

## Message Encryption

/message is encrypted with AES algorithm

/secret key for AES algorithm is shared between Client A and Client B with ECDH algorithm

Client A and Client B agree on a curve with starting point P  
Client A has a private key a and public key  $A = a * P$   
Client B has a private key b and public key  $B = b * P$   
 $a * B = a * b * P = b * A$   
So  $a * b * P$  ends up being the shared secret

AES (i.e. Advanced Encryption Standard)

ECDH (i.e. Elliptic Curve Diffie Hellman  
Key-sharing algorithm used for asymmetric encryption)