

Padding Oracle Attack Example

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Suppose the adversary holds ciphertext c_0, c_1 , encrypting the message
 $m_1 = 1011 | 1100 | 0010$.

This gets padded to become:

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Submit c'_0, c_1 for decryption.

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Now we know there are 5 bytes of padding in m_1 .

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What does it take to create 6 bytes of padding?

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Submit c'_0, c_1 for decryption. Response comes back "error".

Set $c'_0 = c_0 \oplus (0000 | 0000 | 0100 | 0011 | 0011 | 0011 | 0011 | 0011)$.

$m'_1 = 1011 | 1100 | 0110 | 0110 | 0110 | 0110 | 0110 | 0110$

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We now know that $B \oplus 0100 = 0110$.

Therefore: $B = 0110 \oplus 0100 = 0010$