
**Information technology — Message
Handling Systems (MHS): Message store:
Abstract service definition**

**AMENDMENT 1: Additional correlation
attribute and security error code**

Technologies de l'information 98 Systèmes de messagerie (MHS): Dépôt
de message: Définition de service abstrait 4c3-

<https://standards.iteh.ai/catalog/standards/sist/71ab21ebd3cb/iso-iec-10021-5-1996-amd-1-1998>

AMENDEMENT 1: Attributs de corrélation additionnelle et code d'erreur
de sécurité

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Foreword

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In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

Amendment 1 to ISO/IEC 10021-5:1996 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 33, *Distributed application services*, in collaboration with ITU-T. The identical text is published as ITU-T Rec. X.413/Amd.1.

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Introduction

The purpose of this Amendment is as follows:

- to define an extended set of ASN.1 Integer values for MS-security error codes;
- a set of enhancements to change the value of the *MS-retrieval status* attribute;
- missing matching rules for redirection attributes;
- clarification of multi-valued MTS envelope extensions;
- definition of additional correlation attribute for reports;
- clarification of an aspect of attribute creation;
- definition of a new attribute to identify the delivered-message's originator.

The instructions enumerated below identify the reference clause number and then the desired change.

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INTERNATIONAL STANDARD

ITU-T RECOMMENDATION

**INFORMATION TECHNOLOGY – MESSAGE HANDLING SYSTEMS (MHS):
MESSAGE STORE: ABSTRACT SERVICE DEFINITION**

AMENDMENT 1

Additional correlation attribute and security error code

1 Detailed security related changes

1) Subclause 7.1.3 and Annex B

Add a value in the ASN.1 definition of **BindProblem** as follows:

```
BindProblem ::= ENUMERATED {
    authentication-error (0),
    unacceptable-security-context (1),
    unable-to-establish-association (2),
    ..-- 1994 extension addition --,
    bind-extension-problem (3),
    confidentiality-association-error (4)}
```

In subclause 7.1.3, item a), add the following sentence to the end of the Unqualified-error parameter definition:

If **confidentiality-association-error** is indicated, the abstract-association cannot be established because the underlying connection does not provide the necessary degree of confidentiality.

2) Subclause 9.8

Add the following text to the end of this subclause:

The **security-error** contains the **security-problem** parameter which indicates the cause of security-policy violation.

The **security-problem** parameter concerns:

- delete;
- fetch;
- list;
- modify;
- MS-message-submission;
- MS-probe-submission;
- register-MS;
- summarize.

9.8.1 Security-error for register-MS abstract-operation

The **security-problem** parameter can have one of the following values related to change-credentials component of register-MS argument:

- a) **operation-security-failure**: The operation failed for security reason.
- b) **security-policy-violation**: The security-policy is violated.
- c) **security-services-refusal**: The security services cannot be supported.

9.8.2 Security-error for delete, fetch, list, modify and summarize abstract-operations

The security-problem parameter can have one of the following values:

- a) operation-security-failure: The operation failed for security reason.
b) unauthorized-entry-class: The security policy does not permit the requested operation to be performed on the specified entry-class.

9.8.3 Security-error for MS-probe-submission and MS-message-submission abstract-operations

The security-problem parameter may have one of the following values in addition to those defined in ITU-T Rec. X.411 | ISO/IEC 10021-4 for the message-submission and probe-submission abstract-operations:

- a) authentication-problem: The submission failed because the MTS-bind cannot be performed by the MS for peer entity authentication reasons.
b) confidentiality-association-problem: The submission failed because the MTS-bind cannot be performed by the MS for confidentiality association reasons.
c) responder-credentials-checking-problem: The submission failed because the MTS-bind cannot be performed by the MS for responder credentials checking reasons.
d) security-context-problem: The submission failed because the MTS-bind cannot be performed by the MS for security-context reasons.

2 Modification of the retrieval-status attribute

3) Subclause 7.1.2

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Append the following to item h):

This Specification defines one additional capability of the MS: If, and only if, the MS-configuration-request parameter of the MS-bind-argument is true, and the MS supports the use of the Modify abstract-operation to change the value of the retrieval-status attribute, then the following MS-EXTENSION shall be present:

modify-retrieval-status MS-EXTENSION ::= { ModifyRetrievalStatus IDENTIFIED BY id-ext-modify-retrieval-status }

ModifyRetrievalStatus ::= INTEGER { no-restriction (0), listed-to-processed (1) }

If the value no-restriction is present, then the MS supports any modification of the retrieval-status attribute. If the value listed-to-processed is present, then retrieval-status may be modified provided that its existing value is listed and the replacement value is processed.

4) Subclause 11.2.68

In 11.2.68 (Retrieval-status – now renumbered 11.2.69), replace the second sentence with the following:

The Modify abstract-operation and Auto-modify auto-action, if available, may be capable of amending the attribute.

5) Subclause 11.6

Replace the first sentence with the following:

Of the general-attribute-types, only those listed below are subject to modification by the Modify abstract-operation and the Auto-modify auto-action.

Add a new third sentence:

Support for the modification of retrieval-status is indicated as an additional capability reported in MS-bind-result [see item h) in 7.1.2].

6) Annex A

Add the following after the line starting **id-mr**:

id-ext -- extensions – **ID::= {id-ms 9}**

Add the following before the line starting **END**:

-- Extensions --

id-ext-modify-retrieval-status ID::= {id-ext 0}

7) Annex B

Insert the productions shown above for 7.1.2 in this Annex, following the production for **MSBindResult**.

Add the following after **id-crt-ms-access-94**, in the **IMPORTS FROM MSObjectIdentifiers**:

id-ext-modify-retrieval-status,

3 Determination of the presence of an attribute

8) Subclause 8.1.4 and Annex B

Replace the production for **AttributeSelection** with the following:

```
AttributeSelection ::= SET {
  type  ATTRIBUTE.&id ( {AttributeTable} ),
  from  [0] INTEGER (1..ub-attribute-values) OPTIONAL -- used if type is multi-valued --,
  count [1] INTEGER (0..ub-attribute-values) OPTIONAL
  -- for 1988 Application Contexts the lower bound is on -- }
```

Replace bullet c) of 8.1.4 with the following: [ISO/IEC 10021-5:1996/Amd 1:1998](https://standards.iteh.ai/catalog/standards/sist/d0969f3a-45e1-42bf-a4c3-714b21ebd3cb/iso-iec-10021-5-1996-amd-1-1998)

- c) **Count** (0): This Integer specifies the maximum number of values to be returned. It is not an error if **count** is greater than the number of values present in the attribute. If **count** is zero, then information is requested on the total number of values present in the attribute but no actual values are returned. If this component is omitted, there is no limit as to how many values are returned.

9) Subclause 8.1.5

In item b) append the following to the last sentence:

, or if all the requested-attributes present were specified in entry-information-selections in which the count component indicated that zero attribute-values were to be returned.

4 Missing matching-rule

10) Subclause 11.2.25 and Annex C

In the **ASN.1** production for **mt-dl-expansion-history**, insert the following after **redirectionOrDLExpansionSubstringElementsMatch**:

| redirectionOrDLExpansionSingleElementMatch

11) Subclause 11.2.63 and Annex C

In the **ASN.1** production for **mt-redirection-history**, insert the following after **redirectionOrDLExpansionSubstringElementsMatch** |:

redirectionOrDLExpansionSingleElementMatch |