentication Bypass can be deployed as standalone authentication.




Endpoint
Switch
RADIUS Server
EAPoL: EAP Request-Identity
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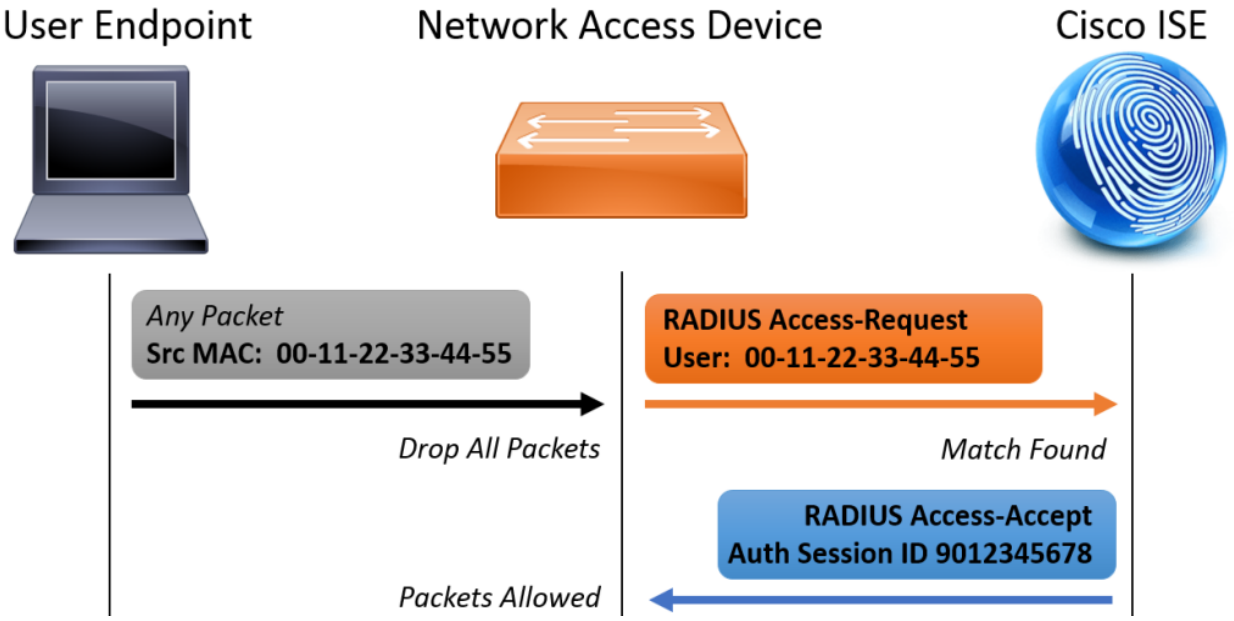
1 Initiation
IEEE 802.1X Timeout
Packet
RADIUS Access-Request
[AVP: source MAC]
2 MAC Address Learning
RADIUS Access-Accept
[AVP: VLAN 10, dACL-n]
3 Authorization
RADIUS Accounting-Request
[Start]
RADIUS Accounting-Response
4 Accounting


User Endpoint
Network Access Device
Cisco ISE
Any Packet
Src MAC: 00-11-22-33-44-55
RADIUS Access-Request
User: 00-11-22-33-44-55
Drop All Packets
Match Found
RADIUS Access-Accept
Auth Session ID 9012345678
Packets Allowed