

## 802.1X Operating Modes:

### Single Host:

Single Host only one supplicant can communicate through the port. Once authentication of the supplicant is accepted by the authentication server, the switch allows it access. If the supplicant logs off or the port state is changed, the port becomes unauthenticated. And if a different supplicant tries to access through this port, its bidirectional traffic is discarded. A port is authorized if there is an authorized client. Only one host can be authorized on a port.

### Multi-Host Mode:

Multi-host allows connection of multiple hosts over a single port. Only the first supplicant is authenticated. Subsequent hosts have network access without the need to authenticate. Used when hub or wireless devices are connected to the port. A port is authorized if there is if there is at least one authorized client.

### Multi-Domain Mode:

Multi-Domain can authenticate two source MAC addresses, one in the voice VLAN and another one in the data VLAN. This is for the scenario where you have an IP phone and a PC on a single switchport. Any more source MAC addresses trigger a security violation.

### Multi-Auth Mode:

Multi-Auth can authenticate multiple source MAC addresses. You can use this when switchport is connected to another switch. Each source MAC address is separately authenticated.

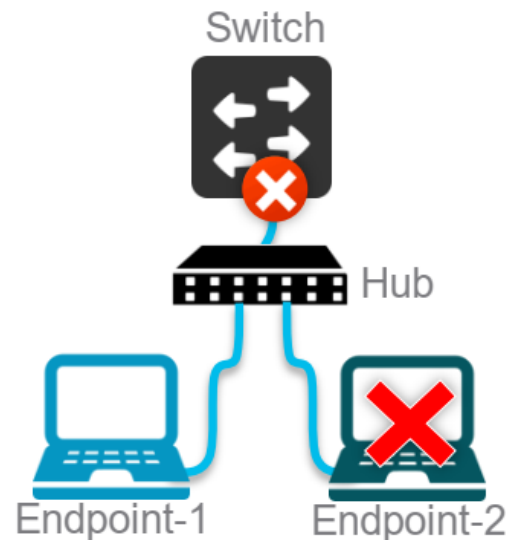
Host Modes	Description	MAC
Single-host	Only one client can connected to the 802.1X enabled port	1
Multi-host	Allow multiple hosts useful for Access Point	*
Multi-domain	Allow both a host and VOIP Phone to be connected	2
Multi-auth	Allow one client Voice and multiple client data	*



## Single Host Mode

Only 'one' MAC Address is allowed. Second MAC Address causes **Security Violation**

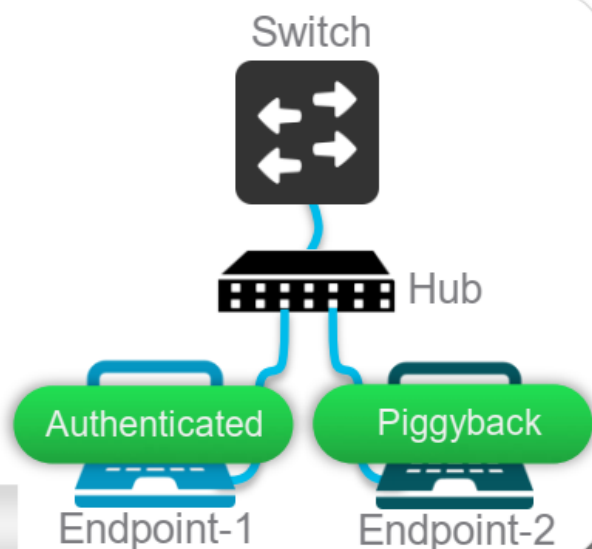
authentication host-mode single-host



## Multi-Host Mode

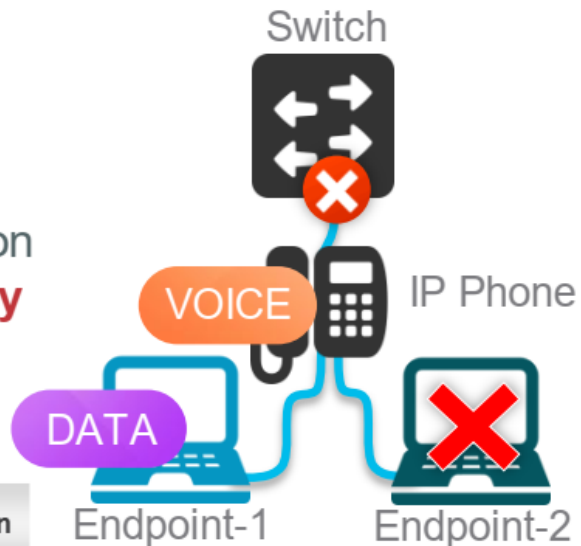
1st MAC Address is authenticated. 2nd endpoint piggybacks on 1st MAC Address authentication and bypasses authentication

authentication host-mode multi-host



## Multi-Domain Mode

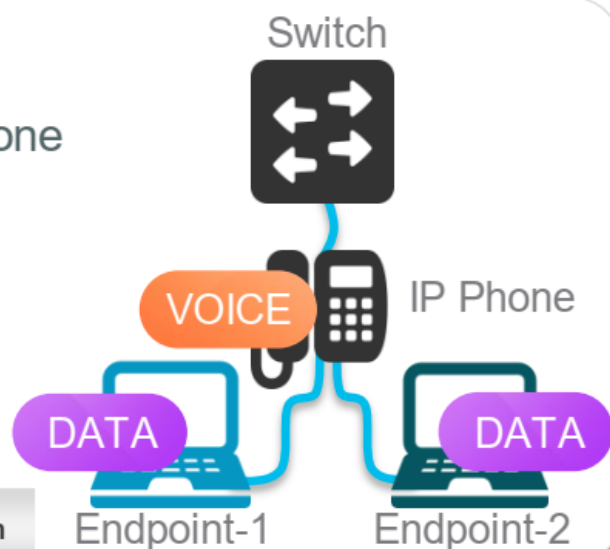
Each domain (Voice or Data) authenticates one MAC address. 2nd MAC address on each domain causes **security violation**



authentication host-mode multi-domain

## Multi-Authentication

Voice domain authenticates one MAC address. Data domain authenticates multiple MAC addresses. dACL or **single VLAN Assignment** for all devices are supported



authentication host-mode multi-auth