**Ipv6 EUI-64 PROCESS**

- EUI-64 = Extended Unique Identifier, 64 bit

**- Link Local IPv6 Address are always FE80::/10**

**- 1st RULE: Uses the MAC address of an interface to create a 64-bit interface ID**

**Challenge: MAC Address only 48 bits**

**MAC address: 0015.2BE4.9B60**

**- Step 1: Split the 48-bit MAC address in the middle.**

**- Step 2: Insert FF.FE in the middle  
  
  
  
  
  
  
  
  
- Step 3: Change format to use a colon delimiter**

0015.2B**FF**.**FE**E4.9B60

0015.2BE4.9B60

0015.2BE4.9B60

E4.9B60



0015.2B

**- Step 4: Convert the first eight bits into binary  
  
  
  
  
  
- Step 5: Flip the 7th bit  
  
  
  
- Step 6: Convert the first eight bits into hexadecimal  
  
  
  
=> link local address: FE80::215:2BFF:FEE4:9B60**

0015**:**2BFF**:**FEE4**:**9B60

0015**:**2BFF**:**FEE4**:**9B60

0015.2BE4.9B60

0000000000

000000**1**000

0015**:**2BFF**:**FEE4**:**9B60

**0215:**2BFF**:**FEE4**:**9B60