



Key Management Interoperability Protocol Use Cases Version 1.0

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Related work:

This specification replaces or supersedes:

- None

This specification is related to:

- [Key Management Interoperability Protocol Specification Version 1.0](#)
- [Key Management Interoperability Protocol Profiles Version 1.0](#)
- [Key Management Interoperability Protocol Usage Guide Version 1.0](#)

Abstract:

This document is intended for developers and architects who wish to design systems and applications that interoperate using the Key Management Interoperability Protocol specification.

Status:

This document was last revised or approved by the Key Management Interoperability Protocol TC on the above date. The level of approval is also listed above. Check the "Latest Version" or "Latest Approved Version" location noted above for possible later revisions of this document.

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40 1 Introduction

41 The purpose of this document is to describe use-cases to demonstrate the Key Management
42 Interoperability Protocol (KMIP) [KMIP-Spec]. The use-cases indicate if all concepts within the protocol
43 are sound and if the protocol is usable when implementing typical scenarios in real life. These use-cases
44 are not intended to fully test an implementation of KMIP. Thus, the use-cases do not contain typical
45 Quality Assurance scenarios which would stress an implementation. The use-cases are based on v1.0 of
46 the protocol.

Deleted: [KMIP-Spec]

47
48 The use-cases define a number of client-to-server request-response pairs for a number of operations. For
49 each request-response message pair the operation is stated, along with the relevant parameters needed
50 for the request or response message. This is followed by two different illustrations of the messages: first,
51 a human-readable construction which shows the fields tags, types and values, followed by the TTLV-
52 encoding of the message. These are included to facilitate the implementation of the message creation
53 and parsing functionality. The use-cases show one possible way to construct the messages, and the
54 messages shown are not necessarily the only correct constructions (e.g. it is possible to omit the attribute
55 index if it is zero). Also note that many values change dynamically when running the use-cases (the
56 server-generated timestamps, Unique Identifiers and key material in responses, as well as Batch Item ID
57 values in client-generated requests).

58 In many situations in the use cases defined in this document, the server behavior depends on the server's
59 policy. The illustrated message exchanges and their contents are not the only possible variants (see
60 [KMIP-Spec]). E.g., the server response messages shown in this document correspond to a server policy
61 of completely destroying a managed object, along with all of its attributes, when receiving a Destroy
62 request.

Deleted: [KMIP-Spec]

63 Multiple use cases describe several clients operating on the same managed object(s). For this to work,
64 the clients SHALL have authenticated themselves to the server using the same credentials (see [KMIP-
65 Prof]). Alternatively, the server policy applied to the relevant managed object(s) SHALL be such that the
66 clients all have access to the managed object(s) in question.

67 1.1 Normative References

- 68 [KMIP-Spec] OASIS Committee Draft 06, *Key Management Interoperability Protocol*
69 *Specification Version 1.0*, Nov 2009,
70 <http://docs.oasis-open.org/kmip/spec/v1.0/cd06/kmip-spec-1.0-cd-06.doc>
71 [KMIP-Prof] OASIS Committee Draft 04, *Key Management Interoperability Protocol Profiles*
72 *Version 1.0*, Nov 2009,
73 <http://docs.oasis-open.org/kmip/profiles/v1.0/cd04/kmip-profiles-1.0-cd-04.doc>
74

75 2 Message exchange

76 The message exchange between clients and the server to test the following use-case scenarios is
77 performed with TTLV encoding over the TLS/SSL transport as defined in [KMIP-Spec] and [KMIP-Prof].

Deleted: [KMIP-Spec]

79 3 Centralized Management

80 3.1 Basic functionality

81 These use-cases test the basic features of KMIP including key creation, template and secret data
82 registration, attribute functionality, access methods, and batch operation.

83

84 3.1.1 Use-case: Create / Destroy

85 In this use-case the client issues a Create request, whereby the server creates a new symmetric key and
86 returns the Unique Identifier. To clean up, the client then performs a Destroy operation to destroy the key.

87

Time	Request/Response messages
0	<p>Create (symmetric key)</p> <p>In: objectType='00000002' (Symmetric Key), attributes={ CryptographicAlgorithm='00000003' (AES), CryptographicLength='128', CryptographicUsageMask='0000000C' }</p> <p>Tag: Request Message (0x420078), Type: Structure (0x01), Data:</p> <p>Tag: Request Header (0x420077), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)</p> <p>Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:</p> <p>Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create)</p> <p>Tag: Request Payload (0x420079), Type: Structure (0x01), Data:</p> <p>Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)</p> <p>Tag: Template-Attribute (0x420091), Type: Structure (0x01), Data:</p> <p>Tag: Attribute (0x420008), Type: Structure (0x01), Data:</p> <p>Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Algorithm</p> <p>Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000003 (AES)</p> <p>Tag: Attribute (0x420008), Type: Structure (0x01), Data:</p> <p>Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Length</p> <p>Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x00000080 (128)</p> <p>Tag: Attribute (0x420008), Type: Structure (0x01), Data:</p> <p>Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Usage Mask</p> <p>Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x0000000C (Encrypt, Decrypt)</p> <p>42007801000001204200770100000038420069010000002042006A0200000004000000010000000042006B0200000004 000000000000000042000D0200000004000000010000000042000F01000000D842005C05000000040000000100000000 42007901000000C04200570500000004000000020000000042009101000000A842008010000003042000A0700000017 43727970746F6772617068696320416C676F726974686D0042000B0500000004000000003000000004200080100000030 42000A070000001443727970746F67726170686963204C656E677468000000042000B02000000040000008000000000 420008010000003042000A070000001843727970746F67726170686963205573616765204D61736B42000B0200000004 0000000C00000000</p> <p>Out: objectType='00000002', uuidKey</p> <p>Tag: Response Message (0x42007B), Type: Structure (0x01), Data:</p> <p>Tag: Response Header (0x42007A), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:</p>

Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004AFBE7C2 (Thu Nov 12 11:47:30 CET 2009)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create)
 Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
 Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
 Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: fc8833de-70d2-4ece-b063-fede3a3c59fe

42007B01000000C042007A0100000048420069010000002042006A0200000004000000010000000042006B0200000004
 00000000000000004200920900000008000000004AFBE7C242000D0200000004000000010000000042000F0100000068
 42005C0500000004000000010000000042007F0500000004000000000000000042007C01000000404200570500000004
 00000002000000004200940700000024666338333364652D373064322D346563652D623036332D6665646533613363
 3539666500000000

1 **Destroy (symmetric key)**
In: uuidKey

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
 Tag: Request Header (0x420077), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
 Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: fc8833de-70d2-4ece-b063-fede3a3c59fe

42007801000000904200770100000038420069010000002042006A0200000004000000010000000042006B0200000004
 000000000000000042000D0200000004000000010000000042000F010000004842005C05000000040000000140000000
 42007901000000304200940700000024666338333364652D373064322D346563652D623036332D6665646533613363
 3539666500000000

Out: uuidKey

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
 Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004AFBE7C3 (Thu Nov 12 11:47:31 CET 2009)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)

<p>Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)</p> <p>Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:</p> <p>Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: fc8833de-70d2-4ece-b063-fede3a3c59fe</p> <p>42007B01000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B0200000004000000000000004200920900000008000000004AFBE7C342000D0200000004000000010000000042000F010000005842005C0500000004000000140000000042007F0500000004000000000000000042007C0100000030420094070000002466633838333364652D373064322D346563652D623036332D66656465336133633539666500000000</p>
--

88

89

90 **3.1.2 Use-case: Register / Create / Get attributes / Destroy**

91 Here the client first registers a template object and then creates a symmetric key using the registered
 92 template. To verify that the attributes of the key were set correctly from the template, the client then
 93 issues a Get Attributes command, after which it destroys first the key and then the template.

94

Time	Request/Response messages
0	<p>Register (template)</p> <p>In: objectType='0000007', TemplateAttribute=empty, Template={ ObjectGroup='Group1', ApplicationSpecificInformation='ssl, www.example.com', ContactInformation='Joe', x-Purpose='demonstration', Name={ NameValue='Template1', NameType='00000001' } }</p> <p>Tag: Request Message (0x420078), Type: Structure (0x01), Data:</p> <p>Tag: Request Header (0x420077), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)</p> <p>Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:</p> <p>Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000003 (Register)</p> <p>Tag: Request Payload (0x420079), Type: Structure (0x01), Data:</p> <p>Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000006 (Template)</p> <p>Tag: Template-Attribute (0x420091), Type: Structure (0x01), Data: null</p> <p>Tag: Template (0x420090), Type: Structure (0x01), Data:</p> <p>Tag: Attribute (0x420008), Type: Structure (0x01), Data:</p> <p>Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Object Group</p> <p>Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: Group1</p> <p>Tag: Attribute (0x420008), Type: Structure (0x01), Data:</p> <p>Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Application Specific Information</p> <p>Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:</p> <p>Tag: Application Namespace (0x420003), Type: Text String (0x07), Data: ssl</p> <p>Tag: Application Data (0x420002), Type: Text String (0x07), Data: www.example.com</p> <p>Tag: Attribute (0x420008), Type: Structure (0x01), Data:</p> <p>Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Contact Information</p> <p>Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: Joe</p> <p>Tag: Attribute (0x420008), Type: Structure (0x01), Data:</p>

	<p>Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: x-Purpose Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: demonstration Tag: Attribute (0x420008), Type: Structure (0x01), Data: Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data: Tag: Name Value (0x420055), Type: Text String (0x07), Data: Template1 Tag: Name Type (0x420054), Type: Enumeration (0x05), Data: 0x00000001 (Uninterpreted text string)</p> <pre> 420078010000001C84200770100000038420069010000002042006A0200000004000000010000000042006B02000000040 0000000000000042000D020000000400000001000000042000F010000018042005C0500000004000000030000000042 0079010000016842005705000000040000000600000000420091010000000042009001000001484200080100000028420 00A070000000C4F626A6563742047726F75700000000042000B070000000647726F757031000042000801000000584200 0A07000000204170706C69636174696F6E205370656369666696320496E666F726D6174696F6E42000B010000002842000 3070000000373736C000000000420002070000000F7777772E6578616D706C652E636F6D00420008010000003042000A 0700000013436F6E7461637420496E666F726D6174696F6E00000000042000B07000000034A6F6500000000004200080 10000003042000A0700000009782D507572706F7365000000000000042000B07000000D64656D6F6E7374726174696F 6E000000420008010000004042000A07000000044E616D65000000042000B0100000028420055070000000954656D706 C61746531000000000000042005405000000040000000100000000 </pre> <p>Out: uuidTemplate</p> <p>Tag: Response Message (0x42007B), Type: Structure (0x01), Data: Tag: Response Header (0x42007A), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004AFBE7C4 (Thu Nov 12 11:47:32 CET 2009) Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Batch Item (0x42000F), Type: Structure (0x01), Data: Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000003 (Register) Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success) Tag: Response Payload (0x42007C), Type: Structure (0x01), Data: Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: a6ebbb6f-4c54-4bbb-ad29-be6bad4ecad5</p> <pre> 42007B010000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040 000000000000004200920900000008000000004AFBE7C442000D0200000004000000010000000042000F010000005842 005C0500000004000000030000000042007F0500000000400000000000000042007C01000000304200940700000024613 66562626236662D346335342D3462622D616432392D62653662616434656361643500000000 </pre>
1	<p>Create (symmetric key using template) In: objectType='00000002', template={ NameValue='Template1', NameType='00000001' }, attributes={ CryptographicAlgorithm='AES', CryptographicLength='128', CryptographicUsageMask='0000000C' }</p> <p>Tag: Request Message (0x420078), Type: Structure (0x01), Data: Tag: Request Header (0x420077), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:</p>

	<p>Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create)</p> <p>Tag: Request Payload (0x420079), Type: Structure (0x01), Data:</p> <p>Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)</p> <p>Tag: Template-Attribute (0x420091), Type: Structure (0x01), Data:</p> <p>Tag: Name (0x420053), Type: Structure (0x01), Data:</p> <p>Tag: Name Value (0x420055), Type: Text String (0x07), Data: Templatel</p> <p>Tag: Name Type (0x420054), Type: Enumeration (0x05), Data: 0x00000001 (Uninterpreted text string)</p> <p>Tag: Attribute (0x420008), Type: Structure (0x01), Data:</p> <p>Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Algorithm</p> <p>Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000003 (AES)</p> <p>Tag: Attribute (0x420008), Type: Structure (0x01), Data:</p> <p>Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Length</p> <p>Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x00000080 (128)</p> <p>Tag: Attribute (0x420008), Type: Structure (0x01), Data:</p> <p>Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Usage</p> <p>Mask</p> <p>Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x0000000C (Encrypt, Decrypt)</p> <p>42007801000001504200770100000038420069010000002042006A0200000004000000010000000042006B0200000004000000000000042000D0200000004000000010000000042000F010000010842005C05000000040000000100000000042007901000000F04200570500000004000000020000000042009101000000D84200530100000028420055070000000954656D706C617465310000000000000042005405000000040000000100000000420008010000003042000A070000001743727970746F6772617068696320416C676F726974686D0042000B05000000040000000300000000420008010000003042000A070000001443727970746F67726170686963204C656E6774680000000042000B020000000400000008000000000420008010000003042000A070000001843727970746F67726170686963205573616765204D61736B42000B020000000400000000C00000000</p> <p>Out: objectType='00000002', uuidKey</p> <p>Tag: Response Message (0x42007B), Type: Structure (0x01), Data:</p> <p>Tag: Response Header (0x42007A), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)</p> <p>Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004AFBE7C5 (Thu Nov 12 11:47:33 CET 2009)</p> <p>Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:</p> <p>Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create)</p> <p>Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)</p> <p>Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:</p> <p>Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)</p> <p>Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 61b10614-d8b5-46f9-8d17-2fa6eald747a</p> <p>42007B010000000C042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040000000000000004200920900000008000000004AFBE7C542000D0200000004000000010000000042000F010000006842005C0500000004000000010000000042007F0500000004000000000000000042007C0100000040420057050000000400000000000000420094070000002436316231303631342D643862352D343666392D386431372D32666136656131643734376100000000</p>
2	Get attributes

In: uuidKey, attributeNames={ 'ObjectGroup', 'ApplicationSpecificInformation', 'ContactInformation', 'x-Purpose' }

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
Tag: Request Header (0x420077), Type: Structure (0x01), Data:
Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)
Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 61b10614-d8b5-46f9-8d17-2fa6eald747a
Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Object Group
Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Application Specific Information
Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Contact Information
Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: x-Purpose

42007801000001084200770100000038420069010000002042006A0200000004000000010000000042006B020000000400000000000042000D0200000004000000010000000042000F010000000C042005C05000000040000000B00000000042007901000000A8420094070000002436316231303631342D643862352D343666392D386431372D3266613665613164373437610000000042000A070000000C4F626A6563742047726F75700000000042000A070000000204170706C69636174696F6E20537065636966696320496E666F726D6174696F6E42000A0700000013436F6E7461637420496E666F726D6174696F6E000000000042000A070000009782D507572706F736500000000000000

Out: uuidKey, attributes={ ObjectGroup='Group1', ApplicationSpecificInformation='ssl, www.example.com', ContactInformation='Joe Miller', x-Purpose='demonstration' }

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004AFBE7C6 (Thu Nov 12 11:47:34 CET 2009)
Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)
Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 61b10614-d8b5-46f9-8d17-2fa6eald747a
Tag: Attribute (0x420008), Type: Structure (0x01), Data:
Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Object Group
Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: Group1
Tag: Attribute (0x420008), Type: Structure (0x01), Data:
Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Application Specific Information
Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:

Tag: Application Namespace (0x420003), Type: Text String (0x07), Data: ssl
 Tag: Application Data (0x420002), Type: Text String (0x07), Data: www.example.com
 Tag: Attribute (0x420008), Type: Structure (0x01), Data:
 Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Contact Information
 Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: Joe
 Tag: Attribute (0x420008), Type: Structure (0x01), Data:
 Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: x-Purpose
 Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: demonstration

42007B01000001B042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040
 00000000000000420092090000008000000004AFBE7C64200D0200000004000000010000000042000F010000015842
 005C05000000040000000B0000000042007F050000000400000000000000000042007C01000001304200940700000024363
 16231303631342D643862352D343666392D386431372D3266613665613164373437610000000042000801000000284200
 0A070000000C4F626A6563742047726F75700000000042000B070000000647726F7570310000420008010000005842000
 A07000000204170706C69636174696F6E20537065636966696320496E666F726D6174696F6E42000B0100000028420003
 070000000373736C0000000000420002070000000F777772E6578616D706C652E636F6D00420008010000003042000A0
 700000013436FE7461637420496E666F726D6174696F6E000000000042000B07000000034A6F6500000000042000801
 0000003042000A0700000009782D507572706F7365000000000000042000B070000000D64656D6F6E7374726174696F6
 E000000

3 Destroy (symmetric key)
In: uuidKey

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
 Tag: Request Header (0x420077), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
 Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 61b10614-d8b5-46f9-8d17-2fa6eald747a

42007801000000904200770100000038420069010000002042006A0200000004000000010000000042006B02000000040
 0000000000000042000D0200000004000000010000000042000F010000004842005C0500000004000000140000000042
 00790100000030420094070000002436316231303631342D643862352D343666392D386431372D3266613665613164373
 4376100000000

Out: uuidKey

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
 Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004AFBE7C6 (Thu Nov 12 11:47:34 CET 2009)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
 Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)

Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 61b10614-d8b5-46f9-8d17-2fa6eald747a

```
42007B01000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040000000000000420092090000008000000004AFBE7C642000D020000004000000010000000042000F010000005842005C0500000004000000140000000042007F050000000400000000000000042007C0100000030420094070000002436316231303631342D643862352D343666392D386431372D32666136656131643734376100000000
```

4 **Destroy (template)**
In: uuidTemplate

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
 Tag: Request Header (0x420077), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
 Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: a6ebbb6f-4c54-4bbb-ad29-be6bad4ecad5

```
42007801000000904200770100000038420069010000002042006A0200000004000000010000000042006B0200000004000000000000042000D0200000004000000010000000042000F010000004842005C050000000400000014000000004200790100000030420094070000002461366562626236662D346335342D346262622D616432392D62653662616434656361643500000000
```

Out: uuidTemplate

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
 Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004AFBE7C6 (Thu Nov 12 11:47:34 CET 2009)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
 Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
 Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: a6ebbb6f-4c54-4bbb-ad29-be6bad4ecad5

```
42007B01000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040000000000000420092090000008000000004AFBE7C642000D0200000004000000010000000042000F010000005842005C0500000004000000140000000042007F050000000400000000000000042007C0100000030420094070000002461366562626236662D346335342D346262622D616432392D62653662616434656361643500000000
```

95

96

97 **3.1.3 Use-case: Create / Locate / Get / Destroy**

98 This use-case tests the Locate and Get operations, in addition to the previously used operations Create
 99 and Destroy. A symmetric key is first created, and then a lookup is performed on the Name attribute using
 100 the Locate operation. Subsequently, a Get request is issued to retrieve the located key, after which the
 101 key on the server is destroyed.
 102

Time	Request/Response messages
0	<p>Create (symmetric key)</p> <p>In: objectType = '00000002', attributes={ Name={ NameValue='Key1', NameType='00000001' }, CryptographicAlgorithm='DES', CryptographicLength='56', CryptographicUsageMask='0000000C', ContactInformation='Joe' }</p> <p>Tag: Request Message (0x420078), Type: Structure (0x01), Data: Tag: Request Header (0x420077), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Batch Item (0x42000F), Type: Structure (0x01), Data: Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create) Tag: Request Payload (0x420079), Type: Structure (0x01), Data: Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key) Tag: Template-Attribute (0x420091), Type: Structure (0x01), Data: Tag: Attribute (0x420008), Type: Structure (0x01), Data: Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data: Tag: Name Value (0x420055), Type: Text String (0x07), Data: Key1 Tag: Name Type (0x420054), Type: Enumeration (0x05), Data: 0x00000001 (Uninterpreted text string) Tag: Attribute (0x420008), Type: Structure (0x01), Data: Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Algorithm Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000002 (3DES) Tag: Attribute (0x420008), Type: Structure (0x01), Data: Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Length Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x000000A8 (168) Tag: Attribute (0x420008), Type: Structure (0x01), Data: Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Usage Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x0000000C (Encrypt, Decrypt) Tag: Attribute (0x420008), Type: Structure (0x01), Data: Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Contact Information Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: Joe</p> <p>42007801000001984200770100000038420069010000002042006A0200000004000000010000000042006B02000000040 0000000000000042000D020000000400000001000000042000F010000015042005C0500000004000000010000000042 00790100000138420057050000000400000002000000004200910100000120420008010000003842000A07000000044E6 16D65000000042000B010000002042005507000000044B65793100000000420054050000000400000001000000004200 08010000003042000A070000001743727970746F6772617068696320416C676F726974686D0042000B05000000040000 00200000000420008010000003042000A070000001443727970746F67726170686963204C656E677468000000042000B</p>

```

0200000004000000A80000000042000801000000304200A070000001843727970746F677261706869632055736167652
04D61736B42000B02000000040000000C0000000042000801000000304200A0700000013436F6E7461637420496E666F
726D6174696F6E00000000042000B07000000034A6F650000000000

Out: objectType = '0000002', uuidKey

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004AFBE7C7 (Thu Nov 12
11:47:35 CET 2009)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create)
    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
      Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 1ed28ea5-2b31-4145-bcf2-
36d0756d3890

42007B01000000C042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040
00000000000000420092090000008000000004AFBE7C742000D0200000004000000010000000042000F010000006842
005C0500000004000000010000000042007F050000000400000000000000000000042007C01000000404200570500000004000
000200000000420094070000002431656432386561352D326233312D343134352D626366322D33366430373536643338
393000000000

```

```

1 Locate (symmetric key)
In: attributes={ objectType = '0000002', Name={ Name='Key1', NameType='0000001' }

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)
    Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Object Type
        Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric
Key)
      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name
        Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:
          Tag: Name Value (0x420055), Type: Text String (0x07), Data: Key1
          Tag: Name Type (0x420054), Type: Enumeration (0x05), Data: 0x00000001 (Uninterpreted
text string)

42007801000000D04200770100000038420069010000002042006A0200000004000000010000000042006B02000000040

```

	<pre> 0000000000000042000D0200000004000000010000000042000F010000008842005C0500000004000000080000000042 00790100000070420008010000002842000A070000000B4F626A656374205479706500000000042000B0500000004000 0000200000000420008010000003842000A07000000044E616D65000000042000B010000002042005507000000044B65 79310000000042005405000000040000000100000000 Out: uuidKey Tag: Response Message (0x42007B), Type: Structure (0x01), Data: Tag: Response Header (0x42007A), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004AFBE7C8 (Thu Nov 12 11:47:36 CET 2009) Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Batch Item (0x42000F), Type: Structure (0x01), Data: Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate) Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success) Tag: Response Payload (0x42007C), Type: Structure (0x01), Data: Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: led28ea5-2b31-4145-bcf2- 36d0756d3890 42007B010000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040 000000000000042009209000000800000004AFBE7C842000D0200000004000000010000000042000F010000005842 005C0500000004000000080000000042007F05000000040000000000000042007C01000000304200940700000024316 56432386561352D326233312D343134352D626366322D33366430373536643338393000000000 </pre>
2	<pre> Get (symmetric key) In: uuidKey Tag: Request Message (0x420078), Type: Structure (0x01), Data: Tag: Request Header (0x420077), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Batch Item (0x42000F), Type: Structure (0x01), Data: Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get) Tag: Request Payload (0x420079), Type: Structure (0x01), Data: Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: led28ea5-2b31-4145-bcf2- 36d0756d3890 42007801000000904200770100000038420069010000002042006A0200000004000000010000000042006B02000000040 000000000000042000D0200000004000000010000000042000F010000004842005C05000000040000000A0000000042 00790100000030420094070000002431656432386561352D326233312D343134352D626366322D3336643037353664333 8393000000000 Out: objectType = '00000002', uuidKey, symmetricKey Tag: Response Message (0x42007B), Type: Structure (0x01), Data: Tag: Response Header (0x42007A), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: </pre>

Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004AFBE7C8 (Thu Nov 12 11:47:36 CET 2009)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)
 Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
 Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
 Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 1ed28ea5-2b31-4145-bcf2-36d0756d3890
 Tag: Symmetric Key (0x42008F), Type: Structure (0x01), Data:
 Tag: Key Block (0x420040), Type: Structure (0x01), Data:
 Tag: Key Format Type (0x420042), Type: Enumeration (0x05), Data: 0x00000001
 Tag: Key Value (0x420045), Type: Structure (0x01), Data:
 Tag: Key Material (0x420043), Type: Octet String (0x08), Data: C8E51523F73D6EE9F40EAB7CD06825499D8C0BD0739E1046
 Tag: Cryptographic Algorithm (0x420028), Type: Enumeration (0x05), Data: 0x00000002 (3DES)
 Tag: Cryptographic Length (0x42002A), Type: Integer (0x02), Data: 0x000000A8 (168)

42007B010000012842007A0100000048420069010000002042006A0200000004000000010000000042006B020000000400000000000004200920900000008000000004AFBE7C842000D0200000004000000010000000042000F01000000D042005C05000000040000000A0000000042007F05000000040000000000000042007C01000000A842005705000000040000000000000420094070000002431656432386561352D326233312D343134352D626366322D333664303735366433383930000000042008F01000000604200400100000058420042050000000400000001000000042004501000000204200430800000018C8E51523F73D6EE9F40EAB7CD06825499D8C0BD0739E10464200280500000004000000020000000042002A0200000004000000A800000000

3 Destroy (symmetric key)
In: uuidKey

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
 Tag: Request Header (0x420077), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
 Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 1ed28ea5-2b31-4145-bcf2-36d0756d3890

42007801000000904200770100000038420069010000002042006A0200000004000000010000000042006B0200000004000000000000042000D0200000004000000010000000042000F010000004842005C0500000004000000014000000004200790100000030420094070000002431656432386561352D326233312D343134352D626366322D33366430373536643338393000000000

Out: uuidKey

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:

```

Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
  Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
    Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
    Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
  Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004AFBE7C8 (Thu Nov 12 11:47:36 CET 2009)
  Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
  Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
    Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 1ed28ea5-2b31-4145-bcf2-36d0756d3890

42007B01000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040
000000000000004200920900000008000000004AFBE7C84200D0200000004000000010000000042000F010000005842
005C0500000004000000140000000042007F0500000004000000000000000042007C01000000304200940700000024316
56432386561352D326233312D343134352D626366322D33366430373536643338393000000000

```

4 **Locate**
In: uuidKey

```

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)
  Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
    Tag: Attribute (0x420008), Type: Structure (0x01), Data:
      Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Unique Identifier
      Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: 1ed28ea5-2b31-4145-bcf2-36d0756d3890

42007801000000B84200770100000038420069010000002042006A0200000004000000010000000042006B02000000040
000000000000004200D020000000400000010000000042000F010000007042005C0500000004000000080000000042
00790100000058420008010000005042000A0700000011556E69717565204964656E74696669657200000000000000420
00B070000002431656432386561352D326233312D343134352D626366322D33366430373536643338393000000000

```

Out: <empty response payload>

```

Tag: Response Message (0x420078), Type: Structure (0x01), Data:
  Tag: Response Header (0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420067), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x420068), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x420069), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x42008F), Type: Date-Time (0x09), Data: 0x000000004AC07323 (Mon Sep 28 10:26:11 CEST 2009)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

```

<p>Tag: Operation (0x42005A), Type: Enumeration (0x05), Data: 0x00000008 (Locate)</p> <p>Tag: Result Status (0x42007C), Type: Enumeration (0x05), Data: 0x00000000 (Success)</p> <p>Tag: Response Payload (0x420079), Type: Structure (0x01), Data: null</p> <p>42007B010000008042007A0100000048420069010000002042006A0200000004000000010000000042006B0200000004000000000000420092090000008000000004AFBE7C84200D0200000004000000010000000042000F010000002842005C0500000004000000080000000042007F05000000040000000000000042007C0100000000</p>
--

103

104

105 **3.1.4 Use-case: Dual client use-case, ID Placeholder linked Locate & Get batch**

106 This use-case has two clients performing operations on the same key. The first client initially registers a
 107 template and creates a symmetric key using that template. The second client then does a batched Locate
 108 and Get using the ID Placeholder to retrieve the key. The second client thereafter performs a number of
 109 operations on the key (Get Attribute List, Get Attribute, Add Attribute, Modify Attribute and Delete
 110 Attribute), before the first client finally destroys the key and the template. The first client also tries to Get
 111 the key and the template after they have been destroyed, but the Get operation fails in both cases.

112

113 This use-case demonstrates the fact that it is possible for two clients to cooperate and use the same
 114 managed object while only having knowledge of a single pre-agreed Name attribute value and without
 115 having to share any other information.

116

Time	Request/Response messages
0	<p>Client A: Register (template) In: objectType='00000007', TemplateAttribute=empty, Template={ CryptographicAlgorithm='AES', CryptographicLength='128', Name={ NameValue='Template1', NameType='00000001' },}</p> <p>Tag: Request Message (0x420078), Type: Structure (0x01), Data: Tag: Request Header (0x420077), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Batch Item (0x42000F), Type: Structure (0x01), Data: Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000003 (Register) Tag: Request Payload (0x420079), Type: Structure (0x01), Data: Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000006 (Template) Tag: Template-Attribute (0x420091), Type: Structure (0x01), Data: null Tag: Template (0x420090), Type: Structure (0x01), Data: Tag: Attribute (0x420008), Type: Structure (0x01), Data: Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Algorithm Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000003 (AES) Tag: Attribute (0x420008), Type: Structure (0x01), Data: Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Length Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x00000080 (128) Tag: Attribute (0x420008), Type: Structure (0x01), Data:</p>

	<p>Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data: Tag: Name Value (0x420055), Type: Text String (0x07), Data: Template1 Tag: Name Type (0x420054), Type: Enumeration (0x05), Data: 0x00000001 (Uninterpreted text string)</p> <p>420078010000001384200770100000038420069010000002042006A0200000004000000010000000042006B0200000004000000000000042000D0200000004000000010000000042000F01000000F042005C0500000004000000030000000042007901000000D842005705000000040000000600000000420091010000000420090010000000B8420008010000003042000A070000001743727970746F6772617068696320416C676F726974686D0042000B05000000040000000300000000420008010000003042000A070000001443727970746F67726170686963204C656E677468000000042000B020000000400000008000000000420008010000004042000A07000000044E616D65000000042000B01000000028420055070000000954656D706C61746531000000000000042005405000000040000000100000000</p> <p>Out: uuidTemplate</p> <p>Tag: Response Message (0x42007B), Type: Structure (0x01), Data: Tag: Response Header (0x42007A), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004AFBED21 (Thu Nov 12 12:10:25 CET 2009) Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Batch Item (0x42000F), Type: Structure (0x01), Data: Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000003 (Register) Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success) Tag: Response Payload (0x42007C), Type: Structure (0x01), Data: Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 45d8629a-9ad1-41b3-9d09-941f2a595da3</p> <p>42007B010000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040000000000000420092090000008000000004AFBED2142000D0200000004000000010000000042000F0100000005842005C0500000004000000030000000042007F050000000400000000000000042007C0100000030420094070000002434356438363239612D396164312D343162332D396430392D39343166326135393564613300000000</p>
1	<p>Client A: Create (symmetric key using template) In: objectType='00000002', template={ NameValue= 'Template1', NameType='00000001' }, attributes={ Name={ Name='Key1', NameType='00000001' }, CryptographicUsageMask='00000004', ContactInformation='Foo' }</p> <p>Tag: Request Message (0x420078), Type: Structure (0x01), Data: Tag: Request Header (0x420077), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Batch Item (0x42000F), Type: Structure (0x01), Data: Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create) Tag: Request Payload (0x420079), Type: Structure (0x01), Data: Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)</p>

	<p>Tag: Template-Attribute (0x420091), Type: Structure (0x01), Data:</p> <p>Tag: Name (0x420053), Type: Structure (0x01), Data:</p> <p>Tag: Name Value (0x420055), Type: Text String (0x07), Data: Template1</p> <p>Tag: Name Type (0x420054), Type: Enumeration (0x05), Data: 0x00000001 (Uninterpreted text string)</p> <p>Tag: Attribute (0x420008), Type: Structure (0x01), Data:</p> <p>Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name</p> <p>Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:</p> <p>Tag: Name Value (0x420055), Type: Text String (0x07), Data: Key1</p> <p>Tag: Name Type (0x420054), Type: Enumeration (0x05), Data: 0x00000001 (Uninterpreted text string)</p> <p>Tag: Attribute (0x420008), Type: Structure (0x01), Data:</p> <p>Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Usage Mask</p> <p>Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x00000004 (Encrypt)</p> <p>Tag: Attribute (0x420008), Type: Structure (0x01), Data:</p> <p>Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Contact Information</p> <p>Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: Foo</p> <p>420078010000001584200770100000038420069010000002042006A0200000004000000010000000042006B0200000004000000000000042000D0200000004000000010000000042000F010000011042005C0500000004000000010000000042007901000000F84200570500000004000000020000000042009101000000E04200530100000028420055070000000954656D706C61746531000000000000042005405000000040000000100000000420008010000003842000A07000000044E616D650000000042000B010000002042005507000000044B6579310000000042005405000000040000000100000000420008010000003042000A070000001843727970746F67726170686963205573616765204D61736B42000B0200000004000000040000000420008010000003042000A0700000013436F6E7461637420496E666F726D6174696F6E00000000042000B07000000346F6F0000000000</p> <p>Out: objectType='0000002', uuidKey</p> <p>Tag: Response Message (0x42007B), Type: Structure (0x01), Data:</p> <p>Tag: Response Header (0x42007A), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)</p> <p>Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x00000004AFBED23 (Thu Nov 12 12:10:27 CET 2009)</p> <p>Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:</p> <p>Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create)</p> <p>Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)</p> <p>Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:</p> <p>Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)</p> <p>Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 0a33e83e-5b7a-4865-964a-8dlc3bbf9ae3</p> <p>42007B010000000C042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040000000000000420092090000008000000004AFBED2342000D0200000004000000010000000042000F010000006842005C0500000004000000010000000042007F050000000400000000000000042007C01000000404200570500000004000000020000000420094070000002430613333653833652D356237612D343836352D393634612D38643163336262663961653300000000</p>
2	<p>Client B:</p> <p>Locate and Get (symmetric key by name)</p>

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)

Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 0E9E1875336E415E

Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)

Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:

Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 0a33e83e-5b7a-4865-964a-8dlc3bbf9ae3

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)

Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: CFEF21DDDF1CF5E3

Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)

Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:

Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)

Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 0a33e83e-5b7a-4865-964a-8dlc3bbf9ae3

Tag: Symmetric Key (0x42008F), Type: Structure (0x01), Data:

Tag: Key Block (0x420040), Type: Structure (0x01), Data:

Tag: Key Format Type (0x420042), Type: Enumeration (0x05), Data: 0x00000001

Tag: Key Value (0x420045), Type: Structure (0x01), Data:

Tag: Key Material (0x420043), Type: Octet String (0x08), Data: 755D03C639648FB5828D5F1CC9FE9B57

Tag: Cryptographic Algorithm (0x420028), Type: Enumeration (0x05), Data: 0x00000003 (AES)

Tag: Cryptographic Length (0x42002A), Type: Integer (0x02), Data: 0x00000080 (128)

42007B01000001A042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040000000000000420092090000008000000004AFBED2442000D0200000004000000020000000042000F010000006842005C050000000400000008000000042009308000000080E9E1875336E415E42007F0500000004000000000000000000042007C0100000030420094070000002430613333653833652D356237612D343836352D393634612D386431633362626639616533000000042000F01000000D842005C0500000040000000A00000000420093080000008CFEF21DDDF1CF5E342007F050000000400000000000000042007C01000000A0420057050000004000000020000000420094070000002430613333653833652D356237612D343836352D393634612D386431633362626639616533000000042008F010000005842004001000000504200420500000004000000010000000042004501000000184200430800000010755D03C639648FB5828D5F1CC9FE9B574200280500000004000000030000000042002A02000000040000000800000000

3 Client B:
Get attribute list
In: uuidKey

Tag: Request Message (0x420078), Type: Structure (0x01), Data:

Tag: Request Header (0x420077), Type: Structure (0x01), Data:

Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:

Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000C (Get Attribute List)

Tag: Request Payload (0x420079), Type: Structure (0x01), Data:

Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 0a33e83e-5b7a-4865-964a-8dlc3bbf9ae3

42007801000000904200770100000038420069010000002042006A0200000004000000010000000042006B0200000004000000000000042000D0200000004000000010000000042000F010000004842005C05000000040000000C000000004200790100000030420094070000002430613333653833652D356237612D343836352D393634612D38643163336262663961653300000000

	<p>Out: uuidKey, attributes={ * }</p> <p>Tag: Response Message (0x42007B), Type: Structure (0x01), Data:</p> <p> Tag: Response Header (0x42007A), Type: Structure (0x01), Data:</p> <p> Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:</p> <p> Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p> Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)</p> <p> Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004AFBED24 (Thu Nov 12 12:10:28 CET 2009)</p> <p> Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p> Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:</p> <p> Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000C (Get Attribute List)</p> <p> Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)</p> <p> Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:</p> <p> Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 0a33e83e-5b7a-4865-964a-8d1c3bbf9ae3</p> <p> Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Length</p> <p> Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Algorithm</p> <p> Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: State</p> <p> Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Digest</p> <p> Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Initial Date</p> <p> Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Unique Identifier</p> <p> Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name</p> <p> Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Usage Mask</p> <p> Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Object Type</p> <p> Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Contact Information</p> <p> Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Last Change Date</p> <p>42007B01000001C842007A0100000048420069010000002042006A0200000004000000010000000042006B020000000040000000000000042000F010000017042005C05000000040000000C0000000042007F050000000400000000000000042007C0100000148420094070000002430613333653833652D356237612D343836352D393634612D3864316333626266396165330000000042000A070000001443727970746F67726170686963204C656E6774680000000042000A070000001743727970746F6772617068696320416C676F726974686D0042000A0700000005537461746500000042000A0700000006446967657374000042000A070000000C496E697469616C20446174650000000042000A0700000011556E69717565204964656E746966696572000000000000042000A0700000044E616D650000000042000A070000001843727970746F67726170686963205573616765204D61736B42000A07000000B4F626A656374205479706500000000042000A0700000013436F6E7461637420496E666F726D6174696F6E0000000042000A07000000104C617374204368616E67652044617465</p>
4	<p>Client B:</p> <p>Get attributes</p> <p>In: uuidKey, attributeNames={'Name', 'ContactInformation'}</p> <p>Tag: Request Message (0x420078), Type: Structure (0x01), Data:</p> <p> Tag: Request Header (0x420077), Type: Structure (0x01), Data:</p> <p> Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:</p> <p> Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p> Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)</p> <p> Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p> Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:</p> <p> Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)</p>

	<p>Tag: Request Payload (0x420079), Type: Structure (0x01), Data:</p> <p>Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 0a33e83e-5b7a-4865-964a-8d1c3bbf9ae3</p> <p>Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name</p> <p>Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Contact Information</p> <p>420078010000000C04200770100000038420069010000002042006A0200000004000000010000000042006B0200000004000000000000042000D0200000004000000010000000042000F010000007842005C05000000040000000B000000004200790100000060420094070000002430613333653833652D356237612D343836352D393634612D386431633362626639616533000000004200A07000000044E616D65000000004200A0700000013436F6E7461637420496E666F726D6174696F6E0000000000</p> <p>Out: uuidKey, attributes={ Name={ Name='Key1', NameType='0000001' }, ContactInformation='Foo' }</p> <p>Tag: Response Message (0x42007B), Type: Structure (0x01), Data:</p> <p>Tag: Response Header (0x42007A), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)</p> <p>Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004AFBED24 (Thu Nov 12 12:10:28 CET 2009)</p> <p>Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:</p> <p>Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)</p> <p>Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)</p> <p>Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:</p> <p>Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 0a33e83e-5b7a-4865-964a-8d1c3bbf9ae3</p> <p>Tag: Attribute (0x420008), Type: Structure (0x01), Data:</p> <p>Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name</p> <p>Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:</p> <p>Tag: Name Value (0x420055), Type: Text String (0x07), Data: Key1</p> <p>Tag: Name Type (0x420054), Type: Enumeration (0x05), Data: 0x00000001 (Uninterpreted text string)</p> <p>Tag: Attribute (0x420008), Type: Structure (0x01), Data:</p> <p>Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Contact Information</p> <p>Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: Foo</p> <p>42007B0100000012842007A0100000048420069010000002042006A0200000004000000010000000042006B020000000400000000000004200920900000008000000004AFBED2442000D0200000004000000010000000042000F01000000D042005C05000000040000000B0000000042007F0500000004000000000000000042007C01000000A8420094070000002430613333653833652D356237612D343836352D393634612D38643163336262663961653300000000420008010000003842000A07000000044E616D650000000042000B010000002042005507000000044B65793100000000420054050000000400000010000000042000801000000304200A0700000013436F6E7461637420496E666F726D6174696F6E000000000042000B0700000003466F6F0000000000</p>
5	<p>Client B:</p> <p>Add attribute [batch]</p> <p>In: uuidKey, attribute={ x-attribute1='Value1' }</p> <p>In: uuidKey, attribute={ x-attribute2='Value2' }</p> <p>Tag: Request Message (0x420078), Type: Structure (0x01), Data:</p> <p>Tag: Request Header (0x420077), Type: Structure (0x01), Data:</p>

Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:

- Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
- Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000002 (2)

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

- Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000D (Add Attribute)
- Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 7A92DDA525EB158A
- Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
 - Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 0a33e83e-5b7a-4865-964a-8d1c3bbf9ae3
 - Tag: Attribute (0x420008), Type: Structure (0x01), Data:
 - Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: x-attribute1
 - Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: Value1

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

- Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000D (Add Attribute)
- Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 7230F6E4D3BEA249
- Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
 - Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 0a33e83e-5b7a-4865-964a-8d1c3bbf9ae3
 - Tag: Attribute (0x420008), Type: Structure (0x01), Data:
 - Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: x-attribute2
 - Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: Value2

```

42007801000001604200770100000038420069010000002042006A0200000004000000010000000042006B02000000040
0000000000000042000D0200000004000000020000000042000F010000008842005C05000000040000000D00000000042
0093080000000087A92DDA525EB158A4200790100000060420094070000002430613333653833652D356237612D3438363
52D393634612D38643163336262663961653300000000420008010000002842000A070000000C782D6174747269627574
65310000000042000B070000000656616C756531000042000F010000008842005C05000000040000000D0000000042009
308000000087230F6E4D3BEA2494200790100000060420094070000002430613333653833652D356237612D343836352D
393634612D38643163336262663961653300000000420008010000002842000A070000000C782D6174747269627574653
20000000042000B070000000656616C7565320000

```

Out: uuidKey, attribute={ x-attribute1='Value1' }

Out: uuidKey, attribute={ x-attribute2='Value2' }

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:

- Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
 - Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 - Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 - Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 - Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004AFBED25 (Thu Nov 12 12:10:29 CET 2009)
 - Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000002 (2)
- Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 - Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000D (Add Attribute)
 - Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 7A92DDA525EB158A
 - Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
 - Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
 - Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 0a33e83e-5b7a-4865-964a-8d1c3bbf9ae3
 - Tag: Attribute (0x420008), Type: Structure (0x01), Data:
 - Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: x-attribute1

```

Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: Value1
Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000D (Add Attribute)
Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 7230F6E4D3BEA249
Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 0a33e83e-5b7a-4865-964a-8d1c3bbf9ae3
Tag: Attribute (0x420008), Type: Structure (0x01), Data:
Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: x-attribute2
Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: Value2

42007B010000019042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040
00000000000000420092090000008000000004AFBED2542000D0200000004000000020000000042000F010000009842
005C05000000040000000D0000000042009308000000087A92DDA525EB158A42007F05000000040000000000000000420
07C0100000060420094070000002430613333653833652D356237612D343836352D393634612D38643163336262663961
6533000000042008010000002842000A070000000C782D617474726962757465310000000042000B070000000656616
C756531000042000F010000009842005C05000000040000000D0000000042009308000000087230F6E4D3BEA24942007F
0500000004000000000000000042007C0100000060420094070000002430613333653833652D356237612D343836352D3
93634612D3864316333626266396165330000000042008010000002842000A070000000C782D61747472696275746532
0000000042000B070000000656616C7565320000

```

6 Client B:
 Modify attribute [batch]
 In: uuidKey, attribute={ x-attribute1='ModifiedValue1' }
 In: uuidKey, attribute={ x-attribute2='ModifiedValue2' }

```

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
Tag: Request Header (0x420077), Type: Structure (0x01), Data:
Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000002 (2)
Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000E (Modify Attribute)
Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: BA3EA60548ECB699
Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 0a33e83e-5b7a-4865-964a-8d1c3bbf9ae3
Tag: Attribute (0x420008), Type: Structure (0x01), Data:
Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: x-attribute1
Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: ModifiedValue1
Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000E (Modify Attribute)
Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 321984E716274A3D
Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 0a33e83e-5b7a-4865-964a-8d1c3bbf9ae3
Tag: Attribute (0x420008), Type: Structure (0x01), Data:
Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: x-attribute2
Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: ModifiedValue2

42007801000001704200770100000038420069010000002042006A0200000004000000010000000042006B02000000040

```

000000000000042000D020000000400000002000000042000F010000009042005C05000000040000000E0000000042
0093080000008BA3EA60548ECB6994200790100000068420094070000002430613333653833652D356237612D3438363
52D393634612D3864316333626266396165330000000420008010000003042000A070000000C782D6174747269627574
65310000000042000B070000000E4D6F64696669656456616C756531000042000F010000009042005C050000000400000
00E00000000420093080000008321984E716274A3D4200790100000068420094070000002430613333653833652D3562
37612D343836352D393634612D3864316333626266396165330000000420008010000003042000A070000000C782D617
474726962757465320000000042000B070000000E4D6F64696669656456616C7565320000

Out: uuidKey, attribute={ x-tribute1='ModifiedValue1' }

Out: uuidKey, attribute={ x-attribute2='ModifiedValue2' }

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:

Tag: Response Header (0x42007A), Type: Structure (0x01), Data:

Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:

Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004AFBED26 (Thu Nov 12 12:10:30 CET 2009)

Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000002 (2)

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000E (Modify Attribute)

Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: BA3EA60548ECB699

Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)

Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:

Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 0a33e83e-5b7a-4865-964a-8d1c3bbf9ae3

Tag: Attribute (0x420008), Type: Structure (0x01), Data:

Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: x-attribute1

Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: ModifiedValue1

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000E (Modify Attribute)

Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 321984E716274A3D

Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)

Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:

Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 0a33e83e-5b7a-4865-964a-8d1c3bbf9ae3

Tag: Attribute (0x420008), Type: Structure (0x01), Data:

Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: x-attribute2

Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: ModifiedValue2

42007B01000001A042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040
000000000000042009209000000800000004AFBED2642000D020000000400000002000000042000F01000000A042
005C05000000040000000E0000000420093080000008BA3EA60548ECB69942007F0500000004000000000000000420
07C0100000068420094070000002430613333653833652D356237612D343836352D393634612D38643163336262663961
65330000000420008010000003042000A070000000C782D61747472696275746531000000042000B070000000E4D6F6
4696669656456616C756531000042000F01000000A042005C05000000040000000E00000000420093080000008321984
E716274A3D42007F05000000040000000000000042007C0100000068420094070000002430613333653833652D35623
7612D343836352D393634612D3864316333626266396165330000000420008010000003042000A070000000C782D6174
74726962757465320000000042000B070000000E4D6F64696669656456616C7565320000

7

Client B:

Delete attribute [batch]

In: uuidKey, attributeNames={'x-attribute1'}

In: uuidKey, attributeNames={x-attribute2}

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
Tag: Request Header (0x420077), Type: Structure (0x01), Data:
Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000002 (2)
Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000F (Delete Attribute)
Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: D5C6DF842DAEECD8
Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 0a33e83e-5b7a-4865-964a-8d1c3bbf9ae3
Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: x-attribute1
Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000F (Delete Attribute)
Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 572D4F0D433DAB10
Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 0a33e83e-5b7a-4865-964a-8d1c3bbf9ae3
Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: x-attribute2

42007801000001304200770100000038420069010000002042006A020000000400000001000000042006B0200000004000000000000042000D020000000400000002000000042000F010000007042005C05000000040000000F00000000420093080000008D5C6DF842DAEECD84200790100000048420094070000002430613333653833652D356237612D343836352D393634612D386431633362626639616533000000042000A070000000C782D617474726962757465310000000042000F010000007042005C05000000040000000F000000004200930800000008572D4F0D433DAB104200790100000048420094070000002430613333653833652D356237612D343836352D393634612D386431633362626639616533000000042000A070000000C782D6174747269627574653200000000

Out: uuidKey, attributeNames={x-attribute1}

Out: uuidKey, attributeNames={x-attribute2}

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004AFBED26 (Thu Nov 12 12:10:30 CET 2009)
Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000002 (2)
Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000F (Delete Attribute)
Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: D5C6DF842DAEECD8
Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 0a33e83e-5b7a-4865-964a-8d1c3bbf9ae3
Tag: Attribute (0x420008), Type: Structure (0x01), Data:
Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: x-attribute1

Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: ModifiedValue1
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000F (Delete Attribute)
 Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 572D4F0D433DAB10
 Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
 Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 0a33e83e-5b7a-4865-964a-8d1c3bbf9ae3
 Tag: Attribute (0x420008), Type: Structure (0x01), Data:
 Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: x-attribute2
 Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: ModifiedValue2

42007B01000001A042007A0100000048420069010000002042006A02000000400000001000000042006B020000004000000000000042009209000000800000004AFBED264200D02000000400000002000000042000F01000000A042005C05000000040000000F00000000420093080000008D5C6DF842DAEED842007F05000000400000000000000042007C0100000068420094070000002430613333653833652D356237612D343836352D393634612D3864316333626266396165330000000420008010000003042000A07000000C782D61747472696275746531000000042000B07000000E4D6F64696669656456616C756531000042000F01000000A042005C0500000040000000F0000000420093080000008572D4F0D433DAB1042007F05000000400000000000000042007C0100000068420094070000002430613333653833652D356237612D343836352D393634612D3864316333626266396165330000000420008010000003042000A07000000C782D61747472696275746532000000042000B07000000E4D6F64696669656456616C7565320000

8

Client A:
Destroy (symmetric key)
In: uuidKey

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
 Tag: Request Header (0x420077), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
 Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 0a33e83e-5b7a-4865-964a-8d1c3bbf9ae3

42007801000000904200770100000038420069010000002042006A02000000400000001000000042006B02000000400000000000004200D02000000400000001000000042000F010000004842005C0500000040000001400000004200790100000030420094070000002430613333653833652D356237612D343836352D393634612D38643163336262663961653300000000

Out: uuidKey

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
 Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x00000004AFBED27 (Thu Nov 12 12:10:31 CET 2009)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
 Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
 Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 0a33e83e-5b7a-4865-964a-8dlc3bbf9ae3

42007B01000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B0200000004000000000000004200920900000008000000004AFBED2742000D0200000004000000010000000042000F010000005842005C0500000004000000140000000042007F050000000400000000000000000000042007C0100000030420094070000002430613333653833652D356237612D343836352D393634612D38643163336262663961653300000000

9 Client A:
 Get (symmetric key)
 In: uuidKey

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
 Tag: Request Header (0x420077), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)
 Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 0a33e83e-5b7a-4865-964a-8dlc3bbf9ae3

42007801000000904200770100000038420069010000002042006A0200000004000000010000000042006B02000000040000000000000042000D02000000040000000010000000042000F010000004842005C05000000040000000A000000004200790100000030420094070000002430613333653833652D356237612D343836352D393634612D38643163336262663961653300000000

Out: Operation Failed, Item Not Found

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
 Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x00000004AFBED27 (Thu Nov 12 12:10:31 CET 2009)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)
 Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000001 (Operation Failed)
 Tag: Result Reason (0x42007E), Type: Enumeration (0x05), Data: 0x00000001 (Item Not Found)
 Tag: Result Message (0x42007D), Type: Text String (0x07), Data: Object does not exist

42007B01000000A842007A0100000048420069010000002042006A0200000004000000010000000042006B0200000004000000000000004200920900000008000000004AFBED2742000D0200000004000000010000000042000F010000005042005C0500000004000000A000000042007F050000000400000001000000042007E0500000004000000010000000420

	07D07000000154F626A65637420646F6573206E6F74206578697374000000
10	<p>Client A: Destroy (template) In: uuidTemplate</p> <p>Tag: Request Message (0x420078), Type: Structure (0x01), Data: Tag: Request Header (0x420077), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Batch Item (0x42000F), Type: Structure (0x01), Data: Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy) Tag: Request Payload (0x420079), Type: Structure (0x01), Data: Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 45d8629a-9ad1-41b3-9d09-941f2a595da3</p> <p>42007801000000904200770100000038420069010000002042006A0200000004000000010000000042006B020000000400000000000042000D020000000400000001000000042000F010000004842005C050000000400000014000000004200790100000030420094070000002434356438363239612D396164312D343162332D396430392D39343166326135393564613300000000</p> <p>Out: uuidTemplate</p> <p>Tag: Response Message (0x42007B), Type: Structure (0x01), Data: Tag: Response Header (0x42007A), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004AFBED27 (Thu Nov 12 12:10:31 CET 2009) Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Batch Item (0x42000F), Type: Structure (0x01), Data: Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy) Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success) Tag: Response Payload (0x42007C), Type: Structure (0x01), Data: Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 45d8629a-9ad1-41b3-9d09-941f2a595da3</p> <p>42007B01000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040000000000004200920900000008000000004AFBED2742000D0200000004000000010000000042000F010000005842005C0500000004000000140000000042007F0500000004000000000000000042007C0100000030420094070000002434356438363239612D396164312D343162332D396430392D39343166326135393564613300000000</p>
11	<p>Client A: Get (template) In: uuidTemplate</p> <p>Tag: Request Message (0x420078), Type: Structure (0x01), Data: Tag: Request Header (0x420077), Type: Structure (0x01), Data:</p>


```

Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
  Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
  Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)
  Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
    Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 45d8629a-9ad1-41b3-9d09-941f2a595da3

42007801000000904200770100000038420069010000002042006A0200000004000000010000000042006B02000000040
0000000000000042000D0200000004000000010000000042000F010000004842005C05000000040000000A0000000042
00790100000030420094070000002434356438363239612D396164312D343162332D396430392D3934316632613539356
4613300000000

Out: Operation Failed, Item Not Found

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004AFBED27 (Thu Nov 12
12:10:31 CET 2009)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
    Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
      Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)
      Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000001 (Failed)
      Tag: Result Reason (0x42007E), Type: Enumeration (0x05), Data: 0x00000001 (Item Not Found)
      Tag: Result Message (0x42007D), Type: Text String (0x07), Data: No Cryptographic Object found
with given Unique Identifier

42007B01000000D042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040
000000000000004200920900000008000000004AFBED2742000D0200000004000000010000000042000F010000007842
005C05000000040000000A0000000042007F0500000004000000010000000042007E05000000040000000100000000420
07D070000003A4E6F2043727970746F67726170686963204F626A65637420666F756E64207769746820676976656E2055
6E69717565204964656E7469666965720000000000000

```

117

118 **3.1.5 Use-case: Register / Destroy Secret Data**

119 In this use-case the client issues a Register request containing a Secret Data object, whereby the server
120 registers the object and returns the Unique Identifier. To clean up, the client then performs a Destroy
121 operation to destroy the object.

122

Time	Request/Response messages
0	Register (secret data) In: objectType='00000007' (Secret Data), attributes={ CryptographicUsageMask='00000002' } Tag: Request Message (0x420078), Type: Structure (0x01), Data:

Tag: Request Header (0x420077), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000003 (Register)
 Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
 Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000007 (Secret Data)
 Tag: Template-Attribute (0x420091), Type: Structure (0x01), Data:
 Tag: Attribute (0x420008), Type: Structure (0x01), Data:
 Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Usage
 Mask
 Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x00000002 (Verify)
 Tag: Secret Data (0x420085), Type: Structure (0x01), Data:
 Tag: Secret Data Type (0x420086), Type: Enumeration (0x05), Data: 0x00000001
 Tag: Key Block (0x420040), Type: Structure (0x01), Data:
 Tag: Key Format Type (0x420042), Type: Enumeration (0x05), Data: 0x00000002
 Tag: Key Value (0x420045), Type: Structure (0x01), Data:
 Tag: Key Material (0x420043), Type: Octet String (0x08), Data:
 53656372657450617373776F7264

42007801000001004200770100000038420069010000002042006A0200000004000000010000000042006B0200000004
 000000000000000042000D0200000004000000010000000042000F01000000B842005C05000000040000000300000000
 42007901000000A0420057050000000400000007000000004200910100000038420008010000003042000A0700000018
 43727970746F67726170686963205573616765204D61736B42000B020000000400000002000000004200850100000048
 420086050000000400000001000000004200400100000030420042050000000400000002000000004200450100000018
 420043080000000E53656372657450617373776F72640000

Out: uuidObject

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
 Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B7924D1 (Mon Feb 15
 11:41:21 CET 2010)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000003 (Register)
 Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
 Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 39622cc2-e5d4-4da9-
 9f10-3bdf64b0e760

42007B01000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B0200000004
 00000000000000004200920900000008000000004B7924D142000D0200000004000000010000000042000F0100000058
 42005C0500000004000000030000000042007F0500000004000000000000000042007C01000000304200940700000024
 33393632326363322D653564342D346461392D396631302D33626466363462306537363000000000

1	<p>Destroy (secret data)</p> <p>In: uuidObject</p>
---	---

```

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
  Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
    Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 39622cc2-e5d4-4da9-9f10-3bdf64b0e760

```

```

42007801000000904200770100000038420069010000002042006A0200000004000000010000000042006B0200000004
000000000000000042000D0200000004000000010000000042000F010000004842005C050000000400000001400000000
4200790100000030420094070000002433393632326363322D653564342D346461392D396631302D3362646636346230
6537363000000000

```

Out: uuidKey

```

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B7924D1 (Mon Feb 15 11:41:21 CET 2010)
  Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
  Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
    Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 39622cc2-e5d4-4da9-9f10-3bdf64b0e760

```

```

42007B01000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B0200000004
00000000000000004200920900000008000000004B7924D142000D0200000004000000010000000042000F0100000058
42005C0500000004000000140000000042007F050000000400000000000000000042007C01000000304200940700000024
33393632326363322D653564342D346461392D396631302D33626466363462306537363000000000

```

123

124

125 **3.2 Use-case: Asynchronous Locate**

126 This use-case tests the asynchronous capabilities of KMIP using the Locate operation. A key is created
 127 and then a Locate request is sent containing the Name of the created key and with the message header
 128 Asynchronous Indicator-field set to True. If the server returns an asynchronous response to the Locate,
 129 the client then polls the server until the operation is ready. If the server responded asynchronously, a
 130 subsequent Locate operation that is also handled asynchronously is then Cancelled, before the key is
 131 finally destroyed.

132

133 This use-case shows the use of two clients with the same assumptions as in the use-case described in
 134 Section 3.1.4 Since the client is unable to force the server to respond asynchronously, it is possible for a
 135 server to respond synchronously to the requests issued at times 1 and 4, in which case the expected
 136 response are the ones shown at times 2 and 5, respectively. In the case of the server not responding
 137 asynchronously to the Locate requests, the client is permitted to skip the requests illustrated at time 7 and
 138 8.
 139

Time	Client A
0	<p>Client A: Create (symmetric key) In: objectType = '00000002', attributes={ CryptographicAlgorithm='AES', CryptographicLength='128', Name={ NameValue='Key1', NameType='00000001' }, CryptographicUsageMask='00000004', ObjectGroup='Group1' }</p> <p>Tag: Request Message (0x420078), Type: Structure (0x01), Data: Tag: Request Header (0x420077), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Batch Item (0x42000F), Type: Structure (0x01), Data: Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create) Tag: Request Payload (0x420079), Type: Structure (0x01), Data: Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key) Tag: Template-Attribute (0x420091), Type: Structure (0x01), Data: Tag: Attribute (0x420008), Type: Structure (0x01), Data: Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Algorithm Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000003 (AES) Tag: Attribute (0x420008), Type: Structure (0x01), Data: Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Length Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x00000080 (128) Tag: Attribute (0x420008), Type: Structure (0x01), Data: Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data: Tag: Name Value (0x420055), Type: Text String (0x07), Data: Key1 Tag: Name Type (0x420054), Type: Enumeration (0x05), Data: 0x00000001 (Uninterpreted text string) Tag: Attribute (0x420008), Type: Structure (0x01), Data: Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Usage Mask Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x00000004 (Encrypt) Tag: Attribute (0x420008), Type: Structure (0x01), Data: Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Object Group Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: Group1</p> <p>42007801000001904200770100000038420069010000002042006A0200000004000000010000000042006B02000000040 0000000000000042000D0200000004000000010000000042000F010000014842005C0500000004000000010000000042 00790100000130420057050000000400000002000000004200910100000118420008010000003042000A0700000017437 27970746F6772617068696320416C676F726974686D0042000B0500000004000000030000000042000801000000304200 0A070000001443727970746F67726170686963204C656E677468000000042000B020000000400000080000000042000</p>

```

8010000003842000A07000000044E616D65000000042000B010000002042005507000000044B65793100000000420054
05000000040000000100000000420008010000003042000A070000001843727970746F677261706869632055736167652
04D61736B42000B0200000004000000040000000420008010000002842000A070000000C4F626A6563742047726F7570
0000000042000B070000000647726F7570310000

Out: objectType = '00000002', uuidKey

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004AFBED28 (Thu Nov 12
12:10:32 CET 2009)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
    Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
      Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create)
      Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
      Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
        Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)
        Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 95a0e6b3-8edc-4ffb-a88e-
e164539dbcca

42007B010000000C042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040
0000000000000420092090000008000000004AFBED2842000D0200000004000000010000000042000F010000006842
005C0500000004000000010000000042007F05000000040000000000000042007C01000000404200570500000004000
0000200000000420094070000002439356130653662332D386564632D346666622D613838652D65313634353339646263
636100000000

```

```

1 Client B:
Locate (symmetric key by name)
In: asynchronousIndicator='TRUE', attributes={ objectType = '00000002', Name={ Name='Key1',
NameType='00000001' } }

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Asynchronous Indicator (0x420007), Type: Boolean (0x06), Data: TRUE
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
    Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
      Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)
      Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
        Tag: Attribute (0x420008), Type: Structure (0x01), Data:
          Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Object Type
          Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric
Key)
        Tag: Attribute (0x420008), Type: Structure (0x01), Data:
          Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name
          Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:
            Tag: Name Value (0x420055), Type: Text String (0x07), Data: Key1

```

	<p>Tag: Name Type (0x420054), Type: Enumeration (0x05), Data: 0x00000001 (Uninterpreted text string)</p> <p>42007801000000E04200770100000048420069010000002042006A0200000004000000010000000042006B020000000400000000000000420007060000000800000000000000142000D0200000004000000010000000042000F010000008842005C050000000400000008000000004200790100000070420008010000002842000A070000000B4F626A656374205479706500000000042000B05000000040000000200000000420008010000003842000A07000000044E616D650000000042000B010000002042005507000000044B6579310000000042005405000000040000000100000000</p> <p>Out: asyncCorrValue1</p> <p>Tag: Response Message (0x42007B), Type: Structure (0x01), Data:</p> <p>Tag: Response Header (0x42007A), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)</p> <p>Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004AFBED28 (Thu Nov 12 12:10:32 CET 2009)</p> <p>Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:</p> <p>Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)</p> <p>Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000002 (Pending)</p> <p>Tag: Asynchronous Correlation Value (0x420006), Type: Octet String (0x08), Data: 130BC369AF005A7F</p> <p>42007B010000008842007A0100000048420069010000002042006A0200000004000000010000000042006B0200000004000000000000004200092090000008000000004AFBED2842000D0200000004000000010000000042000F010000003042005C0500000004000000080000000042007F050000000400000002000000004200060800000008130BC369AF005A7F</p>
2	<p>Client B:</p> <p>Poll*</p> <p>In: asyncCorrValue1</p> <p>Tag: Request Message (0x420078), Type: Structure (0x01), Data:</p> <p>Tag: Request Header (0x420077), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)</p> <p>Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:</p> <p>Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000001A (Poll)</p> <p>Tag: Request Payload (0x420079), Type: Structure (0x01), Data:</p> <p>Tag: Asynchronous Correlation Value (0x420006), Type: Octet String (0x08), Data: 130BC369AF005A7F</p> <p>42007801000000704200770100000038420069010000002042006A0200000004000000010000000042006B02000000040000000000000042000D020000000400000001000000002842005C050000000400000001A0000000042007901000000104200060800000008130BC369AF005A7F</p> <p>Out: uuidKey1</p> <p>Tag: Response Message (0x42007B), Type: Structure (0x01), Data:</p>

```

Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
  Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
    Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
    Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
  Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004AFBED28 (Thu Nov 12 12:10:32 CET 2009)
  Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)
    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
  Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
    Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 95a0e6b3-8edc-4ffb-a88e-e164539dbcca

42007B01000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040
000000000000004200920900000008000000004AFBED2842000D0200000004000000010000000042000F0100000005842
005C0500000004000000080000000042007F05000000040000000000000042007C01000000304200940700000024393
56130653662332D386564632D346666622D613838652D65313634353339646263636100000000

```

3

Client B:
Get (symmetric key)
In: uuidKey1

```

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)
  Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
    Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 95a0e6b3-8edc-4ffb-a88e-e164539dbcca

42007801000000904200770100000038420069010000002042006A0200000004000000010000000042006B02000000040
0000000000000042000D0200000004000000010000000042000F010000004842005C05000000040000000A0000000042
00790100000030420094070000002439356130653662332D386564632D346666622D613838652D6531363435333964626
3636100000000

Out: objectType = '00000002', uuidKey1, symmetricKey

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004AFBED29 (Thu Nov 12 12:10:33 CET 2009)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)

```

Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)

Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:

Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)

Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 95a0e6b3-8edc-4ffb-a88e-e164539dbcca

Tag: Symmetric Key (0x42008F), Type: Structure (0x01), Data:

Tag: Key Block (0x420040), Type: Structure (0x01), Data:

Tag: Key Format Type (0x420042), Type: Enumeration (0x05), Data: 0x00000001

Tag: Key Value (0x420045), Type: Structure (0x01), Data:

Tag: Key Material (0x420043), Type: Octet String (0x08), Data: BEF01F82DFB4682A01C2A08413834AAB

Tag: Cryptographic Algorithm (0x420028), Type: Enumeration (0x05), Data: 0x00000003 (AES)

Tag: Cryptographic Length (0x42002A), Type: Integer (0x02), Data: 0x00000080 (128)

42007B010000012042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040000000000000420092090000008000000004AFBED2942000D0200000004000000010000000042000F01000000C842005C05000000040000000A0000000042007F05000000040000000000000042007C01000000A042005705000000040000000000000420094070000002439356130653662332D386564632D346666622D613838652D6531363435333964626363610000000042008F010000005842004001000000504200420500000004000000010000000042004501000000184200430800000010BEF01F82DFB4682A01C2A08413834AAB4200280500000004000000030000000042002A02000000040000008000000000

4 Client B:
 Locate (symmetric key by group)
 In: asynchronousIndicator='TRUE', attributes={ objectType = '00000002', ObjectGroup='Group1' }

Tag: Request Message (0x420078), Type: Structure (0x01), Data:

Tag: Request Header (0x420077), Type: Structure (0x01), Data:

Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:

Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

Tag: Asynchronous Indicator (0x420007), Type: Boolean (0x06), Data: TRUE

Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)

Tag: Request Payload (0x420079), Type: Structure (0x01), Data:

Tag: Attribute (0x420008), Type: Structure (0x01), Data:

Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Object Type

Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)

Tag: Attribute (0x420008), Type: Structure (0x01), Data:

Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Object Group

Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: Group1

42007801000000D04200770100000048420069010000002042006A0200000004000000010000000042006B02000000040000000000000042000F010000007842005C050000000400000008000000004200790100000060420008010000002842000A070000000B4F626A656374205479706500000000042000B0500000004000000020000000420008010000002842000A070000000C4F626A6563742047726F7570000000042000B070000000647726F7570310000

Out: asyncCorrValue2

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
 Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004AFBED29 (Thu Nov 12 12:10:33 CET 2009)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)
 Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000002 (Pending)
 Tag: Asynchronous Correlation Value (0x420006), Type: Octet String (0x08), Data: 48D43C207CD1FB3A

42007B010000008842007A0100000048420069010000002042006A0200000004000000010000000042006B0200000004000000000000004200920900000008000000004AFBED2942000D0200000004000000010000000042000F010000003042005C0500000004000000080000000042007F05000000040000000200000000420006080000000848D43C207CD1FB3A

5 **Client B:**
Poll*
In: asyncCorrValue2

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
 Tag: Request Header (0x420077), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000001A (Poll)
 Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
 Tag: Asynchronous Correlation Value (0x420006), Type: Octet String (0x08), Data: 48D43C207CD1FB3A

42007801000000704200770100000038420069010000002042006A0200000004000000010000000042006B02000000040000000000000042000D0200000004000000010000000042000F010000002842005C050000000400000001A000000004200790100000010420006080000000848D43C207CD1FB3A

Out: uuidKey2

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
 Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004AFBED29 (Thu Nov 12 12:10:33 CET 2009)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)
 Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)

Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 95a0e6b3-8edc-4ffb-a88e-e164539dbcca

42007B01000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040
 00000000000000420092090000000800000004AFBED2942000D02000000400000010000000042000F010000005842
 005C050000000400000008000000042007F05000000040000000000000042007C01000000304200940700000024393
 56130653662332D386564632D346666622D613838652D65313634353339646263636100000000

6 **Client B:**
Get (symmetric key)
In: uuidKey2

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
 Tag: Request Header (0x420077), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)
 Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 95a0e6b3-8edc-4ffb-a88e-e164539dbcca

42007801000000904200770100000038420069010000002042006A0200000004000000010000000042006B02000000040
 0000000000000042000D0200000004000000010000000042000F010000004842005C05000000040000000A0000000042
 00790100000030420094070000002439356130653662332D386564632D346666622D613838652D6531363435333964626
 36361000000000

Out: objectType = '00000002', uuidKey2, symmetricKey

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
 Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004AFBED29 (Thu Nov 12 12:10:33 CET 2009)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)
 Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
 Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
 Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 95a0e6b3-8edc-4ffb-a88e-e164539dbcca
 Tag: Symmetric Key (0x42008F), Type: Structure (0x01), Data:
 Tag: Key Block (0x420040), Type: Structure (0x01), Data:
 Tag: Key Format Type (0x420042), Type: Enumeration (0x05), Data: 0x00000001
 Tag: Key Value (0x420045), Type: Structure (0x01), Data:
 Tag: Key Material (0x420043), Type: Octet String (0x08), Data:

BEF01F82DFB4682A01C2A08413834AAB

Tag: Cryptographic Algorithm (0x420028), Type: Enumeration (0x05), Data: 0x00000003 (AES)

Tag: Cryptographic Length (0x42002A), Type: Integer (0x02), Data: 0x00000080 (128)

42007B010000012042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040000000000000420092090000008000000004AFBED294200D0200000004000000010000000042000F01000000C842005C05000000040000000A0000000042007F050000000400000000000000042007C01000000A042005705000000040000000000000420094070000002439356130653662332D386564632D346666622D613838652D6531363435333964626363610000000042008F010000005842004001000000504200420500000004000000010000000042004501000000184200430800000010BEF01F82DFB4682A01C2A08413834AAB4200280500000004000000030000000042002A02000000040000000800000000

7

Client B:

Locate (symmetric key by name)

In: asynchronousIndicator='TRUE', attributes={ objectType = '0000002', Name= { Name='Key1', NameType='0000001' } }

Tag: Request Message (0x420078), Type: Structure (0x01), Data:

Tag: Request Header (0x420077), Type: Structure (0x01), Data:

Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:

Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

Tag: Asynchronous Indicator (0x420007), Type: Boolean (0x06), Data: TRUE

Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)

Tag: Request Payload (0x420079), Type: Structure (0x01), Data:

Tag: Attribute (0x420008), Type: Structure (0x01), Data:

Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Object Type

Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)

Tag: Attribute (0x420008), Type: Structure (0x01), Data:

Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name

Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:

Tag: Name Value (0x420055), Type: Text String (0x07), Data: Key1

Tag: Name Type (0x420054), Type: Enumeration (0x05), Data: 0x00000001 (Uninterpreted text string)

42007801000000E04200770100000048420069010000002042006A0200000004000000010000000042006B0200000004000000000000042009209000000800000000000000142000D0200000004000000010000000042000F0100000008842005C050000000400000008000000004200790100000070420008010000002842000A070000000B4F626A656374205479706500000000042000B05000000040000000200000000420008010000003842000A07000000044E616D650000000042000B0100000002042005507000000044B6579310000000042005405000000040000000100000000

Out: asyncCorrValue5

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:

Tag: Response Header (0x42007A), Type: Structure (0x01), Data:

Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:

Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004AFBED29 (Thu Nov 12

12:10:33 CET 2009)

Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)

Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000002 (Pending)

Tag: Asynchronous Correlation Value (0x420006), Type: Octet String (0x08), Data: 4D6BBFC35FE57FBA

42007B010000008842007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040000000000000420092090000008000000004AFBED2942000D0200000004000000010000000042000F010000003042005C0500000004000000080000000042007F0500000004000000020000000042000608000000084D6BBFC35FE57FBA

8

Client B:

Cancel

In: asyncCorrValue5

Tag: Request Message (0x420078), Type: Structure (0x01), Data:

Tag: Request Header (0x420077), Type: Structure (0x01), Data:

Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:

Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000019 (Cancel)

Tag: Request Payload (0x420079), Type: Structure (0x01), Data:

Tag: Asynchronous Correlation Value (0x420006), Type: Octet String (0x08), Data: 4D6BBFC35FE57FBA

42007801000000704200770100000038420069010000002042006A0200000004000000010000000042006B0200000004000000000000042000D0200000004000000010000000042000F010000002842005C05000000040000001900000000420079010000001042000608000000084D6BBFC35FE57FBA

Out: asyncCorrValue5, CancelResult='00000001'

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:

Tag: Response Header (0x42007A), Type: Structure (0x01), Data:

Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:

Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004AFBED29 (Thu Nov 12 12:10:33 CET 2009)

Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000019 (Cancel)

Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)

Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:

Tag: Asynchronous Correlation Value (0x420006), Type: Octet String (0x08), Data: 4D6BBFC35FE57FBA

Tag: Cancellation Result (0x420012), Type: Enumeration (0x05), Data: 0x00000001 (Cancelled)

42007B01000000A042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040000000000000420092090000008000000004AFBED2942000D0200000004000000010000000042000F010000004842005C0500000004000000080000000042007F0500000004000000020000000042000608000000084D6BBFC35FE57FBA

	005C0500000004000000190000000042007F05000000040000000000000042007C01000000204200608000000084D6 BBFC35FE57FBA42001205000000040000000100000000
9	<p>Client A: Destroy (symmetric key) In: uuidKey</p> <p>Tag: Request Message (0x420078), Type: Structure (0x01), Data: Tag: Request Header (0x420077), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Batch Item (0x42000F), Type: Structure (0x01), Data: Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy) Tag: Request Payload (0x420079), Type: Structure (0x01), Data: Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 95a0e6b3-8edc-4ffb-a88e-e164539dbcca</p> <p>42007801000000904200770100000038420069010000002042006A0200000004000000010000000042006B02000000040 0000000000000042000D0200000004000000010000000042000F010000004842005C05000000040000000140000000042 00790100000030420094070000002439356130653662332D386564632D346666622D613838652D6531363435333964626 3636100000000</p> <p>Out: uuidKey</p> <p>Tag: Response Message (0x42007B), Type: Structure (0x01), Data: Tag: Response Header (0x42007A), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004AFBED2A (Thu Nov 12 12:10:34 CET 2009) Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Batch Item (0x42000F), Type: Structure (0x01), Data: Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy) Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success) Tag: Response Payload (0x42007C), Type: Structure (0x01), Data: Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 95a0e6b3-8edc-4ffb-a88e-e164539dbcca</p> <p>42007B01000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040 000000000000004200920900000008000000004AFBED2A42000D0200000004000000010000000042000F010000005842 005C0500000004000000140000000042007F050000000400000000000000000042007C01000000304200940700000024393 56130653662332D386564632D346666622D613838652D65313634353339646263636100000000</p>

140 * = executed until response is ready

141

142

143 **4 Key life cycle support**

144

145 **4.1 Use-case: Revoke scenario**

146 This use-case tests the revocation aspect of the key life cycle support in KMIP. A key is created and a
 147 Get Attribute for the State-attribute reveals that the key is in Pre-active state. The Activation Date is then
 148 set, which changes the state to Active. The key is then revoked with a revocation reason of Compromised
 149 and the state subsequently changed to Compromised, but this does not stop a client from being able to
 150 add, modify and delete attributes or even get the key (since we assume here that the out-of-band
 151 registration has been used to make the server aware of the fact that the client is capable of interpreting
 152 the attributes of the key and determining what it is allowed to do with the key). To clean up, the created
 153 key is finally destroyed.
 154

Time	Client
0	<p>Client A: Create (symmetric key) In: objectType = '00000002', attributes={ CryptographicAlgorithm='AES', CryptographicLength='128', Name={ NameValue='Key1', NameType='00000001' }, CryptographicUsageMask='00000004' }</p> <p>Tag: Request Message (0x420078), Type: Structure (0x01), Data: Tag: Request Header (0x420077), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Batch Item (0x42000F), Type: Structure (0x01), Data: Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create) Tag: Request Payload (0x420079), Type: Structure (0x01), Data: Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key) Tag: Template-Attribute (0x420091), Type: Structure (0x01), Data: Tag: Attribute (0x420008), Type: Structure (0x01), Data: Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Algorithm Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000003 (AES) Tag: Attribute (0x420008), Type: Structure (0x01), Data: Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Length Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x00000080 (128) Tag: Attribute (0x420008), Type: Structure (0x01), Data: Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data: Tag: Name Value (0x420055), Type: Text String (0x07), Data: Key1 Tag: Name Type (0x420054), Type: Enumeration (0x05), Data: 0x00000001 (Uninterpreted text string) Tag: Attribute (0x420008), Type: Structure (0x01), Data: Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Usage Mask Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x00000004 (Encrypt)</p> <p>42007801000001604200770100000038420069010000002042006A0200000004000000010000000042006B02000000040 000000000000042000D0200000004000000010000000042000F010000011842005C0500000004000000010000000042 007901000001004200570500000004000000020000000042009101000000E8420008010000003042000A0700000017437 27970746F6772617068696320416C676F726974686D0042000B050000000400000030000000042000801000000304200 0A070000001443727970746F67726170686963204C656E677468000000042000B0200000004000000800000000042000 8010000003842000A07000000044E616D650000000042000B010000002042005507000000044B6579310000000420054</p>


```

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004AFBED2B (Thu Nov 12
12:10:35 CET 2009)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
    Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
      Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)
      Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 21d28b8a-06df-43c0-b72f-
2a161633ada9
      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: State
        Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000001 (Pre-Active)

42007B01000000D842007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040
000000000000004200920900000008000000004AFBED2B42000D0200000004000000010000000042000F0100000008042
005C05000000040000000B0000000042007F050000000400000000000000042007C01000000584200940700000024323
16432386238612D303664662D343363302D623732662D3261313631363333616461390000000042000801000000204200
0A0700000005537461746500000042000B05000000040000000100000000

```

2

Client A:
Activate
In: uuidKey

```

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
    Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
      Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000012 (Activate)
      Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
        Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 21d28b8a-06df-43c0-b72f-
2a161633ada9

42007801000000904200770100000038420069010000002042006A0200000004000000010000000042006B02000000040
0000000000000042000D0200000004000000010000000042000F010000004842005C05000000040000000120000000042
00790100000030420094070000002432316432386238612D303664662D343363302D623732662D3261313631363333616
46139000000000

Out: uuidKey

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

```


Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004AFBED2B (Thu Nov 12 12:10:35 CET 2009)

Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000012 (Activate)

Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)

Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:

Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 21d28b8a-06df-43c0-b72f-2a161633ada9

42007B01000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B020000000400000000000004200920900000008000000004AFBED2B42000D0200000004000000010000000042000F010000005842005C0500000004000000120000000042007F050000000400000000000000042007C0100000030420094070000002432316432386238612D303664662D343363302D623732662D32613136313633336164613900000000

3

Client A:

Get attribute

In: uuidKey, attributeName={ 'State' }

Tag: Request Message (0x420078), Type: Structure (0x01), Data:

Tag: Request Header (0x420077), Type: Structure (0x01), Data:

Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:

Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)

Tag: Request Payload (0x420079), Type: Structure (0x01), Data:

Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 21d28b8a-06df-43c0-b72f-2a161633ada9

Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: State

42007801000000A04200770100000038420069010000002042006A0200000004000000010000000042006B020000000400000000000004200920900000004000000004000000010000000042000F010000005842005C050000000400000000B000000004200790100000040420094070000002432316432386238612D303664662D343363302D623732662D3261313631363333616461390000000042000A07000000055374617465000000

Out: uuidKey, attribute={ State='00000002' }

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:

Tag: Response Header (0x42007A), Type: Structure (0x01), Data:

Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:

Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004AFBED2B (Thu Nov 12 12:10:35 CET 2009)

Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)

Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)

Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:

Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 21d28b8a-06df-43c0-b72f-

2a161633ada9

Tag: Attribute (0x420008), Type: Structure (0x01), Data:

Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: State

Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000002 (Active)

42007B01000000D842007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040000000000000420092090000008000000004AFBED2B42000D0200000004000000010000000042000F0100000008042005C05000000040000000B0000000042007F050000000400000000000000042007C0100000058420094070000002432316432386238612D303664662D343363302D623732662D32613136313633336164613900000000420008010000002042000A0700000005537461746500000042000B05000000040000000200000000

4

Client B:

Locate (symmetric key by name)

In: objectType = '00000002', attributes={ Name={ Name='Key1', NameType='00000001' } }

Tag: Request Message (0x420078), Type: Structure (0x01), Data:

Tag: Request Header (0x420077), Type: Structure (0x01), Data:

Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:

Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)

Tag: Request Payload (0x420079), Type: Structure (0x01), Data:

Tag: Attribute (0x420008), Type: Structure (0x01), Data:

Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Object Type

Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)

Tag: Attribute (0x420008), Type: Structure (0x01), Data:

Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name

Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:

Tag: Name Value (0x420055), Type: Text String (0x07), Data: Key1

Tag: Name Type (0x420054), Type: Enumeration (0x05), Data: 0x00000001 (Uninterpreted text string)

42007801000000D04200770100000038420069010000002042006A0200000004000000010000000042006B0200000004000000000000042000D0200000004000000010000000042000F010000008842005C050000000400000008000000004200790100000070420008010000002842000A070000000B4F626A656374205479706500000000042000B050000000400000000000000420008010000003842000A07000000044E616D65000000042000B010000002042005507000000044B6579310000000042005405000000040000000100000000

Out: uuidKey

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:

Tag: Response Header (0x42007A), Type: Structure (0x01), Data:

Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:

Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004AFBED2B (Thu Nov 12 12:10:35 CET 2009)

Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)
 Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
 Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 21d28b8a-06df-43c0-b72f-2a161633ada9

42007B01000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040000000000000420092090000008000000004AFBED2B42000D0200000004000000010000000042000F010000005842005C050000000400000008000000042007F050000000400000000000000042007C0100000030420094070000002432316432386238612D303664662D343363302D623732662D32613136313633336164613900000000

5

Client B:
Get (symmetric key)
In: uuidKey

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
 Tag: Request Header (0x420077), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)
 Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 21d28b8a-06df-43c0-b72f-2a161633ada9

42007801000000904200770100000038420069010000002042006A0200000004000000010000000042006B0200000004000000000000042000D0200000004000000010000000042000F010000004842005C05000000040000000A0000000004200790100000030420094070000002432316432386238612D303664662D343363302D623732662D32613136313633336164613900000000

Out: objectType = '00000002', uuidKey, symmetricKey

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
 Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004AFBED2B (Thu Nov 12 12:10:35 CET 2009)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)
 Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
 Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
 Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 21d28b8a-06df-43c0-b72f-2a161633ada9
 Tag: Symmetric Key (0x42008F), Type: Structure (0x01), Data:
 Tag: Key Block (0x420040), Type: Structure (0x01), Data:
 Tag: Key Format Type (0x420042), Type: Enumeration (0x05), Data: 0x00000001

Tag: Key Value (0x420045), Type: Structure (0x01), Data:
 Tag: Key Material (0x420043), Type: Octet String (0x08), Data:
 EF7833AB15F5A1EE5874BC0D9BBC4BE7

Tag: Cryptographic Algorithm (0x420028), Type: Enumeration (0x05), Data: 0x00000003 (AES)

Tag: Cryptographic Length (0x42002A), Type: Integer (0x02), Data: 0x00000080 (128)

42007B010000012042007A0100000048420069010000002042006A0200000004000000010000000042006B0200000004000000000000042009209000000800000004AFBED2B42000D02000000400000001000000042000F01000000C842005C050000004000000A0000000042007F050000000400000000000000042007C01000000A0420057050000004000000000000420094070000002432316432386238612D303664662D343363302D623732662D3261313631363333616461390000000042008F0100000058420040010000005042004205000000400000001000000004200450100000018420043080000010EF7833AB15F5A1EE5874BC0D9BBC4BE742002805000000400000003000000042002A0200000040000000800000000

6

Client B:
Revoke (symmetric key as compromised)
In: uuidKey, RevocationReason='0000002', CompromiseOccurrenceTime='6'

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
 Tag: Request Header (0x420077), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000013 (Revoke)
 Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 21d28b8a-06df-43c0-b72f-2a161633ada9
 Tag: Revocation Reason (0x420081), Type: Structure (0x01), Data:
 Tag: Revocation Reason Code (0x420082), Type: Enumeration (0x05), Data: 0x00000002 (Key Compromise)
 Tag: Compromise Occurrence Date (0x420021), Type: Date-Time (0x09), Data: 0x0000000000000006 (Thu Jan 01 01:00:06 CET 1970)

42007801000000B84200770100000038420069010000002042006A0200000004000000010000000042006B0200000004000000000000042000D02000000400000001000000042000F010000007042005C05000000400000013000000004200790100000058420094070000002432316432386238612D303664662D343363302D623732662D326131363136333361646139000000004200810100000010420082050000004000000020000000042002109000000080000000000000006

Out: uuidKey

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
 Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004AFBED2B (Thu Nov 12 12:10:35 CET 2009)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000013 (Revoke)

Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
 Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 21d28b8a-06df-43c0-b72f-2a161633ada9

42007B01000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B020000000400000000000004200920900000008000000004AFBED2B42000D0200000004000000010000000042000F010000005842005C0500000004000000130000000042007F050000000400000000000000000042007C0100000030420094070000002432316432386238612D303664662D343363302D623732662D32613136313633336164613900000000

7

Client B:
Get attribute
In: uuidKey, attributeName={ 'State' }

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
 Tag: Request Header (0x420077), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)
 Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 21d28b8a-06df-43c0-b72f-2a161633ada9
 Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: State

42007801000000A04200770100000038420069010000002042006A0200000004000000010000000042006B0200000004000000000000042009209000000042000D0200000004000000010000000042000F010000005842005C050000000400000000B000000004200790100000040420094070000002432316432386238612D303664662D343363302D623732662D3261313631363333616461390000000042000A07000000055374617465000000

Out: uuidKey, attribute={ State='00000004' }

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
 Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004AFBED2C (Thu Nov 12 12:10:36 CET 2009)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)
 Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
 Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 21d28b8a-06df-43c0-b72f-2a161633ada9
 Tag: Attribute (0x420008), Type: Structure (0x01), Data:
 Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: State
 Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000004 (Compromised)

42007B01000000D842007A0100000048420069010000002042006A0200000004000000010000000042006B020000000400000000000000420092090000008000000004AFBED2C42000D0200000004000000010000000042000F0100000008042005C0500000004000000B0000000042007F050000000400000000000000000042007C0100000058420094070000002432316432386238612D303664662D343363302D623732662D32613136313633336164613900000000420008010000002042000A0700000005537461746500000042000B05000000040000000400000000

8 **Client A:**
Get attribute list
In: uuidKey

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
 Tag: Request Header (0x420077), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000C (Get Attribute List)
 Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 21d28b8a-06df-43c0-b72f-2a161633ada9

42007801000000904200770100000038420069010000002042006A0200000004000000010000000042006B02000000040000000000000042000D0200000004000000010000000042000F010000004842005C05000000040000000C000000004200790100000030420094070000002432316432386238612D303664662D343363302D623732662D32613136313633336164613900000000

Out: uuidKey, attributes = { * }

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
 Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004AFBED2C (Thu Nov 12 12:10:36 CET 2009)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000C (Get Attribute List)
 Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
 Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 21d28b8a-06df-43c0-b72f-2a161633ada9
 Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Length
 Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Algorithm
 Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: State
 Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Compromise Occurrence Date
 Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Compromise Date
 Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Digest
 Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Initial Date
 Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Activation Date
 Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Revocation Reason

Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Unique Identifier
 Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name
 Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Usage Mask
 Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Object Type
 Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Last Change Date

42007B010000022042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040
 00000000000000420092090000008000000004AFBED2C42000D0200000004000000010000000042000F01000001C842
 005C05000000040000000C0000000042007F0500000004000000000000000042007C01000001A04200940700000024323
 16432386238612D303664662D343363302D623732662D3261313631363333616461390000000042000A07000000144372
 7970746F67726170686963204C656E677468000000042000A070000001743727970746F6772617068696320416C676F7
 26974686D0042000A0700000005537461746500000042000A070000001A436F6D70726F6D697365204F6363757272656E
 636520446174650000000000042000A070000000F436F6D70726F6D69736520446174650042000A07000000064469676
 57374000042000A070000000C496E697469616C2044617465000000042000A070000000F41637469766174696F6E2044
 6174650042000A07000000115265766F636174696F6E20526561736F6E00000000000042000A0700000011556E69717
 565204964656E746966696572000000000000042000A07000000044E616D65000000042000A07000000184372797074
 6F67726170686963205573616765204D61736B42000A070000000B4F626A656374205479706500000000042000A07000
 000104C617374204368616E67652044617465

9 Client A:
 Get attributes
 In: uuidKey, attributeName = { 'State' }

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
 Tag: Request Header (0x420077), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)
 Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 21d28b8a-06df-43c0-b72f-2a161633ada9
 Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: State

42007801000000A04200770100000038420069010000002042006A0200000004000000010000000042006B02000000040
 0000000000000042000D0200000004000000010000000042000F010000005842005C05000000040000000B0000000042
 0079010000000404200940700000002432316432386238612D303664662D343363302D623732662D3261313631363333616
 461390000000042000A07000000055374617465000000

Out: uuidKey, attribute={ State='00000004' }

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
 Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004AFBED2C (Thu Nov 12 12:10:36 CET 2009)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)

Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)

Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:

Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 21d28b8a-06df-43c0-b72f-2a161633ada9

Tag: Attribute (0x420008), Type: Structure (0x01), Data:

Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: State

Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000004 (Compromised)

42007B01000000D842007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040000000000000420092090000008000000004AFBED2C42000D0200000004000000010000000042000F010000008042005C05000000040000000B0000000042007F0500000004000000000000000042007C0100000058420094070000002432316432386238612D303664662D343363302D623732662D32613136313633336164613900000000420008010000002042000A0700000005537461746500000042000B05000000040000000400000000

10 Client A:

Add attribute [batch]

In: uuidKey, attribute={ x-attribute1='Value1' }

In: uuidKey, attribute={ x-attribute2='Value2' }

Tag: Request Message (0x420078), Type: Structure (0x01), Data:

Tag: Request Header (0x420077), Type: Structure (0x01), Data:

Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:

Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000002 (2)

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000D (Add Attribute)

Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 9D407FFB45C95672

Tag: Request Payload (0x420079), Type: Structure (0x01), Data:

Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 21d28b8a-06df-43c0-b72f-2a161633ada9

Tag: Attribute (0x420008), Type: Structure (0x01), Data:

Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: x-attribute1

Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: Value1

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000D (Add Attribute)

Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: D62107C3158409D8

Tag: Request Payload (0x420079), Type: Structure (0x01), Data:

Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 21d28b8a-06df-43c0-b72f-2a161633ada9

Tag: Attribute (0x420008), Type: Structure (0x01), Data:

Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: x-attribute2

Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: Value2

42007801000001604200770100000038420069010000002042006A0200000004000000010000000042006B0200000004000000000000042000F010000008842005C05000000040000000D000000004200930800000089D407FFB45C956724200790100000060420094070000002432316432386238612D303664662D343363302D623732662D32613136313633336164613900000000420008010000002842000A070000000C782D617474726962757465310000000042000B070000000656616C756531000042000F010000008842005C05000000040000000D000000004200930800000089D62107C3158409D84200790100000060420094070000002432316432386238612D303664662D343363302D623732662D32613136313633336164613900000000420008010000002842000A070000000C782D61747472696275746532000000042000B070000000656616C7565320000

Out: uuidKey, attribute={ x-attribute1='Value1' }

Out: uuidKey, attribute={ x-attribute2='Value2' }

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:

 Tag: Response Header (0x42007A), Type: Structure (0x01), Data:

 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:

 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

 Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004AFBED2C (Thu Nov 12 12:10:36 CET 2009)

 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000002 (2)

 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000D (Add Attribute)

 Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 9D407FFB45C95672

 Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)

 Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:

 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 21d28b8a-06df-43c0-b72f-2a161633ada9

 Tag: Attribute (0x420008), Type: Structure (0x01), Data:

 Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: x-attribute1

 Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: Value1

 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000D (Add Attribute)

 Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: D62107C3158409D8

 Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)

 Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:

 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 21d28b8a-06df-43c0-b72f-2a161633ada9

 Tag: Attribute (0x420008), Type: Structure (0x01), Data:

 Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: x-attribute2

 Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: Value2

42007B010000019042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040000000000000420092090000008000000004AFBED2C42000D0200000004000000020000000042000F010000009842005C05000000040000000D0000000042009308000000089D407FFB45C9567242007F0500000004000000000000000000042007C0100000060420094070000002432316432386238612D303664662D343363302D623732662D326131363136333336164613900000000420008010000002842000A070000000C782D617474726962757465310000000042000B070000000656616C756531000042000F010000009842005C05000000040000000D000000004200930800000008D62107C3158409D842007F050000000400000000000000042007C0100000060420094070000002432316432386238612D303664662D343363302D623732662D326131363136333336164613900000000420008010000002842000A070000000C782D61747472696275746531000000042000B070000000656616C7565320000

11 Client A:
 Modify attribute [batch]
 In: uuidKey, attribute={ x-attribute1='ModifiedValue1' }
 In: uuidKey, attribute={ x-attribute2='ModifiedValue2' }

Tag: Request Message (0x420078), Type: Structure (0x01), Data:

 Tag: Request Header (0x420077), Type: Structure (0x01), Data:

 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:

 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000002 (2)

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000E (Modify Attribute)

Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 47FB42CCECA3F6EC

Tag: Request Payload (0x420079), Type: Structure (0x01), Data:

Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 21d28b8a-06df-43c0-b72f-2a161633ada9

Tag: Attribute (0x420008), Type: Structure (0x01), Data:

Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: x-attribute1

Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: ModifiedValue1

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000E (Modify Attribute)

Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 08019A230A05E9E1

Tag: Request Payload (0x420079), Type: Structure (0x01), Data:

Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 21d28b8a-06df-43c0-b72f-2a161633ada9

Tag: Attribute (0x420008), Type: Structure (0x01), Data:

Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: x-attribute2

Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: ModifiedValue2

42007801000001704200770100000038420069010000002042006A0200000004000000010000000042006B020000000400000000000042000D0200000004000000020000000042000F010000009042005C05000000040000000E00000000420093080000000847FB42CCECA3F6EC4200790100000068420094070000002432316432386238612D303664662D343363302D623732662D326131363136333336164613900000000420008010000003042000A070000000C782D617474726962757465310000000042000B070000000E4D6F64696669656456616C756531000042000F010000009042005C0500000004000000E00000000420093080000000808019A230A05E9E14200790100000068420094070000002432316432386238612D303664662D343363302D623732662D326131363136333336164613900000000420008010000003042000A070000000C782D617474726962757465320000000042000B070000000E4D6F64696669656456616C7565320000

Out: uuidKey, attribute={ x-attribute1='ModifiedValue1' }

Out: uuidKey, attribute={ x-attribute2='ModifiedValue2' }

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:

Tag: Response Header (0x42007A), Type: Structure (0x01), Data:

Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:

Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004AFBED2D (Thu Nov 12 12:10:37 CET 2009)

Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000002 (2)

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000E (Modify Attribute)

Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 47FB42CCECA3F6EC

Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)

Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:

Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 21d28b8a-06df-43c0-b72f-2a161633ada9

Tag: Attribute (0x420008), Type: Structure (0x01), Data:

Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: x-attribute1

Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: ModifiedValue1

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000E (Modify Attribute)

Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 08019A230A05E9E1
 Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
 Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 21d28b8a-06df-43c0-b72f-2a161633ada9
 Tag: Attribute (0x420008), Type: Structure (0x01), Data:
 Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: x-attribute2
 Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: ModifiedValue2

42007B01000001A042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040000000000000420092090000000800000004AFBED2D42000D020000000400000002000000042000F01000000A042005C05000000040000000E00000000420093080000000847FB42CCECA3F6EC42007F050000000400000000000000042007C0100000068420094070000002432316432386238612D303664662D343363302D623732662D32613136313633336164613900000000420008010000003042000A070000000C782D61747472696275746531000000042000B070000000E4D6F64696669656456616C756531000042000F01000000A042005C05000000040000000E0000000420093080000000808019A230A05E9E142007F05000000040000000000000042007C0100000068420094070000002432316432386238612D303664662D343363302D623732662D32613136313633336164613900000000420008010000003042000A070000000C782D617472696275746532000000042000B070000000E4D6F64696669656456616C7565320000

12 Client A:
 Delete attribute [batch]
 In: uuidKey, attributeNames={ 'x-attribute1' }
 In: uuidKey, attributeNames={ 'x-attribute2' }

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
 Tag: Request Header (0x420077), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000002 (2)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000F (Delete Attribute)
 Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 3E2C080FA8806057
 Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 21d28b8a-06df-43c0-b72f-2a161633ada9
 Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: x-attribute1
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000F (Delete Attribute)
 Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 9D55988D43D23B82
 Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 21d28b8a-06df-43c0-b72f-2a161633ada9
 Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: x-attribute2

42007801000001304200770100000038420069010000002042006A0200000004000000010000000042006B02000000040000000000000420092090000000800000004AFBED2D42000D020000000400000002000000042000F010000007042005C05000000040000000F0000000042009308000000083E2C080FA880605742007901000000048420094070000002432316432386238612D303664662D343363302D623732662D3261313631363333616461390000000042000A070000000C782D617474726962757465310000000042000F010000007042005C05000000040000000F0000000042009308000000089D55988D43D23B8242007901000000048420094070000002432316432386238612D303664662D343363302D623732662D3261313631363333616461390000000042000A070000000C782D6174747269627574653200000000

Out: uuidKey, attributeNames={ 'x-attribute1' }

Out: uuidKey, attributeNames={ 'x-attribute2' }

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:

 Tag: Response Header (0x42007A), Type: Structure (0x01), Data:

 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:

 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

 Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004AFBED2D (Thu Nov 12 12:10:37 CET 2009)

 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000002 (2)

 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000F (Delete Attribute)

 Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 3E2C080FA8806057

 Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)

 Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:

 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 21d28b8a-06df-43c0-b72f-2a161633ada9

 Tag: Attribute (0x420008), Type: Structure (0x01), Data:

 Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: x-attribute1

 Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: ModifiedValue1

 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000F (Delete Attribute)

 Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 9D55988D43D23B82

 Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)

 Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:

 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 21d28b8a-06df-43c0-b72f-2a161633ada9

 Tag: Attribute (0x420008), Type: Structure (0x01), Data:

 Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: x-attribute2

 Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: ModifiedValue2

42007B01000001A042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040000000000000420092090000008000000004AFBED2D42000D0200000004000000020000000042000F01000000A042005C050000000400000000042009308000000083E2C080FA880605742007F050000000400000000000000042007C01000000684200940700000002432316432386238612D303664662D343363302D623732662D326131363136333336164613900000000420008010000003042000A070000000C782D61747472696275746531000000042000B070000000E4D6F64696669656456616C7565310000042000F01000000A042005C05000000040000000F0000000042009308000000089D55988D43D23B8242007F05000000040000000000000042007C0100000068420094070000002432316432386238612D303664662D343363302D623732662D32613136313633333616461390000000420008010000003042000A070000000C782D617474726962757465320000000042000B070000000E4D6F64696669656456616C7565320000

13 **Client A:**
Get (symmetric key)
In: uuidKey

Tag: Request Message (0x420078), Type: Structure (0x01), Data:

 Tag: Request Header (0x420077), Type: Structure (0x01), Data:

 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:

 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

	<p>Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)</p> <p>Tag: Request Payload (0x420079), Type: Structure (0x01), Data:</p> <p>Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 21d28b8a-06df-43c0-b72f-2a161633ada9</p> <p>42007801000000904200770100000038420069010000002042006A0200000004000000010000000042006B020000000400000000000042000D0200000004000000010000000042000F010000004842005C05000000040000000A000000004200790100000030420094070000002432316432386238612D303664662D343363302D623732662D32613136313633336164613900000000</p> <p>Out: objectType = '00000002', uuidKey, symmetricKey</p> <p>Tag: Response Message (0x42007B), Type: Structure (0x01), Data:</p> <p>Tag: Response Header (0x42007A), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)</p> <p>Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004AFBED2D (Thu Nov 12 12:10:37 CET 2009)</p> <p>Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:</p> <p>Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)</p> <p>Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)</p> <p>Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:</p> <p>Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)</p> <p>Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 21d28b8a-06df-43c0-b72f-2a161633ada9</p> <p>Tag: Symmetric Key (0x42008F), Type: Structure (0x01), Data:</p> <p>Tag: Key Block (0x420040), Type: Structure (0x01), Data:</p> <p>Tag: Key Format Type (0x420042), Type: Enumeration (0x05), Data: 0x00000001</p> <p>Tag: Key Value (0x420045), Type: Structure (0x01), Data:</p> <p>Tag: Key Material (0x420043), Type: Octet String (0x08), Data: EF7833AB15F5A1EE5874BC0D9BBC4BE7</p> <p>Tag: Cryptographic Algorithm (0x420028), Type: Enumeration (0x05), Data: 0x00000003 (AES)</p> <p>Tag: Cryptographic Length (0x42002A), Type: Integer (0x02), Data: 0x00000080 (128)</p> <p>42007B010000012042007A0100000048420069010000002042006A0200000004000000010000000042006B0200000004000000000000004200920900000008000000004AFBED2D42000D0200000004000000010000000042000F010000000C842005C05000000040000000A0000000042007F0500000004000000000000000042007C010000000A04200570500000004000000200000000420094070000002432316432386238612D303664662D343363302D623732662D3261313631363333616461390000000042008F010000005842004001000000504200420500000004000000010000000042004501000000184200430800000010EF7833AB15F5A1EE5874BC0D9BBC4BE7420028050000004000000030000000042002A02000000040000008000000000</p>
14	<p>Client A:</p> <p>Destroy (symmetric key)</p> <p>In: uuidKey</p> <p>Tag: Request Message (0x420078), Type: Structure (0x01), Data:</p> <p>Tag: Request Header (0x420077), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)</p>

```

Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 21d28b8a-06df-43c0-b72f-2a161633ada9

42007801000000904200770100000038420069010000002042006A0200000004000000010000000042006B02000000040
0000000000000042000D020000000400000001000000042000F010000004842005C0500000004000000140000000042
007901000000030420094070000002432316432386238612D303664662D343363302D623732662D3261313631363333616
46139000000000

Out: uuidKey

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004AFBED2E (Thu Nov 12
12:10:38 CET 2009)
Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 21d28b8a-06df-43c0-b72f-2a161633ada9

42007B01000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040
000000000000004200920900000008000000004AFBED2E42000D0200000004000000010000000042000F010000005842
005C050000000400000014000000042007F050000000400000000000000042007C01000000304200940700000024323
16432386238612D303664662D343363302D623732662D32613136313633336164613900000000

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5 Auditing and reporting

5.1 Use-case: Get usage allocation scenario

This use-case tests the usage management functionality of KMIP. A key is created and the Activation Date and Protect Stop Date attributes are set in such a way as to allow the Get Usage Allocation operation to be performed. The value of the Usage Limits attribute is set to 1000 bytes, and two subsequent requests for 500 bytes succeed (one of them also verifying the amount that can be received using the Check operation), while a third fails since the usage allocation has been used up. The key is finally revoked and destroyed. This use-case shows the use of multiple clients with the assumptions regarding the clients being the same as in the use-case described in Section 3.1.4

Time	Client A
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0

Client A:

Create (symmetric key)

In: objectType = '00000002', attributes={ CryptographicAlgorithm='AES', CryptographicLength='128', NameValue={ Name='Key1', NameType='00000001' }, CryptographicUsageMask='00000004' }

Tag: Request Message (0x420078), Type: Structure (0x01), Data:

Tag: Request Header (0x420077), Type: Structure (0x01), Data:

Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:

Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create)

Tag: Request Payload (0x420079), Type: Structure (0x01), Data:

Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)

Tag: Template-Attribute (0x420091), Type: Structure (0x01), Data:

Tag: Attribute (0x420008), Type: Structure (0x01), Data:

Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Algorithm

Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000003 (AES)

Tag: Attribute (0x420008), Type: Structure (0x01), Data:

Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Length

Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x00000080 (128)

Tag: Attribute (0x420008), Type: Structure (0x01), Data:

Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name

Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:

Tag: Name Value (0x420055), Type: Text String (0x07), Data: Key1

Tag: Name Type (0x420054), Type: Enumeration (0x05), Data: 0x00000001 (Uninterpreted text string)

Tag: Attribute (0x420008), Type: Structure (0x01), Data:

Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Usage Mask

Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x00000004 (Encrypt)

```
42007801000001604200770100000038420069010000002042006A0200000004000000010000000042006B020000000400
000000000000042000D0200000004000000010000000042000F010000011842005C050000000400000001000000004200
79010000010042005705000000040000000020000000042009101000000E8420008010000003042000A0700000017437279
70746F6772617068696320416C676F726974686D0042000B05000000040000000300000000420008010000003042000A07
000001443727970746F67726170686963204C656E677468000000042000B020000000400000008000000004200080100
0003842000A07000000044E616D650000000042000B010000002042005507000000044B65793100000000420054050000
00040000000100000000420008010000003042000A070000001843727970746F67726170686963205573616765204D6173
6B42000B02000000040000000400000000
```

Out: objectType = '00000002', uuidKey

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:

Tag: Response Header (0x42007A), Type: Structure (0x01), Data:

Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:

Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B98E05A (Thu Mar 11 13:21:46 CET 2010)

Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create)
 Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
 Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
 Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: e696ebd0-8eba-406e-be21-d9059e29bald

42007B01000000C042007A0100000048420069010000002042006A0200000004000000010000000042006B020000000400
 0000000000000420092090000000800000004B98E05A42000D0200000004000000010000000042000F01000000684200
 5C0500000004000000010000000042007F05000000040000000000000042007C01000000404200570500000004000000
 0200000000420094070000002465363936656264302D386562612D343036652D626532312D643930353965323962613164
 00000000

1 Client A:
 Add attribute [batch]
 In: uuidKey, attribute={ ActivationDate='2' }
 In: uuidKey, attribute={ ProtectStopDate='<NOW+10mins' }

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
 Tag: Request Header (0x420077), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000002 (2)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000D (Add Attribute)
 Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: D7FE2477E364AE1A
 Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: e696ebd0-8eba-406e-be21-d9059e29bald
 Tag: Attribute (0x420008), Type: Structure (0x01), Data:
 Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Activation Date
 Tag: Attribute Value (0x42000B), Type: Date-Time (0x09), Data: 0x0000000000000002 (Thu Jan 01 01:00:02 CET 1970)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000D (Add Attribute)
 Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 9696012991BC8A59
 Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: e696ebd0-8eba-406e-be21-d9059e29bald
 Tag: Attribute (0x420008), Type: Structure (0x01), Data:
 Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Protect Stop Date
 Tag: Attribute Value (0x42000B), Type: Date-Time (0x09), Data: 0x000000004B98E2B3 (Thu Mar 11 13:31:47 CET 2010)

42007801000001684200770100000038420069010000002042006A0200000004000000010000000042006B020000000400
 000000000000042000D0200000004000000020000000042000F01000008842005C0500000004000000D000000004200
 93080000008D7FE2477E364AE1A4200790100000060420094070000002465363936656264302D386562612D343036652D
 626532312D64393035396532396261316400000000420008010000002842000A070000000F41637469766174696F6E2044
 6174650042000B0900000008000000000000000242000F010000009042005C0500000004000000D000000004200930800
 0000089696012991BC8A594200790100000068420094070000002465363936656264302D386562612D343036652D626532
 312D64393035396532396261316400000000420008010000003042000A070000001150726F746563742053746F70204461

	<p>7465000000000000042000B090000000800000004B98E2B3</p> <p>Out: uuidKey, attribute={ ActivationDate='2' } Out: uuidKey, attribute={ ProtectStopDate='<NOW+10min>' }</p> <p>Tag: Response Message (0x42007B), Type: Structure (0x01), Data: Tag: Response Header (0x42007A), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B98E05B (Thu Mar 11 13:21:47 CET 2010) Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000002 (2) Tag: Batch Item (0x42000F), Type: Structure (0x01), Data: Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000D (Add Attribute) Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: D7FE2477E364AE1A Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success) Tag: Response Payload (0x42007C), Type: Structure (0x01), Data: Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: e696ebd0-8eba-406e-be21-d9059e29bald Tag: Attribute (0x420008), Type: Structure (0x01), Data: Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Activation Date Tag: Attribute Value (0x42000B), Type: Date-Time (0x09), Data: 0x0000000000000002 (Thu Jan 01 01:00:02 CET 1970) Tag: Batch Item (0x42000F), Type: Structure (0x01), Data: Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000D (Add Attribute) Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 9696012991BC8A59 Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success) Tag: Response Payload (0x42007C), Type: Structure (0x01), Data: Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: e696ebd0-8eba-406e-be21-d9059e29bald Tag: Attribute (0x420008), Type: Structure (0x01), Data: Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Protect Stop Date Tag: Attribute Value (0x42000B), Type: Date-Time (0x09), Data: 0x000000004B98E2B3 (Thu Mar 11 13:31:47 CET 2010)</p> <p>42007B010000019842007A0100000048420069010000002042006A0200000004000000010000000042006B020000000400 00000000000004200920900000008000000004B98E05B42000D0200000004000000020000000042000F01000000984200 5C05000000040000000D000000004200930800000008D7FE2477E364AE1A42007F05000000040000000000000042007C 0100000060420094070000002465363936656264302D386562612D343036652D626532312D643930353965323962613164 000000042008010000002842000A07000000F41637469766174696F6E20446174650042000B090000008000000000 00000242000F01000000A042005C050000004000000D000000004200930800000089696012991BC8A5942007F050000 00040000000000000042007C0100000068420094070000002465363936656264302D386562612D343036652D62653231 2D64393035396532396261316400000000420008010000003042000A070000001150726F746563742053746F7020446174 6500000000000042000B090000000800000004B98E2B3</p>
2	<p>Client A: Add Attribute In: uuidKey, attribute={ UsageLimits={ UsageLimitsTotal='1000', UsageLimitsUnit='1' } }</p> <p>Tag: Request Message (0x420078), Type: Structure (0x01), Data: Tag: Request Header (0x420077), Type: Structure (0x01), Data:</p>

Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000D (Add Attribute)
 Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: e696ebd0-8eba-406e-be21-
 d9059e29bald
 Tag: Attribute (0x420008), Type: Structure (0x01), Data:
 Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Usage Limits
 Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:
 Tag: Usage Limits Total (0x420097), Type: Long Integer (0x03), Data: 0x00000000000003E8
 (1000)
 Tag: Usage Limits Unit (0x420098), Type: Enumeration (0x05), Data: 0x00000001 (Byte)

42007801000000D84200770100000038420069010000002042006A0200000004000000010000000042006B020000000400
 00000000000042000D0200000004000000010000000042000F010000009042005C05000000040000000D000000004200
 790100000078420094070000002465363936656264302D386562612D343036652D626532312D6439303539653239626131
 6400000000420008010000004042000A0700000000C5573616765204C696D6974730000000042000B010000002042009703
 0000000800000000000003E842009805000000040000000100000000

**Out: uuidKey, attribute={ UsageLimits={ UsageLimitsTotal= '1000', UsageLimitsCount='1000',
 UsageLimitsUnit='1' } }**

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
 Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B98E05C (Thu Mar 11
 13:21:48 CET 2010)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000D (Add Attribute)
 Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
 Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: e696ebd0-8eba-406e-be21-
 d9059e29bald
 Tag: Attribute (0x420008), Type: Structure (0x01), Data:
 Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Usage Limits
 Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:
 Tag: Usage Limits Total (0x420097), Type: Long Integer (0x03), Data: 0x00000000000003E8
 (1000)
 Tag: Usage Limits Count (0x420096), Type: Long Integer (0x03), Data: 0x00000000000003E8
 (1000)
 Tag: Usage Limits Unit (0x420098), Type: Enumeration (0x05), Data: 0x00000001 (Byte)

42007B0100000108420077A0100000048420069010000002042006A0200000004000000010000000042006B020000000400
 0000000000004200920900000008000000004B98E05C42000D0200000004000000010000000042000F01000000B04200
 5C05000000040000000D0000000042007F0500000004000000000000000042007C01000000884200940700000024653639
 36656264302D386562612D343036652D626532312D64393035396532396261316400000000420008010000005042000A07
 0000000C5573616765204C696D6974730000000042000B0100000030420097030000000800000000000003E84200980300

	0000080000000000000003E842009805000000040000000100000000
3	<p>Client B:</p> <p>Locate (symmetric key by name)</p> <p>In: objectType = '00000002', attributes={ Name={ Name='Key1', NameType= '00000001'} }</p> <p>Tag: Request Message (0x420078), Type: Structure (0x01), Data:</p> <p>Tag: Request Header (0x420077), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)</p> <p>Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:</p> <p>Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)</p> <p>Tag: Request Payload (0x420079), Type: Structure (0x01), Data:</p> <p>Tag: Attribute (0x420008), Type: Structure (0x01), Data:</p> <p>Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Object Type</p> <p>Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)</p> <p>Tag: Attribute (0x420008), Type: Structure (0x01), Data:</p> <p>Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name</p> <p>Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:</p> <p>Tag: Name Value (0x420055), Type: Text String (0x07), Data: Key1</p> <p>Tag: Name Type (0x420054), Type: Enumeration (0x05), Data: 0x00000001 (Uninterpreted text string)</p> <p>420078010000000D04200770100000038420069010000002042006A0200000004000000010000000042006B0200000004000000000000042000D02000000040000000010000000042000F01000008842005C050000000400000008000000004200790100000070420008010000002842000A070000000B4F626A656374205479706500000000042000B05000000040000000200000000420008010000003842000A07000000044E616D650000000042000B010000002042005507000000044B6579310000000042005405000000040000000100000000</p> <p>Out: uuidKey</p> <p>Tag: Response Message (0x42007B), Type: Structure (0x01), Data:</p> <p>Tag: Response Header (0x42007A), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)</p> <p>Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B98E05C (Thu Mar 11 13:21:48 CET 2010)</p> <p>Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:</p> <p>Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)</p> <p>Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)</p> <p>Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:</p> <p>Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: e696ebd0-8eba-406e-be21-d9059e29bald</p> <p>42007B010000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B0200000004000000000000004200920900000008000000004B98E05C42000D0200000004000000010000000042000F010000005842005C0500000004000000080000000042007F050000000400000000000000000042007C01000000304200940700000024653639</p>

	36656264302D386562612D343036652D626532312D64393035396532396261316400000000
4	<p>Client B:</p> <p>Get (symmetric key)</p> <p>In: uuidKey</p> <p>Tag: Request Message (0x420078), Type: Structure (0x01), Data:</p> <p>Tag: Request Header (0x420077), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)</p> <p>Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:</p> <p>Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)</p> <p>Tag: Request Payload (0x420079), Type: Structure (0x01), Data:</p> <p>Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: e696ebd0-8eba-406e-be21-d9059e29bald</p> <p>42007801000000904200770100000038420069010000002042006A0200000004000000010000000042006B020000000400000000000042000D020000000400000001000000042000F010000004842005C05000000040000000A0000000042007901000000304200940700000002465363936656264302D386562612D343036652D626532312D64393035396532396261316400000000</p> <p>Out: objectType = '00000002', uuidKey, symmetricKey</p> <p>Tag: Response Message (0x42007B), Type: Structure (0x01), Data:</p> <p>Tag: Response Header (0x42007A), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)</p> <p>Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B98E05C (Thu Mar 11 13:21:48 CET 2010)</p> <p>Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:</p> <p>Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)</p> <p>Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)</p> <p>Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:</p> <p>Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)</p> <p>Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: e696ebd0-8eba-406e-be21-d9059e29bald</p> <p>Tag: Symmetric Key (0x42008F), Type: Structure (0x01), Data:</p> <p>Tag: Key Block (0x420040), Type: Structure (0x01), Data:</p> <p>Tag: Key Format Type (0x420042), Type: Enumeration (0x05), Data: 0x00000001</p> <p>Tag: Key Value (0x420045), Type: Structure (0x01), Data:</p> <p>Tag: Key Material (0x420043), Type: Octet String (0x08), Data: 674B32B1A3266DF1253B0F2C4440B0B0</p> <p>Tag: Cryptographic Algorithm (0x420028), Type: Enumeration (0x05), Data: 0x00000003 (AES)</p> <p>Tag: Cryptographic Length (0x42002A), Type: Integer (0x02), Data: 0x00000080 (128)</p> <p>42007B010000012042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040000000000004200920900000008000000004B98E05C42000D0200000004000000010000000042000F010000000C84200</p>

5C05000000040000000A0000000042007F050000000400000000000000042007C01000000A04200570500000004000000
020000000420094070000002465363936656264302D386562612D343036652D626532312D643930353965323962613164
0000000042008F010000005842004001000000504200420500000004000000010000000042004501000000184200430800
000010674B32B1A3266DF1253B0F2C4440B0B04200280500000004000000030000000042002A0200000004000000800000
0000

5 Client B:
Check
Get usage allocation
In (header): BatchOrderOption='true'
In: uuidKey, UsageLimitsCount='500'
In: uuidKey, UsageLimitsCount='500'

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
Tag: Request Header (0x420077), Type: Structure (0x01), Data:
Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000002 (2)
Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000009 (Check)
Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 19D4F3DC9635307A
Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: e696ebd0-8eba-406e-be21-d9059e29bald
Tag: Usage Limits Count (0x420096), Type: Long Integer (0x03), Data: 0x00000000000001F4 (500)
Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000011 (Get Usage Allocation)
Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 20C8DFFD55BDEEE8
Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: e696ebd0-8eba-406e-be21-d9059e29bald
Tag: Usage Limits Count (0x420096), Type: Long Integer (0x03), Data: 0x00000000000001F4 (500)

42007801000001204200770100000038420069010000002042006A0200000004000000010000000042006B020000000400
000000000000042000D0200000004000000020000000042000F010000006842005C050000000400000009000000004200
93080000000819D4F3DC9635307A4200790100000040420094070000002465363936656264302D386562612D343036652D
626532312D64393035396532396261316400000000420096030000000800000000000001F442000F010000006842005C05
000000040000001100000000420093080000000820C8DFFD55BDEEE8420079010000004042009407000000246536393665
6264302D386562612D343036652D626532312D64393035396532396261316400000000420096030000000800000000000000
01F4

Out: uuidKey
Out: uuidKey

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B98E05D (Thu Mar 11 13:21:49 CET 2010)

Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000002 (2)

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000009 (Check)

Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 19D4F3DC9635307A

Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)

Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:

Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: e696ebd0-8eba-406e-be21-d9059e29bald

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000011 (Get Usage Allocation)

Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 20C8DFFD55BDEEE8

Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)

Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:

Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: e696ebd0-8eba-406e-be21-d9059e29bald

42007B010000013042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040000000000004200920900000008000000004B98E05D42000D0200000004000000020000000042000F010000006842005C05000000040000000900000000420093080000000819D4F3DC9635307A42007F05000000040000000000000042007C0100000030420094070000002465363936656264302D386562612D343036652D626532312D643930353965323962613164000000042000F010000006842005C050000004000000110000000420093080000000820C8DFFD55BDEEE842007F05000000400000000000000042007C0100000030420094070000002465363936656264302D386562612D343036652D626532312D64393035396532396261316400000000

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Client A:

Get usage allocation

In: uuidKey, UsageLimitsCount='500'

Tag: Request Message (0x420078), Type: Structure (0x01), Data:

Tag: Request Header (0x420077), Type: Structure (0x01), Data:

Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:

Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000011 (Get Usage Allocation)

Tag: Request Payload (0x420079), Type: Structure (0x01), Data:

Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: e696ebd0-8eba-406e-be21-d9059e29bald

Tag: Usage Limits Count (0x420096), Type: Long Integer (0x03), Data: 0x00000000000001F4 (500)

42007801000000A04200770100000038420069010000002042006A0200000004000000010000000042006B02000000040000000000000042000D0200000004000000010000000042000F010000005842005C050000000400000011000000004200790100000040420094070000002465363936656264302D386562612D343036652D626532312D64393035396532396261316400000000420096030000000800000000000001F4

Out: uuidKey

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:

Tag: Response Header (0x42007A), Type: Structure (0x01), Data:

Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B98E05D (Thu Mar 11 13:21:49 CET 2010)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000011 (Get Usage Allocation)
 Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
 Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: e696ebd0-8eba-406e-be21-d9059e29bald

42007B01000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040000000000004200920900000008000000004B98E05D42000D0200000004000000010000000042000F010000005842005C0500000004000000110000000042007F0500000004000000000000000042007C0100000030420094070000002465363936656264302D386562612D343036652D626532312D64393035396532396261316400000000

7 Client C:
 Locate (symmetric key by name)
 In: objectType = '00000002', attributes={ Name={ Name='Key1', NameType='00000001'} }

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
 Tag: Request Header (0x420077), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)
 Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
 Tag: Attribute (0x420008), Type: Structure (0x01), Data:
 Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Object Type
 Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)
 Tag: Attribute (0x420008), Type: Structure (0x01), Data:
 Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name
 Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:
 Tag: Name Value (0x420055), Type: Text String (0x07), Data: Key1
 Tag: Name Type (0x420054), Type: Enumeration (0x05), Data: 0x00000001 (Uninterpreted text string)

42007801000000D04200770100000038420069010000002042006A0200000004000000010000000042006B020000000400000000000042000D0200000004000000010000000042000F010000008842005C050000000400000008000000004200790100000070420008010000002842000A070000000B4F626A656374205479706500000000042000B0500000004000000020000000420008010000003842000A07000000044E616D65000000042000B010000002042005507000000044B6579310000000420054050000000400000010000000

Out: uuidKey

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
 Tag: Response Header (0x42007A), Type: Structure (0x01), Data:

Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B98E05D (Thu Mar 11 13:21:49 CET 2010)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)
 Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
 Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: e696ebd0-8eba-406e-be21-d9059e29bald

42007B010000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040000000000004200920900000008000000004B98E05D42000D0200000004000000010000000042000F010000005842005C050000000400000008000000042007F05000000040000000000000042007C0100000030420094070000002465363936656264302D386562612D343036652D626532312D64393035396532396261316400000000

8 **Client C:**
Get (symmetric key)
In: uuidKey

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
 Tag: Request Header (0x420077), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)
 Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: e696ebd0-8eba-406e-be21-d9059e29bald

42007801000000904200770100000038420069010000002042006A0200000004000000010000000042006B020000000400000000000042000D0200000004000000010000000042000F010000004842005C05000000040000000A000000004200790100000030420094070000002465363936656264302D386562612D343036652D626532312D64393035396532396261316400000000

Out: objectType = '00000002', uuidKey, symmetricKey

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
 Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B98E05D (Thu Mar 11 13:21:49 CET 2010)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)
 Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)

Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
 Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: e696ebd0-8eba-406e-be21-d9059e29bald
 Tag: Symmetric Key (0x42008F), Type: Structure (0x01), Data:
 Tag: Key Block (0x420040), Type: Structure (0x01), Data:
 Tag: Key Format Type (0x420042), Type: Enumeration (0x05), Data: 0x00000001
 Tag: Key Value (0x420045), Type: Structure (0x01), Data:
 Tag: Key Material (0x420043), Type: Octet String (0x08), Data: 674B32B1A3266DF1253B0F2C4440B0B0
 Tag: Cryptographic Algorithm (0x420028), Type: Enumeration (0x05), Data: 0x00000003 (AES)
 Tag: Cryptographic Length (0x42002A), Type: Integer (0x02), Data: 0x00000080 (128)

42007B010000012042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040000000000042009209000000800000004B98E05D42000D02000000400000001000000042000F01000000C842005C0500000040000000A0000000042007F05000000040000000000000042007C01000000A04200570500000040000000200000000420094070000002465363936656264302D386562612D343036652D626532312D643930353965323962613164000000042008F01000000584200400100000050420042050000000400000001000000004200450100000018420043080000010674B32B1A3266DF1253B0F2C4440B0B0420028050000004000000030000000042002A020000004000000800000000

9 Client C:
 Get usage allocation
 In: uuidKey, UsageLimitsCount='500'

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
 Tag: Request Header (0x420077), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000011 (Get Usage Allocation)
 Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: e696ebd0-8eba-406e-be21-d9059e29bald
 Tag: Usage Limits Count (0x420096), Type: Long Integer (0x03), Data: 0x000000000000001F4 (500)

42007801000000A04200770100000038420069010000002042006A0200000004000000010000000042006B02000000040000000000042000D020000000400000001000000042000F010000005842005C0500000004000000011000000004200790100000040420094070000002465363936656264302D386562612D343036652D626532312D643930353965323962613164000000004200960300000008000000000000001F4

Out: Operation Failed, Permission Denied

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
 Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B98E05D (Thu Mar 11

13:21:49 CET 2010)

Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000011 (Get Usage Allocation)

Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000001 (Operation Failed)

Tag: Result Reason (0x42007E), Type: Enumeration (0x05), Data: 0x0000000C (Permission Denied)

Tag: Result Message (0x42007D), Type: Text String (0x07), Data: Unable to allocate requested amount

42007B01000000B842007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040000000000004200920900000008000000004B98E05D42000D0200000004000000010000000042000F010000006042005C0500000004000000110000000042007F050000000400000001000000042007E05000000040000000C0000000042007D0700000023556E61626C6520746F20616C6C6F636174652072657175657374656420616D6F756E740000000000

10

Client A:

Revoke (symmetric key as cessation of operation) and Destroy (symmetric key)

In (header): batchOrderOption='TRUE'

In: uuidKey, revocationReasonCode='6'

In: uuidKey

Tag: Request Message (0x420078), Type: Structure (0x01), Data:

Tag: Request Header (0x420077), Type: Structure (0x01), Data:

Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:

Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

Tag: Batch Order Option (0x420010), Type: Boolean (0x06), Data: TRUE

Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000002 (2)

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000013 (Revoke)

Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 727A212BC674B4EA

Tag: Request Payload (0x420079), Type: Structure (0x01), Data:

Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: e696ebd0-8eba-406e-be21-d9059e29bald

Tag: Revocation Reason (0x420081), Type: Structure (0x01), Data:

Tag: Revocation Reason Code (0x420082), Type: Enumeration (0x05), Data: 0x00000006 (Cessation of Operation)

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)

Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 1D0EBF826109B0A5

Tag: Request Payload (0x420079), Type: Structure (0x01), Data:

Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: e696ebd0-8eba-406e-be21-d9059e29bald

42007801000001284200770100000048420069010000002042006A0200000004000000010000000042006B0200000004000000000000420010060000000800000000000142000D0200000004000000020000000042000F010000007042005C0500000004000000130000000042009308000000008727A212BC674B4EA4200790100000048420094070000002465363936656264302D386562612D343036652D626532312D643930353965323962613164000000004200810100000010420082050000004000000060000000042000F010000005842005C0500000004000000140000000042009308000000081D0EBF826109B0A54200790100000030420094070000002465363936656264302D386562612D343036652D626532312D64393035396532396261316400000000

Out: uuidKey

Out: uuidKey

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:

 Tag: Response Header (0x42007A), Type: Structure (0x01), Data:

 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:

 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

 Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B98E05F (Thu Mar 11 13:21:51 CET 2010)

 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000002 (2)

 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000013 (Revoke)

 Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 727A212BC674B4EA

 Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)

 Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:

 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: e696ebd0-8eba-406e-be21-d9059e29bald

 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)

 Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 1D0EBF826109B0A5

 Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)

 Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:

 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: e696ebd0-8eba-406e-be21-d9059e29bald

42007B010000013042007A0100000048420069010000002042006A0200000004000000010000000042006B020000000400000000000420092090000000800000004B98E05F42000D0200000004000000020000000042000F010000006842005C050000000400000013000000004200930800000008727A212BC674B4EA42007F05000000040000000000000042007C0100000030420094070000002465363936656264302D386562612D343036652D626532312D643930353965323962613164000000042000F010000006842005C05000000400000014000000004200930800000081D0EBF826109B0A542007F0500000040000000000000042007C0100000030420094070000002465363936656264302D386562612D343036652D626532312D64393035396532396261316400000000

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6 Key Interchange, Key Exchange

6.1 Use-case: Import of a Third-party Key

This use-case tests the import of a foreign key using the Register operation. To validate that the registered key is treated the same as a locally created key, an attribute is added to the key and then modified. Finally, the key is destroyed.

Time	Request/Response messages
0	<p>Register (symmetric key)</p> <p>In: objectType = '00000002', attributes={ CryptographicUsageMask='00000004' }, foreignSymmetricKey</p> <p>Tag: Request Message (0x420078), Type: Structure (0x01), Data:</p>

Tag: Request Header (0x420077), Type: Structure (0x01), Data:

Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:

Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000003 (Register)

Tag: Request Payload (0x420079), Type: Structure (0x01), Data:

Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)

Tag: Template-Attribute (0x420091), Type: Structure (0x01), Data:

Tag: Attribute (0x420008), Type: Structure (0x01), Data:

Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Usage Mask

Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x00000004 (Encrypt)

Tag: Symmetric Key (0x42008F), Type: Structure (0x01), Data:

Tag: Key Block (0x420040), Type: Structure (0x01), Data:

Tag: Key Format Type (0x420042), Type: Enumeration (0x05), Data: 0x00000001

Tag: Key Value (0x420045), Type: Structure (0x01), Data:

Tag: Key Material (0x420043), Type: Octet String (0x08), Data: 0123456789ABCDEF0123456789ABCDEF

Tag: Cryptographic Algorithm (0x420028), Type: Enumeration (0x05), Data: 0x00000003 (AES)

Tag: Cryptographic Length (0x42002A), Type: Integer (0x02), Data: 0x00000080 (128)

42007801000001104200770100000038420069010000002042006A0200000004000000010000000042006B020000000400000000000042000D0200000004000000010000000042000F01000000C842005C0500000004000000030000000042007901000000B0420057050000000400000002000000004200910100000038420008010000003042000A070000001843727970746F67726170686963205573616765204D61736B42000B0200000004000000040000000042008F0100000058420040010000005042004205000000040000000100000000420045010000001842004308000000100123456789ABCDEF0123456789ABCDEF4200280500000004000000030000000042002A0200000004000000080000000000

Out: uuidKey

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:

Tag: Response Header (0x42007A), Type: Structure (0x01), Data:

Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:

Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004AFBED32 (Thu Nov 12 12:10:42 CET 2009)

Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000003 (Register)

Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)

Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:

Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 6e1a5a83-8113-4260-b40d-966f231b91b7

42007B01000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040000000000004200920900000008000000004AFBED3242000D0200000004000000010000000042000F010000005842005C0500000004000000030000000042007F0500000004000000000000000042007C0100000030420094070000002436653161356138332D383131332D343236302D623430642D39363666323331623931623700000000

<p>1</p>	<p>Add attribute In: uuidKey, attribute={ x-provider='unknown' }</p> <p>Tag: Request Message (0x420078), Type: Structure (0x01), Data: Tag: Request Header (0x420077), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Batch Item (0x42000F), Type: Structure (0x01), Data: Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000D (Add Attribute) Tag: Request Payload (0x420079), Type: Structure (0x01), Data: Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 6e1a5a83-8113-4260-b40d-966f231b91b7 Tag: Attribute (0x420008), Type: Structure (0x01), Data: Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: x-provider Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: unknown</p> <p>420078010000000004200770100000038420069010000002042006A0200000004000000010000000042006B0200000004000000000000042000D0200000004000000010000000042000F010000007842005C05000000040000000D000000004200790100000060420094070000002436653161356138332D383131332D343236302D623430642D39363666323331623931623700000000420008010000002842000A070000000A782D70726F76696465720000000000042000B0700000007756E6B6E6F776E00</p> <p>Out: uuidKey, attribute={ x-provider='unknown' }</p> <p>Tag: Response Message (0x42007B), Type: Structure (0x01), Data: Tag: Response Header (0x42007A), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004AFBED32 (Thu Nov 12 12:10:42 CET 2009) Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Batch Item (0x42000F), Type: Structure (0x01), Data: Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000D (Add Attribute) Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success) Tag: Response Payload (0x42007C), Type: Structure (0x01), Data: Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 6e1a5a83-8113-4260-b40d-966f231b91b7 Tag: Attribute (0x420008), Type: Structure (0x01), Data: Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: x-provider Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: unknown</p> <p>42007B010000000E042007A0100000048420069010000002042006A0200000004000000010000000042006B020000000400000000000004200920900000008000000004AFBED3242000D0200000004000000010000000042000F010000008842005C05000000040000000D0000000042007F050000000400000000000000042007C0100000060420094070000002436653161356138332D383131332D343236302D623430642D39363666323331623931623700000000420008010000002842000A070000000A782D70726F76696465720000000000042000B0700000007756E6B6E6F776E00</p>
<p>2</p>	<p>Modify attribute</p>

	<p>In: uuidKey, attribute={ x-provider='third party' }</p> <p>Tag: Request Message (0x420078), Type: Structure (0x01), Data: Tag: Request Header (0x420077), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Batch Item (0x42000F), Type: Structure (0x01), Data: Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000E (Modify Attribute) Tag: Request Payload (0x420079), Type: Structure (0x01), Data: Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 6e1a5a83-8113-4260-b40d-966f231b91b7 Tag: Attribute (0x420008), Type: Structure (0x01), Data: Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: x-provider Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: third party</p> <p>420078010000000C84200770100000038420069010000002042006A0200000004000000010000000042006B0200000004000000000000042000D0200000004000000010000000042000F010000008042005C05000000040000000E000000004200790100000068420094070000002436653161356138332D383131332D343236302D623430642D39363666323331623931623700000000420008010000003042000A070000000A782D70726F766964657200000000000042000B070000000B74686972642070617274790000000000</p> <p>Out: uuidKey, attribute={ x-provider='third party' }</p> <p>Tag: Response Message (0x42007B), Type: Structure (0x01), Data: Tag: Response Header (0x42007A), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004AFBED32 (Thu Nov 12 12:10:42 CET 2009) Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Batch Item (0x42000F), Type: Structure (0x01), Data: Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000E (Modify Attribute) Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success) Tag: Response Payload (0x42007C), Type: Structure (0x01), Data: Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 6e1a5a83-8113-4260-b40d-966f231b91b7 Tag: Attribute (0x420008), Type: Structure (0x01), Data: Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: x-provider Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: third party</p> <p>42007B010000000E842007A0100000048420069010000002042006A0200000004000000010000000042006B020000000400000000000004200920900000008000000004AFBED3242000D0200000004000000010000000042000F010000009042005C05000000040000000E0000000042007F0500000004000000000000000042007C0100000068420094070000002436653161356138332D383131332D343236302D623430642D39363666323331623931623700000000420008010000003042000A070000000A782D70726F766964657200000000000042000B070000000B74686972642070617274790000000000</p>
3	<p>Destroy (symmetric key)</p> <p>In: uuidKey</p>

```

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
    Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 6e1a5a83-8113-4260-b40d-966f231b91b7

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42007801000000904200770100000038420069010000002042006A0200000004000000010000000042006B020000000400000000000042000D0200000004000000010000000042000F010000004842005C0500000004000000014000000004200790100000030420094070000002436653161356138332D383131332D343236302D623430642D39363666323331623931623700000000

```

Out: uuidKey

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Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004AFBED32 (Thu Nov 12 12:10:42 CET 2009)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 6e1a5a83-8113-4260-b40d-966f231b91b7

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42007B01000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B020000000400000000000004200920900000008000000004AFBED3242000D0200000004000000010000000042000F010000005842005C05000000040000000140000000042007F050000000400000000000000000042007C0100000030420094070000002436653161356138332D383131332D343236302D623430642D39363666323331623931623700000000

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7 Vendor Extensions

These use-cases test the handling of unknown message extensions with vendor-specific content.

184 **7.1 Use-case: Unrecognized Message Extension with Criticality Indicator**
 185 **false**

186 A create request is issued and the request contains a Message Extension with the Criticality Indicator set
 187 to false. The server does not understand the extension, but since it is non-critical, the create request is
 188 processed normally. Subsequently, the created key is deleted.

189

Time	Client A
0	<p>Create (symmetric key)</p> <p>In: objectType='00000002', attributes={ CryptographicAlgorithm='AES', CryptographicLength='128', CryptographicUsageMask='0000000C' }, MessageExtension={ VendorIdentification='Acme', CriticalityIndicator='false', VendorExtension={ tag='0x540001', type='text string', value='na' } }</p> <p>Tag: Request Message (0x420078), Type: Structure (0x01), Data:</p> <p> Tag: Request Header (0x420077), Type: Structure (0x01), Data:</p> <p> Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:</p> <p> Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p> Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)</p> <p> Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p> Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:</p> <p> Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create)</p> <p> Tag: Request Payload (0x420079), Type: Structure (0x01), Data:</p> <p> Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)</p> <p> Tag: Template-Attribute (0x420091), Type: Structure (0x01), Data:</p> <p> Tag: Attribute (0x420008), Type: Structure (0x01), Data:</p> <p> Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Length</p> <p> Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x00000080 (128)</p> <p> Tag: Attribute (0x420008), Type: Structure (0x01), Data:</p> <p> Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Algorithm</p> <p> Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000003 (AES)</p> <p> Tag: Attribute (0x420008), Type: Structure (0x01), Data:</p> <p> Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Usage Mask</p> <p> Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x0000000C (Encrypt, Decrypt)</p> <p> Tag: Message Extension (0x420051), Type: Structure (0x01), Data:</p> <p> Tag: Criticality Indicator (0x420026), Type: Boolean (0x06), Data: FALSE</p> <p> Tag: Vendor Identification (0x42009D), Type: Text String (0x07), Data: Acme</p> <p> Tag: Vendor Extension (0x42009C), Type: Structure (0x01), Data:</p> <p> Tag: Unknown tag (0x014242), Type: Text String (0x07), Data: na</p> <p>42007801000001604200770100000038420069010000002042006A0200000004000000010000000042006B0200000004000000000000042000D0200000004000000010000000042000F010000011842005C05000000040000000100000000042007901000000C04200570500000004000000020000000042009101000000A8420008010000003042000A070000001443727970746F67726170686963204C656E6774680000000042000B02000000040000008000000000420008010000003042000A070000001743727970746F6772617068696320416C676F726974686D0042000B05000000040000000300000000420008010000003042000A070000001843727970746F67726170686963205573616765204D61736B42000B02000000040000000C000000004200510100000038420026060000000000000000000042009D070000000441636D650000000042009C010000001001424207000000026E61000000000000</p>

Out: objectType='00000002', uuidKey

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
 Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B73BF1C (Thu Feb 11 09:26:04 CET 2010)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create)
 Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
 Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
 Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 052eff73-b35e-4702-9db9-37c12f0151d3

42007B01000000C042007A0100000048420069010000002042006A0200000004000000010000000042006B0200000004000000000000004200920900000008000000004B73BF1C42000D0200000004000000010000000042000F010000006842005C0500000004000000010000000042007F05000000040000000000000000000042007C0100000004042005705000000040000000200000000420094070000002430353265666637332D623335652D343730322D396462392D33376331326630313531643300000000

1 Destroy (symmetric key)
In: uuidKey

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
 Tag: Request Header (0x420077), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
 Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 052eff73-b35e-4702-9db9-37c12f0151d3

42007801000000904200770100000038420069010000002042006A0200000004000000010000000042006B02000000040000000000000042000D0200000004000000010000000042000F010000004842005C0500000004000000014000000004200790100000030420094070000002430353265666637332D623335652D343730322D396462392D33376331326630313531643300000000

Out: uuidKey

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
 Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B73BF1C (Thu Feb 11

	<p>09:26:04 CET 2010)</p> <p>Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:</p> <p>Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)</p> <p>Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)</p> <p>Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:</p> <p>Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 052eff73-b35e-4702-9db9-37c12f0151d3</p> <p>42007B01000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040000000000000420092090000008000000004B73BF1C42000D0200000004000000010000000042000F010000005842005C0500000004000000140000000042007F050000000400000000000000042007C0100000030420094070000002430353265666637332D623335652D343730322D396462392D33376331326630313531643300000000</p>
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192 **7.2 Use-case: Unrecognized Message Extension with Criticality Indicator**
193 **true**

194 A create request is issued and the request contains a Message Extension with the Criticality Indicator set
195 to true. The server does not understand the extension, and since it is critical, the create request fails and
196 an error is returned.
197

Time	Client A
0	<p>Create (symmetric key)</p> <p>In: objectType='00000002', attributes={ CryptographicAlgorithm='AES', CryptographicLength='128', CryptographicUsageMask='0000000C' }, MessageExtension={ VendorIdentification='Acme', CriticalityIndicator='true', VendorExtension={ tag='0x540001', type='text string', value='na' } }</p> <p>Tag: Request Message (0x420078), Type: Structure (0x01), Data:</p> <p>Tag: Request Header (0x420077), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)</p> <p>Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:</p> <p>Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create)</p> <p>Tag: Request Payload (0x420079), Type: Structure (0x01), Data:</p> <p>Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)</p> <p>Tag: Template-Attribute (0x420091), Type: Structure (0x01), Data:</p> <p>Tag: Attribute (0x420008), Type: Structure (0x01), Data:</p> <p>Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Length</p> <p>Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x00000080 (128)</p> <p>Tag: Attribute (0x420008), Type: Structure (0x01), Data:</p> <p>Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Algorithm</p> <p>Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000003 (AES)</p> <p>Tag: Attribute (0x420008), Type: Structure (0x01), Data:</p> <p>Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Usage</p>

```
Mask
    Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x0000000C (Encrypt,
Decrypt)
    Tag: Message Extension (0x420051), Type: Structure (0x01), Data:
    Tag: Criticality Indicator (0x420026), Type: Boolean (0x06), Data: TRUE
    Tag: Vendor Identification (0x42009D), Type: Text String (0x07), Data: Acme
    Tag: Vendor Extension (0x42009C), Type: Structure (0x01), Data:
    Tag: Unknown tag (0x014242), Type: Text String (0x07), Data: na

42007801000001604200770100000038420069010000002042006A0200000004000000010000000042006B02000000040
0000000000000042000D020000000400000001000000042000F010000011842005C0500000004000000010000000042
007901000000C0420057050000000400000002000000042009101000000A8420008010000003042000A0700000014437
27970746F67726170686963204C656E6774680000000042000B02000000040000000800000000042000801000000304200
0A070000001743727970746F6772617068696320416C676F726974686D0042000B0500000004000000030000000042000
8010000003042000A070000001843727970746F67726170686963205573616765204D61736B42000B0200000004000000
0C0000000042005101000000384200260600000008000000000000000142009D070000000441636D65000000042009C0
10000001001424207000000026E61000000000000

Out: Operation Failed, Feature Not Supported

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
    Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
        Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
            Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
            Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
        Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B73BF1D (Thu Feb 11
09:26:05 CET 2010)
        Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
        Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
            Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create)
            Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000001 (Operation Failed)
            Tag: Result Reason (0x42007E), Type: Enumeration (0x05), Data: 0x00000008 (Feature Not
Supported)
            Tag: Result Message (0x42007D), Type: Text String (0x07), Data: Critical Message Extension
not recognized

42007B01000000C042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040
000000000000004200920900000008000000004B73BF1D42000D0200000004000000010000000042000F010000006842
005C0500000004000000010000000042007F0500000004000000010000000042007E05000000040000000800000000420
07D0700000029437269746963616C204D65737361676520457874656E73696F6E206E6F74207265636F676E697A656400
000000000000
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8 Asymmetric keys

Creation of keys using “Create Key Pair” operation, locating pair using Link attribute.

8.1 Use-case: Create a Key Pair

Create a new private/public key pair. Make sure they are linked correctly by issuing Locate commands with the assigned Unique Identifiers. Finally delete both key halves.

Time	Client A
0	<p>Create Key Pair</p> <p>In: commonAttributes={ CryptographicAlgorithm='RSA', CryptographicLength='1024' }, privateKeyAttributes={ Name={ NameValue='PrivateKey1', NameType='00000001' }, CryptographicUsageMask='00000001' }, publicKeyAttributes={ NameValue='PublicKey1', NameType='00000001' }, CryptographicUsageMask='00000002' }</p> <p>Tag: Request Message (0x420078), Type: Structure (0x01), Data:</p> <p> Tag: Request Header (0x420077), Type: Structure (0x01), Data:</p> <p> Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:</p> <p> Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p> Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)</p> <p> Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p> Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:</p> <p> Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000002 (Create Key Pair)</p> <p> Tag: Request Payload (0x420079), Type: Structure (0x01), Data:</p> <p> Tag: Common Template-Attribute (0x42001F), Type: Structure (0x01), Data:</p> <p> Tag: Attribute (0x420008), Type: Structure (0x01), Data:</p> <p> Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Algorithm</p> <p> Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000004 (RSA)</p> <p> Tag: Attribute (0x420008), Type: Structure (0x01), Data:</p> <p> Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Length</p> <p> Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x00000400 (1024)</p> <p> Tag: Private Key Template-Attribute (0x420065), Type: Structure (0x01), Data:</p> <p> Tag: Attribute (0x420008), Type: Structure (0x01), Data:</p> <p> Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name</p> <p> Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:</p> <p> Tag: Name Value (0x420055), Type: Text String (0x07), Data: PrivateKey1</p> <p> Tag: Name Type (0x420054), Type: Enumeration (0x05), Data: 0x00000001 (Uninterpreted text string)</p> <p> Tag: Attribute (0x420008), Type: Structure (0x01), Data:</p> <p> Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Usage Mask</p> <p> Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x00000001 (Sign)</p> <p> Tag: Public Key Template-Attribute (0x42006E), Type: Structure (0x01), Data:</p> <p> Tag: Attribute (0x420008), Type: Structure (0x01), Data:</p> <p> Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name</p> <p> Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:</p> <p> Tag: Name Value (0x420055), Type: Text String (0x07), Data: PublicKey1</p> <p> Tag: Name Type (0x420054), Type: Enumeration (0x05), Data: 0x00000001 (Uninterpreted text string)</p> <p> Tag: Attribute (0x420008), Type: Structure (0x01), Data:</p> <p> Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Usage Mask</p> <p> Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x00000002 (Verify)</p> <p>42007801000001E84200770100000038420069010000002042006A0200000004000000010000000042006B020000000400000000000042000D0200000004000000010000000042000F01000001A042005C05000000040000000200000000420079010000018842001F0100000070420008010000003042000A070000001743727970746F6772617068696320416C676</p>

```

F726974686D0042000B05000000040000000400000000420008010000003042000A070000001443727970746F67726170
686963204C656E6774680000000042000B020000000400000400000000004200650100000080420008010000004042000
A07000000044E616D650000000042000B0100000028420055070000000B507269766174654B6579310000000000420054
05000000040000000100000000420008010000003042000A070000001843727970746F677261706869632055736167652
04D61736B42000B0200000004000000010000000042006E0100000080420008010000004042000A07000000044E616D65
0000000042000B0100000028420055070000000A5075626C69634B657931000000000004200540500000004000000010
000000420008010000003042000A070000001843727970746F67726170686963205573616765204D61736B42000B0200
000040000000200000000

```

Out: uuidPrivateKey, uuidPublicKey

```

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B73C13A (Thu Feb 11
09:35:06 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
    Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
      Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000002 (Create Key Pair)
      Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
      Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
        Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 895f72c2-b20a-49d8-9504-
6dc2115cc042
        Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: a242fca4-ebf0-4398-ac65-
879bab490259

```

```

42007B01000000E042007A0100000048420069010000002042006A0200000004000000010000000042006B020000000040
000000000000004200920900000008000000004B73C13A42000D0200000004000000010000000042000F010000008842
005C0500000004000000020000000042007F0500000004000000000000000042007C01000000604200940700000024383
9356637326332D623230612D343964382D393530342D3664633231313563633034320000000042009407000000246132
3432666361342D656266302D343339382D616336352D38373962616234393032353900000000

```

1

Locate (Public Key)
In: attributes={ objectType='PublicKey', Link={ LinkType='PrivateKeyLink', LinkedObjectIdentifier=uuidPrivateKey } }

```

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
    Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
      Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)
      Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
        Tag: Attribute (0x420008), Type: Structure (0x01), Data:
          Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Object Type
          Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000003 (Public Key)
        Tag: Attribute (0x420008), Type: Structure (0x01), Data:
          Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Link
          Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:

```

	<p>Tag: Link Type (0x42004B), Type: Enumeration (0x05), Data: 0x00000103 (Private Key Link)</p> <p>Tag: Linked Object Identifier (0x42004C), Type: Text String (0x07), Data: a242fca4-ebf0-4398-ac65-879bab490259</p> <p>42007801000000F04200770100000038420069010000002042006A0200000004000000010000000042006B0200000004000000000000042000D0200000004000000010000000042000F01000000A842005C050000000400000008000000004200790100000090420008010000002842000A070000000B4F626A6563742054797065000000000042000B050000000400000000300000000420008010000005842000A07000000044C696E6B0000000042000B010000004042004B050000000400000103000000042004C070000002461323432666361342D656266302D343339382D616336352D38373962616234393032353900000000</p> <p>Out: uuidPublicKey</p> <p>Tag: Response Message (0x42007B), Type: Structure (0x01), Data:</p> <p>Tag: Response Header (0x42007A), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)</p> <p>Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B73C13B (Thu Feb 11 09:35:07 CET 2010)</p> <p>Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:</p> <p>Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)</p> <p>Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)</p> <p>Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:</p> <p>Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 895f72c2-b20a-49d8-9504-6dc2115cc042</p> <p>42007B01000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040000000000000420092090000008000000004B73C13B42000D0200000004000000010000000042000F010000005842005C0500000004000000080000000042007F05000000040000000000000000000042007C0100000030420094070000002438393566373263322D623230612D343964382D393530342D36646332313135636330343200000000</p>
2	<p>Locate (Private Key)</p> <p>In: attributes={ objectType='PrivateKey', Link={ LinkType='PublicKeyLink', LinkedObjectIdentifier=uuidPublicKey } }</p> <p>Tag: Request Message (0x420078), Type: Structure (0x01), Data:</p> <p>Tag: Request Header (0x420077), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)</p> <p>Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:</p> <p>Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)</p> <p>Tag: Request Payload (0x420079), Type: Structure (0x01), Data:</p> <p>Tag: Attribute (0x420008), Type: Structure (0x01), Data:</p> <p>Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Object Type</p> <p>Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000004 (Private Key)</p> <p>Tag: Attribute (0x420008), Type: Structure (0x01), Data:</p> <p>Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Link</p>

	<p>Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:</p> <p>Tag: Link Type (0x42004B), Type: Enumeration (0x05), Data: 0x00000102 (Public Key Link)</p> <p>Tag: Linked Object Identifier (0x42004C), Type: Text String (0x07), Data: 895f72c2-b20a-49d8-9504-6dc2115cc042</p> <p>42007801000000F04200770100000038420069010000002042006A0200000004000000010000000042006B020000000400000000000042000D0200000004000000010000000042000F01000000A842005C050000000400000008000000004200790100000090420008010000002842000A070000000B4F626A6563742054797065000000000042000B0500000004000000004000000000420008010000005842000A07000000044C696E6B0000000042000B010000004042004B0500000004000001020000000042004C070000002438393566373263322D623230612D343964382D393530342D36646332313135636330343200000000</p> <p>Out: uuidPrivateKey</p> <p>Tag: Response Message (0x42007B), Type: Structure (0x01), Data:</p> <p>Tag: Response Header (0x42007A), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)</p> <p>Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B73C13B (Thu Feb 11 09:35:07 CET 2010)</p> <p>Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:</p> <p>Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)</p> <p>Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)</p> <p>Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:</p> <p>Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: a242fca4-ebf0-4398-ac65-b79bab490259</p> <p>42007B01000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B0200000004000000000000420092090000008000000004B73C13B42000D0200000004000000010000000042000F010000005842005C0500000004000000080000000042007F0500000004000000000000000042007C0100000030420094070000002461323432666361342D656266302D343339382D616336352D38373962616234393032353900000000</p>
3	<p>Destroy</p> <p>In: uuidPrivateKey</p> <p>Tag: Request Message (0x420078), Type: Structure (0x01), Data:</p> <p>Tag: Request Header (0x420077), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)</p> <p>Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:</p> <p>Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)</p> <p>Tag: Request Payload (0x420079), Type: Structure (0x01), Data:</p> <p>Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: a242fca4-ebf0-4398-ac65-b79bab490259</p> <p>42007801000000904200770100000038420069010000002042006A0200000004000000010000000042006B020000000400000000000042000D0200000004000000010000000042000F010000004842005C050000000400000014000000004200790100000030420094070000002461323432666361342D656266302D343339382D616336352D38373962616234393032353900000000</p>

	<p>Out: uuidPrivateKey</p> <p>Tag: Response Message (0x42007B), Type: Structure (0x01), Data: Tag: Response Header (0x42007A), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B73C13B (Thu Feb 11 09:35:07 CET 2010) Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Batch Item (0x42000F), Type: Structure (0x01), Data: Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy) Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success) Tag: Response Payload (0x42007C), Type: Structure (0x01), Data: Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: a242fca4-ebf0-4398-ac65-879bab490259</p> <p>42007B01000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B020000000400000000000000420092090000008000000004B73C13B42000D0200000004000000010000000042000F010000005842005C0500000004000000140000000042007F0500000004000000000000000042007C0100000030420094070000002461323432666361342D656266302D343339382D616336352D38373962616234393032353900000000</p>
4	<p>Destroy</p> <p>In: uuidPublicKey</p> <p>Tag: Request Message (0x420078), Type: Structure (0x01), Data: Tag: Request Header (0x420077), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Batch Item (0x42000F), Type: Structure (0x01), Data: Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy) Tag: Request Payload (0x420079), Type: Structure (0x01), Data: Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 895f72c2-b20a-49d8-9504-6dc2115cc042</p> <p>42007801000000904200770100000038420069010000002042006A0200000004000000010000000042006B02000000040000000000000042000F010000004842005C0500000004000000014000000004200790100000030420094070000002438393566373263322D623230612D343964382D393530342D36646332313135636330343200000000</p> <p>Out: uuidPublicKey</p> <p>Tag: Response Message (0x42007B), Type: Structure (0x01), Data: Tag: Response Header (0x42007A), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B73C13B (Thu Feb 11</p>

	<p>09:35:07 CET 2010)</p> <p>Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:</p> <p>Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)</p> <p>Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)</p> <p>Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:</p> <p>Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 895f72c2-b20a-49d8-9504-6dc2115cc042</p> <p>42007B01000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B0200000004000000000000420092090000008000000004B73C13B42000D0200000004000000010000000042000F010000005842005C0500000004000000140000000042007F050000000400000000000000042007C0100000030420094070000002438393566373263322D623230612D343964382D393530342D36646332313135636330343200000000</p>
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208

209 **8.2 Use-case: Register Both Halves of a Key Pair**

210 Register a private key and a public key and set the Link attribute to point to each other. Verify the links
 211 were set correctly by locating the keys based on the link attributes, and then delete both objects.

212

Time	Client A
0	<p>Register (Private Key)</p> <p>In: objectType='00000004', attributes={ CryptographicUsageMask='00000001' }, foreignPrivateKey</p> <p>Tag: Request Message (0x420078), Type: Structure (0x01), Data:</p> <p>Tag: Request Header (0x420077), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)</p> <p>Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:</p> <p>Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000003 (Register)</p> <p>Tag: Request Payload (0x420079), Type: Structure (0x01), Data:</p> <p>Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000004 (Private Key)</p> <p>Tag: Template-Attribute (0x420091), Type: Structure (0x01), Data:</p> <p>Tag: Attribute (0x420008), Type: Structure (0x01), Data:</p> <p>Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Usage Mask</p> <p>Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x00000001 (Sign)</p> <p>Tag: Private Key (0x420064), Type: Structure (0x01), Data:</p> <p>Tag: Key Block (0x420040), Type: Structure (0x01), Data:</p> <p>Tag: Key Format Type (0x420042), Type: Enumeration (0x05), Data: 0x00000004</p> <p>Tag: Key Value (0x420045), Type: Structure (0x01), Data:</p> <p>Tag: Key Material (0x420043), Type: Octet String (0x08), Data:</p> <p>30820276020100300D06092A864886F70D0101010500048202603082025C02010002818100930451C9ECD94F5BB9DA17D D09381BD23BE43ECA8C7539F301FC8A8CD5D5274C3E7699DBDC711C97A7AA91E2C50A82BD0B1034F0DF493DEC16362427 E58ACCE7F6CE0F9BCC617BBD8C90D0094A2703BA0D09EB19D1005F2FB265526AAC75AF32F8BC782CDED2A57F811E03EAF 67A944DE5E78413DCA8F232D074E6DCEA4CEC9F02030100010281800B6A7D736199EA48A420E4537CA0C7C046784DCBEA A63BAEBC0BC132787449CDE8D7CAD0C0C863C0FEFEB06C3062BEPFC50033ECF87B4E33A9BE7BCBC8F1511AE215E80DEB5D8 AF2BD31319D7821196640935A0CD67C94599579F2100D65E038831FDAFB0DBE2BBDAC00A696E67E756350E1C99ACE11A3 6DABAC3ED3E730960059024100DDF672FBCC5BDA3D73AFFC4E791E0C03390224405D69CCAABC749FAA0DCD4C2583C71DD E8941A7B9AA030F52EF1451466C074D4D338FE677892ACD9E10FD35BD024100A98FBC3ED6B4C6F860F97165AC2F7BB6F2</p>

Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:

Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000003 (Register)

Tag: Request Payload (0x420079), Type: Structure (0x01), Data:

Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000003 (Public Key)

Tag: Template-Attribute (0x420091), Type: Structure (0x01), Data:

Tag: Attribute (0x420008), Type: Structure (0x01), Data:

Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Usage

Mask

Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x00000002 (Verify)

Tag: Attribute (0x420008), Type: Structure (0x01), Data:

Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Link

Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:

Tag: Link Type (0x42004B), Type: Enumeration (0x05), Data: 0x00000103 (Private Key

Link)

Tag: Linked Object Identifier (0x42004C), Type: Text String (0x07), Data: fa06068c-6fb1-42ea-b6a2-d66d27b11943

Tag: Public Key (0x42006D), Type: Structure (0x01), Data:

Tag: Key Block (0x420040), Type: Structure (0x01), Data:

Tag: Key Format Type (0x420042), Type: Enumeration (0x05), Data: 0x00000005

Tag: Key Value (0x420045), Type: Structure (0x01), Data:

Tag: Key Material (0x420043), Type: Octet String (0x08), Data:

30819F300D06092A864886F70D010101050003818D0030818902818100930451C9ECD94F5BB9DA17DD09381BD23BE43EC
A8C7539F301FC8A8CD5D5274C3E7699DBDC711C97A7AA91E2C50A82BD0B1034F0DF493DEC16362427E58ACCE7F6CE0F9B
CC617BBD8C90D0094A2703BA0D09EB19D1005F2FB265526AAC75AF32F8BC782CDED2A57F811E03EAF67A944DE5E78413D
CA8F232D074E6DCEA4CEC9F0203010001

Tag: Cryptographic Algorithm (0x420028), Type: Enumeration (0x05), Data: 0x00000004

(RSA)

Tag: Cryptographic Length (0x42002A), Type: Integer (0x02), Data: 0x00000400 (1024)

42007801000002084200770100000038420069010000002042006A020000000400000001000000042006B02000000040
000000000000042000D02000000400000001000000042000F01000001C042005C050000004000000030000000042
007901000001A84200570500000040000000300000004200910100000098420008010000003042000A0700000018437
27970746F67726170686963205573616765204D61736B42000B020000000400000002000000042000801000000584200
0A07000000044C696E6B000000042000B010000004042004B050000000400000103000000042004C070000002466613
036303638632D366662312D343265612D623661322D643636643237623131393433000000042006D01000000F0420040
01000000E842004205000000400000005000000042004501000000B04200430800000A230819F300D06092A864886F
70D010101050003818D0030818902818100930451C9ECD94F5BB9DA17DD09381BD23BE43ECA8C7539F301FC8A8CD5D527
4C3E7699DBDC711C97A7AA91E2C50A82BD0B1034F0DF493DEC16362427E58ACCE7F6CE0F9BCC617BBD8C90D0094A2703B
A0D09EB19D1005F2FB265526AAC75AF32F8BC782CDED2A57F811E03EAF67A944DE5E78413DCA8F232D074E6DCEA4CEC9F
02030100010000000000042002805000000400000004000000042002A020000004000004000000000

Out: uuidPublicKey

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:

Tag: Response Header (0x42007A), Type: Structure (0x01), Data:

Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:

Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x00000004B73C4A2 (Thu Feb 11 09:49:38 CET 2010)

```

Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
  Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000003 (Register)
  Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
  Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
    Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 79cbf228-16df-4fb1-a385-443546935e74

42007B01000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040
000000000000004200920900000008000000004B73C4A242000D0200000004000000010000000042000F010000005842
005C0500000004000000030000000042007F050000000400000000000000000042007C01000000304200940700000024373
96362663232382D313664662D346662312D613338352D34343335343639333565373400000000

```

2

Add attribute
In: uuidPrivateKey, attribute={ Link={ LinkType='PublicKeyLink', LinkedObjectIdentifier=uuidPublicKey } }

```

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
Tag: Request Header (0x420077), Type: Structure (0x01), Data:
  Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
    Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
    Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
  Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000D (Add Attribute)
    Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: fa06068c-6fb1-42ea-b6a2-d66d27b11943
      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Link
        Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:
          Tag: Link Type (0x42004B), Type: Enumeration (0x05), Data: 0x00000102 (Public Key Link)
          Tag: Linked Object Identifier (0x42004C), Type: Text String (0x07), Data: 79cbf228-16df-4fb1-a385-443546935e74

42007801000000F04200770100000038420069010000002042006A020000000400000001000000004200
6B0200000004000000000000000042000D0200000004000000010000000042000F01000000A842005C0
5000000040000000D00000000042007901000000090420094070000002466613036303638632D36666231
2D343265612D623661322D64363664323762313139343300000000420008010000005842000A0700000
0044C696E6B0000000042000B010000004042004B0500000004000001020000000042004C070000002
437396362663232382D313664662D346662312D613338352D34343335343639333565373400000000

Out: uuidPrivateKey, attribute={ Link={ LinkType='PublicKeyLink', LinkedObjectIdentifier=uuidPublicKey }
}

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
  Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
    Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

```

Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B73C4A2 (Thu Feb 11 09:49:38 CET 2010)

Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000D (Add Attribute)

Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)

Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:

Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: fa06068c-6fb1-42ea-b6a2-d66d27b11943

Tag: Attribute (0x420008), Type: Structure (0x01), Data:

Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Link

Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:

Tag: Link Type (0x42004B), Type: Enumeration (0x05), Data: 0x00000102 (Public Key Link)

Tag: Linked Object Identifier (0x42004C), Type: Text String (0x07), Data: 79cbf228-16df-4fb1-a385-443546935e74

42007B010000011042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040000000000004200920900000008000000004B73C4A242000D0200000004000000010000000042000F01000000B842005C0500000004000000D0000000042007F050000000400000000000000042007C0100000090420094070000002466613036303638632D366662312D343265612D623661322D64363664323762313139343300000000420008010000005842000A07000000044C696E6B0000000042000B010000004042004B0500000004000001020000000042004C070000002437396362663232382D313664662D346662312D613338352D34343335343639333565373400000000

3 **Locate (Public Key)**
In: attributes={ objectType='PublicKey', Link={ LinkType='PrivateKeyLink', LinkedObjectIdentifier=uuidPrivateKey } }

Tag: Request Message (0x420078), Type: Structure (0x01), Data:

Tag: Request Header (0x420077), Type: Structure (0x01), Data:

Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:

Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)

Tag: Request Payload (0x420079), Type: Structure (0x01), Data:

Tag: Attribute (0x420008), Type: Structure (0x01), Data:

Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Object Type

Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000003 (Public Key)

Tag: Attribute (0x420008), Type: Structure (0x01), Data:

Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Link

Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:

Tag: Link Type (0x42004B), Type: Enumeration (0x05), Data: 0x00000103 (Private Key Link)

Tag: Linked Object Identifier (0x42004C), Type: Text String (0x07), Data: fa06068c-6fb1-42ea-b6a2-d66d27b11943

42007801000000F04200770100000038420069010000002042006A0200000004000000010000000042006B02000000040000000000000042000D0200000004000000010000000042000F01000000A842005C0500000004000000080000000004200790100000090420008010000002842000A070000000B4F626A656374205479706500000000042000B050000000400000000300000000420008010000005842000A07000000044C696E6B0000000042000B010000004042004B0500000004000001030000000042004C070000002466613036303638632D366662312D61333265612D623661322D64363664323762313139343300000000

	<p>Out: uuidPublicKey</p> <p>Tag: Response Message (0x42007B), Type: Structure (0x01), Data: Tag: Response Header (0x42007A), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B73C4A2 (Thu Feb 11 09:49:38 CET 2010) Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Batch Item (0x42000F), Type: Structure (0x01), Data: Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate) Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success) Tag: Response Payload (0x42007C), Type: Structure (0x01), Data: Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 79cbf228-16df-4fb1-a385-443546935e74</p> <p>42007B01000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040000000000000420092090000008000000004B73C4A242000D0200000004000000010000000042000F010000005842005C050000000400000008000000042007F0500000004000000000000000000042007C0100000030420094070000002437396362663232382D313664662D346662312D613338352D34343335343639333565373400000000</p>
4	<p>Locate (Private Key)</p> <p>In: attributes={ objectType='PrivateKey', Link={ LinkType='PublicKeyLink', LinkedObjectIdentifier=uuidPublicKey } }</p> <p>Tag: Request Message (0x420078), Type: Structure (0x01), Data: Tag: Request Header (0x420077), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Batch Item (0x42000F), Type: Structure (0x01), Data: Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate) Tag: Request Payload (0x420079), Type: Structure (0x01), Data: Tag: Attribute (0x420008), Type: Structure (0x01), Data: Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Object Type Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000004 (Private Key) Tag: Attribute (0x420008), Type: Structure (0x01), Data: Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Link Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data: Tag: Link Type (0x42004B), Type: Enumeration (0x05), Data: 0x00000102 (Public Key Link) Tag: Linked Object Identifier (0x42004C), Type: Text String (0x07), Data: 79cbf228-16df-4fb1-a385-443546935e74</p> <p>42007801000000F04200770100000038420069010000002042006A0200000004000000010000000042006B0200000004000000000000042000D0200000004000000010000000042000F01000000A842005C050000000400000008000000004200790100000090420008010000002842000A070000000B4F626A656374205479706500000000042000B05000000040000000000000420008010000005842000A07000000044C696E6B0000000042000B010000004042004B050000000400000102000000042004C070000002437396362663232382D313664662D346662312D613338352D34343335343639333565373400000000</p>

	<p>Out: uuidPrivateKey</p> <p>Tag: Response Message (0x42007B), Type: Structure (0x01), Data: Tag: Response Header (0x42007A), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B73C4A3 (Thu Feb 11 09:49:39 CET 2010) Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Batch Item (0x42000F), Type: Structure (0x01), Data: Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate) Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success) Tag: Response Payload (0x42007C), Type: Structure (0x01), Data: Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: fa06068c-6fb1-42ea-b6a2-d66d27b11943</p> <p>42007B01000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040000000000000420092090000008000000004B73C4A342000D0200000004000000010000000042000F0100000005842005C050000000400000008000000042007F05000000040000000000000000042007C0100000030420094070000002466613036303638632D366662312D343265612D623661322D64363664323762313139343300000000</p>
5	<p>Destroy</p> <p>In: uuidPrivateKey</p> <p>Tag: Request Message (0x420078), Type: Structure (0x01), Data: Tag: Request Header (0x420077), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Batch Item (0x42000F), Type: Structure (0x01), Data: Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy) Tag: Request Payload (0x420079), Type: Structure (0x01), Data: Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: fa06068c-6fb1-42ea-b6a2-d66d27b11943</p> <p>42007801000000904200770100000038420069010000002042006A0200000004000000010000000042006B0200000004000000000000042000D0200000004000000010000000042000F010000004842005C0500000004000000014000000004200790100000030420094070000002466613036303638632D366662312D343265612D623661322D64363664323762313139343300000000</p> <p>Out: uuidPrivateKey</p> <p>Tag: Response Message (0x42007B), Type: Structure (0x01), Data: Tag: Response Header (0x42007A), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B73C4A3 (Thu Feb 11</p>

	<p>09:49:39 CET 2010)</p> <p>Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:</p> <p>Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)</p> <p>Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)</p> <p>Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:</p> <p>Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: fa06068c-6fb1-42ea-b6a2-d66d27b11943</p> <p>42007B01000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040000000000000420092090000008000000004B73C4A342000D0200000004000000010000000042000F010000005842005C0500000004000000140000000042007F050000000400000000000000042007C0100000030420094070000002466613036303638632D366662312D343265612D623661322D64363664323762313139343300000000</p>
6	<p>Destroy</p> <p>In: uuidPublicKey</p> <p>Tag: Request Message (0x420078), Type: Structure (0x01), Data:</p> <p>Tag: Request Header (0x420077), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)</p> <p>Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:</p> <p>Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)</p> <p>Tag: Request Payload (0x420079), Type: Structure (0x01), Data:</p> <p>Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 79cbf228-16df-4fb1-a385-443546935e74</p> <p>42007801000000904200770100000038420069010000002042006A0200000004000000010000000042006B0200000004000000000000042000D0200000004000000010000000042000F010000004842005C050000000400000014000000004200790100000030420094070000002437396362663232382D3136646662D346662312D613338352D34343335343639333565373400000000</p> <p>Out: uuidPublicKey</p> <p>Tag: Response Message (0x42007B), Type: Structure (0x01), Data:</p> <p>Tag: Response Header (0x42007A), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)</p> <p>Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B73C4A3 (Thu Feb 11 09:49:39 CET 2010)</p> <p>Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:</p> <p>Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)</p> <p>Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)</p> <p>Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:</p> <p>Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 79cbf228-16df-4fb1-a385-443546935e74</p> <p>42007B01000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B020000000400000000000000</p>


```
000000000000004200920900000008000000004B73C4A342000D0200000004000000010000000042000F010000005842
005C0500000004000000140000000042007F05000000040000000000000042007C01000000304200940700000024373
96362663232382D313664662D346662312D613338352D34343335343639333565373400000000
```

213
214

9 Key Roll-over

216

217 These use-cases test manual key roll-over using the “Re-key” operation. In particular, they test the
218 formatting of the Re-key command, the handling and server-side processing of the various Time
219 attributes and the setting of some other attributes that are not automatically copied from the existing key
220 to the new key.

9.1 Use-case: Create a Key, Re-key

222 Create a symmetric key with a specific name, and then use Locate to find the key. After using Re-key to
223 create a new key, verify that the name was removed from the existing key and copied to the new key.
224 Also verify that the key material for the old key is still retrievable. To clean up, both keys are deleted.
225

Time	Client A
0	<p>Create (symmetric key)</p> <p>In: objectType='00000002', attributes={ CryptographicAlgorithm='AES', CryptographicLength='128', CryptographicUsageMask='0000000C', Name={ NameValue='rekeyKey', NameType='00000001' } }</p> <p>Tag: Request Message (0x420078), Type: Structure (0x01), Data:</p> <p> Tag: Request Header (0x420077), Type: Structure (0x01), Data:</p> <p> Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:</p> <p> Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p> Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)</p> <p> Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p> Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:</p> <p> Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create)</p> <p> Tag: Request Payload (0x420079), Type: Structure (0x01), Data:</p> <p> Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)</p> <p> Tag: Template-Attribute (0x420091), Type: Structure (0x01), Data:</p> <p> Tag: Attribute (0x420008), Type: Structure (0x01), Data:</p> <p> Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Algorithm</p> <p> Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000003 (AES)</p> <p> Tag: Attribute (0x420008), Type: Structure (0x01), Data:</p> <p> Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Length</p> <p> Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x00000080 (128)</p> <p> Tag: Attribute (0x420008), Type: Structure (0x01), Data:</p> <p> Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Usage</p> <p>Mask</p> <p> Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x0000000C (Encrypt, Decrypt)</p> <p> Tag: Attribute (0x420008), Type: Structure (0x01), Data:</p> <p> Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name</p> <p> Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:</p>

Tag: Name Value (0x420055), Type: Text String (0x07), Data: rekeyKey
 Tag: Name Type (0x420054), Type: Enumeration (0x05), Data: 0x00000001 (Uninterpreted text string)

42007801000001604200770100000038420069010000002042006A0200000004000000010000000042006B0200000004000000000000042000D0200000004000000010000000042000F010000011842005C0500000004000000010000000042007901000001004200570500000004000000020000000042009101000000E8420008010000003042000A070000001743727970746F6772617068696320416C676F726974686D0042000B05000000040000000300000000420008010000003042000A070000001443727970746F67726170686963204C656E677468000000042000B020000000400000008000000000420008010000003042000A070000001843727970746F67726170686963205573616765204D61736B42000B02000000040000000C00000000420008010000003842000A07000000044E616D65000000042000B0100000020420055070000000872656B65794B657942005405000000040000000100000000

Out: objectType='00000002', uuidKey

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
 Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B73C8BA (Thu Feb 11 10:07:06 CET 2010)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create)
 Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
 Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
 Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: fb560735-ef6f-4085-9e0a-eb6f1394c218

42007B010000000C042007A0100000048420069010000002042006A0200000004000000010000000042006B020000000400000000000004200920900000008000000004B73C8BA42000D0200000004000000010000000042000F010000006842005C0500000004000000010000000042007F050000000400000000000000042007C0100000040420057050000000400000002000000004200940700000002466623536303733352D656636662D343038352D396530612D65623666313339346332313800000000

1 **Locate**
In: attributes={ Name={ NameValue='rekeyKey', NameType='00000001' } }

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
 Tag: Request Header (0x420077), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)
 Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
 Tag: Attribute (0x420008), Type: Structure (0x01), Data:
 Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name
 Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:
 Tag: Name Value (0x420055), Type: Text String (0x07), Data: rekeyKey

Tag: Name Type (0x420054), Type: Enumeration (0x05), Data: 0x00000001 (Uninterpreted text string)

42007801000000A04200770100000038420069010000002042006A0200000004000000010000000042006B0200000004000000000000042000D0200000004000000010000000042000F010000005842005C050000000400000008000000004200790100000040420008010000003842000A07000000044E616D650000000042000B0100000020420055070000000872656B65794B657942005405000000040000000100000000

Out: uuidKey

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:

Tag: Response Header (0x42007A), Type: Structure (0x01), Data:

Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:

Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B73C8BA (Thu Feb 11 10:07:06 CET 2010)

Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)

Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)

Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:

Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: fb560735-ef6f-4085-9e0a-eb6f1394c218

42007B01000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040000000000000420092090000008000000004B73C8BA42000D0200000004000000010000000042000F010000005842005C050000000400000008000000042007F050000000400000000000000042007C0100000030420094070000002466623536303733352D656636662D343038352D396530612D65623666313339346332313800000000

2

Rekey

In: uuidKey

Tag: Request Message (0x420078), Type: Structure (0x01), Data:

Tag: Request Header (0x420077), Type: Structure (0x01), Data:

Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:

Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000004 (Re-key)

Tag: Request Payload (0x420079), Type: Structure (0x01), Data:

Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: fb560735-ef6f-4085-9e0a-eb6f1394c218

42007801000000904200770100000038420069010000002042006A0200000004000000010000000042006B0200000004000000000000042000D020000000400000001000000004842005C0500000004000000080000000042000F01000000584200790100000030420094070000002466623536303733352D656636662D343038352D396530612D65623666313339346332313800000000

Out: uuidNewKey

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
 Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B73C8BB (Thu Feb 11 10:07:07 CET 2010)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000004 (Re-key)
 Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
 Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: bf6cc1d4-f914-4099-b4d4-453050d8bcf4

42007B01000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040000000000000420092090000008000000004B73C8BB42000D0200000004000000010000000042000F010000005842005C0500000004000000040000000042007F0500000004000000000000000000042007C0100000030420094070000002462663663633164342D663931342D343039392D623464342D34353330353064386263663400000000

3 **Locate**
In: attributes={ Name={ NameValue='rekeyKey', NameType='00000001' } }

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
 Tag: Request Header (0x420077), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)
 Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
 Tag: Attribute (0x420008), Type: Structure (0x01), Data:
 Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name
 Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:
 Tag: Name Value (0x420055), Type: Text String (0x07), Data: rekeyKey
 Tag: Name Type (0x420054), Type: Enumeration (0x05), Data: 0x00000001 (Uninterpreted text string)

42007801000000A04200770100000038420069010000002042006A0200000004000000010000000042006B0200000004000000000000042000D0200000004000000010000000042000F010000005842005C0500000004000000080000000004200790100000040420008010000003842000A07000000044E616D65000000042000B0100000020420055070000000872656B65794B657942005405000000040000000100000000

Out: uuidNewKey

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
 Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B73C8BB (Thu Feb 11

10:07:07 CET 2010)

Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)

Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)

Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:

Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: bf6cc1d4-f914-4099-b4d4-453050d8bcf4

42007B01000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040000000000004200920900000008000000004B73C8BB42000D0200000004000000010000000042000F010000005842005C0500000004000000080000000042007F05000000040000000000000042007C0100000030420094070000002462663663633164342D663931342D343039392D623464342D34353330353064386263663400000000

4

Get Attribute
In: uuidKey, attributeName={'Name'}

Tag: Request Message (0x420078), Type: Structure (0x01), Data:

Tag: Request Header (0x420077), Type: Structure (0x01), Data:

Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:

Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)

Tag: Request Payload (0x420079), Type: Structure (0x01), Data:

Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: fb560735-ef6f-4085-9e0a-eb6f1394c218

Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name

42007801000000A04200770100000038420069010000002042006A0200000004000000010000000042006B02000000040000000000000042000D0200000004000000010000000042000F010000005842005C050000000400000008000000004200790100000004020094070000002466623536303733352D656636662D343038352D396530612D6562366631333934633231380000000042000A07000000044E616D6500000000

Out: uuidKey

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:

Tag: Response Header (0x42007A), Type: Structure (0x01), Data:

Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:

Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B73C8BB (Thu Feb 11 10:07:07 CET 2010)

Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)

Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)

Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:

Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: fb560735-ef6f-4085-9e0a-eb6f1394c218

	<pre>42007B01000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040 000000000000000420092090000008000000004B73C8BB42000D0200000004000000010000000042000F010000005842 005C05000000040000000B0000000042007F05000000040000000000000042007C01000000304200940700000024666 23536303733352D656636662D343038352D396530612D65623666313339346332313800000000</pre>
5	<p>Get (symmetric key) In: uuidKey</p> <p>Tag: Request Message (0x420078), Type: Structure (0x01), Data: Tag: Request Header (0x420077), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Batch Item (0x42000F), Type: Structure (0x01), Data: Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get) Tag: Request Payload (0x420079), Type: Structure (0x01), Data: Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: fb560735-ef6f-4085-9e0a-eb6f1394c218</p> <pre>42007801000000904200770100000038420069010000002042006A0200000004000000010000000042006B02000000040 00000000000000042000D0200000004000000010000000042000F010000004842005C05000000040000000A0000000042 00790100000030420094070000002466623536303733352D656636662D343038352D396530612D6562366631333934633 23138000000000</pre> <p>Out: objectType = '00000002', uuidKey, symmetricKey</p> <p>Tag: Response Message (0x42007B), Type: Structure (0x01), Data: Tag: Response Header (0x42007A), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B73C8BB (Thu Feb 11 10:07:07 CET 2010) Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Batch Item (0x42000F), Type: Structure (0x01), Data: Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get) Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success) Tag: Response Payload (0x42007C), Type: Structure (0x01), Data: Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key) Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: fb560735-ef6f-4085-9e0a-eb6f1394c218 Tag: Symmetric Key (0x42008F), Type: Structure (0x01), Data: Tag: Key Block (0x420040), Type: Structure (0x01), Data: Tag: Key Format Type (0x420042), Type: Enumeration (0x05), Data: 0x00000001 Tag: Key Value (0x420045), Type: Structure (0x01), Data: Tag: Key Material (0x420043), Type: Octet String (0x08), Data: BC25617991C49D06536008D076017462 Tag: Cryptographic Algorithm (0x420028), Type: Enumeration (0x05), Data: 0x00000003 (AES) Tag: Cryptographic Length (0x42002A), Type: Integer (0x02), Data: 0x00000080 (128)</p>

	<pre> 42007B010000012042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040 000000000000000420092090000008000000004B73C8BB42000D0200000004000000010000000042000F01000000C842 005C0500000004000000A0000000042007F050000000400000000000000042007C01000000A04200570500000004000 0000200000000420094070000002466623536303733352D656636662D343038352D396530612D65623666313339346332 31380000000042008F0100000058420040010000005042004205000000040000000100000000420045010000001842004 30800000010BC25617991C49D06536008D0760174624200280500000004000000030000000042002A0200000004000000 8000000000 </pre>
6	<p>Destroy In: uuidKey</p> <p>Tag: Request Message (0x420078), Type: Structure (0x01), Data: Tag: Request Header (0x420077), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Batch Item (0x42000F), Type: Structure (0x01), Data: Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy) Tag: Request Payload (0x420079), Type: Structure (0x01), Data: Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: fb560735-ef6f-4085-9e0a-eb6f1394c218</p> <pre> 42007801000000904200770100000038420069010000002042006A0200000004000000010000000042006B02000000040 00000000000000042000D0200000004000000010000000042000F010000004842005C05000000040000000140000000042 00790100000030420094070000002466623536303733352D656636662D343038352D396530612D6562366631333934633 23138000000000 </pre> <p>Out: uuidKey</p> <p>Tag: Response Message (0x42007B), Type: Structure (0x01), Data: Tag: Response Header (0x42007A), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B73C8BC (Thu Feb 11 10:07:08 CET 2010) Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Batch Item (0x42000F), Type: Structure (0x01), Data: Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy) Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success) Tag: Response Payload (0x42007C), Type: Structure (0x01), Data: Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: fb560735-ef6f-4085-9e0a-eb6f1394c218</p> <pre> 42007B01000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040 000000000000000420092090000008000000004B73C8BC42000D0200000004000000010000000042000F010000005842 005C0500000004000000140000000042007F050000000400000000000000042007C01000000304200940700000024666 23536303733352D656636662D343038352D396530612D65623666313339346332313800000000 </pre>
7	<p>Destroy In: uuidNewKey</p>

```

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
    Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: bf6ccd4-f914-4099-b4d4-453050d8bcf4

42007801000000904200770100000038420069010000002042006A0200000004000000010000000042006B02000000040
0000000000000042000D0200000004000000010000000042000F010000004842005C05000000040000000140000000042
00790100000030420094070000002462663663633164342D663931342D343039392D623464342D3435333035306438626
3663400000000

Out: uuidNewKey

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B73C8BC (Thu Feb 11
10:07:08 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: bf6ccd4-f914-4099-b4d4-453050d8bcf4

42007B01000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040
00000000000000420092090000008000000004B73C8BC42000D0200000004000000010000000042000F010000005842
005C0500000004000000140000000042007F050000000400000000000000000042007C01000000304200940700000024626
63663633164342D663931342D343039392D623464342D34353330353064386263663400000000

```

226
227

228 **9.2 Use-case: Existing Key Expired, Re-key with Same lifecycle**

229 Create a new symmetric key. Then add the *Activation Date* and *Deactivation Date* attributes based on the
230 timestamp in the response to the Create request. The *Activation Date* is set to a time in the past and the
231 *Deactivation Date* to a time in the near future. Repeated Get Attribute calls are performed to verify that
232 the state is first "Active", then subsequently "Deactivated". Then issue a Re-key request, including an
233 *Activation Date* attribute with the value set to the previously specified *Deactivation Date* of the existing
234 key. Verify from the response that the *Activation Date* and *Deactivation Date* attributes were set correctly
235 (if they are not returned, issue a Get Attribute request). Do a Get Attribute operation to verify that the
236 state of the new key is "Active". To clean up, both keys are deleted.
237

Time	Client A
0	<p>Create (symmetric key)</p> <p>In: objectType='0000002', attributes={ CryptographicAlgorithm='AES', CryptographicLength='128', CryptographicUsageMask='000000C' }</p> <p>Tag: Request Message (0x420078), Type: Structure (0x01), Data:</p> <p>Tag: Request Header (0x420077), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)</p> <p>Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:</p> <p>Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create)</p> <p>Tag: Request Payload (0x420079), Type: Structure (0x01), Data:</p> <p>Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)</p> <p>Tag: Template-Attribute (0x420091), Type: Structure (0x01), Data:</p> <p>Tag: Attribute (0x420008), Type: Structure (0x01), Data:</p> <p>Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Algorithm</p> <p>Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000003 (AES)</p> <p>Tag: Attribute (0x420008), Type: Structure (0x01), Data:</p> <p>Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Length</p> <p>Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x00000080 (128)</p> <p>Tag: Attribute (0x420008), Type: Structure (0x01), Data:</p> <p>Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Usage</p> <p>Mask</p> <p>Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x0000000C (Encrypt, Decrypt)</p> <p>Tag: Attribute (0x420008), Type: Structure (0x01), Data:</p> <p>Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name</p> <p>Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:</p> <p>Tag: Name Value (0x420055), Type: Text String (0x07), Data: rekeyKey</p> <p>Tag: Name Type (0x420054), Type: Enumeration (0x05), Data: 0x00000001 (Uninterpreted text string)</p> <p>42007801000001604200770100000038420069010000002042006A0200000004000000010000000042006B020000000400000000000000042000D020000000400000001000000042000F010000011842005C0500000004000000010000000042007901000001004200570500000004000000020000000042009101000000E8420008010000003042000A070000001743727970746F6772617068696320416C676F726974686D0042000B0500000004000000030000000420008010000003042000A070000001443727970746F67726170686963204C656E677468000000042000B02000000040000008000000000420008010000003042000A070000001843727970746F67726170686963205573616765204D61736B42000B02000000040000000C00000000420008010000003842000A07000000044E616D65000000042000B0100000020420055070000000872656B65794B657942005405000000040000000100000000</p> <p>Out: objectType='0000002', uuidKey</p> <p>Tag: Response Message (0x42007B), Type: Structure (0x01), Data:</p> <p>Tag: Response Header (0x42007A), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)</p>

Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B73FFC7 (Thu Feb 11 14:01:59 CET 2010)

Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create)

Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)

Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:

Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)

Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: fbc5f3e5-48bf-4294-b754-0575a41d93b6

42007B010000000C042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040000000000000420092090000008000000004B73FFC742000D020000000400000001000000042000F010000006842005C050000000400000001000000042007F050000000400000000000000042007C01000000404200570500000004000000020000000420094070000002466626335663356352D343862662D343239342D623735342D30353735613431643933623600000000

1

Add Activation Date, Deactivation Date attributes based on Timestamp in previous response (batch)

In: uuidKey, attribute={ ActivationDate='<Timestamp in previous response - 365 days>' }

In: uuidKey, attribute={ DeactivationDate='<Timestamp in previous response + 2 minutes>' }

Tag: Request Message (0x420078), Type: Structure (0x01), Data:

Tag: Request Header (0x420077), Type: Structure (0x01), Data:

Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:

Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

Tag: Batch Order Option (0x420010), Type: Boolean (0x06), Data: TRUE

Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000002 (2)

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000D (Add Attribute)

Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: BAC4A9CECC650259

Tag: Request Payload (0x420079), Type: Structure (0x01), Data:

Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: fbc5f3e5-48bf-4294-b754-0575a41d93b6

Tag: Attribute (0x420008), Type: Structure (0x01), Data:

Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Activation Date

Tag: Attribute Value (0x42000B), Type: Date-Time (0x09), Data: 0x000000004992CC47 (Wed Feb 11 14:01:59 CET 2009)

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000D (Add Attribute)

Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 582C952324F4552F

Tag: Request Payload (0x420079), Type: Structure (0x01), Data:

Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: fbc5f3e5-48bf-4294-b754-0575a41d93b6

Tag: Attribute (0x420008), Type: Structure (0x01), Data:

Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Deactivation Date

Tag: Attribute Value (0x42000B), Type: Date-Time (0x09), Data: 0x000000004B74003F (Thu Feb 11 14:03:59 CET 2010)

42007801000001784200770100000048420069010000002042006A0200000004000000010000000042006B02000000040000000000000420010060000008000000000000000142000D020000000400000002000000042000F010000008842005C05000000040000000D00000004200930800000008BAC4A9CECC6502594200790100000060420094070000002466626335663352D343862662D343239342D623735342D3035373561343164393362360000000420008010000002842000A070000000F41637469766174696F6E20446174650042000B0900000008000000004992CC4742000F010000009042005

C05000000040000000D000000004200930800000008582C952324F4552F4200790100000068420094070000002466626335663365352D343862662D343239342D623735342D30353735613431643933623600000000420008010000003042000A0700000011446561637469766174696F6E20446174650000000000000042000B0900000008000000004B74003F

Out: uuidKey, attribute={ ActivationDate=' <Timestamp in previous response - 1 year>' }

Out: uuidKey, attribute={ DeactivationDate=' <Timestamp in previous response + 2 minutes>' }

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:

Tag: Response Header (0x42007A), Type: Structure (0x01), Data:

Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:

Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B73FFC7 (Thu Feb 11 14:01:59 CET 2010)

Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000002 (2)

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000D (Add Attribute)

Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: BAC4A9CECC650259

Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)

Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:

Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: fbc5f3e5-48bf-4294-b754-0575a41d93b6

Tag: Attribute (0x420008), Type: Structure (0x01), Data:

Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Activation Date

Tag: Attribute Value (0x42000B), Type: Date-Time (0x09), Data: 0x000000004992CC47 (Wed Feb 11 14:01:59 CET 2009)

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000D (Add Attribute)

Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 582C952324F4552F

Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)

Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:

Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: fbc5f3e5-48bf-4294-b754-0575a41d93b6

Tag: Attribute (0x420008), Type: Structure (0x01), Data:

Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Deactivation Date

Tag: Attribute Value (0x42000B), Type: Date-Time (0x09), Data: 0x000000004B74003F (Thu Feb 11 14:03:59 CET 2010)

42007B010000019842007A0100000048420069010000002042006A0200000004000000010000000042006B0200000004000000000000004200920900000008000000004B73FFC742000D02000000040000000042000F010000009842005C05000000040000000D000000004200930800000008BAC4A9CECC65025942007F0500000004000000000000000042007C0100000060420094070000002466626335663365352D343862662D343239342D623735342D30353735613431643933623600000000420008010000002842000A070000000F41637469766174696F6E20446174650042000B0900000008000000004992CC4742000F01000000A042005C05000000040000000D000000004200930800000008582C952324F4552F42007F05000000040000000000000042007C0100000068420094070000002466626335663365352D343862662D343239342D623735342D30353735613431643933623600000000420008010000003042000A0700000011446561637469766174696F6E204461746500000000000042000B0900000008000000004B74003F

2

Get Attribute * Repeated until state changes to Deactivated

In: uuidKey, attributeName={'State'}

Tag: Request Message (0x420078), Type: Structure (0x01), Data:

Tag: Request Header (0x420077), Type: Structure (0x01), Data:

	<p>Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)</p> <p>Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:</p> <p>Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)</p> <p>Tag: Request Payload (0x420079), Type: Structure (0x01), Data:</p> <p>Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: fbc5f3e5-48bf-4294-b754-0575a41d93b6</p> <p>Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: State</p> <p>42007801000000A04200770100000038420069010000002042006A0200000004000000010000000042006B0200000004000000000000042000D0200000004000000010000000042000F010000005842005C05000000040000000B0000000004200790100000040420094070000002466626335663365352D343862662D343239342D623735342D3035373561343164339362360000000042000A07000000055374617465000000</p> <p>Out: uuidKey, attribute={ State='Active' }</p> <p>Tag: Response Message (0x42007B), Type: Structure (0x01), Data:</p> <p>Tag: Response Header (0x42007A), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)</p> <p>Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B73FFC7 (Thu Feb 11 14:01:59 CET 2010)</p> <p>Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:</p> <p>Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)</p> <p>Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)</p> <p>Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:</p> <p>Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: fbc5f3e5-48bf-4294-b754-0575a41d93b6</p> <p>Tag: Attribute (0x420008), Type: Structure (0x01), Data:</p> <p>Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: State</p> <p>Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000002 (Active)</p> <p>42007B01000000D842007A0100000048420069010000002042006A0200000004000000010000000042006B020000000400000000000000420092090000008000000004B73FFC742000D0200000004000000010000000042000F010000008042005C05000000040000000B0000000042007F0500000004000000000000000042007C0100000058420094070000002466626335663365352D343862662D343239342D623735342D30353735613431643393623600000000420008010000002042000A0700000005537461746500000042000B05000000040000000200000000</p>
3	<p>Get Attribute</p> <p>In: uuidKey, attributeName={'State'}</p> <p>Tag: Request Message (0x420078), Type: Structure (0x01), Data:</p> <p>Tag: Request Header (0x420077), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)</p> <p>Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:</p>

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)
 Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: fbc5f3e5-48bf-4294-b754-0575a41d93b6
 Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: State

42007801000000A04200770100000038420069010000002042006A0200000004000000010000000042006B02000000040
 0000000000000042000D0200000004000000010000000042000F010000005842005C05000000040000000B0000000042
 00790100000040420094070000002466626335663365352D343862662D343239342D623735342D3035373561343164393
 36236000000042000A07000000055374617465000000

Out: uuidKey, attribute={ State='Deactivated' }

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
 Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B740040 (Thu Feb 11
 14:04:00 CET 2010)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)
 Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
 Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: fbc5f3e5-48bf-4294-b754-0575a41d93b6
 Tag: Attribute (0x420008), Type: Structure (0x01), Data:
 Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: State
 Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000003 (Deactivated)

42007B01000000D842007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040
 000000000000004200920900000008000000004B74004042000D0200000004000000010000000042000F0100000008042
 005C050000000040000000B0000000042007F05000000040000000000000042007C01000000584200940700000024666
 26335663365352D343862662D343239342D623735342D3035373561343164393362360000000042000801000000204200
 0A0700000005537461746500000042000B05000000040000000300000000

4 Rekey
In: uuidKey, attribute={ offset='FE747E00' (300 days backwards)}

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
 Tag: Request Header (0x420077), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000004 (Re-key)
 Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: fbc5f3e5-48bf-4294-b754-0575a41d93b6
 Tag: Offset (0x420058), Type: Interval (0x0A), Data: 0xFE747E00

	<pre> 42007801000000A04200770100000038420069010000002042006A0200000004000000010000000042006B02000000040 0000000000000042000D0200000004000000010000000042000F010000005842005C0500000004000000040000000042 00790100000040420094070000002466626335663365352D343862662D343239342D623735342D3035373561343164393 36236000000004200580A00000004FE747E000000000000 Out: uuidNewKey Tag: Response Message (0x42007B), Type: Structure (0x01), Data: Tag: Response Header (0x42007A), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B740040 (Thu Feb 11 14:04:00 CET 2010) Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Batch Item (0x42000F), Type: Structure (0x01), Data: Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000004 (Re-key) Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success) Tag: Response Payload (0x42007C), Type: Structure (0x01), Data: Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 389602b1-ca02-4c3c-b5a3- c3789e7f2c92 42007B01000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040 00000000000000420092090000008000000004B74004042000D0200000004000000010000000042000F010000005842 005C0500000004000000040000000042007F050000000400000000000000042007C01000000304200940700000024333 83936303262312D636130322D346333632D623561332D63333738396537663263393200000000 </pre>
5	<pre> Get Attribute In: uuidNewKey, attributeName={' ActivationDate', 'DeactivationDate' } Tag: Request Message (0x420078), Type: Structure (0x01), Data: Tag: Request Header (0x420077), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Batch Item (0x42000F), Type: Structure (0x01), Data: Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes) Tag: Request Payload (0x420079), Type: Structure (0x01), Data: Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 389602b1-ca02-4c3c-b5a3- c3789e7f2c92 Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Activation Date Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Deactivation Date 42007801000000C84200770100000038420069010000002042006A0200000004000000010000000042006B02000000040 0000000000000042000D0200000004000000010000000042000F010000008042005C05000000040000000B0000000042 00790100000068420094070000002433383936303262312D636130322D346333632D623561332D6333373839653766326 339320000000042000A07000000F41637469766174696F6E20446174650042000A070000001144656163746976617469 6F6E20446174650000000000000000 Out: uuidNewKey, attribute={' ActivationDate=' <Value of ActivationTime in existing key + 65 days>', </pre>

DeactivationDate='<Value of DeactivationDate of existing key + 65 days>']

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:

 Tag: Response Header (0x42007A), Type: Structure (0x01), Data:

 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:

 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

 Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B740040 (Thu Feb 11 14:04:00 CET 2010)

 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)

 Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)

 Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:

 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 389602b1-ca02-4c3c-b5a3-c3789e7f2c92

 Tag: Attribute (0x420008), Type: Structure (0x01), Data:

 Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Activation Date

 Tag: Attribute Value (0x42000B), Type: Date-Time (0x09), Data: 0x0000000049E87DC6 (Fri Apr 17 15:01:58 CEST 2009)

 Tag: Attribute (0x420008), Type: Structure (0x01), Data:

 Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Deactivation Date

 Tag: Attribute Value (0x42000B), Type: Date-Time (0x09), Data: 0x000000004BC9B1BE (Sat Apr 17 15:03:58 CEST 2010)

42007B010000011842007A0100000048420069010000002042006A0200000004000000010000000042006B0200000004000000000000004200920900000008000000004B74004042000D0200000004000000010000000042000F010000000C042005C05000000040000000B0000000042007F050000000400000000000000042007C0100000098420094070000002433383936303262312D636130322D346333632D623561332D633373839653766326339320000000420008010000002842000A070000000F41637469766174696F6E20446174650042000B0900000008000000049E87DC6420008010000003042000A0700000011446561637469766174696F6E2044617465000000000000042000B090000000800000004BC9B1BE

6

Get Attribute

In: uuidNewKey, attributeName={'State'}

Tag: Request Message (0x420078), Type: Structure (0x01), Data:

 Tag: Request Header (0x420077), Type: Structure (0x01), Data:

 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:

 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)

 Tag: Request Payload (0x420079), Type: Structure (0x01), Data:

 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 389602b1-ca02-4c3c-b5a3-c3789e7f2c92

 Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: State

42007801000000A04200770100000038420069010000002042006A0200000004000000010000000042006B02000000040000000000000042000D0200000004000000010000000042000F010000005842005C05000000040000000B000000004200790100000040420094070000002433383936303262312D636130322D346333632D623561332D63337383965376632633932000000042000A07000000055374617465000000

	<p>Out: uuidNewKey, attribute={ State='Active' }</p> <p>Tag: Response Message (0x42007B), Type: Structure (0x01), Data: Tag: Response Header (0x42007A), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B740040 (Thu Feb 11 14:04:00 CET 2010) Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Batch Item (0x42000F), Type: Structure (0x01), Data: Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes) Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success) Tag: Response Payload (0x42007C), Type: Structure (0x01), Data: Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 389602b1-ca02-4c3c-b5a3-c3789e7f2c92 Tag: Attribute (0x420008), Type: Structure (0x01), Data: Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: State Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000002 (Active)</p> <p>42007B01000000D842007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040000000000004200920900000008000000004B7400404200D0200000004000000010000000042000F010000008042005C05000000040000000B0000000042007F05000000040000000000000042007C0100000058420094070000002433383936303262312D636130322D346333632D623561332D633337383965376632633932000000042008010000002042000A0700000005537461746500000042000B05000000040000000200000000</p>
7	<p>Destroy</p> <p>In: uuidKey</p> <p>Tag: Request Message (0x420078), Type: Structure (0x01), Data: Tag: Request Header (0x420077), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Batch Item (0x42000F), Type: Structure (0x01), Data: Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy) Tag: Request Payload (0x420079), Type: Structure (0x01), Data: Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: fbc5f3e5-48bf-4294-b754-0575a41d93b6</p> <p>42007801000000904200770100000038420069010000002042006A0200000004000000010000000042006B020000000400000000000042000D0200000004000000010000000042000F010000004842005C050000000400000014000000004200790100000030420094070000002466626335663365352D343862662D343239342D623735342D303537356134316433933623600000000</p> <p>Out: uuidKey</p> <p>Tag: Response Message (0x42007B), Type: Structure (0x01), Data: Tag: Response Header (0x42007A), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:</p>

Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B740040 (Thu Feb 11 14:04:00 CET 2010)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
 Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
 Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: fbc5f3e5-48bf-4294-b754-0575a41d93b6

42007B01000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B0200000000400000000000004200920900000008000000004B74004042000D0200000004000000010000000042000F010000005842005C0500000004000000140000000042007F050000000400000000000000000042007C0100000030420094070000002466626335663365352D343862662D343239342D623735342D30353735613431643933623600000000

8 **Revoke (symmetric key as cessation of operation) and Destroy**
In (header): batchOrderOption='TRUE'
In: uuidKey, revocationReasonCode='6'
In: uuidNewKey

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
 Tag: Request Header (0x420077), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Batch Order Option (0x420010), Type: Boolean (0x06), Data: TRUE
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000002 (2)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000013 (Revoke)
 Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 7012417AA1B7394B
 Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 389602b1-ca02-4c3c-b5a3-c3789e7f2c92
 Tag: Revocation Reason (0x420081), Type: Structure (0x01), Data:
 Tag: Revocation Reason Code (0x420082), Type: Enumeration (0x05), Data: 0x00000006 (Cessation of Operation)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
 Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 3F8F4F1759704555
 Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 389602b1-ca02-4c3c-b5a3-c3789e7f2c92

42007801000001284200770100000048420069010000002042006A0200000004000000010000000042006B02000000004000000000000042001006000000080000000000000000000142000D0200000004000000020000000042000F010000007042005C0500000004000000130000000042009308000000087012417AA1B7394B4200790100000048420094070000002433383936303262312D636130322D346333632D623561332D6333373839653766326339320000000042008101000000104200820500000004000000060000000042000F010000005842005C0500000004000000140000000042009308000000083F8F4F17597045554200790100000030420094070000002433383936303262312D636130322D346333632D623561332D63333738396537663263393200000000

```

Out: uuidNewKey
Out: uuidNewKey

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B740040 (Thu Feb 11
14:04:00 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000002 (2)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000013 (Revoke)
    Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 7012417AA1B7394B
    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 389602b1-ca02-4c3c-b5a3-
c3789e7f2c92
    Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
      Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
      Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 3F8F4F1759704555
      Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
      Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
        Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 389602b1-ca02-4c3c-b5a3-
c3789e7f2c92

42007B010000013042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040
000000000000004200920900000008000000004B74004042000D0200000004000000020000000042000F010000006842
005C05000000040000001300000000420093080000000087012417AA1B7394B42007F0500000004000000000000000420
07C0100000030420094070000002433383936303262312D636130322D346333632D623561332D63333738396537663263
3932000000042000F010000006842005C0500000004000000140000000042009308000000083F8F4F175970455542007
F05000000040000000000000042007C0100000030420094070000002433383936303262312D636130322D346333632D
623561332D6333373839653766326339320000000

```

238

239 **9.3 Use-case: Existing Key Compromised, Re-key with same lifecycle**

240 Create a new symmetric key with the *Activation Date* in the past. Do a Get Attribute operation on the
241 State attribute to verify the key is “Active”. Then revoke the key as compromised, verify that the state has
242 changed to “Compromised”. Create a replacement key using Re-key with the offset set to ‘0’ to indicate
243 that the times are to be copied from the existing key. Do a Get Attribute operation to verify that the state
244 of the new key is “Active”. To clean up, both keys are deleted.
245

Time	Client A
0	Create (symmetric key) In: objectType='00000002', attributes={ CryptographicAlgorithm='AES', CryptographicLength='128', CryptographicUsageMask='0000000C', Name={ NameValue='rekeyKey', NameType='00000001' }, ActivationDate='<NOW>' } Tag: Request Message (0x420078), Type: Structure (0x01), Data:

Tag: Request Header (0x420077), Type: Structure (0x01), Data:

Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:

Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create)

Tag: Request Payload (0x420079), Type: Structure (0x01), Data:

Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)

Tag: Template-Attribute (0x420091), Type: Structure (0x01), Data:

Tag: Attribute (0x420008), Type: Structure (0x01), Data:

Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Algorithm

Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000003 (AES)

Tag: Attribute (0x420008), Type: Structure (0x01), Data:

Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Length

Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x00000080 (128)

Tag: Attribute (0x420008), Type: Structure (0x01), Data:

Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Usage

Mask

Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x0000000C (Encrypt, Decrypt)

Tag: Attribute (0x420008), Type: Structure (0x01), Data:

Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Activation Date

Tag: Attribute Value (0x42000B), Type: Date-Time (0x09), Data: 0x000000004B741047 (Thu Feb 11 15:12:23 CET 2010)

Tag: Attribute (0x420008), Type: Structure (0x01), Data:

Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name

Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:

Tag: Name Value (0x420055), Type: Text String (0x07), Data: rekeyKey

Tag: Name Type (0x420054), Type: Enumeration (0x05), Data: 0x00000001 (Uninterpreted text string)

42007801000001904200770100000038420069010000002042006A0200000004000000010000000042006B020000000400000000000042000D0200000004000000010000000042000F010000014842005C050000000400000001000000004200790100000130420057050000000400000002000000004200910100000118420008010000003042000A070000001743727970746F6772617068696320416C676F726974686D0042000B05000000040000000300000000420008010000003042000A070000001443727970746F67726170686963204C656E6774688000000042000B0200000004000000080000000000420008010000003042000A070000001843727970746F67726170686963205573616765204D61736B42000B02000000040000000C00000000420008010000002842000A070000000F41637469766174696F6E20446174650042000B0900000008000000004B741047420008010000003842000A07000000044E616D65000000042000B0100000020420055070000000872656B65794B657942005405000000040000000100000000

Out: objectType='00000002', uuidKey

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:

Tag: Response Header (0x42007A), Type: Structure (0x01), Data:

Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:

Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B741048 (Thu Feb 11 15:12:24 CET 2010)

Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create)
 Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
 Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
 Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: eea742b4-96ed-4238-afd2-53189c79f781

42007B01000000C042007A0100000048420069010000002042006A0200000004000000010000000042006B020000000400000000000000420092090000008000000004B74104842000D0200000004000000010000000042000F0100000006842005C0500000004000000010000000042007F0500000004000000000000000042007C010000000404200570500000004000000020000000420094070000002465656137343262342D393665642D343233382D616664322D35333138396337396637383100000000

1

Get Attribute
In: uuidKey, attributeName={'State'}

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
 Tag: Request Header (0x420077), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)
 Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: eea742b4-96ed-4238-afd2-53189c79f781
 Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: State

42007801000000A04200770100000038420069010000002042006A0200000004000000010000000042006B02000000040000000000000042000D0200000004000000010000000042000F010000005842005C050000000400000000B0000000042007901000000040420094070000002465656137343262342D393665642D343233382D616664322D3533313839633739663738310000000042000A07000000055374617465000000

Out: uuidKey, attribute={ State='Active' }

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
 Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B741048 (Thu Feb 11 15:12:24 CET 2010)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)
 Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
 Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: eea742b4-96ed-4238-afd2-53189c79f781
 Tag: Attribute (0x420008), Type: Structure (0x01), Data:
 Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: State

	<p>Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000002 (Active)</p> <p>42007B010000000842007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040000000000000420092090000008000000004B74104842000D0200000004000000010000000042000F0100000008042005C05000000040000000B0000000042007F050000000400000000000000042007C0100000058420094070000002465656137343262342D393665642D343233382D616664322D35333138396337396637383100000000420008010000002042000A0700000005537461746500000042000B05000000040000000200000000</p>
2	<p>Revoke (symmetric key as compromised) In: uuidKey, RevocationReason='00000002', CompromiseOccurrenceDate='<NOW>'</p> <p>Tag: Request Message (0x420078), Type: Structure (0x01), Data: Tag: Request Header (0x420077), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Batch Item (0x42000F), Type: Structure (0x01), Data: Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000013 (Revoke) Tag: Request Payload (0x420079), Type: Structure (0x01), Data: Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: eea742b4-96ed-4238-afd2-53189c79f781 Tag: Revocation Reason (0x420081), Type: Structure (0x01), Data: Tag: Revocation Reason Code (0x420082), Type: Enumeration (0x05), Data: 0x00000002 (Key Compromise) Tag: Compromise Occurrence Date (0x420021), Type: Date-Time (0x09), Data: 0x000000004B741048 (Thu Feb 11 15:12:24 CET 2010)</p> <p>420078010000000842007701000000038420069010000002042006A0200000004000000010000000042006B0200000004000000000000042000D0200000004000000010000000042000F010000007042005C0500000004000000013000000004200790100000058420094070000002465656137343262342D393665642D343233382D616664322D353331383963373966373831000000004200810100000010420082050000000400000002000000004200210900000008000000004B741048</p> <p>Out: uuidKey</p> <p>Tag: Response Message (0x42007B), Type: Structure (0x01), Data: Tag: Response Header (0x42007A), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B741049 (Thu Feb 11 15:12:25 CET 2010) Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Batch Item (0x42000F), Type: Structure (0x01), Data: Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000013 (Revoke) Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success) Tag: Response Payload (0x42007C), Type: Structure (0x01), Data: Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: eea742b4-96ed-4238-afd2-53189c79f781</p> <p>42007B010000000842007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040000000000000420092090000008000000004B74104942000D0200000004000000010000000042000F010000005842005C05000000040000000130000000042007F050000000400000000000000042007C01000000304200940700000024656</p>

	56137343262342D393665642D343233382D616664322D35333138396337396637383100000000
3	<p>Get Attribute In: uuidKey, attributeName={'State'}</p> <p>Tag: Request Message (0x420078), Type: Structure (0x01), Data: Tag: Request Header (0x420077), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Batch Item (0x42000F), Type: Structure (0x01), Data: Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes) Tag: Request Payload (0x420079), Type: Structure (0x01), Data: Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: eea742b4-96ed-4238-afd2-53189c79f781 Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: State</p> <p>42007801000000A04200770100000038420069010000002042006A0200000004000000010000000042006B0200000004000000000000042000D0200000004000000010000000042000F010000005842005C05000000040000000B000000004200790100000040420094070000002465656137343262342D393665642D343233382D616664322D3533313839633739663738310000000042000A07000000055374617465000000</p> <p>Out: uuidKey, attribute={ State='Compromised' }</p> <p>Tag: Response Message (0x42007B), Type: Structure (0x01), Data: Tag: Response Header (0x42007A), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B741049 (Thu Feb 11 15:12:25 CET 2010) Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Batch Item (0x42000F), Type: Structure (0x01), Data: Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes) Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success) Tag: Response Payload (0x42007C), Type: Structure (0x01), Data: Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: eea742b4-96ed-4238-afd2-53189c79f781 Tag: Attribute (0x420008), Type: Structure (0x01), Data: Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: State Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000004 (Compromised)</p> <p>42007B01000000D842007A0100000048420069010000002042006A0200000004000000010000000042006B0200000004000000000000004200920900000008000000004B74104942000D0200000004000000010000000042000F010000005842005C05000000040000000B0000000042007F05000000040000000000000042007C0100000058420094070000002465656137343262342D393665642D343233382D616664322D35333138396337396637383100000000420008010000002042000A0700000005537461746500000042000B05000000040000000400000000</p>
4	<p>Rekey In: uuidKey</p>

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
 Tag: Request Header (0x420077), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000004 (Re-key)
 Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: eea742b4-96ed-4238-afd2-53189c79f781

42007801000000904200770100000038420069010000002042006A0200000004000000010000000042006B0200000004000000000000042000D0200000004000000010000000042000F010000004842005C050000000400000004000000004200790100000030420094070000002465656137343262342D393665642D343233382D616664322D35333138396337396637383100000000

Out: uuidNewKey

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
 Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B741049 (Thu Feb 11 15:12:25 CET 2010)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000004 (Re-key)
 Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
 Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: ad3cb774-d00d-4591-a634-6ea36a801824

42007B01000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040000000000000420092090000008000000004B74104942000D0200000004000000010000000042000F010000005842005C050000000400000004000000042007F0500000004000000000000000000042007C0100000030420094070000002461643363623737342D643030642D343539312D613633342D36656133366138303138323400000000

5

Get Attribute
In: uuidNewKey, attributeName={'State'}

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
 Tag: Request Header (0x420077), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)
 Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: ad3cb774-d00d-4591-a634-

6ea36a801824

Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: State

42007801000000A04200770100000038420069010000002042006A0200000004000000010000000042006B0200000004000000000000042000D0200000004000000010000000042000F010000005842005C05000000040000000B0000000004200790100000040420094070000002461643363623737342D643030642D343539312D613633342D3665613336613830313832340000000042000A07000000055374617465000000

Out: uuidNewKey, attribute={ State='Active' }

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:

Tag: Response Header (0x42007A), Type: Structure (0x01), Data:

Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:

Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B741049 (Thu Feb 11 15:12:25 CET 2010)

Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)

Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)

Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:

Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: ad3cb774-d00d-4591-a634-6ea36a801824

Tag: Attribute (0x420008), Type: Structure (0x01), Data:

Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: State

Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000002 (Active)

42007B01000000D842007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040000000000000420092090000008000000004E74104942000D0200000004000000010000000042000F0100000008042005C05000000040000000B0000000042007F0500000004000000000000000042007C0100000058420094070000002461643363623737342D643030642D343539312D613633342D36656133366138303138323400000000420008010000002042000A0700000005537461746500000042000B05000000040000000200000000

6

Destroy

In: uuidKey

Tag: Request Message (0x420078), Type: Structure (0x01), Data:

Tag: Request Header (0x420077), Type: Structure (0x01), Data:

Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:

Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)

Tag: Request Payload (0x420079), Type: Structure (0x01), Data:

Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: eea742b4-96ed-4238-afd2-53189c79f781

42007801000000904200770100000038420069010000002042006A0200000004000000010000000042006B0200000004000000000000042000D0200000004000000010000000042000F010000004842005C050000000400000014000000004200790100000030420094070000002465656137343262342D393665642D343233382D616664322D35333138396337396637383100000000

Out: uuidKey

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
 Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B741049 (Thu Feb 11 15:12:25 CET 2010)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
 Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
 Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: eea742b4-96ed-4238-afd2-53189c79f781

42007B01000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B0200000004000000000000004200920900000008000000004B74104942000D0200000004000000010000000042000F010000005842005C0500000004000000140000000042007F05000000040000000000000000000042007C0100000030420094070000002465656137343262342D393665642D34323382D616664322D35333138396337396637383100000000

7

Revoke (symmetric key as cessation of operation) and Destroy
In (header): batchOrderOption='TRUE'
In: uuidNewKey, revocationReasonCode='6'
In: uuidNewKey

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
 Tag: Request Header (0x420077), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Batch Order Option (0x420010), Type: Boolean (0x06), Data: TRUE
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000002 (2)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000013 (Revoke)
 Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 7131695CF636735E
 Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: ad3cb774-d00d-4591-a634-6ea36a801824
 Tag: Revocation Reason (0x420081), Type: Structure (0x01), Data:
 Tag: Revocation Reason Code (0x420082), Type: Enumeration (0x05), Data: 0x00000006 (Cessation of Operation)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
 Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 1845BCBBF09B5A66
 Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: ad3cb774-d00d-4591-a634-6ea36a801824

```

42007801000001284200770100000048420069010000002042006A0200000004000000010000000042006B02000000040
0000000000000004200100600000008000000000000000000142000D0200000004000000020000000042000F010000007042
005C0500000004000000130000000042009308000000087131695CF636735E42007901000000484200940700000024616
43363623737342D643030642D343539312D613633342D3665613336613830313832340000000042008101000000104200
820500000004000000060000000042000F010000005842005C050000000400000014000000004200930800000081845B
CBBF09B5A664200790100000030420094070000002461643363623737342D643030642D343539312D613633342D366561
33366138303138323400000000

```

Out: uuidNewKey
Out: uuidNewKey

```

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B741049 (Thu Feb 11
15:12:25 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000002 (2)
    Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
      Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000013 (Revoke)
      Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 7131695CF636735E
      Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
      Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
        Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: ad3cb774-d00d-4591-a634-
6ea36a801824
      Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
        Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
        Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 1845BCBBF09B5A66
        Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
        Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
          Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: ad3cb774-d00d-4591-a634-
6ea36a801824

```

```

42007B010000013042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040
0000000000000004200920900000008000000004B74104942000D0200000004000000020000000042000F010000006842
005C0500000004000000130000000042009308000000087131695CF636735E42007F05000000040000000000000000420
07C0100000030420094070000002461643363623737342D643030642D343539312D613633342D36656133366138303138
32340000000042000F010000006842005C050000000400000014000000004200930800000081845BCBBF09B5A6642007
F05000000040000000000000000042007C0100000030420094070000002461643363623737342D643030642D343539312D
613633342D36656133366138303138323400000000

```

246
247

248 9.4 Use-case: Create key, Re-key with new lifecycle

249 Create a symmetric key with a specific name, then use Locate to find the key. After using Re-key to
250 create a new key, verify that the name was removed from the existing key and copied to the new key. To
251 clean up, both keys are deleted.
252

Time	Client A
0	Create (symmetric key)

In: objectType='00000002', attributes={ CryptographicAlgorithm='AES', CryptographicLength='128', CryptographicUsageMask='0000000C', Name={ NameValue='rekeyKey', NameType='00000001' } }

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
Tag: Request Header (0x420077), Type: Structure (0x01), Data:
Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create)
Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)
Tag: Template-Attribute (0x420091), Type: Structure (0x01), Data:
Tag: Attribute (0x420008), Type: Structure (0x01), Data:
Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Algorithm
Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000003 (AES)
Tag: Attribute (0x420008), Type: Structure (0x01), Data:
Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Length
Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x00000080 (128)
Tag: Attribute (0x420008), Type: Structure (0x01), Data:
Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Usage
Mask
Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x0000000C (Encrypt,
Decrypt)
Tag: Attribute (0x420008), Type: Structure (0x01), Data:
Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name
Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:
Tag: Name Value (0x420055), Type: Text String (0x07), Data: rekeyKey
Tag: Name Type (0x420054), Type: Enumeration (0x05), Data: 0x00000001 (Uninterpreted
text string)

42007801000001604200770100000038420069010000002042006A0200000004000000010000000042006B02000000040
0000000000000042000D0200000004000000010000000042000F010000011842005C0500000004000000010000000042
007901000001004200570500000004000000020000000042009101000000E8420008010000003042000A0700000017437
27970746F6772617068696320416C676F726974686D0042000B0500000004000000030000000042000801000000304200
0A070000001443727970746F67726170686963204C656E677468000000042000B0200000004000000800000000042000
8010000003042000A070000001843727970746F67726170686963205573616765204D61736B42000B0200000004000000
0C00000000420008010000003842000A0700000004E616D65000000042000B0100000020420055070000000872656B6
5794B657942005405000000040000000100000000

Out: objectType='00000002', uuidKey

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B742475 (Thu Feb 11
16:38:29 CET 2010)
Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create)
 Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
 Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
 Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: f0342590-f78a-4d34-a2f4-4d6fc85a56ef

42007B01000000C042007A0100000048420069010000002042006A0200000004000000010000000042006B0200000004000000000000004200920900000008000000004B74247542000D0200000004000000010000000042000F010000006842005C0500000004000000010000000042007F05000000040000000000000000000042007C01000000404200570500000004000000000000004200940700000002466303334323539302D663738612D346433342D613266342D34643666633835613536656600000000

1

Locate

In: attributes={ Name={ NameValue='rekeyKey', NameType='00000001' } }

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
 Tag: Request Header (0x420077), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)
 Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
 Tag: Attribute (0x420008), Type: Structure (0x01), Data:
 Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name
 Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:
 Tag: Name Value (0x420055), Type: Text String (0x07), Data: rekeyKey
 Tag: Name Type (0x420054), Type: Enumeration (0x05), Data: 0x00000001 (Uninterpreted text string)

42007801000000A04200770100000038420069010000002042006A0200000004000000010000000042006B0200000004000000000000005842005C050000000400000008000000004200790100000040420008010000003842000A07000000044E616D65000000042000B0100000020420055070000000872656B65794B657942005405000000040000000100000000

Out: uuidKey

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
 Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B742476 (Thu Feb 11 16:38:30 CET 2010)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)
 Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
 Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: f0342590-f78a-4d34-a2f4-

	<p>4d6fc85a56ef</p> <p>42007B01000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B0200000004000000000000420092090000008000000004B74247642000D0200000004000000010000000042000F010000005842005C050000000400000008000000042007F05000000040000000000000042007C0100000030420094070000002466303334323539302D663738612D346433342D613266342D34643666633835613536656600000000</p>
2	<p>Rekey</p> <p>In: uuidKey, attributes={ ActivationDate='000000043B7B630', ProcessStartDate='000000043B7B630', ProtectStopDate='00000005E0C7BB0', DeactivationDate='00000005E0C7BB0' }</p> <p>Tag: Request Message (0x420078), Type: Structure (0x01), Data:</p> <p> Tag: Request Header (0x420077), Type: Structure (0x01), Data:</p> <p> Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:</p> <p> Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p> Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)</p> <p> Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p> Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:</p> <p> Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000004 (Re-key)</p> <p> Tag: Request Payload (0x420079), Type: Structure (0x01), Data:</p> <p> Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: f0342590-f78a-4d34-a2f4-4d6fc85a56ef</p> <p> Tag: Template-Attribute (0x420091), Type: Structure (0x01), Data:</p> <p> Tag: Attribute (0x420008), Type: Structure (0x01), Data:</p> <p> Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Activation Date</p> <p> Tag: Attribute Value (0x42000B), Type: Date-Time (0x09), Data: 0x0000000043B7B630 (Sun Jan 01 12:00:00 CET 2006)</p> <p> Tag: Attribute (0x420008), Type: Structure (0x01), Data:</p> <p> Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Process Start Date</p> <p> Tag: Attribute Value (0x42000B), Type: Date-Time (0x09), Data: 0x0000000043B7B630 (Sun Jan 01 12:00:00 CET 2006)</p> <p> Tag: Attribute (0x420008), Type: Structure (0x01), Data:</p> <p> Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Protect Stop Date</p> <p> Tag: Attribute Value (0x42000B), Type: Date-Time (0x09), Data: 0x000000005E0C7BB0 (Wed Jan 01 12:00:00 CET 2020)</p> <p> Tag: Attribute (0x420008), Type: Structure (0x01), Data:</p> <p> Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Deactivation Date</p> <p> Tag: Attribute Value (0x42000B), Type: Date-Time (0x09), Data: 0x000000005E0C7BB0 (Wed Jan 01 12:00:00 CET 2020)</p> <p>42007801000001704200770100000038420069010000002042006A0200000004000000010000000042006B02000000040000000000000042000D0200000004000000010000000042000F010000012842005C0500000004000000040000000042009101000000D8420008010000002842000A070000000F41637469766174696F6E20446174650042000B09000000080000000043B7B630420008010000003042000A070000001250726F636573732053746172742044617465000000000042000B09000000080000000043B7B630420008010000003042000A070000001150726F746563742053746F70204461746500000000000042000B0900000008000000005E0C7BB0420008010000003042000A0700000011446561637469766174696F6E204461746500000000000042000B0900000008000000005E0C7BB0</p> <p>Out: uuidNewKey</p> <p>Tag: Response Message (0x42007B), Type: Structure (0x01), Data:</p> <p> Tag: Response Header (0x42007A), Type: Structure (0x01), Data:</p>

Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B742477 (Thu Feb 11 16:38:31 CET 2010)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000004 (Re-key)
 Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
 Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: a3fa6e5c-1397-4ab4-9d12-ff6ffaa75fbd

42007B01000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040000000000000420092090000008000000004B74247742000D0200000004000000010000000042000F010000005842005C050000000400000004000000042007F0500000004000000000000000000042007C0100000030420094070000002461336661366535632D313339372D346162342D396431322D66663666666161373566626400000000

3 **Get Attribute**
In: uuidKey, attributeName={'Name'}

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
 Tag: Request Header (0x420077), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)
 Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: f0342590-f78a-4d34-a2f4-4d6fc85a56ef
 Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name

42007801000000A04200770100000038420069010000002042006A0200000004000000010000000042006B0200000004000000000000042000D0200000004000000010000000042000F010000005842005C05000000040000000B0000000004200790100000040420094070000002466303334323539302D663738612D346433342D613266342D346436666338356135366566000000042000A07000000044E616D6500000000

Out: uuidKey

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
 Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B742477 (Thu Feb 11 16:38:31 CET 2010)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)
 Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)

	<p>Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:</p> <p>Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: f0342590-f78a-4d34-a2f4-4d6fc85a56ef</p> <p>42007B01000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040000000000000420092090000008000000004B74247742000D0200000004000000010000000042000F010000005842005C05000000040000000B0000000042007F050000000400000000000000042007C0100000030420094070000002466303334323539302D663738612D346433342D613266342D34643666633835613536656600000000</p>
4	<p>Get Attribute</p> <p>In: uuidKey, attributeName={ 'ActivationDate', 'ProcessStartDate', 'ProtectStopDate', 'DeactivationDate' }</p> <p>Tag: Request Message (0x420078), Type: Structure (0x01), Data:</p> <p>Tag: Request Header (0x420077), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)</p> <p>Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:</p> <p>Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)</p> <p>Tag: Request Payload (0x420079), Type: Structure (0x01), Data:</p> <p>Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: a3fa6e5c-1397-4ab4-9d12-ff6ffaa75fbd</p> <p>Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Activation Date</p> <p>Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Process Start Date</p> <p>Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Protect Stop Date</p> <p>Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Deactivation Date</p> <p>42007801000001084200770100000038420069010000002042006A0200000004000000010000000042006B0200000004000000000000042000D0200000004000000010000000042000F01000000C042005C05000000040000000B00000000042007901000000A8420094070000002461336661366535632D313339372D346162342D396431322D6666636666661613735662640000000042000A07000000F41637469766174696F6E20446174650042000A070000001250726F6365737320537461727420446174650000000000042000A070000001150726F746563742053746F702044617465000000000000042000A0700000011446561637469766174696F6E204461746500000000000000</p> <p>Out: uuidKey, attribute={ ActivationDate='0000000043B7B630', ProcessStartDate='0000000043B7B630', ProtectStopDate='000000005E0C7BB0', DeactivationDate='000000005E0C7BB0' }</p> <p>Tag: Response Message (0x42007B), Type: Structure (0x01), Data:</p> <p>Tag: Response Header (0x42007A), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)</p> <p>Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B742477 (Thu Feb 11 16:38:31 CET 2010)</p> <p>Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:</p> <p>Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)</p> <p>Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)</p> <p>Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:</p> <p>Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: a3fa6e5c-1397-4ab4-9d12-ff6ffaa75fbd</p>

Tag: Attribute (0x420008), Type: Structure (0x01), Data:
 Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Activation Date
 Tag: Attribute Value (0x42000B), Type: Date-Time (0x09), Data: 0x0000000043B7B630 (Sun Jan 01 12:00:00 CET 2006)
 Tag: Attribute (0x420008), Type: Structure (0x01), Data:
 Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Process Start Date
 Tag: Attribute Value (0x42000B), Type: Date-Time (0x09), Data: 0x0000000043B7B630 (Sun Jan 01 12:00:00 CET 2006)
 Tag: Attribute (0x420008), Type: Structure (0x01), Data:
 Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Protect Stop Date
 Tag: Attribute Value (0x42000B), Type: Date-Time (0x09), Data: 0x000000005E0C7BB0 (Wed Jan 01 12:00:00 CET 2020)
 Tag: Attribute (0x420008), Type: Structure (0x01), Data:
 Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Deactivation Date
 Tag: Attribute Value (0x42000B), Type: Date-Time (0x09), Data: 0x000000005E0C7BB0 (Wed Jan 01 12:00:00 CET 2020)

42007B010000018842007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040000000000000420092090000008000000004B74247742000D020000000400000001000000042000F010000013042005C05000000040000000B0000000042007F0500000004000000000000000000042007C0100000108420094070000002461336661366535632D313339372D346162342D396431322D666636666661613735666264000000042008010000002842000A070000000F41637469766174696F6E20446174650042000B09000000080000000043B7B63042008010000003042000A070000001250726F6365737320537461727420446174650000000000042000B09000000080000000043B7B630420008010000003042000A070000001150726F746563742053746F702044617465000000000000042000B0900000008000000005E0C7BB042008010000003042000A0700000011446561637469766174696F6E2044617465000000000000042000B090000000800000005E0C7BB0

5 **Locate**
 In: attributes={ Name={ NameValue='rekeyKey', NameType='00000001' } }

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
 Tag: Request Header (0x420077), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)
 Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
 Tag: Attribute (0x420008), Type: Structure (0x01), Data:
 Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name
 Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:
 Tag: Name Value (0x420055), Type: Text String (0x07), Data: rekeyKey
 Tag: Name Type (0x420054), Type: Enumeration (0x05), Data: 0x00000001 (Uninterpreted text string)

42007801000000A04200770100000038420069010000002042006A0200000004000000010000000042006B0200000004000000000000042000D0200000004000000010000000042000F010000005842005C050000000400000008000000004200790100000004042008010000003842000A070000000044E616D650000000042000B0100000020420055070000000872656B65794B657942005405000000040000000100000000

Out: uuidNewKey

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:

Tag: Response Header (0x42007A), Type: Structure (0x01), Data:

Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:

Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B742477 (Thu Feb 11 16:38:31 CET 2010)

Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)

Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)

Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:

Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: a3fa6e5c-1397-4ab4-9d12-ff6ffaa75fbd

42007B01000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B020000000400000000000000420092090000008000000004B74247742000D0200000004000000010000000042000F0100000005842005C0500000004000000080000000042007F05000000040000000000000000000042007C01000000304200940700000002461336661366535632D313339372D346162342D396431322D66663666666161373566626400000000

6

Destroy

In: uuidKey

Tag: Request Message (0x420078), Type: Structure (0x01), Data:

Tag: Request Header (0x420077), Type: Structure (0x01), Data:

Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:

Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)

Tag: Request Payload (0x420079), Type: Structure (0x01), Data:

Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: f0342590-f78a-4d34-a2f4-4d6fc85a56ef

42007801000000904200770100000038420069010000002042006A0200000004000000010000000042006B02000000040000000000000042000D0200000004000000010000000042000F010000004842005C0500000004000000014000000004200790100000030420094070000002466303334323539302D663738612D346433342D613266342D34643666633835613536656600000000

Out: uuidKey

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:

Tag: Response Header (0x42007A), Type: Structure (0x01), Data:

Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:

Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B742478 (Thu Feb 11 16:38:32 CET 2010)

Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)

Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)

Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: f0342590-f78a-4d34-a2f4-4d6fc85a56ef

42007B01000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040
 0000000000000042009209000000080000000004B74247842000D0200000004000000010000000042000F010000005842
 005C0500000004000000140000000042007F050000000400000000000000042007C01000000304200940700000024663
 03334323539302D663738612D346433342D613266342D34643666633835613536656600000000

7 **Revoke (symmetric key as cessation of operation) and Destroy**
In (header): batchOrderOption='TRUE'
In: uuidNewKey, revocationReasonCode='6'
In: uuidNewKey

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
 Tag: Request Header (0x420077), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Batch Order Option (0x420010), Type: Boolean (0x06), Data: TRUE
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000002 (2)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000013 (Revoke)
 Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 3DC816BB39869D07
 Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: a3fa6e5c-1397-4ab4-9d12-ff6ffaa75fbd
 Tag: Revocation Reason (0x420081), Type: Structure (0x01), Data:
 Tag: Revocation Reason Code (0x420082), Type: Enumeration (0x05), Data: 0x00000006 (Cessation of Operation)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
 Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 32B517312FD5B558
 Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: a3fa6e5c-1397-4ab4-9d12-ff6ffaa75fbd

42007801000001284200770100000048420069010000002042006A0200000004000000010000000042006B02000000040
 0000000000000042001006000000080000000000000142000D0200000004000000020000000042000F010000007042
 005C0500000004000000130000000042009308000000083DC816BB39869D0742007901000000484200940700000024613
 36661366535632D313339372D346162342D396431322D66666366666616137356662640000000042008101000000104200
 820500000004000000060000000042000F010000005842005C05000000040000001400000000420093080000000832B51
 7312FD5B5584200790100000030420094070000002461336661366535632D313339372D346162342D396431322D6666636
 66666161373566626400000000

Out: uuidNewKey
Out: uuidNewKey

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
 Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

```

Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B742478 (Thu Feb 11
16:38:32 CET 2010)
Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000002 (2)
Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000013 (Revoke)
Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 3DC816BB39869D07
Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: a3fa6e5c-1397-4ab4-9d12-
ff6ffaa75fbd
Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 32B517312FD5B558
Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: a3fa6e5c-1397-4ab4-9d12-
ff6ffaa75fbd

42007B0100000013042007A0100000048420069010000002042006A0200000004000000010000000042006B020000000040
000000000000004200920900000008000000004B74247842000D0200000004000000020000000042000F010000006842
005C0500000004000000130000000042009308000000083DC816BB39869D0742007F05000000040000000000000000420
07C0100000030420094070000002461336661366535632D313339372D346162342D396431322D66663666666161373566
62640000000042000F010000006842005C05000000040000001400000000420093080000000832B517312FD5B55842007
F05000000040000000000000000042007C0100000030420094070000002461336661366535632D313339372D346162342D
396431322D666636666661613735662640000000

```

253

254

255 **9.5 Use-case: Obtain Lease for Expired Key**

- 256 Create a symmetric key with a specific name and obtain a lease. Revoke the key with state
- 257 "Compromised" and re-key the key. Try to obtain a lease on the old key which fails. Locate the new key
- 258 with the original name. Get the new key and obtain a lease.
- 259

Time	Client
0	<p>Client A: Create (symmetric key) In: objectType='00000002', attributes={ CryptographicAlgorithm='AES', CryptographicLength='128', CryptographicUsageMask='0000000C', Name={ NameValue=' rekeyKey', NameType='00000001' }, ActivationDate='<NOW>' }</p> <p>Tag: Request Message (0x420078), Type: Structure (0x01), Data: Tag: Request Header (0x420077), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Batch Item (0x42000F), Type: Structure (0x01), Data: Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create)</p>

Tag: Request Payload (0x420079), Type: Structure (0x01), Data:

Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)

Tag: Template-Attribute (0x420091), Type: Structure (0x01), Data:

Tag: Attribute (0x420008), Type: Structure (0x01), Data:

Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Algorithm

Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000003 (AES)

Tag: Attribute (0x420008), Type: Structure (0x01), Data:

Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Length

Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x00000080 (128)

Tag: Attribute (0x420008), Type: Structure (0x01), Data:

Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Usage

Mask

Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x0000000C (Encrypt, Decrypt)

Tag: Attribute (0x420008), Type: Structure (0x01), Data:

Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name

Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:

Tag: Name Value (0x420055), Type: Text String (0x07), Data: rekeyKey

Tag: Name Type (0x420054), Type: Enumeration (0x05), Data: 0x00000001 (Uninterpreted text string)

Tag: Attribute (0x420008), Type: Structure (0x01), Data:

Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Activation Date

Tag: Attribute Value (0x42000B), Type: Date-Time (0x09), Data: 0x000000004B74262C (Thu Feb 11 16:45:48 CET 2010)

42007801000001904200770100000038420069010000002042006A0200000004000000010000000042006B02000000004000000000000042000D0200000004000000010000000042000F010000014842005C050000000400000001000000004200790100000130420057050000000400000002000000004200910100000118420008010000003042000A070000001743727970746F6772617068696320416C676F726974686D0042000B05000000040000000300000000420008010000003042000A070000001443727970746F67726170686963204C656E677468000000042000B020000000400000008000000000420008010000003042000A070000001843727970746F67726170686963205573616765204D61736B42000B02000000040000000C00000000420008010000003842000A07000000044E616D65000000042000B0100000020420055070000000872656B65794B65794200540500000004000000010000000420008010000002842000A070000000F41637469766174696F6E20446174650042000B0900000008000000004B74262C

Out: objectType='00000002', uuidKey

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:

Tag: Response Header (0x42007A), Type: Structure (0x01), Data:

Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:

Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B74262D (Thu Feb 11 16:45:49 CET 2010)

Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create)

Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)

Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:

Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)

Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: ca368e33-dc3d-4c7c-8f6d-262895bc31ce

	<pre>42007B01000000C042007A0100000048420069010000002042006A0200000004000000010000000042006B0200000004000000000000004200920900000008000000004B74262D42000D0200000004000000010000000042000F010000006842005C0500000004000000010000000042007F0500000004000000000000000042007C0100000040420057050000000400000000000000420094070000002463613336386533332D646333642D346337632D386636642D3236323839356263331636500000000</pre>
1	<p>Client A: Get (symmetric key) In: uuidKey</p> <p>Tag: Request Message (0x420078), Type: Structure (0x01), Data: Tag: Request Header (0x420077), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Batch Item (0x42000F), Type: Structure (0x01), Data: Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get) Tag: Request Payload (0x420079), Type: Structure (0x01), Data: Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: ca368e33-dc3d-4c7c-8f6d-262895bc31ce</p> <pre>42007801000000904200770100000038420069010000002042006A0200000004000000010000000042006B02000000040000000000000042000D0200000004000000010000000042000F010000004842005C05000000040000000A000000004200790100000030420094070000002463613336386533332D646333642D346337632D386636642D3236323839356263331636500000000</pre> <p>Out: objectType = '00000002', uuidKey, symmetricKey</p> <p>Tag: Response Message (0x42007B), Type: Structure (0x01), Data: Tag: Response Header (0x42007A), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B74262D (Thu Feb 11 16:45:49 CET 2010) Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Batch Item (0x42000F), Type: Structure (0x01), Data: Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get) Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success) Tag: Response Payload (0x42007C), Type: Structure (0x01), Data: Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key) Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: ca368e33-dc3d-4c7c-8f6d-262895bc31ce Tag: Symmetric Key (0x42008F), Type: Structure (0x01), Data: Tag: Key Block (0x420040), Type: Structure (0x01), Data: Tag: Key Format Type (0x420042), Type: Enumeration (0x05), Data: 0x00000001 Tag: Key Value (0x420045), Type: Structure (0x01), Data: Tag: Key Material (0x420043), Type: Octet String (0x08), Data: F43C7798AACB22B1411A8773C199708B Tag: Cryptographic Algorithm (0x420028), Type: Enumeration (0x05), Data: 0x00000003 (AES)</p>

Tag: Cryptographic Length (0x42002A), Type: Integer (0x02), Data: 0x00000080 (128)

42007B010000012042007A0100000048420069010000002042006A0200000004000000010000000042006B0200000004000000000000420092090000008000000004B74262D42000D0200000004000000010000000042000F01000000C842005C05000000040000000A0000000042007F05000000040000000000000042007C01000000A0420057050000000400000000000000420094070000002463613336386533332D646333642D346337632D386636642D323632383935626333316365000000042008F01000000584200400100000050420042050000000400000001000000004200450100000018420043080000010F43C7798AACB22B1411A8773C199708B420028050000004000000030000000042002A02000000040000008000000000

2

Client A:
Obtain Lease
In: uuidKey

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
Tag: Request Header (0x420077), Type: Structure (0x01), Data:
Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000010 (Obtain Lease)
Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: ca368e33-dc3d-4c7c-8f6d-262895bc31ce

42007801000000904200770100000038420069010000002042006A0200000004000000010000000042006B02000000040000000000000042000D0200000004000000010000000042000F010000004842005C05000000040000000100000000420094070000002463613336386533332D646333642D346337632D386636642D32363238393562633331636500000000

Out: uuidKey, leaseTime, lastChangeDate

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B74262E (Thu Feb 11 16:45:50 CET 2010)
Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000010 (Obtain Lease)
Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: ca368e33-dc3d-4c7c-8f6d-262895bc31ce
Tag: Lease Time (0x420049), Type: Interval (0x0A), Data: 0x00000010
Tag: Last Change Date (0x420048), Type: Date-Time (0x09), Data: 0x000000004B74262D (Thu Feb 11 16:45:49 CET 2010)

42007B01000000D042007A0100000048420069010000002042006A0200000004000000010000000042006B020000000400000000000000420092090000008000000004B74262E42000D0200000004000000010000000042000F010000007842

	<pre>005C0500000004000000100000000042007F05000000040000000000000042007C01000000504200940700000024636 1333638653332D646333642D346337632D386636642D323632383935626333316365000000004200490A000000040000 0010000000004200480900000008000000004B74262D</pre>
3	<p>Client B: Revoke (symmetric key as compromised) In: uuidKey, RevocationReason='00000002', CompromiseOccurrenceDate='<NOW>'</p> <p>Tag: Request Message (0x420078), Type: Structure (0x01), Data: Tag: Request Header (0x420077), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Batch Item (0x42000F), Type: Structure (0x01), Data: Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000013 (Revoke) Tag: Request Payload (0x420079), Type: Structure (0x01), Data: Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: ca368e33-dc3d-4c7c-8f6d-262895bc31ce Tag: Revocation Reason (0x420081), Type: Structure (0x01), Data: Tag: Revocation Reason Code (0x420082), Type: Enumeration (0x05), Data: 0x00000002 (Key Compromise) Tag: Compromise Occurrence Date (0x420021), Type: Date-Time (0x09), Data: 0x000000004B74262E (Thu Feb 11 16:45:50 CET 2010)</p> <pre>42007801000000B84200770100000038420069010000002042006A0200000004000000010000000042006B02000000040 0000000000000042000D0200000004000000010000000042000F010000007042005C05000000040000000130000000042 00790100000058420094070000002463613336386533332D646333642D346337632D386636642D3236323839356263333 1636500000004200810100000010420082050000000400000002000000004200210900000008000000004B74262E</pre> <p>Out: uuidKey</p> <p>Tag: Response Message (0x42007B), Type: Structure (0x01), Data: Tag: Response Header (0x42007A), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B74262E (Thu Feb 11 16:45:50 CET 2010) Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Batch Item (0x42000F), Type: Structure (0x01), Data: Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000013 (Revoke) Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success) Tag: Response Payload (0x42007C), Type: Structure (0x01), Data: Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: ca368e33-dc3d-4c7c-8f6d-262895bc31ce</p> <pre>42007B01000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040 000000000000004200920900000008000000004B74262E42000D0200000004000000010000000042000F010000005842 005C0500000004000000130000000042007F05000000040000000000000042007C01000000304200940700000024636 13336386533332D646333642D346337632D386636642D32363238393562633331636500000000</pre>
4	<p>Client B:</p>

	<p>Rekey In: uuidKey</p> <p>Tag: Request Message (0x420078), Type: Structure (0x01), Data: Tag: Request Header (0x420077), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Batch Item (0x42000F), Type: Structure (0x01), Data: Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000004 (Re-key) Tag: Request Payload (0x420079), Type: Structure (0x01), Data: Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: ca368e33-dc3d-4c7c-8f6d-262895bc31ce</p> <p>42007801000000904200770100000038420069010000002042006A0200000004000000010000000042006B020000000400000000000042000D0200000004000000010000000042000F010000004842005C05000000040000000400000000420079010000003042009407000000246361333638653332D64633642D346337632D386636642D32363238393562633331636500000000</p> <p>Out: uuidNewKey</p> <p>Tag: Response Message (0x42007B), Type: Structure (0x01), Data: Tag: Response Header (0x42007A), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x00000004B74262F (Thu Feb 11 16:45:51 CET 2010) Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Batch Item (0x42000F), Type: Structure (0x01), Data: Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000004 (Re-key) Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success) Tag: Response Payload (0x42007C), Type: Structure (0x01), Data: Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 59fbf81d-574f-4f4f-9581-7785dc593f5f</p> <p>42007B01000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040000000000004200920900000008000000004B74262F42000D0200000004000000010000000042000F010000005842005C0500000004000000040000000042007F0500000004000000000000000042007C0100000030420094070000002433396662663831642D353734662D346634662D393538312D37373835646335393366356600000000</p>
5	<p>Client A: Obtain Lease In: uuidKey</p> <p>Tag: Request Message (0x420078), Type: Structure (0x01), Data: Tag: Request Header (0x420077), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)</p>

Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000010 (Obtain Lease)

Tag: Request Payload (0x420079), Type: Structure (0x01), Data:

Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: ca368e33-dc3d-4c7c-8f6d-262895bc31ce

42007801000000904200770100000038420069010000002042006A0200000004000000010000000042006B0200000004000000000000042000D0200000004000000010000000042000F010000004842005C0500000004000000010000000004200790100000030420094070000002463613336386533332D646333642D346337632D386636642D32363238393562633331636500000000

Out: Operation Failed, Permission Denied

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:

Tag: Response Header (0x42007A), Type: Structure (0x01), Data:

Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:

Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B74262F (Thu Feb 11 16:45:51 CET 2010)

Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000010 (Obtain Lease)

Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000001 (Operation Failed)

Tag: Result Reason (0x42007E), Type: Enumeration (0x05), Data: 0x0000000C (Permission Denied)

Tag: Result Message (0x42007D), Type: Text String (0x07), Data: CO is in state Compromised, no lease given

42007B010000000C042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040000000000000420092090000008000000004B74262F42000D0200000004000000010000000042000F010000006842005C0500000004000000010000000042007F0500000004000000010000000042007E05000000040000000C0000000042007D070000002A434F20697320696E20737461746520436F6D70726F6D697365642C206E6F206C6561736520676976656E000000000000

6 Client A:
 Locate (symmetric key)
 In: attributes={ Name={ NameValue='rekeyKey', NameType='00000001' } }

Tag: Request Message (0x420078), Type: Structure (0x01), Data:

Tag: Request Header (0x420077), Type: Structure (0x01), Data:

Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:

Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)

Tag: Request Payload (0x420079), Type: Structure (0x01), Data:

Tag: Attribute (0x420008), Type: Structure (0x01), Data:

Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name

Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:

Tag: Name Value (0x420055), Type: Text String (0x07), Data: rekeyKey

	<p>Tag: Name Type (0x420054), Type: Enumeration (0x05), Data: 0x00000001 (Uninterpreted text string)</p> <p>42007801000000A04200770100000038420069010000002042006A0200000004000000010000000042006B02000000040000000000000042000D0200000004000000010000000042000F010000005842005C050000000400000008000000004200790100000040420008010000003842000A07000000044E616D650000000042000B0100000020420055070000000872656B65794B657942005405000000040000000100000000</p> <p>Out: uuidNewKey</p> <p>Tag: Response Message (0x42007B), Type: Structure (0x01), Data: Tag: Response Header (0x42007A), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B74262F (Thu Feb 11 16:45:51 CET 2010) Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Batch Item (0x42000F), Type: Structure (0x01), Data: Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate) Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success) Tag: Response Payload (0x42007C), Type: Structure (0x01), Data: Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 59fbf81d-574f-4f4f-9581-7785dc593f5f</p> <p>42007B01000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B020000000400000000000000420092090000008000000004B74262F42000D0200000004000000010000000042000F010000005842005C0500000004000000080000000042007F05000000040000000000000042007C010000003042009407000000243539662663831642D353734662D346634662D393538312D37373835646335393366356600000000</p>
7	<p>Client A: Get (symmetric key) In: uuidNewKey</p> <p>Tag: Request Message (0x420078), Type: Structure (0x01), Data: Tag: Request Header (0x420077), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Batch Item (0x42000F), Type: Structure (0x01), Data: Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get) Tag: Request Payload (0x420079), Type: Structure (0x01), Data: Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 59fbf81d-574f-4f4f-9581-7785dc593f5f</p> <p>42007801000000904200770100000038420069010000002042006A0200000004000000010000000042006B02000000040000000000000042000D0200000004000000010000000042000F010000004842005C05000000040000000A00000000420079010000003042009407000000243539662663831642D353734662D346634662D393538312D37373835646335393366356600000000</p> <p>Out: objectType = '00000002', uuidNewKey, newSymmetricKey</p>

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:

Tag: Response Header (0x42007A), Type: Structure (0x01), Data:

Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:

Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B74262F (Thu Feb 11 16:45:51 CET 2010)

Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)

Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)

Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:

Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)

Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 59fbf81d-574f-4f4f-9581-7785dc593f5f

Tag: Symmetric Key (0x42008F), Type: Structure (0x01), Data:

Tag: Key Block (0x420040), Type: Structure (0x01), Data:

Tag: Key Format Type (0x420042), Type: Enumeration (0x05), Data: 0x00000001

Tag: Key Value (0x420045), Type: Structure (0x01), Data:

Tag: Key Material (0x420043), Type: Octet String (0x08), Data: 173E9499F7C573712AFB9883B5DF2BCE

Tag: Cryptographic Algorithm (0x420028), Type: Enumeration (0x05), Data: 0x00000003 (AES)

Tag: Cryptographic Length (0x42002A), Type: Integer (0x02), Data: 0x00000080 (128)

42007B010000012042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040000000000000420092090000008000000004B74262F42000D0200000004000000010000000042000F01000000C842005C05000000040000000A0000000042007F0500000004000000000000000042007C01000000A04200570500000004000000000000420094070000002435396662663831642D353734662D346634662D393538312D373738356463353933663566000000042008F010000005842004001000000504200420500000004000000010000000042004501000000184200430800000010173E9499F7C573712AFB9883B5DF2BCE420028050000004000000030000000042002A02000000040000000800000000

8 Client A:
Obtain Lease
In: uuidNewKey

Tag: Request Message (0x420078), Type: Structure (0x01), Data:

Tag: Request Header (0x420077), Type: Structure (0x01), Data:

Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:

Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000010 (Obtain Lease)

Tag: Request Payload (0x420079), Type: Structure (0x01), Data:

Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 59fbf81d-574f-4f4f-9581-7785dc593f5f

42007801000000904200770100000038420069010000002042006A0200000004000000010000000042006B0200000004000000000000042000D0200000004000000010000000042000F010000004842005C0500000004000000010000000004200790100000030420094070000002435396662663831642D353734662D346634662D393538312D37373835646335393366

	<p>635660000000</p> <p>Out: uuidNewKey, leaseTime, lastChangeDate</p> <p>Tag: Response Message (0x42007B), Type: Structure (0x01), Data: Tag: Response Header (0x42007A), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B74262F (Thu Feb 11 16:45:51 CET 2010) Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Batch Item (0x42000F), Type: Structure (0x01), Data: Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000010 (Obtain Lease) Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success) Tag: Response Payload (0x42007C), Type: Structure (0x01), Data: Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 59fbf81d-574f-4f4f-9581-7785dc593f5f Tag: Lease Time (0x420049), Type: Interval (0x0A), Data: 0x00000000 Tag: Last Change Date (0x420048), Type: Date-Time (0x09), Data: 0x000000004B74262F (Thu Feb 11 16:45:51 CET 2010)</p> <p>42007B010000000D042007A0100000048420069010000002042006A0200000004000000010000000042006B020000000400000000000004200920900000008000000004B74262F42000D0200000004000000010000000042000F010000007842005C050000000400000010000000042007F050000000400000000000000042007C0100000050420094070000002435396662663831642D353734662D346634662D393538312D37373738356463353933663566000000004200490A0000000040000000000004200480900000008000000004B74262F</p>
9	<p>Client A: Destroy In: uuidKey</p> <p>Tag: Request Message (0x420078), Type: Structure (0x01), Data: Tag: Request Header (0x420077), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Batch Item (0x42000F), Type: Structure (0x01), Data: Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy) Tag: Request Payload (0x420079), Type: Structure (0x01), Data: Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: ca368e33-dc3d-4c7c-8f6d-262895bc31ce</p> <p>42007801000000904200770100000038420069010000002042006A0200000004000000010000000042006B0200000004000000000000042000D0200000004000000010000000042000F010000004842005C0500000004000000014000000004200790100000030420094070000002463613336386533332D646333642D346337632D386636642D32363238393562633331636500000000</p> <p>Out: uuidKey</p>

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
 Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B74262F (Thu Feb 11 16:45:51 CET 2010)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
 Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
 Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: ca368e33-dc3d-4c7c-8f6d-262895bc31ce

42007B01000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B020000000400000000000004200920900000080000000004B74262F42000D0200000004000000010000000042000F010000005842005C0500000004000000140000000042007F05000000040000000000000000000042007C0100000030420094070000002463613336386533332D646333642D346337632D386636642D32363238393562633331636500000000

10 Client A:
 Revoke (symmetric key as cessation of operation) and Destroy
 In (header): batchOrderOption='TRUE'
 In: uuidNewKey, revocationReasonCode='6'
 In: uuidNewKey

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
 Tag: Request Header (0x420077), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Batch Order Option (0x420010), Type: Boolean (0x06), Data: TRUE
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000002 (2)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000013 (Revoke)
 Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 3748B9E243205BA7
 Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 59fbf81d-574f-4f4f-9581-7785dc593f5f
 Tag: Revocation Reason (0x420081), Type: Structure (0x01), Data:
 Tag: Revocation Reason Code (0x420082), Type: Enumeration (0x05), Data: 0x00000006 (Cessation of Operation)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
 Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 04EAF416D0BEB50D
 Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 59fbf81d-574f-4f4f-9581-7785dc593f5f

42007801000001284200770100000048420069010000002042006A0200000004000000010000000042006B02000000040000000000000420010060000008000000000000142000D0200000004000000020000000042000F010000007042005C0500000004000000130000000042009308000000083748B9E243205BA742007901000000484200940700000024353

```
96662663831642D353734662D346634662D393538312D373738356463353933663566000000042008101000000104200
820500000004000000060000000042000F010000005842005C05000000040000001400000000420093080000000804EAF
416D0BEB50D4200790100000030420094070000002435396662663831642D353734662D346634662D393538312D373738
35646335393366356600000000
```

Out: uuidNewKey

Out: uuidNewKey

```
Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B74262F (Thu Feb 11
16:45:51 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000002 (2)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000013 (Revoke)
    Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 3748B9E243205BA7
    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 59fbf81d-574f-4f4f-9581-
7785dc593f5f
    Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
      Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
      Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 04EAF416D0BEB50D
      Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
      Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
        Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 59fbf81d-574f-4f4f-9581-
7785dc593f5f
```

```
42007B010000013042007A0100000048420069010000002042006A0200000004000000010000000042006B020000000040
0000000000000420092090000008000000004B74262F42000D0200000004000000020000000042000F010000006842
005C0500000004000000130000000042009308000000083748B9E243205BA742007F050000000400000000000000420
07C0100000030420094070000002435396662663831642D353734662D346634662D393538312D37373835646335393366
35660000000042000F010000006842005C05000000040000001400000000420093080000000804EAF416D0BEB50D42007
F05000000040000000000000042007C0100000030420094070000002435396662663831642D353734662D346634662D
393538312D37373835646335393366356600000000
```

260

261 10 Archival

262

263 These use-cases test archiving and locating keys using the off-line indicator. If the server performs the
264 Archive and Recover operations asynchronously, the client Polls the server until the operations complete.
265 The client indicates in the request that it supports asynchronous responses.

266 10.1 Use-case: Create a Key, Archive and Recover it

267 Create a symmetric key with a specified name, then use Locate to find the key and get the key. Archive
268 the key (asynchronous operation, use Poll until it completes) and use Get and Locate on it, but both fail.
269 Add the Storage Status Mask to the Locate-command, indicating to the server to search in both online
270 and archived storage. The Locate finds the key. Recover the key from the archive (also asynchronous),
271 both Locate and Get succeed.

Time	Client A
0	<p>Create (symmetric key)</p> <p>In: objectType='00000002', attributes={ CryptographicAlgorithm='AES', CryptographicLength='128', CryptographicUsageMask='0000000C', Name={ NameValue='archiveKey', NameType='00000001' } }</p> <p>Tag: Request Message (0x420078), Type: Structure (0x01), Data:</p> <p> Tag: Request Header (0x420077), Type: Structure (0x01), Data:</p> <p> Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:</p> <p> Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p> Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)</p> <p> Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p> Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:</p> <p> Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create)</p> <p> Tag: Request Payload (0x420079), Type: Structure (0x01), Data:</p> <p> Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)</p> <p> Tag: Template-Attribute (0x420091), Type: Structure (0x01), Data:</p> <p> Tag: Attribute (0x420008), Type: Structure (0x01), Data:</p> <p> Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Algorithm</p> <p> Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000003 (AES)</p> <p> Tag: Attribute (0x420008), Type: Structure (0x01), Data:</p> <p> Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Length</p> <p> Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x00000080 (128)</p> <p> Tag: Attribute (0x420008), Type: Structure (0x01), Data:</p> <p> Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Usage Mask</p> <p> Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x0000000C (Encrypt, Decrypt)</p> <p> Tag: Attribute (0x420008), Type: Structure (0x01), Data:</p> <p> Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name</p> <p> Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:</p> <p> Tag: Name Value (0x420055), Type: Text String (0x07), Data: archiveKey</p> <p> Tag: Name Type (0x420054), Type: Enumeration (0x05), Data: 0x00000001 (Uninterpreted text string)</p> <p>42007801000001684200770100000038420069010000002042006A0200000004000000010000000042006B0200000004000000000000042000D0200000004000000010000000042000F010000012042005C0500000004000000010000000042007901000001084200570500000004000000020000000042009101000000F0420008010000003042000A070000001743727970746F6772617068696320416C676F726974686D0042000B05000000040000000300000000420008010000003042000A070000001443727970746F67726170686963204C656E6774680000000042000B020000000400000008000000000420008010000003042000A070000001843727970746F67726170686963205573616765204D61736B42000B02000000040000000C000000004200080100000004042000A07000000044E616D65000000042000B0100000028420055070000000A617263686976654B65790000000000042005405000000040000000100000000</p> <p>Out: objectType='00000002', uuidKey</p> <p>Tag: Response Message (0x42007B), Type: Structure (0x01), Data:</p> <p> Tag: Response Header (0x42007A), Type: Structure (0x01), Data:</p> <p> Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:</p> <p> Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)</p>

Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B751FA3 (Fri Feb 12 10:30:11 CET 2010)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create)
 Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
 Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
 Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 0d552160-fb04-4f7c-8a73-fef905b21c0f

42007B01000000C042007A0100000048420069010000002042006A0200000004000000010000000042006B020000000400000000000004200920900000008000000004B751FA342000D0200000004000000010000000042000F010000006842005C0500000004000000010000000042007F05000000040000000000000042007C01000000404200570500000004000000020000000420094070000002430643535323136302D666230342D346637632D386137332D66656639303562323163306600000000

1

Locate
 In: attributes={ Name={ NameValue='archiveKey', NameType='0000001' } }

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
 Tag: Request Header (0x420077), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)
 Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
 Tag: Attribute (0x420008), Type: Structure (0x01), Data:
 Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Object Type
 Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)

Tag: Attribute (0x420008), Type: Structure (0x01), Data:
 Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name
 Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:
 Tag: Name Value (0x420055), Type: Text String (0x07), Data: archiveKey
 Tag: Name Type (0x420054), Type: Enumeration (0x05), Data: 0x00000001 (Uninterpreted text string)

42007801000000D84200770100000038420069010000002042006A0200000004000000010000000042006B0200000004000000000000042000D0200000004000000010000000042000F010000009042005C050000000400000008000000004200790100000078420008010000002842000A070000000B4F626A656374205479706500000000042000B0500000004000000020000000420008010000004042000A07000000044E616D65000000042000B0100000028420055070000000A617263686976654B65790000000000042005405000000040000000100000000

Out: uuidKey

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
 Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:

Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B751FA6 (Fri Feb 12 10:30:14 CET 2010)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)
 Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
 Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 0d552160-fb04-4f7c-8a73-fef905b21c0f

 42007B01000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B020000000040
 000000000000004200920900000008000000004B751FA642000D0200000004000000010000000042000F010000005842
 005C0500000004000000080000000042007F05000000040000000000000042007C01000000304200940700000024306
 43535323136302D666230342D346637632D386137332D66656639303562323163306600000000

2
Get (symmetric key)
In: uuidKey

 Tag: Request Message (0x420078), Type: Structure (0x01), Data:
 Tag: Request Header (0x420077), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)
 Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 0d552160-fb04-4f7c-8a73-fef905b21c0f

 42007801000000904200770100000038420069010000002042006A0200000004000000010000000042006B020000000040
 0000000000000042000D0200000004000000010000000042000F010000004842005C05000000040000000A0000000042
 00790100000030420094070000002430643535323136302D666230342D346637632D386137332D6665663930356232316
 33066000000000

Out: objectType = '00000002', uuidKey, symmetricKey

 Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
 Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B751FA7 (Fri Feb 12 10:30:15 CET 2010)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)
 Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
 Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
 Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)

Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 0d552160-fb04-4f7c-8a73-
 fef905b21c0f

Tag: Symmetric Key (0x42008F), Type: Structure (0x01), Data:

Tag: Key Block (0x420040), Type: Structure (0x01), Data:

Tag: Key Format Type (0x420042), Type: Enumeration (0x05), Data: 0x00000001

Tag: Key Value (0x420045), Type: Structure (0x01), Data:

Tag: Key Material (0x420043), Type: Octet String (0x08), Data:
 C3200B1291BA648DB9089DED3073DE74

Tag: Cryptographic Algorithm (0x420028), Type: Enumeration (0x05), Data: 0x00000003
 (AES)

Tag: Cryptographic Length (0x42002A), Type: Integer (0x02), Data: 0x00000080 (128)

42007B010000012042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040
 00000000000000420092090000008000000004B751FA742000D020000000400000001000000004200F01000000C842
 005C0500000004000000A0000000042007F050000000400000000000000042007C01000000A04200570500000004000
 0000200000000420094070000002430643535323136302D666230342D346637632D386137332D66656639303562323163
 3066000000042008F0100000058420040010000005042004205000000040000000100000000420045010000001842004
 30800000010C3200B1291BA648DB9089DED3073DE74420028050000004000000030000000042002A0200000004000000
 8000000000

3 **Archive**
In: uuidKey, asynchronousIndicator='true'

Tag: Request Message (0x420078), Type: Structure (0x01), Data:

Tag: Request Header (0x420077), Type: Structure (0x01), Data:

Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:

Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

Tag: Asynchronous Indicator (0x420007), Type: Boolean (0x06), Data: TRUE

Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000015 (Archive)

Tag: Request Payload (0x420079), Type: Structure (0x01), Data:

Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 0d552160-fb04-4f7c-8a73-
 fef905b21c0f

42007801000000A04200770100000048420069010000002042006A0200000004000000010000000042006B02000000040
 000000000000004200070600000008000000000000000142000D020000000400000001000000004200F0100000004842
 005C050000000400000015000000004200790100000030420094070000002430643535323136302D666230342D3466376
 32D386137332D66656639303562323163306600000000

Out: asynchronousCorrelationValue

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:

Tag: Response Header (0x42007A), Type: Structure (0x01), Data:

Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:

Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B751FA7 (Fri Feb 12
 10:30:15 CET 2010)

Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000015 (Archive)

	<p>Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000002 (Operation Pending)</p> <p>Tag: Asynchronous Correlation Value (0x420006), Type: Octet String (0x08), Data: F17893DB51652969</p> <p>42007B010000008842007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040000000000000420092090000008000000004B751FA742000D0200000004000000010000000042000F010000003042005C0500000004000000150000000042007F050000000400000002000000004200060800000008F17893DB51652969</p>
4	<p>Poll*</p> <p>In: asynchronousCorrelationValue</p> <p>Tag: Request Message (0x420078), Type: Structure (0x01), Data:</p> <p>Tag: Request Header (0x420077), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)</p> <p>Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:</p> <p>Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000001A (Poll)</p> <p>Tag: Request Payload (0x420079), Type: Structure (0x01), Data:</p> <p>Tag: Asynchronous Correlation Value (0x420006), Type: Octet String (0x08), Data: F17893DB51652969</p> <p>42007801000000704200770100000038420069010000002042006A0200000004000000010000000042006B0200000004000000000000042000D0200000004000000010000000042000F010000002842005C05000000040000001A0000000042007901000000104200060800000008F17893DB51652969</p> <p>Out: uuidKey</p> <p>Tag: Response Message (0x42007B), Type: Structure (0x01), Data:</p> <p>Tag: Response Header (0x42007A), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)</p> <p>Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B751FAA (Fri Feb 12 10:30:18 CET 2010)</p> <p>Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:</p> <p>Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000015 (Archive)</p> <p>Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)</p> <p>Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:</p> <p>Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 0d552160-fb04-4f7c-8a73-fef905b21c0f</p> <p>42007B01000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040000000000000420092090000008000000004B751FAA42000D0200000004000000010000000042000F010000005842005C0500000004000000150000000042007F0500000004000000000000000042007C0100000030420094070000002430643535323136302D666230342D346637632D386137332D66656639303562323163306600000000</p>
5	<p>Get (symmetric key)</p> <p>In: uuidKey</p>

	<p>Tag: Request Message (0x420078), Type: Structure (0x01), Data:</p> <p>Tag: Request Header (0x420077), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)</p> <p>Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:</p> <p>Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)</p> <p>Tag: Request Payload (0x420079), Type: Structure (0x01), Data:</p> <p>Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 0d552160-fb04-4f7c-8a73-fef905b21c0f</p> <p>42007801000000904200770100000038420069010000002042006A0200000004000000010000000042006B0200000004000000000000042000D0200000004000000010000000042000F010000004842005C05000000040000000A000000004200790100000030420094070000002430643535323136302D666230342D346637632D386137332D66656639303562323163306600000000</p> <p>Out: Operation Failed, Object Archived</p> <p>Tag: Response Message (0x42007B), Type: Structure (0x01), Data:</p> <p>Tag: Response Header (0x42007A), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)</p> <p>Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B751FAC (Fri Feb 12 10:30:20 CET 2010)</p> <p>Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:</p> <p>Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)</p> <p>Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000001 (Operation Failed)</p> <p>Tag: Result Reason (0x42007E), Type: Enumeration (0x05), Data: 0x0000000D (Object Archived)</p> <p>Tag: Result Message (0x42007D), Type: Text String (0x07), Data: Object is archived</p> <p>42007B01000000A842007A0100000048420069010000002042006A0200000004000000010000000042006B0200000004000000000000004200920900000008000000004B751FAC42000D0200000004000000010000000042000F010000005042005C05000000040000000A0000000042007F0500000004000000010000000042007E05000000040000000D0000000042007D07000000124F626A656374206973206172636869766564000000000000</p>
6	<p>Get Attribute (Archive Date)</p> <p>In: uuidKey, attributeName='ArchiveDate'</p> <p>Tag: Request Message (0x420078), Type: Structure (0x01), Data:</p> <p>Tag: Request Header (0x420077), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)</p> <p>Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:</p> <p>Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)</p> <p>Tag: Request Payload (0x420079), Type: Structure (0x01), Data:</p> <p>Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 0d552160-fb04-4f7c-8a73-</p>

```

fef905b21c0f
  Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Archive Date

42007801000000A84200770100000038420069010000002042006A0200000004000000010000000042006B02000000040
000000000000042000D0200000004000000010000000042000F010000006042005C05000000040000000B0000000042
00790100000048420094070000002430643535323136302D666230342D346637632D386137332D6665663930356232316
330660000000042000A070000000C41726368697665204461746500000000

Out: uuidKey, attribute={ ArchiveDate }

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B751FAC (Fri Feb 12
10:30:20 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
    Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
      Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)
      Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
      Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
        Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 0d552160-fb04-4f7c-8a73-
fef905b21c0f
        Tag: Attribute (0x420008), Type: Structure (0x01), Data:
          Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Archive Date
          Tag: Attribute Value (0x42000B), Type: Date-Time (0x09), Data: 0x000000004B751FAA (Fri
Feb 12 10:30:18 CET 2010)

42007B01000000E042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040
0000000000000420092090000008000000004B751FAC42000D0200000004000000010000000042000F0100000008842
005C05000000040000000B0000000042007F0500000000400000000000000042007C01000000604200940700000024306
43535323136302D666230342D346637632D386137332D6665663930356232316330660000000042000801000000284200
0A0700000000C4172636869766520446174650000000042000B0900000008000000004B751FAA

```

```

7
Locate
In: attributes={ Name={ NameValue='archiveKey', NameType='00000001' } }

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
    Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
      Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)
      Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
        Tag: Attribute (0x420008), Type: Structure (0x01), Data:
          Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Object Type
          Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric
Key)
        Tag: Attribute (0x420008), Type: Structure (0x01), Data:

```

Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name
 Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:
 Tag: Name Value (0x420055), Type: Text String (0x07), Data: archiveKey
 Tag: Name Type (0x420054), Type: Enumeration (0x05), Data: 0x00000001 (Uninterpreted text string)

420078010000000D84200770100000038420069010000002042006A0200000004000000010000000042006B02000000040000000000000042000D02000000400000001000000042000F010000009042005C050000000400000008000000004200790100000078420008010000002842000A070000000B4F626A656374205479706500000000042000B050000000400000000000000420008010000004042000A0700000004E616D65000000042000B010000002842005507000000A617263686976654B65790000000000042005405000000040000000100000000

Out: <empty response payload>

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
 Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B751FAC (Fri Feb 12 10:30:20 CET 2010)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)
 Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
 Tag: Response Payload (0x42007C), Type: Structure (0x01), Data: null

42007B010000008042007A0100000048420069010000002042006A0200000004000000010000000042006B0200000004000000000000004200920900000008000000004B751FAC42000D0200000004000000010000000042000F010000002842005C0500000004000000080000000042007F050000000400000000000000000042007C0100000000

8 **Locate**
In: storageStatusMask='00000003', attributes={ Name={ NameValue='archiveKey', NameType='00000001' } }

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
 Tag: Request Header (0x420077), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)
 Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
 Tag: Storage Status Mask (0x42008E), Type: Integer (0x02), Data: 0x00000003 (3)
 Tag: Attribute (0x420008), Type: Structure (0x01), Data:
 Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Object Type
 Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)
 Tag: Attribute (0x420008), Type: Structure (0x01), Data:
 Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name
 Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:

Tag: Name Value (0x420055), Type: Text String (0x07), Data: archiveKey

Tag: Name Type (0x420054), Type: Enumeration (0x05), Data: 0x00000001 (Uninterpreted text string)

42007801000000E84200770100000038420069010000002042006A0200000004000000010000000042006B0200000004000000000000042000D0200000004000000010000000042000F0100000A042005C05000000040000000800000000420079010000008842008E02000000040000000300000000420008010000002842000A070000000B4F626A656374205479706500000000042000B05000000040000000200000000420008010000004042000A07000000044E616D650000000042000B0100000028420055070000000A617263686976654B657900000000000042005405000000040000000100000000

Out: uuidKey

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:

Tag: Response Header (0x42007A), Type: Structure (0x01), Data:

Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:

Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B751FAC (Fri Feb 12 10:30:20 CET 2010)

Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)

Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)

Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:

Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 0d552160-fb04-4f7c-8a73-fef905b21c0f

42007B01000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B0200000004000000000000004200920900000008000000004B751FAC42000D0200000004000000010000000042000F0100000005842005C0500000004000000080000000042007F0500000004000000000000000042007C0100000030420094070000002430643535323136302D666230342D346637632D386137332D66656639303562323163306600000000

9

Recover

In: uuidKey, asynchronousIndicator='true'

Tag: Request Message (0x420078), Type: Structure (0x01), Data:

Tag: Request Header (0x420077), Type: Structure (0x01), Data:

Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:

Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

Tag: Asynchronous Indicator (0x420007), Type: Boolean (0x06), Data: TRUE

Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000016 (Recover)

Tag: Request Payload (0x420079), Type: Structure (0x01), Data:

Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 0d552160-fb04-4f7c-8a73-fef905b21c0f

42007801000000A04200770100000048420069010000002042006A0200000004000000010000000042006B0200000004000000000000004200070600000008000000000000000142000D0200000004000000010000000042000F0100000004842005C0500000004000000016000000004200790100000030420094070000002430643535323136302D666230342D346637632D386137332D66656639303562323163306600000000

	<p>Out: asynchronousCorrelationValue</p> <p>Tag: Response Message (0x42007B), Type: Structure (0x01), Data: Tag: Response Header (0x42007A), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B751FAC (Fri Feb 12 10:30:20 CET 2010) Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Batch Item (0x42000F), Type: Structure (0x01), Data: Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000016 (Recover) Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000002 (Operation Pending) Tag: Asynchronous Correlation Value (0x420006), Type: Octet String (0x08), Data: DDBB075607727F3F</p> <p>42007B010000008842007A0100000048420069010000002042006A0200000004000000010000000042006B0200000004000000000000004200920900000008000000004B751FAC42000D0200000004000000010000000042000F010000003042005C0500000004000000160000000042007F050000000400000002000000004200060800000008DDBB075607727F3F</p>
10	<p>Poll*</p> <p>In: asynchronousCorrelationValue</p> <p>Tag: Request Message (0x420078), Type: Structure (0x01), Data: Tag: Request Header (0x420077), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Batch Item (0x42000F), Type: Structure (0x01), Data: Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000001A (Poll) Tag: Request Payload (0x420079), Type: Structure (0x01), Data: Tag: Asynchronous Correlation Value (0x420006), Type: Octet String (0x08), Data: DDBB075607727F3F</p> <p>42007801000000704200770100000038420069010000002042006A0200000004000000010000000042006B02000000040000000000000042000D0200000004000000010000000042000F010000002842005C050000000400000001A0000000042007901000000104200060800000008DDBB075607727F3F</p> <p>Out: uuidKey</p> <p>Tag: Response Message (0x42007B), Type: Structure (0x01), Data: Tag: Response Header (0x42007A), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B751FB3 (Fri Feb 12 10:30:27 CET 2010) Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Batch Item (0x42000F), Type: Structure (0x01), Data: Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000016 (Recover)</p>

	<p>Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)</p> <p>Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:</p> <p>Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 0d552160-fb04-4f7c-8a73- fef905b21c0f</p> <p>42007B01000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040 000000000000004200920900000008000000004B751FB342000D0200000004000000010000000042000F010000005842 005C0500000004000000160000000042007F0500000004000000000000000042007C01000000304200940700000024306 43535323136302D666230342D346637632D386137332D66656639303562323163306600000000</p>
11	<p>Get (symmetric key) In: uuidKey</p> <p>Tag: Request Message (0x420078), Type: Structure (0x01), Data:</p> <p>Tag: Request Header (0x420077), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)</p> <p>Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:</p> <p>Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)</p> <p>Tag: Request Payload (0x420079), Type: Structure (0x01), Data:</p> <p>Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 0d552160-fb04-4f7c-8a73- fef905b21c0f</p> <p>42007801000000904200770100000038420069010000002042006A0200000004000000010000000042006B02000000040 0000000000000042000D0200000004000000010000000042000F010000004842005C05000000040000000A0000000042 00790100000030420094070000002430643535323136302D666230342D346637632D386137332D6665663930356232316 33066000000000</p> <p>Out: objectType = '00000002', uuidKey, symmetricKey</p> <p>Tag: Response Message (0x42007B), Type: Structure (0x01), Data:</p> <p>Tag: Response Header (0x42007A), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:</p> <p>Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)</p> <p>Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B751FB3 (Fri Feb 12 10:30:27 CET 2010)</p> <p>Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:</p> <p>Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)</p> <p>Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)</p> <p>Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:</p> <p>Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)</p> <p>Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 0d552160-fb04-4f7c-8a73- fef905b21c0f</p> <p>Tag: Symmetric Key (0x42008F), Type: Structure (0x01), Data:</p> <p>Tag: Key Block (0x420040), Type: Structure (0x01), Data:</p> <p>Tag: Key Format Type (0x420042), Type: Enumeration (0x05), Data: 0x00000001</p> <p>Tag: Key Value (0x420045), Type: Structure (0x01), Data:</p> <p>Tag: Key Material (0x420043), Type: Octet String (0x08), Data:</p>

C3200B1291BA648DB9089DED3073DE74

Tag: Cryptographic Algorithm (0x420028), Type: Enumeration (0x05), Data: 0x00000003 (AES)

Tag: Cryptographic Length (0x42002A), Type: Integer (0x02), Data: 0x00000080 (128)

42007B010000012042007A0100000048420069010000002042006A02000000400000001000000042006B0200000004000000000000420092090000008000000004B751FB342000D02000000400000001000000042000F01000000C842005C0500000040000000A000000042007F05000000400000000000000042007C01000000A042005705000000400000002000000420094070000002430643535323136302D666230342D346637632D386137332D666566393035623231633066000000042008F0100000058420040010000005042004205000000400000001000000042004501000000184200430800000010C3200B1291BA648DB9089DED3073DE74420028050000004000000030000000042002A0200000040000000800000000

12 Destroy
In: uuidKey

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
 Tag: Request Header (0x420077), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
 Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 0d552160-fb04-4f7c-8a73-fef905b21c0f

42007801000000904200770100000038420069010000002042006A02000000400000001000000042006B02000000040000000000004200920900000040000000040000000042000F010000004842005C050000004000000014000000004200790100000030420094070000002430643535323136302D666230342D346637632D386137332D66656639303562323163306600000000

Out: uuidKey

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
 Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B751FB4 (Fri Feb 12 10:30:28 CET 2010)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
 Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
 Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 0d552160-fb04-4f7c-8a73-fef905b21c0f

42007B01000000B042007A0100000048420069010000002042006A02000000400000001000000042006B0200000004000000000000420092090000008000000004B751FB442000D02000000400000001000000042000F010000005842005C050000004000000014000000042007F05000000400000000000000042007C0100000030420094070000002430643535323136302D666230342D346637632D386137332D66656639303562323163306600000000

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11 Access Control, Policies

These use-cases test attributes and objects related to access control and server policy.

11.1 Use-case: Credential, Operation Policy, Destroy Date

Pass a Credential object in the message header in all requests for identification purposes (how the Credential object is used is defined in [KMIP-Prof]). Create a symmetric key and set the Operation Policy Name attribute to "default". Using another Credential, attempt to perform a Get operation batched with a Get Attribute List on the created symmetric key – according to the Default Operation Policy, both these request SHALL fail, and with the Batch Error Continuation Option set to "Continue", the client SHALL also receive both response payloads. Using the initially used Credential, destroy the object and get the Destroy Date attribute.

The message exchanges in this use case are based on a certain server policy (e.g. handling of Credentials) that in some aspects differs from the policy assumed in earlier use cases (e.g. in this use case, the Destroy Date is retained). As mentioned in Section 1 , the message exchanges shown in this document are not the only correct alternatives.

Time	Request/Response
0	<p>Create (symmetric key)</p> <p>In (header): credential={ credentialType='1', credentialValue={ username="Fred", password="password1" } }</p> <p>In: objectType='00000002', attributes={ CryptographicAlgorithm='AES', CryptographicLength='128', CryptographicUsageMask='0000000C', Name={ NameValue='PolicyKey', NameType='00000001' }, OperationPolicyName='default', CryptographicParameters={ BlockCipherMode='1', PaddingMethod='3', HashingAlgorithm='4' } }</p> <p>Tag: Request Message (0x420078), Type: Structure (0x01), Data:</p> <p> Tag: Request Header (0x420077), Type: Structure (0x01), Data:</p> <p> Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:</p> <p> Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p> Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)</p> <p> Tag: Authentication (0x42000C), Type: Structure (0x01), Data:</p> <p> Tag: Credential (0x420023), Type: Structure (0x01), Data:</p> <p> Tag: Credential Type (0x420024), Type: Enumeration (0x05), Data: 0x00000001 (Username and Password)</p> <p> Tag: Credential Value (0x420025), Type: Structure (0x01), Data:</p> <p> Tag: Username (0x420099), Type: Text String (0x07), Data: Fred</p> <p> Tag: Password (0x4200A1), Type: Text String (0x07), Data: password1</p> <p> Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p> Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:</p> <p> Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create)</p> <p> Tag: Request Payload (0x420079), Type: Structure (0x01), Data:</p> <p> Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)</p> <p> Tag: Template-Attribute (0x420091), Type: Structure (0x01), Data:</p>

Tag: Attribute (0x420008), Type: Structure (0x01), Data:
 Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Algorithm
 Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000003 (AES)
 Tag: Attribute (0x420008), Type: Structure (0x01), Data:
 Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Length
 Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x00000080 (128)
 Tag: Attribute (0x420008), Type: Structure (0x01), Data:
 Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Usage
 Mask
 Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x0000000C (Encrypt,
 Decrypt)
 Tag: Attribute (0x420008), Type: Structure (0x01), Data:
 Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name
 Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:
 Tag: Name Value (0x420055), Type: Text String (0x07), Data: PolicyKey
 Tag: Name Type (0x420054), Type: Enumeration (0x05), Data: 0x00000001 (Uninterpreted
 text string)
 Tag: Attribute (0x420008), Type: Structure (0x01), Data:
 Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Operation Policy Name
 Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: default
 Tag: Attribute (0x420008), Type: Structure (0x01), Data:
 Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic
 Parameters
 Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:
 Tag: Block Cipher Mode (0x420011), Type: Enumeration (0x05), Data: 0x00000001 (CBC)
 Tag: Padding Method (0x42005F), Type: Enumeration (0x05), Data: 0x00000003 (PKCS5)
 Tag: Hashing Algorithm (0x420038), Type: Enumeration (0x05), Data: 0x00000004 (SHA-1)

42007801000002504200770100000088420069010000002042006A0200000004000000010000000042006B02000000040
 0000000000000042000C0100000048420023010000004042002405000000040000000100000000420025010000002842
 0099070000000446726564000000004200A1070000000970617373776F726431000000000000042000D0200000004000
 000010000000042000F01000001B842005C0500000004000000010000000042007901000001A042005705000000040000
 00020000000004200910100000188420008010000003042000A070000001743727970746F6772617068696320416C676F7
 26974686D0042000B05000000040000000300000000420008010000003042000A070000001443727970746F6772617068
 6963204C656E6774680000000042000B02000000040000008000000000420008010000003042000A07000000184372797
 0746F67726170686963205573616765204D61736B42000B02000000040000000C000000004200080100000004042000A07
 000000044E616D650000000042000B0100000028420055070000009506F6C6963794B65790000000000000420054050
 0000040000000100000000420008010000003042000A07000000154F7065726174696F6E20506F6C696379204E616D65
 00000042000B070000000764656661756C7400420008010000005842000A070000001843727970746F677261706869632
 0506172616D657465727342000B01000000304200110500000004000000010000000042005F0500000004000000030000
 000042003805000000040000000400000000

Out: objectType='0000002', uuidKey

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
 Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B9F8B4B (Tue Mar 16
 14:44:43 CET 2010)
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create)

Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
 Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
 Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 63478615-8b6d-4c70-bc23-8d164817555b

42007B01000000C042007A0100000048420069010000002042006A0200000004000000010000000042006B020000000400000000000000420092090000008000000004B9F8B4B42000D0200000004000000010000000042000F010000006842005C050000000400000001000000042007F050000000400000000000000042007C01000000404200570500000004000000020000000420094070000002436333437383631352D386236642D346337302D626332332D38643136343831373535356200000000

1 Client A
 Get Attributes, Get
 In (header): credential={ credentialType='1', credentialValue={ username="Fred", password="password1" } }
 In: attributeName='Operation Policy Name'
 In: uuidKey

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
 Tag: Request Header (0x420077), Type: Structure (0x01), Data:
 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
 Tag: Authentication (0x42000C), Type: Structure (0x01), Data:
 Tag: Credential (0x420023), Type: Structure (0x01), Data:
 Tag: Credential Type (0x420024), Type: Enumeration (0x05), Data: 0x00000001 (Username and Password)
 Tag: Credential Value (0x420025), Type: Structure (0x01), Data:
 Tag: Username (0x420099), Type: Text String (0x07), Data: Fred
 Tag: Password (0x4200A1), Type: Text String (0x07), Data: password1
 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000002 (2)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)
 Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 4CBB6751574C4DA8
 Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 63478615-8b6d-4c70-bc23-8d164817555b
 Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Operation Policy Name
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)
 Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 0EA05EE703DA997B
 Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 63478615-8b6d-4c70-bc23-8d164817555b

42007801000001704200770100000088420069010000002042006A0200000004000000010000000042006B02000000040000000000000042000C0100000048420023010000004042002405000000040000000100000000420025010000002842009907000000044672656400000004200A107000000097061737376F72643100000000000042000D02000000040000000000000042000F010000007842005C05000000040000000B0000000042009308000000084CBB6751574C4DA84200790100000050420094070000002436333437383631352D386236642D346337302D626332332D3864313634383137353535620000000042000A07000000154F7065726174696F6E20506F6C696379204E616D6500000042000F010000005842005C05000000040000000A0000000042009308000000080EA05EE703DA997B420079010000003042009407000000243633343

7383631352D386236642D346337302D626332332D38643136343831373535356200000000

Out: attributes={ OperationPolicyName='Default' }
Out: objectType = '00000002', uuidKey, symmetricKey

```

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B9F8B4C (Tue Mar 16 14:44:44 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000002 (2)
    Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
      Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)
      Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 4CBB6751574C4DA8
      Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
      Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
        Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 63478615-8b6d-4c70-bc23-8d164817555b
          Tag: Attribute (0x420008), Type: Structure (0x01), Data:
            Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Operation Policy Name
            Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: default
          Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
            Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)
            Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 0EA05EE703DA997B
            Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
            Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
              Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)
              Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 63478615-8b6d-4c70-bc23-8d164817555b
                Tag: Symmetric Key (0x42008F), Type: Structure (0x01), Data:
                  Tag: Key Block (0x420040), Type: Structure (0x01), Data:
                    Tag: Key Format Type (0x420042), Type: Enumeration (0x05), Data: 0x00000001
                    Tag: Key Value (0x420045), Type: Structure (0x01), Data:
                      Tag: Key Material (0x420043), Type: Octet String (0x08), Data: C520FCA4E681F7BFFB3523D71427D594
                      Tag: Cryptographic Algorithm (0x420028), Type: Enumeration (0x05), Data: 0x00000003 (AES)
                      Tag: Cryptographic Length (0x42002A), Type: Integer (0x02), Data: 0x00000080 (128)
                42007B01000001D842007A0100000048420069010000002042006A0200000004000000010000000042006B020000000040
                000000000000004200920900000008000000004B9F8B4C42000D0200000004000000020000000042000F01000000A042
                005C05000000040000000B0000000042009308000000084CBB6751574C4DA842007F05000000040000000000000000420
                07C0100000068420094070000002436333437383631352D386236642D346337302D626332332D38643136343831373535
                35620000000420008010000003042000A07000000154F7065726174696F6E20506F6C696379204E616D6500000042000
                B070000000764656661756C740042000F01000000D842005C05000000040000000A000000004200930800000008EA05E
                E703DA997B42007F050000000400000000000000042007C01000000A0420057050000000400000002000000004200940
                70000002436333437383631352D386236642D346337302D626332332D3864313634383137353535620000000042008F01
                00000584200400100000050420042050000000400000001000000042004501000000184200430800000010C520FCA4E
                681F7BFFB3523D71427D5944200280500000004000000030000000042002A02000000040000008000000000

```

2	Client B
---	----------

Get (symmetric key), Get Attribute List

In (header): credential={ credentialType='1', credentialValue={ username="Barney", password="secret2" } }, BatchOrderOption='true', BatchErrorContinuationOption='Continue'

In: uuidKey

In: uuidKey

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
Tag: Request Header (0x420077), Type: Structure (0x01), Data:
Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
Tag: Authentication (0x42000C), Type: Structure (0x01), Data:
Tag: Credential (0x420023), Type: Structure (0x01), Data:
Tag: Credential Type (0x420024), Type: Enumeration (0x05), Data: 0x00000001 (Username and Password)
Tag: Credential Value (0x420025), Type: Structure (0x01), Data:
Tag: Username (0x420099), Type: Text String (0x07), Data: Barney
Tag: Password (0x4200A1), Type: Text String (0x07), Data: secret2
Tag: Batch Order Option (0x420010), Type: Boolean (0x06), Data: TRUE
Tag: Batch Error Continuation Option (0x42000E), Type: Enumeration (0x05), Data: 0x00000001
Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000002 (2)
Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)
Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: E3E72D5A352687D8
Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 63478615-8b6d-4c70-bc23-8d164817555b
Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000C (Get Attribute List)
Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: A9A1D60B0C62ECAF
Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 63478615-8b6d-4c70-bc23-8d164817555b

420078010000016842007701000000A0420069010000002042006A0200000004000000010000000042006B020000000040
0000000000000042000C01000000404200230100000038420024050000000400000001000000004200250100000002042
009907000000064261726E657900004200A107000000077365637265743200420010060000000800000000000001420
00E0500000004000000010000000042000D0200000004000000020000000042000F010000005842005C05000000040000
000A000000004200930800000008E3E72D5A352687D84200790100000030420094070000002436333437383631352D386
236642D346337302D626332332D3864313634383137353535620000000042000F010000005842005C0500000004000000
0C000000004200930800000008A9A1D60B0C62ECAF4200790100000030420094070000002436333437383631352D38623
6642D346337302D626332332D38643136343831373535356200000000

Out: Operation Failed, Permission Denied

Out: Operation Failed, Permission Denied

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B9F8B4D (Tue Mar 16 14:44:45 CET 2010)

Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000002 (2)

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)

Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: E3E72D5A352687D8

Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000001 (Operation Failed)

Tag: Result Reason (0x42007E), Type: Enumeration (0x05), Data: 0x0000000C (Permission Denied)

Tag: Result Message (0x42007D), Type: Text String (0x07), Data: Access denied

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000C (Get Attribute List)

Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: A9A1D60B0C62ECAF

Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000001 (Operation Failed)

Tag: Result Reason (0x42007E), Type: Enumeration (0x05), Data: 0x0000000C (Permission Denied)

Tag: Result Message (0x42007D), Type: Text String (0x07), Data: Access denied

42007B010000011042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040000000000000420092090000008000000004B9F8B4D42000D020000000400000002000000042000F010000005842005C05000000040000000A00000004200930800000008E3E72D5A352687D842007F0500000004000000010000000042007E05000000040000000C0000000042007D070000000D4163636573732064656E69656400000042000F010000005842005C05000000040000000C00000000420093080000008A9A1D60B0C62ECAF42007F0500000004000000010000000042007E05000000040000000C0000000042007D070000000D4163636573732064656E696564000000

3 Destroy

In (header): credential={ credentialType='1', credentialValue={ username="Fred", password="password1" } }

In: uuidKey

Tag: Request Message (0x420078), Type: Structure (0x01), Data:

Tag: Request Header (0x420077), Type: Structure (0x01), Data:

Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:

Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

Tag: Authentication (0x42000C), Type: Structure (0x01), Data:

Tag: Credential (0x420023), Type: Structure (0x01), Data:

Tag: Credential Type (0x420024), Type: Enumeration (0x05), Data: 0x00000001 (Username and Password)

Tag: Credential Value (0x420025), Type: Structure (0x01), Data:

Tag: Username (0x420099), Type: Text String (0x07), Data: Fred

Tag: Password (0x4200A1), Type: Text String (0x07), Data: password1

Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)

Tag: Request Payload (0x420079), Type: Structure (0x01), Data:

Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 63478615-8b6d-4c70-bc23-8d164817555b

42007801000000E04200770100000088420069010000002042006A0200000004000000010000000042006B0200000004000000000000042000C010000004842002301000000404200240500000004000000010000000420025010000002842009907000000044672656400000004200A107000000097061737376F726431000000000000042000D0200000004000000000000042000F010000004842005C05000000040000001400000004200790100000030420094070000002436333437383631352D386236642D346337302D626332332D38643136343831373535356200000000

Out: uuidKey

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:

 Tag: Response Header (0x42007A), Type: Structure (0x01), Data:

 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:

 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

 Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B9F8B4D (Tue Mar 16 14:44:45 CET 2010)

 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)

 Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)

 Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:

 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 63478615-8b6d-4c70-bc23-8d164817555b

42007B01000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B0200000004000000000000004200920900000008000000004B9F8B4D42000D0200000004000000010000000042000F0100000005842005C0500000004000000140000000042007F05000000040000000000000000000042007C0100000030420094070000002436333437383631352D386236642D346337302D626332332D38643136343831373535356200000000

4 Get Attributes

In (header): credential={ credentialType='1', credentialValue={ username="Fred", password="password1" } }

In: uuidKey, attributeNames={ 'Destroy Date' }

Tag: Request Message (0x420078), Type: Structure (0x01), Data:

 Tag: Request Header (0x420077), Type: Structure (0x01), Data:

 Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:

 Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

 Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

 Tag: Authentication (0x42000C), Type: Structure (0x01), Data:

 Tag: Credential (0x420023), Type: Structure (0x01), Data:

 Tag: Credential Type (0x420024), Type: Enumeration (0x05), Data: 0x00000001 (Username and Password)

 Tag: Credential Value (0x420025), Type: Structure (0x01), Data:

 Tag: Username (0x420099), Type: Text String (0x07), Data: Fred

 Tag: Password (0x4200A1), Type: Text String (0x07), Data: password1

 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

 Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)

 Tag: Request Payload (0x420079), Type: Structure (0x01), Data:

 Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 63478615-8b6d-4c70-bc23-8d164817555b

 Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Destroy Date

42007801000000F84200770100000088420069010000002042006A0200000004000000010000000042006B02000000040000000000000042000C010000004842002301000000404200240500000004000000010000000042002501000000284200990700000044672656400000004200A107000000970617373776F72643100000000000042000D02000000040000000000000042000F0100000006042005C05000000040000000B000000004200790100000048420094070000002436333437383631352D386236642D346337302D626332332D3864313634383137353535620000000042000A070000000C44657

```

374726F79204461746500000000

Out: uuidKey, attributes={ DestroyDate=' 0x00000004B9F8B4D' }

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x00000004B9F8B4E (Tue Mar 16
14:44:46 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
    Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
      Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)
      Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
      Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
        Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 63478615-8b6d-4c70-bc23-
8d164817555b
        Tag: Attribute (0x420008), Type: Structure (0x01), Data:
          Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Destroy Date
          Tag: Attribute Value (0x42000B), Type: Date-Time (0x09), Data: 0x00000004B9F8B4D (Tue
Mar 16 14:44:45 CET 2010)

42007B01000000E042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040
000000000000004200920900000008000000004B9F8B4E42000D0200000004000000010000000042000F010000008842
005C05000000040000000B0000000042007F050000000400000000000000000000042007C01000000604200940700000024363
33437383631352D386236642D346337302D626332332D3864313634383137353535620000000042000801000000284200
0A070000000C44657374726F7920446174650000000042000B0900000008000000004B9F8B4D

```

291
292

293 **12 Query, Maximum Response Size**

294

295 This use case tests the Query operation and the Maximum Response Size header field.

296 **12.1 Use-case: Query, Maximum Response Size**

297 Perform a Query operation, querying the Operations and Objects supported by the server, with a
298 restriction on the Maximum Response Size set in the request header. Since the resulting Query response
299 is too big, an error is returned. Increase the Maximum Response Size, resubmit the Query request, and
300 get a successful response.
301

Time	Request/Response
0	Query (operations, objects) In (header): maximumResponseSize='256' In: queryFunctions={ '00000001', '00000002' } Tag: Request Message (0x420078), Type: Structure (0x01), Data: Tag: Request Header (0x420077), Type: Structure (0x01), Data:

	<p>Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:</p> <p> Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p> Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)</p> <p> Tag: Maximum Response Size (0x420050), Type: Integer (0x02), Data: 0x00000100 (256)</p> <p> Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p>Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:</p> <p> Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000018 (Query)</p> <p> Tag: Request Payload (0x420079), Type: Structure (0x01), Data:</p> <p> Tag: Query Function (0x420074), Type: Enumeration (0x05), Data: 0x00000001 (Operations)</p> <p> Tag: Query Function (0x420074), Type: Enumeration (0x05), Data: 0x00000002 (Objects)</p> <p>42007801000000904200770100000048420069010000002042006A0200000004000000010000000042006B02000000040000000000000420050020000000400000100000000042000D0200000004000000010000000042000F010000003842005C050000000400000018000000004200790100000020420074050000000400000001000000004200740500000004000</p> <p>Out: Operation Failed, Response Too Large</p> <p>Tag: Response Message (0x42007B), Type: Structure (0x01), Data:</p> <p> Tag: Response Header (0x42007A), Type: Structure (0x01), Data:</p> <p> Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:</p> <p> Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p> Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)</p> <p> Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B7918AA (Mon Feb 15 10:49:30 CET 2010)</p> <p> Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000001 (Operation Failed)</p> <p> Tag: Result Reason (0x42007E), Type: Enumeration (0x05), Data: 0x00000002 (Response Too Large)</p> <p> Tag: Result Message (0x42007D), Type: Text String (0x07), Data: Response size: 568, Maximum Response Size indicated in request: 256</p> <p> Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000000 (0)</p> <p>42007B010000000C042007A01000000B8420069010000002042006A0200000004000000010000000042006B020000000400000000000004200920900000008000000004B7918AA42007F0500000004000000010000000042007E050000000400000020000000042007D0700000043526573706F6E73652073697A653A203536382C204D6178696D756D20526573706F6E73652053697A6520696E6469636174656420696E20726571756573743A20323536000000000042000D02000000040000</p>
1	<p>Query (operations, objects)</p> <p>In (header): maximumResponseSize='2048'</p> <p>In: queryFunctions={ '00000001', '00000002' }</p> <p>Tag: Request Message (0x420078), Type: Structure (0x01), Data:</p> <p> Tag: Request Header (0x420077), Type: Structure (0x01), Data:</p> <p> Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:</p> <p> Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p> Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)</p> <p> Tag: Maximum Response Size (0x420050), Type: Integer (0x02), Data: 0x00000800 (2048)</p> <p> Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)</p> <p> Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:</p> <p> Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000018 (Query)</p> <p> Tag: Request Payload (0x420079), Type: Structure (0x01), Data:</p>

Tag: Query Function (0x420074), Type: Enumeration (0x05), Data: 0x00000001 (Operations)
Tag: Query Function (0x420074), Type: Enumeration (0x05), Data: 0x00000002 (Objects)

42007801000000904200770100000048420069010000002042006A0200000004000000010000000042006B02000000040
0000000000000042005002000000400000800000000042000D0200000004000000010000000042000F010000003842
005C05000000040000001800000000420079010000002042007405000000040000000100000000420074050000004000
000200000000

Out: operations, objects

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:

Tag: Response Header (0x42007A), Type: Structure (0x01), Data:

Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:

Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B7918AA (Mon Feb 15 10:49:30 CET 2010)

Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000018 (Query)

Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)

Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create)

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000002 (Create Key Pair)

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000003 (Register)

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000004 (Re-key)

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000009 (Check)

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000C (Get Attribute List)

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000D (Add Attribute)

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000E (Modify Attribute)

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000F (Delete Attribute)

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000010 (Obtain Lease)

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000011 (Get Usage Allocation)

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000012 (Activate)

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000013 (Revoke)

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000015 (Archive)

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000016 (Recover)

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000018 (Query)

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000019 (Cancel)

Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000001A (Poll)

Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000001 (Certificate)

Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)

Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000003 (Public Key)

Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000004 (Private Key)

Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000006 (Template)

42007B010000023042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040
000000000000000420092090000008000000004B7918AA42000D0200000004000000010000000042000F01000001D842
005C0500000004000000180000000042007F0500000004000000000000000042007C01000001B042005C0500000004000
00010000000042005C0500000004000000020000000042005C0500000004000000030000000042005C05000000040000
00040000000042005C0500000004000000080000000042005C0500000004000000090000000042005C05000000040000
00A0000000042005C05000000040000000B0000000042005C05000000040000000C0000000042005C0500000004000000
0D0000000042005C05000000040000000E0000000042005C05000000040000000F0000000042005C05000000040000001
00000000042005C0500000004000000110000000042005C0500000004000000120000000042005C050000000400000013
0000000042005C0500000004000000140000000042005C0500000004000000150000000042005C0500000004000000160
000000042005C0500000004000000180000000042005C0500000004000000190000000042005C05000000040000001A00
0000004200570500000004000000010000000042005705000000040000000200000000420057050000000400000003000
000004200570500000004000000040000000042005705000000040000000600000000

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330 Matthew Ball, [Oracle Corporation](#)

331 Elaine Barker, NIST

332 Peter Bartok, Venafi, Inc.

333 Mathias Björkqvist, IBM

334 Kevin Bocek, Thales e-Security

335 Kelley Burgin, National Security Agency

336 Tom Clifford, Symantec Corp.

337 Graydon Dodson, Lexmark International Inc.

338 Paul Earsy, SafeNet, Inc.

339 Stan Feather, [Hewlett-Packard](#)

340 Indra Fitzgerald, [Hewlett-Packard](#)

341 Alan Frindell, SafeNet, Inc.

342 Judith Furlong, EMC Corporation

343 Jonathan Geater, Thales e-Security

344 Robert Griffin, EMC Corporation

345 Robert Haas, IBM

346 Thomas Hardjono, M.I.T.

347 [Kurt Heberlein, 3PAR, Inc.](#)

348 Marc Hocking, BeCrypt Ltd.

349 Larry Hofer, Emulex Corporation

350 Brandon Hoff, Emulex Corporation

351 Walt Hubis, LSI Corporation

352 Wyllys Ingersoll, Sun Microsystems

353 Jay Jacobs, Target Corporation

354 Glen Jaquette, IBM

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355 Scott Kipp, Brocade Communications Systems, Inc.
 356 David Lawson, Emulex Corporation
 357 | [Hal Lockhart, Oracle Corporation](#)
 358 Robert Lockhart, Thales e-Security
 359 Shyam Mankala, EMC Corporation
 360 | [Upendra Mardikar, PayPal Inc.](#)
 361 | Hyrum Mills, Mitre Corporation
 362 | [Bob Nixon, Emulex Corporation](#)
 363 Landon Noll, Cisco Systems, Inc.
 364 René Pawlitzek, IBM
 365 Rob Philpott, EMC Corporation
 366 | [Scott Rea, Individual](#)
 367 Bruce Rich, IBM
 368 Scott Rotondo, Sun Microsystems
 369 | [Saikat Saha, Vormetric, Inc.](#)
 370 Anil Saldhana, Red Hat
 371 Subhash Sankuratripati, NetApp
 372 | Mark Schiller, [Hewlett-Packard](#),
 373 Jitendra Singh, Brocade Communications Systems, Inc.
 374 Servesh Singh, EMC Corporation
 375 | [Terence Spies, Voltage Security](#)
 376 Marcus Streets, Thales e-Security
 377 | [Sean Turner, IECA, Inc.](#)
 378 Paul Turner, Venafi, Inc.
 379 | Marko Vukolić, IBM
 380 Rod Wideman, Quantum Corporation
 381 | Steven Wierenga, [Hewlett-Packard](#),
 382 Peter Yee, EMC Corporation
 383 Krishna Yellepeddy, IBM
 384 Peter Zelechowski, Election Systems & Software
 385 | [Grace Zhang, Skyworth TTG Holdings Limited](#)

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B. Revision History

Revision	Date	Editor	Changes Made
ed-0.98	2009-04-28	Mathias Björkqvist	Initial conversion of input document to OASIS format.
ed-0.98	2009-08-06	Mathias Björkqvist	Changes to layout and message content to reflect the recent changes to the KMIP specification, added descriptions to the use-cases for which they were missing.
ed-0.98	2009-09-28	Mathias Björkqvist	Updated messages and TTLV encodings to conform with KMIP specification ed-0.98 rev 17.
draft-01	2009-10-08	Mathias Björkqvist	Removed normative words “must”, “shall”, “required”, “will” and “can”; updated messages and TTLV encodings to conform to KMIP specification ed-0.98 rev 19; added normative references; added minor edits
draft-02	2009-10-15	Mathias Björkqvist	Replaced the TBDs, changed status to Committee Draft, changed use-cases to use protocol major version 1 and minor version 0
draft-03	2009-10-15	Mathias Björkqvist	Corrected names of TC chairs
draft-04	2009-11-05	Mathias Björkqvist	Added list of participants, added reference to Profiles document, line spacing change to list of original contributors, added related documents
cd-05	2009-11-06	Mathias Björkqvist	Changes to various naming aspects on front page and document footer. This is the tentative version for public review.
cd-06	2009-11-12	Mathias Björkqvist	Updated tags.
cd-07	2010-02-17	Mathias Björkqvist	Addressed public review comments, added line numbering.
cd-08	2010-03-17	Mathias Björkqvist	Registration of Templates changed to use the Template object, Usage Allocation changes (Add Attribute, Check, Get Usage Allocation), batched Revoke requests with Destroy requests when destroying objects in the Active state, adopted new format for Username and Password Credential object.
cd-09	2010-03-18	Mathias Björkqvist	Updated participants' list. Editorial fixes.