**宽块共享存储媒体加密的IEEE标准**

**IEEE计算机学会**

**由信息鉴定标准委员会和存储系统标准委员会赞助**

**宽块共享存储媒体加密的IEEE标准**

**赞助方**

**信息鉴定标准委员会与IEEE计算机协会的存储系统委员会**

**2010年9月30批准**

**IEEE\_SA标准委员会**

**2011年5月5批准**

**美国国家标准协会**

**摘要**：本标准对EME2-AES和XCB-AES宽块加密与相关数据(EAD)模式的NIST AES分组密码进行了描述，并提供了使用指导和测试向量。以大量明文输入与密文输出的宽块加密算法作为一个独立的分组密码，但其内部使用的是窄块加密【一种高级加密标准(AES)】。这些加密模式是面向不提供身份验证的随机存取存储设备的，但是这些加密模式需要减少这些存储设备被潜在攻击的粒度。

关键字：静止数据安全，加密，EAD（加密与相关数据），EME2（加密混合加密卷的操作模式），XCB（扩展码的操作模式），IEEE 1619.2，安全，存储

目录

[1 概述 3](#_Toc360519401)

[1.1范围 3](#_Toc360519402)

[1.2用途 3](#_Toc360519403)

[2 标准参考 3](#_Toc360519404)

[3 定义、首字母缩写词和缩写 3](#_Toc360519405)

[3.1 定义 3](#_Toc360519406)

[3.2 关键字 3](#_Toc360519407)

[3.3 字头字和缩写 4](#_Toc360519408)

[4 数学约定 4](#_Toc360519409)

[5 宽块加密算法 5](#_Toc360519410)

[5.1 关联数据加密 5](#_Toc360519411)

[5.2 EME2-AES算法 6](#_Toc360519412)

[5.3 XCB-AES 算法 11](#_Toc360519413)

[6. 合规性 15](#_Toc360519414)

[附录A 16](#_Toc360519415)

[附录B 17](#_Toc360519416)

[附录C 18](#_Toc360519417)

**宽块共享存储媒体加密的IEEE标准**

重要注意事项：这个标准是不是为了确保可靠，安全，卫生，环保。确定适当的可靠，安全，环保，健康的做法或监管规定的标准由实施者负责。

该IEEE文档可以使用，但必须要遵守重要注意事项和法律免责声明。这些注意事项和免责声明出现在包含此文件的所有出版物中，可能会在标题下发现为“重要通知”或“关于IEEE文档的重要通告和免责声明。”它们可以通过向IEEE请求获得或通过浏览以下网址得到<http://standards.ieee.org/IPR/disclaimers.html>。

## 1 概述

### 1.1范围

本标准规定了对随机存取存储设备中的数据进行加密的体系结构，其面向使用宽加密块的大小为512字节及以上的应用程序。

### 1.2用途

本标准规定了媒体的安全性和启用组件的体系结构。宽加密块在攻击者已经重复访问密码通信或密文，或者能够执行流量分析的数据访问模式的环境下适用。标准是面向固定大小没有数据扩展的加密块，但其预计一个可选的数据扩展模式，以用来抵御涉及数据篡改的攻击。

## 2 标准参考

以下参考文档对于本文档的应用是必不可少的（例如，这些文档必须被理解与使用，因此每个在文本中被引用的参考文档和其与这份文档的关系是要被解释的）。对于过时的参考文献，仅提供版本的引用。对于未标日期的参考文献，提供最新引用版本（包括任何的修正与勘误）。

NIST联邦信息处理标准(FIPS 197)、高级加密标准(AES)。

2001年11月

NIST特殊出版800 - 38(NIST SP 800 - 38 - a)，对分组密码模式的操作方法和技术的一个建议。

## 3 定义、首字母缩写词和缩写

### 3.1 定义

出于本文的目的,运用了下列术语和定义。

IEEE标准

词典：词汇的术语和定义，应参照本节中定义的术语。

关联数据：与明文相关联但不需要加密的数据。输入关联的数据表征明文。在静态数据加密算法中，关联数据通常被称为调整值。

EAD（关联数据加密）：一个加密算法由两部分组成：一个用来加密明文和相关数据与私钥的程序，和一个用来解密密文和相同的相关数据与私钥的程序。

### 3.2 关键字

can:显示功能（等同于能够） 。

required: 参见: shall。

may:在这个标准内被允许的一套动作（等同于被允许）

must: 只用来形容一个不可避免的情况，并不构成符合本标准的要求。

shall:表示一项必须严格遵循的强制性规定，以符合该标准而且不允许偏差（应等于必须）。

shall not: 表示这个标准绝对禁止的短语。

should:表示在几种可能性中，有一种是作为特别适合而推荐使用的，但没有提到或是排除其它的可能性；或是一种首选的但不是必须要求的动作；或 （在某否定形式中）某此动作是被弃用的，但不是被禁止的（应当等同于建议）。

### 3.3 字头字和缩写

AES 高级加密标准（参见NISF FIPS 1973）

CTR 计数器（如AES计数器模式操作）

FIPS 联邦信息处理标准

GF  伽罗瓦域(参见Menezes et al. [B4]4)

LBA 逻辑块地址

GCM 伽罗瓦​​/计数器模式的认证加密

## 4 数学约定

本标准采用十进制，二进制，十六进制数字。为了清楚起见，通常用十进制数计数，用二进制或十六进制的数字描述位组合模式或原始二进制数据。

二进制数是由一个或多个二进制数位组成的数据，用2作为下标记。例如十进制数26的二进制表示形式为000110102 。

十六进制数是由进一个或多个十六进数位组成的数据，并加上0x作为其前缀。例如十进制数135的十六进制表示形式为0x87。

在由位组成的数字中字符X被表示成#X。

在这个标准中用到的过程如下：

⎯ AES-Enc(K, X)，AES分组密码加密 (参见 NIST FIPS 197)， 输入明文X与密钥K返回其对应的密文。

⎯ AES-Dec(K, X), AES分组密码解密，输入密文X与密钥K返回其对应的明文 。 ⎯ mult-by-alpha(X), 一个16字节值X ∈ GF (2128)与α相乘的乘法，α是一个在有限域GF（2128）的本原元素，该公式在5.2.1.节中定义。

⎯ X · Y, 在域GF(2128）上两个元素相乘，X，Y∈ GF (2128)，此公式定义在5.3.3节。

⎯ X ⊕ Y, 在域GF(2128）上两个元素按位作异或运算，X，Y∈ GF (2128)。

⎯ bitlength(X) 返回一个8字节的串，此串包含非负整数，该整数记录了输入X的比特位总数，其中最重要的是首位，最不重要的是末位。表达式0n表示n个0比特位，表达式A|B表示两个位串的连接。

⎯ bytelength(X) 返回输入X中的字节总数，以整数的形式记录。

⎯ msbt(X) 返回输入X初始的t位。位串从最重要位（即首位）开始索引，因此X的0位是最重要的位。X[a:b]表示从a开始到b的字串。

## 5 宽块加密算法

### 5.1 关联数据加密

#### 5.1.1 数据单元与关联数据

本标准规定保持长度不变的加密和适合静态数据加密的关联数据算法。关联数据算法包括加密程序与解密程序。加密程序接受三个输入如下：

⎯ 私钥

⎯ 明文

⎯ 关联数据

它返回一个单独的密文文本值。其中每个输入是一字节的字符串。

这些程序的安全性是依赖与私钥的，私钥包括一些随机数或伪随机数，这些数攻击者是无法预测的。每个EAD算法接受一个固定长度的密钥，但是不同的算法密钥长度可能不同。

纯文本的输入中包含要进行加密的数据。在一个特定的密钥范围，明文可能被划分成具有不同长度的数据单元。EAD算法定义了可处理明文长度的范围。要想实施兼容性应保持数据单元的大小一致在一个密钥的范围内。如果在一个密钥范围内一个执行允许可变长度的数据单元，那么实现的设计应该是这样的，它能够明确确定每个数据单元的长度，在没有使用潜在被攻击方控制的数据的情况下。兼容的实现应当针对不同的数据单元使用不同的关联数据。

关联数据的输入包含与明文相关的数据，但是，它并不需要加密。此输入数据的选择被更详细地描述如下。在一个特定的密钥范围，相关的数据单元可以具有不同的长度。

密文由加密程序返回，其长度是与明文相同的。

解密程序接受三个输入如下：

⎯ 私钥

⎯ 密文

⎯ 关联数据值

它返回一个单独的明文值。解密程序是加密程序的逆过程，更具体的说，如果加密的明文P和密钥K以及相关数A产生密文文本C，然后密文C和密钥K以及相关数A可以产生明文文本P。

在加密和解密时，一个符合标准的实现当以明文形式存在时，它应包括仅有可用信息在关联数据中。

相关数据的输入应确定明文。这是因为相同的明文用相同的密钥，但是不同的关联数据值，在不同时间进行加密时，结果是两个不同的密文文本值。因此，不同的关联数据值的使用对攻击者而言隐藏了纯文本的平等性。

#### 5.1.2使用EAD算法来保护一个数据块中的字符串

EAD可以用来保护数据块中的字符串，诸如那些在数据存储磁盘中的数据。在此应用中，关联数据输入到加密和解密程序时应该包含当前在执行的程序的逻辑块索引。当此信息被包含在关联数据中时，在这种情况下，两个不同的数据块包含相同的明文值对攻击者来说是透明的。图一显示了EAD如何执行加密与解密的示例。

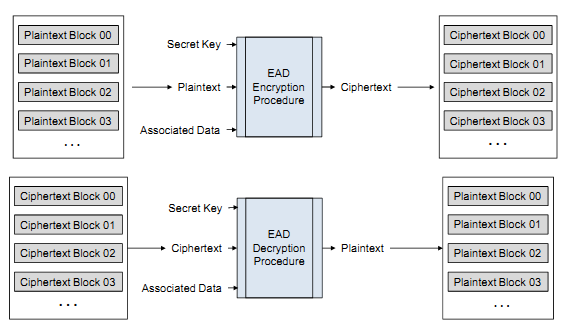


图1 EAD对设备块的加密与解密

如果多个磁盘的保护仅仅使用一个单一的私钥，那么关联数据的输入应包含逻辑块索引与另一个可识别的参数，该参数对每个磁盘来说是唯一可区分的。当此信息被包含在关联数据中时，在这种情况下，两个不同磁盘中的数据块包含相同的明文值对攻击者来说是透明的。

### 5.2 EME2-AES算法

#### 5.2.1 mult-by-alpha程序

在下面的小节中描述了加解密程序，使用了mult-by-alpha(X)程序，该程序通过一个16字节的值X与一个在GF(2128)域中的原始α元素相乘。输入首先被转换到字节数组X[i]中，i = 0, 1, ... , 15，X[0]是字节数组的首元素。

表1定义了由α作用的乘法，或在数学上是等效的程序。

表1 mult-by-alpha(X)程序

// compute mult-by-alpha(X), where X is a 16-byte value

//

// X[i] denotes the ith byte of X, and indexing starts at 0

//

// i is an integer used in loops

//

// Y[i] denotes the ith byte of the output Y, and indexing starts at 0

1. for i = 0 to 15 do

2. Y[i] = 2\*X[i] mod 256

3. if (i>0 and X[i-1]>127) then Y[i]=Y[i]+1

4. end-for

5. if (X[15] > 127) then Y[0] = Y[0] ⊕ 0x87

6. return Y

从概念上讲，此程序逐字节每次左移一位。另外，如果第15个（最后一个）字节移位结果产生进位，则将一个特殊的值（十六进制数0x87）与第一个字节进行异或。这个值是来自于伽罗瓦域的模数（多项式X128+ X7+ X2+ X +1）。

#### 5.2.2 EME2-AES 加密

等式（1）描述了加密过程：

C = EME2-AES-Enc(Key, T, P) (1)

参数详解

Key是48或64字节的EME2-AES密钥

T是相关数，任意长字节（大于等于0）

P是明文，其长度大于等16字节

C是来自运算后的密文，与P的长度一致

对EME2-AES加密过程输入的解析如下：

⎯ 密钥被分成三部分，Key = KAD | KECB | KAES, KAD （相关数密钥）组成了前16字节，KECB （ECB 验证密钥）组成紧接着的16字节， KAES （AES加/解密密钥）组成剩下的16或32字节。

⎯ 如果非空，相关数T被分成一系列的块 T = T1 | T2 | … | Tr，而T1, T2, …, Tr–1都是长度为16字节的块，Tr 的长度则为1到16字节不等。

⎯ 明文P被分成一系列块P = P1 | P2 | … | Pm，而P1, P2, …, Pm–1 都是长度为16字节的块，Pm的长度则为1到16字节不等。

关联数作为密文计算的一部分，要有序的经过表2中的程序或是等效的数学过程处理。

表2— 处理相关数T的函数H

// Function H(KAES, KAD, T = (T1 | ... | Tr-1 | Tr) ) :

1. if bytelength(T) == 0 then

2. T\_star = AES-Enc(KAES, KAD)

3. else

4. KAD = mult-by-alpha(KAD)

5. for j = 1 to r-1

6. TTj = AES-Enc(KAES, KAD ⊕ Tj) ⊕ KAD

7. KAD = mult-by-alpha(KAD)

8. next

9. if bytelength(Tr) < 16 then

10. Tr = Tr | 0x80 | 0x00 | ... // pad Tr to 16 bytes, 0x80 followed by 0’s

11. KAD = mult-by-alpha(KAD)

12. endif

13. TTr = AES-Enc(kAES, KAD ⊕ Tr) ⊕ KAD

14. T\_star = TT1 ⊕ TT2 ⊕ … ⊕ TTr

15. endif

16. return T\_star // return the 16 byte value T\_star

符合标准的实现应按序的执行表3中的程序或是说等效的数学过程来计算密文。

表3 —EME2-AES 加密程序

// EME2-AES-Enc(kAES, KECB, KAD, T, P = (P1 | ... | Pm-1 | Pm) ):

1. T\_star = H(kAES, KAD, T) // Process the associated data

2. if bytelength(Pm) == 16 then

3. lastFull = m

4. else

5. lastFull = m-1

6. PPPm = Pm | 0x80 | 0x00 | ... // Pad Pm to 16 bytes, 0x80 followed by 0’s

7. endif

// First ECB pass

8. L = KECB

9. for j = 1 to lastFull

10. PPPj = AES-Enc(kAES, L ⊕ Pj)

11. L = mult-by-alpha(L)

12. next

// Intermediate mixing

13. MP = PPP1 ⊕ PPP2 ⊕ ... ⊕ PPPm ⊕ T\_star

14. if bytelength(Pm) < 16 then

15. MM = AES-Enc(kAES, MP)

16. MC = MC1 = AES-Enc(kAES, MM)

17. else

18. MC = MC1 = AES-Enc(kAES, MP)

19. endif

20. M = M1 = MP ⊕ MC

21. for j = 2 to lastFull

22. if (j-1 mod 128 > 0) then // use the current mask M

23. M = mult-by-alpha(M)

24. CCCj = PPPj ⊕ M

25. else // calculate a new mask M

26. MP = PPPi ⊕ M1

27. MC = AES-Enc(kAES, MP)

28. M = MP ⊕ MC

29. CCC = MC ⊕ M

30. endif

31. next

32. if lastFull < m then

33. Cm = Pm ⊕ (MM truncated to bytelength(Pm) bytes)

34. CCCm = Cm | 0x80 | 0x00 | ... // Pad Cm to 16 bytes, 0x80 followed by 0’s

35. endif

36. CCC1 = MC1 ⊕ CCC2 ⊕ ... ⊕ CCCm ⊕ T\_star

// Second ECB Pass

37. L = KECB

38. for j = 1 to lastFull

39. Cj = AES-Enc(kAES, CCCj) ⊕ L

40. L = mult-by-alpha(L)

41. next

42. return C = (C1 | ... | Cm-1 | Cm)

图2是EME2-AES加密过程的说明（针对130个完整块与一个部分块）

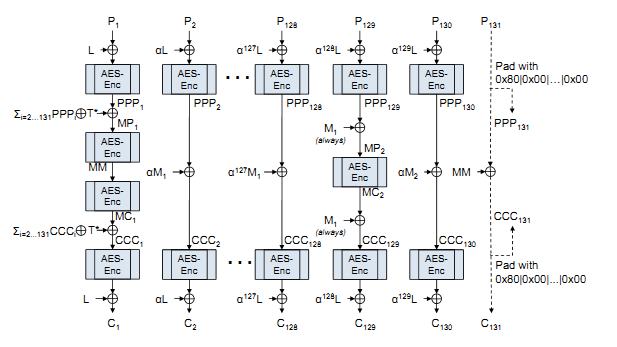


图2--EME2-AES加密过程说明

#### 5.2.3 EME2-AES 解密

等式（2）描述EME2-AES解密过程：

P = EME2-AES-Dec(Key, T, C) (2)

参数详解

Key是48或64字节的EME2-AES密钥

T是相关数，任意长字节（大于等于0）

C是密文，其长度大于等16字节

P是来自运算后的明文，与C的长度一致

对EME2-AES解密过程输入的解析如下：

⎯ 密钥被分成三部分，Key = KAD | KECB | KAES, KAD （相关数密钥）组成了前16字节，KECB （ECB 验证密钥）组成紧接着的16字节， KAES （AES加/解密密钥）组成剩下的16或32字节。

⎯ 如果非空，相关数T被分成一系列的块 T = T1 | T2 | … | Tr，而T1, T2, …, Tr–1都是长度为16字节的块，Tr 的长度则为1到16字节不等。

⎯ 密文C被分成一系列块C = C1 | C2 | … | Cm，而C1, C2, …, Cm-1 f都是长度为16字节的块，Cm的长度则为1到16字节不等。

关联数作为密文计算的一部分，要有序的经过表2中的程序或是等效的数学过程处理。

符合标准的实现应按序的执行表4中的程序或是说等效的数学过程来计算明文。

注意—加密过程与解密过程唯一的不同是在表三中的AES-Enc的调用被替换成了AES-Dec的调用。函数H的定义是在表2中的。5

表 4 —EME2-AES解密程序

// EME2-AES-Dec(KAES, KECB, KAD, T, C = (C1 | ... | Cm-1 | Cm) ):

1. T\_star = H(KAES, KAD, T) // Process the associated data

2. if bytelength(Cm) == 16 then

3. lastFull = m

4. else

5. lastFull = m-1

6. CCCm = Cm | 0x80 | 0x00 | ... // Pad Cm to 16 bytes, 0x80 followed by 0’s

7. endif

// First ECB pass

8. L = KECB

9. for j = 1 to lastFull

10. CCCj = AES-Enc(KAES, L ⊕ Cj)

11. L = mult-by-alpha(L)

12. next

// Intermediate mixing

13. MC = CCC1 ⊕ CCC2 ⊕ ... ⊕ CCCm ⊕ T\_star

14. if bytelength(Cm) < 16 then

15. MM = AES-Dec(KAES, MC)

16. MP = MP1 = AES-Dec(KAES, MM)

17. else

18. MP = MP1 = AES-Dec(KAES, MC)

19. endif

20. M = M1 = MP ⊕ MC

21. for j = 2 to lastFull

22. if (j-1 mod 128 > 0) then // use the current mask M

23. M = mult-by-alpha(M)

24. PPPj = CCCj ⊕ M

25. else // calculate a new mask M

26. MC = CCCj ⊕ M1

27. MP = AES-Dec(KAES, MC)

28. M = MP ⊕ MC

29. PPPj = MP ⊕ M1

30. endif

31. next

32. if lastFull < m then

33. Pm = Cm ⊕ (MM truncated to bytelength(Cm) bytes)

34. PPPm = Pm | 0x80 | 0x00 | ... // Pad Pm to 16 bytes, 0x80 followed by 0’s

35. endif

36. PPP1 = MP1 ⊕ PPP2 ⊕ ... ⊕ PPPm ⊕ T\_star

// Second ECB Pass

37. L = KECB

38. for j = 1 to lastFull

39. Pj = AES-Dec(KAES, PPPj) ⊕ L

40. L = mult-by-alpha(L)

41. next

42. return P = (P1 ... Pm-1 Pm)

### 5.3 XCB-AES 算法

#### 5.3.1 XCB-AES概述

XCB-AES算法使用的AES分组加密程序中的AES-Enc和AES-Dec过程和散列函数H与伪随机数函数C。变量H，Ke，Kd和 Kc来自于K，是在CTR（参见NIST SP 800-38A）模式下运行AES-Enc加密过程必不可少的。符合标准的实现在加密与解密程序计算过程中也许会存储这些值，用以权衡存储和计算负载。

#### 5.3.2 函数C

设k是供给AES过程密钥（16或32个字节）的大小。

函数C：{0, 255}k × {0, 255}16 → {0, 255}l，输出长度l(以字节为单位)(0 <= l <= 236)，在CTR模式下运行AES-Enc过程将产生一个任意长度的输出，使用16字节的输入作为计数器的初始值。它的定义如下：

c(K, W ,l) = AES-Enc(K, W) | AES-Enc(K, incr(W))| . . . | msbt (AES-Enc(K, incrn-1(W)))

输出长度l作为显示定义的精确参数；上取整是输出中以16字节为单位的块的数量，并且t = l mod 16是剩下的块的数量。

incr: {0, 255}16 → {0, 255}16 的功能是自增用来产生连续的计数值。此函数将其参数的最右边的4个字节作为一个非负的整数，有最少意义的字节也在右边，这个值是递增模232的。更正式的讲，

incr(X) = X[0:95] | (X[96:127] + 1 mod 232 )

位字符串隐式转换为整数。

#### 5.3.3 GF(2128) 域上的乘法

两个16字节数X， Y ∈ GF(2128)的乘法操作等同于数学上的位向量运算。结果Z = X · Y仍在域GF(2128)上。输入值首先被转换成字节数组X[i]，i = 0,1,...,15，其中最重要的字节是X[0]，最不重要的字节是X[15]。

在有限域GF（2128）上的乘法操作定义于表5中，或通过一个数学上等效的程序来表示：

表5-- GF(2128) 域上的乘法程序

// mult-GF(X, Y)

// compute Z = X \* Y, where X, Y, Z are elements of GF(2^128) using a

// byte based algorithm

//

// here A[i] denotes the ith byte of A, and indexing starts at 0

//

// i and j are integers used in loops

// mask, b, and msb are unsigned integers

/\* initialize z to the all-zero element \*/

7. for i = 0 to 15

8. z[i] = 0

9. next

10. for i=0 to 15 /\* loop over bytes of y \*/

11. mask = 128

12. while mask > 0 /\* loop over bits in byte \*/

/\* if masked bit is set, add in terms from x \*/

13. b = y[i] & mask

14. if b != 0

15. for j=0 to 15

16. set z[j] to z[j] ^ x[j]

17. next

18. endif

19. mask = mask / 2;

/\* now execute LFSR shift on x \*/

20. set msb to x[15] & 0x01

21. for j=15 down to 1

22. set b to x[j-1] & 0x01

23. set x[j] to (x[j] / 2) + b \* 128

24. next

25. set x[0] to x[0] / 2

26. if msb == 1

27. set x[0] to x[0] ^ 0xe1

28. endif

29. endwhile

30. next

31. return z

注意—在表5，乘法操作运用了特别元素R = 111000012|0120 (0xe1 | 0x00 | … | 0x00)。

#### 5.3.4 h1与h2过程

过程h1与h2是依据潜在散列函数而定义的，定义如下：

h1 (H, Z, B) = h(H, 0128 | Z, B | 0padlen1(#B))

h2 (H, Z, B) = h(H, Z | 0128, B | 0padlen2(#B)| bitlength(Z | 0128) | bitlength(B))

过程padlen2(x)返回一个0到127的整数，当加上x时它是一个能被128整除的数。过程padlen1(x)返回padlen2(x) + 128。等式3与等式4用数学语言对其进行了描述：

padlen2(x) = 128 \* ceil(x/128) – x (3)

padlen1(x) = 128 \* (1 + ceil(x/128)) – x = 128 + padlen2(x) (4)

ceil(x)是大于或等于x的最小整数。

过程h：{0, 1}128 × {0, 1}a × {0, 1}c → {0, 1}128 是由 h(H, A, C) = Xm+n+1定义的，其中a与c是在区间[128,239]上的，m是A中以16字节为单位的块的数量，n是C中以16字节为单位的块的数量，变量Xi ∈{0, 1}128 for i = 0,…,m+n+1 定义如下：

Xi = 0 for i = 0

Xi = (Xi−1 ⊕ Ai) · H for i = 1, …, m − 1

Xi = (Xm−1 ⊕ Am) · H for i = m

Xi = (Xi−1 ⊕ Ci−m) · H for i = m + 1, …, m+n−1

Xi = (Xm+n−1 ⊕ Cn) · H for i = m + n

Xi = (Xm+n ⊕ (bitlength(A) | bitlength(C))) · H for i = m + n + 1

让Ai表示16字节为单位的字串A[128\*(i–1): 128\*i–1]，并且让Ci 表示C [128\*(i–1): 128\*i–1]。换句话说，如果这些位串分别以16字节为单位进行分块，Ai 与 Ci是A与C的第i个块（最后的Ai 与 Ci块不满16字节则以0填充）。

注意—本过程同于通用散列函数，通用散列函数作为伽罗瓦/计数器模式（GCM）操作的一部分（参见NIST SP 800-38D [B5]）。它等同于在规范算法4步骤5中的过程，但是请注意，它不同于在GHASH文档中的定义。

#### 5.3.5 XCB-AES 加密

一个m位的块P用 XCB-AES加密程序加密可以仿照等式（5）：

CT ← XCB-AES-Enc(K, P, Z) (5)

参数详解

K 是16或32字节的XCB-AES密钥

P 是m比特位的明文 m ∈ [128, 232]，并且是8的整数倍

Z 是相关数的值，任意字节长（大于等于0字节）

CT 是运算后的密文，与P的长度相同

符合标准的实现应按序的执行以下步骤或是说等效的数学过程来计算密文（参见图3）。

H ← AES-Enc(K, 0128)

Ke ← msbk(AES-Enc(K, 0125|0012)| AES-Enc(K, 0125|0102))

Kd ← msbk(AES-Enc(K, 0125|0112)| AES-Enc(K, 0125|1002))

Kc ← msbk(AES-Enc(K, 0125|1012)| AES-Enc(K, 0125|1102))

A ← P[m–128: m–1]

B ← P[0: m–127]

C ← AES-Enc(Ke, A)

D ← C ⊕ h1(H, Z, B)

E ← B ⊕ c(Kc, D, #B)

F ← D ⊕ h2(H, Z, E)

G ← AES-Dec(Kd, F)

CT ← E|G

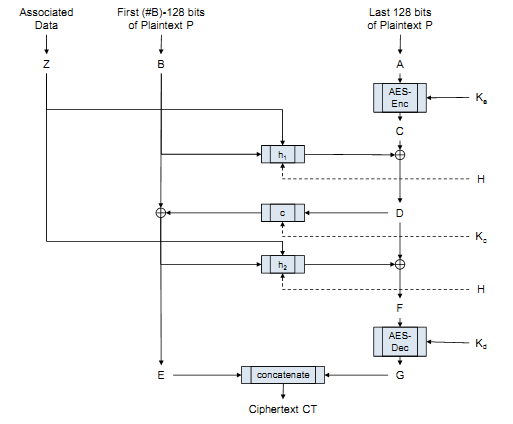


图3-- XCB-AES 加密说明

#### 5.3.6 XCB-AES 解密

一个m位的块CT用 XCB-AES解密程序解密可以仿照等式（6）：

P ← XCB-AES-Dec(K, CT, Z) (6)

参数详解

K 是16或32字节的XCB-AES密钥

CT 是m比特位的密文 m ∈ [128, 232]，并且是8的整数倍

Z 是相关数的值，任意字节长（大于等于0字节）

P 是运算后的明文，与CT的长度相同

符合标准的实现应按序的执行以下步骤或是说等效的数学过程来计算明文（参见图4）。

H ← AES-Enc(K, 0128)

Ke ← msbk(AES-Enc(K, 0125|0012)| AES-Enc(K, 0125|0102))

Kd ← msbk(AES-Enc(K, 0125|0112)| AES-Enc(K, 0125|1002))

Kc ← msbk(AES-Enc(K, 0125|1012)| AES-Enc(K, 0125|1102))

G ← CT[m–128: m–1]

E ← CT[0: m–127]

F ← AES-Enc(Kd, G)

D ← F ⊕ h2(H, Z, E)

B ← E ⊕ c(Kc, D, #E)

C ← D ⊕ h1(H, Z, B)

A ← AES-Dec(Ke, C)

P ← B|A

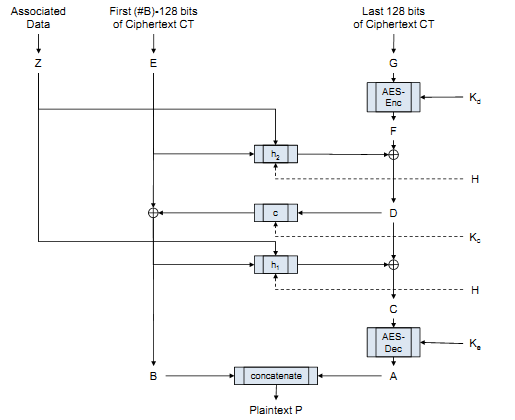


图4-- XCB-AES 解密说明

## 6. 合规性

在5.2.2和5 2 3中描述了EME2-AES的加密和解密过程，它利用48字节或是64字节密钥的AES作为基本的构建快。EME2-AES--128使用48字节密钥，EME2-AES - 256使用一个64字节的密钥。

在5.3.3和5.3.6中描述了XCB-AES的加密和解密过程，它利用16字节或是32字节密钥的AES作为基本的构建快。XCB-AES --128使用16字节密钥，XCB-AES - 256使用一个32字节的密钥。

一个加解密算法实现符合本标准并且满足所有的要求，那么它的加密或解密程序至少有一个或两个以下算法:

⎯EME2-AES-128

⎯EME2-AES-256

⎯XCB-AES-128

⎯XCB-AES-256

## 附录A

参考文献

[B1] Halevi, S., “EME\*: extending EME to handle arbitrary-length messages with associated data,” INDOCRYPT 2004, Lecture Notes in Computer Science, vol. 3348, pp. 315–327. Springer-Verlag, 2004.

[B2] IEEE Std 1619TM-2007, IEEE Standard for Cryptographic Protection of Data on Block-OrientedStorage Devices. 6, 7

[B3] McGrew, D., and Fluhrer, S., “The Security of the Extended Codebook (XCB) Mode of Operation,” Proceedings of the 14th Annual Workshop on Selected Areas in Cryptography, Springer-Verlag, 2007.

[B4] Menezes, A. J., Van Oorschot, P. C., Vanstone, S. A., Handbook of Applied Cryptography, CRCPress, October 1996.

[B5] NIST Special Publication 800-38D (NIST SP 800-38D), Recommendation for Block Cipher Modesof Operation: Galois/Counter Mode (GCM) and GMAC.

## 附录B

实施指南

B.1安全注意事项

长度保留的EAD的安全目标大致描述如下:首先,对于固定明文长度和任何特定与数据有关联的值,EAD方案应该就像分组加密一样，并且使密文等于明文长度。即,通过分析加密和解密的实例,从一个随机序列及其它的逆区分它们应该是不可行的。此外,改变明文长度或相关的数据长度应该看起来使用了一个不同、独立的密钥。

更准确地说,安全模型规定一个攻击者可以得到一个未知密钥情况下明文或相关数据的密文，也同样能得到密文或相关数据对在同一未知的密钥下的明文。敌手是能够自己地选择明文、密文,和相关的数据值。安全模型要求攻击者无法区分以下两种情况:

a) 查询确实是采用固定的密钥响应的。

b) 查询被一组随机排列响应，不同的数据或明文长度得到不同的随机组合

特别地，这个安全要求指出, 使用数据相关的值对明文进行加密，然后使用随机的与数据域相关的一个不同的值对加密结果进行解密.【因为这就是上面情况b)所说的】

EME2-AES和XCB-AES在这个模型上已被证明是安全的,它是基于以下假设： 随机排列的AES分组加密(见NIST FIPS 197)是不区分的(并限制相同密钥的调用次数,)。

这个安全模型假设加密/解密程序从来没有应用到与密钥直接相关的明文或密文值。特别是这个模型没有考虑这样一种情况,加密程序用来加密他自己的密钥。

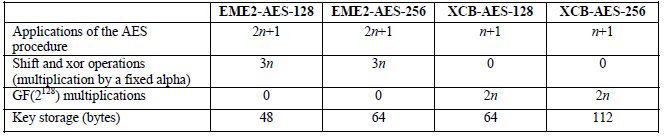
B.2 EME2-AES和XCB-AES的性能特征

这个文档指定了两种不同的EAD算法:EME2-AES和XCB-AES。同时实现一个具有大致相似的安全属性的tweakable伪随机置换和对数据大小有类似的界限的数据可以使用一个单密钥进行的安全加密。

然而,在选择算法,实现人员可能需要考虑其他因素而不仅仅是安全级别，如软件性能或硬件实现的大小。

表B.1显示了两种算法当:数据块由n个16字节的块组成时计算复杂度的相助差异

T表 B.1—EME2-AES 和 XCB-AES的计算复杂度差异



B.3 逻辑块级磁盘加密的应用

在基于这个标准的逻辑块级磁盘加密的应用中：

a) 数据单元通常对应于一个逻辑块,

b) 对应的范围中的第一个数据单元相关联的数据值通常对应于与该逻辑块相关联的范围内的逻辑块地址（LBA）。

相关的数据应该是连续分配的,从一个任意非负整数开始。当使用AES加密一个相关的数据值,相关的数据值是首先转换成小端字节序字符串。例如关联数据值0 x123456789a对应字节字符串0x9a, 0x78, 0x56, 0x34, 0x12。

一个符合标准的实现不应该使用一个密钥对不止一个密钥范围的存储数据进行加密。

注意：有上面限制的原因是，加密多个块用同一密钥以及相同的关联数据值引入了安全漏洞，这些漏洞可能被用于攻击系统，特别的密钥重放攻击。

## 附录C

(大量信息)

测试向量

C.1 编码

测试向量以C数组的形式存储方便在C编码中执行。每个测试向量用一对括号表示，括号中是其字节数据。所使用的C结构体在表C.1中。

表C.1—用来表示测试向量的C结构体

typedef struct test\_case\_t {

uint8\_t key[64]; /\* holds AES keys of any size (16, 24, 32, 64) \*/

uint8\_t bytes\_in\_key;

uint8\_t plaintext[TEST\_BUF\_LEN];

unsigned int plaintext\_len;

uint8\_t assoc\_data[TEST\_BUF\_LEN];

unsigned int assoc\_data\_len;

uint8\_t ciphertext[TEST\_BUF\_LEN];

struct test\_case\_t \*next;

} test\_case\_t;

C.2-- EME2-AES测试向量

表C.2显示10个测试向量，案例1到案例9使用明文的不同组合、密钥长度与关联数长度测试了EME2-AES。

表C.2-- EME2-AES测试案例

test\_case\_t case1 = {

/\* key \*/

{

0xd6, 0xc2, 0xb8, 0x55, 0x32, 0xb0, 0x2e, 0xec,

0x5a, 0x0e, 0x7e, 0xfc, 0x1a, 0x31, 0xdb, 0xef,

0x2f, 0x4e, 0xcf, 0x01, 0xeb, 0x2a, 0xfd, 0x5d,

0xed, 0x4e, 0x71, 0x77, 0xc0, 0xd4, 0x1e, 0x07,

0x45, 0x20, 0x78, 0x6f, 0x13, 0xef, 0x99, 0xb1,

0xe6, 0x2a, 0x98, 0xd2, 0x5b, 0x6e, 0xc5, 0x16,

0x8d, 0xcf, 0xe3, 0xb4, 0x53, 0xb9, 0x68, 0xc5,

0x4f, 0x73, 0x62, 0xf2, 0xa4, 0x89, 0x19, 0x23,

},

/\* bytes in key \*/

64,

/\* plaintext \*/

{

0x18, 0x7d, 0xdd, 0x99, 0x8c, 0x75, 0xb5, 0x50,

0xf8, 0x32, 0x94, 0x62, 0x77, 0x2a, 0xc0, 0xd6,

},

/\* bytes in plaintext \*/

16,

/\* associated data \*/

{

},

/\* bytes in associated data \*/

0,

/\* ciphertext \*/

{

0x60, 0x99, 0x53, 0xbc, 0x9a, 0x86, 0xf7, 0x1a,

0xee, 0x0c, 0xed, 0x2e, 0xee, 0x7f, 0x03, 0xdf,

},

&case4

};

test\_case\_t case2 = {

/\* key \*/

{

0x36, 0x7b, 0x9c, 0x49, 0xdd, 0xf2, 0xfa, 0xde,

0x0b, 0x02, 0x5e, 0x1c, 0x95, 0xbe, 0xb3, 0x7a,

0x5b, 0x1e, 0x6c, 0x42, 0x8d, 0x45, 0xf1, 0x9d,

0xde, 0xe0, 0x63, 0xd2, 0xf5, 0xe9, 0x56, 0x33,

0x9d, 0x15, 0x0e, 0x07, 0x7a, 0xfd, 0xe4, 0xb8,

0x29, 0x53, 0x32, 0x1c, 0x7f, 0x18, 0x0c, 0x2b,

},

/\* bytes in key \*/

48,

/\* plaintext \*/

{

0x53, 0xa3, 0x7f, 0xc1, 0x96, 0xa6, 0xc4, 0xaa,

0xfc, 0x05, 0xee, 0xc2, 0xad, 0xe7, 0x50, 0x1c,

},

/\* bytes in plaintext \*/

16,

/\* associated data \*/

{

0xfb, 0x37, 0xa0, 0x28, 0xd3, 0x4a, 0x2e, 0x2f,

0xc2, 0x11, 0xb7, 0xad, 0x62, 0x88, 0x6a, 0x6a,

0x78, 0xb8, 0x7a, 0xf1,

},

/\* bytes in associated data \*/

20,

/\* ciphertext \*/

{

0x39, 0xbb, 0xae, 0xab, 0x50, 0xc4, 0xa0, 0x62,

0xff, 0x62, 0xe2, 0xc6, 0xa2, 0xbe, 0x52, 0x64,

},

&case1

};

test\_case\_t case3 = {

/\* key \*/

{

0x41, 0x37, 0x1f, 0x79, 0xa2, 0x2b, 0x3c, 0xda,

0x7c, 0x25, 0xb1, 0x4c, 0xe0, 0x3a, 0xdd, 0x54,

0x23, 0x4f, 0xd8, 0xb2, 0xe1, 0xba, 0x9c, 0xc5,

0x74, 0xc4, 0xc0, 0x46, 0xd7, 0x7a, 0x05, 0x9f,

0x0a, 0x57, 0x97, 0xe4, 0x18, 0x21, 0xb6, 0x48,

0x53, 0x23, 0x16, 0x9f, 0xbf, 0x42, 0xe1, 0x27,

},

/\* bytes in key \*/

48,

/\* plaintext \*/

{

0x22, 0x1f, 0xd8, 0x2f, 0x37, 0x81, 0x64, 0x0b,

0xb3, 0xf4, 0x35, 0x76, 0xc8, 0xe3, 0xf8, 0x33,

},

/\* bytes in plaintext \*/

16,

/\* associated data \*/

{

0xed, 0x7b, 0x85, 0x27, 0x2d, 0xbc, 0x00, 0x1f,

0x96, 0x6d, 0xbb, 0xa8, 0x9a, 0x0e, 0xf1, 0x6a,

},

/\* bytes in associated data \*/

16,

/\* ciphertext \*/

{

0xf2, 0x37, 0x8f, 0xe1, 0x98, 0x27, 0xc0, 0xb5,

0xb3, 0xbc, 0xaf, 0xa5, 0x49, 0x11, 0xcb, 0x6b,

},

&case2

};

test\_case\_t case4 = {

/\* key \*/

{

0xfb, 0x7f, 0xfa, 0xa9, 0x0d, 0xa7, 0xfa, 0xc8,

0x8d, 0xc9, 0xc0, 0x7e, 0xdf, 0x92, 0x59, 0xd0,

0xc7, 0xcb, 0xa7, 0x6d, 0x50, 0x54, 0x18, 0xe3,

0xee, 0x2b, 0xf5, 0xa8, 0xd4, 0x16, 0x10, 0xf7,

0xd4, 0xf8, 0xe8, 0x3f, 0xd1, 0x7b, 0x95, 0x3b,

0x21, 0x98, 0x46, 0xba, 0x88, 0x89, 0x2c, 0x68,

},

/\* bytes in key \*/

48,

/\* plaintext \*/

{

0xe7, 0x5e, 0x49, 0x46, 0x20, 0x64, 0x1a, 0x53,

0xe0, 0xaa, 0xbd, 0xc9, 0x3c, 0x72, 0x60, 0x36,

0xc8,

},

/\* bytes in plaintext \*/

17,

/\* associated data \*/

{

0x1e, 0x80, 0xfe, 0xca, 0x90, 0x9d, 0x75, 0x33,

0x0e, 0xb5, 0x76, 0x01, 0xf8, 0x7c, 0x1d, 0xac,

},

/\* bytes in associated data \*/

16,

/\* ciphertext \*/

{

0xaa, 0x01, 0xc6, 0x9d, 0x81, 0xd0, 0x61, 0xa6,

0xf9, 0xa0, 0xda, 0x07, 0x1f, 0xc0, 0x9b, 0xa2,

0x96,

},

&case3

};

test\_case\_t case5 = {

/\* key \*/

{

0xaa, 0xc0, 0xaa, 0xb3, 0x5d, 0x4b, 0x75, 0x62,

0x6b, 0xef, 0x4e, 0x78, 0xde, 0x0c, 0xb1, 0x3e,

0xbc, 0x1d, 0x03, 0x83, 0x68, 0x35, 0x69, 0xad,

0x81, 0x9b, 0x79, 0xf8, 0xa4, 0x7f, 0xfe, 0xe6,

0xe8, 0xdc, 0x58, 0x66, 0x0e, 0xb1, 0xb1, 0x7e,

0xbc, 0x0f, 0xd9, 0x03, 0xed, 0x3c, 0x05, 0x2f,

},

/\* bytes in key \*/

48,

/\* plaintext \*/

{

0x40, 0xc9, 0xec, 0xe1, 0xc6, 0x90, 0x2a, 0x89,

0x0a, 0xd8, 0x78, 0xb2, 0x01, 0x46, 0x02, 0x3e,

0x46, 0x5d, 0x2b, 0xe9,

},

/\* bytes in plaintext \*/

20,

/\* associated data \*/

{

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

},

/\* bytes in associated data \*/

16,

/\* ciphertext \*/

{

0xe5, 0x7c, 0x72, 0x8d, 0xa8, 0x00, 0xc3, 0x64,

0xf8, 0xbe, 0x13, 0xba, 0xc3, 0xe2, 0x93, 0x94,

0xea, 0x68, 0x45, 0x9a,

},

&case4

};

test\_case\_t case6 = {

/\* key \*/

{

0x76, 0x10, 0xff, 0x13, 0xd7, 0xbd, 0x68, 0x4b,

0xcb, 0x87, 0x51, 0x90, 0xb5, 0x4d, 0x7c, 0x4f,

0x60, 0x75, 0x4f, 0x1a, 0x2d, 0xfd, 0x3a, 0xd7,

0x10, 0xa4, 0x8b, 0x9f, 0x1d, 0x9b, 0x63, 0x02,

0xe7, 0xc4, 0x37, 0x14, 0xc6, 0x1c, 0xa6, 0xd6,

0xe6, 0x42, 0xaa, 0xd6, 0x1f, 0xe4, 0x00, 0x29,

},

/\* bytes in key \*/

48,

/\* plaintext \*/

{

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

},

/\* bytes in plaintext \*/

32,

/\* associated data \*/

{

0xfe, 0x81, 0xb7, 0x13, 0xc3, 0x53, 0x03, 0x6e,

0x9f, 0xfc, 0x77, 0x8e, 0x69, 0x61, 0x03, 0x35,

},

/\* bytes in associated data \*/

16,

/\* ciphertext \*/

{

0xda, 0xbb, 0x71, 0x9b, 0xa8, 0x3f, 0xa2, 0x29,

0xdc, 0x7f, 0x90, 0xe8, 0x30, 0x9d, 0xb3, 0x7c,

0x40, 0x5e, 0x78, 0x14, 0xaf, 0x6c, 0x37, 0xed,

0xf0, 0xa3, 0x5d, 0x6e, 0xef, 0x89, 0x90, 0x54,

},

&case5

};

test\_case\_t case7 = {

/\* key \*/

{

0xee, 0x83, 0xbb, 0xa4, 0x55, 0x5b, 0xe9, 0xe8,

0x0f, 0x15, 0xed, 0xeb, 0x5b, 0x43, 0xc5, 0x31,

0x41, 0xd4, 0xa5, 0x9c, 0x9e, 0x6c, 0x92, 0xce,

0x12, 0x3e, 0x3f, 0xd3, 0x1d, 0x5d, 0xc3, 0xd7,

0x34, 0xa9, 0x06, 0xe1, 0x1c, 0xe9, 0x1f, 0x64,

0x98, 0x33, 0x62, 0x92, 0x86, 0x0b, 0xd4, 0x4e,

},

/\* bytes in key \*/

48,

/\* plaintext \*/

{

0x67, 0x0b, 0xd1, 0xae, 0xa0, 0x12, 0xd2, 0x05,

0x9a, 0xbb, 0xe1, 0x97, 0x36, 0x23, 0x4d, 0x61,

0x0d, 0xe2, 0x0b, 0x94, 0x38, 0xd8, 0x73, 0x34,

0x25, 0x7c, 0x64, 0xdc, 0x07, 0xb6, 0x21, 0xc4,

0xe8, 0x88, 0xcf, 0x19, 0xc5, 0x4f, 0x0e, 0xb4,

0x14, 0xaf, 0xad, 0x0f, 0x1f, 0xf2, 0x40, 0x93,

0x5b, 0xe0, 0x98, 0x96, 0x3e, 0x2f, 0xda, 0x3f,

0x80, 0x57, 0x55, 0x3a, 0xb8, 0x2e, 0x2e, 0xe0,

0x60, 0xdd, 0xe5, 0x5b, 0xcc, 0xef, 0x12, 0xf7,

0x91, 0x2b, 0x24, 0xd7, 0xb6, 0x73, 0x88, 0x1e,

0x7e, 0xc7, 0x84, 0x15, 0xe5, 0xf4, 0xbe, 0x78,

0x66, 0xf6, 0xe3, 0x9f, 0x2d, 0x2d, 0xc7, 0x81,

0x28, 0xe1, 0x62, 0x57, 0x80, 0x2f, 0x9f, 0xc9,

0x69, 0x01, 0x66, 0xc5, 0xb0, 0x48, 0x05, 0x18,

0x43, 0x1d, 0xa9, 0x8c, 0x9d, 0x75, 0x74, 0x81,

0x67, 0x9a, 0x39, 0xfd, 0xa6, 0xff, 0x86, 0xce,

0xdb, 0x60, 0x32, 0xe9, 0xf2, 0x41, 0x82, 0x04,

0xc6, 0x83, 0xc7, 0xe1, 0x4b, 0xfa, 0x61, 0xa3,

0x5d, 0x09, 0xc8, 0xee, 0x27, 0xc6, 0xcd, 0x16,

0xb4, 0x19, 0xc6, 0x13, 0x69, 0x90, 0x90, 0x2c,

0x93, 0x87, 0x51, 0xd9, 0xcd, 0x68, 0xce, 0x0a,

0x87, 0x35, 0xe0, 0x5e, 0x47, 0x0b, 0x1f, 0xa1,

0x15, 0x52, 0x11, 0xb4, 0x36, 0xf2, 0xa4, 0xe0,

0xe5, 0x50, 0x1b, 0x81, 0xce, 0xa9, 0xd6, 0x5e,

0x71, 0xb3, 0x60, 0x79, 0x0e, 0x7e, 0xd1, 0x06,

0x24, 0xf9, 0xcb, 0xb9, 0x4f, 0xe4, 0x78, 0x17,

0x97, 0xaf, 0xa6, 0x5e, 0xee, 0xd8, 0x7c, 0x09,

0x25, 0xc9, 0xe6, 0xe0, 0xbb, 0x7f, 0x70, 0xdf,

0x43, 0x65, 0x6e, 0x7a, 0xfb, 0x4d, 0x26, 0xd0,

0x05, 0xf9, 0x2d, 0x60, 0x86, 0x71, 0x34, 0x27,

0xce, 0xff, 0x68, 0xba, 0x68, 0xfa, 0xb6, 0x8a,

0x5c, 0x65, 0x0e, 0x7e, 0xc5, 0x70, 0x26, 0x48,

0x9f, 0x5a, 0xc5, 0x65, 0x9b, 0xab, 0xb7, 0x49,

0x70, 0x71, 0xfe, 0x9c, 0x54, 0x7f, 0x17, 0x1d,

0xe3, 0x70, 0xe3, 0x60, 0x8d, 0x46, 0xba, 0xfd,

0xc9, 0xf2, 0xf1, 0xa4, 0x96, 0xe6, 0x5d, 0x4a,

0x62, 0x46, 0xdf, 0x3c, 0x8d, 0x6e, 0x6c, 0xeb,

0x81, 0x3c, 0x98, 0x11, 0xee, 0x18, 0xaf, 0x4c,

0x84, 0x15, 0xc6, 0x9f, 0x3d, 0xa7, 0x21, 0x53,

0x78, 0xac, 0xf6, 0x47, 0xab, 0x38, 0x8a, 0xc3,

0x5e, 0xde, 0x5a, 0xe9, 0x6d, 0x85, 0xff, 0xbc,

0x55, 0x86, 0xd8, 0x90, 0x9f, 0x1f, 0x73, 0xca,

0x71, 0x3c, 0xfb, 0x41, 0x58, 0x70, 0xfe, 0xee,

0x72, 0xb2, 0x78, 0x55, 0x5d, 0xfc, 0x5b, 0xed,

0x87, 0xf1, 0x97, 0x0c, 0xda, 0xea, 0x2b, 0x94,

0x9b, 0xea, 0x1c, 0x22, 0xfe, 0x66, 0x6e, 0xe8,

0xd1, 0x77, 0x5a, 0x11, 0xe5, 0xb0, 0xe9, 0xaf,

0x29, 0x3e, 0xa0, 0xb5, 0xa4, 0xc9, 0xf5, 0x0a,

0xa6, 0x48, 0xdf, 0x64, 0xaf, 0xb4, 0x45, 0x13,

0x3d, 0x96, 0x49, 0xf6, 0xfb, 0x79, 0xa3, 0x90,

0x5f, 0xd7, 0x02, 0xcf, 0x81, 0x64, 0x24, 0xf2,

0x64, 0x8f, 0x73, 0x31, 0xe6, 0x9a, 0xf2, 0x8e,

0xf4, 0xae, 0xb6, 0x6e, 0x6e, 0x25, 0x1f, 0x01,

0xc9, 0x31, 0x3b, 0x7e, 0xb5, 0xb4, 0xf7, 0x6a,

0x8f, 0xa7, 0x38, 0xf1, 0x37, 0x3c, 0x14, 0x0d,

0xaf, 0xf4, 0x71, 0x5b, 0xb4, 0x29, 0xf2, 0xe9,

0xcd, 0x1f, 0x72, 0x9a, 0xed, 0x8a, 0xf6, 0xa9,

0xab, 0x09, 0x27, 0x5e, 0x43, 0xeb, 0xee, 0xae,

0xf0, 0x5f, 0x93, 0xb2, 0xd8, 0x06, 0x73, 0xb9,

0x7f, 0x08, 0x71, 0xeb, 0x53, 0xa1, 0x03, 0x72,

0x46, 0x3a, 0x10, 0x85, 0xc1, 0xa3, 0x05, 0x67,

0x08, 0x4b, 0x4b, 0x58, 0xfb, 0x8e, 0x53, 0x91,

0x00, 0xfe, 0x66, 0xcd, 0x2c, 0x2a, 0xd0, 0xbd,

0x0c, 0xd9, 0x7d, 0xf3, 0x3c, 0x10, 0xd9, 0x4c,

},

/\* bytes in plaintext \*/

512,

/\* associated data \*/

{

0x5f, 0x18, 0xe3, 0x6d, 0xee, 0xb7, 0xaf, 0x7d,

0x8e, 0xeb, 0x27, 0x54, 0xc5, 0xf7, 0xd1, 0x34,

},

/\* bytes in associated data \*/

16,

/\* ciphertext \*/

{

0x8b, 0x3a, 0xc4, 0x22, 0x3c, 0x54, 0xd6, 0x0c,

0xbc, 0x6b, 0xc8, 0x3f, 0x76, 0x64, 0x0a, 0xee,

0xb7, 0xa3, 0xe6, 0x0b, 0xe7, 0xaf, 0x3f, 0x51,

0x7e, 0x45, 0x8f, 0xe7, 0x73, 0x19, 0x81, 0xd9,

0x1a, 0x4b, 0xf7, 0xd0, 0x21, 0x1a, 0xb4, 0xf4,

0xaf, 0x64, 0x83, 0x3c, 0x40, 0x9f, 0x5f, 0xa3,

0x34, 0xa5, 0x79, 0xae, 0x31, 0xf8, 0xb4, 0x70,

0x63, 0x9f, 0x25, 0x3b, 0x80, 0x07, 0x9d, 0xde,

0x12, 0xf9, 0x56, 0xd9, 0xd3, 0xa6, 0x7a, 0xc5,

0x5b, 0xca, 0x50, 0xc0, 0xa0, 0x11, 0xe4, 0x3f,

0x56, 0xc1, 0x24, 0x2f, 0x8f, 0x09, 0x16, 0x24,

0x11, 0x82, 0x34, 0x04, 0x18, 0x7f, 0x13, 0x72,

0x62, 0x79, 0x42, 0x90, 0x2f, 0x15, 0xdc, 0xd5,

0x6f, 0xfb, 0xf9, 0xa0, 0xd7, 0x8c, 0xa7, 0xa6,

0xdb, 0x5b, 0x5b, 0x1d, 0x44, 0x65, 0xb1, 0x86,

0xd7, 0xc8, 0x1f, 0x6d, 0x59, 0x49, 0x9b, 0xe3,

0x7f, 0xd9, 0xd8, 0xaf, 0x36, 0xb1, 0x17, 0x57,

0x5b, 0x70, 0xc7, 0x8c, 0x79, 0x72, 0xc8, 0xd9,

0xe6, 0x6d, 0x06, 0x8f, 0x49, 0x8c, 0xdc, 0x54,

0x24, 0xda, 0xc8, 0x66, 0x95, 0x81, 0x7a, 0x87,

0xcb, 0x65, 0x12, 0x81, 0x78, 0x80, 0xa2, 0x9f,

0xc0, 0xbe, 0xa8, 0xa7, 0x52, 0xc9, 0x74, 0xe4,

0x60, 0x49, 0x58, 0x12, 0x94, 0xe7, 0x79, 0xea,

0xcb, 0x97, 0xc2, 0x21, 0xef, 0xa0, 0x5c, 0xe2,

0xb0, 0x3a, 0x2a, 0xc7, 0x54, 0x68, 0x61, 0xab,

0xca, 0x38, 0xc6, 0xa5, 0xa0, 0x16, 0xf8, 0xc7,

0x00, 0x03, 0xe1, 0xb1, 0xe5, 0xad, 0xff, 0x2b,

0x4d, 0x27, 0x5e, 0xdc, 0x74, 0x17, 0x28, 0x72,

0x7b, 0x24, 0x41, 0xe6, 0xbb, 0xc5, 0xdf, 0x36,

0xa9, 0x3f, 0xcf, 0xef, 0x32, 0xbc, 0x4b, 0x24,

0xb0, 0xbe, 0xa8, 0x97, 0x2d, 0x14, 0xf2, 0xba,

0x0d, 0x3c, 0xc0, 0xeb, 0x97, 0x13, 0x46, 0x50,

0xaf, 0x3a, 0x29, 0x13, 0xcb, 0xd6, 0x19, 0x12,

0xdf, 0xcc, 0xb8, 0x21, 0x1d, 0x24, 0x17, 0x8a,

0xa0, 0x17, 0xf0, 0x34, 0x62, 0x18, 0x2f, 0x15,

0x4c, 0x48, 0x50, 0x9e, 0xab, 0x2c, 0xd8, 0x41,

0x8a, 0x96, 0x4e, 0xc8, 0x10, 0x9a, 0xdb, 0xad,

0x5a, 0xe5, 0xe0, 0x86, 0xdf, 0x86, 0x2a, 0x82,

0xaa, 0xfb, 0xeb, 0x92, 0xf0, 0x0a, 0xca, 0x01,

0x36, 0xe0, 0xef, 0x63, 0xf8, 0x64, 0x15, 0xcb,

0x08, 0xf1, 0x84, 0x9b, 0xc1, 0xd5, 0x7e, 0x92,

0xb3, 0x67, 0xeb, 0x8d, 0x91, 0x17, 0x62, 0xec,

0x14, 0xdc, 0x4a, 0x86, 0xb7, 0x51, 0xc9, 0xa1,

0x50, 0x66, 0x94, 0x43, 0x74, 0x6d, 0x03, 0xcd,

0x48, 0x06, 0xeb, 0xbe, 0xc0, 0xf2, 0x21, 0x79,

0xac, 0xad, 0x23, 0x06, 0x0b, 0xca, 0x61, 0xd2,

0xd9, 0xc4, 0xd6, 0x84, 0x19, 0xe4, 0xbf, 0x33,

0xe0, 0x21, 0x3c, 0xbe, 0x6a, 0xc0, 0x80, 0xd1,

0xbf, 0x04, 0x31, 0xd5, 0xe6, 0x1d, 0x34, 0xf8,

0x13, 0x4e, 0x9a, 0xd7, 0xa9, 0xdf, 0x9a, 0x9a,

0x5f, 0xed, 0x6a, 0x34, 0x1e, 0xd0, 0x54, 0x0e,

0x42, 0x7b, 0x79, 0xd9, 0x68, 0x3e, 0xc6, 0x40,

0xfc, 0x5c, 0xc0, 0x3a, 0x95, 0xd7, 0x60, 0x90,

0x19, 0x7d, 0x07, 0x1e, 0x1a, 0x12, 0x04, 0xfe,

0x2f, 0x6d, 0xa9, 0x1c, 0x16, 0xb1, 0xdc, 0x7f,

0x65, 0x3e, 0x4f, 0x7c, 0x27, 0x60, 0x28, 0x58,

0x7a, 0x94, 0xc1, 0x14, 0xd4, 0x03, 0x8d, 0x4a,

0xf8, 0xb8, 0x0f, 0x26, 0x78, 0x95, 0x78, 0x81,

0x5c, 0xbc, 0x50, 0x9f, 0x1a, 0x43, 0xaa, 0x59,

0x33, 0xf5, 0x5d, 0x7d, 0xc9, 0x18, 0x75, 0x13,

0x1d, 0x64, 0x91, 0x31, 0x00, 0x9f, 0x5f, 0x6e,

0x66, 0x26, 0xc9, 0x26, 0x57, 0xf9, 0xf3, 0x9f,

0xa2, 0xef, 0x28, 0xd3, 0x00, 0x9a, 0x14, 0x3f,

0x23, 0x61, 0x20, 0xd6, 0x08, 0x19, 0x74, 0x75,

},

&case6

};

test\_case\_t case8 = {

/\* key \*/

{

0xe2, 0x3e, 0x51, 0x2c, 0xa7, 0x9b, 0x2b, 0x2a,

0x22, 0xc7, 0x47, 0x96, 0x15, 0x53, 0x92, 0x1e,

0x2e, 0x4a, 0x82, 0x7f, 0xd8, 0x0f, 0x93, 0xb7,

0xb3, 0x4a, 0x2b, 0x7b, 0x7d, 0x9b, 0xb3, 0xaa,

0x74, 0x55, 0x4a, 0xe2, 0x02, 0xbc, 0x37, 0x3e,

0x02, 0xe8, 0x73, 0x34, 0x27, 0x42, 0xdb, 0xd6,

},

/\* bytes in key \*/

48,

/\* plaintext \*/

{

0x00, 0x01, 0x02, 0x03, 0x04, 0x05, 0x06, 0x07,

0x08, 0x09, 0x0a, 0x0b, 0x0c, 0x0d, 0x0e, 0x0f,

0x10, 0x11, 0x12, 0x13, 0x14, 0x15, 0x16, 0x17,

0x18, 0x19, 0x1a, 0x1b, 0x1c, 0x1d, 0x1e, 0x1f,

0x20, 0x21, 0x22, 0x23, 0x24, 0x25, 0x26, 0x27,

0x28, 0x29, 0x2a, 0x2b, 0x2c, 0x2d, 0x2e, 0x2f,

0x30, 0x31, 0x32, 0x33, 0x34, 0x35, 0x36, 0x37,

0x38, 0x39, 0x3a, 0x3b, 0x3c, 0x3d, 0x3e, 0x3f,

0x40, 0x41, 0x42, 0x43, 0x44, 0x45, 0x46, 0x47,

0x48, 0x49, 0x4a, 0x4b, 0x4c, 0x4d, 0x4e, 0x4f,

0x50, 0x51, 0x52, 0x53, 0x54, 0x55, 0x56, 0x57,

0x58, 0x59, 0x5a, 0x5b, 0x5c, 0x5d, 0x5e, 0x5f,

0x60, 0x61, 0x62, 0x63, 0x64, 0x65, 0x66, 0x67,

0x68, 0x69, 0x6a, 0x6b, 0x6c, 0x6d, 0x6e, 0x6f,

0x70, 0x71, 0x72, 0x73, 0x74, 0x75, 0x76, 0x77,

0x78, 0x79, 0x7a, 0x7b, 0x7c, 0x7d, 0x7e, 0x7f,

0x80, 0x81, 0x82, 0x83, 0x84, 0x85, 0x86, 0x87,

0x88, 0x89, 0x8a, 0x8b, 0x8c, 0x8d, 0x8e, 0x8f,

0x90, 0x91, 0x92, 0x93, 0x94, 0x95, 0x96, 0x97,

0x98, 0x99, 0x9a, 0x9b, 0x9c, 0x9d, 0x9e, 0x9f,

0xa0, 0xa1, 0xa2, 0xa3, 0xa4, 0xa5, 0xa6, 0xa7,

0xa8, 0xa9, 0xaa, 0xab, 0xac, 0xad, 0xae, 0xaf,

0xb0, 0xb1, 0xb2, 0xb3, 0xb4, 0xb5, 0xb6, 0xb7,

0xb8, 0xb9, 0xba, 0xbb, 0xbc, 0xbd, 0xbe, 0xbf,

0xc0, 0xc1, 0xc2, 0xc3, 0xc4, 0xc5, 0xc6, 0xc7,

0xc8, 0xc9, 0xca, 0xcb, 0xcc, 0xcd, 0xce, 0xcf,

0xd0, 0xd1, 0xd2, 0xd3, 0xd4, 0xd5, 0xd6, 0xd7,

0xd8, 0xd9, 0xda, 0xdb, 0xdc, 0xdd, 0xde, 0xdf,

0xe0, 0xe1, 0xe2, 0xe3, 0xe4, 0xe5, 0xe6, 0xe7,

0xe8, 0xe9, 0xea, 0xeb, 0xec, 0xed, 0xee, 0xef,

0xf0, 0xf1, 0xf2, 0xf3, 0xf4, 0xf5, 0xf6, 0xf7,

0xf8, 0xf9, 0xfa, 0xfb, 0xfc, 0xfd, 0xfe, 0xff,

0x00, 0x01, 0x02, 0x03, 0x04, 0x05, 0x06, 0x07,

0x08, 0x09, 0x0a, 0x0b, 0x0c, 0x0d, 0x0e, 0x0f,

0x10, 0x11, 0x12, 0x13, 0x14, 0x15, 0x16, 0x17,

0x18, 0x19, 0x1a, 0x1b, 0x1c, 0x1d, 0x1e, 0x1f,

0x20, 0x21, 0x22, 0x23, 0x24, 0x25, 0x26, 0x27,

0x28, 0x29, 0x2a, 0x2b, 0x2c, 0x2d, 0x2e, 0x2f,

0x30, 0x31, 0x32, 0x33, 0x34, 0x35, 0x36, 0x37,

0x38, 0x39, 0x3a, 0x3b, 0x3c, 0x3d, 0x3e, 0x3f,

0x40, 0x41, 0x42, 0x43, 0x44, 0x45, 0x46, 0x47,

0x48, 0x49, 0x4a, 0x4b, 0x4c, 0x4d, 0x4e, 0x4f,

0x50, 0x51, 0x52, 0x53, 0x54, 0x55, 0x56, 0x57,

0x58, 0x59, 0x5a, 0x5b, 0x5c, 0x5d, 0x5e, 0x5f,

0x60, 0x61, 0x62, 0x63, 0x64, 0x65, 0x66, 0x67,

0x68, 0x69, 0x6a, 0x6b, 0x6c, 0x6d, 0x6e, 0x6f,

0x70, 0x71, 0x72, 0x73, 0x74, 0x75, 0x76, 0x77,

0x78, 0x79, 0x7a, 0x7b, 0x7c, 0x7d, 0x7e, 0x7f,

0x80, 0x81, 0x82, 0x83, 0x84, 0x85, 0x86, 0x87,

0x88, 0x89, 0x8a, 0x8b, 0x8c, 0x8d, 0x8e, 0x8f,

0x90, 0x91, 0x92, 0x93, 0x94, 0x95, 0x96, 0x97,

0x98, 0x99, 0x9a, 0x9b, 0x9c, 0x9d, 0x9e, 0x9f,

0xa0, 0xa1, 0xa2, 0xa3, 0xa4, 0xa5, 0xa6, 0xa7,

0xa8, 0xa9, 0xaa, 0xab, 0xac, 0xad, 0xae, 0xaf,

0xb0, 0xb1, 0xb2, 0xb3, 0xb4, 0xb5, 0xb6, 0xb7,

0xb8, 0xb9, 0xba, 0xbb, 0xbc, 0xbd, 0xbe, 0xbf,

0xc0, 0xc1, 0xc2, 0xc3, 0xc4, 0xc5, 0xc6, 0xc7,

0xc8, 0xc9, 0xca, 0xcb, 0xcc, 0xcd, 0xce, 0xcf,

0xd0, 0xd1, 0xd2, 0xd3, 0xd4, 0xd5, 0xd6, 0xd7,

0xd8, 0xd9, 0xda, 0xdb, 0xdc, 0xdd, 0xde, 0xdf,

0xe0, 0xe1, 0xe2, 0xe3, 0xe4, 0xe5, 0xe6, 0xe7,

0xe8, 0xe9, 0xea, 0xeb, 0xec, 0xed, 0xee, 0xef,

0xf0, 0xf1, 0xf2, 0xf3, 0xf4, 0xf5, 0xf6, 0xf7,

0xf8, 0xf9, 0xfa, 0xfb, 0xfc, 0xfd, 0xfe, 0xff,

0x00, 0x01, 0x02, 0x03, 0x04, 0x05, 0x06, 0x07,

},

/\* bytes in plaintext \*/

520,

/\* associated data \*/

{

0xf7, 0x28, 0xad, 0x63, 0x05, 0x84, 0x24, 0x0d,

0x7b, 0x41, 0xce, 0xf7, 0x16, 0xd2, 0x52, 0x77,

},

/\* bytes in associated data \*/

16,

/\* ciphertext \*/

{

0x84, 0xef, 0xf0, 0xf2, 0x27, 0xa1, 0x7b, 0x94,

0x4a, 0x8d, 0xe3, 0xcb, 0x4c, 0x9a, 0x3b, 0x5d,

0x67, 0x33, 0x5e, 0x06, 0xcb, 0x28, 0x18, 0x50,

0xa3, 0x35, 0x65, 0xec, 0x36, 0x66, 0xf9, 0x49,

0x66, 0xe4, 0x30, 0x4e, 0x4a, 0x44, 0x96, 0xd1,

0x8f, 0x9d, 0x1e, 0x57, 0xb6, 0x03, 0x93, 0x1c,

0xd9, 0xdb, 0x59, 0x39, 0xe4, 0x67, 0xb4, 0x97,

0x65, 0x5a, 0x1e, 0x13, 0x76, 0xb2, 0xb3, 0x9c,

0x28, 0x16, 0xcc, 0xe2, 0x8e, 0xce, 0xf2, 0xde,

0x83, 0x8f, 0x5d, 0x6b, 0x7f, 0x5e, 0x86, 0xa8,

0xc5, 0xbb, 0xb3, 0xa8, 0x14, 0x78, 0x58, 0xc0,

0x12, 0x83, 0xbc, 0xf7, 0x7d, 0xed, 0xda, 0x43,

0x0c, 0x9f, 0xea, 0x9e, 0x34, 0x16, 0x25, 0x6f,

0xbc, 0xc9, 0x68, 0x7d, 0xf7, 0xf4, 0xcb, 0x20,

0xfd, 0x13, 0x4d, 0x33, 0x66, 0xa5, 0x8e, 0x14,

0xad, 0x43, 0x24, 0x95, 0x66, 0x35, 0x7d, 0x6c,

0xec, 0xee, 0x0e, 0x1a, 0x47, 0xe3, 0x26, 0x89,

0x35, 0xbd, 0xdf, 0x4c, 0xcf, 0x0b, 0x24, 0xcb,

0xd8, 0xfe, 0xfa, 0xe2, 0x6e, 0xe8, 0x1d, 0xa2,

0x03, 0x45, 0x44, 0xa3, 0x0c, 0xf9, 0x19, 0x29,

0x99, 0x34, 0xf9, 0xcf, 0xc9, 0xe6, 0x42, 0xbb,

0xbb, 0x49, 0xea, 0x25, 0xf3, 0x59, 0x1f, 0x87,

0x91, 0x1a, 0xb4, 0x19, 0xc1, 0xb6, 0x9c, 0x18,

0x38, 0x0a, 0x62, 0x9b, 0x25, 0xb9, 0x98, 0x9b,

0x22, 0xc8, 0x68, 0xcd, 0xf3, 0x88, 0xb4, 0x13,

0x83, 0x89, 0xeb, 0x4d, 0x91, 0x95, 0xe9, 0x58,

0x6f, 0x96, 0x8f, 0x05, 0x3d, 0x61, 0xe2, 0x18,

0xc0, 0x61, 0x12, 0xde, 0x5b, 0x6a, 0x51, 0x4e,

0x5e, 0x63, 0x62, 0x7a, 0xb4, 0x5d, 0x10, 0x12,

0x86, 0xe6, 0x4b, 0x08, 0x73, 0x82, 0x1c, 0xa8,

0x72, 0xb3, 0xa6, 0xde, 0xed, 0xba, 0x1b, 0xfb,

0x6a, 0x31, 0xeb, 0xe6, 0xf8, 0xc8, 0x4c, 0xa7,

0xe7, 0xec, 0x94, 0x08, 0xc9, 0x34, 0x4a, 0x59,

0xa4, 0xbf, 0xaa, 0x03, 0x3b, 0x89, 0x84, 0x4b,

0xf5, 0xd8, 0x1f, 0xf8, 0x8d, 0x8f, 0x1f, 0x37,

0x82, 0xd7, 0xf0, 0x0b, 0x9c, 0x8f, 0x5b, 0x9b,

0xb0, 0x1c, 0x69, 0x5a, 0x9c, 0x2f, 0xbf, 0x55,

0xc2, 0x5e, 0x69, 0xba, 0x65, 0x7d, 0x92, 0x1b,

0x15, 0x0a, 0x55, 0x32, 0xc5, 0x22, 0xf3, 0xb6,

0xf3, 0x06, 0xc4, 0xda, 0xd2, 0x36, 0xf2, 0x20,

0x9a, 0x22, 0xa4, 0x0d, 0x37, 0xe0, 0xfe, 0xfb,

0x0b, 0x6d, 0x30, 0xfd, 0x08, 0xad, 0x9b, 0x2c,

0x19, 0x63, 0xcb, 0x6a, 0x47, 0xdf, 0xcb, 0xdd,

0xf8, 0x09, 0x03, 0x43, 0x14, 0xd4, 0x71, 0xf2,

0x1d, 0x76, 0x77, 0xd9, 0x5a, 0x12, 0x2f, 0xe2,

0xb6, 0x08, 0x0a, 0x10, 0x77, 0x8b, 0xd4, 0x86,

0x37, 0xe9, 0x14, 0x62, 0xf3, 0xb8, 0x06, 0x89,

0x20, 0x23, 0x09, 0xc7, 0xed, 0x50, 0xfe, 0xd8,

0xf7, 0xd1, 0x7d, 0x6f, 0xca, 0x83, 0xad, 0x67,

0x33, 0x34, 0x77, 0x5c, 0xd8, 0xf1, 0xfd, 0x48,

0x2f, 0xee, 0xbe, 0x33, 0x7a, 0x0d, 0x75, 0x07,

0x14, 0x29, 0xba, 0x7b, 0xc5, 0xc5, 0x6d, 0x62,

0x20, 0x59, 0x48, 0x79, 0x9c, 0xa9, 0x84, 0xe4,

0xea, 0x14, 0x6d, 0x0c, 0x68, 0xe4, 0xa5, 0xa5,

0x10, 0x99, 0x8d, 0xab, 0xa5, 0xd0, 0x73, 0x76,

0xa0, 0xba, 0xfd, 0x9f, 0x61, 0xca, 0x96, 0xf6,

0x6c, 0x1a, 0xd3, 0x3a, 0xf8, 0xac, 0x0e, 0xb5,

0xec, 0x70, 0x81, 0x8e, 0xbc, 0x6a, 0x31, 0x00,

0x69, 0x15, 0x72, 0xbf, 0x8b, 0x39, 0x1f, 0xb3,

0x2c, 0x80, 0xf0, 0x37, 0x45, 0x11, 0x75, 0x56,

0x09, 0x99, 0x49, 0x39, 0x4a, 0xf7, 0x74, 0x61,

0xd5, 0x99, 0xac, 0xff, 0x10, 0x54, 0x9c, 0x5b,

0x54, 0x03, 0x9a, 0x5f, 0xe8, 0xf2, 0x4a, 0xad,

0x0c, 0x1b, 0xa7, 0xd0, 0x51, 0xbb, 0xdc, 0x15,

0xf7, 0xf9, 0x58, 0x57, 0x58, 0xb7, 0xdb, 0xf5,

},

&case7

};

test\_case\_t case9 = {

/\* key \*/

{

0x44, 0xb9, 0x77, 0xc9, 0x48, 0xab, 0x9d, 0x55,

0x5c, 0xfa, 0x2b, 0xb7, 0x1d, 0xae, 0xba, 0x0e,

0x7d, 0x72, 0x6a, 0xba, 0x3a, 0xbb, 0x08, 0x2f,

0xba, 0xb5, 0xb5, 0xcb, 0x39, 0x88, 0x1d, 0xa7,

0x90, 0x57, 0x6c, 0x20, 0xb3, 0x7b, 0xc6, 0x50,

0x19, 0xee, 0xd6, 0xdf, 0x20, 0x46, 0x94, 0x26,

},

/\* bytes in key \*/

48,

/\* plaintext \*/

{

0x25, 0x63, 0x5f, 0x2e, 0x1b, 0x99, 0x27, 0xc0,

0x9a, 0xa7, 0xf9, 0x9a, 0xac, 0x1c, 0x01, 0x0b,

0xa6, 0xb9, 0x75, 0xe7, 0xb8, 0x17, 0x26, 0x71,

0x49, 0x82, 0x60, 0x38, 0x9f, 0x22, 0x47, 0x83,

0x48, 0x70, 0x2d, 0x48, 0xf3, 0xb7, 0xdc, 0xcc,

0x58, 0xee, 0x59, 0x28, 0xaf, 0xf4, 0xc4, 0xe8,

0xbf, 0xa2, 0xf9, 0x02, 0x52, 0xc8, 0xf4, 0xa5,

0x82, 0xbd, 0xf1, 0xd7, 0x56, 0x8f, 0x80, 0xf6,

0x8a, 0x17, 0x5d, 0xff, 0xbe, 0xae, 0x2d, 0x20,

0xe3, 0x87, 0x11, 0x02, 0x19, 0xd4, 0x65, 0x15,

0x71, 0x09, 0x2d, 0x78, 0x99, 0x4a, 0x75, 0x03,

0x83, 0x38, 0x8a, 0x88, 0x47, 0xdc, 0xd3, 0xcf,

0xff, 0x2e, 0x96, 0x19, 0xf0, 0xf5, 0x01, 0xe8,

0x9b, 0xde, 0x9c, 0xb4, 0xb7, 0xa0, 0x03, 0xa0,

0x24, 0xb7, 0x74, 0x27, 0xa6, 0xc9, 0xa9, 0xd3,

0x94, 0x40, 0x44, 0x1f, 0x2c, 0x36, 0xe0, 0x6b,

0xa6, 0x27, 0x84, 0x18, 0xb5, 0xad, 0x7f, 0x93,

0x28, 0x3c, 0x86, 0xce, 0x6d, 0x57, 0x36, 0x72,

0x56, 0x1a, 0x09, 0x2e, 0x00, 0xcd, 0x4b, 0x19,

0xf0, 0x09, 0x65, 0xa2, 0x21, 0xed, 0xbd, 0x89,

0xe4, 0xc8, 0xa6, 0x05, 0xd8, 0xe9, 0xaa, 0xff,

0xdb, 0xed, 0xfe, 0x4f, 0xa5, 0x67, 0x6d, 0xbc,

0xef, 0x8b, 0xda, 0x28, 0x9b, 0x72, 0xda, 0xe8,

0x7f, 0x9f, 0xd9, 0x59, 0xb7, 0x29, 0x90, 0xc6,

0x37, 0x7a, 0xaf, 0xa0, 0x50, 0x18, 0xdd, 0x76,

0xf2, 0x66, 0xc6, 0x2e, 0xff, 0x5c, 0x77, 0xf9,

0x1a, 0x07, 0xb0, 0xce, 0x64, 0x5e, 0xf2, 0x8a,

0xa2, 0xd3, 0xa8, 0xe0, 0xcc, 0x82, 0x69, 0xbd,

0x01, 0xf7, 0xde, 0xc3, 0x43, 0x3e, 0xb1, 0x2f,

0x7c, 0x6b, 0x18, 0x16, 0x05, 0xf2, 0xa2, 0x06,

0x3d, 0x40, 0x73, 0x6c, 0x47, 0xf0, 0x6b, 0xd6,

0x2d, 0x8a, 0x77, 0x84, 0x1a, 0x80, 0xd5, 0x93,

0x7e, 0x7b, 0x9d, 0xec, 0x05, 0xa4, 0x03, 0x47,

0xed, 0x4c, 0x89, 0x4b, 0xdd, 0xf7, 0x36, 0x1f,

0xf8, 0x5a, 0x94, 0x22, 0xf2, 0xdd, 0x3f, 0x8e,

0x49, 0x9c, 0xe7, 0x9e, 0xe6, 0xc2, 0x78, 0x18,

0x30, 0x42, 0xba, 0x0b, 0x11, 0x5a, 0x72, 0x55,

0x98, 0x1b, 0xf2, 0x16, 0x0a, 0x6e, 0x44, 0x68,

0x8c, 0x69, 0x28, 0x2c, 0xd8, 0x8a, 0x0f, 0x69,

0x1a, 0x7f, 0xeb, 0xe1, 0x26, 0x18, 0x70, 0x51,

0x96, 0x21, 0x99, 0x72, 0xed, 0x19, 0x6a, 0x0a,

0x2a, 0xc8, 0xe5, 0x15, 0xaa, 0xc3, 0x07, 0xdb,

0x44, 0xe7, 0xe1, 0xc3, 0xc2, 0x00, 0x21, 0xe0,

0xf0, 0x55, 0xe1, 0x66, 0x59, 0xe8, 0xfb, 0x0d,

0xdb, 0x3f, 0xda, 0xb7, 0x04, 0xf6, 0x13, 0x7a,

0x4b, 0x4d, 0x87, 0x42, 0x92, 0x7c, 0x63, 0xac,

0xbb, 0x7f, 0x40, 0x2a, 0xc9, 0xce, 0xe2, 0x92,

0x6b, 0xb4, 0xd2, 0xd1, 0x72, 0x2c, 0x99, 0xf8,

0x3e, 0xc7, 0xec, 0xdc, 0xc8, 0xf8, 0x76, 0x34,

0xb3, 0x26, 0x73, 0xaf, 0xb4, 0x00, 0x84, 0xf2,

0x71, 0xc3, 0xea, 0xa9, 0x66, 0x99, 0xcd, 0xd3,

0x5a, 0x6c, 0xdb, 0x55, 0x9c, 0x4a, 0x3c, 0x67,

0xd0, 0x31, 0xd7, 0x00, 0x11, 0x4d, 0x9a, 0x79,

0x52, 0xdf, 0x40, 0x8e, 0x5b, 0x01, 0x80, 0x4a,

0xa9, 0xbe, 0x34, 0xa6, 0x0b, 0x7f, 0xf7, 0x84,

0xaa, 0x24, 0x2e, 0x74, 0x17, 0x9d, 0x8c, 0x95,

0x74, 0x43, 0xa8, 0xbf, 0xec, 0x17, 0x14, 0x47,

0xa9, 0xe8, 0xaa, 0x49, 0x2d, 0x1e, 0xab, 0xb5,

0xea, 0x44, 0x9a, 0xa2, 0x78, 0xfd, 0xb2, 0x98,

0x32, 0x6c, 0xd2, 0x78, 0x82, 0xa0, 0x79, 0x74,

0x85, 0x9f, 0x83, 0xe7, 0x0b, 0x23, 0xe5, 0xbe,

0x85, 0xf8, 0x40, 0x4c, 0xde, 0x8e, 0xa0, 0x2b,

0xaa, 0xbc, 0xe4, 0x7a, 0x73, 0xe9, 0x1e, 0x5e,

0x59, 0x1e, 0xf8, 0x30, 0x5a, 0x2d, 0xe4, 0x1c,

0x87, 0xa4, 0xc7, 0xa2, 0x81, 0x87, 0xc2, 0x78,

0xbf, 0x2f, 0xa0, 0xad, 0x04, 0x44, 0x2b, 0x0c,

0x9d, 0xc6, 0x2a, 0x5b, 0xf3, 0xac, 0xb8, 0x8d,

0x3e, 0xe9, 0x89, 0x8c, 0xf8, 0x49, 0x7a, 0x20,

0x09, 0x0d, 0x83, 0x22, 0xdf, 0x65, 0x85, 0x63,

0x71, 0x25, 0xdf, 0x8f, 0x5a, 0xcc, 0x7a, 0xcf,

0x65, 0xcb, 0xd0, 0x2a, 0xa6, 0xc4, 0xfc, 0xad,

0x12, 0xf3, 0x61, 0x5b, 0x56, 0xb9, 0x3c, 0x38,

0x96, 0xbb, 0xfd, 0x57, 0xda, 0x9f, 0x98, 0xf1,

0x4d, 0xaa, 0x86, 0xd8, 0x52, 0xf1, 0x4a, 0xed,

0xf9, 0xb3, 0x7b, 0x5c, 0xec, 0x7e, 0x4c, 0xc6,

0xf8, 0xaf, 0xe1, 0xc7, 0xac, 0x04, 0xbe, 0x12,

0x39, 0x43, 0xe5, 0x6a, 0x49, 0x63, 0xbc, 0xe0,

0xdf, 0xc0, 0x01, 0xac, 0xf0, 0x1f, 0xb9, 0xec,

0x27, 0x90, 0x81, 0xe5, 0xaf, 0xf0, 0xb8, 0x9a,

0xdb, 0x03, 0x07, 0x6a, 0x1a, 0xf1, 0xb9, 0x09,

0xb6, 0xc2, 0x2a, 0x6d, 0xc0, 0x28, 0x64, 0xf6,

0x42, 0x7b, 0x53, 0x8b, 0x2d, 0x1f, 0x5b, 0x8d,

0xa8, 0x48, 0xf4, 0x95, 0xa8, 0x35, 0x05, 0x1e,

0xac, 0x3d, 0x92, 0x89, 0x39, 0x66, 0x14, 0xe6,

0x3b, 0x81, 0xf8, 0xe8, 0x5b, 0xaf, 0xd5, 0x80,

0xec, 0x20, 0x7f, 0x9a, 0x3d, 0xed, 0xf0, 0x6a,

0x11, 0x84, 0x59, 0x73, 0xe6, 0x70, 0x8f, 0xc2,

0x01, 0xf7, 0xcd, 0x77, 0x23, 0x50, 0x80, 0xa2,

0xa7, 0x7d, 0x0e, 0x87, 0x4e, 0x1b, 0x67, 0xff,

0x13, 0x6d, 0xc8, 0xee, 0x7e, 0x6e, 0x01, 0x46,

0x4c, 0x82, 0x8a, 0x4f, 0x78, 0x3c, 0x00, 0x8d,

0x17, 0x25, 0x6b, 0x43, 0x21, 0x9c, 0xd8, 0x9d,

0x90, 0x81, 0xce, 0x95, 0x22, 0x27, 0xee, 0x34,

0x4a, 0x09, 0x2d, 0x05, 0x7a, 0xdf, 0x5d, 0xdf,

0x4b, 0x61, 0x8b, 0x2f, 0xc7, 0xf5, 0x85, 0x7f,

0x83, 0x6b, 0x25, 0x36, 0x23, 0x22, 0xb7, 0x37,

0x93, 0x43, 0xec, 0x21, 0x78, 0x71, 0xf6, 0x6c,

0xab, 0x19, 0x7f, 0x21, 0xc4, 0x0f, 0x45, 0x5f,

0xac, 0x49, 0x67, 0x51, 0x6d, 0x81, 0x4c, 0x04,

0x96, 0xe3, 0x86, 0xa5, 0xdc, 0x91, 0xa8, 0x8b,

0x3c, 0xb4, 0x3d, 0xfa, 0x6f, 0x68, 0x61, 0xad,

0x2c, 0xbd, 0xbe, 0x20, 0x83, 0x6f, 0x3e, 0xfc,

0x48, 0xb1, 0x11, 0xd9, 0xbf, 0x0e, 0xb8, 0xa0,

0xa8, 0x56, 0x46, 0x69, 0xb2, 0xc5, 0xd6, 0xf5,

0x1c, 0xf6, 0x86, 0x5d, 0xfe, 0x63, 0x80, 0x2c,

0x44, 0x75, 0x8e, 0x87, 0x38, 0x98, 0x02, 0x21,

0xc5, 0x7d, 0xee, 0x8a, 0xf9, 0x4b, 0x35, 0x03,

0xad, 0x7c, 0x8c, 0xf5, 0x77, 0x2b, 0x4e, 0x51,

0xeb, 0xd4, 0xc3, 0xfe, 0x3d, 0xab, 0x95, 0xd0,

0x07, 0xb5, 0xde, 0xe0, 0x31, 0x29, 0xcb, 0xf9,

0x2f, 0xd9, 0x4e, 0x7c, 0x26, 0x0d, 0xca, 0x3b,

0x43, 0x92, 0xce, 0x69, 0x3f, 0x74, 0x82, 0x0f,

0x49, 0xa0, 0x58, 0xb5, 0xee, 0x62, 0xb4, 0x7b,

0x56, 0x57, 0x6b, 0xfa, 0x6b, 0xd7, 0x5d, 0xa3,

0x39, 0x93, 0xc6, 0xa8, 0xb6, 0x9b, 0x87, 0xb3,

0xd0, 0x11, 0x46, 0x92, 0xbe, 0x35, 0xec, 0xcb,

0xae, 0xb5, 0x67, 0x03, 0x5f, 0x01, 0xe7, 0x55,

0x8f, 0xa3, 0x46, 0x82, 0x2b, 0x36, 0x35, 0x12,

0xe9, 0xa4, 0xcd, 0xcf, 0x15, 0x50, 0x3b, 0x29,

0x91, 0xd8, 0x35, 0xff, 0xd5, 0xb2, 0xed, 0x9b,

0x89, 0x5a, 0x8f, 0xbf, 0x98, 0x49, 0x2a, 0xa7,

0x13, 0xc9, 0xd2, 0x05, 0x2f, 0x68, 0x5e, 0xc9,

0xdc, 0x5d, 0xc0, 0xbd, 0xe5, 0x00, 0x07, 0x38,

0x7a, 0x21, 0x7c, 0x27, 0x4f, 0x64, 0x5b, 0x35,

0x1b, 0x99, 0x57, 0xf8, 0x7d, 0x8e, 0xc1, 0xd0,

0x6f, 0xa5, 0xff, 0xb9, 0x8f, 0xa2, 0x57, 0x6d,

0xf9, 0x7f, 0x28, 0x3f, 0x3a, 0x42, 0x84, 0xed,

0xfd, 0x1e, 0x8d, 0xe9, 0x79, 0xa7, 0xfb, 0x54,

0x3b, 0xbd, 0x47, 0xe2, 0xd0, 0xc5, 0x47, 0x25,

0x39, 0x9c, 0x3e, 0x74, 0x23, 0xd4, 0xa8, 0xdb,

0x1f, 0x1b, 0x64, 0x31, 0x55, 0x18, 0x22, 0xf7,

0xa1, 0x5b, 0x9d, 0x0c, 0xb0, 0x19, 0x7d, 0xa3,

0x18, 0x83, 0xc1, 0xdc, 0x6c, 0x91, 0xf0, 0xcf,

0xd8, 0x34, 0xd2, 0xcc, 0x93, 0x50, 0x9a, 0xc4,

0xdb, 0x7a, 0xb4, 0xb1, 0xd4, 0x38, 0xca, 0x09,

0x2e, 0x4f, 0x19, 0x15, 0x38, 0xe4, 0xdd, 0x93,

0x4d, 0x47, 0xe6, 0xc6, 0x54, 0x80, 0xba, 0x94,

0x53, 0x14, 0x44, 0x45, 0x24, 0xdf, 0xbf, 0x80,

0x8a, 0xb3, 0x5e, 0x58, 0x05, 0x22, 0x6e, 0x1c,

0x84, 0xfa, 0x53, 0x7f, 0x64, 0xfd, 0x9c, 0x68,

0x98, 0x5a, 0x9a, 0xf6, 0x27, 0x5f, 0x17, 0xd6,

0x99, 0xc8, 0x4f, 0x39, 0x9b, 0x84, 0xa0, 0x33,

0xde, 0x20, 0x0e, 0x46, 0xc8, 0x52, 0x30, 0x39,

0xb5, 0x5e, 0x11, 0xb3, 0xd2, 0x16, 0x83, 0x96,

0x65, 0x39, 0xaa, 0x76, 0xbc, 0x21, 0x21, 0xaf,

0x13, 0x59, 0x7f, 0xab, 0xf9, 0xf1, 0xbd, 0x7b,

0x89, 0xac, 0xa6, 0xaa, 0x21, 0x05, 0x69, 0xcd,

0x1b, 0x42, 0x36, 0x69, 0xe8, 0x13, 0xae, 0xb6,

0x1d, 0x23, 0xc4, 0x6c, 0x4d, 0x9e, 0xa4, 0xfe,

0x61, 0x1e, 0x6d, 0x67, 0x11, 0x33, 0x94, 0x7c,

0xc3, 0x2b, 0x10, 0xef, 0x26, 0x7b, 0xdf, 0x28,

0x45, 0x5c, 0xde, 0xbd, 0xb4, 0xf5, 0x51, 0x6e,

0xff, 0xe9, 0x13, 0xe0, 0xda, 0xd2, 0x48, 0x87,

0x43, 0x14, 0x47, 0xed, 0xc6, 0xb4, 0xd4, 0xb7,

0x76, 0xee, 0x97, 0xce, 0x47, 0x1f, 0x95, 0xec,

0x05, 0x83, 0x2a, 0x0c, 0x37, 0x6b, 0x35, 0xb9,

0xa7, 0xdf, 0xc6, 0xa4, 0x65, 0xc7, 0x1a, 0x6a,

0x32, 0xf1, 0x8d, 0x99, 0xd9, 0xad, 0x14, 0x0f,

0xb2, 0xa9, 0xc7, 0x4a, 0x00, 0xbe, 0x77, 0x4c,

0x0c, 0x25, 0x7a, 0xaa, 0x1c, 0x06, 0x8e, 0x70,

0x10, 0x75, 0xc6, 0x38, 0x0a, 0xf6, 0xa5, 0x97,

0xb2, 0x52, 0x00, 0x44, 0xf9, 0xe5, 0x10, 0xf3,

0x83, 0x23, 0x66, 0xe7, 0x56, 0xcc, 0x4d, 0xfa,

0x99, 0x2b, 0xfc, 0xd1, 0x97, 0xc4, 0x89, 0xfe,

0xd0, 0xe1, 0x1a, 0xfc, 0x8f, 0x7c, 0x45, 0x82,

0x5a, 0x21, 0xe0, 0xc3, 0x61, 0x2d, 0xe7, 0xf0,

0x9b, 0xcd, 0x94, 0x2b, 0x3c, 0x63, 0x87, 0xb4,

0x77, 0x08, 0x6a, 0xf2, 0xf2, 0xe8, 0x44, 0xd4,

0xa0, 0x19, 0x16, 0x43, 0xcf, 0x00, 0xbb, 0x9a,

0x15, 0xc5, 0x11, 0x19, 0x26, 0xd0, 0xdf, 0x93,

0x5f, 0x4a, 0x67, 0x18, 0x41, 0x5b, 0xde, 0x71,

0x24, 0xf6, 0xd0, 0x02, 0x28, 0x3e, 0xa9, 0xcc,

0x7b, 0xd5, 0xa7, 0x0b, 0x5a, 0x2b, 0x7c, 0x3a,

0xac, 0x43, 0x93, 0xa5, 0x33, 0x7e, 0xd4, 0xab,

0x57, 0x9d, 0x31, 0x06, 0xcd, 0x02, 0xfc, 0x11,

0xf8, 0x6a, 0x50, 0xb3, 0x29, 0x1f, 0xd7, 0x88,

0x1a, 0x4c, 0x62, 0xc7, 0x8a, 0x7f, 0xd8, 0x74,

0xcb, 0x6c, 0xeb, 0xaa, 0x83, 0x2b, 0x76, 0x47,

0x12, 0xb7, 0x96, 0xf7, 0x1a, 0x16, 0xb0, 0x2c,

0x2a, 0x7a, 0x46, 0x32, 0x12, 0x1f, 0x17, 0xf1,

0xde, 0x36, 0xff, 0xa5, 0x52, 0xd5, 0xa6, 0x97,

0xda, 0x05, 0xd7, 0x60, 0x05, 0x41, 0x9f, 0x1c,

0x0e, 0xd0, 0xcc, 0x82, 0xe7, 0x74, 0x6d, 0x0e,

0x89, 0x61, 0x28, 0xfc, 0xa2, 0x9f, 0xb5, 0xca,

0x17, 0x2d, 0xd7, 0x53, 0xb1, 0xe4, 0xd1, 0xe9,

0xca, 0x26, 0x72, 0xca, 0x10, 0x25, 0xf5, 0x27,

0x12, 0x84, 0xaf, 0x40, 0x9e, 0xb5, 0x2e, 0x8d,

0xda, 0x8d, 0xfd, 0xb1, 0x3c, 0x9a, 0x2c, 0xb7,

0xe5, 0x0b, 0xe0, 0x57, 0x9a, 0xf6, 0xd2, 0x3a,

0x82, 0x47, 0xfa, 0xe9, 0x80, 0xb2, 0x4e, 0x46,

0xe6, 0x71, 0x15, 0x17, 0xa4, 0x28, 0xb6, 0x49,

0x96, 0xf4, 0x3f, 0x09, 0x65, 0xa7, 0x48, 0xbc,

0x3b, 0xda, 0x00, 0xcf, 0xfc, 0x6f, 0x9e, 0xe4,

0xbc, 0x72, 0x4e, 0x7e, 0xc1, 0x1b, 0x53, 0xb4,

0xbd, 0x8a, 0x36, 0xf9, 0x87, 0x45, 0xe5, 0x28,

0x52, 0xc2, 0x0d, 0xc7, 0x5d, 0xf0, 0x58, 0x7d,

0xca, 0x65, 0x62, 0xe1, 0x38, 0x7d, 0x41, 0x8f,

0x2f, 0x56, 0xda, 0xcd, 0xfd, 0x34, 0xfb, 0x3c,

0x02, 0xb5, 0xd4, 0x3f, 0x8f, 0xd5, 0xa8, 0x56,

0x85, 0x09, 0x70, 0x98, 0xbd, 0xcc, 0x96, 0xed,

0xba, 0x06, 0x79, 0xde, 0xa4, 0xf5, 0x4f, 0x5d,

0x83, 0x03, 0xcc, 0xee, 0x09, 0xf8, 0xce, 0x08,

0x84, 0x03, 0x01, 0xbf, 0x14, 0x06, 0xde, 0x7c,

0xce, 0x86, 0xa6, 0x25, 0xa1, 0x72, 0xe9, 0x92,

0x18, 0xdb, 0x76, 0x06, 0x28, 0xaf, 0xdd, 0x5a,

0x11, 0x37, 0x15, 0xda, 0xa0, 0x7b, 0x18, 0x0c,

0x43, 0x91, 0x50, 0xc6, 0x9a, 0x79, 0x4d, 0x4f,

0xd3, 0x11, 0xbe, 0x5d, 0xec, 0x87, 0xd2, 0x64,

0x25, 0xa8, 0x0d, 0x06, 0x76, 0xf5, 0x21, 0x18,

0x15, 0xe1, 0x93, 0x10, 0x0f, 0xd7, 0x9a, 0x14,

0xf7, 0xe8, 0xc5, 0x16, 0x8d, 0x28, 0xdb, 0x65,

0xe9, 0x47, 0x20, 0x47, 0xd7, 0x6f, 0x81, 0x56,

0x73, 0x8b, 0xce, 0xaa, 0x6d, 0xb5, 0x3b, 0x66,

0x66, 0xdd, 0x71, 0x67, 0x36, 0xc6, 0x4e, 0x59,

0xc3, 0x26, 0x1a, 0x44, 0x23, 0xf9, 0x1c, 0x42,

0xcc, 0xa7, 0xe0, 0xa2, 0xf5, 0x7b, 0x9a, 0x57,

0x50, 0x06, 0x2e, 0x59, 0x78, 0x21, 0x8b, 0x48,

0x98, 0x89, 0x5e, 0x7c, 0xd8, 0x0a, 0x52, 0xe6,

0x75, 0xfb, 0x21, 0xd5, 0x97, 0xb1, 0x24, 0xee,

0x33, 0x04, 0xf1, 0x93, 0x23, 0xc0, 0x35, 0xb3,

0xdb, 0xba, 0xb5, 0xcd, 0x4d, 0x16, 0x0f, 0xd6,

0x5f, 0x59, 0xca, 0x47, 0x3b, 0xc7, 0xe4, 0xa0,

0x01, 0xe2, 0x0a, 0xd0, 0x1b, 0xde, 0x61, 0x52,

0x4c, 0x70, 0x7f, 0x7c, 0x45, 0xbf, 0x5a, 0x88,

0x23, 0x30, 0x3f, 0x64, 0x42, 0x10, 0x7a, 0x36,

0x9e, 0xfd, 0xb6, 0x3c, 0x60, 0xb2, 0x0e, 0x0a,

0xa3, 0x91, 0x85, 0x52, 0x4d, 0xfa, 0x76, 0x32,

0xc0, 0x27, 0xf0, 0x85, 0xd7, 0xf5, 0xd8, 0x19,

0xf6, 0x8f, 0xe4, 0x49, 0xe7, 0x0e, 0x10, 0x7d,

0xfa, 0x3f, 0x45, 0xda, 0xe6, 0x3c, 0x40, 0x6e,

0xea, 0x28, 0x86, 0x2a, 0x4c, 0xb0, 0x34, 0x86,

0x83, 0x0d, 0x5e, 0x38, 0x9c, 0x78, 0xbe, 0x77,

0xcc, 0x28, 0xcf, 0xfb, 0x8f, 0x6f, 0xc6, 0x7e,

0x95, 0x11, 0x49, 0x63, 0x6f, 0x8a, 0xfb, 0x8a,

0x63, 0x1b, 0xcf, 0x8a, 0x57, 0x3b, 0xfd, 0x1a,

0x8e, 0xc2, 0xb4, 0x46, 0xb4, 0x84, 0xfe, 0x9c,

0xd3, 0x27, 0x15, 0x70, 0x00, 0xf1, 0x75, 0x67,

0xcc, 0x70, 0x4d, 0x44, 0xb0, 0xf1, 0x14, 0x18,

0xc9, 0x05, 0xb8, 0x2a, 0x0b, 0x14, 0xd7, 0x4d,

0x7a, 0x2c, 0x29, 0x47, 0x3a, 0x95, 0x67, 0x1a,

0xcd, 0x9d, 0x19, 0x88, 0x61, 0xd6, 0x95, 0xeb,

0xc0, 0x89, 0x6f, 0x20, 0xa2, 0xa6, 0x48, 0xbf,

0x56, 0xdc, 0xbc, 0xd9, 0x73, 0x57, 0x2b, 0x0d,

0xc0, 0x8b, 0xcf, 0xee, 0x25, 0x61, 0xf3, 0x81,

0x6a, 0xf5, 0x1c, 0xf4, 0xee, 0x70, 0xd5, 0xed,

0x29, 0x17, 0x79, 0x25, 0x2c, 0xf7, 0xc6, 0xc6,

0xc6, 0xf3, 0x50, 0xf5, 0xf5, 0x02, 0x62, 0xdc,

0xb7, 0x12, 0x99, 0x2a, 0xc8, 0x16, 0xe3, 0x50,

0x57, 0x6d, 0xd3, 0xfb, 0x06, 0x24, 0xbf, 0x9a,

0x2d, 0x66, 0x38, 0x1d, 0xd4, 0x03, 0x71, 0xb1,

0x9b, 0xc2, 0xfb, 0x41, 0xbb, 0x7f, 0x9a, 0xfd,

0x93, 0x74, 0xc3, 0xc3, 0xd9, 0x61, 0x49, 0x3c,

0xe4, 0x0b, 0xaa, 0x85, 0x70, 0xc5, 0x36, 0xd6,

0x51, 0x77, 0xe6, 0xbb, 0xe3, 0xf3, 0xe0, 0x85,

0xda, 0x7b, 0x86, 0x45, 0xf9, 0x04, 0x4b, 0xad,

0xe1, 0x6c, 0xef, 0xf8, 0x4b, 0xb4, 0x22, 0x30,

0x0a, 0xd5, 0xd7, 0xb2, 0x3c, 0x01, 0xdf, 0x8c,

0xc5, 0x14, 0x8f, 0x66, 0x99, 0x3b, 0x04, 0x08,

},

/\* bytes in plaintext \*/

2064,

/\* associated data \*/

{

0x3d, 0xa5, 0xf4, 0x9d, 0x10, 0xf8, 0x5b, 0xcf,

0x77, 0x0f, 0x5e, 0x24, 0x0d, 0xb8, 0x40, 0xd7,

},

/\* bytes in associated data \*/

16,

/\* ciphertext \*/

{

0x9b, 0x9a, 0xcd, 0xad, 0xd8, 0xdb, 0x40, 0x0d,

0x49, 0x89, 0x92, 0xb0, 0x1f, 0xcd, 0x20, 0x1f,

0xa8, 0x67, 0x45, 0x12, 0xbf, 0x30, 0xb7, 0x94,

0x37, 0xf0, 0xbd, 0x5a, 0xf1, 0x7e, 0x1e, 0x99,

0x45, 0xc8, 0x76, 0xd8, 0xd4, 0xd6, 0xd1, 0x73,

0x20, 0x6f, 0x85, 0x9a, 0x46, 0xec, 0x26, 0xb1,

0xdd, 0xa1, 0xf1, 0x18, 0xed, 0xd2, 0x64, 0x7e,

0x80, 0xc3, 0x07, 0x18, 0x06, 0xe7, 0xf5, 0x24,

0xff, 0x72, 0xee, 0x0b, 0x34, 0xaa, 0xf0, 0x84,

0xeb, 0x3c, 0x39, 0x52, 0x95, 0x62, 0x62, 0x89,

0x87, 0x86, 0xa8, 0xc9, 0x41, 0xaf, 0xf3, 0x6e,

0x69, 0xf1, 0xd4, 0x68, 0x4d, 0x9b, 0x30, 0x5f,

0x3b, 0x48, 0x1d, 0xa4, 0x29, 0x2c, 0x4c, 0xc5,

0x5b, 0xe5, 0x6e, 0xbc, 0xc2, 0xdc, 0x42, 0xc8,

0x89, 0xa8, 0x59, 0xd8, 0x46, 0xf1, 0x0b, 0x0c,

0x50, 0x05, 0x60, 0x86, 0x05, 0x35, 0x24, 0x16,

0xfe, 0x80, 0x81, 0xbc, 0x8c, 0x92, 0x26, 0xca,

0x99, 0x34, 0x4e, 0xa1, 0xbe, 0x52, 0xf0, 0xb8,

0xd1, 0xae, 0x0a, 0x67, 0x4c, 0xcf, 0xf7, 0x0d,

0x12, 0x12, 0x84, 0x57, 0x94, 0xa3, 0x98, 0xae,

0xd3, 0xf3, 0x94, 0xed, 0xed, 0xe4, 0xa2, 0xb5,

0x67, 0x07, 0x58, 0x49, 0xc4, 0xb3, 0xcf, 0x5c,

0x32, 0xdb, 0xcb, 0x58, 0x25, 0x44, 0x44, 0xfa,

0xbb, 0xf6, 0xd1, 0x52, 0x65, 0xfb, 0x9e, 0x41,

0xf6, 0x4a, 0xa7, 0xc8, 0x8b, 0x88, 0x23, 0x56,

0x70, 0x80, 0xc8, 0x3f, 0x9c, 0x97, 0x5a, 0x02,

0xb2, 0xe4, 0x24, 0xb7, 0x3e, 0x3e, 0x55, 0x54,

0x3e, 0x60, 0x66, 0x31, 0xbc, 0xe8, 0x84, 0x32,

0x75, 0x4b, 0xc4, 0x67, 0xf7, 0x59, 0x19, 0x4a,

0x8e, 0x0f, 0x69, 0xf5, 0x57, 0x0a, 0x9d, 0xdc,

0xf4, 0x62, 0x17, 0xd3, 0xfc, 0xcc, 0x55, 0x0a,

0x1b, 0xc2, 0x13, 0x22, 0x2e, 0x96, 0x68, 0xaf,

0x4f, 0xcf, 0x8b, 0x2c, 0x88, 0xaf, 0x03, 0xfc,

0x1d, 0x2a, 0x08, 0x01, 0x43, 0xb2, 0x50, 0xed,

0xd5, 0x73, 0x71, 0x5a, 0x83, 0xe6, 0x29, 0x8c,

0xbc, 0x3c, 0x70, 0xfb, 0x92, 0xa3, 0x44, 0x94,

0x06, 0x53, 0x5b, 0x42, 0xf7, 0x97, 0xc4, 0x9a,

0x27, 0x3c, 0xd8, 0x61, 0x5e, 0x54, 0x72, 0x22,

0xeb, 0xa0, 0xac, 0x46, 0x69, 0xd1, 0x1c, 0x45,

0xed, 0x6d, 0x61, 0xc3, 0x31, 0x53, 0xf0, 0x63,

0x19, 0x46, 0xee, 0xa8, 0x61, 0x45, 0x43, 0x19,

0x00, 0x1f, 0xc2, 0x27, 0x7b, 0xa9, 0xbf, 0x4b,

0x6c, 0x4b, 0x8c, 0x4f, 0x57, 0x23, 0x90, 0xd0,

0xb3, 0x8c, 0xfb, 0xa2, 0xd2, 0x54, 0x91, 0x34,

0x40, 0xf9, 0xc3, 0x45, 0x8f, 0x63, 0xde, 0x5b,

0x02, 0x38, 0x08, 0x2c, 0x73, 0x70, 0xe1, 0xd6,

0x1c, 0xe8, 0xb4, 0x43, 0x4c, 0x29, 0xbd, 0x9f,

0x6d, 0x17, 0x0e, 0xa1, 0xe9, 0x80, 0xbb, 0x10,

0x88, 0x21, 0x73, 0x9a, 0x40, 0x86, 0xaf, 0xed,

0x9c, 0xf6, 0xd1, 0x01, 0x85, 0x72, 0x31, 0x2e,

0xbb, 0x5a, 0x46, 0x46, 0x69, 0xe6, 0x09, 0xb7,

0x2d, 0x20, 0x2e, 0x69, 0xb4, 0x5c, 0x9c, 0x42,

0x61, 0x63, 0x4c, 0xa0, 0x18, 0xb0, 0xcf, 0x39,

0x07, 0xad, 0xc7, 0xdc, 0x33, 0xf9, 0xbd, 0x6f,

0xa9, 0xe7, 0x35, 0x60, 0xbc, 0xcf, 0x32, 0x6c,

0x3d, 0x96, 0x31, 0xd9, 0xdc, 0x55, 0x80, 0x71,

0x35, 0x43, 0xa9, 0x11, 0xd0, 0xea, 0xba, 0x56,

0xec, 0x0e, 0xbd, 0x6b, 0x11, 0x52, 0xa7, 0xd6,

0xdb, 0x1a, 0x3c, 0x80, 0xc5, 0xdd, 0x17, 0xc9,

0x19, 0x5f, 0x5d, 0x26, 0xac, 0x71, 0x94, 0x6e,

0x3c, 0x8e, 0xc0, 0x2a, 0x3f, 0xbf, 0x4a, 0x25,

0x65, 0x37, 0xd6, 0xa0, 0x89, 0x36, 0x4a, 0xbf,

0x51, 0x64, 0xaf, 0x4b, 0xeb, 0x8f, 0x33, 0xa5,

0x91, 0x18, 0x0c, 0xb4, 0x9b, 0x75, 0xb5, 0x63,

0x69, 0xf9, 0x4a, 0xda, 0xd1, 0xf3, 0x34, 0xf9,

0x62, 0x7c, 0x57, 0xe3, 0xe1, 0x4b, 0x88, 0x7e,

0x5e, 0xed, 0xa4, 0x15, 0x35, 0xcb, 0x07, 0xe3,

0x8c, 0x39, 0xfc, 0x09, 0xd7, 0xaa, 0x26, 0xbc,

0x82, 0xc2, 0x09, 0x01, 0xfa, 0x9f, 0xde, 0x84,

0xa7, 0x90, 0x13, 0x39, 0x6b, 0x5a, 0x88, 0x23,

0x2e, 0x9e, 0xff, 0x66, 0xa1, 0xb8, 0x2a, 0x6e,

0xe1, 0xad, 0xdf, 0x99, 0x9b, 0x8d, 0x03, 0x9c,

0x86, 0x68, 0xeb, 0x1d, 0xbb, 0xa3, 0x7f, 0x42,

0x03, 0x1e, 0x65, 0xc3, 0x86, 0x74, 0x1c, 0xc0,

0xb6, 0x3d, 0xb1, 0xf4, 0x7e, 0x56, 0x6f, 0xd0,

0x38, 0x7d, 0x76, 0xc7, 0xc1, 0x9f, 0xf6, 0x4e,

0xf8, 0x25, 0xaf, 0x4c, 0xd4, 0x28, 0xc6, 0x31,

0xbb, 0xe3, 0x80, 0x3b, 0xc2, 0x8f, 0x5b, 0x79,

0x81, 0xbe, 0x15, 0xe1, 0xb0, 0xe7, 0x11, 0x24,

0x53, 0xfa, 0xb7, 0xc0, 0x6c, 0x3a, 0x02, 0xf6,

0x46, 0xfa, 0x02, 0xd8, 0x96, 0x41, 0x99, 0x81,

0x1f, 0x78, 0x36, 0x46, 0xc3, 0x78, 0x45, 0x6b,

0x25, 0xba, 0x8d, 0x79, 0x0e, 0xc1, 0xa8, 0x3d,

0x33, 0x9f, 0x66, 0xa3, 0x93, 0x2a, 0x40, 0xf1,

0xed, 0xbc, 0x83, 0x04, 0xb9, 0x5c, 0xc6, 0xfb,

0x42, 0x29, 0x6a, 0x04, 0xc2, 0xfe, 0x24, 0x36,

0x14, 0xa5, 0x3c, 0x4d, 0x84, 0xa2, 0x63, 0x16,

0xbc, 0x34, 0x6c, 0xa4, 0x30, 0xcc, 0xf3, 0x27,

0x9a, 0xfc, 0x29, 0xe4, 0x2a, 0x5a, 0x1f, 0x0f,

0x71, 0xa8, 0x12, 0x62, 0xe1, 0xb8, 0xe4, 0xd5,

0x3e, 0x97, 0xda, 0x4d, 0x4f, 0x47, 0x49, 0x74,

0xeb, 0x2f, 0x64, 0x6a, 0xfc, 0x9e, 0xe6, 0x97,

0x75, 0xb2, 0xe3, 0xff, 0xe0, 0x74, 0x22, 0xc4,

0x20, 0x32, 0x2e, 0x88, 0xc3, 0x15, 0x3d, 0x29,

0x9d, 0x39, 0xee, 0x68, 0x79, 0x72, 0xe0, 0x2b,

0xf3, 0x4c, 0x7a, 0xfc, 0x2f, 0x39, 0xf2, 0xec,

0xb9, 0xd8, 0x2d, 0xd3, 0xc9, 0x78, 0xc3, 0x52,

0x4c, 0xf9, 0xae, 0xca, 0x23, 0xbe, 0xbb, 0x54,

0x28, 0x88, 0x5c, 0x51, 0x9e, 0xd4, 0x75, 0xc1,

0x1b, 0xe3, 0x86, 0xcb, 0xda, 0xab, 0x8e, 0xa9,

0x89, 0x6a, 0x93, 0x75, 0x45, 0xce, 0xd7, 0x6a,

0x9d, 0x11, 0xd1, 0x45, 0xb1, 0x16, 0x2a, 0x6b,

0x26, 0x21, 0xbb, 0x7a, 0xbc, 0x65, 0xac, 0x46,

0x40, 0xf7, 0x74, 0x74, 0xc6, 0x32, 0x40, 0x4c,

0x18, 0x80, 0xc8, 0xf7, 0x90, 0x7a, 0x39, 0x32,

0xa6, 0xcc, 0xf7, 0x13, 0xd9, 0xba, 0x32, 0x80,

0x62, 0x33, 0xcd, 0xc8, 0x35, 0x58, 0x6d, 0x5b,

0x19, 0xa2, 0x1e, 0x53, 0x64, 0xea, 0x77, 0xec,

0xa2, 0xee, 0xc6, 0x4f, 0x60, 0x10, 0x94, 0x12,

0xb1, 0xca, 0xd6, 0x7d, 0xef, 0x6d, 0xca, 0xb2,

0xa8, 0xd8, 0x28, 0x11, 0xb4, 0x35, 0xa6, 0x53,

0x8e, 0x12, 0x18, 0x3b, 0x8d, 0x86, 0x11, 0x37,

0x9f, 0xa6, 0x36, 0xfd, 0x7a, 0x50, 0x89, 0xe9,

0x52, 0xbe, 0xca, 0x1d, 0x31, 0xec, 0xff, 0x46,

0x4f, 0x90, 0xb9, 0x7e, 0x32, 0xa9, 0x3d, 0xd3,

0x4c, 0x6a, 0xc0, 0x9a, 0x6d, 0x64, 0x0d, 0xa2,

0xf6, 0xd5, 0x34, 0xac, 0x79, 0x9d, 0x04, 0xf1,

0x5a, 0xf9, 0xe3, 0xb6, 0xb9, 0xda, 0xfd, 0x2b,

0x16, 0x1a, 0x58, 0x7c, 0x1d, 0xdb, 0x46, 0x40,

0xd1, 0x69, 0x6c, 0x6b, 0x3b, 0xe1, 0x34, 0x9d,

0xd9, 0xf2, 0xe4, 0x6d, 0x29, 0x8c, 0x1d, 0xfd,

0x88, 0xb0, 0x7b, 0xb1, 0x37, 0xdf, 0x74, 0x7a,

0xe2, 0x95, 0x79, 0x33, 0xab, 0x50, 0x05, 0x10,

0xfc, 0x83, 0xa3, 0x9a, 0x50, 0x72, 0x3f, 0x79,

0x61, 0xc9, 0x8c, 0x4a, 0xba, 0xce, 0x56, 0x78,

0x47, 0xf7, 0xca, 0x42, 0x2d, 0x40, 0x5a, 0x5b,

0x8b, 0xd0, 0x73, 0xf5, 0x33, 0xfd, 0x5c, 0x58,

0x7a, 0x34, 0x5c, 0x2e, 0x11, 0x8e, 0xf7, 0xa4,

0xb9, 0x1f, 0x07, 0x2b, 0xcd, 0x0c, 0x85, 0xcd,

0x3a, 0x9c, 0xfd, 0x24, 0xa7, 0xda, 0x4f, 0x92,

0x9a, 0xab, 0x43, 0x50, 0x6e, 0xb5, 0x00, 0xf1,

0x72, 0xce, 0xe8, 0xce, 0xdd, 0xde, 0x01, 0x22,

0xe2, 0x0a, 0x15, 0xc7, 0x62, 0x57, 0xd9, 0x25,

0xa0, 0xe0, 0x48, 0x3e, 0x01, 0x58, 0x13, 0x05,

0x3f, 0x05, 0xc1, 0x67, 0x44, 0x64, 0x38, 0x4e,

0xd0, 0x52, 0x87, 0x18, 0x57, 0xfd, 0x2a, 0x9e,

0x7a, 0x14, 0xd4, 0x76, 0xd5, 0x19, 0xc6, 0x16,

0xe0, 0xa1, 0x8a, 0x79, 0x7d, 0xe9, 0x1a, 0x64,

0x99, 0x91, 0xc3, 0xe3, 0x80, 0x80, 0xa2, 0x49,

0x0d, 0xb3, 0xfd, 0x0e, 0xb3, 0x0d, 0xea, 0x66,

0x9b, 0x16, 0xde, 0x88, 0xb6, 0x34, 0xfb, 0x33,

0xd7, 0x76, 0xf1, 0xc2, 0x88, 0x00, 0x7e, 0x07,

0x2d, 0x75, 0xce, 0xdf, 0x5e, 0x0e, 0x96, 0x7a,

0x7e, 0x4b, 0x0d, 0x32, 0x02, 0xcb, 0x71, 0x4e,

0xa9, 0x87, 0x82, 0x3f, 0x62, 0xad, 0x97, 0xf2,

0x40, 0xaa, 0xa7, 0x9f, 0x1d, 0x36, 0xad, 0x74,

0xdd, 0x95, 0x85, 0x8c, 0x9b, 0xdb, 0xdf, 0xe1,

0xdb, 0xbb, 0x70, 0xf6, 0x63, 0xc4, 0xa2, 0xde,

0x8d, 0x5c, 0xa1, 0x45, 0x2d, 0xe5, 0xc1, 0x91,

0x38, 0xe3, 0x91, 0x55, 0xca, 0xbd, 0x1e, 0x58,

0xef, 0xc2, 0xd6, 0xee, 0xf0, 0x13, 0xbd, 0xa6,

0xf1, 0xe0, 0xf3, 0xfb, 0x4f, 0xce, 0x5c, 0x62,

0x11, 0xbb, 0xab, 0xdb, 0xc7, 0xbb, 0xf1, 0xd3,

0x28, 0x6b, 0xf4, 0x98, 0x1f, 0x69, 0x21, 0xc3,

0x92, 0x08, 0x50, 0x21, 0x0b, 0x03, 0x14, 0xca,

0xd4, 0xc8, 0x69, 0xe5, 0x53, 0x7f, 0x1c, 0x9c,

0xd4, 0xdc, 0x57, 0x87, 0x6a, 0x60, 0x5f, 0x53,

0xb0, 0x01, 0x41, 0x65, 0x4a, 0x3d, 0xe6, 0xf0,

0x9e, 0x2f, 0x07, 0x2f, 0x0b, 0x69, 0x16, 0xe0,

0x2e, 0x66, 0x87, 0xae, 0xd1, 0x77, 0x72, 0x40,

0xc4, 0x4b, 0x65, 0x71, 0xe7, 0xbe, 0xcb, 0x1c,

0x05, 0x43, 0x8c, 0x08, 0xe6, 0xac, 0x63, 0x16,

0xa6, 0x89, 0x8f, 0xc2, 0xa1, 0x8e, 0xec, 0xa3,

0x13, 0x5d, 0x6b, 0x1d, 0x10, 0x90, 0xbd, 0xed,

0xc9, 0x45, 0x19, 0x11, 0xa3, 0x2c, 0x3c, 0x99,

0xb6, 0x0f, 0x4c, 0xe4, 0xb3, 0xcc, 0x20, 0xa5,

0xd5, 0xdd, 0x3a, 0xcd, 0x36, 0x48, 0xb7, 0x73,

0x41, 0xfc, 0x5a, 0xcb, 0x02, 0x83, 0x3b, 0xb3,

0x8a, 0x72, 0x75, 0x5e, 0xfc, 0x54, 0x0b, 0xa1,

0x0c, 0xd7, 0xea, 0x17, 0x3b, 0x7e, 0x7e, 0x9e,

0xbe, 0xe4, 0x41, 0x41, 0x47, 0xb2, 0x02, 0xac,

0x09, 0x9a, 0x13, 0xfb, 0xac, 0xdd, 0x9b, 0x73,

0xc2, 0x14, 0x01, 0x02, 0x86, 0x79, 0xf8, 0xc0,

0xc2, 0x85, 0x8d, 0x43, 0xc8, 0x6d, 0x6b, 0x7b,

0xcc, 0xc3, 0x74, 0xde, 0xea, 0x09, 0x9e, 0x65,

0xc1, 0x3e, 0x1f, 0xf2, 0xa9, 0x1a, 0x65, 0xbe,

0x0d, 0x2e, 0xd5, 0x0e, 0xe2, 0x35, 0x4a, 0x9b,

0x8a, 0xd6, 0x72, 0x6b, 0x3e, 0x23, 0xe2, 0x2a,

0x9d, 0x0b, 0x57, 0xe1, 0x33, 0x14, 0x6c, 0xcf,

0xea, 0x56, 0xec, 0x0b, 0x4d, 0x05, 0x7c, 0x50,

0xee, 0x49, 0x4d, 0xfa, 0x3a, 0xd9, 0x1e, 0x6b,

0x0d, 0xc6, 0x33, 0xf0, 0x65, 0x78, 0xf4, 0x51,

0x58, 0xa7, 0x04, 0xc5, 0x78, 0x03, 0x28, 0xad,

0x10, 0x2e, 0x5c, 0x79, 0x26, 0xeb, 0x1f, 0xd4,

0xc0, 0x43, 0x92, 0x38, 0xf3, 0xa7, 0xb5, 0x1e,

0x3e, 0xe8, 0xe7, 0xc3, 0x77, 0xcf, 0x83, 0xb5,

0xbf, 0x32, 0x8e, 0x57, 0xec, 0xc7, 0x46, 0x8e,

0x35, 0xba, 0x4e, 0x7c, 0x28, 0xd6, 0x21, 0xb6,

0x3e, 0x63, 0x86, 0x9a, 0xb2, 0x64, 0x5d, 0xb6,

0xfc, 0xdd, 0xe3, 0x89, 0x4d, 0xbd, 0x6d, 0x16,

0x17, 0x7f, 0xce, 0x6d, 0x3d, 0x57, 0x6d, 0xc3,

0x8f, 0xdd, 0x4e, 0x5c, 0xa7, 0xfe, 0x31, 0x58,

0x5b, 0x21, 0xe1, 0xd1, 0xf3, 0xb7, 0x3b, 0x05,

0x68, 0x40, 0xad, 0x3e, 0x05, 0x95, 0xca, 0x1e,

0xdd, 0x0e, 0x08, 0xe7, 0xac, 0xe6, 0x3f, 0x92,

0x2a, 0x28, 0xc0, 0xef, 0x65, 0x9b, 0xf8, 0xfb,

0x20, 0x51, 0xd7, 0x25, 0x97, 0xcf, 0x24, 0x7a,

0x06, 0x3d, 0xac, 0xdc, 0x10, 0x37, 0xfa, 0xfb,

0x1c, 0xd4, 0xdf, 0xd4, 0xa1, 0xd3, 0x42, 0xa5,

0x9c, 0x4a, 0xcd, 0xc2, 0xd1, 0xf2, 0xb4, 0x52,

0xa9, 0xe8, 0x08, 0xfa, 0x3a, 0x6d, 0x06, 0xd9,

0x28, 0x50, 0xee, 0x7c, 0x0c, 0xeb, 0x98, 0x2d,

0xda, 0x70, 0x4c, 0x6f, 0xab, 0x06, 0x53, 0xf8,

0xea, 0xc4, 0x8b, 0xb4, 0x5b, 0x69, 0x4a, 0xb9,

0xcb, 0xe7, 0x38, 0xc4, 0x5b, 0x15, 0x6a, 0x97,

0xfd, 0x0d, 0x0f, 0xa1, 0x7e, 0xe2, 0x7b, 0x28,

0x08, 0xcd, 0x51, 0x48, 0x39, 0xeb, 0xb4, 0x57,

0x48, 0x1b, 0x6b, 0x28, 0x4d, 0x86, 0x44, 0xa3,

0x68, 0x5e, 0x31, 0x8a, 0x3c, 0x20, 0xc4, 0x40,

0x8a, 0xae, 0xd0, 0xd0, 0x8f, 0x93, 0xae, 0x89,

0x21, 0xa9, 0xc6, 0x4b, 0x45, 0xfc, 0x9a, 0xfe,

0x09, 0x6f, 0x15, 0x07, 0xc8, 0x94, 0x14, 0xb6,

0xbd, 0x7e, 0x16, 0x0e, 0x50, 0xf8, 0xa9, 0x78,

0x95, 0x9b, 0x7e, 0xf5, 0xb5, 0x7d, 0xfd, 0xa1,

0x98, 0x26, 0x52, 0x17, 0xdb, 0xfc, 0xe4, 0x59,

0xaf, 0x06, 0xe2, 0x06, 0x22, 0x23, 0x09, 0x4b,

0x40, 0x8d, 0x43, 0x03, 0xd0, 0x88, 0x95, 0xee,

0x9c, 0x9f, 0xe6, 0x01, 0x0a, 0x1e, 0x43, 0x5b,

0xd5, 0xc5, 0x29, 0x55, 0x52, 0x0e, 0xe9, 0xb2,

0x3b, 0x49, 0xf4, 0x85, 0xd7, 0xc5, 0xd1, 0x39,

0x16, 0x96, 0x4d, 0x58, 0x3b, 0x45, 0x4a, 0xe0,

0x00, 0xad, 0xdb, 0x01, 0x14, 0x42, 0x78, 0x80,

0x27, 0x2a, 0x2e, 0x97, 0x50, 0x29, 0x12, 0x0e,

0x38, 0x2f, 0xf9, 0xe3, 0x78, 0xd4, 0x69, 0x29,

0x9e, 0xfd, 0xdb, 0x2a, 0x5b, 0x39, 0x28, 0x5f,

0x2f, 0xde, 0xd8, 0x25, 0x75, 0x93, 0x77, 0x6c,

0x57, 0xc3, 0x58, 0xa6, 0x95, 0xae, 0xa4, 0xd1,

0xce, 0x61, 0x58, 0x92, 0x9a, 0xe0, 0x6b, 0x3f,

0xa2, 0xd7, 0x0f, 0x21, 0xf0, 0x3b, 0x4f, 0x68,

0xfe, 0xcd, 0xca, 0x19, 0xfe, 0xcc, 0xdf, 0x09,

0x39, 0xce, 0xef, 0x98, 0x59, 0x3d, 0x84, 0xc0,

0xf6, 0xb2, 0x9c, 0xb3, 0xbe, 0x08, 0x61, 0xf3,

0xdb, 0x1f, 0x4e, 0xb6, 0x83, 0xab, 0x11, 0xed,

0x35, 0xce, 0x6c, 0xfc, 0xb5, 0x1c, 0x17, 0x9d,

0x39, 0xf5, 0x21, 0xf7, 0x60, 0x66, 0x1b, 0xc4,

0x52, 0xea, 0x0d, 0x18, 0x16, 0xc2, 0xc6, 0x71,

0xa7, 0x29, 0x29, 0x82, 0xb1, 0xea, 0x04, 0x1b,

0x51, 0xac, 0x83, 0x2a, 0x3a, 0xd2, 0x4a, 0x76,

0x03, 0x2a, 0xdb, 0xc9, 0xd4, 0x80, 0x6e, 0xf8,

0x86, 0x5e, 0x42, 0x5d, 0xd3, 0xe4, 0x2d, 0xbf,

0xca, 0x80, 0xd9, 0x8e, 0x5e, 0xeb, 0x48, 0x23,

0x40, 0x7d, 0x6a, 0xf6, 0x96, 0x50, 0xf3, 0xdf,

0xf9, 0x11, 0xae, 0x48, 0x7b, 0x56, 0x80, 0xf0,

0x3b, 0x55, 0x41, 0x9c, 0xcc, 0xeb, 0x52, 0x87,

0xa2, 0xfe, 0xb7, 0xa7, 0xb1, 0x2d, 0x52, 0x8d,

0x1f, 0x00, 0x02, 0xa8, 0x27, 0xc7, 0xda, 0xc2,

0x82, 0xd8, 0x5e, 0x13, 0x9f, 0x3f, 0x03, 0xe5,

0x5f, 0x2d, 0x05, 0xbd, 0x17, 0x8c, 0x32, 0xcf,

0xaa, 0x57, 0xcb, 0x42, 0x55, 0x35, 0x50, 0x67,

0x22, 0xe8, 0xb4, 0x80, 0x62, 0xac, 0x02, 0xe7,

0xd7, 0xa2, 0x1b, 0x44, 0x99, 0x3a, 0x84, 0x8b,

0x59, 0x2a, 0x4c, 0x85, 0xac, 0x27, 0xf9, 0x43,

0x77, 0xb4, 0x27, 0xc4, 0x85, 0xef, 0xfe, 0xf0,

0x7d, 0x5b, 0xf6, 0xce, 0xc9, 0x0f, 0x20, 0xa0,

0x81, 0x0f, 0x25, 0x26, 0xb8, 0xd6, 0x0e, 0xc3,

0x0f, 0x8f, 0x79, 0x4c, 0xf1, 0x54, 0x45, 0x67,

0xad, 0x34, 0x1f, 0x15, 0xa5, 0x18, 0xd0, 0x8f,

0x5d, 0xa2, 0xf4, 0x49, 0xf8, 0x90, 0x3a, 0x33,

},

&case8

};

test\_case\_t case10 = {

/\* key \*/

{

0xdb, 0x0d, 0xb2, 0x58, 0x87, 0xd4, 0x7b, 0xdb,

0x74, 0x93, 0x1a, 0x7f, 0x48, 0xc3, 0x65, 0xcd,

0x6a, 0x76, 0xc7, 0x9a, 0x26, 0x53, 0xe4, 0xa2,

0xe1, 0x2b, 0x0d, 0x7e, 0x4c, 0x81, 0x3f, 0x93,

0x2d, 0xf6, 0xa8, 0xc9, 0x21, 0xb6, 0x2a, 0x2e,

0x64, 0xaf, 0xa6, 0x9f, 0xc1, 0x99, 0x97, 0x8d,

},

/\* bytes in key \*/

48,

/\* plaintext \*/

{

0xc4, 0xdf, 0x50, 0x73, 0x99, 0x95, 0x30, 0x24,

0x6d, 0x76, 0x2f, 0x25, 0xa6, 0xe8, 0x0b, 0x37,

0x78, 0x9c, 0x1b, 0x10, 0x3f, 0xa2, 0x97, 0x68,

0x55, 0x4e, 0x05, 0x32, 0x0b, 0xa6, 0x66, 0x88,

0x42, 0x70, 0xc4, 0xda, 0x19, 0x4f, 0xf5, 0x1a,

0xab, 0x80, 0x6b, 0x59, 0x9f, 0x54, 0x32, 0xb1,

0x88, 0x39, 0x1f, 0x80, 0x3f, 0x24, 0xc8, 0xd3,

0x1a, 0x2a, 0x0b, 0x51, 0x67, 0x35, 0xf5, 0x3f,

0xdb, 0x53, 0xff, 0xdb, 0xfd, 0xaa, 0x57, 0xdb,

0x1e, 0x82, 0xfb, 0x65, 0x7f, 0xd7, 0xd3, 0x89,

0x25, 0xbc, 0x3a, 0x72, 0x98, 0x56, 0x9f, 0x3f,

0x7d, 0xe2, 0x75, 0x76, 0x40, 0xa8, 0x04, 0x88,

0xfa, 0x38, 0x6c, 0x30, 0xba, 0x60, 0x4c, 0xec,

0xf1, 0x96, 0x6f, 0xe3, 0xa4, 0x60, 0x6a, 0xbe,

0x3a, 0xec, 0x16, 0xb6, 0x76, 0xd6, 0xe9, 0x80,

0x7e, 0x28, 0x21, 0xd7, 0xd2, 0x0d, 0xbc, 0xa9,

0xb2, 0x73, 0x8f, 0x7b, 0x6c, 0x92, 0x91, 0xa4,

0x06, 0xa1, 0xa0, 0x73, 0x8d, 0xdb, 0x8c, 0x1c,

0xc9, 0x6b, 0x43, 0x00, 0x64, 0x43, 0xf5, 0x27,

0x62, 0x5c, 0x24, 0xb3, 0x82, 0x7c, 0x7b, 0xc4,

0x1f, 0x72, 0x10, 0x6a, 0x4a, 0xe4, 0xe3, 0x99,

0x28, 0x69, 0x57, 0x91, 0x64, 0xa5, 0xa2, 0xa4,

0x94, 0x38, 0x77, 0xbc, 0xc1, 0xf1, 0x82, 0x00,

0x41, 0xec, 0x0d, 0x16, 0xde, 0xfc, 0xb1, 0x01,

0xa0, 0xd5, 0x5c, 0x4c, 0x70, 0xf8, 0xf7, 0xaf,

0xd3, 0x3c, 0x88, 0xad, 0x63, 0x87, 0xeb, 0xf0,

0xf6, 0x13, 0xa5, 0xf5, 0x4f, 0xdc, 0x1e, 0xc5,

0xc3, 0x2f, 0x13, 0x65, 0x0b, 0x3f, 0x19, 0x83,

0x52, 0xeb, 0x33, 0xa5, 0xfd, 0x9e, 0x0a, 0x14,

0x33, 0x92, 0xb1, 0x1c, 0x66, 0x2b, 0x3d, 0x11,

0x66, 0x4f, 0xc7, 0x81, 0x9c, 0x05, 0x8e, 0x05,

0x81, 0xa2, 0x5c, 0xd3, 0x26, 0x11, 0x26, 0x40,

0xf4, 0x4e, 0xca, 0x96, 0xd3, 0x36, 0xec, 0xf3,

0x90, 0xe1, 0x3a, 0xcc, 0x12, 0x23, 0x21, 0x49,

0x72, 0xa7, 0x43, 0xcd, 0xb0, 0xf1, 0x74, 0x2b,

0x6e, 0x73, 0x9f, 0x56, 0x1d, 0x0a, 0x15, 0xad,

0xb5, 0xb1, 0xe8, 0xdf, 0xa1, 0xb1, 0xa9, 0x06,

0xee, 0x4a, 0xe6, 0xac, 0x07, 0x99, 0x3e, 0x74,

0x69, 0x78, 0xd3, 0x4a, 0x42, 0xd8, 0xd9, 0x8c,

0x55, 0x35, 0xf0, 0x83, 0xa2, 0xa3, 0xac, 0xf0,

0xcd, 0xb6, 0xd7, 0x7b, 0x4a, 0x35, 0x81, 0xf5,

0x8b, 0x67, 0x9b, 0xc2, 0x03, 0xf4, 0xdc, 0x07,

0xe0, 0xe6, 0xf2, 0x99, 0xa6, 0x7f, 0x4d, 0xf4,

0xee, 0xbe, 0x17, 0x14, 0x34, 0xd0, 0xaa, 0x7d,

0x14, 0x80, 0x27, 0x04, 0x9f, 0x93, 0x53, 0xa6,

0x2b, 0xde, 0xb6, 0x6d, 0x10, 0x64, 0x92, 0x66,

0x65, 0x44, 0x1d, 0xec, 0x46, 0xb4, 0xdd, 0x2b,

0x78, 0x95, 0x84, 0x65, 0xb6, 0xcc, 0x26, 0x36,

0x09, 0x8e, 0xf1, 0x6d, 0x9c, 0x56, 0xfd, 0xf4,

0xff, 0x16, 0xa1, 0x95, 0x45, 0x55, 0x94, 0x50,

0x4c, 0xe1, 0xb2, 0xe8, 0xad, 0x67, 0x0d, 0xd9,

0x95, 0x76, 0xac, 0xfe, 0x0c, 0xb7, 0x04, 0xe7,

0x67, 0x81, 0x33, 0xbf, 0xae, 0x50, 0x4e, 0xb5,

0xef, 0xff, 0x43, 0x41, 0x27, 0xb7, 0x60, 0xff,

0x33, 0x29, 0x37, 0x0d, 0x49, 0xc9, 0xd8, 0x25,

0x73, 0xf9, 0x80, 0x3e, 0x1d, 0x86, 0x9c, 0xed,

0xa6, 0x41, 0x77, 0x80, 0x9f, 0x44, 0x7e, 0x7d,

0x07, 0x91, 0x33, 0x87, 0xa2, 0x5e, 0xa4, 0x9c,

0xc1, 0x84, 0xba, 0x4a, 0x0a, 0x70, 0xf2, 0x05,

0x9d, 0x5a, 0xea, 0x6e, 0xe7, 0xbd, 0x66, 0x59,

0xe5, 0xc0, 0x09, 0x52, 0x97, 0x54, 0x9d, 0x64,

0x7e, 0xb0, 0xf9, 0xd3, 0xc5, 0xd7, 0xe3, 0x53,

0x09, 0x37, 0xaf, 0x72, 0x6d, 0x50, 0x64, 0x03,

0x26, 0x28, 0x27, 0x64, 0x91, 0x43, 0x59, 0x10,

0x2b, 0x61, 0x8c, 0xe4, 0x05, 0xc3, 0xf0, 0xce,

0xb7, 0xf0, 0x4a, 0x93, 0x47, 0xb5, 0xcf, 0x44,

0xf4, 0xee, 0xb9, 0xbe, 0x18, 0xfe, 0xe2, 0xb9,

0xe0, 0x98, 0xa5, 0x30, 0x0d, 0x3c, 0x43, 0xa5,

0xd2, 0x4b, 0xf0, 0x2b, 0x21, 0x8a, 0x25, 0xd9,

0x50, 0xc0, 0x91, 0xc2, 0x5b, 0xd1, 0x20, 0xac,

0xbe, 0xd3, 0xd1, 0x0c, 0x45, 0x38, 0x4e, 0x8d,

0xe3, 0xfa, 0x60, 0xbf, 0xac, 0x96, 0x99, 0x1f,

0x9d, 0x1e, 0x10, 0x11, 0x79, 0xb9, 0x75, 0x24,

0xf9, 0x84, 0x48, 0x0c, 0x15, 0xb0, 0xaf, 0x94,

0x06, 0x28, 0xdc, 0x72, 0x6a, 0xea, 0x8d, 0xa4,

0x2a, 0x6e, 0xf9, 0x9d, 0x7e, 0x74, 0x37, 0xa1,

0xd3, 0x75, 0x42, 0x2d, 0x44, 0x44, 0xc5, 0xef,

0x7a, 0x4d, 0xe4, 0xbd, 0xe7, 0x51, 0x24, 0xa2,

0x5f, 0x03, 0x21, 0xdc, 0x4c, 0xdc, 0xb4, 0x98,

0x70, 0x35, 0xe3, 0x6d, 0xf2, 0xbc, 0x4e, 0x87,

0x43, 0x2a, 0x60, 0x3c, 0x39, 0xae, 0x53, 0x8d,

0xb0, 0xa6, 0x12, 0x54, 0x23, 0x80, 0x15, 0x3b,

0x42, 0x2c, 0x93, 0x65, 0x45, 0x7a, 0xbd, 0x1c,

0xdc, 0xf1, 0xb8, 0x5f, 0x86, 0xab, 0xcb, 0x23,

0xe3, 0xf2, 0x1c, 0x50, 0x84, 0x19, 0x3e, 0x5c,

0xc9, 0x2a, 0x5d, 0x36, 0x13, 0x96, 0xc1, 0x5c,

0xc5, 0x1b, 0x1b, 0x9c, 0xaa, 0x6f, 0x93, 0xe8,

0xd1, 0x16, 0x4e, 0x57, 0x39, 0x1f, 0x94, 0x4b,

0x15, 0x22, 0xf4, 0xe1, 0xbd, 0xd2, 0xf0, 0x58,

0xdc, 0xfa, 0x5d, 0x44, 0x1b, 0xa1, 0x25, 0xc4,

0xc9, 0xa4, 0xf1, 0xeb, 0x29, 0x84, 0x8b, 0x01,

0x2a, 0x15, 0x97, 0x3d, 0x23, 0x36, 0x00, 0xd2,

0xb1, 0xee, 0xff, 0xf3, 0x06, 0x6d, 0xa8, 0x22,

0xc3, 0x53, 0xa0, 0x21, 0x5f, 0x78, 0xc3, 0x32,

0x7b, 0xba, 0x0f, 0x0e, 0xfb, 0xec, 0x15, 0x9f,

0x67, 0x4b, 0x18, 0xf4, 0xac, 0xe5, 0x4d, 0x9e,

0xbd, 0x8b, 0xd1, 0x35, 0xae, 0xbf, 0x5b, 0xe8,

0x34, 0x15, 0x1b, 0xc6, 0x4d, 0x7d, 0x24, 0x2d,

0x80, 0x42, 0x21, 0xa0, 0xf8, 0xb8, 0x06, 0x50,

0x6e, 0x40, 0xed, 0xf7, 0x85, 0xcc, 0x3a, 0x71,

0x8a, 0x5c, 0x42, 0x33, 0x75, 0xb8, 0x74, 0x88,

0xdb, 0x2a, 0x91, 0x6d, 0x56, 0xa6, 0x33, 0x72,

0x0d, 0xe3, 0xf5, 0x3e, 0x86, 0xff, 0xc5, 0xcb,

0xe6, 0xb6, 0x13, 0x82, 0x70, 0xe6, 0x66, 0xd1,

0xb1, 0x55, 0x5d, 0x6b, 0x3f, 0x35, 0xcd, 0x3d,

0xf6, 0x0f, 0xaf, 0x78, 0xaa, 0x8a, 0xbd, 0x3d,

0x8d, 0x7b, 0xa3, 0xe9, 0x19, 0x8e, 0x42, 0x50,

0x2c, 0xa9, 0x64, 0x1c, 0x7e, 0x78, 0x48, 0x1b,

0xa1, 0xfa, 0x3e, 0x51, 0x66, 0xca, 0x8e, 0x47,

0xae, 0x9c, 0x65, 0x73, 0x45, 0x8e, 0xfa, 0xa4,

0xcb, 0x33, 0x4f, 0x47, 0xb3, 0x24, 0x16, 0x0f,

0x45, 0x2e, 0x89, 0x77, 0xcf, 0xae, 0x63, 0x15,

0xcb, 0x24, 0xd6, 0x01, 0x59, 0x7a, 0x7d, 0x40,

0xef, 0x1d, 0x67, 0xdb, 0xd8, 0x4a, 0x13, 0x6f,

0xe4, 0x69, 0xa2, 0x6c, 0x13, 0x27, 0x01, 0x64,

0x69, 0x25, 0xfa, 0xdf, 0x02, 0x66, 0x8f, 0x0e,

0x2c, 0xae, 0xaf, 0x46, 0xcb, 0x90, 0x38, 0x37,

0x1b, 0x57, 0xf2, 0x06, 0xfb, 0x47, 0x11, 0x77,

0xc0, 0x4f, 0x0c, 0x4e, 0xcd, 0x8f, 0x49, 0xf8,

0x58, 0xd9, 0xc9, 0x08, 0x26, 0xe9, 0xd0, 0xcb,

0x43, 0xa5, 0xca, 0xa9, 0x39, 0x9a, 0x4d, 0x18,

0x9e, 0x1b, 0x94, 0x0d, 0xc9, 0xc4, 0x77, 0xf7,

0x23, 0x3e, 0xa3, 0x93, 0xca, 0x37, 0xb1, 0x57,

0x92, 0x88, 0x76, 0x90, 0x98, 0x47, 0xc6, 0x05,

0x04, 0x22, 0x6d, 0x4c, 0x0a, 0xdb, 0xe1, 0x0f,

0x40, 0x3e, 0x98, 0x24, 0x7b, 0xbb, 0xab, 0xb9,

0xec, 0x33, 0xec, 0xaf, 0x62, 0xaa, 0x8d, 0xf4,

0x89, 0x1e, 0x8a, 0xd8, 0x54, 0xff, 0x3f, 0x6a,

0x7c, 0x4d, 0xc8, 0xf0, 0x3f, 0x7b, 0xce, 0x68,

0xdf, 0x47, 0x3e, 0x8f, 0x28, 0xa4, 0xd8, 0xb5,

0x9a, 0xaa, 0xfa, 0x1a, 0x18, 0x2b, 0x05, 0xd8,

0xca, 0x11, 0xa6, 0xf1, 0xf5, 0xce, 0xfd, 0xef,

0x1f, 0x58, 0x63, 0xcb, 0xb4, 0xd5, 0x78, 0x51,

0xf9, 0xd6, 0x8d, 0x93, 0xd2, 0x44, 0x10, 0x47,

0x80, 0x29, 0x95, 0xd3, 0x95, 0xa8, 0xe2, 0x49,

0x77, 0xcd, 0x36, 0xb4, 0xec, 0x2f, 0x7a, 0xd9,

0x45, 0x26, 0xb6, 0x14, 0x03, 0x8b, 0xe9, 0x4d,

0x18, 0xed, 0xe6, 0xb9, 0xe5, 0x95, 0x47, 0xa5,

0x7d, 0x11, 0x3b, 0x0e, 0x84, 0x06, 0xfa, 0xca,

0xb4, 0x0e, 0x8a, 0xfc, 0xab, 0x9b, 0x11, 0xb9,

0x00, 0xa6, 0x74, 0xbb, 0x70, 0x9d, 0x44, 0x30,

0xa8, 0x5c, 0xa1, 0xfa, 0xd0, 0x39, 0x7d, 0x77,

0x4a, 0xd4, 0xe4, 0x89, 0xd2, 0xda, 0x8b, 0x58,

0x93, 0x7f, 0xb7, 0xf9, 0x42, 0xcb, 0x5a, 0xec,

0xeb, 0xd8, 0x6e, 0x45, 0x4f, 0x7f, 0xf1, 0x72,

0x20, 0xa8, 0x59, 0xcb, 0x3f, 0x29, 0xd4, 0x5a,

0x33, 0x23, 0x75, 0xbc, 0xa6, 0x09, 0xa2, 0xca,

0x5d, 0xe2, 0x73, 0x0b, 0x83, 0x1d, 0x0a, 0xe8,

0xfd, 0x67, 0xc4, 0x43, 0x28, 0x9d, 0xc5, 0xc6,

0x11, 0x83, 0x7d, 0xe0, 0xdf, 0x90, 0xb4, 0xeb,

0xc4, 0xc2, 0xcd, 0xc3, 0x52, 0x1f, 0xc3, 0xc2,

0xc4, 0xcc, 0x14, 0xc0, 0xa6, 0xbf, 0xbc, 0x95,

0xc2, 0xda, 0xfa, 0xc1, 0x3a, 0xb2, 0xa0, 0x5d,

0x5c, 0x55, 0x62, 0xf4, 0x82, 0x33, 0xd5, 0x2b,

0x3b, 0x25, 0x1d, 0xfa, 0xbc, 0x70, 0xbb, 0x35,

0x64, 0x1f, 0x70, 0x5d, 0x44, 0x90, 0x89, 0xec,

0xe1, 0xed, 0x5a, 0xa2, 0x13, 0xa8, 0x6a, 0x0c,

0xd7, 0xc1, 0x9e, 0x0f, 0x69, 0x97, 0xd8, 0x84,

0x5d, 0xa9, 0xbd, 0x5d, 0x00, 0x39, 0x8c, 0x6a,

0x9b, 0x3d, 0x57, 0xc1, 0x04, 0x7f, 0xe0, 0x0c,

0xac, 0x4a, 0xd7, 0x0b, 0xfa, 0x90, 0x6c, 0xbd,

0xb6, 0xd2, 0x03, 0x8d, 0xf0, 0x53, 0x23, 0xa8,

0x78, 0xd7, 0x0d, 0xd4, 0xbd, 0x3d, 0xc6, 0x0e,

0x74, 0xcf, 0x95, 0x9c, 0x9a, 0x74, 0xb6, 0x9f,

0x3f, 0xfd, 0x61, 0x46, 0xed, 0x35, 0x3f, 0xec,

0x36, 0x64, 0x6e, 0xed, 0x05, 0x36, 0xd1, 0xd7,

0xf8, 0x64, 0x8e, 0xb9, 0x0a, 0xa0, 0xf0, 0xff,

0x39, 0x38, 0x3f, 0xbb, 0x8d, 0xb1, 0x1c, 0xeb,

0xe9, 0xcb, 0xa0, 0x24, 0x10, 0xb8, 0x51, 0xfc,

0xf4, 0xca, 0x0a, 0x92, 0xca, 0xa3, 0xd4, 0xc6,

0x76, 0x9b, 0x10, 0x8a, 0x45, 0x9e, 0x5f, 0x9a,

0xe9, 0x35, 0x0c, 0x4a, 0x44, 0xa6, 0x97, 0x4e,

0x87, 0x61, 0x5c, 0xee, 0xfb, 0x37, 0xf7, 0xd8,

0x53, 0x3a, 0x13, 0x2f, 0xff, 0x07, 0x1d, 0x9c,

0x70, 0x36, 0x4e, 0x8e, 0x35, 0x57, 0x9d, 0x57,

0x77, 0x2d, 0x38, 0x97, 0x47, 0x32, 0x44, 0xe5,

0xed, 0x16, 0xb0, 0x6c, 0x99, 0x5c, 0x66, 0x52,

0x74, 0x04, 0x94, 0x3c, 0x11, 0xdb, 0x3c, 0xd4,

0xc8, 0xc7, 0x45, 0x6c, 0xff, 0x75, 0x36, 0xef,

0xc2, 0xe8, 0xf9, 0x37, 0x5d, 0x11, 0x4e, 0x19,

0x5d, 0xbc, 0x09, 0xb6, 0xd4, 0xe0, 0x37, 0xb5,

0x45, 0x82, 0x8c, 0x75, 0x32, 0x16, 0x9d, 0x9e,

0x0f, 0x46, 0xdb, 0x09, 0x51, 0x08, 0x19, 0xdb,

0xad, 0xa2, 0x5d, 0x2c, 0x3e, 0xa8, 0x05, 0x4a,

0xff, 0xef, 0x2f, 0xfb, 0x9b, 0xf2, 0x7d, 0x7e,

0x2d, 0x02, 0x49, 0x77, 0x2c, 0x92, 0xc3, 0x64,

0xa2, 0xda, 0xbe, 0x24, 0x92, 0xef, 0x79, 0xc0,

0xb1, 0xf4, 0x2f, 0x3d, 0x0a, 0x65, 0x1a, 0xac,

0xf4, 0x1c, 0x5a, 0xf2, 0x4b, 0x98, 0xd6, 0x14,

0x04, 0xec, 0xfe, 0x0d, 0xfc, 0xad, 0xbe, 0x3b,

0xc9, 0x44, 0x9d, 0xc2, 0xe5, 0x3d, 0x6f, 0xb9,

0x46, 0x1e, 0x21, 0xed, 0xea, 0x6c, 0xce, 0xbe,

0xe8, 0xc1, 0x4f, 0xc3, 0x32, 0xc7, 0x26, 0xc5,

0x5e, 0xe4, 0x2b, 0xf2, 0x72, 0x79, 0xf5, 0x19,

0x72, 0x88, 0xbb, 0xbe, 0x93, 0x1a, 0x48, 0xd5,

0x8a, 0x27, 0x49, 0x82, 0x2c, 0xe0, 0x98, 0xe0,

0x73, 0x7f, 0xe5, 0xb9, 0xba, 0x7d, 0x55, 0x5f,

0xf0, 0x66, 0xf9, 0x76, 0xcb, 0xca, 0xa2, 0xaa,

0xf2, 0xc8, 0xaa, 0xab, 0xd6, 0x4d, 0x7c, 0xfd,

0xa7, 0x1a, 0x7a, 0xb2, 0x9d, 0x6c, 0xa8, 0x49,

0x8f, 0x21, 0xe9, 0x12, 0x88, 0x15, 0x50, 0x91,

0x78, 0x6e, 0x9c, 0x1a, 0x50, 0xa4, 0x63, 0x22,

0xa7, 0x7e, 0x76, 0x63, 0x7c, 0x32, 0xd0, 0x78,

0xfb, 0x23, 0xae, 0xa9, 0x03, 0x1b, 0x34, 0x54,

0xad, 0xb6, 0x2b, 0x96, 0x5a, 0x4a, 0xd9, 0x33,

0xb6, 0x60, 0x55, 0xc7, 0xf6, 0x32, 0xba, 0xcc,

0x8a, 0x7a, 0xf8, 0xef, 0x8c, 0xce, 0x57, 0x94,

0x70, 0x71, 0x8a, 0xff, 0x20, 0x78, 0x1d, 0x4d,

0x35, 0x7d, 0x7d, 0x42, 0xc6, 0x55, 0xcb, 0x6e,

0x19, 0x3a, 0x68, 0x8a, 0x01, 0x87, 0xac, 0x19,

0xa2, 0x93, 0x44, 0xcc, 0xc4, 0x0f, 0xf9, 0x13,

0x00, 0x5a, 0xa5, 0x09, 0x06, 0x8f, 0x34, 0x9e,

0x6a, 0xdf, 0x47, 0x35, 0x5d, 0xdd, 0xd6, 0xa7,

0x42, 0x35, 0x90, 0x32, 0x33, 0xc9, 0x09, 0x73,

0x40, 0x1b, 0x13, 0x20, 0x48, 0xa4, 0x36, 0xdc,

0xe9, 0xb5, 0x9a, 0x53, 0xae, 0xdc, 0x15, 0xcb,

0x70, 0xac, 0xd7, 0x8f, 0x0a, 0x05, 0xd4, 0xe2,

0xc2, 0x7c, 0xc4, 0xa4, 0x40, 0xf9, 0x6a, 0x65,

0x4a, 0x66, 0x3c, 0x9e, 0xc8, 0xb6, 0x7b, 0x4d,

0xeb, 0x6c, 0xb8, 0xe3, 0x16, 0x94, 0x5c, 0x25,

0xa2, 0xe9, 0x44, 0xce, 0xb9, 0x44, 0x2b, 0xee,

0x51, 0x76, 0xcd, 0x2c, 0x1a, 0xeb, 0x86, 0xbe,

0x3e, 0xc4, 0x9d, 0xdd, 0xd6, 0xb3, 0x11, 0xeb,

0x1a, 0x38, 0x61, 0xb2, 0x4f, 0x9e, 0xcd, 0x91,

0xab, 0x91, 0xb7, 0x98, 0xaf, 0xa9, 0x9c, 0x01,

0x98, 0x65, 0x5b, 0xfc, 0x0a, 0xab, 0xce, 0x27,

0xab, 0xa2, 0xff, 0x06, 0xd7, 0xac, 0xec, 0x01,

0xe3, 0x32, 0x8c, 0x97, 0x13, 0x38, 0x3d, 0xa0,

0x52, 0x37, 0x7f, 0x3c, 0x48, 0x91, 0x08, 0x6a,

0x64, 0x87, 0x4d, 0xd2, 0x3d, 0x7a, 0x6e, 0xe5,

0x85, 0x43, 0xf8, 0x57, 0xaf, 0xd7, 0x66, 0x9a,

0xc4, 0x88, 0xe4, 0xcd, 0x37, 0xd2, 0xf4, 0x11,

0x10, 0xda, 0xc0, 0x31, 0x0f, 0xd3, 0x09, 0x1c,

0xe5, 0x74, 0x38, 0x95, 0x8a, 0x4a, 0x69, 0x3c,

0xcf, 0x75, 0xd9, 0xac, 0x07, 0x68, 0xfa, 0x43,

0xd8, 0x74, 0xa3, 0x12, 0xcd, 0x75, 0xdb, 0x1f,

0xc4, 0xe8, 0xe1, 0x42, 0x3b, 0x64, 0x7a, 0x92,

0x1c, 0x9b, 0xc4, 0xe4, 0x75, 0xd6, 0x0f, 0x07,

0x3b, 0x37, 0x1f, 0x27, 0xf4, 0x18, 0x6c, 0x7c,

0xb7, 0x4f, 0x23, 0xc8, 0xc4, 0x6d, 0x20, 0x36,

0x56, 0x83, 0xf8, 0xa8, 0xc3, 0x52, 0x5a, 0xe8,

0xec, 0xb7, 0x20, 0xc1, 0xcb, 0xa8, 0xaa, 0x1c,

0x3a, 0x7a, 0x77, 0xae, 0x2c, 0xff, 0x71, 0x0c,

0x9e, 0x41, 0xa9, 0xab, 0xf6, 0xc8, 0xf6, 0x71,

0xcd, 0x1b, 0x7c, 0xc3, 0xcb, 0x1f, 0x98, 0xa7,

0x72, 0xc2, 0x45, 0x8a, 0xc8, 0x91, 0x7b, 0xc3,

0xf3, 0x62, 0xf2, 0xb7, 0x34, 0xd5, 0x0c, 0xca,

0xd3, 0xaa, 0x8a, 0x63, 0xde, 0xa2, 0xaf, 0x99,

0x82, 0x92, 0xb1, 0x88, 0x72, 0xf1, 0xe8, 0xda,

0xe6, 0xca, 0x9e, 0xf9, 0xc9, 0xce, 0x2d, 0x66,

0x2b, 0x72, 0x3b, 0x17, 0x94, 0x68, 0xba, 0xb3,

0x22, 0x7c, 0x77, 0xce, 0xa0, 0x1b, 0x06, 0x45,

0x19, 0x5c, 0xc2, 0x2e, 0x33, 0xca, 0xdc, 0x30,

0x46, 0x21, 0xa0, 0x31, 0x4e, 0x7f, 0x73, 0xdf,

0xf4, 0xff, 0x16, 0x72, 0x96, 0xb2, 0x21, 0x61,

0x49, 0x97, 0x56, 0xd6, 0x83, 0xe9, 0x01, 0x0c,

0xdc, 0x06, 0xd7, 0xd9, 0xcd, 0xce, 0x72, 0xbc,

0x3e, 0x93, 0xd0, 0xba, 0x93, 0xe4, 0xcb, 0x8f,

0x32,

},

/\* bytes in plaintext \*/

2065,

/\* associated data \*/

{

0x27, 0x47, 0xb0, 0x58, 0x61, 0x6c, 0x36, 0x10,

0x5c, 0x77, 0x67, 0xe5, 0x7d, 0x1b, 0x31, 0x9a,

},

/\* bytes in associated data \*/

16,

/\* ciphertext \*/

{

0x2c, 0x51, 0xc9, 0x48, 0xd5, 0x1a, 0x83, 0x46,

0xd2, 0x69, 0xb8, 0x2c, 0xc4, 0x47, 0x0a, 0x24,

0x90, 0x49, 0x3a, 0x7e, 0xa1, 0xbd, 0x27, 0xa1,

0x89, 0x8e, 0x1f, 0x8c, 0xeb, 0x49, 0xaa, 0xb9,

0x83, 0x74, 0x73, 0x2a, 0x7b, 0x25, 0x62, 0x05,

0x24, 0xaa, 0x63, 0x1b, 0x06, 0x40, 0x90, 0x4a,

0x96, 0xa5, 0xdd, 0x40, 0x7f, 0xf5, 0xcb, 0x98,

0x92, 0x91, 0xd5, 0x2c, 0x45, 0xbd, 0xe2, 0x7e,

0xdc, 0xdb, 0x8b, 0xf3, 0xd2, 0x52, 0x76, 0xc0,

0xf2, 0xa1, 0x6e, 0x2c, 0x83, 0x07, 0xbe, 0xff,

0x51, 0x05, 0x1c, 0xe0, 0xd6, 0xab, 0x91, 0xc9,

0xfd, 0xb3, 0x25, 0x82, 0xbb, 0x89, 0xf9, 0xef,

0x30, 0x3f, 0x50, 0xdf, 0x36, 0xea, 0x1f, 0x2e,

0x0a, 0xba, 0x48, 0x3e, 0xad, 0x88, 0x1e, 0xb9,

0x3b, 0xd2, 0xf4, 0x66, 0x9f, 0x61, 0x0c, 0xd5,

0xbe, 0x55, 0x4c, 0x71, 0x35, 0xd6, 0x36, 0xad,

0xff, 0x87, 0xbf, 0xf8, 0x46, 0x0e, 0x66, 0xf7,

0xe7, 0x98, 0xc1, 0xde, 0x67, 0x64, 0x66, 0x40,

0xa8, 0x68, 0x4d, 0xd5, 0x0f, 0x3f, 0xd2, 0x6f,

0xb8, 0xa4, 0x4e, 0x55, 0xc0, 0xae, 0x4a, 0x7a,

0x9e, 0x47, 0x97, 0xb6, 0x43, 0x81, 0x17, 0x0e,

0x57, 0x9e, 0xf6, 0x76, 0x80, 0x13, 0x61, 0xf7,

0x03, 0x60, 0x01, 0x0b, 0xbc, 0x8d, 0xb9, 0x1b,

0xb1, 0x6f, 0x4a, 0x9d, 0x4e, 0x77, 0xd3, 0x62,

0xb9, 0x6c, 0xd8, 0x10, 0x20, 0x0f, 0x7e, 0xd6,

0x9a, 0xa4, 0xf8, 0x34, 0xbd, 0x1c, 0x82, 0x1e,

0xd7, 0x65, 0xe6, 0xf0, 0x4f, 0x3f, 0x4f, 0x78,

0x39, 0x4f, 0x16, 0xdd, 0xad, 0x5e, 0x1e, 0xde,

0x62, 0x3c, 0x1d, 0x1d, 0xa0, 0x87, 0x8d, 0xd7,

0xbd, 0xa7, 0x8b, 0xf9, 0xa0, 0xd9, 0x53, 0xb6,

0x8a, 0x34, 0x56, 0xa6, 0x35, 0x38, 0xb4, 0xdc,

0xcd, 0xb6, 0x4e, 0xb9, 0xfc, 0x35, 0x8d, 0x4a,

0x3f, 0x82, 0x34, 0x20, 0x38, 0xf4, 0x6d, 0x9d,

0x55, 0x76, 0x19, 0xe7, 0x94, 0xbd, 0x38, 0x0a,

0xed, 0x3b, 0xaa, 0x21, 0xff, 0x3d, 0x30, 0x57,

0x6f, 0xd2, 0xcc, 0xf8, 0x91, 0x89, 0xe3, 0x4e,

0x65, 0x51, 0x49, 0x8c, 0x66, 0x8e, 0x2c, 0xda,

0x89, 0xe7, 0xb6, 0x23, 0xb1, 0x14, 0x31, 0xae,

0x59, 0xa4, 0x5c, 0x5d, 0x86, 0xb3, 0xfd, 0x7f,

0x1d, 0xe5, 0xb1, 0x85, 0x4e, 0xf9, 0x24, 0x0f,

0xa2, 0x51, 0xd5, 0xb1, 0x0e, 0xc6, 0xfe, 0x06,

0xe5, 0xf5, 0x8d, 0x8a, 0x04, 0xd3, 0x3c, 0xbc,

0x55, 0xd6, 0xc7, 0xb8, 0x1f, 0x10, 0x2c, 0x98,

0x04, 0xb3, 0x4c, 0x97, 0x91, 0x60, 0x8a, 0x53,

0x45, 0x29, 0xe2, 0xcd, 0x05, 0xf6, 0x6e, 0x00,

0x18, 0x9d, 0xf4, 0x13, 0x2c, 0xd3, 0xc0, 0x26,

0x23, 0xeb, 0xef, 0x4a, 0x19, 0xb9, 0x31, 0x5b,

0x57, 0x6b, 0x29, 0xc2, 0xaa, 0x10, 0xb7, 0xc7,

0x31, 0x61, 0xb1, 0x80, 0x5b, 0xa2, 0xf0, 0x61,

0xcd, 0x0c, 0xec, 0x9f, 0x1b, 0xde, 0x60, 0x79,

0x9c, 0x00, 0xe6, 0x9d, 0x3c, 0x7c, 0x3f, 0x78,

0x2c, 0x81, 0x05, 0x19, 0x22, 0x5c, 0x5b, 0x05,

0x4d, 0x29, 0x4f, 0x61, 0x24, 0xb4, 0x57, 0xae,

0xf2, 0xc7, 0x63, 0xe2, 0x80, 0xac, 0x3d, 0x6a,

0xaa, 0x57, 0xac, 0x36, 0x3a, 0x62, 0x86, 0xf1,

0x84, 0xee, 0xb9, 0x92, 0xd4, 0xa7, 0x97, 0xd5,

0x97, 0xe4, 0x64, 0xc8, 0x33, 0xa8, 0x62, 0x47,

0x52, 0xf5, 0x7d, 0xc6, 0x32, 0x20, 0x93, 0xb0,

0x60, 0xe4, 0xd5, 0xea, 0xac, 0xcd, 0xe9, 0xe4,

0x39, 0xb1, 0x9c, 0x44, 0x2c, 0xea, 0xf4, 0x8c,

0xea, 0xd0, 0x3b, 0xe8, 0x7d, 0x57, 0x24, 0xe3,

0xac, 0xf5, 0x22, 0x17, 0xcf, 0xfe, 0xfc, 0xdb,

0x5b, 0xe4, 0x50, 0x11, 0xab, 0x15, 0x94, 0x01,

0x7e, 0xd6, 0x2a, 0x1c, 0x87, 0x40, 0x68, 0x0d,

0xd2, 0x93, 0x61, 0x3f, 0x4a, 0xe6, 0x36, 0xaf,

0x87, 0x1b, 0x89, 0xc6, 0x2a, 0xc3, 0x86, 0xd1,

0x7f, 0xbd, 0x70, 0x1e, 0x32, 0x7d, 0xc0, 0xd8,

0xa0, 0xb3, 0x6b, 0x64, 0xf9, 0x5c, 0x5e, 0xee,

0x39, 0x68, 0xc5, 0xc9, 0x07, 0x44, 0x39, 0x9b,

0x6a, 0xbf, 0xd6, 0x29, 0x42, 0xb1, 0x22, 0x63,

0x37, 0xed, 0x2f, 0xe7, 0x5a, 0xd1, 0xbe, 0x55,

0x80, 0x13, 0x32, 0xf6, 0x91, 0x99, 0x53, 0x73,

0x74, 0xe6, 0x3e, 0x40, 0xd3, 0x4a, 0x28, 0xd1,

0x92, 0xec, 0xc6, 0x0a, 0x8b, 0xd4, 0x14, 0x4b,

0x8f, 0xd4, 0x53, 0xe1, 0xfa, 0x3c, 0x69, 0x57,

0xdb, 0x69, 0x83, 0xa9, 0x55, 0xde, 0x5b, 0xd9,

0xae, 0x94, 0x99, 0x59, 0x8e, 0xe7, 0xa4, 0x66,

0x3c, 0x86, 0x8a, 0xe1, 0x60, 0x03, 0xa8, 0xcc,

0x9b, 0x31, 0x95, 0x10, 0xe7, 0x92, 0x32, 0xbc,

0x3b, 0xe0, 0xc0, 0x57, 0x18, 0x32, 0x34, 0xd4,

0x26, 0xa8, 0x13, 0x4b, 0x13, 0xdb, 0xe9, 0x18,

0xde, 0xdb, 0xaf, 0xbc, 0x8c, 0x31, 0xf2, 0x24,

0x1f, 0xa0, 0x66, 0x72, 0xd4, 0xf7, 0xc5, 0xdb,

0xd4, 0x45, 0xf7, 0x84, 0x75, 0x5d, 0x7c, 0xcd,

0x58, 0x7a, 0x72, 0x50, 0x6b, 0x0c, 0x9b, 0x6b,

0xca, 0xaa, 0xa8, 0x50, 0xe7, 0x4f, 0x43, 0x45,

0x4a, 0xd0, 0x92, 0x10, 0x5b, 0x7e, 0x10, 0xc3,

0xbc, 0x90, 0x68, 0x8d, 0xc9, 0x2b, 0x36, 0xeb,

0x29, 0x33, 0x39, 0xf5, 0x5b, 0x66, 0x25, 0x4d,

0xe5, 0x65, 0x4c, 0xeb, 0x3a, 0x98, 0x70, 0x62,

0x01, 0x27, 0xc9, 0x17, 0x5a, 0x68, 0xc1, 0xec,

0x65, 0x02, 0xb8, 0x66, 0x20, 0xa5, 0x57, 0x26,

0xfc, 0x8c, 0xf0, 0x75, 0x9c, 0x08, 0xc1, 0x02,

0x20, 0x71, 0x19, 0x0f, 0xaf, 0xf0, 0x30, 0x48,

0x8a, 0x32, 0xd1, 0xb1, 0x6d, 0xa5, 0xbf, 0x36,

0x1f, 0x06, 0x32, 0xc8, 0x65, 0x61, 0xac, 0x6a,

0x4f, 0x0d, 0x55, 0xb0, 0x71, 0xb5, 0x62, 0xf6,

0x83, 0x8a, 0x65, 0xb4, 0xc6, 0x64, 0x0c, 0xa7,

0x32, 0xc5, 0x1c, 0xf7, 0x23, 0x91, 0xe8, 0x1c,

0x92, 0x14, 0xaf, 0x2f, 0x4d, 0x1a, 0xcb, 0x07,

0x37, 0x95, 0xf8, 0x1c, 0xab, 0x0f, 0x6c, 0x66,

0xe6, 0xd0, 0xd6, 0xd2, 0x48, 0x87, 0x68, 0x79,

0xd3, 0x6e, 0x3a, 0x3f, 0x1f, 0xbe, 0x49, 0xd1,

0xc2, 0x56, 0x26, 0x58, 0x5f, 0xd3, 0x36, 0xc1,

0x99, 0x48, 0x86, 0x9c, 0xcb, 0xb7, 0x65, 0xf7,

0x50, 0xa5, 0xd6, 0x29, 0x2c, 0xac, 0xb1, 0x95,

0xcc, 0x28, 0x9a, 0x7b, 0x86, 0x2d, 0x31, 0x37,

0xbd, 0xae, 0xa9, 0x4d, 0x3a, 0xd0, 0xcf, 0x86,

0x4d, 0x7f, 0xc1, 0xb6, 0x81, 0x7a, 0xb4, 0xd5,

0x9f, 0x16, 0xbe, 0x8d, 0x94, 0x82, 0xe5, 0x3d,

0x73, 0x90, 0xf8, 0xc1, 0xa1, 0x77, 0x47, 0x73,

0xae, 0xe2, 0x5e, 0x10, 0x89, 0xc0, 0x40, 0x02,

0xe8, 0x9d, 0x38, 0xda, 0xeb, 0xd5, 0x87, 0x22,

0x22, 0x10, 0xce, 0x5e, 0xab, 0xec, 0xba, 0xa8,

0x05, 0xf1, 0x14, 0x25, 0x38, 0x88, 0x85, 0x01,

0x96, 0xc8, 0x0c, 0x2b, 0x16, 0xb4, 0xf8, 0x2d,

0x65, 0x2d, 0x2f, 0x00, 0xc8, 0x8f, 0x4f, 0x81,

0xab, 0x56, 0xe9, 0x91, 0x6f, 0x92, 0x57, 0x27,

0x16, 0x43, 0xc8, 0xf8, 0xf4, 0x3f, 0x45, 0x9e,

0x11, 0x30, 0x77, 0xa5, 0x23, 0xae, 0x75, 0xf4,

0x8d, 0x1a, 0x22, 0x37, 0x2e, 0xe9, 0xe8, 0x6e,

0x5c, 0x80, 0xd3, 0x11, 0x92, 0x9a, 0x41, 0x64,

0xc7, 0x7b, 0xc9, 0x46, 0x44, 0x97, 0x7e, 0x16,

0xa7, 0x34, 0xdd, 0xe7, 0x24, 0x6d, 0x5c, 0x63,

0x85, 0xf1, 0xe8, 0xc1, 0x4d, 0x08, 0xa7, 0xf2,

0xe0, 0xf9, 0x42, 0x12, 0x62, 0x59, 0xc8, 0xc6,

0x98, 0xd8, 0x0e, 0xf2, 0x77, 0x9d, 0x7d, 0x77,

0x86, 0x08, 0x64, 0xab, 0xf1, 0xc6, 0x3f, 0x1c,

0x3f, 0x4d, 0xec, 0x0b, 0x97, 0x6d, 0x38, 0x74,

0xf8, 0x9f, 0x2b, 0x44, 0xe0, 0x73, 0x62, 0xc4,

0xfa, 0x15, 0x1e, 0x56, 0x91, 0xe3, 0x37, 0xa5,

0x03, 0xe0, 0x67, 0xe8, 0x97, 0x7d, 0xb1, 0xaf,

0x96, 0xc9, 0xc1, 0xa9, 0x7d, 0x33, 0x75, 0x87,

0x63, 0x80, 0xc3, 0x11, 0x4f, 0x9b, 0x14, 0x72,

0x84, 0xbb, 0x6d, 0xc6, 0xba, 0xf8, 0x84, 0x2b,

0x9b, 0x9b, 0xe3, 0x4d, 0xc9, 0x7f, 0xb0, 0xb6,

0x8f, 0x4f, 0x01, 0x7d, 0xdc, 0x55, 0x2a, 0x54,

0x6d, 0x22, 0x85, 0xed, 0x5b, 0x20, 0xa8, 0x66,

0xef, 0x23, 0xea, 0xa5, 0x8a, 0x8d, 0x40, 0x93,

0x45, 0xe9, 0x31, 0x11, 0x57, 0xed, 0x73, 0xa6,

0x1c, 0x00, 0xb7, 0x48, 0xdf, 0xa3, 0x3d, 0x6f,

0x4e, 0x3b, 0x10, 0xe0, 0xdc, 0xcd, 0x95, 0x76,

0x37, 0x0c, 0x7d, 0x5e, 0xf7, 0xd3, 0x29, 0x8d,

0xb6, 0x38, 0x52, 0x6f, 0x77, 0x17, 0xa7, 0xd3,

0xf7, 0xf4, 0xa9, 0xea, 0x42, 0xb9, 0x93, 0x69,

0x16, 0xc6, 0x51, 0x8c, 0x9f, 0x3b, 0x83, 0x6f,

0xf7, 0xe9, 0xf4, 0x61, 0xce, 0xb9, 0xa8, 0x4d,

0x65, 0x30, 0x97, 0xec, 0xbe, 0xb9, 0xc9, 0x3c,

0xa0, 0xc9, 0xd0, 0x3f, 0xbb, 0xf9, 0x5c, 0x49,

0x1a, 0x80, 0x7f, 0x92, 0xb8, 0x60, 0x64, 0x6b,

0xa5, 0xb1, 0x28, 0x17, 0x30, 0xae, 0x87, 0x37,

0xcd, 0x24, 0x75, 0x57, 0xb8, 0x3d, 0x17, 0x19,

0x87, 0x44, 0xe0, 0x78, 0xb2, 0x7e, 0xfb, 0x50,

0xb0, 0xed, 0xd7, 0xa1, 0x8a, 0x27, 0x59, 0x8d,

0x65, 0x81, 0x62, 0x32, 0xf1, 0x5a, 0x65, 0xe5,

0x52, 0xd7, 0xd9, 0xc6, 0x3a, 0x37, 0x2b, 0xd9,

0x86, 0xf4, 0x57, 0x68, 0x77, 0xb4, 0x22, 0x04,

0x71, 0x23, 0x20, 0x8e, 0x00, 0x78, 0xc9, 0x6c,

0x54, 0x44, 0x30, 0x6a, 0xa7, 0x43, 0xbc, 0x1f,

0xdf, 0xae, 0x2f, 0x2e, 0xf7, 0x15, 0x7b, 0x0a,

0x7f, 0xfb, 0xc2, 0x48, 0x86, 0xbd, 0x29, 0xe7,

0xeb, 0x66, 0x16, 0x6d, 0x7c, 0xb7, 0x68, 0x64,

0x7c, 0xb3, 0x01, 0x4d, 0x67, 0x22, 0x6d, 0x43,

0x96, 0x88, 0xbb, 0x3c, 0x11, 0xdd, 0x88, 0x07,

0x2b, 0x77, 0x6c, 0xcd, 0xbc, 0x6a, 0x8b, 0xb6,

0x7e, 0x40, 0x02, 0xa5, 0xd2, 0x23, 0xb4, 0x30,

0x96, 0x8a, 0xaa, 0x20, 0xec, 0xd1, 0xe7, 0x79,

0x3d, 0xb4, 0x83, 0xb6, 0xf4, 0x1a, 0xf7, 0x58,

0x4b, 0x10, 0x29, 0x5d, 0x7f, 0xad, 0x28, 0xb7,

0x91, 0xa2, 0xb9, 0x4c, 0xc7, 0xf7, 0x40, 0x3c,

0x93, 0xbb, 0x83, 0x33, 0x72, 0x18, 0x8c, 0xda,

0x25, 0x7e, 0xa0, 0x61, 0x76, 0xb2, 0x19, 0xab,

0x9a, 0xfe, 0xce, 0x16, 0x99, 0xe3, 0x3e, 0x68,

0x92, 0xba, 0x7c, 0xb3, 0xb0, 0x35, 0xa2, 0xd8,

0xa1, 0xb5, 0xfc, 0x69, 0x1f, 0x30, 0xb2, 0xd0,

0x23, 0xc1, 0x73, 0xf5, 0x24, 0x79, 0xbf, 0xa1,

0xbb, 0xd3, 0x10, 0xaa, 0x85, 0x09, 0x2d, 0x77,

0x3e, 0x9a, 0x63, 0x09, 0x12, 0x0b, 0x84, 0x27,

0x7a, 0xb1, 0x58, 0x54, 0xad, 0x08, 0x73, 0x20,

0x9d, 0x01, 0x78, 0x65, 0x07, 0x38, 0x22, 0x9c,

0xb4, 0xdd, 0xec, 0x5b, 0x4b, 0x20, 0x6f, 0xef,

0x69, 0x72, 0x89, 0xf1, 0x6d, 0xa9, 0xa3, 0x4d,

0x8c, 0xfb, 0x7f, 0x31, 0x02, 0x7b, 0xff, 0x08,

0x2c, 0xa7, 0xba, 0x3f, 0x9f, 0x4b, 0x2d, 0xa0,

0x23, 0x84, 0x8f, 0x27, 0x57, 0x11, 0x9d, 0xcf,

0xb2, 0xa7, 0xe4, 0x21, 0x18, 0xda, 0xa8, 0x02,

0x87, 0x16, 0x73, 0x5e, 0xea, 0x3d, 0x0d, 0x7e,

0xd0, 0x47, 0x45, 0x3e, 0xd5, 0xc7, 0x3f, 0xf0,

0x11, 0x09, 0xef, 0xfb, 0x17, 0x7a, 0x55, 0xf6,

0xbf, 0x6c, 0xe7, 0x2a, 0x4f, 0x23, 0xc5, 0x0d,

0x75, 0x44, 0xab, 0x3b, 0x5a, 0x07, 0xd8, 0x70,

0x3b, 0xfe, 0x4d, 0x9c, 0xbc, 0xd3, 0x8f, 0xf2,

0x57, 0xd0, 0xba, 0x76, 0x7e, 0xd0, 0x15, 0x7a,

0x50, 0x4c, 0x21, 0x53, 0xf3, 0x3c, 0x7e, 0x79,

0xda, 0xc0, 0x2a, 0x1d, 0x14, 0x9c, 0xcc, 0xf3,

0x16, 0xa5, 0x7f, 0xb6, 0x4b, 0x15, 0xa7, 0x14,

0x78, 0xf2, 0x19, 0x42, 0xd4, 0x19, 0xce, 0x42,

0x3a, 0xc6, 0x19, 0xcc, 0xd1, 0x62, 0x61, 0x3b,

0x30, 0x4d, 0xba, 0xa4, 0xb8, 0xc1, 0xfe, 0xa2,

0x9a, 0x2a, 0x0a, 0x75, 0xb8, 0x65, 0xf8, 0x5a,

0xde, 0xe6, 0xeb, 0x78, 0x11, 0x0d, 0x53, 0x7d,

0x2e, 0xc4, 0x33, 0xa6, 0x42, 0x18, 0x08, 0x32,

0xcb, 0xb3, 0x0f, 0x17, 0x2f, 0xd4, 0x21, 0x6f,

0xd7, 0xc6, 0xa9, 0x25, 0x45, 0xe5, 0x6c, 0x1c,

0x79, 0x6e, 0xdd, 0x1b, 0x42, 0x43, 0x53, 0xf8,

0x3b, 0x9b, 0x7a, 0xab, 0x29, 0x5d, 0x3e, 0x33,

0x6a, 0x51, 0xfb, 0x73, 0x3d, 0xd5, 0xfa, 0x61,

0xde, 0xe4, 0x52, 0xe5, 0xf6, 0xa6, 0x3b, 0x91,

0xef, 0x89, 0x59, 0xe4, 0x48, 0xeb, 0x67, 0x0a,

0xfe, 0x69, 0x15, 0x2a, 0x52, 0x76, 0x6e, 0x6f,

0xea, 0xa3, 0x1b, 0x10, 0x7e, 0x19, 0xd7, 0x8f,

0x75, 0xa9, 0x74, 0xe8, 0xa7, 0xb1, 0x0a, 0xff,

0x1a, 0xbc, 0x43, 0xeb, 0x0d, 0x78, 0x3f, 0x80,

0xa4, 0x5d, 0x7d, 0xae, 0xb3, 0x85, 0xf5, 0xb7,

0x80, 0xd6, 0x54, 0x9b, 0x64, 0xa8, 0xc7, 0xde,

0x37, 0x8e, 0xf3, 0x36, 0x4c, 0x02, 0x91, 0xe9,

0xca, 0x6b, 0xf1, 0xa5, 0x3a, 0xaf, 0xbe, 0x8f,

0xee, 0x68, 0xd9, 0x8a, 0x09, 0x88, 0xfc, 0xde,

0x9b, 0x05, 0x2c, 0xa8, 0x84, 0xf7, 0xdd, 0xae,

0xac, 0x94, 0x8a, 0x00, 0x99, 0x06, 0xd4, 0x68,

0x9b, 0x6e, 0x97, 0x03, 0xa1, 0x09, 0x73, 0x2d,

0x89, 0xf3, 0x6f, 0x9c, 0xb9, 0x6b, 0x4c, 0xae,

0x58, 0x86, 0xb2, 0x0d, 0xc8, 0x8b, 0xa5, 0xf2,

0x9a, 0xf7, 0x08, 0x16, 0x88, 0xfa, 0x52, 0xa7,

0x8c, 0x35, 0xbb, 0x6d, 0x44, 0x07, 0xb4, 0x38,

0x90, 0x4a, 0xd7, 0x08, 0x31, 0xcc, 0x7e, 0x2f,

0xef, 0x52, 0x18, 0x67, 0xd8, 0xfc, 0x4b, 0x55,

0x6d, 0x8c, 0x30, 0x7f, 0xc4, 0xa9, 0x2b, 0xf5,

0x0b, 0x9a, 0xb1, 0xfc, 0x5e, 0x9f, 0x36, 0xcf,

0xf0, 0x56, 0xbd, 0x46, 0x4c, 0xef, 0xfa, 0x09,

0xaa, 0xb6, 0x29, 0xb3, 0x1d, 0x44, 0x97, 0x14,

0xfa, 0xb7, 0x08, 0xf3, 0xc5, 0xd4, 0x48, 0x86,

0xf7, 0x10, 0xe0, 0x57, 0x6a, 0x9b, 0xd1, 0x71,

0x76, 0x86, 0xf7, 0x71, 0x71, 0x62, 0x07, 0x5a,

0x08, 0x34, 0x64, 0x4e, 0x6a, 0x0a, 0x20, 0x97,

0x29, 0xf4, 0xa3, 0xed, 0xe3, 0x53, 0xae, 0x4e,

0xc6, 0x77, 0x6a, 0xd6, 0x97, 0x61, 0xe4, 0x51,

0x4f, 0xb5, 0x59, 0x3c, 0x08, 0x51, 0xb8, 0xdb,

0x34, 0xcd, 0xd3, 0x0e, 0xc0, 0xf4, 0xcd, 0x74,

0xf6, 0xd5, 0x77, 0xb1, 0xf5, 0x23, 0x9c, 0x6a,

0xf8, 0xf7, 0xbe, 0x68, 0x3d, 0x56, 0x87, 0x13,

0x0d, 0x0f, 0x72, 0x1b, 0x49, 0xe5, 0x98, 0xbd,

0x92, 0x7c, 0x87, 0xc3, 0xe4, 0x7e, 0x5b, 0xfc,

0x14, 0x7d, 0x7c, 0x3c, 0xa3, 0x65, 0xd8, 0x21,

0x4e, 0xaa, 0x84, 0xe0, 0xbc, 0x2a, 0xa6, 0x35,

0xf0, 0x8c, 0x10, 0xef, 0x08, 0x05, 0x8a, 0xa1,

0x8b, 0xfc, 0x43, 0xf3, 0xb9, 0x75, 0x5d, 0x3b,

0x28, 0xa5, 0x1d, 0x18, 0x00, 0x23, 0xe0, 0xc5,

0x07, 0x16, 0x2c, 0xaf, 0xab, 0x54, 0x10, 0xa0,

0xbd, 0x62, 0xe3, 0xf2, 0x58, 0x12, 0x82, 0x8a,

0x78, 0xb9, 0xa6, 0xb6, 0xc4, 0xec, 0xf3, 0xd1,

0x87, 0x08, 0xb6, 0x33, 0x79, 0x4d, 0x00, 0x0e,

0x70, 0x19, 0xf4, 0xfd, 0x1b, 0xe0, 0x0b, 0x17,

0x10, 0x98, 0x67, 0xc6, 0xa7, 0x00, 0xd7, 0x75,

0x29, 0xfd, 0xf4, 0xb2, 0x5c, 0x06, 0x40, 0xdb,

0xc6, 0x7c, 0x35, 0xdd, 0x86, 0xd4, 0xb3, 0x79,

0x51, 0x86, 0x4d, 0xe6, 0xfe, 0xb3, 0x9e, 0x16,

0x81, 0x7b, 0x34, 0x96, 0x43, 0x2b, 0x24, 0xfe,

0xf6,

},

&case9

};

test\_case\_t case11 = {

/\* key \*/

{

0xd6, 0xc2, 0xb8, 0x55, 0x32, 0xb0, 0x2e, 0xec,

0x5a, 0x0e, 0x7e, 0xfc, 0x1a, 0x31, 0xdb, 0xef,

0x2f, 0x4e, 0xcf, 0x01, 0xeb, 0x2a, 0xfd, 0x5d,

0xed, 0x4e, 0x71, 0x77, 0xc0, 0xd4, 0x1e, 0x07,

0x45, 0x20, 0x78, 0x6f, 0x13, 0xef, 0x99, 0xb1,

0xe6, 0x2a, 0x98, 0xd2, 0x5b, 0x6e, 0xc5, 0x16,

},

/\* bytes in key \*/

48,

/\* plaintext \*/

{

0x18, 0x7d, 0xdd, 0x99, 0x8c, 0x75, 0xb5, 0x50,

0xf8, 0x32, 0x94, 0x62, 0x77, 0x2a, 0xc0, 0xd6,

0x36, 0x7b, 0x9c, 0x49, 0xdd, 0xf2, 0xfa, 0xde,

0x0b, 0x02, 0x5e, 0x1c, 0x95, 0xbe, 0xb3, 0x7a,

0x5b, 0x1e, 0x6c, 0x42, 0x8d, 0x45, 0xf1, 0x9d,

0xde, 0xe0, 0x63, 0xd2, 0xf5, 0xe9, 0x56, 0x33,

0x9d, 0x15, 0x0e, 0x07, 0x7a, 0xfd, 0xe4, 0xb8,

0x29, 0x53, 0x32, 0x1c, 0x7f, 0x18, 0x0c, 0x2b,

0xfb, 0x37, 0xa0, 0x28, 0xd3, 0x4a, 0x2e, 0x2f,

0xc2, 0x11, 0xb7, 0xad, 0x62, 0x88, 0x6a, 0x6a,

0x78, 0xb8, 0x7a, 0xf1, 0x53, 0xa3, 0x7f, 0xc1,

0x96, 0xa6, 0xc4, 0xaa, 0xfc, 0x05, 0xee, 0xc2,

0xad, 0xe7, 0x50, 0x1c, 0x41, 0x37, 0x1f, 0x79,

0xa2, 0x2b, 0x3c, 0xda, 0x7c, 0x25, 0xb1, 0x4c,

0xe0, 0x3a, 0xdd, 0x54, 0x23, 0x4f, 0xd8, 0xb2,

0xe1, 0xba, 0x9c, 0xc5, 0x74, 0xc4, 0xc0, 0x46,

0xd7, 0x7a, 0x05, 0x9f, 0x0a, 0x57, 0x97, 0xe4,

0x18, 0x21, 0xb6, 0x48, 0x53, 0x23, 0x16, 0x9f,

0xbf, 0x42, 0xe1, 0x27, 0xed, 0x7b, 0x85, 0x27,

0x2d, 0xbc, 0x00, 0x1f, 0x96, 0x6d, 0xbb, 0xa8,

0x9a, 0x0e, 0xf1, 0x6a, 0x22, 0x1f, 0xd8, 0x2f,

0x37, 0x81, 0x64, 0x0b, 0xb3, 0xf4, 0x35, 0x76,

0xc8, 0xe3, 0xf8, 0x33, 0xfb, 0x7f, 0xfa, 0xa9,

0x0d, 0xa7, 0xfa, 0xc8, 0x8d, 0xc9, 0xc0, 0x7e,

0xdf, 0x92, 0x59, 0xd0, 0xc7, 0xcb, 0xa7, 0x6d,

0x50, 0x54, 0x18, 0xe3, 0xee, 0x2b, 0xf5, 0xa8,

0xd4, 0x16, 0x10, 0xf7, 0xd4, 0xf8, 0xe8, 0x3f,

0xd1, 0x7b, 0x95, 0x3b, 0x21, 0x98, 0x46, 0xba,

0x88, 0x89, 0x2c, 0x68, 0x1e, 0x80, 0xfe, 0xca,

0x90, 0x9d, 0x75, 0x33, 0x0e, 0xb5, 0x76, 0x01,

0xf8, 0x7c, 0x1d, 0xac, 0xe7, 0x5e, 0x49, 0x46,

0x20, 0x64, 0x1a, 0x53, 0xe0, 0xaa, 0xbd, 0xc9,

0x3c, 0x72, 0x60, 0x36, 0xc8, 0xaa, 0xc0, 0xaa,

0xb3, 0x5d, 0x4b, 0x75, 0x62, 0x6b, 0xef, 0x4e,

0x78, 0xde, 0x0c, 0xb1, 0x3e, 0xbc, 0x1d, 0x03,

0x83, 0x68, 0x35, 0x69, 0xad, 0x81, 0x9b, 0x79,

0xf8, 0xa4, 0x7f, 0xfe, 0xe6, 0xe8, 0xdc, 0x58,

0x66, 0x0e, 0xb1, 0xb1, 0x7e, 0xbc, 0x0f, 0xd9,

0x03, 0xed, 0x3c, 0x05, 0x2f, 0x40, 0xc9, 0xec,

0xe1, 0xc6, 0x90, 0x2a, 0x89, 0x0a, 0xd8, 0x78,

0xb2, 0x01, 0x46, 0x02, 0x3e, 0x46, 0x5d, 0x2b,

0xe9, 0x76, 0x10, 0xff, 0x13, 0xd7, 0xbd, 0x68,

0x4b, 0xcb, 0x87, 0x51, 0x90, 0xb5, 0x4d, 0x7c,

0x4f, 0x60, 0x75, 0x4f, 0x1a, 0x2d, 0xfd, 0x3a,

0xd7, 0x10, 0xa4, 0x8b, 0x9f, 0x1d, 0x9b, 0x63,

0x02, 0xe7, 0xc4, 0x37, 0x14, 0xc6, 0x1c, 0xa6,

0xd6, 0xe6, 0x42, 0xaa, 0xd6, 0x1f, 0xe4, 0x00,

0x29, 0xfe, 0x81, 0xb7, 0x13, 0xc3, 0x53, 0x03,

0x6e, 0x9f, 0xfc, 0x77, 0x8e, 0x69, 0x61, 0x03,

0x35, 0xee, 0x83, 0xbb, 0xa4, 0x55, 0x5b, 0xe9,

0xe8, 0x0f, 0x15, 0xed, 0xeb, 0x5b, 0x43, 0xc5,

0x31, 0x41, 0xd4, 0xa5, 0x9c, 0x9e, 0x6c, 0x92,

0xce, 0x12, 0x3e, 0x3f, 0xd3, 0x1d, 0x5d, 0xc3,

0xd7, 0x34, 0xa9, 0x06, 0xe1, 0x1c, 0xe9, 0x1f,

0x64, 0x98, 0x33, 0x62, 0x92, 0x86, 0x0b, 0xd4,

0x4e, 0x5f, 0x18, 0xe3, 0x6d, 0xee, 0xb7, 0xaf,

0x7d, 0x8e, 0xeb, 0x27, 0x54, 0xc5, 0xf7, 0xd1,

0x34, 0x67, 0x0b, 0xd1, 0xae, 0xa0, 0x12, 0xd2,

0x05, 0x9a, 0xbb, 0xe1, 0x97, 0x36, 0x23, 0x4d,

0x61, 0x0d, 0xe2, 0x0b, 0x94, 0x38, 0xd8, 0x73,

0x34, 0x25, 0x7c, 0x64, 0xdc, 0x07, 0xb6, 0x21,

0xc4, 0xe8, 0x88, 0xcf, 0x19, 0xc5, 0x4f, 0x0e,

0xb4, 0x14, 0xaf, 0xad, 0x0f, 0x1f, 0xf2, 0x40,

0x93, 0x5b, 0xe0, 0x98, 0x96, 0x3e, 0x2f, 0xda,

0x3f, 0x80, 0x57, 0x55, 0x3a, 0xb8, 0x2e, 0x2e,

0xe0, 0x60, 0xdd, 0xe5, 0x5b, 0xcc, 0xef, 0x12,

0xf7, 0x91, 0x2b, 0x24, 0xd7, 0xb6, 0x73, 0x88,

0x1e, 0x7e, 0xc7, 0x84, 0x15, 0xe5, 0xf4, 0xbe,

0x78, 0x66, 0xf6, 0xe3, 0x9f, 0x2d, 0x2d, 0xc7,

0x81, 0x28, 0xe1, 0x62, 0x57, 0x80, 0x2f, 0x9f,

0xc9, 0x69, 0x01, 0x66, 0xc5, 0xb0, 0x48, 0x05,

0x18, 0x43, 0x1d, 0xa9, 0x8c, 0x9d, 0x75, 0x74,

0x81, 0x67, 0x9a, 0x39, 0xfd, 0xa6, 0xff, 0x86,

0xce, 0xdb, 0x60, 0x32, 0xe9, 0xf2, 0x41, 0x82,

0x04, 0xc6, 0x83, 0xc7, 0xe1, 0x4b, 0xfa, 0x61,

0xa3, 0x5d, 0x09, 0xc8, 0xee, 0x27, 0xc6, 0xcd,

0x16, 0xb4, 0x19, 0xc6, 0x13, 0x69, 0x90, 0x90,

0x2c, 0x93, 0x87, 0x51, 0xd9, 0xcd, 0x68, 0xce,

0x0a, 0x87, 0x35, 0xe0, 0x5e, 0x47, 0x0b, 0x1f,

0xa1, 0x15, 0x52, 0x11, 0xb4, 0x36, 0xf2, 0xa4,

0xe0, 0xe5, 0x50, 0x1b, 0x81, 0xce, 0xa9, 0xd6,

0x5e, 0x71, 0xb3, 0x60, 0x79, 0x0e, 0x7e, 0xd1,

0x06, 0x24, 0xf9, 0xcb, 0xb9, 0x4f, 0xe4, 0x78,

0x17, 0x97, 0xaf, 0xa6, 0x5e, 0xee, 0xd8, 0x7c,

0x09, 0x25, 0xc9, 0xe6, 0xe0, 0xbb, 0x7f, 0x70,

0xdf, 0x43, 0x65, 0x6e, 0x7a, 0xfb, 0x4d, 0x26,

0xd0, 0x05, 0xf9, 0x2d, 0x60, 0x86, 0x71, 0x34,

0x27, 0xce, 0xff, 0x68, 0xba, 0x68, 0xfa, 0xb6,

0x8a, 0x5c, 0x65, 0x0e, 0x7e, 0xc5, 0x70, 0x26,

0x48, 0x9f, 0x5a, 0xc5, 0x65, 0x9b, 0xab, 0xb7,

0x49, 0x70, 0x71, 0xfe, 0x9c, 0x54, 0x7f, 0x17,

0x1d, 0xe3, 0x70, 0xe3, 0x60, 0x8d, 0x46, 0xba,

0xfd, 0xc9, 0xf2, 0xf1, 0xa4, 0x96, 0xe6, 0x5d,

0x4a, 0x62, 0x46, 0xdf, 0x3c, 0x8d, 0x6e, 0x6c,

0xeb, 0x81, 0x3c, 0x98, 0x11, 0xee, 0x18, 0xaf,

0x4c, 0x84, 0x15, 0xc6, 0x9f, 0x3d, 0xa7, 0x21,

0x53, 0x78, 0xac, 0xf6, 0x47, 0xab, 0x38, 0x8a,

0xc3, 0x5e, 0xde, 0x5a, 0xe9, 0x6d, 0x85, 0xff,

0xbc, 0x55, 0x86, 0xd8, 0x90, 0x9f, 0x1f, 0x73,

0xca, 0x71, 0x3c, 0xfb, 0x41, 0x58, 0x70, 0xfe,

0xee, 0x72, 0xb2, 0x78, 0x55, 0x5d, 0xfc, 0x5b,

0xed, 0x87, 0xf1, 0x97, 0x0c, 0xda, 0xea, 0x2b,

0x94, 0x9b, 0xea, 0x1c, 0x22, 0xfe, 0x66, 0x6e,

0xe8, 0xd1, 0x77, 0x5a, 0x11, 0xe5, 0xb0, 0xe9,

0xaf, 0x29, 0x3e, 0xa0, 0xb5, 0xa4, 0xc9, 0xf5,

0x0a, 0xa6, 0x48, 0xdf, 0x64, 0xaf, 0xb4, 0x45,

0x13, 0x3d, 0x96, 0x49, 0xf6, 0xfb, 0x79, 0xa3,

0x90, 0x5f, 0xd7, 0x02, 0xcf, 0x81, 0x64, 0x24,

0xf2, 0x64, 0x8f, 0x73, 0x31, 0xe6, 0x9a, 0xf2,

0x8e, 0xf4, 0xae, 0xb6, 0x6e, 0x6e, 0x25, 0x1f,

0x01, 0xc9, 0x31, 0x3b, 0x7e, 0xb5, 0xb4, 0xf7,

0x6a, 0x8f, 0xa7, 0x38, 0xf1, 0x37, 0x3c, 0x14,

0x0d, 0xaf, 0xf4, 0x71, 0x5b, 0xb4, 0x29, 0xf2,

0xe9, 0xcd, 0x1f, 0x72, 0x9a, 0xed, 0x8a, 0xf6,

0xa9, 0xab, 0x09, 0x27, 0x5e, 0x43, 0xeb, 0xee,

0xae, 0xf0, 0x5f, 0x93, 0xb2, 0xd8, 0x06, 0x73,

0xb9, 0x7f, 0x08, 0x71, 0xeb, 0x53, 0xa1, 0x03,

0x72, 0x46, 0x3a, 0x10, 0x85, 0xc1, 0xa3, 0x05,

0x67, 0x08, 0x4b, 0x4b, 0x58, 0xfb, 0x8e, 0x53,

0x91, 0x00, 0xfe, 0x66, 0xcd, 0x2c, 0x2a, 0xd0,

0xbd, 0x0c, 0xd9, 0x7d, 0xf3, 0x3c, 0x10, 0xd9,

0x4c, 0xe2, 0x3e, 0x51, 0x2c, 0xa7, 0x9b, 0x2b,

0x2a, 0x22, 0xc7, 0x47, 0x96, 0x15, 0x53, 0x92,

0x1e, 0x2e, 0x4a, 0x82, 0x7f, 0xd8, 0x0f, 0x93,

0xb7, 0xb3, 0x4a, 0x2b, 0x7b, 0x7d, 0x9b, 0xb3,

0xaa, 0x74, 0x55, 0x4a, 0xe2, 0x02, 0xbc, 0x37,

0x3e, 0x02, 0xe8, 0x73, 0x34, 0x27, 0x42, 0xdb,

0xd6, 0xf7, 0x28, 0xad, 0x63, 0x05, 0x84, 0x24,

0x0d, 0x7b, 0x41, 0xce, 0xf7, 0x16, 0xd2, 0x52,

0x77, 0x44, 0xb9, 0x77, 0xc9, 0x48, 0xab, 0x9d,

0x55, 0x5c, 0xfa, 0x2b, 0xb7, 0x1d, 0xae, 0xba,

0x0e, 0x7d, 0x72, 0x6a, 0xba, 0x3a, 0xbb, 0x08,

0x2f, 0xba, 0xb5, 0xb5, 0xcb, 0x39, 0x88, 0x1d,

0xa7, 0x90, 0x57, 0x6c, 0x20, 0xb3, 0x7b, 0xc6,

0x50, 0x19, 0xee, 0xd6, 0xdf, 0x20, 0x46, 0x94,

0x26, 0x3d, 0xa5, 0xf4, 0x9d, 0x10, 0xf8, 0x5b,

0xcf, 0x77, 0x0f, 0x5e, 0x24, 0x0d, 0xb8, 0x40,

0xd7, 0x25, 0x63, 0x5f, 0x2e, 0x1b, 0x99, 0x27,

0xc0, 0x9a, 0xa7, 0xf9, 0x9a, 0xac, 0x1c, 0x01,

0x0b, 0xa6, 0xb9, 0x75, 0xe7, 0xb8, 0x17, 0x26,

0x71, 0x49, 0x82, 0x60, 0x38, 0x9f, 0x22, 0x47,

0x83, 0x48, 0x70, 0x2d, 0x48, 0xf3, 0xb7, 0xdc,

0xcc, 0x58, 0xee, 0x59, 0x28, 0xaf, 0xf4, 0xc4,

0xe8, 0xbf, 0xa2, 0xf9, 0x02, 0x52, 0xc8, 0xf4,

0xa5, 0x82, 0xbd, 0xf1, 0xd7, 0x56, 0x8f, 0x80,

0xf6, 0x8a, 0x17, 0x5d, 0xff, 0xbe, 0xae, 0x2d,

0x20, 0xe3, 0x87, 0x11, 0x02, 0x19, 0xd4, 0x65,

0x15, 0x71, 0x09, 0x2d, 0x78, 0x99, 0x4a, 0x75,

0x03, 0x83, 0x38, 0x8a, 0x88, 0x47, 0xdc, 0xd3,

0xcf, 0xff, 0x2e, 0x96, 0x19, 0xf0, 0xf5, 0x01,

0xe8, 0x9b, 0xde, 0x9c, 0xb4, 0xb7, 0xa0, 0x03,

0xa0, 0x24, 0xb7, 0x74, 0x27, 0xa6, 0xc9, 0xa9,

0xd3, 0x94, 0x40, 0x44, 0x1f, 0x2c, 0x36, 0xe0,

0x6b, 0xa6, 0x27, 0x84, 0x18, 0xb5, 0xad, 0x7f,

0x93, 0x28, 0x3c, 0x86, 0xce, 0x6d, 0x57, 0x36,

0x72, 0x56, 0x1a, 0x09, 0x2e, 0x00, 0xcd, 0x4b,

0x19, 0xf0, 0x09, 0x65, 0xa2, 0x21, 0xed, 0xbd,

0x89, 0xe4, 0xc8, 0xa6, 0x05, 0xd8, 0xe9, 0xaa,

0xff, 0xdb, 0xed, 0xfe, 0x4f, 0xa5, 0x67, 0x6d,

0xbc, 0xef, 0x8b, 0xda, 0x28, 0x9b, 0x72, 0xda,

0xe8, 0x7f, 0x9f, 0xd9, 0x59, 0xb7, 0x29, 0x90,

0xc6, 0x37, 0x7a, 0xaf, 0xa0, 0x50, 0x18, 0xdd,

0x76, 0xf2, 0x66, 0xc6, 0x2e, 0xff, 0x5c, 0x77,

0xf9, 0x1a, 0x07, 0xb0, 0xce, 0x64, 0x5e, 0xf2,

0x8a, 0xa2, 0xd3, 0xa8, 0xe0, 0xcc, 0x82, 0x69,

0xbd, 0x01, 0xf7, 0xde, 0xc3, 0x43, 0x3e, 0xb1,

0x2f, 0x7c, 0x6b, 0x18, 0x16, 0x05, 0xf2, 0xa2,

0x06, 0x3d, 0x40, 0x73, 0x6c, 0x47, 0xf0, 0x6b,

0xd6, 0x2d, 0x8a, 0x77, 0x84, 0x1a, 0x80, 0xd5,

0x93, 0x7e, 0x7b, 0x9d, 0xec, 0x05, 0xa4, 0x03,

0x47, 0xed, 0x4c, 0x89, 0x4b, 0xdd, 0xf7, 0x36,

0x1f, 0xf8, 0x5a, 0x94, 0x22, 0xf2, 0xdd, 0x3f,

0x8e, 0x49, 0x9c, 0xe7, 0x9e, 0xe6, 0xc2, 0x78,

0x18, 0x30, 0x42, 0xba, 0x0b, 0x11, 0x5a, 0x72,

0x55, 0x98, 0x1b, 0xf2, 0x16, 0x0a, 0x6e, 0x44,

0x68, 0x8c, 0x69, 0x28, 0x2c, 0xd8, 0x8a, 0x0f,

0x69, 0x1a, 0x7f, 0xeb, 0xe1, 0x26, 0x18, 0x70,

0x51, 0x96, 0x21, 0x99, 0x72, 0xed, 0x19, 0x6a,

0x0a, 0x2a, 0xc8, 0xe5, 0x15, 0xaa, 0xc3, 0x07,

0xdb, 0x44, 0xe7, 0xe1, 0xc3, 0xc2, 0x00, 0x21,

0xe0, 0xf0, 0x55, 0xe1, 0x66, 0x59, 0xe8, 0xfb,

0x0d, 0xdb, 0x3f, 0xda, 0xb7, 0x04, 0xf6, 0x13,

0x7a, 0x4b, 0x4d, 0x87, 0x42, 0x92, 0x7c, 0x63,

0xac, 0xbb, 0x7f, 0x40, 0x2a, 0xc9, 0xce, 0xe2,

0x92, 0x6b, 0xb4, 0xd2, 0xd1, 0x72, 0x2c, 0x99,

0xf8, 0x3e, 0xc7, 0xec, 0xdc, 0xc8, 0xf8, 0x76,

0x34, 0xb3, 0x26, 0x73, 0xaf, 0xb4, 0x00, 0x84,

0xf2, 0x71, 0xc3, 0xea, 0xa9, 0x66, 0x99, 0xcd,

0xd3, 0x5a, 0x6c, 0xdb, 0x55, 0x9c, 0x4a, 0x3c,

0x67, 0xd0, 0x31, 0xd7, 0x00, 0x11, 0x4d, 0x9a,

0x79, 0x52, 0xdf, 0x40, 0x8e, 0x5b, 0x01, 0x80,

0x4a, 0xa9, 0xbe, 0x34, 0xa6, 0x0b, 0x7f, 0xf7,

0x84, 0xaa, 0x24, 0x2e, 0x74, 0x17, 0x9d, 0x8c,

0x95, 0x74, 0x43, 0xa8, 0xbf, 0xec, 0x17, 0x14,

0x47, 0xa9, 0xe8, 0xaa, 0x49, 0x2d, 0x1e, 0xab,

0xb5, 0xea, 0x44, 0x9a, 0xa2, 0x78, 0xfd, 0xb2,

0x98, 0x32, 0x6c, 0xd2, 0x78, 0x82, 0xa0, 0x79,

0x74, 0x85, 0x9f, 0x83, 0xe7, 0x0b, 0x23, 0xe5,

0xbe, 0x85, 0xf8, 0x40, 0x4c, 0xde, 0x8e, 0xa0,

0x2b, 0xaa, 0xbc, 0xe4, 0x7a, 0x73, 0xe9, 0x1e,

0x5e, 0x59, 0x1e, 0xf8, 0x30, 0x5a, 0x2d, 0xe4,

0x1c, 0x87, 0xa4, 0xc7, 0xa2, 0x81, 0x87, 0xc2,

0x78, 0xbf, 0x2f, 0xa0, 0xad, 0x04, 0x44, 0x2b,

0x0c, 0x9d, 0xc6, 0x2a, 0x5b, 0xf3, 0xac, 0xb8,

0x8d, 0x3e, 0xe9, 0x89, 0x8c, 0xf8, 0x49, 0x7a,

0x20, 0x09, 0x0d, 0x83, 0x22, 0xdf, 0x65, 0x85,

0x63, 0x71, 0x25, 0xdf, 0x8f, 0x5a, 0xcc, 0x7a,

0xcf, 0x65, 0xcb, 0xd0, 0x2a, 0xa6, 0xc4, 0xfc,

0xad, 0x12, 0xf3, 0x61, 0x5b, 0x56, 0xb9, 0x3c,

0x38, 0x96, 0xbb, 0xfd, 0x57, 0xda, 0x9f, 0x98,

0xf1, 0x4d, 0xaa, 0x86, 0xd8, 0x52, 0xf1, 0x4a,

0xed, 0xf9, 0xb3, 0x7b, 0x5c, 0xec, 0x7e, 0x4c,

0xc6, 0xf8, 0xaf, 0xe1, 0xc7, 0xac, 0x04, 0xbe,

0x12, 0x39, 0x43, 0xe5, 0x6a, 0x49, 0x63, 0xbc,

0xe0, 0xdf, 0xc0, 0x01, 0xac, 0xf0, 0x1f, 0xb9,

0xec, 0x27, 0x90, 0x81, 0xe5, 0xaf, 0xf0, 0xb8,

0x9a, 0xdb, 0x03, 0x07, 0x6a, 0x1a, 0xf1, 0xb9,

0x09, 0xb6, 0xc2, 0x2a, 0x6d, 0xc0, 0x28, 0x64,

0xf6, 0x42, 0x7b, 0x53, 0x8b, 0x2d, 0x1f, 0x5b,

0x8d, 0xa8, 0x48, 0xf4, 0x95, 0xa8, 0x35, 0x05,

0x1e, 0xac, 0x3d, 0x92, 0x89, 0x39, 0x66, 0x14,

0xe6, 0x3b, 0x81, 0xf8, 0xe8, 0x5b, 0xaf, 0xd5,

0x80, 0xec, 0x20, 0x7f, 0x9a, 0x3d, 0xed, 0xf0,

0x6a, 0x11, 0x84, 0x59, 0x73, 0xe6, 0x70, 0x8f,

0xc2, 0x01, 0xf7, 0xcd, 0x77, 0x23, 0x50, 0x80,

0xa2, 0xa7, 0x7d, 0x0e, 0x87, 0x4e, 0x1b, 0x67,

0xff, 0x13, 0x6d, 0xc8, 0xee, 0x7e, 0x6e, 0x01,

0x46, 0x4c, 0x82, 0x8a, 0x4f, 0x78, 0x3c, 0x00,

0x8d, 0x17, 0x25, 0x6b, 0x43, 0x21, 0x9c, 0xd8,

0x9d, 0x90, 0x81, 0xce, 0x95, 0x22, 0x27, 0xee,

0x34, 0x4a, 0x09, 0x2d, 0x05, 0x7a, 0xdf, 0x5d,

0xdf, 0x4b, 0x61, 0x8b, 0x2f, 0xc7, 0xf5, 0x85,

0x7f, 0x83, 0x6b, 0x25, 0x36, 0x23, 0x22, 0xb7,

0x37, 0x93, 0x43, 0xec, 0x21, 0x78, 0x71, 0xf6,

0x6c, 0xab, 0x19, 0x7f, 0x21, 0xc4, 0x0f, 0x45,

0x5f, 0xac, 0x49, 0x67, 0x51, 0x6d, 0x81, 0x4c,

0x04, 0x96, 0xe3, 0x86, 0xa5, 0xdc, 0x91, 0xa8,

0x8b, 0x3c, 0xb4, 0x3d, 0xfa, 0x6f, 0x68, 0x61,

0xad, 0x2c, 0xbd, 0xbe, 0x20, 0x83, 0x6f, 0x3e,

0xfc, 0x48, 0xb1, 0x11, 0xd9, 0xbf, 0x0e, 0xb8,

0xa0, 0xa8, 0x56, 0x46, 0x69, 0xb2, 0xc5, 0xd6,

0xf5, 0x1c, 0xf6, 0x86, 0x5d, 0xfe, 0x63, 0x80,

0x2c, 0x44, 0x75, 0x8e, 0x87, 0x38, 0x98, 0x02,

0x21, 0xc5, 0x7d, 0xee, 0x8a, 0xf9, 0x4b, 0x35,

0x03, 0xad, 0x7c, 0x8c, 0xf5, 0x77, 0x2b, 0x4e,

0x51, 0xeb, 0xd4, 0xc3, 0xfe, 0x3d, 0xab, 0x95,

0xd0, 0x07, 0xb5, 0xde, 0xe0, 0x31, 0x29, 0xcb,

0xf9, 0x2f, 0xd9, 0x4e, 0x7c, 0x26, 0x0d, 0xca,

0x3b, 0x43, 0x92, 0xce, 0x69, 0x3f, 0x74, 0x82,

0x0f, 0x49, 0xa0, 0x58, 0xb5, 0xee, 0x62, 0xb4,

0x7b, 0x56, 0x57, 0x6b, 0xfa, 0x6b, 0xd7, 0x5d,

0xa3, 0x39, 0x93, 0xc6, 0xa8, 0xb6, 0x9b, 0x87,

0xb3, 0xd0, 0x11, 0x46, 0x92, 0xbe, 0x35, 0xec,

0xcb, 0xae, 0xb5, 0x67, 0x03, 0x5f, 0x01, 0xe7,

0x55, 0x8f, 0xa3, 0x46, 0x82, 0x2b, 0x36, 0x35,

0x12, 0xe9, 0xa4, 0xcd, 0xcf, 0x15, 0x50, 0x3b,

0x29, 0x91, 0xd8, 0x35, 0xff, 0xd5, 0xb2, 0xed,

0x9b, 0x89, 0x5a, 0x8f, 0xbf, 0x98, 0x49, 0x2a,

0xa7, 0x13, 0xc9, 0xd2, 0x05, 0x2f, 0x68, 0x5e,

0xc9, 0xdc, 0x5d, 0xc0, 0xbd, 0xe5, 0x00, 0x07,

0x38, 0x7a, 0x21, 0x7c, 0x27, 0x4f, 0x64, 0x5b,

0x35, 0x1b, 0x99, 0x57, 0xf8, 0x7d, 0x8e, 0xc1,

0xd0, 0x6f, 0xa5, 0xff, 0xb9, 0x8f, 0xa2, 0x57,

0x6d, 0xf9, 0x7f, 0x28, 0x3f, 0x3a, 0x42, 0x84,

0xed, 0xfd, 0x1e, 0x8d, 0xe9, 0x79, 0xa7, 0xfb,

0x54, 0x3b, 0xbd, 0x47, 0xe2, 0xd0, 0xc5, 0x47,

0x25, 0x39, 0x9c, 0x3e, 0x74, 0x23, 0xd4, 0xa8,

0xdb, 0x1f, 0x1b, 0x64, 0x31, 0x55, 0x18, 0x22,

0xf7, 0xa1, 0x5b, 0x9d, 0x0c, 0xb0, 0x19, 0x7d,

0xa3, 0x18, 0x83, 0xc1, 0xdc, 0x6c, 0x91, 0xf0,

0xcf, 0xd8, 0x34, 0xd2, 0xcc, 0x93, 0x50, 0x9a,

0xc4, 0xdb, 0x7a, 0xb4, 0xb1, 0xd4, 0x38, 0xca,

0x09, 0x2e, 0x4f, 0x19, 0x15, 0x38, 0xe4, 0xdd,

0x93, 0x4d, 0x47, 0xe6, 0xc6, 0x54, 0x80, 0xba,

0x94, 0x53, 0x14, 0x44, 0x45, 0x24, 0xdf, 0xbf,

0x80, 0x8a, 0xb3, 0x5e, 0x58, 0x05, 0x22, 0x6e,

0x1c, 0x84, 0xfa, 0x53, 0x7f, 0x64, 0xfd, 0x9c,

0x68, 0x98, 0x5a, 0x9a, 0xf6, 0x27, 0x5f, 0x17,

0xd6, 0x99, 0xc8, 0x4f, 0x39, 0x9b, 0x84, 0xa0,

0x33, 0xde, 0x20, 0x0e, 0x46, 0xc8, 0x52, 0x30,

0x39, 0xb5, 0x5e, 0x11, 0xb3, 0xd2, 0x16, 0x83,

0x96, 0x65, 0x39, 0xaa, 0x76, 0xbc, 0x21, 0x21,

0xaf, 0x13, 0x59, 0x7f, 0xab, 0xf9, 0xf1, 0xbd,

0x7b, 0x89, 0xac, 0xa6, 0xaa, 0x21, 0x05, 0x69,

0xcd, 0x1b, 0x42, 0x36, 0x69, 0xe8, 0x13, 0xae,

0xb6, 0x1d, 0x23, 0xc4, 0x6c, 0x4d, 0x9e, 0xa4,

0xfe, 0x61, 0x1e, 0x6d, 0x67, 0x11, 0x33, 0x94,

0x7c, 0xc3, 0x2b, 0x10, 0xef, 0x26, 0x7b, 0xdf,

0x28, 0x45, 0x5c, 0xde, 0xbd, 0xb4, 0xf5, 0x51,

0x6e, 0xff, 0xe9, 0x13, 0xe0, 0xda, 0xd2, 0x48,

0x87, 0x43, 0x14, 0x47, 0xed, 0xc6, 0xb4, 0xd4,

0xb7, 0x76, 0xee, 0x97, 0xce, 0x47, 0x1f, 0x95,

0xec, 0x05, 0x83, 0x2a, 0x0c, 0x37, 0x6b, 0x35,

0xb9, 0xa7, 0xdf, 0xc6, 0xa4, 0x65, 0xc7, 0x1a,

0x6a, 0x32, 0xf1, 0x8d, 0x99, 0xd9, 0xad, 0x14,

0x0f, 0xb2, 0xa9, 0xc7, 0x4a, 0x00, 0xbe, 0x77,

0x4c, 0x0c, 0x25, 0x7a, 0xaa, 0x1c, 0x06, 0x8e,

0x70, 0x10, 0x75, 0xc6, 0x38, 0x0a, 0xf6, 0xa5,

0x97, 0xb2, 0x52, 0x00, 0x44, 0xf9, 0xe5, 0x10,

0xf3, 0x83, 0x23, 0x66, 0xe7, 0x56, 0xcc, 0x4d,

0xfa, 0x99, 0x2b, 0xfc, 0xd1, 0x97, 0xc4, 0x89,

0xfe, 0xd0, 0xe1, 0x1a, 0xfc, 0x8f, 0x7c, 0x45,

0x82, 0x5a, 0x21, 0xe0, 0xc3, 0x61, 0x2d, 0xe7,

0xf0, 0x9b, 0xcd, 0x94, 0x2b, 0x3c, 0x63, 0x87,

0xb4, 0x77, 0x08, 0x6a, 0xf2, 0xf2, 0xe8, 0x44,

0xd4, 0xa0, 0x19, 0x16, 0x43, 0xcf, 0x00, 0xbb,

0x9a, 0x15, 0xc5, 0x11, 0x19, 0x26, 0xd0, 0xdf,

0x93, 0x5f, 0x4a, 0x67, 0x18, 0x41, 0x5b, 0xde,

0x71, 0x24, 0xf6, 0xd0, 0x02, 0x28, 0x3e, 0xa9,

0xcc, 0x7b, 0xd5, 0xa7, 0x0b, 0x5a, 0x2b, 0x7c,

0x3a, 0xac, 0x43, 0x93, 0xa5, 0x33, 0x7e, 0xd4,

0xab, 0x57, 0x9d, 0x31, 0x06, 0xcd, 0x02, 0xfc,

0x11, 0xf8, 0x6a, 0x50, 0xb3, 0x29, 0x1f, 0xd7,

0x88, 0x1a, 0x4c, 0x62, 0xc7, 0x8a, 0x7f, 0xd8,

0x74, 0xcb, 0x6c, 0xeb, 0xaa, 0x83, 0x2b, 0x76,

0x47, 0x12, 0xb7, 0x96, 0xf7, 0x1a, 0x16, 0xb0,

0x2c, 0x2a, 0x7a, 0x46, 0x32, 0x12, 0x1f, 0x17,

0xf1, 0xde, 0x36, 0xff, 0xa5, 0x52, 0xd5, 0xa6,

0x97, 0xda, 0x05, 0xd7, 0x60, 0x05, 0x41, 0x9f,

0x1c, 0x0e, 0xd0, 0xcc, 0x82, 0xe7, 0x74, 0x6d,

0x0e, 0x89, 0x61, 0x28, 0xfc, 0xa2, 0x9f, 0xb5,

0xca, 0x17, 0x2d, 0xd7, 0x53, 0xb1, 0xe4, 0xd1,

0xe9, 0xca, 0x26, 0x72, 0xca, 0x10, 0x25, 0xf5,

0x27, 0x12, 0x84, 0xaf, 0x40, 0x9e, 0xb5, 0x2e,

0x8d, 0xda, 0x8d, 0xfd, 0xb1, 0x3c, 0x9a, 0x2c,

0xb7, 0xe5, 0x0b, 0xe0, 0x57, 0x9a, 0xf6, 0xd2,

0x3a, 0x82, 0x47, 0xfa, 0xe9, 0x80, 0xb2, 0x4e,

0x46, 0xe6, 0x71, 0x15, 0x17, 0xa4, 0x28, 0xb6,

0x49, 0x96, 0xf4, 0x3f, 0x09, 0x65, 0xa7, 0x48,

0xbc, 0x3b, 0xda, 0x00, 0xcf, 0xfc, 0x6f, 0x9e,

0xe4, 0xbc, 0x72, 0x4e, 0x7e, 0xc1, 0x1b, 0x53,

0xb4, 0xbd, 0x8a, 0x36, 0xf9, 0x87, 0x45, 0xe5,

0x28, 0x52, 0xc2, 0x0d, 0xc7, 0x5d, 0xf0, 0x58,

0x7d, 0xca, 0x65, 0x62, 0xe1, 0x38, 0x7d, 0x41,

0x8f, 0x2f, 0x56, 0xda, 0xcd, 0xfd, 0x34, 0xfb,

0x3c, 0x02, 0xb5, 0xd4, 0x3f, 0x8f, 0xd5, 0xa8,

0x56, 0x85, 0x09, 0x70, 0x98, 0xbd, 0xcc, 0x96,

0xed, 0xba, 0x06, 0x79, 0xde, 0xa4, 0xf5, 0x4f,

0x5d, 0x83, 0x03, 0xcc, 0xee, 0x09, 0xf8, 0xce,

0x08, 0x84, 0x03, 0x01, 0xbf, 0x14, 0x06, 0xde,

0x7c, 0xce, 0x86, 0xa6, 0x25, 0xa1, 0x72, 0xe9,

0x92, 0x18, 0xdb, 0x76, 0x06, 0x28, 0xaf, 0xdd,

0x5a, 0x11, 0x37, 0x15, 0xda, 0xa0, 0x7b, 0x18,

0x0c, 0x43, 0x91, 0x50, 0xc6, 0x9a, 0x79, 0x4d,

0x4f, 0xd3, 0x11, 0xbe, 0x5d, 0xec, 0x87, 0xd2,

0x64, 0x25, 0xa8, 0x0d, 0x06, 0x76, 0xf5, 0x21,

0x18, 0x15, 0xe1, 0x93, 0x10, 0x0f, 0xd7, 0x9a,

0x14, 0xf7, 0xe8, 0xc5, 0x16, 0x8d, 0x28, 0xdb,

0x65, 0xe9, 0x47, 0x20, 0x47, 0xd7, 0x6f, 0x81,

0x56, 0x73, 0x8b, 0xce, 0xaa, 0x6d, 0xb5, 0x3b,

0x66, 0x66, 0xdd, 0x71, 0x67, 0x36, 0xc6, 0x4e,

0x59, 0xc3, 0x26, 0x1a, 0x44, 0x23, 0xf9, 0x1c,

0x42, 0xcc, 0xa7, 0xe0, 0xa2, 0xf5, 0x7b, 0x9a,

0x57, 0x50, 0x06, 0x2e, 0x59, 0x78, 0x21, 0x8b,

0x48, 0x98, 0x89, 0x5e, 0x7c, 0xd8, 0x0a, 0x52,

0xe6, 0x75, 0xfb, 0x21, 0xd5, 0x97, 0xb1, 0x24,

0xee, 0x33, 0x04, 0xf1, 0x93, 0x23, 0xc0, 0x35,

0xb3, 0xdb, 0xba, 0xb5, 0xcd, 0x4d, 0x16, 0x0f,

0xd6, 0x5f, 0x59, 0xca, 0x47, 0x3b, 0xc7, 0xe4,

0xa0, 0x01, 0xe2, 0x0a, 0xd0, 0x1b, 0xde, 0x61,

0x52, 0x4c, 0x70, 0x7f, 0x7c, 0x45, 0xbf, 0x5a,

0x88, 0x23, 0x30, 0x3f, 0x64, 0x42, 0x10, 0x7a,

0x36, 0x9e, 0xfd, 0xb6, 0x3c, 0x60, 0xb2, 0x0e,

0x0a, 0xa3, 0x91, 0x85, 0x52, 0x4d, 0xfa, 0x76,

0x32, 0xc0, 0x27, 0xf0, 0x85, 0xd7, 0xf5, 0xd8,

0x19, 0xf6, 0x8f, 0xe4, 0x49, 0xe7, 0x0e, 0x10,

0x7d, 0xfa, 0x3f, 0x45, 0xda, 0xe6, 0x3c, 0x40,

0x6e, 0xea, 0x28, 0x86, 0x2a, 0x4c, 0xb0, 0x34,

0x86, 0x83, 0x0d, 0x5e, 0x38, 0x9c, 0x78, 0xbe,

0x77, 0xcc, 0x28, 0xcf, 0xfb, 0x8f, 0x6f, 0xc6,

0x7e, 0x95, 0x11, 0x49, 0x63, 0x6f, 0x8a, 0xfb,

0x8a, 0x63, 0x1b, 0xcf, 0x8a, 0x57, 0x3b, 0xfd,

0x1a, 0x8e, 0xc2, 0xb4, 0x46, 0xb4, 0x84, 0xfe,

0x9c, 0xd3, 0x27, 0x15, 0x70, 0x00, 0xf1, 0x75,

0x67, 0xcc, 0x70, 0x4d, 0x44, 0xb0, 0xf1, 0x14,

0x18, 0xc9, 0x05, 0xb8, 0x2a, 0x0b, 0x14, 0xd7,

0x4d, 0x7a, 0x2c, 0x29, 0x47, 0x3a, 0x95, 0x67,

0x1a, 0xcd, 0x9d, 0x19, 0x88, 0x61, 0xd6, 0x95,

0xeb, 0xc0, 0x89, 0x6f, 0x20, 0xa2, 0xa6, 0x48,

0xbf, 0x56, 0xdc, 0xbc, 0xd9, 0x73, 0x57, 0x2b,

0x0d, 0xc0, 0x8b, 0xcf, 0xee, 0x25, 0x61, 0xf3,

0x81, 0x6a, 0xf5, 0x1c, 0xf4, 0xee, 0x70, 0xd5,

0xed, 0x29, 0x17, 0x79, 0x25, 0x2c, 0xf7, 0xc6,

0xc6, 0xc6, 0xf3, 0x50, 0xf5, 0xf5, 0x02, 0x62,

0xdc, 0xb7, 0x12, 0x99, 0x2a, 0xc8, 0x16, 0xe3,

0x50, 0x57, 0x6d, 0xd3, 0xfb, 0x06, 0x24, 0xbf,

0x9a, 0x2d, 0x66, 0x38, 0x1d, 0xd4, 0x03, 0x71,

0xb1, 0x9b, 0xc2, 0xfb, 0x41, 0xbb, 0x7f, 0x9a,

0xfd, 0x93, 0x74, 0xc3, 0xc3, 0xd9, 0x61, 0x49,

0x3c, 0xe4, 0x0b, 0xaa, 0x85, 0x70, 0xc5, 0x36,

0xd6, 0x51, 0x77, 0xe6, 0xbb, 0xe3, 0xf3, 0xe0,

0x85, 0xda, 0x7b, 0x86, 0x45, 0xf9, 0x04, 0x4b,

0xad, 0xe1, 0x6c, 0xef, 0xf8, 0x4b, 0xb4, 0x22,

0x30, 0x0a, 0xd5, 0xd7, 0xb2, 0x3c, 0x01, 0xdf,

0x8c, 0xc5, 0x14, 0x8f, 0x66, 0x99, 0x3b, 0x04,

0x08, 0xdb, 0x0d, 0xb2, 0x58, 0x87, 0xd4, 0x7b,

0xdb, 0x74, 0x93, 0x1a, 0x7f, 0x48, 0xc3, 0x65,

0xcd, 0x6a, 0x76, 0xc7, 0x9a, 0x26, 0x53, 0xe4,

0xa2, 0xe1, 0x2b, 0x0d, 0x7e, 0x4c, 0x81, 0x3f,

0x93, 0x2d, 0xf6, 0xa8, 0xc9, 0x21, 0xb6, 0x2a,

0x2e, 0x64, 0xaf, 0xa6, 0x9f, 0xc1, 0x99, 0x97,

0x8d, 0x27, 0x47, 0xb0, 0x58, 0x61, 0x6c, 0x36,

0x10, 0x5c, 0x77, 0x67, 0xe5, 0x7d, 0x1b, 0x31,

0x9a, 0xc4, 0xdf, 0x50, 0x73, 0x99, 0x95, 0x30,

0x24, 0x6d, 0x76, 0x2f, 0x25, 0xa6, 0xe8, 0x0b,

0x37, 0x78, 0x9c, 0x1b, 0x10, 0x3f, 0xa2, 0x97,

0x68, 0x55, 0x4e, 0x05, 0x32, 0x0b, 0xa6, 0x66,

0x88, 0x42, 0x70, 0xc4, 0xda, 0x19, 0x4f, 0xf5,

0x1a, 0xab, 0x80, 0x6b, 0x59, 0x9f, 0x54, 0x32,

0xb1, 0x88, 0x39, 0x1f, 0x80, 0x3f, 0x24, 0xc8,

0xd3, 0x1a, 0x2a, 0x0b, 0x51, 0x67, 0x35, 0xf5,

0x3f, 0xdb, 0x53, 0xff, 0xdb, 0xfd, 0xaa, 0x57,

0xdb, 0x1e, 0x82, 0xfb, 0x65, 0x7f, 0xd7, 0xd3,

0x89, 0x25, 0xbc, 0x3a, 0x72, 0x98, 0x56, 0x9f,

0x3f, 0x7d, 0xe2, 0x75, 0x76, 0x40, 0xa8, 0x04,

0x88, 0xfa, 0x38, 0x6c, 0x30, 0xba, 0x60, 0x4c,

0xec, 0xf1, 0x96, 0x6f, 0xe3, 0xa4, 0x60, 0x6a,

0xbe, 0x3a, 0xec, 0x16, 0xb6, 0x76, 0xd6, 0xe9,

0x80, 0x7e, 0x28, 0x21, 0xd7, 0xd2, 0x0d, 0xbc,

0xa9, 0xb2, 0x73, 0x8f, 0x7b, 0x6c, 0x92, 0x91,

0xa4, 0x06, 0xa1, 0xa0, 0x73, 0x8d, 0xdb, 0x8c,

0x1c, 0xc9, 0x6b, 0x43, 0x00, 0x64, 0x43, 0xf5,

0x27, 0x62, 0x5c, 0x24, 0xb3, 0x82, 0x7c, 0x7b,

0xc4, 0x1f, 0x72, 0x10, 0x6a, 0x4a, 0xe4, 0xe3,

0x99, 0x28, 0x69, 0x57, 0x91, 0x64, 0xa5, 0xa2,

0xa4, 0x94, 0x38, 0x77, 0xbc, 0xc1, 0xf1, 0x82,

0x00, 0x41, 0xec, 0x0d, 0x16, 0xde, 0xfc, 0xb1,

0x01, 0xa0, 0xd5, 0x5c, 0x4c, 0x70, 0xf8, 0xf7,

0xaf, 0xd3, 0x3c, 0x88, 0xad, 0x63, 0x87, 0xeb,

0xf0, 0xf6, 0x13, 0xa5, 0xf5, 0x4f, 0xdc, 0x1e,

0xc5, 0xc3, 0x2f, 0x13, 0x65, 0x0b, 0x3f, 0x19,

0x83, 0x52, 0xeb, 0x33, 0xa5, 0xfd, 0x9e, 0x0a,

0x14, 0x33, 0x92, 0xb1, 0x1c, 0x66, 0x2b, 0x3d,

0x11, 0x66, 0x4f, 0xc7, 0x81, 0x9c, 0x05, 0x8e,

0x05, 0x81, 0xa2, 0x5c, 0xd3, 0x26, 0x11, 0x26,

0x40, 0xf4, 0x4e, 0xca, 0x96, 0xd3, 0x36, 0xec,

0xf3, 0x90, 0xe1, 0x3a, 0xcc, 0x12, 0x23, 0x21,

0x49, 0x72, 0xa7, 0x43, 0xcd, 0xb0, 0xf1, 0x74,

0x2b, 0x6e, 0x73, 0x9f, 0x56, 0x1d, 0x0a, 0x15,

0xad, 0xb5, 0xb1, 0xe8, 0xdf, 0xa1, 0xb1, 0xa9,

0x06, 0xee, 0x4a, 0xe6, 0xac, 0x07, 0x99, 0x3e,

0x74, 0x69, 0x78, 0xd3, 0x4a, 0x42, 0xd8, 0xd9,

0x8c, 0x55, 0x35, 0xf0, 0x83, 0xa2, 0xa3, 0xac,

0xf0, 0xcd, 0xb6, 0xd7, 0x7b, 0x4a, 0x35, 0x81,

0xf5, 0x8b, 0x67, 0x9b, 0xc2, 0x03, 0xf4, 0xdc,

0x07, 0xe0, 0xe6, 0xf2, 0x99, 0xa6, 0x7f, 0x4d,

0xf4, 0xee, 0xbe, 0x17, 0x14, 0x34, 0xd0, 0xaa,

0x7d, 0x14, 0x80, 0x27, 0x04, 0x9f, 0x93, 0x53,

0xa6, 0x2b, 0xde, 0xb6, 0x6d, 0x10, 0x64, 0x92,

0x66, 0x65, 0x44, 0x1d, 0xec, 0x46, 0xb4, 0xdd,

0x2b, 0x78, 0x95, 0x84, 0x65, 0xb6, 0xcc, 0x26,

0x36, 0x09, 0x8e, 0xf1, 0x6d, 0x9c, 0x56, 0xfd,

0xf4, 0xff, 0x16, 0xa1, 0x95, 0x45, 0x55, 0x94,

0x50, 0x4c, 0xe1, 0xb2, 0xe8, 0xad, 0x67, 0x0d,

0xd9, 0x95, 0x76, 0xac, 0xfe, 0x0c, 0xb7, 0x04,

0xe7, 0x67, 0x81, 0x33, 0xbf, 0xae, 0x50, 0x4e,

0xb5, 0xef, 0xff, 0x43, 0x41, 0x27, 0xb7, 0x60,

0xff, 0x33, 0x29, 0x37, 0x0d, 0x49, 0xc9, 0xd8,

0x25, 0x73, 0xf9, 0x80, 0x3e, 0x1d, 0x86, 0x9c,

0xed, 0xa6, 0x41, 0x77, 0x80, 0x9f, 0x44, 0x7e,

0x7d, 0x07, 0x91, 0x33, 0x87, 0xa2, 0x5e, 0xa4,

0x9c, 0xc1, 0x84, 0xba, 0x4a, 0x0a, 0x70, 0xf2,

0x05, 0x9d, 0x5a, 0xea, 0x6e, 0xe7, 0xbd, 0x66,

0x59, 0xe5, 0xc0, 0x09, 0x52, 0x97, 0x54, 0x9d,

0x64, 0x7e, 0xb0, 0xf9, 0xd3, 0xc5, 0xd7, 0xe3,

0x53, 0x09, 0x37, 0xaf, 0x72, 0x6d, 0x50, 0x64,

0x03, 0x26, 0x28, 0x27, 0x64, 0x91, 0x43, 0x59,

0x10, 0x2b, 0x61, 0x8c, 0xe4, 0x05, 0xc3, 0xf0,

0xce, 0xb7, 0xf0, 0x4a, 0x93, 0x47, 0xb5, 0xcf,

0x44, 0xf4, 0xee, 0xb9, 0xbe, 0x18, 0xfe, 0xe2,

0xb9, 0xe0, 0x98, 0xa5, 0x30, 0x0d, 0x3c, 0x43,

0xa5, 0xd2, 0x4b, 0xf0, 0x2b, 0x21, 0x8a, 0x25,

0xd9, 0x50, 0xc0, 0x91, 0xc2, 0x5b, 0xd1, 0x20,

0xac, 0xbe, 0xd3, 0xd1, 0x0c, 0x45, 0x38, 0x4e,

0x8d, 0xe3, 0xfa, 0x60, 0xbf, 0xac, 0x96, 0x99,

0x1f, 0x9d, 0x1e, 0x10, 0x11, 0x79, 0xb9, 0x75,

0x24, 0xf9, 0x84, 0x48, 0x0c, 0x15, 0xb0, 0xaf,

0x94, 0x06, 0x28, 0xdc, 0x72, 0x6a, 0xea, 0x8d,

0xa4, 0x2a, 0x6e, 0xf9, 0x9d, 0x7e, 0x74, 0x37,

0xa1, 0xd3, 0x75, 0x42, 0x2d, 0x44, 0x44, 0xc5,

0xef, 0x7a, 0x4d, 0xe4, 0xbd, 0xe7, 0x51, 0x24,

0xa2, 0x5f, 0x03, 0x21, 0xdc, 0x4c, 0xdc, 0xb4,

0x98, 0x70, 0x35, 0xe3, 0x6d, 0xf2, 0xbc, 0x4e,

0x87, 0x43, 0x2a, 0x60, 0x3c, 0x39, 0xae, 0x53,

0x8d, 0xb0, 0xa6, 0x12, 0x54, 0x23, 0x80, 0x15,

0x3b, 0x42, 0x2c, 0x93, 0x65, 0x45, 0x7a, 0xbd,

0x1c, 0xdc, 0xf1, 0xb8, 0x5f, 0x86, 0xab, 0xcb,

0x23, 0xe3, 0xf2, 0x1c, 0x50, 0x84, 0x19, 0x3e,

0x5c, 0xc9, 0x2a, 0x5d, 0x36, 0x13, 0x96, 0xc1,

0x5c, 0xc5, 0x1b, 0x1b, 0x9c, 0xaa, 0x6f, 0x93,

0xe8, 0xd1, 0x16, 0x4e, 0x57, 0x39, 0x1f, 0x94,

0x4b, 0x15, 0x22, 0xf4, 0xe1, 0xbd, 0xd2, 0xf0,

0x58, 0xdc, 0xfa, 0x5d, 0x44, 0x1b, 0xa1, 0x25,

0xc4, 0xc9, 0xa4, 0xf1, 0xeb, 0x29, 0x84, 0x8b,

0x01, 0x2a, 0x15, 0x97, 0x3d, 0x23, 0x36, 0x00,

0xd2, 0xb1, 0xee, 0xff, 0xf3, 0x06, 0x6d, 0xa8,

0x22, 0xc3, 0x53, 0xa0, 0x21, 0x5f, 0x78, 0xc3,

0x32, 0x7b, 0xba, 0x0f, 0x0e, 0xfb, 0xec, 0x15,

0x9f, 0x67, 0x4b, 0x18, 0xf4, 0xac, 0xe5, 0x4d,

0x9e, 0xbd, 0x8b, 0xd1, 0x35, 0xae, 0xbf, 0x5b,

0xe8, 0x34, 0x15, 0x1b, 0xc6, 0x4d, 0x7d, 0x24,

0x2d, 0x80, 0x42, 0x21, 0xa0, 0xf8, 0xb8, 0x06,

0x50, 0x6e, 0x40, 0xed, 0xf7, 0x85, 0xcc, 0x3a,

0x71, 0x8a, 0x5c, 0x42, 0x33, 0x75, 0xb8, 0x74,

0x88, 0xdb, 0x2a, 0x91, 0x6d, 0x56, 0xa6, 0x33,

0x72, 0x0d, 0xe3, 0xf5, 0x3e, 0x86, 0xff, 0xc5,

0xcb, 0xe6, 0xb6, 0x13, 0x82, 0x70, 0xe6, 0x66,

0xd1, 0xb1, 0x55, 0x5d, 0x6b, 0x3f, 0x35, 0xcd,

0x3d, 0xf6, 0x0f, 0xaf, 0x78, 0xaa, 0x8a, 0xbd,

0x3d, 0x8d, 0x7b, 0xa3, 0xe9, 0x19, 0x8e, 0x42,

0x50, 0x2c, 0xa9, 0x64, 0x1c, 0x7e, 0x78, 0x48,

0x1b, 0xa1, 0xfa, 0x3e, 0x51, 0x66, 0xca, 0x8e,

0x47, 0xae, 0x9c, 0x65, 0x73, 0x45, 0x8e, 0xfa,

0xa4, 0xcb, 0x33, 0x4f, 0x47, 0xb3, 0x24, 0x16,

0x0f, 0x45, 0x2e, 0x89, 0x77, 0xcf, 0xae, 0x63,

0x15, 0xcb, 0x24, 0xd6, 0x01, 0x59, 0x7a, 0x7d,

0x40,

},

/\* bytes in plaintext \*/

4129,

/\* associated data \*/

{

0x8d, 0xcf, 0xe3, 0xb4, 0x53, 0xb9, 0x68, 0xc5,

0x4f, 0x73, 0x62, 0xf2, 0xa4, 0x89, 0x19, 0x23,

},

/\* bytes in associated data \*/

16,

/\* ciphertext \*/

{

0x17, 0xee, 0x74, 0x8b, 0x55, 0xed, 0xc8, 0x90,

0xa1, 0xf6, 0x4b, 0x12, 0xd0, 0x9e, 0xf8, 0xf7,

0x85, 0x6c, 0xef, 0x00, 0xe8, 0x74, 0x99, 0x9b,

0x3d, 0x01, 0x17, 0x62, 0x62, 0xeb, 0x0f, 0x17,

0x93, 0x9f, 0x41, 0xdf, 0x8c, 0x2b, 0xe9, 0x3f,

0xa5, 0xcb, 0x5a, 0xc1, 0x2e, 0x96, 0x41, 0x3a,

0x03, 0xea, 0x4e, 0x85, 0xfe, 0x7f, 0x46, 0x42,

0xd4, 0xd2, 0x74, 0xa6, 0xfd, 0x9f, 0x17, 0xc1,

0x45, 0xd2, 0x5e, 0xc5, 0x5e, 0x03, 0xa2, 0x95,

0xf7, 0x0f, 0xd7, 0x60, 0x6d, 0x26, 0xc3, 0x91,

0x01, 0x37, 0xc5, 0x2e, 0xc2, 0xfe, 0xaf, 0x08,

0x41, 0x3b, 0x7d, 0xb0, 0x11, 0x6c, 0x95, 0xcf,

0xfe, 0xc7, 0xd4, 0x0a, 0x41, 0x1d, 0xe1, 0x38,

0x9f, 0x09, 0xd9, 0x96, 0xba, 0xce, 0x50, 0x4e,

0x94, 0x27, 0x5f, 0x04, 0xe0, 0x96, 0xea, 0xdf,

0x91, 0x59, 0xc6, 0x74, 0xa5, 0x7a, 0x47, 0x57,

0xbc, 0x98, 0x5b, 0xd4, 0xa4, 0x2f, 0x91, 0x77,

0x59, 0x93, 0x50, 0x9f, 0xf0, 0x4d, 0x60, 0x90,

0x99, 0x4a, 0xa7, 0xb8, 0xa8, 0x76, 0x7d, 0xed,

0xf1, 0xc0, 0x7d, 0x9b, 0x37, 0x3e, 0x8b, 0x64,

0x5b, 0x05, 0x1b, 0x26, 0x21, 0x4b, 0x49, 0x7d,

0x46, 0x1c, 0xef, 0x4c, 0x2a, 0x1f, 0x62, 0xbe,

0x0d, 0x0d, 0xae, 0xe7, 0x3d, 0x0d, 0x0f, 0x59,

0x59, 0x18, 0xd8, 0x73, 0x96, 0x77, 0x93, 0x79,

0x26, 0x25, 0xde, 0x5f, 0xbc, 0x24, 0x1d, 0xf7,

0xd4, 0xeb, 0x72, 0x37, 0x7d, 0x91, 0xe9, 0x9d,

0x8d, 0x5d, 0x0b, 0x15, 0xe3, 0x5f, 0xd4, 0xbf,

0xb7, 0x8a, 0xe1, 0x35, 0x6d, 0x86, 0xa2, 0x6a,

0x64, 0x30, 0xf6, 0x33, 0x47, 0xbe, 0xbe, 0x53,

0x7d, 0x72, 0x9b, 0xbc, 0x30, 0x93, 0x40, 0xee,

0xbd, 0xa9, 0xb0, 0xc5, 0x93, 0x63, 0x6e, 0x48,

0x4c, 0xc3, 0x6e, 0x6a, 0xb8, 0x9c, 0xb4, 0xc0,

0x3a, 0x08, 0xb1, 0x10, 0xfa, 0x18, 0xe9, 0x8c,

0x68, 0x2d, 0xe3, 0x4d, 0xd6, 0x42, 0x87, 0x8e,

0xa2, 0xb4, 0xdf, 0x9b, 0xf1, 0x64, 0x7a, 0x32,

0xdf, 0xb2, 0x68, 0xf2, 0x9c, 0x70, 0xc2, 0x6a,

0xb2, 0xa4, 0x07, 0xcc, 0x50, 0x57, 0x37, 0x9e,

0x18, 0xfc, 0xcf, 0x72, 0xff, 0x3d, 0x2c, 0x56,

0xec, 0x83, 0x5e, 0xb4, 0x0c, 0xc2, 0x48, 0xac,

0x12, 0xd1, 0xda, 0x8b, 0xbc, 0x3e, 0x48, 0x1c,

0xf1, 0x34, 0xda, 0x14, 0x98, 0xe2, 0xc0, 0x9f,

0x09, 0x8b, 0x0b, 0xe6, 0xd8, 0x80, 0x73, 0xb1,

0xa8, 0xc7, 0x1b, 0x77, 0xfd, 0x34, 0x36, 0x47,

0xcf, 0xad, 0x42, 0x1a, 0x41, 0x11, 0xc1, 0x58,

0xec, 0xa7, 0xc1, 0x8c, 0x67, 0xe8, 0x72, 0xd2,

0x08, 0x1b, 0xf8, 0xb0, 0x11, 0x23, 0x1b, 0xcb,

0x8b, 0x2c, 0xc8, 0x7e, 0x98, 0x96, 0xba, 0xf3,

0xee, 0x86, 0x4a, 0x0f, 0xae, 0x99, 0x26, 0x79,

0x18, 0xc4, 0xce, 0x4f, 0xba, 0x04, 0xad, 0x80,

0x76, 0xac, 0x3d, 0x57, 0x90, 0x1f, 0x90, 0xc3,

0x63, 0x6a, 0x1b, 0x4a, 0x8f, 0x66, 0xfc, 0x5f,

0xf3, 0x31, 0x08, 0x41, 0xa8, 0x19, 0xb6, 0x76,

0xa9, 0xaa, 0x57, 0x0d, 0x03, 0x0d, 0x7a, 0x9a,

0x8b, 0x71, 0x78, 0xf6, 0x45, 0x38, 0xaf, 0xb0,

0x7a, 0xbc, 0xe5, 0x48, 0x79, 0x6e, 0xa4, 0x7d,

0xd7, 0xe0, 0x22, 0x09, 0x2d, 0x08, 0xf5, 0xc8,

0x24, 0x3a, 0x57, 0x45, 0x01, 0xdc, 0x78, 0x4d,

0x2b, 0xe9, 0xa9, 0x45, 0x18, 0x5a, 0x02, 0xca,

0xcd, 0x37, 0x03, 0x75, 0x77, 0xd8, 0x91, 0xc3,

0xfb, 0xfb, 0x8d, 0x9f, 0x40, 0x8d, 0xb6, 0xaa,

0xed, 0xd7, 0x69, 0x28, 0xd4, 0x1d, 0x23, 0x58,

0xf4, 0x94, 0xeb, 0x77, 0xdc, 0x53, 0xb6, 0x7a,

0xfd, 0x6e, 0xc5, 0xe1, 0xa6, 0xb6, 0x2e, 0x3b,

0x54, 0xf7, 0xbf, 0xb5, 0x5f, 0x0f, 0xf4, 0xf5,

0xb7, 0xf5, 0xe6, 0x9c, 0xa4, 0x57, 0x15, 0xbe,

0x42, 0x4e, 0x49, 0x0e, 0xe6, 0x9e, 0x1c, 0x57,

0x49, 0x98, 0x9f, 0xa6, 0xc9, 0x9c, 0x20, 0xce,

0xd5, 0x1f, 0x80, 0xed, 0xff, 0xd2, 0xfb, 0x96,

0xc8, 0x6f, 0x5e, 0x75, 0x57, 0xe4, 0x09, 0x14,

0x3d, 0x99, 0xa6, 0xab, 0x92, 0x70, 0xb9, 0x4f,

0x1e, 0xa1, 0xfd, 0xce, 0xaa, 0x76, 0x67, 0x8b,

0xce, 0x46, 0xc9, 0x48, 0x6b, 0x28, 0xeb, 0x08,

0x55, 0x88, 0xff, 0x23, 0x5c, 0x2b, 0xd0, 0xaa,

0x24, 0x59, 0x57, 0x73, 0xa5, 0xc5, 0x14, 0xce,

0xa0, 0x26, 0xa5, 0x79, 0x23, 0x99, 0x29, 0x28,

0x39, 0xcf, 0x7d, 0xa8, 0x14, 0xa9, 0x46, 0x15,

0xb9, 0xcb, 0x80, 0x3b, 0xde, 0x76, 0x5b, 0x06,

0x33, 0x15, 0x02, 0x8a, 0xae, 0x80, 0x49, 0x23,

0x25, 0x2f, 0xe8, 0xf2, 0x29, 0xdc, 0x63, 0x42,

0x7d, 0xd2, 0xa7, 0xcd, 0x60, 0x92, 0x6d, 0xe8,

0x9b, 0x04, 0xa9, 0x53, 0x67, 0x5a, 0x89, 0x2b,

0xc8, 0x95, 0x08, 0x1b, 0x5c, 0x82, 0xae, 0xff,

0x39, 0xaa, 0x90, 0xa5, 0x26, 0x72, 0x95, 0xeb,

0xd3, 0x2f, 0x42, 0x1a, 0xb0, 0xb4, 0xa4, 0xce,

0x9e, 0xf0, 0xd1, 0x5e, 0xbb, 0x1e, 0xaf, 0x8e,

0x0c, 0xec, 0x0a, 0xbe, 0x83, 0x82, 0x43, 0xd8,

0x28, 0x63, 0xe2, 0xc0, 0xcb, 0x59, 0xb2, 0xd8,

0x78, 0x3b, 0x18, 0xee, 0x09, 0x15, 0xa2, 0x35,

0xbd, 0xab, 0x18, 0xa8, 0xd2, 0x1c, 0x57, 0x98,

0x4f, 0xe8, 0xd7, 0xab, 0x9f, 0x81, 0xcd, 0xe6,

0x78, 0xf8, 0x5b, 0xea, 0x0b, 0xed, 0x67, 0xc6,

0xf1, 0x38, 0x0c, 0x1f, 0x9c, 0x19, 0x3d, 0x6c,

0x18, 0xb1, 0x2c, 0xa9, 0x0d, 0x85, 0xcc, 0x99,

0x37, 0xf1, 0x0a, 0xbf, 0x3b, 0x1b, 0xe0, 0x5a,

0xc4, 0x14, 0x1b, 0xc0, 0x72, 0x5c, 0x2d, 0xc5,

0x66, 0xde, 0x3b, 0x17, 0x3d, 0x1c, 0x5d, 0x46,

0x1f, 0x87, 0x33, 0xe7, 0x29, 0xdf, 0x2f, 0x75,

0x40, 0xe3, 0xf2, 0xb8, 0xd1, 0x3f, 0xfb, 0xd6,

0xdf, 0xa3, 0x4f, 0x54, 0x72, 0xe4, 0xb6, 0xef,

0x8b, 0xde, 0xb4, 0x5d, 0x77, 0xab, 0xb3, 0xc4,

0x63, 0x59, 0xad, 0xe0, 0xbd, 0x95, 0x12, 0xa6,

0xd1, 0x8e, 0x74, 0x72, 0xae, 0xd3, 0xee, 0x4b,

0x3f, 0x67, 0xa3, 0xc0, 0xbd, 0x01, 0xd1, 0xec,

0xfa, 0xa4, 0x70, 0x59, 0xeb, 0x28, 0x24, 0xc8,

0xf2, 0x2e, 0xe4, 0xee, 0x5c, 0x99, 0xb7, 0xdc,

0xef, 0xa6, 0xcd, 0xc2, 0x74, 0xf3, 0xac, 0x26,

0xbb, 0x81, 0xd3, 0xa8, 0x32, 0xda, 0x4e, 0x92,

0xdb, 0xf5, 0xe8, 0x3d, 0x59, 0x34, 0xd1, 0xf7,

0xbc, 0xfd, 0xc5, 0x94, 0x71, 0x5a, 0xb7, 0xa7,

0xb3, 0xce, 0xc9, 0x67, 0x7a, 0xdd, 0xd0, 0x0f,

0xfb, 0xa1, 0xcf, 0xb0, 0x09, 0x31, 0x45, 0x5e,

0x21, 0x7f, 0xab, 0x5b, 0xaf, 0x9e, 0x1e, 0xd2,

0x69, 0x84, 0x67, 0x06, 0x61, 0x4c, 0xe6, 0x93,

0xa1, 0x4d, 0x64, 0x06, 0xc0, 0xaf, 0x91, 0x65,

0xf7, 0xd7, 0x19, 0x9f, 0x57, 0xe0, 0x98, 0x4d,

0xab, 0x45, 0x71, 0x3e, 0x29, 0x7e, 0xc4, 0xc6,

0xd8, 0x48, 0x7b, 0x64, 0x84, 0x8e, 0x22, 0x2e,

0x24, 0x91, 0xdb, 0x90, 0x5a, 0x8a, 0x19, 0x90,

0x10, 0xbb, 0xc7, 0x25, 0x04, 0x81, 0x04, 0x03,

0xb5, 0x4b, 0x03, 0xe5, 0xb3, 0xa8, 0xb6, 0x46,

0x22, 0xb2, 0xfb, 0xef, 0x28, 0xa5, 0xe1, 0x2e,

0x68, 0xf3, 0x14, 0xb3, 0x7d, 0x9e, 0x31, 0x87,

0xff, 0xee, 0x40, 0xa5, 0xae, 0x52, 0x6a, 0x5e,

0xa3, 0xf7, 0xef, 0xc6, 0x2e, 0x54, 0x92, 0xba,

0x7d, 0x8d, 0x90, 0x73, 0x7b, 0x1e, 0x7b, 0x19,

0x6b, 0x07, 0xcb, 0xbe, 0xf5, 0x78, 0xe4, 0x9e,

0xcd, 0x7b, 0x16, 0xab, 0x85, 0x3e, 0xd3, 0x83,

0xa8, 0x2a, 0xdc, 0xc8, 0x07, 0x23, 0xc3, 0x75,

0x17, 0xe0, 0xc9, 0xdf, 0xa5, 0x62, 0xe1, 0x21,

0x54, 0x61, 0x8f, 0x04, 0xe4, 0xd1, 0xc9, 0x51,

0xe8, 0x04, 0xc5, 0x61, 0x97, 0xe6, 0x16, 0xd6,

0xdc, 0x3f, 0x22, 0x48, 0x60, 0x75, 0x13, 0x8d,

0x3e, 0x1f, 0xd3, 0x50, 0xd7, 0x19, 0x03, 0xc7,

0x68, 0xb9, 0xcb, 0x88, 0x6e, 0x6f, 0x4d, 0x02,

0xc4, 0x3d, 0xb2, 0x91, 0x5b, 0x01, 0xe7, 0x4a,

0x28, 0x15, 0xcb, 0xbc, 0x0e, 0xbb, 0x05, 0x28,

0xab, 0xaf, 0x63, 0x13, 0x61, 0x8d, 0xa1, 0xb6,

0x2f, 0x84, 0x3f, 0xa0, 0x69, 0xed, 0xf5, 0x96,

0x7b, 0xf6, 0x4d, 0xee, 0x80, 0x73, 0xb5, 0xd1,

0x61, 0x40, 0x6a, 0x10, 0xef, 0x6b, 0x38, 0x62,

0xf9, 0x6a, 0xaa, 0x21, 0x12, 0x2e, 0x6e, 0x34,

0x30, 0x5e, 0x19, 0xd3, 0x35, 0x64, 0x4c, 0x98,

0xec, 0xe7, 0xf3, 0xc2, 0xdc, 0xcb, 0x1f, 0xdf,

0x26, 0x2c, 0xd0, 0xbe, 0xb8, 0xd4, 0x18, 0xf3,

0x25, 0xa0, 0x70, 0xce, 0x85, 0x6b, 0x7f, 0x47,

0x42, 0x81, 0xb2, 0xa6, 0xed, 0x35, 0xf3, 0xa3,

0x54, 0x40, 0xcc, 0x69, 0x64, 0x28, 0x18, 0xe2,

0x4f, 0x4e, 0xd5, 0x04, 0xa9, 0x89, 0x8a, 0xf9,

0xfc, 0xd1, 0xca, 0x6e, 0xee, 0x63, 0xe4, 0xfa,

0x02, 0x04, 0x81, 0x15, 0x8e, 0x01, 0x91, 0xb7,

0x0a, 0x8f, 0xc8, 0x32, 0x76, 0xf6, 0xfa, 0xd5,

0x70, 0xd5, 0xcb, 0xa8, 0x9d, 0x9c, 0xd7, 0x19,

0xb5, 0x15, 0xa0, 0x99, 0x21, 0xc0, 0xf4, 0x18,

0xb4, 0xae, 0x22, 0x03, 0xda, 0xf4, 0xaf, 0x4f,

0x3a, 0xef, 0x34, 0x4b, 0xf2, 0xc3, 0xc3, 0xff,

0x04, 0xd0, 0xcc, 0xaa, 0xe3, 0x1c, 0xa4, 0xe3,

0x6f, 0xba, 0x3d, 0xee, 0x87, 0x16, 0x35, 0xe2,

0xaf, 0x6c, 0xcc, 0x60, 0xfd, 0xd1, 0xc2, 0x5b,

0xf9, 0x02, 0xe8, 0x2f, 0xcd, 0x7a, 0x1f, 0x68,

0x35, 0xd9, 0xd8, 0x3c, 0x9b, 0x99, 0xc3, 0x67,

0xe2, 0xcb, 0xdd, 0x4b, 0x28, 0x80, 0xc2, 0xac,

0x7d, 0xdc, 0xfb, 0x98, 0x29, 0x17, 0xf3, 0xa6,

0x4e, 0x4e, 0xe0, 0x21, 0x1e, 0x54, 0x29, 0xc2,

0x0a, 0xa2, 0xa4, 0x32, 0xf0, 0x91, 0x01, 0xbf,

0xd1, 0xf1, 0x5c, 0x3f, 0xe5, 0x43, 0x06, 0x84,

0x35, 0xe3, 0x38, 0x11, 0xcf, 0x84, 0xb2, 0x0b,

0x89, 0x34, 0x7c, 0x2b, 0x7a, 0x05, 0x44, 0x4a,

0xe3, 0x88, 0x0a, 0x85, 0xdb, 0xcc, 0xab, 0x25,

0x8b, 0x4e, 0x6b, 0x7c, 0x74, 0x44, 0x07, 0xb6,

0x52, 0x18, 0xbd, 0xc7, 0x3d, 0x6c, 0x05, 0xa7,

0x79, 0x04, 0x49, 0x5f, 0x94, 0xd0, 0x6e, 0xbf,

0xff, 0x11, 0x58, 0x58, 0x20, 0xf9, 0x5d, 0xcd,

0x0d, 0x44, 0xa1, 0xe1, 0x09, 0xe6, 0x89, 0xa1,

0xd6, 0x58, 0x9f, 0x3f, 0x3b, 0x25, 0xc5, 0x6b,

0xf7, 0xb1, 0x92, 0x4a, 0x89, 0xe7, 0x91, 0xd9,

0x06, 0x3c, 0x6e, 0x74, 0x18, 0x66, 0xd9, 0x6b,

0xd9, 0xc9, 0x85, 0x7d, 0xa3, 0x81, 0x70, 0x14,

0x90, 0x59, 0x1f, 0x98, 0xcc, 0x3b, 0x70, 0x82,

0xd1, 0x93, 0x76, 0x87, 0xd8, 0x5a, 0xfe, 0x3a,

0xc4, 0xd2, 0x44, 0xb0, 0xcc, 0x52, 0x91, 0xc8,

0xfa, 0x9a, 0x94, 0x90, 0xfa, 0x8d, 0x77, 0x61,

0x47, 0x02, 0xa6, 0xb7, 0xe4, 0x18, 0x4e, 0x0a,

0x7b, 0x79, 0x40, 0x90, 0x32, 0x02, 0x43, 0x7e,

0xe3, 0xdf, 0x63, 0xcb, 0xb8, 0xe7, 0x51, 0x27,

0x5c, 0x1a, 0x7a, 0x48, 0x89, 0x1c, 0x7a, 0x54,

0xc4, 0xc8, 0x37, 0xdb, 0xaf, 0x96, 0x4a, 0xe0,

0x45, 0x9b, 0x4e, 0x66, 0x16, 0x6c, 0xb8, 0x8c,

0xd1, 0x10, 0x50, 0x95, 0x25, 0x9c, 0x35, 0x35,

0xc2, 0x1c, 0xc4, 0x63, 0x9f, 0x85, 0x57, 0x9e,

0x37, 0x34, 0xdb, 0xfd, 0x5f, 0x7a, 0xdf, 0xc2,

0xf9, 0x6e, 0xa9, 0x3f, 0x41, 0xa5, 0x53, 0x69,

0x13, 0xce, 0xdc, 0x2a, 0xc4, 0x4c, 0xde, 0x43,

0x8a, 0x6a, 0x93, 0xcb, 0xc4, 0xb8, 0x9b, 0x1d,

0x89, 0xb3, 0x49, 0x5e, 0xb7, 0x7c, 0x51, 0xf2,

0x8e, 0xa6, 0x5b, 0xa8, 0xe9, 0x52, 0x20, 0x49,

0x61, 0x9e, 0xe7, 0xdf, 0x0d, 0xc0, 0xd0, 0xc8,

0x32, 0x77, 0xb1, 0x4a, 0xe2, 0x5e, 0xe1, 0x8f,

0xbf, 0x75, 0x77, 0xa7, 0xd1, 0x39, 0xac, 0xbb,

0x22, 0x8b, 0x96, 0xfa, 0xc4, 0xa3, 0x92, 0x9d,

0x5e, 0x92, 0x0d, 0xee, 0xc8, 0x5e, 0x1b, 0x6d,

0x1e, 0x72, 0xb5, 0x49, 0x5a, 0x19, 0x70, 0x50,

0x76, 0xc8, 0x30, 0x07, 0x0d, 0x9d, 0x76, 0x38,

0xb1, 0x66, 0xd0, 0x76, 0x46, 0xd1, 0xf8, 0x93,

0x34, 0xfe, 0xb2, 0x45, 0x57, 0x19, 0x58, 0x35,

0xcd, 0xe0, 0x98, 0x4d, 0x1d, 0x75, 0x4e, 0x4e,

0x38, 0x34, 0xa5, 0x26, 0x17, 0x93, 0xa8, 0xa3,

0x9b, 0xa0, 0x23, 0xa4, 0xcd, 0x2f, 0x7b, 0x82,

0x77, 0xed, 0xf6, 0x8a, 0x08, 0xbf, 0xec, 0x8d,

0x53, 0x66, 0xd1, 0xb5, 0x3e, 0x62, 0xcd, 0x27,

0xf8, 0x90, 0x1a, 0x1e, 0x28, 0x29, 0xf7, 0x15,

0x4d, 0x82, 0x75, 0x71, 0xe4, 0x4a, 0xf3, 0x6d,

0x68, 0x18, 0x17, 0x25, 0xfb, 0x98, 0x0d, 0x09,

0xc0, 0x68, 0x5a, 0x36, 0x45, 0x9d, 0x87, 0x69,

0x07, 0xb5, 0xf9, 0xc1, 0x8e, 0xc0, 0xa2, 0xe2,

0xe0, 0x3c, 0x03, 0x0d, 0xc0, 0xfe, 0x6a, 0xc0,

0x0f, 0x8d, 0x58, 0xdc, 0xcb, 0xf7, 0x30, 0x3f,

0xf5, 0x03, 0xf2, 0x83, 0xfd, 0x61, 0x94, 0x86,

0x7e, 0xb4, 0xae, 0x32, 0x73, 0xbc, 0xa1, 0xf0,

0x0d, 0x05, 0x8d, 0x96, 0x7d, 0xff, 0xf8, 0xee,

0x80, 0x28, 0x43, 0xcd, 0x16, 0xa9, 0x50, 0x10,

0x41, 0x07, 0x8a, 0xee, 0xf7, 0xbf, 0x8f, 0x89,

0x8c, 0xcb, 0x9b, 0x8d, 0xcd, 0xd4, 0x38, 0x56,

0xf5, 0xec, 0xad, 0xbe, 0x77, 0x08, 0x48, 0xf6,

0x3a, 0xda, 0x8d, 0x2f, 0xa5, 0x6a, 0xe5, 0xbf,

0x6e, 0x92, 0xad, 0x5b, 0x30, 0xa7, 0x56, 0x6c,

0xa9, 0xc0, 0x52, 0xf0, 0xf9, 0x6f, 0x84, 0xad,

0x93, 0xf8, 0x1d, 0xb6, 0x3b, 0xf1, 0x61, 0xe6,

0x0f, 0x4e, 0x52, 0x0d, 0x01, 0xf5, 0x74, 0xcc,

0xff, 0x5c, 0xcc, 0x50, 0x83, 0x98, 0x8f, 0x8e,

0x57, 0xa2, 0x17, 0x7f, 0xa2, 0x1b, 0x8c, 0x38,

0x91, 0x3e, 0x9d, 0x4a, 0x76, 0xc3, 0xd0, 0xbd,

0x11, 0x8a, 0x5f, 0xb2, 0x93, 0xad, 0xd1, 0x56,

0x4b, 0x07, 0xee, 0xd6, 0x5d, 0x61, 0x9b, 0xde,

0xcc, 0x59, 0x50, 0x5d, 0xa0, 0x26, 0xfa, 0x55,

0xb7, 0x14, 0xf7, 0x4a, 0xe2, 0xa1, 0x18, 0x94,

0x22, 0xf2, 0x5f, 0x62, 0x47, 0x0f, 0xe3, 0xeb,

0x42, 0x54, 0x8b, 0xb1, 0xd9, 0xbe, 0xce, 0x00,

0xc6, 0x34, 0x88, 0x5b, 0x4b, 0x09, 0x20, 0xeb,

0xfb, 0xa8, 0x4f, 0xc2, 0x00, 0xe2, 0x8b, 0xc9,

0x07, 0x5b, 0xa1, 0x77, 0x7e, 0x10, 0x59, 0xc9,

0x9e, 0x9a, 0x4f, 0x5d, 0xba, 0x84, 0x5c, 0x8a,

0xfc, 0xb6, 0x89, 0x3f, 0x09, 0x1c, 0xa9, 0x1f,

0x22, 0xea, 0xc9, 0x31, 0x30, 0xef, 0x7b, 0xf3,

0x60, 0xcd, 0x3d, 0xc9, 0xef, 0x4b, 0xb6, 0x19,

0x2d, 0x41, 0xad, 0x17, 0x3c, 0x66, 0x9f, 0xdd,

0x26, 0x48, 0x0a, 0xd1, 0x5e, 0x09, 0x22, 0x31,

0x58, 0xe4, 0x14, 0x43, 0x21, 0x14, 0xed, 0x81,

0x8a, 0xc8, 0xea, 0x53, 0x79, 0x01, 0xf5, 0xb0,

0x57, 0xc7, 0xe6, 0x4b, 0xaa, 0xd1, 0x2f, 0xf5,

0xd5, 0x38, 0x35, 0xfb, 0x8a, 0x6a, 0xf7, 0x37,

0x65, 0x12, 0x55, 0x1b, 0xc2, 0x38, 0x97, 0x01,

0x1f, 0x2c, 0x56, 0x55, 0x6a, 0xd0, 0xff, 0x0d,

0x9e, 0x40, 0xcd, 0x02, 0x4a, 0x44, 0x12, 0xde,

0xc0, 0x3d, 0xa0, 0xee, 0x66, 0x8f, 0xa6, 0xec,

0x80, 0x12, 0x86, 0x42, 0x52, 0x4e, 0xff, 0x17,

0x41, 0x86, 0xb4, 0x26, 0x69, 0x82, 0x00, 0x18,

0xae, 0x3b, 0x82, 0xdc, 0x1f, 0x93, 0x8b, 0x6b,

0x6d, 0x34, 0x5e, 0x7f, 0xb1, 0x78, 0xf1, 0x9f,

0x99, 0x4a, 0x27, 0x68, 0xb5, 0x32, 0x57, 0x37,

0x3d, 0xef, 0xcc, 0x1f, 0xc2, 0x4b, 0x39, 0x4c,

0xcf, 0x16, 0x1f, 0x4e, 0x38, 0x73, 0xcd, 0xe8,

0xae, 0xae, 0x57, 0x7f, 0x17, 0xdc, 0xc9, 0x36,

0x61, 0x19, 0xe9, 0x44, 0x4b, 0xfe, 0x28, 0xf0,

0xc2, 0xe5, 0x9c, 0x3c, 0xb2, 0xde, 0x57, 0xae,

0x6a, 0x16, 0xee, 0xca, 0xcc, 0x80, 0x6a, 0xae,

0x88, 0xd9, 0x60, 0xe4, 0xf9, 0x5b, 0x66, 0xea,

0xbe, 0xb7, 0xb6, 0xe2, 0x60, 0x45, 0xc7, 0x42,

0x29, 0xa0, 0x95, 0x18, 0x45, 0x2d, 0x35, 0xc1,

0x87, 0x07, 0x2e, 0x3c, 0xee, 0x77, 0x10, 0x61,

0x54, 0x0f, 0x5a, 0xf6, 0xf0, 0xc8, 0xce, 0x3d,

0xee, 0xe7, 0x8e, 0x6d, 0x6c, 0x13, 0x24, 0xa1,

0x60, 0x5a, 0x98, 0x64, 0xe6, 0x66, 0x1e, 0xd7,

0x08, 0xac, 0x23, 0xbf, 0x58, 0xf9, 0x7b, 0x4c,

0x4f, 0x92, 0xe1, 0x37, 0xba, 0xd9, 0xb3, 0x30,

0x3e, 0xec, 0x68, 0xe8, 0x4e, 0x8d, 0x22, 0x76,

0xa8, 0x96, 0x6d, 0x81, 0x12, 0x6c, 0x46, 0xdb,

0xeb, 0xe4, 0xd5, 0xf6, 0x17, 0xf5, 0xa0, 0xb1,

0xe3, 0x7e, 0xa6, 0xe7, 0x9b, 0xbd, 0x6b, 0xd7,

0x3e, 0xc8, 0x7b, 0x9a, 0xde, 0x57, 0x10, 0xca,

0x76, 0x0c, 0xf0, 0xa8, 0xcb, 0xac, 0xf2, 0x42,

0x69, 0x80, 0x88, 0xfd, 0x72, 0xaf, 0x76, 0xc9,

0xdd, 0x88, 0x7a, 0x9c, 0xe9, 0x39, 0x85, 0x3b,

0x43, 0xb4, 0x53, 0xf9, 0x68, 0xcd, 0x83, 0x6d,

0xd4, 0x27, 0x11, 0xb9, 0x66, 0x10, 0x82, 0x5b,

0x73, 0x63, 0x36, 0x85, 0x11, 0x98, 0x74, 0xba,

0x3d, 0x40, 0x0d, 0xef, 0x72, 0xb2, 0x34, 0x9d,

0x46, 0x82, 0x5e, 0xc2, 0x39, 0x26, 0xbd, 0xa9,

0xf0, 0xba, 0xe0, 0x70, 0x31, 0xc9, 0x9b, 0xf8,

0xa4, 0x86, 0x15, 0x4f, 0x03, 0x7a, 0x87, 0xe2,

0x5d, 0x41, 0xa9, 0x6e, 0x6c, 0x24, 0xaf, 0x94,

0xad, 0x50, 0xf5, 0xe6, 0x08, 0x80, 0x2f, 0x04,

0x03, 0x6e, 0x33, 0xac, 0x9d, 0xb2, 0x95, 0x58,

0xdf, 0xf3, 0x7c, 0x38, 0x37, 0xfa, 0xe6, 0xf1,

0x07, 0xf7, 0x4e, 0x99, 0xb2, 0x1e, 0xc5, 0xce,

0xb2, 0x83, 0x02, 0x59, 0x18, 0xa3, 0x9d, 0x80,

0xfd, 0x59, 0x2e, 0x74, 0x99, 0x03, 0x14, 0x70,

0xae, 0xed, 0x74, 0x39, 0x91, 0x98, 0xfd, 0xc9,

0x48, 0x22, 0x48, 0xba, 0x29, 0x6b, 0x1d, 0xfb,

0xb1, 0x32, 0x09, 0x5f, 0xc5, 0x31, 0xc7, 0x2b,

0x83, 0xba, 0xaf, 0xb0, 0x17, 0x0d, 0x4b, 0x1b,

0x36, 0xa9, 0x4d, 0x3c, 0xb2, 0x33, 0x5d, 0x8b,

0x95, 0xda, 0xc3, 0x63, 0x31, 0x16, 0x6d, 0xfd,

0xf1, 0x72, 0xea, 0x9a, 0x54, 0x71, 0x4a, 0x26,

0xe1, 0xc3, 0x58, 0x32, 0x82, 0xf0, 0xf5, 0x01,

0xf9, 0xee, 0xac, 0x19, 0x7e, 0x2c, 0xf0, 0xb1,

0x51, 0xee, 0x37, 0x3a, 0xdc, 0x8e, 0x80, 0xe5,

0x54, 0xf2, 0x3d, 0x85, 0xb5, 0x29, 0x95, 0x65,

0x7e, 0xb6, 0x19, 0xb9, 0x7b, 0xda, 0xb1, 0xad,

0xc7, 0xeb, 0xba, 0x68, 0xf6, 0x84, 0xce, 0x56,

0xa5, 0x76, 0xe0, 0xcd, 0x04, 0x9b, 0x44, 0x67,

0xae, 0x52, 0x14, 0x47, 0x41, 0x13, 0xa5, 0xea,

0xd8, 0x4b, 0xed, 0x66, 0x87, 0xb4, 0xa3, 0xe1,

0x69, 0x3e, 0xb8, 0x96, 0x6a, 0x5f, 0x91, 0xea,

0xd2, 0x13, 0xca, 0x31, 0x2e, 0xe6, 0xa8, 0x28,

0xf8, 0x52, 0x84, 0x54, 0x15, 0xff, 0x5d, 0xc1,

0xd4, 0x0a, 0x8c, 0x0f, 0x71, 0x3b, 0xe5, 0xba,

0xaa, 0x26, 0xb9, 0x30, 0x8c, 0x3d, 0x97, 0x37,

0x1f, 0x04, 0x75, 0x95, 0x90, 0xa5, 0x9e, 0x1f,

0xcb, 0xd0, 0x99, 0x35, 0xdd, 0x27, 0xaf, 0x1c,

0xbf, 0x09, 0x02, 0x8b, 0xf5, 0xbf, 0x57, 0xc0,

0x29, 0xff, 0x54, 0xef, 0xdc, 0xe6, 0x03, 0x11,

0x66, 0x41, 0xf8, 0x38, 0xe1, 0x2f, 0x7d, 0x9c,

0xc2, 0xb8, 0x65, 0xc6, 0x31, 0xe1, 0xf2, 0x99,

0xec, 0x4e, 0x1d, 0xf5, 0xa3, 0x80, 0xbc, 0xd3,

0x10, 0x1e, 0x7d, 0xb9, 0x4e, 0x70, 0x0d, 0x3e,

0xf8, 0x78, 0xcd, 0x78, 0x3b, 0xde, 0x1d, 0x3a,

0xba, 0x3d, 0xc6, 0x9b, 0xca, 0xf2, 0x24, 0x1e,

0xec, 0xf5, 0xba, 0x36, 0xf7, 0x72, 0x1d, 0x84,

0xf0, 0x14, 0x57, 0x20, 0x55, 0xfc, 0xf6, 0xeb,

0x9a, 0x9d, 0x53, 0x5c, 0x67, 0x0d, 0xb0, 0x00,

0x34, 0x2d, 0xa8, 0x2e, 0x2f, 0xbc, 0x0b, 0x47,

0xf7, 0x02, 0xf8, 0xa8, 0xa3, 0xd4, 0x9c, 0xab,

0xc3, 0xac, 0x11, 0x9e, 0x2a, 0x4b, 0xb7, 0x96,

0x4a, 0xfd, 0x3f, 0x27, 0x3b, 0xcc, 0xba, 0xf5,

0xf2, 0xb5, 0xff, 0xf9, 0x3a, 0xcf, 0x16, 0x74,

0xa8, 0x55, 0x60, 0xe6, 0xd4, 0x5a, 0x8e, 0xb7,

0x47, 0xcd, 0x00, 0x78, 0xf0, 0x45, 0xb3, 0xaa,

0x7f, 0x27, 0x6d, 0xc6, 0xa7, 0xca, 0xce, 0x15,

0x98, 0x64, 0x01, 0x9d, 0x59, 0x28, 0xae, 0x17,

0xe9, 0x7b, 0x65, 0x3f, 0x6e, 0x48, 0x2b, 0x36,

0xeb, 0x56, 0x40, 0xe6, 0x93, 0xb7, 0xad, 0x3e,

0x45, 0xad, 0x3d, 0x78, 0x10, 0xee, 0x93, 0xb1,

0x04, 0xa9, 0xc6, 0x7d, 0xec, 0x88, 0xa4, 0x54,

0x43, 0x0e, 0x55, 0x77, 0x35, 0x81, 0x69, 0x5e,

0xb7, 0x60, 0x7a, 0x56, 0x04, 0x30, 0x8b, 0x00,

0xf7, 0x6c, 0x86, 0x79, 0x8b, 0x42, 0x29, 0xda,

0x1f, 0x39, 0x68, 0x84, 0x7c, 0xf0, 0xa5, 0x72,

0xcd, 0x72, 0xaa, 0xe7, 0xa9, 0xac, 0x59, 0x7a,

0x9b, 0x37, 0x7b, 0x46, 0x80, 0x29, 0xb2, 0x96,

0x21, 0x32, 0xcc, 0x9a, 0xbf, 0xfa, 0xa6, 0x0f,

0x23, 0xdf, 0xcb, 0x1e, 0x6e, 0xa8, 0xbb, 0x18,

0x21, 0x25, 0x4b, 0xda, 0x10, 0x38, 0xf9, 0x5e,

0x7f, 0x90, 0x75, 0x10, 0xb4, 0xa7, 0x7f, 0xcc,

0x59, 0xbc, 0x2b, 0x63, 0x04, 0x21, 0xdb, 0x90,

0x8e, 0x8d, 0xc5, 0xcc, 0xe6, 0xdc, 0xfd, 0xfc,

0x1e, 0xc8, 0xec, 0x9f, 0x3f, 0x44, 0xa4, 0x6c,

0x9c, 0x20, 0xda, 0xff, 0x34, 0xe8, 0xa9, 0xba,

0x0d, 0x46, 0x70, 0xa8, 0x11, 0xc4, 0xb6, 0xa2,

0x07, 0x15, 0xc6, 0x75, 0x23, 0x28, 0xd1, 0xdb,

0x5c, 0xc6, 0x01, 0x87, 0x10, 0xb8, 0x43, 0xb3,

0x1c, 0x4c, 0xdf, 0x1e, 0x56, 0x0b, 0x15, 0x2d,

0x28, 0xbd, 0x2e, 0x73, 0xba, 0xae, 0x29, 0x25,

0x0d, 0x14, 0x7e, 0x91, 0x7e, 0xba, 0x56, 0xe5,

0xbf, 0xa1, 0x2b, 0x22, 0x5a, 0x1e, 0x49, 0xb0,

0xcd, 0xd2, 0x62, 0xbe, 0x19, 0x2d, 0xd1, 0x76,

0x28, 0xf0, 0x16, 0xb0, 0x11, 0x34, 0xc0, 0x15,

0xb7, 0xfc, 0xed, 0x14, 0x78, 0xd0, 0x61, 0xa5,

0x0c, 0x78, 0xb9, 0x72, 0x5e, 0x36, 0xa5, 0xbd,

0xa1, 0x85, 0x01, 0x71, 0x44, 0x7d, 0xff, 0x3f,

0x4c, 0x45, 0x53, 0x57, 0x9a, 0xa6, 0xe5, 0xe8,

0x89, 0xa8, 0x77, 0xdd, 0xee, 0x75, 0x13, 0x92,

0xa4, 0x88, 0x8a, 0x06, 0x4d, 0xb5, 0x13, 0xf8,

0xee, 0x88, 0xbb, 0x54, 0xdd, 0xc0, 0x55, 0x8e,

0x51, 0xc5, 0xfe, 0xa0, 0x0c, 0x96, 0x8f, 0x79,

0x84, 0x52, 0x40, 0x23, 0x06, 0x03, 0x36, 0x70,

0x13, 0xbf, 0xcd, 0xb0, 0x9e, 0x57, 0xb9, 0x5b,

0x69, 0x8f, 0x90, 0x38, 0xab, 0xf9, 0xa1, 0x5e,

0xcf, 0x00, 0xb9, 0x1b, 0x47, 0xf9, 0x92, 0xdb,

0xae, 0x02, 0x26, 0x3e, 0x1f, 0x18, 0xe6, 0xe9,

0xac, 0xc0, 0x4d, 0x2a, 0x7d, 0xa2, 0x98, 0x39,

0x0e, 0xf9, 0xaa, 0x4d, 0xdf, 0x3f, 0xae, 0x09,

0xdb, 0x66, 0x5a, 0xd2, 0xfd, 0x9e, 0x3c, 0xaf,

0x0f, 0x9f, 0xe0, 0xc2, 0xf7, 0xb7, 0x30, 0x80,

0x95, 0x0f, 0x99, 0x33, 0xdf, 0x8f, 0xa3, 0x90,

0xf6, 0xa2, 0x4c, 0x7d, 0xb5, 0x19, 0xb4, 0x9b,

0x3e, 0xbe, 0x20, 0x55, 0x07, 0xd6, 0x27, 0x47,

0xd5, 0xf2, 0x77, 0xad, 0xf5, 0x3a, 0x56, 0x00,

0x9a, 0xf9, 0xa4, 0xd2, 0xc4, 0xbb, 0xc0, 0xc4,

0x01, 0x65, 0x7d, 0x36, 0xab, 0xf1, 0x60, 0x48,

0x21, 0xa9, 0xe4, 0xdf, 0x1d, 0x81, 0x42, 0x04,

0x1f, 0xf2, 0x31, 0xf2, 0xcb, 0x5b, 0xf4, 0x5a,

0x75, 0xb3, 0x6e, 0x66, 0xc5, 0xaf, 0xfd, 0x58,

0xa0, 0xd3, 0xec, 0xb3, 0xb0, 0xbf, 0xbe, 0x1f,

0xb6, 0xfc, 0x5a, 0xfd, 0x96, 0x1f, 0xa4, 0x2a,

0x02, 0x2c, 0xde, 0x1d, 0x18, 0xd6, 0x3b, 0x4d,

0x30, 0x31, 0x41, 0x7e, 0x9b, 0xbd, 0xd2, 0xb7,

0x70, 0x64, 0x4b, 0xd4, 0x4e, 0x05, 0xb7, 0x39,

0xd6, 0xf3, 0xf1, 0xfa, 0xbd, 0xc4, 0xff, 0x67,

0x68, 0x34, 0x95, 0x0d, 0xf9, 0x9c, 0x78, 0x0b,

0xe0, 0x5e, 0x97, 0x70, 0x23, 0x0e, 0x46, 0xb7,

0x83, 0x09, 0xf8, 0xb7, 0x6a, 0x53, 0x35, 0x18,

0x60, 0x73, 0x5f, 0x44, 0x02, 0x6c, 0xdb, 0x41,

0x83, 0x82, 0x2c, 0x99, 0x2d, 0xce, 0xd4, 0xb3,

0xd2, 0x3e, 0x26, 0xd7, 0x6d, 0xbe, 0xba, 0x21,

0x9d, 0x34, 0xc0, 0x2c, 0x66, 0x52, 0x42, 0x5e,

0x05, 0x8e, 0xe3, 0x22, 0xd2, 0xe2, 0xf4, 0x3e,

0x62, 0x76, 0x66, 0xfd, 0x9f, 0xb3, 0xd7, 0x0f,

0x40, 0xe2, 0x1b, 0xeb, 0x0c, 0x6f, 0x3c, 0x27,

0xaa, 0xc5, 0xa0, 0x5d, 0xe6, 0x2a, 0xf0, 0x54,

0xb9, 0x82, 0x2a, 0xe9, 0xc9, 0x17, 0xea, 0xb6,

0x6a, 0x95, 0x21, 0x45, 0x9a, 0x91, 0x94, 0xd1,

0x74, 0x4c, 0x8b, 0xc1, 0xf2, 0xa2, 0x6c, 0x42,

0x37, 0xa2, 0x85, 0x8e, 0x6a, 0xa9, 0xe0, 0x67,

0x80, 0x76, 0x0c, 0x16, 0x7d, 0x35, 0x55, 0x2b,

0x98, 0xdf, 0xe3, 0x4a, 0xef, 0x00, 0x5d, 0x54,

0x25, 0x6e, 0x8d, 0xa6, 0x73, 0xee, 0x21, 0x43,

0xd7, 0x58, 0x48, 0x06, 0xee, 0x52, 0x9d, 0x5b,

0x35, 0x10, 0x78, 0x0e, 0x20, 0xef, 0xb9, 0xc2,

0x83, 0x5e, 0xd8, 0xcd, 0x65, 0xd6, 0x22, 0xc4,

0x61, 0xf8, 0x90, 0xd1, 0x28, 0xb6, 0xea, 0x46,

0x5a, 0xa3, 0x20, 0x42, 0x73, 0x82, 0x71, 0xef,

0xc1, 0xc2, 0x44, 0x90, 0x3b, 0xa5, 0x01, 0x27,

0x02, 0x6d, 0xa1, 0x8c, 0x72, 0xba, 0xe1, 0xdf,

0x01, 0x01, 0xd7, 0xc6, 0x1e, 0xe6, 0xc1, 0xe7,

0x69, 0x80, 0x96, 0xf5, 0xbe, 0x55, 0x5e, 0x10,

0x3e, 0x20, 0x2b, 0x32, 0xe4, 0x04, 0x93, 0x86,

0xaf, 0xa3, 0x50, 0xf8, 0x0b, 0xec, 0x48, 0x4c,

0xbf, 0x94, 0x4a, 0x4c, 0x7e, 0xb9, 0xc5, 0x21,

0x2a, 0x28, 0xfe, 0x95, 0x01, 0x9a, 0x51, 0x11,

0xce, 0x7a, 0x48, 0x5a, 0x05, 0x6c, 0x68, 0xbb,

0x07, 0x64, 0x8b, 0x95, 0xc7, 0x70, 0x51, 0xa1,

0x66, 0x29, 0xc7, 0x3d, 0xf7, 0xf5, 0xb7, 0x69,

0x15, 0xb1, 0xf9, 0x28, 0x18, 0xd7, 0x42, 0xa1,

0x64, 0xe1, 0x58, 0x18, 0x3d, 0x21, 0x3c, 0xb3,

0x8b, 0x3c, 0x7e, 0xa4, 0x1f, 0xa9, 0x5b, 0x56,

0xa7, 0xd8, 0x3d, 0x3e, 0x15, 0xde, 0x5e, 0xe8,

0x59, 0x22, 0x21, 0xc7, 0x88, 0x13, 0x06, 0xbe,

0xaf, 0x37, 0x0c, 0x3b, 0x58, 0xd5, 0x76, 0x1e,

0xc8, 0x94, 0xb0, 0x8e, 0x08, 0xea, 0x4d, 0x57,

0x53, 0x58, 0x1c, 0xd8, 0xc6, 0x33, 0xff, 0xe0,

0x40, 0x21, 0xb4, 0xe9, 0x40, 0xd6, 0x8f, 0x98,

0xd7, 0x9e, 0xc1, 0x06, 0x16, 0xfa, 0x52, 0x49,

0xdc, 0x97, 0x57, 0x5b, 0x16, 0x9a, 0x2f, 0xd1,

0xc2, 0x1f, 0xc3, 0x96, 0x20, 0x25, 0x7c, 0xee,

0x27, 0xf3, 0xe1, 0x87, 0x59, 0x5d, 0x0d, 0xa2,

0x3a, 0x16, 0xe9, 0x4f, 0x39, 0xc4, 0x68, 0x09,

0xe3, 0x7d, 0x0f, 0xb2, 0x15, 0x90, 0xc5, 0x9f,

0xae, 0x29, 0xbb, 0x36, 0x14, 0x91, 0x79, 0x03,

0x00, 0xf3, 0x2f, 0x66, 0xb4, 0x07, 0x01, 0x26,

0xde, 0x85, 0xfe, 0x7d, 0xbf, 0x42, 0x34, 0xde,

0x6f, 0xc7, 0x2e, 0xf6, 0x34, 0x83, 0xa7, 0x40,

0x5a, 0xa4, 0x35, 0x60, 0x21, 0x17, 0x9b, 0xf7,

0xcc, 0x4f, 0x6a, 0x9c, 0xf9, 0x98, 0xbe, 0xde,

0x92, 0xf9, 0x40, 0xc9, 0x32, 0x6c, 0xa9, 0xc5,

0xfe, 0x79, 0x49, 0x4e, 0x12, 0x48, 0xdc, 0x6a,

0xa3, 0xa7, 0x11, 0x4a, 0xe4, 0x61, 0x1e, 0x5a,

0x71, 0x70, 0x3e, 0x2a, 0x1a, 0x80, 0x1f, 0xfb,

0xdc, 0xa0, 0x54, 0xda, 0xf8, 0xc5, 0xbc, 0xa2,

0x21, 0x06, 0x19, 0xfe, 0xa4, 0x32, 0x54, 0xc6,

0x70, 0x39, 0x2b, 0x83, 0x7f, 0x0b, 0x23, 0xbc,

0x76, 0x1b, 0x02, 0x1f, 0x1c, 0xf3, 0xee, 0x79,

0x17, 0x55, 0xb9, 0xc0, 0x14, 0x84, 0x5c, 0x4f,

0x40, 0xea, 0x1f, 0xc2, 0x74, 0xf0, 0xbc, 0xa9,

0xc5, 0x5b, 0xdb, 0x6c, 0x2b, 0xfa, 0xb8, 0xe9,

0xf3, 0x9e, 0x67, 0x18, 0x2f, 0xf7, 0x44, 0x41,

0x06, 0xfb, 0xb9, 0x91, 0x4b, 0x74, 0xd7, 0x17,

0x81, 0xdf, 0x0c, 0x0f, 0x1c, 0x04, 0xc1, 0x45,

0x1d, 0xa4, 0xa1, 0x3e, 0x18, 0xf9, 0xc7, 0x91,

0xfc, 0x3f, 0x29, 0x0a, 0xcf, 0x44, 0x11, 0xde,

0xa5, 0x31, 0x7b, 0xea, 0x72, 0x1e, 0x69, 0xb9,

0x2b, 0xdd, 0xc0, 0x3c, 0x94, 0xb8, 0x93, 0x5c,

0x9e, 0xa0, 0xd7, 0xa5, 0x1c, 0x5b, 0x71, 0xa7,

0x3c, 0xbc, 0x33, 0x6d, 0x6e, 0x7d, 0xb7, 0x32,

0x54, 0x17, 0x1c, 0xd2, 0x6b, 0x1a, 0x03, 0x3b,

0xfa, 0xf3, 0x43, 0x9e, 0x75, 0x50, 0xba, 0x77,

0xc1, 0x63, 0x8d, 0x84, 0x33, 0xea, 0xd2, 0xcd,

0xe7, 0xa2, 0xf4, 0xe7, 0xc1, 0x1c, 0xcc, 0xb7,

0xea, 0x38, 0x64, 0xf9, 0x0d, 0x33, 0xa0, 0x73,

0x35, 0x78, 0x2e, 0xef, 0x42, 0xdd, 0x13, 0x8c,

0x4d, 0x98, 0x95, 0x3d, 0xb6, 0x0d, 0xdd, 0x26,

0x95, 0x33, 0xcc, 0xc7, 0x65, 0x08, 0xfd, 0x53,

0x8c, 0xa5, 0xe5, 0x66, 0xb6, 0x2c, 0x86, 0xd6,

0x07, 0xf5, 0xee, 0x14, 0xd9, 0x02, 0x86, 0xeb,

0x92, 0xf2, 0x1e, 0xec, 0x90, 0xf3, 0x23, 0xd1,

0x9d, 0x13, 0x45, 0xd2, 0x4b, 0x91, 0x2a, 0x8e,

0x39, 0x9f, 0x96, 0xf4, 0x20, 0xb6, 0x81, 0x38,

0x79, 0x35, 0x98, 0x4a, 0x64, 0x85, 0xaf, 0xff,

0x04, 0x4e, 0x28, 0x10, 0x46, 0x80, 0x76, 0x22,

0x66, 0x26, 0x02, 0x46, 0x45, 0x15, 0xf8, 0x92,

0x23, 0xdc, 0x06, 0x41, 0x0a, 0x85, 0xed, 0x1f,

0xd3, 0x51, 0x5c, 0xa4, 0xad, 0xa6, 0x21, 0xa9,

0x56, 0x0c, 0x4b, 0xbe, 0xc8, 0xe1, 0xc1, 0xcc,

0xd6, 0x72, 0x6f, 0xc7, 0x97, 0x50, 0x87, 0x9d,

0x67, 0x24, 0x75, 0x00, 0x9c, 0x62, 0x2c, 0xad,

0x7d, 0x2d, 0x12, 0x47, 0x71, 0x62, 0xc2, 0xb0,

0x63, 0xdc, 0x9a, 0x6b, 0xea, 0x80, 0xc6, 0x9a,

0x47, 0x6b, 0xa4, 0x45, 0x1c, 0xb4, 0xbf, 0x82,

0xd9, 0x26, 0x08, 0x03, 0x46, 0x25, 0x65, 0xd2,

0x70, 0xd6, 0x07, 0xd0, 0x3e, 0x77, 0xc0, 0x0c,

0x4a, 0x9f, 0x34, 0xfd, 0xcc, 0x07, 0x7b, 0xec,

0xcf, 0x01, 0xa8, 0xc4, 0x2e, 0x79, 0x43, 0x76,

0xaa, 0x0e, 0xc2, 0xe4, 0xa3, 0x2d, 0xb3, 0x7e,

0x29, 0x5d, 0xf9, 0x5e, 0x10, 0xb1, 0xce, 0xbd,

0x21, 0x1a, 0x0d, 0x15, 0x80, 0x74, 0xb2, 0x5e,

0x0a, 0x15, 0x49, 0x9b, 0x51, 0xbc, 0xc5, 0x75,

0x84, 0x80, 0xbf, 0xdb, 0x0a, 0x45, 0xea, 0xda,

0x86, 0x27, 0x93, 0x90, 0x2b, 0x3f, 0xba, 0xa1,

0xfb, 0xe1, 0x16, 0xf8, 0x9e, 0x5b, 0xf4, 0x8b,

0x8a, 0x8a, 0xdf, 0x3f, 0xda, 0xe3, 0x0e, 0xc4,

0x8c, 0x49, 0x4b, 0x53, 0xc8, 0x7c, 0x49, 0xa0,

0xa0, 0xa3, 0x2b, 0x06, 0x03, 0xed, 0x20, 0x1b,

0xda, 0x4c, 0xf7, 0x61, 0xc9, 0x98, 0x3c, 0xd8,

0xc7, 0x94, 0x6d, 0xf2, 0x98, 0xf8, 0x0f, 0xdc,

0x26, 0x60, 0x0e, 0x48, 0xea, 0x73, 0x82, 0xe4,

0xd3, 0x07, 0x21, 0x02, 0x42, 0x9e, 0x98, 0x0b,

0xa9, 0xa3, 0x05, 0x19, 0x28, 0x7e, 0x7c, 0x7d,

0x47,

},

&case10

};

C.3 XCB-AES测试向量

XCB安全分析在指定地区的2007密码学上发布，其中涉及到内在变量F和C（在3.1中定义，定理3,参见B3）。这种关系是用于实现上的一致性检查，因为此关系适用于每个调用的XCB算法。因为安全性证明利用的事实关系成立，这样的检查使得安全性分析与有效性实现相连，从而对正确性提供了额外的保证，在此文中的档测试用例已被证实与检查相一致。

表C.3显示11个测试向量，参考“案例10”到“案例0”。案例1测试XCB-AES-256，而其他案例使用不同明文的组合与关联数长度测试了XCB-AES-128。

表C.3

表C.3—XCB-AES测试案例

test\_case\_t case10 = {

/\* key \*/

{

0xa9, 0x55, 0xec, 0x89, 0xee, 0x6e, 0x0f, 0xf5,

0xe5, 0x30, 0x34, 0xc5, 0x89, 0x1c, 0x4e, 0x97,

0x68, 0x30, 0x31, 0x2a, 0x3a, 0x94, 0xb1, 0xe8,

0x5e, 0x30, 0xeb, 0xc6, 0x34, 0x95, 0x97, 0xea,

},

/\* bytes in key \*/

32,

/\* plaintext \*/

{

0x6e, 0xc7, 0xe1, 0x66, 0x5f, 0x80, 0x6d, 0xf4,

0xbc, 0xbd, 0x4a, 0x4c, 0x10, 0xa0, 0x6b, 0xd8,

0x7b, 0xfb, 0x06, 0xf4, 0x17, 0x8a, 0xe5, 0x18,

0x70, 0x6a, 0x1d, 0x71, 0x5f, 0x44, 0x8b

},

/\* bytes in plaintext \*/

31,

/\* associated data \*/

{ },

/\* bytes in associated data \*/

0,

/\* ciphertext \*/

{

0xfb, 0x9c, 0x5b, 0xfb, 0x11, 0xc5, 0x75, 0x28,

0x47, 0x64, 0xaa, 0x81, 0xba, 0x18, 0x90, 0x6f,

0x2d, 0x66, 0xf5, 0x3a, 0x52, 0x3a, 0xd4, 0xfc,

0x2f, 0x23, 0x53, 0xa4, 0x8f, 0x0b, 0x6f

},

NULL

};

test\_case\_t case9 = {

/\* key \*/

{

0xc9, 0x9a, 0xb8, 0x97, 0xad, 0xdd, 0xcc, 0xca,

0xb8, 0x4e, 0x0d, 0xf4, 0xea, 0xfc, 0x93, 0xa4,

0xf7, 0x60, 0xf3, 0x92, 0x69, 0x64, 0x1c, 0x19,

0xe5, 0x92, 0x9b, 0x71, 0x2d, 0xd3, 0xd0, 0x79,

},

/\* bytes in key \*/

32,

/\* plaintext \*/

{

0xb1, 0x13, 0x50, 0x83, 0x81, 0x22, 0x96, 0x8d,

0xbb, 0xf2, 0xaa, 0xe6, 0x9b, 0xfd, 0xf5, 0xdb,

0x5b, 0xff, 0x16, 0x6f, 0xe7, 0x14, 0x03, 0x9b,

0xd3

},

/\* bytes in plaintext \*/

25,

/\* associated data \*/

{

0xb7, 0xd6, 0xbb, 0x6d, 0x90, 0x35, 0x22, 0x08,

0x02, 0x69, 0xb3, 0xa5, 0x75, 0x61, 0x5a, 0xf8,

0xc7, 0x5a, 0x52, 0xa4, 0x82, 0x86, 0xe3, 0x46,

0x15, 0xfc, 0x6c, 0x28, 0x9b, 0x09, 0x57,

},

/\* bytes in associated data \*/

31,

/\* ciphertext \*/

{

0x02, 0x15, 0x47, 0x5a, 0xec, 0xfc, 0xe0, 0x55,

0x00, 0xc4, 0xcd, 0xc9, 0x06, 0x8c, 0xbb, 0x65,

0xb6, 0x6b, 0x27, 0x0e, 0xff, 0xa2, 0xe3, 0x08,

0x9d

},

&case10

};

test\_case\_t case8 = {

/\* key \*/

{

0x3b, 0xb9, 0x6b, 0xd5, 0x0b, 0x91, 0xa7, 0xd8,

0x37, 0x84, 0x45, 0x24, 0x26, 0x2f, 0xef, 0x97,

0xe0, 0x41, 0x2c, 0xbd, 0x64, 0xa3, 0x91, 0xc1,

0xd3, 0x93, 0xc1, 0x33, 0x11, 0xf1, 0x9f, 0x86,

},

/\* bytes in key \*/

32,

/\* plaintext \*/

{

0xf0, 0xae, 0x13, 0x92, 0x99, 0xc1, 0xaf, 0x3d,

0xd0, 0xe5, 0xa0, 0x4b, 0xe3, 0x2c, 0xd3, 0xe3,

0x93

},

/\* bytes in plaintext \*/

17,

/\* associated data \*/

{

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

},

/\* bytes in associated data \*/

16,

/\* ciphertext \*/

{

0x58, 0xe3, 0x6c, 0xeb, 0xc7, 0x41, 0x17, 0x28,

0xc1, 0x5b, 0xe4, 0xaf, 0xad, 0x3d, 0xfd, 0x0f,

0x18

},

&case9

};

test\_case\_t case7 = {

/\* key \*/

{

0x00, 0x01, 0x02, 0x03, 0x04, 0x05, 0x06, 0x07,

0x08, 0x09, 0x0a, 0x0b, 0x0c, 0x0d, 0x0e, 0x0f,

},

/\* bytes in key \*/

16,

/\* plaintext \*/

{

0x08, 0x47, 0x1e, 0x46, 0x29, 0x45, 0xa7, 0x41,

0x54, 0x0f, 0xaa, 0x16, 0xf0, 0x1e, 0x42, 0x1b,

0x7f, 0xa4, 0x3e, 0x0d, 0x1f, 0x99, 0xf6, 0xa0,

0x1f, 0x71, 0x26, 0xf9, 0x8a, 0x3f, 0xc9, 0x6a,

0xd6, 0x8b, 0xf8, 0x6e, 0xa8, 0xd7, 0x2a, 0xab,

0x5d, 0x98, 0x7d, 0x08, 0x54, 0xea, 0x72, 0xfe,

0xa7, 0x64, 0x3c, 0x65, 0x84, 0x33, 0xdd, 0x5e,

0x31, 0xb4, 0x06, 0x70, 0xc6, 0xd6, 0x9d, 0x1b,

0x4c, 0xe3, 0xac, 0x9d, 0x9f, 0x5f, 0x73, 0xc6,

0x91, 0x8a, 0xeb, 0x8d, 0x4c, 0x2d, 0xad, 0xbe,

0x12, 0xe6, 0xd0, 0xc7, 0x2f, 0x4c, 0xa9, 0x1e,

0x66, 0xc6, 0xbe, 0xbd, 0x32, 0xf0, 0x09, 0x48,

0x65, 0x81, 0xda, 0x90, 0x18, 0xa7, 0x4b, 0x9c,

0x7e, 0x28, 0x8f, 0xb1, 0x8f, 0xd6, 0x09, 0x00,

0xa4, 0x44, 0x8f, 0xab, 0xea, 0xd7, 0x3d, 0x13,

0xcb, 0x24, 0x83, 0xfb, 0xc8, 0xfb, 0xdf, 0xe9,

0x30, 0xa1, 0x38, 0x90, 0x55, 0x5c, 0xaa, 0x88,

0xf4, 0xac, 0xdd, 0x5a, 0x3e, 0x51, 0x59, 0xe5,

0xa6, 0x46, 0x7e, 0xc7, 0xef, 0x05, 0x23, 0x95,

0x30, 0x14, 0xe6, 0xde, 0x79, 0x6c, 0xce, 0x7d,

0x4f, 0xcd, 0x14, 0xb0, 0x67, 0x7a, 0x2d, 0x8e,

0x50, 0x9f, 0x55, 0xc8, 0x14, 0xed, 0x12, 0xcd,

0x75, 0x5c, 0xd8, 0xac, 0xb7, 0xbb, 0x12, 0x66,

0xb4, 0xd7, 0x25, 0xe2, 0x50, 0x55, 0xe4, 0xd3,

0x60, 0xb7, 0xcd, 0x31, 0xab, 0xdd, 0x5f, 0x42,

0x92, 0x7a, 0x4c, 0x11, 0x16, 0x30, 0x5f, 0xea,

0x7e, 0xcb, 0xac, 0x5d, 0xc4, 0x7f, 0xf2, 0xf3,

0x30, 0xef, 0x10, 0x8d, 0xc8, 0x93, 0xf7, 0xbe,

0xcd, 0x6e, 0xea, 0xa3, 0x95, 0x74, 0xdb, 0x1e,

0xe8, 0x42, 0xea, 0xab, 0x10, 0xf1, 0x7c, 0x29,

0x93, 0x1f, 0x92, 0x52, 0xc1, 0x0c, 0x40, 0x2c,

0xaa, 0x00, 0xe8, 0x77, 0x2d, 0x54, 0x11, 0x1a,

0xba, 0x50, 0x6e, 0x4f, 0xef, 0x24, 0x7b, 0x58,

0xcb, 0x6a, 0xa2, 0xfc, 0xbb, 0xc4, 0xef, 0x91,

0xc4, 0x04, 0x5d, 0xde, 0x51, 0x32, 0xda, 0x81,

0x12, 0x12, 0x7c, 0xa4, 0xb0, 0x0b, 0x9c, 0xa9,

0xa4, 0x28, 0x29, 0xa4, 0xd3, 0x9a, 0xaf, 0x2b,

0xc1, 0x27, 0xd9, 0xe6, 0x9e, 0x92, 0x4f, 0x01,

0x69, 0x29, 0xf9, 0x5f, 0x54, 0x68, 0xbe, 0x6f,

0xc7, 0x41, 0x58, 0xe7, 0x0d, 0xa7, 0x9c, 0x74,

0x83, 0x54, 0xab, 0x11, 0x81, 0xee, 0xbd, 0x77,

0x47, 0xf8, 0xfb, 0x44, 0x08, 0x72, 0xd4, 0xb4,

0xfb, 0xa2, 0x11, 0xfb, 0x4c, 0x00, 0x9a, 0xf0,

0xd4, 0x1a, 0xc8, 0x13, 0x44, 0x11, 0x20, 0xb9,

0x62, 0xde, 0x53, 0x01, 0xdd, 0x54, 0x4e, 0x0c,

0x0b, 0x1a, 0xd4, 0x3f, 0x82, 0x9f, 0x76, 0xa5,

0x1b, 0x33, 0x1c, 0xd4, 0x26, 0x51, 0xb6, 0xa2,

0x26, 0x28, 0x42, 0xb9, 0x0c, 0xd2, 0x93, 0x24,

0x18, 0xd8, 0xb6, 0x70, 0x75, 0x2a, 0x99, 0x25,

0xd2, 0xfb, 0x80, 0xfa, 0x25, 0x23, 0xb4, 0x22,

0x21, 0x21, 0xd0, 0x09, 0x99, 0x7e, 0xf2, 0x22,

0x3a, 0xca, 0x4b, 0x12, 0xe6, 0x28, 0x05, 0x0d,

0xce, 0x8d, 0x0a, 0x6b, 0xdc, 0xd5, 0x47, 0x49,

0xe0, 0xda, 0x58, 0xf3, 0xfc, 0xa5, 0x63, 0x91,

0xb5, 0x60, 0x2b, 0x5b, 0xbb, 0x13, 0xd0, 0xf1,

0x2b, 0x1c, 0xd3, 0x0b, 0x45, 0xb6, 0xa7, 0x62,

0x32, 0xdc, 0x27, 0xab, 0x81, 0x97, 0x1f, 0xab,

0xdc, 0xc7, 0x5a, 0xee, 0x7b, 0xb6, 0x8b, 0xf9,

0x35, 0x95, 0x55, 0xe2, 0x04, 0x8c, 0xd4, 0x4b,

0x8e, 0x7a, 0xdb, 0x89, 0x52, 0xe2, 0xf0, 0xfa,

0x3b, 0xda, 0x38, 0xbc, 0xa6, 0x49, 0x72, 0x4a,

0x5f, 0x1d, 0x0a, 0xac, 0x41, 0x31, 0x0d, 0x75,

0x78, 0xa6, 0x17, 0x48, 0x88, 0x82, 0xab, 0x66,

0x3f, 0x46, 0x26, 0x19, 0x11, 0xe4, 0xb8, 0x41,

0x27, 0xf3, 0x70, 0x62, 0x3b, 0x9f, 0xf6, 0x2e,

},

/\* bytes in plaintext \*/

520,

/\* associated data \*/

{

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

},

/\* bytes in associated data \*/

16,

/\* ciphertext \*/

{

0x28, 0xb0, 0xec, 0x43, 0x2f, 0x39, 0x7f, 0x1b,

0x1a, 0xe9, 0x8e, 0x45, 0x86, 0xd2, 0x92, 0x66,

0xae, 0x7e, 0x59, 0x78, 0x7c, 0x2d, 0x8e, 0x8b,

0x3f, 0x3f, 0x1c, 0x10, 0xda, 0xfc, 0x7e, 0x63,

0x13, 0x21, 0xec, 0x09, 0xe7, 0xa4, 0x7a, 0x04,

0x92, 0xf1, 0xfb, 0x52, 0xff, 0x11, 0x23, 0xd4,

0x96, 0xaf, 0xf0, 0xad, 0xbc, 0xb9, 0x32, 0x1c,

0x9b, 0xd2, 0x91, 0x74, 0xc4, 0x78, 0x2b, 0x28,

0xb1, 0x18, 0x92, 0x77, 0x72, 0x96, 0xd3, 0x0c,

0xbc, 0xf0, 0x4f, 0x6e, 0x4f, 0x7a, 0xe6, 0x1a,

0xc0, 0xa8, 0x6a, 0x06, 0x4c, 0xe9, 0xec, 0xe8,

0x8b, 0x3a, 0x6d, 0x32, 0xd1, 0x79, 0xba, 0xca,

0x91, 0x66, 0xcd, 0x15, 0xc5, 0xf1, 0x68, 0x7e,

0x88, 0x9a, 0x1e, 0xe4, 0x0b, 0x32, 0x78, 0x3b,

0x02, 0xdd, 0xfd, 0x50, 0x0b, 0x6c, 0xd4, 0x96,

0xba, 0x1f, 0x5d, 0x7b, 0x6e, 0xd6, 0xfd, 0xee,

0xfd, 0xc8, 0xc3, 0x6c, 0xa3, 0x81, 0x8b, 0x51,

0x60, 0xb5, 0x58, 0x82, 0xc6, 0x16, 0x58, 0x03,

0xdb, 0xbe, 0xe9, 0x5e, 0x12, 0xb5, 0xe2, 0xfd,

0x4a, 0x0a, 0xfd, 0x5d, 0x84, 0x50, 0xd0, 0x98,

0x3e, 0x30, 0xdb, 0x63, 0x18, 0x1f, 0x9a, 0x2a,

0x3c, 0xc5, 0x16, 0xf2, 0x07, 0x59, 0x6e, 0xf5,

0xee, 0x92, 0x7a, 0xfb, 0xf1, 0x41, 0xf0, 0xc5,

0x5b, 0x0b, 0x08, 0x13, 0xe2, 0x99, 0x5b, 0x7c,

0x4c, 0x13, 0xc0, 0x22, 0xe0, 0xba, 0x00, 0x42,

0x27, 0x8b, 0x13, 0x32, 0x39, 0x1d, 0xb8, 0x9c,

0x5d, 0xec, 0x68, 0x2f, 0xcd, 0xba, 0xdf, 0xba,

0x6c, 0x01, 0x83, 0x25, 0x48, 0x47, 0x8f, 0x60,

0x06, 0x21, 0x98, 0xa9, 0x5c, 0x85, 0xa3, 0xc8,

0xf6, 0x33, 0x75, 0x3d, 0xc1, 0xe2, 0x9a, 0xc5,

0x60, 0xf5, 0xf5, 0xf8, 0x1d, 0x9e, 0xaa, 0x24,

0x00, 0x76, 0x65, 0x6b, 0x84, 0xe1, 0xd9, 0x20,

0xb9, 0xd9, 0x68, 0xee, 0xb8, 0x4c, 0x74, 0x1a,

0x22, 0x54, 0xe5, 0x11, 0x2c, 0x33, 0x92, 0xfb,

0xd4, 0xf9, 0xb2, 0xdd, 0x30, 0x75, 0x2b, 0xf2,

0x69, 0xef, 0x30, 0xa3, 0xca, 0x5c, 0x67, 0x35,

0x6e, 0x4e, 0x53, 0xd9, 0xda, 0x6a, 0x1b, 0x99,

0x55, 0x38, 0x1f, 0x85, 0x49, 0x1e, 0x52, 0xaa,

0xdc, 0x38, 0xd8, 0x69, 0x61, 0xec, 0x53, 0x47,

0xa7, 0x24, 0x04, 0xfc, 0x50, 0xd7, 0x33, 0x11,

0xd8, 0x20, 0x00, 0x86, 0x98, 0x3e, 0x50, 0x35,

0xff, 0x02, 0xb1, 0xf8, 0xf1, 0x44, 0xea, 0xef,

0x31, 0x75, 0x12, 0x3a, 0xf4, 0x97, 0x0f, 0xc7,

0x7e, 0x76, 0x91, 0xce, 0xe4, 0x50, 0x1d, 0x94,

0x90, 0x69, 0xd6, 0x11, 0x6b, 0xf1, 0xb3, 0x01,

0x2e, 0xac, 0x51, 0x07, 0x36, 0xc0, 0x9c, 0xfc,

0x63, 0x6d, 0x01, 0x64, 0xf6, 0x9f, 0x52, 0x53,

0xf4, 0xb4, 0x16, 0x2c, 0x5e, 0x55, 0x98, 0xcb,

0x7b, 0x0f, 0x95, 0xff, 0xe4, 0xc0, 0x78, 0x97,

0x1b, 0xe5, 0x49, 0x52, 0x0d, 0xec, 0x65, 0x5d,

0xd6, 0x1d, 0x36, 0xcc, 0xa9, 0xd2, 0x6b, 0xaa,

0x02, 0xb1, 0x8c, 0xed, 0x48, 0xfb, 0xee, 0xb4,

0xb8, 0x42, 0xc0, 0x45, 0xc3, 0xc1, 0x18, 0x81,

0xdc, 0x83, 0x76, 0xc5, 0xda, 0xfc, 0x82, 0xac,

0xc6, 0xda, 0x45, 0x3a, 0xd3, 0xa1, 0x21, 0x39,

0xab, 0x0f, 0x0f, 0x6d, 0xd7, 0xdf, 0x3b, 0x1e,

0xe4, 0xaa, 0x71, 0x42, 0x8a, 0x19, 0xff, 0x97,

0x31, 0x92, 0xeb, 0xd6, 0x0d, 0x6d, 0xe6, 0x98,

0x84, 0xff, 0x99, 0xe9, 0x0d, 0xea, 0x4e, 0x5f,

0xc0, 0xab, 0x0a, 0xa6, 0x0d, 0x96, 0x7d, 0x60,

0x0b, 0xdd, 0x25, 0x9d, 0x5d, 0x63, 0xb3, 0xb9,

0xd4, 0x85, 0x9e, 0xf7, 0x5d, 0x3d, 0xbd, 0xe2,

0xd1, 0x4f, 0x17, 0x66, 0x07, 0xff, 0x3c, 0x1d,

0xe5, 0xf6, 0x28, 0xc2, 0xfc, 0x65, 0x5f, 0x33,

0x32, 0x29, 0xf7, 0x48, 0x12, 0x27, 0x98, 0xe3

},

&case8

};

test\_case\_t case6 = {

/\* key \*/

{

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x16, 0x16, 0xdd, 0xa6

},

/\* bytes in key \*/

16,

/\* plaintext \*/

{

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00

},

/\* bytes in plaintext \*/

24,

/\* associated data \*/

{

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

},

/\* bytes in associated data \*/

16,

/\* ciphertext \*/

{

0x70, 0x13, 0xfd, 0xe3, 0xc3, 0x9f, 0xa1, 0xa4,

0x3f, 0x5a, 0xb4, 0x34, 0x5a, 0xbf, 0xe5, 0xd9,

0xcf, 0x80, 0x85, 0xf8, 0x7e, 0xb3, 0x11, 0x89,

},

&case7

};

test\_case\_t case5 = {

/\* key \*/

{

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x16, 0x16, 0xdd, 0xa6

},

/\* bytes in key \*/

16,

/\* plaintext \*/

{

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00

},

20,

/\* associated data \*/

{ 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

},

/\* bytes in associated data \*/

16,

/\* ciphertext \*/

{

0x70, 0x13, 0xfd, 0xe3, 0xdb, 0x56, 0x19, 0xbf,

0xa4, 0xed, 0x25, 0x6d, 0xb4, 0x44, 0x15, 0x68,

0x7a, 0xa4, 0x50, 0x3f

},

&case6

};

test\_case\_t case4 = {

/\* key \*/

{

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0xf3, 0x24, 0x6b, 0x19,

},

/\* bytes in key \*/

16,

/\* plaintext \*/

{

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

},

/\* bytes in plaintext \*/

16,

/\* associated data \*/

{

0x80, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

},

/\* bytes in associated data \*/

16,

/\* ciphertext \*/

{

0x28, 0x2a, 0x71, 0x43, 0x39, 0xae, 0x66, 0x8c,

0x3c, 0x20, 0x2a, 0xca, 0x9c, 0x71, 0xe0, 0x0b,

},

&case5

};

test\_case\_t case3 = {

/\* key \*/

{

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x16, 0x16, 0xdd, 0xa6,

},

/\* bytes in key \*/

16,

/\* plaintext \*/

{

0x80, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, /\* 32 \*/

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, /\* 64 \*/

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, /\* 96 \*/

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, /\* 128 \*/

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, /\* 160 \*/

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, /\* 192 \*/

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, /\* 224 \*/

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, /\* 256 \*/

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, /\* 288 \*/

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, /\* 320 \*/

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, /\* 352 \*/

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, /\* 384 \*/

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, /\* 416 \*/

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, /\* 448 \*/

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, /\* 480 \*/

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00 /\* 512 \*/

},

/\* bytes in plaintext \*/

512,

/\* associated data \*/

{

0x80, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

},

/\* bytes in associated data \*/

16,

/\* ciphertext \*/

{

0xbf, 0x2c, 0x04, 0x93, 0xbb, 0xb4, 0xbd, 0x55,

0xcc, 0x11, 0xc0, 0x3d, 0xd9, 0x25, 0x1b, 0xe5,

0x83, 0x79, 0x9f, 0x9d, 0xba, 0xcf, 0x23, 0x16,

0x7a, 0x4c, 0x5e, 0xf0, 0x3e, 0x0d, 0xb9, 0x40,

0x4e, 0x4e, 0xee, 0xb3, 0x5d, 0xdf, 0x15, 0x1d,

0x23, 0x9e, 0x8b, 0x78, 0xc2, 0x64, 0x08, 0x24,

0xce, 0x1f, 0x10, 0x6e, 0xab, 0x1c, 0x01, 0x9a,

0xca, 0xd3, 0x98, 0x56, 0x31, 0xc7, 0x0c, 0x36,

0x3f, 0x30, 0x15, 0xf5, 0xec, 0x41, 0xc8, 0x82,

0x5e, 0xc4, 0xf4, 0x7f, 0x9e, 0xa0, 0x4d, 0x7e,

0xdc, 0x17, 0x34, 0x1f, 0x5c, 0x41, 0x98, 0x9c,

0x56, 0x3c, 0x6a, 0xc2, 0xac, 0x4e, 0xd8, 0xac,

0x6b, 0xa4, 0x61, 0xfc, 0xaf, 0xb0, 0xb4, 0x1e,

0x64, 0x4b, 0x00, 0x3c, 0xa3, 0xcf, 0x52, 0x60,

0x73, 0xa1, 0xef, 0x97, 0x21, 0x7d, 0xf0, 0x3e,

0x26, 0xbb, 0xd0, 0x22, 0xee, 0x27, 0x9f, 0x06,

0x95, 0x3c, 0xa3, 0xcd, 0xfd, 0xb4, 0x3d, 0x49,

0x20, 0xf3, 0x2e, 0xd6, 0x87, 0xd7, 0x81, 0x11,

0x32, 0x84, 0xb1, 0x7d, 0x34, 0x10, 0x72, 0x58,

0x1a, 0x3b, 0x38, 0xe7, 0x9f, 0x65, 0xd7, 0x54,

0x9f, 0x80, 0x39, 0x00, 0x74, 0x5f, 0x37, 0x94,

0xbf, 0x71, 0x75, 0xa8, 0xca, 0xeb, 0x62, 0xb7,

0x96, 0x6f, 0xf7, 0xa2, 0xb7, 0x0f, 0xdf, 0x1f,

0x12, 0x3f, 0x98, 0x26, 0x65, 0x2e, 0xda, 0x09,

0x7e, 0x7f, 0x39, 0x2d, 0xf8, 0xd0, 0xa9, 0xc4,

0xf4, 0x4b, 0xa4, 0x0e, 0x54, 0xb9, 0x71, 0xbe,

0x31, 0x87, 0x6f, 0x1e, 0x43, 0xaa, 0x1f, 0x65,

0xf5, 0xa6, 0x0e, 0xbf, 0x53, 0xf1, 0xea, 0x9b,

0x8f, 0x9b, 0xc6, 0x37, 0x31, 0xfa, 0xbb, 0xb4,

0xdf, 0xcb, 0xd2, 0xbc, 0xa9, 0x94, 0x70, 0x37,

0x8f, 0x5a, 0x91, 0xc2, 0xf1, 0xbc, 0xb0, 0x80,

0x10, 0xea, 0xfa, 0x3e, 0x32, 0xf3, 0xac, 0xe6,

0xd3, 0xc9, 0xe9, 0x1d, 0x12, 0xd7, 0x9a, 0x78,

0x3d, 0xb3, 0xf8, 0xdf, 0xec, 0xdd, 0xd8, 0x1a,

0xda, 0xb8, 0x79, 0x03, 0x75, 0x28, 0x8c, 0x5d,

0xf9, 0xee, 0xa4, 0xa6, 0x63, 0xb5, 0x45, 0x6a,

0x02, 0xdc, 0x4f, 0xe4, 0x4c, 0xd9, 0x82, 0x1c,

0x77, 0x3b, 0xdc, 0xfd, 0xf8, 0xc5, 0xe0, 0x68,

0x65, 0x22, 0xab, 0x40, 0x98, 0x50, 0x01, 0x0f,

0x34, 0xe9, 0x0a, 0x64, 0x2c, 0x0a, 0x96, 0xf2,

0xbd, 0xa3, 0xe9, 0x75, 0x8b, 0xfd, 0xd5, 0x18,

0x47, 0xa7, 0x15, 0xb0, 0xb8, 0xcf, 0x12, 0xc2,

0x29, 0xf4, 0x39, 0x3d, 0xa6, 0xc8, 0x49, 0x72,

0xf7, 0x3f, 0x2b, 0x2f, 0x72, 0xb7, 0x5d, 0x03,

0x23, 0xe5, 0x9a, 0x48, 0xe3, 0xf2, 0x08, 0xe6,

0x6d, 0xe7, 0x2f, 0x4d, 0x9a, 0x44, 0x04, 0x75,

0x2a, 0xc7, 0x0f, 0x04, 0xe6, 0x47, 0x25, 0x27,

0x1b, 0xd3, 0xff, 0xf2, 0x6c, 0xd7, 0xb4, 0x19,

0x1d, 0x0d, 0xe3, 0xf7, 0x19, 0x63, 0xd7, 0x6e,

0xf5, 0xda, 0x72, 0xbf, 0x7e, 0xf6, 0xd4, 0xdb,

0xd7, 0x87, 0xce, 0xa1, 0x8a, 0x13, 0x6f, 0x01,

0x2b, 0x2d, 0x8c, 0x8b, 0x50, 0x83, 0xdd, 0xcc,

0xf8, 0xc2, 0x86, 0x41, 0xb6, 0x25, 0x60, 0x17,

0x5f, 0x6d, 0x28, 0xea, 0xdd, 0xa5, 0xc9, 0xa1,

0x5b, 0xf1, 0x53, 0xa5, 0xfd, 0x01, 0x16, 0xdf,

0xd4, 0xf5, 0x62, 0x2a, 0x8f, 0x18, 0xd0, 0x7d,

0x55, 0x93, 0x03, 0xe2, 0xe8, 0xdd, 0x10, 0x1c,

0x17, 0x0f, 0xe8, 0x35, 0x88, 0xfb, 0xe2, 0x00,

0x5e, 0x90, 0x07, 0x1b, 0xb0, 0x70, 0x64, 0xcd,

0x36, 0x2e, 0x15, 0x32, 0x31, 0x1c, 0x06, 0x7e,

0xf4, 0xa7, 0xa5, 0x00, 0xe3, 0x5e, 0x20, 0xc5,

0x82, 0x05, 0x98, 0x18, 0xb3, 0x3e, 0xd0, 0x66,

0x3f, 0x7a, 0xe0, 0xa0, 0xb2, 0xc8, 0x87, 0xef,

0x72, 0x30, 0x91, 0x79, 0x9f, 0xaf, 0xfd, 0xbb,

},

&case4

};

test\_case\_t case2 = {

/\* key \*/

{

0x00, 0x01, 0x02, 0x03, 0x04, 0x05, 0x06, 0x07,

0x08, 0x09, 0x0a, 0x0b, 0x0c, 0x0d, 0x0e, 0x0f,

},

/\* bytes in key \*/

16,

/\* plaintext \*/

{

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00

},

/\* bytes in plaintext \*/

48,

/\* associated data \*/

{ 0x80, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

},

/\* bytes in associated data \*/

16,

/\* ciphertext \*/

{

0x97, 0xc6, 0xb2, 0xb7, 0x19, 0xa9, 0x54, 0xe3,

0x3b, 0xab, 0x39, 0x0a, 0xf2, 0x57, 0xeb, 0x4c,

0x59, 0x93, 0xdd, 0x9a, 0x1a, 0x36, 0x61, 0xd5,

0xb1, 0x52, 0xf8, 0xd6, 0x5f, 0x35, 0x37, 0xb9,

0x54, 0x34, 0xff, 0xf3, 0x35, 0x2d, 0xfe, 0xb6,

0x61, 0x5e, 0xc1, 0xb1, 0xc6, 0x6d, 0x81, 0x5d,

},

&case3

};

test\_case\_t case1 = {

/\* key \*/

{

0x00, 0x01, 0x02, 0x03, 0x04, 0x05, 0x06, 0x07,

0x08, 0x09, 0x0a, 0x0b, 0x0c, 0x0d, 0x0e, 0x0f,

0x10, 0x11, 0x12, 0x13, 0x14, 0x15, 0x16, 0x17,

0x18, 0x19, 0x1a, 0x1b, 0x1c, 0x1d, 0x1e, 0x1f,

},

/\* bytes in key \*/

32,

/\* plaintext \*/

{

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00

},

/\* bytes in plaintext \*/

32,

/\* associated data \*/

{ 0x80, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

},

/\* bytes in associated data \*/

16,

/\* ciphertext \*/

{

0x0a, 0xa2, 0x7c, 0x16, 0x7b, 0x7a, 0x6f, 0x13,

0x93, 0x23, 0x4c, 0xb1, 0x82, 0x8f, 0x73, 0x7c,

0xe5, 0x3d, 0xa9, 0xf5, 0x05, 0x8e, 0xbd, 0x81,

0xf4, 0x4b, 0xfb, 0x8a, 0xa6, 0x4a, 0xe6, 0xc1,

},

&case2

};

test\_case\_t case0 = {

/\* key \*/

{

0x00, 0x01, 0x02, 0x03, 0x04, 0x05, 0x06, 0x07,

0x08, 0x09, 0x0a, 0x0b, 0x0c, 0x0d, 0x0e, 0x0f,

},

/\* bytes in key \*/

16,

/\* plaintext \*/

{

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

},

/\* bytes in plaintext \*/

32,

/\* associated data \*/

{

0x80, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,

},

/\* bytes in associated data \*/

16,

/\* ciphertext \*/

{

0xf7, 0x27, 0xd7, 0x48, 0xb8, 0x6e, 0x3b, 0x36,

0x2f, 0x20, 0x81, 0x0e, 0xed, 0xbe, 0x37, 0x8a,

0x07, 0x76, 0x16, 0x31, 0xb9, 0x00, 0x94, 0x54,

0xd5, 0x4d, 0x8d, 0x94, 0x9c, 0x35, 0x27, 0x19,

},

&case1

};