KMIP Formal Interop Process (Abbreviated) v1.0a

# Introduction

This document forms the process by which the abbreviated version of the OASIS KMIP Interoperability Demonstration Event shall be conducted including provisions for both the KMIP Formal Interoperability Test and the participation at the Interoperability Demonstration. This document outlines:

* Overall process
* Detailed instructions
* Eligibility
* Confidentiality
* Test Parameters

As the objective of an OASIS Interoperability Demonstration is to demonstrate successful, interoperating implementations of OASIS technical committee work, it is imperative that:

* All participating client implementations interoperate successfully with all participating server implementations; and
* All participating server implementations interoperate successfully with all participating client implementations.

A formal interoperability test is used to ensure successful interoperation prior to a public demonstration at the Interoperability Demonstration.

# Obligations

Each Interop Participant is obligated to work towards the following goals:

* Promotion of the OASIS Consortia to increase membership
* Promotion of the KMIP TC to expand its applicability, reach, membership and quality of the specification
* Promotion of the work of the KMIP Technical Committee through live interoperability demonstrations

# Overall process

Interoperability testing shall be performed by each KMIP Client implementation interacting with each KMIP Server implementation, testing only the capabilities reported as being supported by the relevant KMIP Server implementation operator. Test results outside of the capabilities claimed shall not be reported. The following high level steps form the process:

1. All organizations participating in the Interop Demonstration commit to participation under the terms of this Process including the test scope;
2. Test sheets shall be distributed to all Interop Participants for use prior to testing. testing is to be included in or referenced from this Process
3. A Connectivity Test shall be run between the Interop Participants, prior to the commencement of Interoperability Testing
4. Interoperability Testing is performed
5. Final results collation, analysis and publication

# Definitions

This section provides definitions used in this document.

* Client Operator – an Interop Participant operating a client
* Connectivity Test – The period used to establish connectivity between each applicable client and server pair suitable to complete all required KMIP operations.
* Initial Results – Initial results published to the Interop Participants for verification
* Interop Commencement Date – the date by which all Interop Participants must have attained KMIP TC voting rights and agreed to follow the KMIP Formal Interop Process.
* Interop Participant – an organisation participating in the KMIP Interoperability Demonstration
* Interoperability Demonstration – The live demonstration event following the Interoperability Test
* Interop Special Majority Vote – A Special Majority Vote run as an electronic ballot by the OASIS TC Administrator. Such vote is held in accordance with the OASIS TC Process except that there shall be one vote per Interop Participant and the ballots may be closed by TC Admin after all Interop Participants have voted or after no less than three days, whichever occurs first.
* Interoperability Test – Formal Testing between Client and Server implementations
* Interoperability Demonstration Event – conducted at the request of the KMIP TC end encompasses the:
  1. Connectivity Test
  2. Interoperability Test
  3. Test Sheet completion & processing
  4. Test Results agreement and publication
  5. Interoperability Demonstration participation
* Server Operator – an Interop Participant operating a server
* Test Results – Results collated from the Interoperability Test
* Test Sheet – Form used to gather Test Results
* Test Scope – The tests available to be run during the Interoperability Demonstration Event that may be amended by the Interop Participants and/or the KMIP TC.

# Detailed Process

This section expands on the high level steps provided in Section 3

## Interop Parameters

The Interop Demo Lead Test publishes the formal interoperability test parameters in this process document. All Interop Participants review and confirm this process document indicating a formal acceptance of the test process.

## Test Sheets

The Interop Demo Lead Test publishes Test Sheets to all Interop Participants who are to complete a sheet for each implementation participating in the Event. Each Test Sheet shall be marked to show the implementation name, version and any test cases that are not supported. These Test Sheets are then sent to the Interop Lead and the other Interop Participants.

### Applicable rules

* Full product name and version number must be included on each test sheet for each implementation under test however there is no requirement that the product be a released product or ever planned to be released (research and development products can be used). Product information is to be accurate as this is what is attached to the published results.
* Test Sheets are to be completed and sent to the Interop Lead and the other Interop Participants during the Connectivity Test Period in electronic form via email. This is a criteria for successfully completing the Connectivity Test

## Connectivity testing

Prior to the commencement of the Formal Interoperability Test, each implementation must ensure that all connections can be successfully made to support all applicable KMIP operations. This usually involves issuing and testing of the required credentials as well as making sure connections can be made through corporate firewalls with ports for both client-to-server and server-to-client operations.

### Client operators

During the Connectivity Test Period, each client implementation must ensure they can connect with each participating server implementation to ensure successful initiation and completion of client to server operations and successfully receive and process any server to client operations.

### Server operators

During the Connectivity Test Period, each server implementation must ensure they can connect with each participating client implementation to ensure successful initiation and completion of server to client operations and successfully receive and process any client to server operations.

### Applicable rules

* Each client and server implementation test pair must establish connectivity during the Connectivity Test Period
* Successful completion of the Connectivity Test is defined for implementations as each client implementation and server implementation establishing a connection suitable for all applicable KMIP operations and completion of all required Test Sheets.
* Implementations that do not successfully complete Connectivity Test shall not be accepted to participate in the Formal Interoperability Test without an Interop Special Majority Vote and approval of the OASIS KMIP technical committee supporting their continued participation.
* Credentials issued to enable completion of the Connectivity Test must remain valid for the Interop Demonstration Event

## Interoperability Testing

### Client operators

Each client operator conducts tests against each server following the test sheets provided. Results are to be recorded as “Pass” or “Fail” for each listed test case. After performing all formal interoperability tests, each KMIP Client contact is to send each result file to the respective KMIP Server contact.Any blank entries shall not be interpreted as a “pass” result.

### Server operators

Each Server Operator is to record/log the test details including (where supported) the actual requests and responses received/sent. On receipt of the test results from each client operator, the server operator is to review the results provided by the client operators to ensure the result reported is accurate. Each KMIP Server contact is to attempt to resolve any discrepancies with the relevant KMIP Client contact. Each KMIP Server contact is then to forward the completed test sheets to the Interop Demo Lead and the relevant client operators.

### Applicable rules

* All Test Sheets must be completed each client and server implementation
* Results are to be provided to the group in the form of tests that fail.
* Results will be collated on the basis of tests passing unless noted as failed.
* Any discrepancy between a particular client/server should be discussed and resolved (if possible) between the client and server implementation operators.
* Where the result of a profile based test **does not match** the expected test case result (stated variations aside), that test will be deemed failed.
* Any test issues that cannot be resolved via email discussion amongst the respective organizations shall be referred to the Interop Participants for resolution.
* Any issues unable to be resolved by the test Interop Participants shall be anonymised and referred to the wider interop SC and /or TC for discussion and normative documentation improvement.
* All request and response (traffic) logs must be preserved by the Interop Participants and made available on request by any other Interop Participant.
* Implementations that are not ready and available for testing for the entire test period (excluding intermittent resets not exceeding 25% of the test period in total) shall not be accepted to participate in the Interoperability Demonstration without an Interop Special Majority Vote.
* Implementations that do not successfully complete Interoperability Test shall not be accepted to participate in the Interoperability Demonstration without an Interop Special Majority Voteand approval of the OASIS KMIP technical committee supporting their continued participation.
* Successful completion of the Interoperability Test by a Client implementation means:
  + The implementation must be testing or able and available to test for at least 75% of the test period
  + The implementation must have demonstrated an uncontested “pass” for at least one test against each server implementation.
* Successful completion of the Interoperability Test by a Server implementation means:
  + The implementation must be testing or able and available to test for at least 75% of the test period
  + The implementation must have demonstrated an uncontested “pass” for at least one test against each client implementation.

## Result collation, analysis and publication

Once all KMIP Test results are received, the results will be collated for review amongst the Interop Participants and agreed as accurate. The Interop Lead shall circulate summary results to all Interop Participants for review prior to publication to the OASIS KMIP technical committee.

### Applicable rules

* Where results for a particular server are not received by the due date, the capability verification that is available from other organization reports (as part of item 3.5) shall be used as the result.
* Finalised test result shall be agreed as accurate via a simple majority ballot of Interop Participants.
* Agreed test result data will be used to determine if an organization is unable to meet the technical requirements and hence will require approval of the Interop Participants and the KMIP TC in order to continue participation.

# Balloting and Appeals

* Approval for changes to Section 10 after the Interop Commencement Date has passed, requires an Interop Special Majority Vote.
* Approval for an Interop Participant’s continued participation in the Interoperability Demonstration Event following that Interop Participant’s failure to meet the eligibility requirements in Section 7 requires an Interop Special Majority Vote.
* Any Interop Participant who believes that an action taken or not taken in accordance with this process may appeal such action or inaction to the Interop Lead. The Interop lead SHALL:
  + Request TC Admin to commence an Interop Special Majority Vote to resolve the matter; or
  + Request the KMIP TC to resolve the matter; or
  + Request TC Admin to provide advice to the TC regarding this process to enable the KMIP TC to resolve the matter.
* Any Interop Participant who believes that an action taken or not taken by the Interop Lead in accordance with this process may appeal in accordance with the TC Process Appeal Process.

# Eligibility

All implementations participating in the Interoperability Demonstration are required to:

* Comply with any applicable OASIS KMIP Technical Committee standing rules[[1]](#footnote-2); and
* Demonstrate support for one or more test cases supported (tests are informative not normative and variations in responses may be accepted by the Interop Participants); and
* Demonstrate support for one or more profiles and associated named test cases supported (tests are normative).
* Comply with the Conformance section in the specification; and
* Comply with the Conformance section in one or more Profiles; and
* Successfully participate in the formal interoperability test.

### Applicable rules

* Participation requirements as specified in this Process must be met prior to commitment to participate is made
* There shall be no implied warranty or commitment of an Interop Participant to make a tested implementation available beyond the requirements for Interoperability Testing and the Interoperability Demonstration.
* Unless otherwise stated by an Interop Participant, implementations made available for testing shall not be categorised as reflective of a released product or a product intended to be released.
* Interop Participants agree that reference to test results will refer to the product using the naming provided by the Interop Participant.
* Each Interop Participant must not miss more than one Interop Demonstration Event Meeting where meetings are scheduled with at least 24 hours’ notice (meetings may be repeated to cover multiple time zones).
* Implementations that do not interoperate successfully with all other implementations (clients interoperate with all servers and servers interoperate with all clients) during the Interoperability Test shall not be accepted to participate in the Interoperability Demonstration without an Interop Special Majority Vote and approval of the Interop Participants and the OASIS KMIP technical committee supporting their continued participation.

# Confidentiality

All implementation capabilities and test results shall remain confidential between the KMIP interoperability Interop Participants in keeping with the understanding that pre-release and development implementations may participate and that no negative results are shared outside of the Interop Participants. The only results that may be shared outside each Interop Participant’s organisation are those test results that the test Interop Participants approve to be released to the KMIP Interoperability Subcommittee and wider KMIP Technical Committee.

### Applicable rules

* All KMIP Interoperability Test Capability Statement contents shall remain confidential between the Interop Participants.
* Any published KMIP Interoperability Test Results shall only include positive results (no failures or non-supported capabilities are to be reported).
* KMIP Interoperability Test Results shall only be made available to the KMIP Interoperability Subcommittee and KMIP Technical Committee with the agreement by an Interoperability Special Majority Vote of the Interop Participants. All other KMIP Interoperability test result data shall remain confidential between the Interop Participants.

# Interoperability Demonstration

The Interoperability Demonstration will be held as organised by OASIS Staff.

### Applicable rules

* The version of an implementation participating in the Formal Interoperability Test must be able to be used at the KMIP Interoperability Demonstration to ensure interoperability.
* The configuration of each KMIP server implementation must:
  + match that of the implementation used during the interop test; and
  + run locally on the Demonstration network such that only the IP address of all the locally connecting implementations need to be adjusted in order to ensure interoperability.
* Reconfiguration or reissuing of client or server credentials or any other configuration change beyond that of the IP address of the server SHALL NOT be permitted.
* Remote access to servers from within the Interoperability Demonstration SHALL NOT be permitted.
* During the Interoperability Demonstration, all Interop Participants SHALL be able to demonstrate interoperability between each implementation that was tested during the interop test, on request of any attendee or visitor.
* Any Interop Participant not accepted to participate at the Interoperability Demonstration shall be asked to remove all vendor signage and leave the Interop Demonstration.
* Any published KMIP Interoperability Test Results shall only include positive results (no failures or non-supported capabilities are to be reported).
* An Interop Participant shall not knowingly impede, hinder or negatively affect another Interop Participant’s implementation on the booth.
* All Interop Participants must promote OASIS membership, TC Participation and the work of the TC in a positive manner.
* Whilst attending the Interoperability Demonstration, any Interop Participant found making statements to the detriment of OASIS, OASIS Staff, the Interoperability Demonstration Event, an Interoperability Participant or an Interoperability Participant’s implementation or test results shall be asked to remove all vendor signage and leave the Interop Demonstration following consultation with OASIS TC Admin.
* Interoperability Demonstration implementations shall be attended at all times during the Interoperability Demonstration Period. Any implementation left unattended for greater than 15 minutes shall be removed from the Interoperability Demonstration.
* Test results shall not be used to state or imply endorsement by OASIS, Formal Interoperability Test Participants’, KMIP TC, or KMIP Interoperability SC endorsement of any products used in the Formal Interoperability Test.
* Nothing within these rules precludes and use of results subsequently published to the KMIP TC.

# Test Parameters

## Deliverable Dates Updated

Note: All times and dates are US-Pacific Standard Time

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| --- | --- |
| **Item** | **Dates** |
| Interop Process & initial Test Scope Agreed | 4pm Thu 15 Dec 2018 |
| Interop Commencement Date | 7am Monday 7 Jan 2019 |
| Connectivity Test Period | 7am Mon 14 Jan 2019 – 5pm Fri 18 Jan 2019 |
| Interoperability Test period | 7am Mon 21 Jan 2019 – 5pm Fri 1 Feb 2019 |
| Final Test results provided to Interop Lead & List | 5pm Sat 2 Feb 2019 |
| Initial Results publication | 12pm Wed 6 Feb 2019 |
| Results review & discussion period | 12pm Wed 6 Feb 2019 – 5pm Thursday 14 Feb 2019 |
| Distribution of agreed results | Before 3pm Thursday 21 Feb 2019 |
| Interoperability demonstration setup period | 8am – 3pm Mon 4 Mar 2018 |
| Interoperability Demonstration period | 5pm Mon 4 Mar 2019 – 3pm Thu 7 Mar 2019 |

## Interop Participants

|  |  |  |
| --- | --- | --- |
| **Participant** | **Primary Contact** | **Secondary contact** |
| Cryptsoft |  |  |
| P6R |  |  |
| Quintessence Labs |  |  |
| Thales |  |  |
| Unbound |  |  |
| Utimaco |  |  |
|  |  |  |
|  |  |  |

## Organisers

|  |  |  |
| --- | --- | --- |
| **Role** | **Contact** | **Email** |
| Interop Demo Lead | Tony Cox | tony.cox@cryptsoft.com |

## Test Scope Overview

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| --- | --- |
| **Item** | **Scope** |
| KMIP v2.0 Profile Test Cases for protocol version 2.0 | Committee Specification Draft |

### Test Scope Detail

|  |  |
| --- | --- |
| **KMIP v2.0** | **KMIP v2.0 (cont)** |
| AKLC-M-1-20 | SKFF-M-8-20 |
| AKLC-M-2-20 | SKFF-M-9-20 |
| AKLC-M-3-20 | SKFF-M-10-20 |
| AX-M-1-20 | SKFF-M-11-20 |
| AX-M-2-20 | SKFF-M-12-20 |
| CS-AC-M-1-20 | SKLC-M-1-20 |
| CS-AC-M-2-20 | SKLC-M-2-20 |
| CS-AC-M-3-20 | SKLC-M-3-20 |
| CS-AC-M-4-20 | TC-CERTATTR-1-20 |
| CS-AC-M-5-20 | TC-CREATE-SD-1-20 |
| CS-AC-M-6-20 | TC-CS-CORVAL-1-20 |
| CS-AC-M-7-20 | TC-DERIVEKEY-1-20 |
| CS-AC-M-8-20 | TC-DERIVEKEY-2-20 |
| CS-AC-M-OAEP-1-20 | TC-DERIVEKEY-3-20 |
| CS-AC-M-OAEP-2-20 | TC-DERIVEKEY-4-20 |
| CS-AC-M-OAEP-3-20 | TC-DERIVEKEY-5-20 |
| CS-AC-M-OAEP-4-20 | TC-DERIVEKEY-6-20 |
| CS-AC-M-OAEP-5-20 | TC-ECC-1-20 |
| CS-AC-M-OAEP-6-20 | TC-ECC-2-20 |
| CS-AC-M-OAEP-7-20 | TC-ECC-3-20 |
| CS-AC-M-OAEP-8-20 | TC-ECDSA-SIGN-1-20 |
| CS-AC-M-OAEP-9-20 | TC-ECDSA-SIGN-DIGESTEDDATA-1-20 |
| CS-AC-M-OAEP-10-20 | TC-EXTRACTABLE-1-20 |
| CS-BC-M-1-20 | TC-I18N-1-20 |
| CS-BC-M-2-20 | TC-I18N-2-20 |
| CS-BC-M-3-20 | TC-I18N-3-20 |
| CS-BC-M-4-20 | TC-MDO-1-20 |
| CS-BC-M-5-20 | TC-MDO-2-20 |
| CS-BC-M-6-20 | TC-MDO-3-20 |
| CS-BC-M-7-20 | TC-OFFSET-1-20 |
| CS-BC-M-8-20 | TC-OFFSET-2-20 |
| CS-BC-M-9-20 | TC-PGP-1-20 |
| CS-BC-M-10-20 | TC-PKCS12-1-20 |
| CS-BC-M-11-20 | TC-PKCS12-2-20 |
| CS-BC-M-12-20 | TC-REKEY-1-20 |
| CS-BC-M-13-20 | TC-RNG-ATTR-1-20 |
| CS-BC-M-14-20 | TC-RNG-ATTR-2-20 |
| CS-BC-M-GCM-1-20 | TC-RSA-SIGN-DIGESTEDDATA-1-20 |
| CS-BC-M-GCM-2-20 | TC-SENSITIVE-1-20 |
| CS-BC-M-GCM-3-20 | TC-STREAM-ENC-1-20 |
| CS-RNG-M-1-20 | TC-STREAM-ENC-2-20 |
| OMOS-M-1-20 | TC-STREAM-ENCDEC-1-20 |
| SASED-M-1-20 | TC-STREAM-HASH-1-20 |
| SASED-M-2-20 | TC-STREAM-HASH-2-20 |
| SASED-M-3-20 | TC-STREAM-HASH-3-20 |
| SKFF-M-1-20 | TC-STREAM-MAC-1-20 |
| SKFF-M-2-20 | TC-STREAM-SIGN-1-20 |
| SKFF-M-3-20 | TC-STREAM-SIGNVFY-1-20 |
| SKFF-M-4-20 | TL-M-1-20 |
| SKFF-M-5-20 | TL-M-2-20 |
| SKFF-M-6-20 | TL-M-3-20 |
| SKFF-M-7-20 |  |

1. - The KMIP TC is to be represented at an interoperability event by KMIP TC voting member organisations.  
   - At an Interoperability Event, interoperability between implementations needs to be proven to the satisfaction of the participants, well ahead of any demonstration commencing.  
   - In order for the KMIP TC to accept a Statement of Use, the submitting member needs to have participated in a plugfest or interop test for that version of the specification. [↑](#footnote-ref-2)