NCI AGENCY

NATO Communications and Information Agency
Agence OTAN d'information et de communication

AGENCY INSTRUCTION

INSTR TECH 06.02.05

SERVICE INTERFACE PROFILE FOR ENTERPRISE DIRECTORY SERVICES

Effective date:

Revision No: Original

Issued by: Chief, Core Enterprise Services _____

Approved by: Director Service Strategy _____

Table of Amendments

Amendment No	Date issued	Remarks

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SERVICE INTERFACE PROFILE FOR ENTERPRISE DIRECTORY SERVICES

0 PRELIMINARY INFORMATION

0.1 References

A. NCIA/GM/2012/235; Directive 1 Revision 1; dated 3 May 2013
B. NCIARECCEN-4-22852 DIRECTIVE 01.01, Agency Policy on Management and Control of Directives, Notices, Processes, Procedures and Instructions, dated 20 May 2014
C. NCIARECCEN-4-23297, Directive 06.00.01, Management and Control of Directives, Processes, Procedures and Instructions on Service Management, dated 03 June 2014

0.2 Purpose

This Technical Instruction (TI) provides detailed information, guidance, instructions, standards and criteria to be used when planning, programming, and designing Agency products and services. In this specific case the TI defines a Service Interface Profile (SIP) for one of NATO's Core Enterprise Services.

TIs are living documents and will be periodically reviewed, updated, and made available to Agency staff as part of the Service Strategy responsibility as Design Authority. Technical content of these instructions is the shared responsibility of SStrat/Service Engineering and Architecture Branch and the Service Line of the discipline involved.

TIs are primarily disseminated electronically[1], and will be announced through Agency Routine Orders. Hard copies or local electronic copies should be checked against the current electronic version prior to use to assure that the latest instructions are used.

0.3 Applicability

This TI applies to all elements of the Agency, in particular to all NCI Agency staff involved in development of IT services or software products. It is the responsibility of all NCI Agency Programme, Service, Product and Project Managers to ensure the implementation of this technical instruction and to incorporate its content into relevant contractual documentation for external suppliers.

1 SIP INTRODUCTION

In order to ensure compatibility between services, both within NATO and between NATO and its partners, there is a need to ensure that a standard (and standards-based) profile can be defined which will be mandatory for all service operations in the NATO Network Enabled Capability (NNEC).

A range of separate directories and data repositories coexist within NATO with a sizeable overlap between the information contained within these various directories. There is a need for synchronization between them to harmonise and rationalise the information which can be facilitated by an Enterprise Directory Service.

The Enterprise Directory Service can serve as a central information repository in an enterprise network infrastructure, storing identity, authorization, and application-specific information, service-publication and discovery information, as well as directory service configuration data. A directory service is an inherent part of distributed security and identity management, and plays a key role in the manageability of a distributed enterprise.

[1] https://servicestrategy.nr.ncia/SitePages/Agency%20Directives%20(Technical).aspx

The purpose of this Service Interface Profile (SIP) is to specify the interface of the directory service itself. Though the Enterprise Directory Services is often referred to as a capability also including adapters to a variety of data sources like for instance file interfaces such as LDAP data interchange format (LDIF) and comma-separated value (CSV), or database interfaces using structured query language (SQL), this specification will entirely focus on the directory service interface. The additional interfaces are to be provided through separate agents that are able to translate various sources to the protocol used by the directory service as specified in this document.

1.1 Audience

The target audience for this specification is the broad community of NNEC stakeholders, who are delivering capability in an NNEC environment, or anticipate that their services may be used in this environment.

These may include (but are not limited to):

- Project Managers procuring Bi-SC (Bi-Strategic Commands) or NNEC related systems
- The architects and developers of service consumers and providers
- Coalition partners whose services may need to interact with NNEC services
- Systems integrators delivering systems into the NATO environment.

1.2 Notational conventions

The following notational conventions apply to this document:

- The keywords "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in [IETF RFC 2119, 1997].
- Words in *italics* indicate terms referenced in Section 1.3.

1.3 Terminology

Table 1
Terminology

Directory interrogation	The search and retrieval of information from the directory.
Directory modification	Adding, deleting and modifying entries within the directory.
Directory schema	Definition of the attributes and their optional or mandatory presence in a directory entry of a given object class.
Distinguished Name	A name that uniquely identifies an entry within the directory, consisting of a sequence of relative distinguished names.
RootDSE	An entry within the directory server that contains information about the directory server itself, including its capabilities and configuration.

1.4 Goals

The following are the goals of this profile:

- Identifying the protocol used to access the Enterprise Directory Service

- Identifying the authentication mechanisms to be used
- Identifying the security mechanisms to be used.

1.5 Non-Goals

The following topics are outside the scope of this profile:

- Identifying the complete Enterprise Directory Service schema.

1.6 Relationships to Other Profiles and Specifications

Relationships with other CES Service Interface Profiles are among others:

- Security Token Service (see [NCIA TR/2012/CPW007253/02, 2012]) – Enterprise Directory Services can act as an Identity Provider.
- Collaboration Services (see [NC3A RD-3186, 2011] – Enterprise Directory Services can provide common user data to collaboration services.

1.6.1 Normative References

The following documents have fed into this specification, and are incorporated as normative references:

1.6.1.1 General

- Lightweight Directory Access Protocol (LDAP): Technical Specification Road Map, [IETF RFC 4510, 2006]
- Lightweight Directory Access Protocol (LDAP): The Protocol, [IETF RFC 4511, 2006]
- Lightweight Directory Access Protocol (LDAP): Directory Information Models, [IETF RFC 4512, 2006]
- Lightweight Directory Access Protocol (LDAP): Authentication Methods and Security Mechanisms, [IETF RFC 4513, 2006]
- Lightweight Directory Access Protocol (LDAP): String Representation of Distinguished Names, [IETF RFC4514, 2006]
- Lightweight Directory Access Protocol (LDAP): String Representation of Search Filters, [IETF RFC 4515, 2006]
- Lightweight Directory Access Protocol (LDAP): Uniform Resource Locator, [IETF RFC 4516, 2006]
- Lightweight Directory Access Protocol (LDAP): Syntaxes and Matching Rules, [IETF RFC 4517, 2006]
- Lightweight Directory Access Protocol (LDAP): Internationalized String Preparation, [IETF RFC 4518, 2006].

1.6.1.2 Schema Documentation

- Definition of the LDAP iNetOrgPerson Object Class, [IETF RFC 2798, 2000]
- Lightweight Directory Access Protocol (LDAP): Schema for User Applications, [IETF RFC 4519, 2006]
- Allied Communication Publication 133(C), [CCEB ACP133C, 2007].

2 SIP DEFINITION

2.1 Subject

This SIP focuses on the interface profile of an Enterprise Directory Service. It is part of the *Repository* services as defined in the Core Enterprise Services Framework [NAC EAPC(AC/322-SC/1)N(2009)0015 (INV), 2009].

This SIP identifies and describes the mandatory service interfaces needed for the basic interoperability.

2.1.1 Directory Service Standards and XML

The Enterprise Directory Service is one of the services in the CES Framework that has existed for considerable time. Initial standards definitions were drafted by the International Telecommunication Union (ITU) as the X.500 series, but were soon overtaken by the more successful IETF LDAP standards, with an initial Request for Comments (RFC) for Version 2 in 1993 [IETF RFC 1487, 1993], followed-up by Version 3 in 1997 [IETF RFC 2251, 1997] which was further re-organized in 2006 [IETF RFC 4511, 2006]. Not only has the standard undergone substantial development and updates, it has also been well accepted and broadly implemented by vendors such as Microsoft and Oracle.

Whereas most of the CES Framework standards use extensible markup language (XML) encoding, LDAP uses abstract syntax notation (ASN) 1. Several attempts have been made to standardize a Directory Services specification based on XML, such as Directory Service Markup Language [OASIS DSML, 2002], Service Provisioning Markup Language [OASIS SPML, 2006] and XML-Enabled Directory [IETF DraftXED, 2007], but they have not been widely adopted.

2.2 Service interface

The service interface is not a web service and therefore a web services description language (WSDL) is not appropriate to describe the operations of the service.

The service interface is defined by IETF LDAP standards as defined in the LDAP Technical Specification Road Map [IETF RFC 4510, 2006].

2.3 Operations

The LDAP operations consist of a series of requests and responses, predominantly from the client to the server. The operations are grouped into three basic groups:

1) Association management – Bind/Unbind
2) Directory interrogation – Search/Compare/Abandon
3) Directory modification – Modify/Add/Delete/ModifyDN.

It is expected that the majority of the users of this SIP will perform *Directory Interrogation* and that a minority will perform directory modification operations. (All will perform association management operations.)

Table 2 shows the complete list of operations as described in [IETF RFC 4511, 2006].

Table 2
LDAP operations

Operation	Description
Bind	*Section 4.2*: The function of the Bind operation is to allow authentication information to be exchanged between the client and server. The Bind operation should be thought of as the "authenticate" operation.
Unbind	*Section 4.3*: The function of the Unbind operation is to terminate an LDAP session. The Unbind operation is not the antithesis of the Bind operation as the name implies. The naming of these operations are historical. The Unbind operation should be thought of as the "quit" operation.
Search	*Section 4.5*: The Search operation is used to request a server to return, subject to access controls and other restrictions, a set of entries matching a complex search criterion. This can be used to read attributes from a single entry, from entries immediately subordinate to a particular entry, or from a whole sub-tree of entries.
Modify	*Section 4.6*: The Modify operation allows a client to request that a modification of an entry be performed on its behalf by a server.
Add	*Section 4.7*: The Add operation allows a client to request the addition of an entry into the Directory.
Delete	*Section 4.8*: The Delete operation allows a client to request the removal of an entry from the Directory.
Modify DN	*Section 4.9*: The Modify DN operation allows a client to change the relative distinguished name (RDN) of an entry in the Directory and/or to move a sub-tree of entries to a new location in the Directory. The directory service must implement the interface as defined in Section 4.9 of [IETF RFC 4511, 2006.
Compare	*Section 4.10*: The Compare operation allows a client to compare an assertion value with the values of a particular attribute in a particular entry in the Directory.
Abandon	*Section 4.11*: The function of the Abandon operation is to allow a client to request that the server abandon an uncompleted operation.
Extended	*Section 4.12*: The Extended operation allows additional operations to be defined for services not already available in the protocol; for example, to Add operations to install transport layer security.

2.3.1 **Authentication**

The Bind operation allows a client to authenticate to the Enterprise Directory Service prior to interrogating or modifying the directory information.

The Enterprise Directory Service may allow parts of the directory information to be interrogated by all users, in which case no authentication is required during the Bind. This is termed "anonymous" access.

The Enterprise Directory Service may allow other parts of the directory information to only be interrogated by specific users, and will only allow the modification of directory information by other specific users. In both these cases authentication is required during the Bind.

The Enterprise Directory Service SHALL allow only three three authentication modes:

1) Anonymous authentication – the user provides no credentials.
2) Simple authentication –the user provides a name and password that is specific to the Enterprise Directory Service.
3) Kerberos authentication – the user re-uses their domain credentials, which provides a single sign-on (SSO) capability. The more sophisticated Kerberos authentication uses simple authentication and security layer (SASL) [IETF RFC 4422, 2006] within the LDAP Bind operation.

If simple authentication is used then transport layer security (TLS) [IETF RFC 4346, 2006] SHALL be used to protect the credentials over the network. The TLS negotiation will also authenticate the Enterprise Directory Service to the client.

2.3.2 LDAP operation security

The users of the Enterprise Directory SIP will generally retrieve and publish authoritative information to the Enterprise Directory. As a result, the information being retrieved or published must be appropriately protected to ensure that the information is not tampered with in transit. Therefore all LDAP operations SHALL be protected by either:

- TLS, which encrypts the requests and results and provides indirect integrity.
- SASL integrity security layer (which signs the requests and results) negotiated during the authentication exchange.

Both TLS and SASL security layers SHALL NOT be used concurrently.

2.4 Message Structure

The following message structures are defined by [IETF RFC 4511, 2006].

2.4.1 Requests and responses

Paragraph 4.1.1 of [IETF RFC 4511, 2006] states that *"For the purposes of protocol exchanges, all protocol operations are encapsulated in a common envelope, the LDAPMessage, which is defined as follows"*:

```
LDAPMessage ::= SEQUENCE {
             messageID       MessageID,
             protocolOp      CHOICE {
                  bindRequest           BindRequest,
                  bindResponse          BindResponse,
                  unbindRequest         UnbindRequest,
                  searchRequest         SearchRequest,
                  searchResEntry        SearchResultEntry,
                  searchResDone         SearchResultDone,
                  searchResRef          SearchResultReference,
                  modifyRequest         ModifyRequest,
                  modifyResponse        ModifyResponse,
```

```
            addRequest              AddRequest,
            addResponse             AddResponse,
            delRequest              DelRequest,
            delResponse             DelResponse,
            modDNRequest            ModifyDNRequest,
            modDNResponse           ModifyDNResponse,
            compareRequest          CompareRequest,
            compareResponse         CompareResponse,
            abandonRequest          AbandonRequest,
            extendedReq             ExtendedRequest,
            extendedResp            ExtendedResponse,
            ...,
            intermediateResponse    IntermediateResponse },
        controls        [0] Controls OPTIONAL }

MessageID ::= INTEGER (0 ..  maxInt)

maxInt INTEGER ::= 2147483647 -- (2^^31 - 1) -
```

2.4.2 Errors

Paragraph 4.1.1 of [IETF RFC 4511, 2006] states that *"The LDAPResult is the construct used in this protocol to return success or failure indications from servers to clients. To various requests, servers will return responses containing the elements found in LDAPResult to indicate the final status of the protocol operation request."*

```
LDAPResult ::= SEQUENCE {
        resultCode          ENUMERATED {
            success                      (0),
            operationsError              (1),
            protocolError                (2),
            timeLimitExceeded            (3),
            sizeLimitExceeded            (4),
            compareFalse                 (5),
            compareTrue                  (6),
            authMethodNotSupported       (7),
            strongerAuthRequired         (8),
                -- 9 reserved --
            referral                     (10),
            adminLimitExceeded           (11),
            unavailableCriticalExtension (12),
            confidentialityRequired      (13),
            saslBindInProgress           (14),
            noSuchAttribute              (16),
            undefinedAttributeType       (17),
            inappropriateMatching        (18),
            constraintViolation          (19),
            attributeOrValueExists       (20),
            invalidAttributeSyntax       (21),
                -- 22-31 unused --
            noSuchObject                 (32),
            aliasProblem                 (33),
            invalidDNSyntax              (34),
                -- 35 reserved for undefined isLeaf --
            aliasDereferencingProblem    (36),
                -- 37-47 unused --
            inappropriateAuthentication  (48),
            invalidCredentials           (49),
            insufficientAccessRights     (50),
            busy                         (51),
            unavailable                  (52),
            unwillingToPerform           (53),
            loopDetect                   (54),
                -- 55-63 unused --
            namingViolation              (64),
            objectClassViolation         (65),
            notAllowedOnNonLeaf          (66),
```

```
        notAllowedOnRDN              (67),
        entryAlreadyExists           (68),
        objectClassModsProhibited    (69),
             -- 70 reserved for CLDAP --
        affectsMultipleDSAs          (71),
             -- 72-79 unused --
        other                        (80),
        ...  },
matchedDN          LDAPDN,
diagnosticMessage  LDAPString,
referral           [3] Referral OPTIONAL }
```

These result codes are further detailed in Appendix A of [IETF RFC 4511, 2006], and also includes non-error conditions.

3 SCHEMA

3.1 Introduction

The Enterprise Directory Service maintains a well-defined directory schema and ensures that all the directory information it contains to the *Directory Schema*.

Core Enterprise Services that use the Enterprise Directory Service SIP for directory interrogation need a basic understanding of the *Directory Schema* to determine how to construct search filters to find specific entries within the directory and request the appropriate attributes.

Core Enterprise Services that use the Enterprise Directory Service SIP for *Directory Modification* need a complete understanding of the *Directory Schema* to ensure that the modifications they perform conform to the *Directory Schema*.

Note that though the *Directory Schema* will define all of the possible attributes and object classes that the Enterprise Directory Service may contain, the Enterprise Directory Service may not contain instances of all the object classes and attributes that are defined.

3.2 Base Schema

The Enterprise Directory Service contains a base *Directory Schema* that supports interoperability with NATO nations through the Alliance Replication Hub (ARH). This *Directory Schema* is defined in the ACP133 Edition C[2], ([CCEB ACP133C, 2007]).

An LDAP representation of the base directory schema is shown in Annex 1 .

3.3 Extended Schema

The *Directory Schema* is dynamic and will be extended as NATO authoritative sources publish their information to the Enterprise Directory Service. The current *Directory Schema* supported by the Enterprise Directory Service can be determined by sub-schema entries identified in the *RootDSE* of the Enterprise Directory Service.

3.4 Naming

The Enterprise Directory Service maintains two unique identifiers for all of the entries that it contains:

- *Distinguished Name* – a structured name that indicates the hierarchical name of the entry within the Enterprise Directory Service. This identifier would be used as the baseObject for a

---

[2] Note that ACP133 Edition D has been published but this has not yet been ratified by NATO.

baseObject search to read specific attributes from the entry. For example, "cn=Joe Smith, ou=Staff, ou=NC3A, o=NATO", which may have been obtained from the SubjectDN of an X.509 certificate.

- NATO Enterprise Identifier (NEID) – an attribute that contains a unique universal identifier (UUID) that is assigned to the entry when it is created. This identifier would be used within a search filter within a singleLevel or wholeSubtree search.

In addition, entries that conform to the ACP133 Edition C [CCEB ACP133C, 2007] *Directory Schema* may include the following unique identifiers:

- aCPEID – an attribute that specifies a globally unique identifier thus allowing each entry within a multinational directory to be identified.
- aCPEntryType/aCPEntryUniqueId – a pair of attributes that identify the entry type and an unique number within that entry type.

As the Enterprise Directory Service *Directory Schema* is extended, further unique naming attributes may be defined.

The aCPEID and aCPEntryType/aCPEntryUniqueId attributes, and other attributes (e.g. mail), may be used to identify entries within specific sub-trees within the Enterprise. However, the Enterprise Directory Service will not necessarily ensure their uniqueness. CESs that use these attributes should therefore be prepared to handle multiple matches.

4 REFERENCES

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5 ABBREVIATIONS

ARH	Alliance replication hub
ASN	Abstract syntax notation
CES	Core Enterprise Services
CSV	Comma-separated value
ITU	International Telecommunication Union
LDAP	Lightweight directory access protocol
LDIF	LDAP data interchange format
NEID	NATO enterprise identifier
NNEC	NATO Network Enabled Capability
RDN	Relative distinguished name
RFC	Request for comments
SASL	Simple authentication and security layer
SIP	Service interface profile
SQL	Structured query language
SSO	Single sign-on
TLS	Transport layer security
WSDL	Web services description language
XML	Extensible markup language

ANNEX 1 – LDAP REPRESENTATION OF THE BASE DIRECTORY SCHEMA

The following is a complete ACP 133(C) LDAP *directory schema* containing all the attributes and object classes that may be found within an ACP 133(C) compliant DIB.

```
# ACP 133(C) LDAP Schema derived from commented X.500 ASN.1 Module
# Developed by NC3A, The Hague, 28th July 2009 and updated November 2010.
#

 objectclass (2.5.6.1
              NAME 'alias'
              SUP top
              STRUCTURAL
              MUST ( aliasedObjectName ) )

 objectclass (2.5.6.2
              NAME 'country'
              SUP top
              STRUCTURAL
              MUST ( c )
              MAY ( searchGuide $
                    description ) )

 objectclass (2.5.6.19
               NAME 'cRLDistributionPoint'
               SUP top
               STRUCTURAL
               MUST ( cn )
               MAY ( certificateRevocationList $
                     authorityRevocationList $
                     deltaRevocationList ) )

 objectclass (2.5.6.14
               NAME 'device'
               SUP top
               STRUCTURAL
               MUST ( cn )
               MAY ( serialNumber $
                     seeAlso $
                     owner $
                     ou $
                     o $
                     l $
                     description ) )

 objectclass (2.5.6.9
               NAME 'groupOfNames'
               SUP top
               STRUCTURAL
               MUST ( member $
                      cn )
               MAY ( businessCategory $
                     seeAlso $
                     owner $
                     ou $
                     o $
                     description ) )

 objectclass (2.16.840.1.113730.3.2.2
               NAME 'inetOrgPerson'
               DESC 'RFC2798: Internet Organizational Person'
               SUP organizationalPerson
               STRUCTURAL
               MAY ( audio $
                     businessCategory $
                     carLicense $
                     departmentNumber $
                     displayName $
                     employeeNumber $
```

```
                    employeeType $
                    givenName $
                    homePhone $
                    homePostalAddress $
                    initials $
                    jpegPhoto $
                    labeledURI $
                    mail $
                    manager $
                    mobile $
                    o $
                    pager $
                    photo $
                    preferredLanguage $
                    roomNumber $
                    secretary $
                    uid $
                    userCertificate $
                    x500uniqueIdentifier $
                    userSMIMECertificate $
                    userPKCS12 ) )

objectclass (2.5.6.3
             NAME 'locality'
             SUP top
             STRUCTURAL
             MAY ( street $
                   seeAlso $
                   searchGuide $
                   st $
                   l $
                   description ) )

objectclass (2.5.6.4
             NAME 'organization'
             SUP top
             STRUCTURAL
             MUST ( o )
             MAY ( userPassword $
                   searchGuide $
                   seeAlso $
                   businessCategory $
                   x121Address $
                   registeredAddress $
                   destinationIndicator $
                   preferredDeliveryMethod $
                   telexNumber $
                   teletexTerminalIdentifier $
                   telephoneNumber $
                   internationaliSDNNumber $
                   facsimileTelephoneNumber $
                   street $
                   postOfficeBox $
                   postalCode $
                   postalAddress $
                   physicalDeliveryOfficeName $
                   st $
                   l $
                   description ) )

objectclass (2.5.6.7
             NAME 'organizationalPerson'
             SUP person
             STRUCTURAL
             MAY ( title $
                   x121Address $
                   registeredAddress $
                   destinationIndicator $
                   preferredDeliveryMethod $
                   telexNumber $
                   teletexTerminalIdentifier $
                   telephoneNumber $
                   internationaliSDNNumber $
```

```
                facsimileTelephoneNumber $
                street $
                postOfficeBox $
                postalCode $
                postalAddress $
                physicalDeliveryOfficeName $
                ou $
                st $
                l ) )

objectclass (2.5.6.8
             NAME 'organizationalRole'
             SUP top
             STRUCTURAL
             MUST ( cn )
             MAY ( x121Address $
                   registeredAddress $
                   destinationIndicator $
                   preferredDeliveryMethod $
                   telexNumber $
                   teletexTerminalIdentifier $
                   telephoneNumber $
                   internationaliSDNNumber $
                   facsimileTelephoneNumber $
                   seeAlso $
                   roleOccupant $
                   preferredDeliveryMethod $
                   street $
                   postOfficeBox $
                   postalCode $
                   postalAddress $
                   physicalDeliveryOfficeName $
                   ou $
                   st $
                   l $
                   description ) )

objectclass (2.5.6.5
             NAME 'organizationalUnit'
             SUP top
             STRUCTURAL
             MUST ( ou )
             MAY ( userPassword $
                   searchGuide $
                   seeAlso $
                   businessCategory $
                   x121Address $
                   registeredAddress $
                   destinationIndicator $
                   preferredDeliveryMethod $
                   telexNumber $
                   teletexTerminalIdentifier $
                   telephoneNumber $
                   internationaliSDNNumber $
                   facsimileTelephoneNumber $
                   street $
                   postOfficeBox $
                   postalCode $
                   postalAddress $
                   physicalDeliveryOfficeName $
                   st $
                   l $
                   description ) )

objectclass (2.5.6.6
             NAME 'person'
             SUP top
             STRUCTURAL
             MUST ( sn $
                    cn )
             MAY ( userPassword $
                   telephoneNumber $
                   seeAlso $
```

```
                    description ) )

objectclass (2.5.6.22
             NAME 'pkiCA'
             DESC 'X.509 PKI Certificate Authority'
             SUP top
             AUXILIARY
             MAY ( cACertificate $
                   certificateRevocationList $
                   authorityRevocationList $
                   crossCertificatePair ) )

objectclass (2.5.6.21
             NAME 'pkiUser'
             DESC 'X.509 PKI User'
             SUP top
             AUXILIARY
             MAY ( userCertificate ) )

objectclass (2.5.6.0
             NAME 'top'
             ABSTRACT
             MUST objectClass)

objectclass (2.16.840.1.101.2.2.3.81
            NAME 'aCPDistributionCodesHandled'
            DESC 'Associate distribution codes with an entry'
            SUP  top
            AUXILIARY
            MAY (distributionCodeAction $
                 distributionCodeInfo $
                 distributionExemptAction $
                 distributionExemptInfo $
                 distributionKeywordAction $
                 distributionKeywordInfo))

objectclass (2.16.840.1.101.2.2.3.102
            NAME 'aCPEntryAdmin'
            DESC 'Associate standard information with an entry'
            SUP  top
            AUXILIARY
            MAY (aCPEID $
                 aCPEntryCreationDate $
                 aCPEntryModificationDate $
                 aCPEntryType $
                 aCPEntryUniqueId))

objectclass (2.16.840.1.101.2.2.3.104
            NAME 'aCPEntryCharacteristics'
            DESC 'Associates the functions, tasks, COIs and CSSs with an entry'
            SUP  top
            AUXILIARY
            MAY (aCPCOI $
                 aCPFunctionalDescription $
                 aCPPublishTo $
                 aCPSvcApps))

objectclass (2.16.840.1.101.2.2.3.82
            NAME 'aCPMhsCapabilitiesInformation'
            DESC 'Associates the message capabilities information with an entry'
            SUP  top
            AUXILIARY
            MAY (active $
                 emConCapability $
                 emConState $
                 fileTypeInfoCapability $
                 maxMessageSize $
                 minimize $
                 msgProtocolInfoCapability $
                 webAccessCapability))

objectclass (2.16.840.1.101.2.2.3.83
            NAME 'aCPOtherContactInformation'
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```
            DESC 'Associates additional contact information with an entry'
            SUP  top
            AUXILIARY
            MAY (mhsORAddresses $
                 buildingName $
                 mobile $
                 pager $
                 roomNumber $
                 aCPPreferredDelivery $
                 mailDomains $
                 militaryFacsimileNumber $
                 militaryIPPhoneNumber $
                 militaryTelephoneNumber $
                 proprietaryMailboxes $
                 secureFacsimileNumber $
                 secureTelephoneNumber))

 objectclass (2.16.840.1.101.2.2.3.70
            NAME 'aCPAddressList'
            DESC 'A group of users that are named and addressed as a group for messaging
purposes'
            SUP  top
            MUST (cn)
            MAY (mhsDLSubmitPermissions $
                 mhsDLRelatedLists $
                 businessCategory $
                 description $
                 o $
                 ou $
                 owner $
                 seeAlso $
                 aLExemptedAddressProcessor $
                 mail $
                 actionAddressees $
                 aliasPointer $
                 alternateRecipient $
                 aLType $
                 member $
                 copyMember $
                 guard $
                 infoAddressees $
                 listPointer $
                 nationality $
                 remarks $
                 effectiveDate $
                 expirationDate ))

 nameform (2.16.840.1.101.2.2.4.44
          NAME 'aCPAddressListNameForm'
          OC   aCPAddressList
          MUST ( commonName ))

 objectclass (2.16.840.1.101.2.2.3.71
            NAME 'aCPAliasCommonName'
            DESC 'An alias that can be named with a cn attribute value'
            SUP  alias
            MUST ( cn )
            MAY (effectiveDate $
                 expirationDate))

 nameform (2.16.840.1.101.2.2.4.45
          NAME 'aCPAliasCommonNameNameForm'
          OC   aCPAliasCommonName
          MUST ( cn ))

 objectclass (2.16.840.1.101.2.2.3.72
            NAME 'aCPAliasOrganizationalUnit'
            DESC 'An alias that can be named with an ou attribute value'
            SUP  alias
            MUST ( ou )
            MAY (effectiveDate $
                 expirationDate))
```

```
nameform (2.16.840.1.101.2.2.4.46
          NAME 'aCPAliasOrganizationalUnitNameForm'
          OC   aCPAliasOrganizationalUnit
          MUST ( ou ))

objectclass (2.16.840.1.101.2.2.3.73
            NAME 'aCPDevice'
            DESC 'A physical unit which can communicate or store information, such as a
modem, printer, etc'
            SUP  device
            MAY (aliasPointer $
                 effectiveDate $
                 expirationDate))

nameform (2.16.840.1.101.2.2.4.47
          NAME 'aCPDeviceNameForm'
          OC aCPDevice
          MUST ( cn ))

objectclass (2.16.840.1.101.2.2.3.74
            NAME 'aCPDistributionCodeDescription'
            DESC 'A registered distribution code and its description'
            SUP  top
            MUST ( cn )
            MAY (description $
                 aliasPointer $
                 effectiveDate $
                 expirationDate))

nameform (2.16.840.1.101.2.2.4.48
          NAME 'aCPDistributionCodeDescriptionNameForm'
          OC aCPDistributionCodeDescription
          MUST ( cn ))

objectclass (2.16.840.1.101.2.2.3.75
            NAME 'aCPGroupOfNames'
            DESC 'A static group of entries or other groups of names, often used in
constructing ACLs'
            SUP  groupOfNames
            MAY (aliasPointer $
                 effectiveDate $
                 expirationDate))

nameform (2.16.840.1.101.2.2.4.49
          NAME 'aCPGroupOfNamesNameForm'
          OC aCPGroupOfNames
          MUST ( cn ))

objectclass (2.16.840.1.101.2.2.3.76
            NAME 'aCPLocality'
            DESC 'An ACP133 locality'
            SUP  locality
            MAY (aliasPointer $
                 effectiveDate $
                 expirationDate))

nameform (2.16.840.1.101.2.2.4.50
          NAME 'aCPLocalityNameForm'
          OC   aCPLocality
          MUST (l $
                st))

objectclass (2.16.840.1.101.2.2.3.77
            NAME 'aCPOrganization'
            DESC 'An ACP133 Organisation'
            SUP  organization
            MAY (dnQualifier $
                 aCPLegacyFormat $
                 aliasPointer $
                 effectiveDate $
                 expirationDate))

nameform (2.16.840.1.101.2.2.4.51
```

```
          NAME 'aCPOrganizationNameForm'
          MUST ( o ))

 objectclass (2.16.840.1.101.2.2.3.103
           NAME 'aCPOrganizationalLocation'
           DESC 'An entry containing information about a site or other location'
           SUP  top
           MUST(cn $
                l )
           MAY (businessCategory $
                description $
                seeAlso $
                jpegPhoto $
                aCPDirectionsTo $
                aCPDutyOfficer $
                aCPLatitude $
                aCPLocationMap $
                aCPLongitude $
                aliasPointer $
                nationality $
                st $
                streetAddress $
                physicalDeliveryOfficeName $
                postalAddress $
                postalCode $
                postOfficeBox $
                facsimileTelephoneNumber $
                internationalISDNNumber $
                telephoneNumber $
                telexNumber $
                preferredDeliveryMethod $
                destinationIndicator $
                registeredAddress $
                x121address $
                effectiveDate $
                expirationDate))

 nameform (2.16.840.1.101.2.2.4.52
          NAME 'aCPOrganizationalLocationNameForm'
          OC aCPOrganizationalLocation
          MUST ( cn ))

 objectclass (2.16.840.1.101.2.2.3.78
           NAME 'aCPOrganizationalPerson'
           DESC 'An entry containing information representing an individual as a member of
an organization'
           SUP  inetOrgPerson
           MAY (dnQualifier $
                clearance $
                aCPCitizenship $
                aCPLegacyFormat $
                aliasPointer $
                alternateRecipient $
                coalitionGrade $
                deployed $
                garrison $
                guard $
                listPointer $
                nationality $
                positionNumber $
                rank $
                serviceNumber $
                effectiveDate $
                expirationDate))

 nameform (2.16.840.1.101.2.2.4.53
          NAME 'aCPOrganizationalPersonNameForm'
          OC aCPOrganizationalPerson
          MUST ( cn ))

 objectclass (2.16.840.1.101.2.2.3.79
           NAME 'aCPOrganizationalRole'
           DESC 'An entry containing information representing a role or function which is
```

```
performed by one or more persons'
            SUP  organizationalRole
            MAY (businessCategory $
                 dnQualifier $
                 clearance $
                 mail $
                 aCPCitizenship $
                 aCPLegacyFormat $
                 aCPRoleInformation $
                 aliasPointer $
                 alternateRecipient $
                 deployed $
                 garrison $
                 guard $
                 listPointer $
                 nationality $
                 effectiveDate $
                 expirationDate ))

nameform (2.16.840.1.101.2.2.4.54
          NAME 'aCPOrganizationalRoleNameForm'
          OC aCPOrganizationalRole
          MUST ( cn ))

objectclass (2.16.840.1.101.2.2.3.80
            NAME 'aCPOrganizationalUnit'
            DESC 'An entry representing a suborganization'
            SUP  organizationalUnit
            MAY (dnQualifier $
                 clearance $
                 mail $
                 aCPLegacyFormat $
                 aliasPointer $
                 alternateRecipient $
                 associatedPLA $
                 deployed $
                 garrison $
                 guard $
                 listPointer $
                 nationality $
                 effectiveDate $
                 expirationDate))

nameform (2.16.840.1.101.2.2.4.55
          NAME 'aCPOrganizationalUnitNameForm'
          OC aCPOrganizationalUnit
          MUST ( ou ))

objectclass (2.16.840.1.101.2.2.3.86
            NAME 'aCPSecurePKIUser'
            DESC 'Allows PKI certificates to be associated with an entry'
            SUP  top
            AUXILIARY
            MAY (attributeCertificateAttribute $
                 userCertificate $
                 supportedAlgorithms))

objectclass (2.16.840.1.101.2.2.3.85
            NAME 'aCPCRLDistributionPoint'
            DESC 'An entry used for holding a CRL that is a subset of the complete CRL.'
            SUP  cRLDistributionPoint
            MAY (aliasPointer $
                 effectiveDate $
                 expirationDate))

nameform (2.16.840.1.101.2.2.4.56
          NAME 'aCPCRLDistributionPointNameForm'
          OC aCPCRLDistributionPoint
          MUST ( cn ))

objectclass (2.16.840.1.101.2.2.3.98
            NAME 'aCPPlaACP127'
            DESC 'Common general service (GENSER) PLA attributes'
```

```
            SUP  top
            AUXILIARY
            MUST plaNameACP127
            MAY (community $
                 nationality $
                 publish $
                 remarks $
                 serviceOrAgency $
                 effectiveDate $
                 expirationDate))

 objectclass (2.16.840.1.101.2.2.3.99
            NAME 'aCPPlaData'
            DESC 'Common special intelligence (SI) PLA attributes'
            SUP  top
            AUXILIARY
            MAY (description $
                 community $
                 effectiveDate $
                 expirationDate))

 objectclass (2.16.840.1.101.2.2.3.84
            NAME 'aCPPlaUser'
            DESC 'Associates the PLA directory entry and optionally the routing information,
with an entry''
            SUP  top
            AUXILIARY
            MUST plaNameACP127
            MAY (alternatePLAName $
                 rI $
                 rIInfo))

 objectclass (2.16.840.1.101.2.2.3.87
            NAME 'aCPAltSpellingACP127'
            DESC 'An alternate spelling for a PLA'
            SUP  top
            MUST (plaReplace $
                  primarySpellingACP127))

 nameform (2.16.840.1.101.2.2.4.57
           NAME 'aCPAltSpellingACP127NameForm'
           OC aCPAltSpellingACP127
           MUST ( plaNameACP127 ))

 objectclass (2.16.840.1.101.2.2.3.88
            NAME 'aCPCadACP127'
            DESC 'A collective address designator (CAD) used to represent an ACP127/JANAP128
distribution list'
            SUP  top
            MUST ( cognizantAuthority )
            MAY (associatedAL $
                 entryClassification $
                 recapDueDate $
                 rIInfo))

 nameform (2.16.840.1.101.2.2.4.58
           NAME 'aCPCadACP127NameForm'
           OC aCPCadACP127
           MUST ( plaNameACP127 ))

 objectclass (2.16.840.1.101.2.2.3.89
            NAME 'aCPDSSCSPLA'
            DESC 'An intelligence community (IC) PLA organisation'
            SUP  top
            MUST ( rI )
            MAY (l $
                 adminConversion $
                 associatedOrganization $
                 sigad $
                 usdConversion))

 nameform (2.16.840.1.101.2.2.4.59
           NAME 'aCPDSSCSPLANameForm'
```

```
          OC aCPDSSCSPLA
          MUST ( plaNameACP127 ))

 objectclass (2.16.840.1.101.2.2.3.90
             NAME 'aCPOrgACP127'
             DESC 'A single ACP127/JANAP128 messaging user'
             SUP  top
             MAY (c $
                  l $
                  st $
                  accountingCode $
                  associatedOrganization $
                  dualRoute $
                  entryClassification $
                  longTitle $
                  minimize $
                  minimizeOverride $
                  nameClassification $
                  rI $
                  rIInfo $
                  section $
                  tARE))

 nameform (2.16.840.1.101.2.2.4.60
          NAME 'aCPOrgACP127NameForm'
          OC aCPOrgACP127
          MUST ( plaNameACP127 ))

 objectclass (2.16.840.1.101.2.2.3.91
             NAME 'aCPPLACollectiveACP127'
             DESC 'An address indicator group (AIG) used to represent an ACP127/JANAP128
distribution list'
             SUP  top
             MUST cognizantAuthority
             MAY (description $
                  actionAddressees $
                  allowableOriginators $
                  associatedAL $
                  entryClassification $
                  infoAddressees $
                  lastRecapDate $
                  recapDueDate))

 nameform (2.16.840.1.101.2.2.4.61
          NAME 'aCPPLACollectiveACP127NameForm'
          OC aCPPLACollectiveACP127
          MUST ( plaNameACP127 ))

 objectclass (2.16.840.1.101.2.2.3.92
             NAME 'aCPRoutingIndicator'
             DESC 'A routing indicator'
             SUP  top
             MUST rI
             MAY (mhsMaximumContentLength $
                  lmf $
                  nationality $
                  publish $
                  rIClassification $
                  sHD $
                  tCC $
                  transferStation $
                  tRC ))

 nameform (2.16.840.1.101.2.2.4.62
          NAME 'aCPRoutingIndicatorNameForm'
          OC aCPRoutingIndicator
          MUST ( rI ))

 objectclass (2.16.840.1.101.2.2.3.93
             NAME 'aCPSigIntPLA'
             DESC 'A sensitive signal intelligence (SIGINT) PLA'
             SUP  top
             MUST sigad
```

```
            MAY (l $
                 nationality $
                 publish $
                 remarks $
                 rI $
                 shortTitle))

nameform (2.16.840.1.101.2.2.4.63
          NAME 'aCPSigIntPLANameForm'
          OC aCPSigIntPLA
          MUST ( sigad ))

objectclass (2.16.840.1.101.2.2.3.94
             NAME 'aCPSIPLA'
             DESC 'A single special intelligence (SO) messaging user'
             SUP  top
             MUST (sigad $
                   longTitle )
             MAY (l $
                  nationality $
                  publish $
                  remarks $
                  rI $
                  shortTitle))

nameform (2.16.840.1.101.2.2.4.64
          NAME 'aCPSIPLANameForm'
          OC aCPSIPLA
          MUST ( longTitle ))

objectclass (2.16.840.1.101.2.2.3.95
             NAME 'aCPSpotPLA'
             DESC 'A special products distribution list'
             SUP  top
             MUST spot
             MAY (mhsDLSubmitPermissions $
                  actionAddressees $
                  additionalAddressees $
                  additionalSecondPartyAddressees $
                  remarks $
                  secondPartyAddressees))

nameform (2.16.840.1.101.2.2.4.65
          NAME 'aCPSpotPLANameForm'
          OC aCPSpotPLA
          MUST ( spot ))

objectclass (2.16.840.1.101.2.2.3.96
             NAME 'aCPTaskForceACP127'
             DESC 'A ACP127/JANAP128 task force distribution list'
             SUP  top
             MUST (cognizantAuthority $
                   lastRecapDate $
                   recapDueDate )
             MAY (associatedAL $
                  entryClassification $
                  plaAddressees))

nameform (2.16.840.1.101.2.2.4.66
          NAME 'aCPTaskForceACP127NameForm'
          OC aCPTaskForceACP127
          MUST ( rI ))

objectclass (2.16.840.1.101.2.2.3.97
             NAME 'aCPTenantACP127'
             DESC 'A tenant PLA'
             SUP  top
             MUST hostOrgACP127
             MAY (entryClassification $
                  tARE ))

nameform (2.16.840.1.101.2.2.4.67
          NAME 'aCPTenantACP127NameForm'
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```
          OC aCPTenantACP127
          MUST ( plaNameACP127 ))

 attributetype ( 2.16.840.1.101.2.2.1.53
               NAME 'accountingCode'
               EQUALITY caseIgnoreMatch
               SUBSTR caseIgnoreSubstringsMatch
               SYNTAX 1.3.6.1.4.1.1466.115.121.1.44 )

 attributetype ( 2.16.840.1.101.2.2.1.178
               NAME 'aCPCitizenship'
               DESC 'The citizenship of the entry (ISO 3166-3)'
               EQUALITY caseIgnoreMatch
               SUBSTR caseIgnoreSubstringsMatch
               SYNTAX 1.3.6.1.4.1.1466.115.121.1.44 )

 attributetype ( 2.16.840.1.101.2.2.1.180
               NAME 'aCPCOI'
               DESC 'The communities of interest (COI) associated with the entry'
               EQUALITY caseIgnoreMatch
               SUBSTR caseIgnoreSubstringsMatch
               SYNTAX 1.3.6.1.4.1.1466.115.121.1.44 )

 attributetype ( 2.16.840.1.101.2.2.1.183
               NAME 'aCPDirectionsTo'
               DESC 'The URI of a webpage containing details of the directions to reach the
location'
               EQUALITY caseIgnoreMatch
               SUBSTR caseIgnoreSubstringsMatch
               SYNTAX 1.3.6.1.4.1.1466.115.121.1.44 )

 attributetype ( 2.16.840.1.101.2.2.1.184
               NAME 'aCPDutyOfficer'
               SUP distinguishedName )

 attributetype ( 2.16.840.1.101.2.2.1.179
               NAME 'aCPEID'
               DESC 'A time-based, universally unique identifier (UUID) for the entry'
               EQUALITY caseIgnoreMatch
               SUBSTR caseIgnoreSubstringsMatch
                    SINGLE-VALUE
               SYNTAX 1.3.6.1.4.1.1466.115.121.1.44 )

 attributetype ( 2.16.840.1.101.2.2.1.174
               NAME 'aCPEntryCreationDate'
               DESC 'The date and time the entry was created'
               EQUALITY generalizedTimeMatch
               SINGLE-VALUE
               SYNTAX 1.3.6.1.4.1.1466.115.121.1.24 )

 attributetype ( 2.16.840.1.101.2.2.1.175
               NAME 'aCPEntryModificationDate'
               DESC 'The date and time the entry was last modified'
               EQUALITY generalizedTimeMatch
               SINGLE-VALUE
               SYNTAX 1.3.6.1.4.1.1466.115.121.1.24 )

 attributetype ( 2.16.840.1.101.2.2.1.176
               NAME 'aCPEntryType'
               DESC 'The type of entry, defined by the owning nation or organization'
               EQUALITY objectIdentifierMatch
               SINGLE-VALUE
               SYNTAX 1.3.6.1.4.1.1466.115.121.1.38 )

 attributetype ( 2.16.840.1.101.2.2.1.177
               NAME 'aCPEntryUniqueId'
               DESC 'A unique identifier within the aCPEntryType, defined by the owning nation
or organization'
               EQUALITY integerMatch
               SINGLE-VALUE
               SYNTAX 1.3.6.1.4.1.1466.115.121.1.27 )

 attributetype ( 2.16.840.1.101.2.2.1.172
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                NAME 'aCPFunctionalDescription'
                DESC 'The function or task of the entry'
                EQUALITY caseIgnoreMatch
                SUSBTR caseIgnoreSubstringsMatch
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.44 )

        attributetype ( 2.16.840.1.101.2.2.1.185
                NAME 'aCPLatitude'
                DESC 'The latitude ("Northings") of the location'
                EQUALITY caseIgnoreMatch
                SUSBTR caseIgnoreSubstringsMatch
                SINGLE-VALUE
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.44 )

        attributetype ( 2.16.840.1.101.2.2.1.142
                NAME 'aCPLegacyFormat'
                DESC 'The message format type for ACP127 delivery'
                EQUALITY integerMatch
                SINGLE-VALUE
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.27 )

        attributetype ( 2.16.840.1.101.2.2.1.186
                NAME 'aCPLocationMap'
                DESC 'The URI of a web page containing a map of the location'
                EQUALITY caseIgnoreMatch
                SUSBTR caseIgnoreSubstringsMatch
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.44 )

        attributetype ( 2.16.840.1.101.2.2.1.187
                NAME 'aCPLongitude'
                DESC 'The longitude ("Eastings") of the location'
                EQUALITY caseIgnoreMatch
                SUSBTR caseIgnoreSubstringsMatch
                SINGLE-VALUE
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.44 )

        attributetype ( 2.16.840.1.101.2.2.1.108
                NAME 'aCPPreferredDelivery'
                DESC 'The message system that a user prefers for message delivery'
                EQUALITY integerMatch
                SINGLE-VALUE
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.27 )

        attributetype ( 2.16.840.1.101.2.2.1.181
                NAME 'aCPPublishTo'
                DESC 'The domains, communities or deployments to which the entry should be
published'
                EQUALITY caseIgnoreMatch
                SUSBTR caseIgnoreSubstringsMatch
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.44 )

        attributetype ( 2.16.840.1.101.2.2.1.158
                NAME 'aCPRoleInformation'
                DESC 'An informal mapping to simplify the access to organizational person
entries related to this role'
                EQUALITY caseIgnoreMatch
                SUSBTR caseIgnoreSubstringsMatch
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.15 )

        attributetype ( 2.16.840.1.101.2.2.1.182
                NAME 'aCPSvcApps'
                DESC 'The centralized applications to which the entry has access'
                EQUALITY caseIgnoreMatch
                SUSBTR caseIgnoreSubstringsMatch
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.44 )

        attributetype ( 2.16.840.1.101.2.2.1.109
                NAME 'aCPTelephoneFaxNumber'
                DESC 'A supertype for defining other fax/telephone number attributes'
                EQUALITY telephoneNumberMatch
                SUSBTR telephoneNumberSubstringsMatch
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.50 )
```

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attributetype ( 2.16.840.1.101.2.2.1.46
                NAME 'actionAddressees'
                DESC 'The addressees who are expected to take appropriate action on the
message'
                EQUALITY caseIgnoreMatch
                SUSBTR caseIgnoreSubstringsMatch
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.44 )

attributetype ( 2.16.840.1.101.2.2.1.164
                NAME 'active'
                DESC 'Whether the tactical entry is active or inactive'
                EQUALITY booleanMatch
                SINGLE-VALUE
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.7 )

attributetype ( 2.16.840.1.101.2.2.1.47
                NAME 'additionalAddressees'
                DESC 'The additional addressees who are expected to take appropriate action on
the message under circumstances identified in the remarks attribute'
                EQUALITY caseIgnoreMatch
                SUSBTR caseIgnoreSubstringsMatch
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.44 )

attributetype ( 2.16.840.1.101.2.2.1.48
                NAME 'additionalSecondPartyAddressees'
                DESC 'The additional second party addressees who are expected to take
appropriate action on messages under circumstances identified in the remarks attribute'
                EQUALITY caseIgnoreMatch
                SUSBTR caseIgnoreSubstringsMatch
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.44 )

attributetype ( 2.16.840.1.101.2.2.1.143
                NAME 'adminConversion'
                DESC 'An abbreviation of the organization's administrative title as an
administrative message address'
                EQUALITY caseIgnoreMatch
                SUSBTR caseIgnoreSubstringsMatch
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.15 )

attributetype ( 2.16.840.1.101.2.1.5.47
                NAME 'aLExemptedAddressProcessor'
                DESC 'The X.400 O/R Name of the address list's exempted address processor'
                EQUALITY caseIgnoreMatch
                SUSBTR caseIgnoreSubstringsMatch
                     SINGLE-VALUE
                SYNTAX 2.16.840.1.101.2.2.2.15)

attributetype (2.5.4.1
                NAME ('aliasedObjectName' 'aliasedEntryName')
                EQUALITY distinguishedNameMatch
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
                SINGLE-VALUE)

attributetype ( 2.16.840.1.101.2.2.1.49
                NAME 'aliasPointer'
                DESC 'The entries that may need to be modified if this entry is modified'
                SUP distinguishedName)

attributetype ( 2.16.840.1.101.2.2.1.50
                NAME 'allowableOriginators'
                DESC 'The name of an ACP127/JANAP128 collective that contains the list of PLAs
that are allowed to originate message to this list'
                EQUALITY caseIgnoreMatch
                SUSBTR caseIgnoreSubstringsMatch
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.44)

attributetype ( 2.16.840.1.101.2.2.1.173
                NAME 'alternatePLAName'
                DESC 'An alternate plain language address'
                EQUALITY caseIgnoreMatch
                SUSBTR caseIgnoreSubstringsMatch
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.44)
```

```
attributetype ( 2.16.840.1.101.2.2.1.3
                NAME 'alternateRecipient'
                DESC 'An X.400 alternate recipient for the messaging user'
                SUP distinguishedName )

attributetype ( 2.16.840.1.101.2.2.1.112
                NAME 'aLType'
                DESC 'The type of the address list'
                EQUALITY integerMatch
                SINGLE-VALUE
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.27)

attributetype ( 2.16.840.1.101.2.2.1.113
                NAME 'associatedAL'
                DESC 'The address list entry which replaces the ACP127/JANAP128 Task Force PLA'
                SUP distinguishedName )

attributetype ( 2.16.840.1.101.2.2.1.4
                NAME 'associatedOrganization'
                DESC 'The organizational unit entry which represents the same organizational
messaging entity'
                SUP distinguishedName )

attributetype ( 2.16.840.1.101.2.2.1.6
                NAME 'associatedPLA'
                DESC 'The ACP127/JANAP128 entry which represents the same the same messaging
entity'
                SUP distinguishedName )

attributetype ( 2.5.4.58
                NAME 'attributeCertificateAttribute'
                DESC 'X.509 attribute certificate attribute'
                EQUALITY octetStringMatch
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.40)

attributetype (0.9.2342.19200300.100.1.55
                NAME 'audio'
                EQUALITY octetStringMatch
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.40 )

attributetype (2.5.4.38
                NAME 'authorityRevocationList'
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.9 )

attributetype (0.9.2342.19200300.100.1.48
                NAME 'buildingName'
                EQUALITY caseIgnoreMatch
                SUBSTR caseIgnoreSubstringsMatch
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.15{256} )

attributetype ( 2.5.4.15
                NAME 'businessCategory'
                EQUALITY caseIgnoreMatch
                SUBSTR caseIgnoreSubstringsMatch
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.15{128} )

attributetype (2.5.4.37
                NAME 'cACertificate'
                EQUALITY certificateExactMatch
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.8 )

attributetype (2.16.840.1.113730.3.1.1
                NAME 'carLicense'
                DESC 'RFC2798: vehicle license or registration plate'
                EQUALITY caseIgnoreMatch
                SUBSTR caseIgnoreSubstringsMatch
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.15 )

attributetype (2.5.4.39
                NAME 'certificateRevocationList'
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.9 )

attributetype(2.5.4.55
```

```
                NAME 'clearance'
                EQUALITY octetStringMatch
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.40 )

    attributetype ( 2.16.840.1.101.2.2.1.159
                NAME 'coalitionGrade'
                DESC 'The NATO rank from STANAG 2166 or an applicable civil grade-code'
                EQUALITY caseIgnoreMatch
                SUBSTR caseIgnoreSubstringsMatch
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.15)

    attributetype ( 2.16.840.1.101.2.2.1.51
                NAME 'cognizantAuthority'
                DESC 'The administrator of the ACP127/JANAP128 collective'
                EQUALITY caseIgnoreMatch
                SUBSTR caseIgnoreSubstringsMatch
                SINGLE-VALUE
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.44)

    attributetype (2.5.4.3
                NAME ( 'cn' 'commonName' )
                SUP name )

    attributetype ( 2.16.840.1.101.2.2.1.52
                NAME 'community'
                DESC 'The community, GENSER, SI or both, to which the entry belongs'
                EQUALITY integerMatch
                SINGLE-VALUE
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.27)

    attributetype ( 2.16.840.1.101.2.2.1.114
                NAME 'copyMember'
                DESC 'The members who receive the message for information purposes (no action
required)'
                SUP member )

    attributetype (2.5.4.6
                 NAME ( 'c' 'countryName' )
                 SUP name
                 SINGLE-VALUE )

    attributetype (2.5.4.40
                NAME 'crossCertificatePair'
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.10 )

    attributetype (2.5.4.53
                NAME 'deltaRevocationList'
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.9 )

    attributetype (2.16.840.1.113730.3.1.2
                NAME 'departmentNumber'
                DESC 'RFC2798: identifies a department within an organization'
                EQUALITY caseIgnoreMatch
                SUBSTR caseIgnoreSubstringsMatch
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.15 )

    attributetype ( 2.5.4.13
                NAME 'description'
                EQUALITY caseIgnoreMatch
                SUBSTR caseIgnoreSubstringsMatch
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.15{1024} )

    attributetype ( 2.16.840.1.101.2.2.1.139
                NAME 'deployed'
                DESC 'The entries that represent this entry in the field'
                SUP distinguishedName )

    attributetype (2.5.4.27
                NAME 'destinationIndicator'
                EQUALITY caseIgnoreMatch
                SUBSTR caseIgnoreSubstringsMatch
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.44{128} )
```

```
 attributetype (2.16.840.1.113730.3.1.241
                NAME 'displayName'
                DESC 'RFC2798: preferred name to be used when displaying entries'
                EQUALITY caseIgnoreMatch
                SUBSTR caseIgnoreSubstringsMatch
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
                SINGLE-VALUE )

# Used for sub-typing
 attributetype (2.5.4.49
                NAME 'distinguishedName'
                EQUALITY distinguishedNameMatch
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.12 )

 attributetype ( 2.16.840.1.101.2.2.1.104
                NAME 'distributionCodeAction'
                DESC 'The distribution codes (including SICs) for which an organization, person
or role handles messages for action'
                EQUALITY caseIgnoreMatch
                SUBSTR caseIgnoreSubstringsMatch
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.44)

 attributetype ( 2.16.840.1.101.2.2.1.105
                NAME 'distributionCodeInfo'
                DESC 'The distribution codes (including SICs) for which an organization, person
or role handles messages for information'
                EQUALITY caseIgnoreMatch
                SUBSTR caseIgnoreSubstringsMatch
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.44)

 attributetype ( 2.16.840.1.101.2.2.1.168
                NAME 'distributionExemptAction'
                DESC 'The distribution codes (including SICs) for which an organization, person
or role handles messages which are specifically exempted for action'
                EQUALITY caseIgnoreMatch
                SUBSTR caseIgnoreSubstringsMatch
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.44)

 attributetype ( 2.16.840.1.101.2.2.1.169
                NAME 'distributionExemptInfo'
                DESC 'The distribution codes (including SICs) for which an organization, person
or role handles messages which are specifically exempted for information'
                EQUALITY caseIgnoreMatch
                SUBSTR caseIgnoreSubstringsMatch
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.44)

 attributetype ( 2.16.840.1.101.2.2.1.170
                NAME 'distributionKeywordAction'
                EQUALITY caseIgnoreMatch
                DESC 'The keywords used for distribiution for which an organization, person or
role handles messages for action'
                SUBSTR caseIgnoreSubstringsMatch
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.44)

 attributetype ( 2.16.840.1.101.2.2.1.171
                NAME 'distributionKeywordInfo'
                DESC 'The keywords used for distribiution for which an organization, person or
role handles messages for information'
                EQUALITY caseIgnoreMatch
                SUBSTR caseIgnoreSubstringsMatch
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.44)

 attributetype (2.5.4.46
                NAME 'dnQualifier'
                EQUALITY caseIgnoreMatch
                ORDERING caseIgnoreOrderingMatch
                SUBSTR caseIgnoreSubstringsMatch
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.44 )

 attributetype ( 2.16.840.1.101.2.2.1.54
                NAME 'dualRoute'
                DESC 'Deliver messages for the organization to both the home and deployed
sites'
```

```
                EQUALITY booleanMatch
                SINGLE-VALUE
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.7)

    attributetype ( 2.16.840.1.101.2.2.1.55
                NAME 'effectiveDate'
                DESC 'The date and time at which the directory entry becomes valid'
                EQUALITY generalizedTimeMatch
                SINGLE-VALUE
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.24 )

    attributetype ( 2.16.840.1.101.2.2.1.165
                NAME 'emConCapability'
                DESC 'Whether the entry is capable of entering the emcon (radio silence) state'
                EQUALITY booleanMatch
                SINGLE-VALUE
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.7)

    attributetype ( 2.16.840.1.101.2.2.1.166
                NAME 'emConState'
                DESC 'The emcon (radio silence) state'
                EQUALITY integerMatch
                SINGLE-VALUE
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.27)

    attributetype (2.16.840.1.113730.3.1.3
                NAME 'employeeNumber'
                DESC 'RFC2798: numerically identifies an employee within an organization'
                EQUALITY caseIgnoreMatch
                SUBSTR caseIgnoreSubstringsMatch
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
                SINGLE-VALUE )

    attributetype (2.16.840.1.113730.3.1.4
                NAME 'employeeType'
                DESC 'RFC2798: type of employment for a person'
                EQUALITY caseIgnoreMatch
                SUBSTR caseIgnoreSubstringsMatch
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.15 )

    attributetype ( 2.16.840.1.101.2.2.1.56
                NAME 'entryClassification'
                DESC 'The security classification of the entry'
                EQUALITY integerMatch
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.27)

    attributetype ( 2.16.840.1.101.2.2.1.57
                NAME 'expirationDate'
                DESC 'The date and time at which the directory entry becomes invalid'
                EQUALITY generalizedTimeMatch
                SINGLE-VALUE
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.24)

    attributetype (2.5.4.23
                NAME ( 'facsimileTelephoneNumber' 'fax' )
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.22 )

    attributetype ( 2.16.840.1.101.2.2.1.161
                NAME 'fileTypeInfoCapability'
                DESC 'The types of attachments which are acceptable to the user associated with
the mailbox'
                EQUALITY objectIdentifierMatch
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.38)

    attributetype ( 2.16.840.1.101.2.2.1.140
                NAME 'garrison'
                DESC 'The entries that represent this entry in the garrison'
                SUP distinguishedName )

    attributetype (2.5.4.44
                NAME 'generationQualifier'
                DESC 'e.g. Jr or II.'
                SUP name )
```

```
attributetype (2.5.4.42
               NAME ( 'givenName' 'gn' )
               SUP name )

attributetype ( 2.16.840.1.101.2.2.1.117
               NAME 'guard'
               DESC 'The entry of the guard gateway'
               SUP distinguishedName )

attributetype ( 0.9.2342.19200300.100.1.20
               NAME ( 'homePhone' 'homeTelephoneNumber' )
               EQUALITY telephoneNumberMatch
               SUBSTR telephoneNumberSubstringsMatch
               SYNTAX 1.3.6.1.4.1.1466.115.121.1.50 )

attributetype (0.9.2342.19200300.100.1.39
               NAME 'homePostalAddress'
               EQUALITY caseIgnoreListMatch
               SUBSTR caseIgnoreListSubstringsMatch
               SYNTAX 1.3.6.1.4.1.1466.115.121.1.41 )

attributetype ( 2.16.840.1.101.2.2.1.58
               NAME 'hostOrgACP127'
               DESC 'The PLA for the organization which accepts traffic for a tenant'
               EQUALITY caseIgnoreMatch
               SUBSTR caseIgnoreSubstringsMatch
               SINGLE-VALUE
               SYNTAX 1.3.6.1.4.1.1466.115.121.1.44 )

attributetype ( 2.16.840.1.101.2.2.1.59
               NAME 'infoAddressees'
               DESC 'The addressees who receive the message for information'
               EQUALITY caseIgnoreMatch
               SUBSTR caseIgnoreSubstringsMatch
               SYNTAX 1.3.6.1.4.1.1466.115.121.1.44 )

attributetype (2.5.4.43
               NAME 'initials'
               DESC 'The initials attribute type contains the initials of some or all of an
individuals names, but not the surname(s).' )
               SUP name)

attributetype (2.5.4.25
               NAME 'internationalISDNNumber'
               EQUALITY numericStringMatch
               SUBSTR numericStringSubstringsMatch
               SYNTAX 1.3.6.1.4.1.1466.115.121.1.36{16} )

attributetype (0.9.2342.19200300.100.1.60
               NAME 'jpegPhoto'
               DESC 'a JPEG image'
               SYNTAX 1.3.6.1.4.1.1466.115.121.1.28 )

attributetype (1.3.6.1.4.1.250.1.57
               NAME 'labeledURI'
               DESC 'RFC2079: Uniform Resource Identifier with optional label'
               EQUALITY caseExactMatch
               SYNTAX 1.3.6.1.4.1.1466.115.121.1.15 )

attributetype ( 2.16.840.1.101.2.2.1.60
               NAME 'lastRecapDate'
               DESC 'The date and time when the list was last recapped or validated'
               EQUALITY generalizedTimeMatch
               SINGLE-VALUE
               SYNTAX 1.3.6.1.4.1.1466.115.121.1.24 )

attributetype ( 2.16.840.1.101.2.2.1.61
               NAME 'listPointer'
               DESC 'The address list entries that may need to be modified if this entry is
modified'
               SUP distinguishedName )
```

```
attributetype ( 2.16.840.1.101.2.2.1.62
              NAME 'lmf'
              DESC 'The lmf (Language and Media Format) that can be accepted between to two
communicating end-systems'
              EQUALITY caseIgnoreMatch
              SINGLE-VALUE
              SYNTAX 1.3.6.1.4.1.1466.115.121.1.44 )

attributetype (2.5.4.7
               NAME ( 'l' 'localityName' )
               SUP name )

attributetype ( 2.16.840.1.101.2.2.1.63
              NAME 'longTitle'
              DESC 'The expanded form of an organization's PLA'
              EQUALITY caseIgnoreMatch
              SUBSTR caseIgnoreSubstringsMatch
              SINGLE-VALUE
              SYNTAX 1.3.6.1.4.1.1466.115.121.1.44 )

attributetype (0.9.2342.19200300.100.1.3
              NAME ( 'mail' 'rfc822Mailbox' )
              DESC 'RFC1274: RFC822 Mailbox'
              EQUALITY caseIgnoreIA5Match
              SUBSTR caseIgnoreIA5SubstringsMatch
              SYNTAX 1.3.6.1.4.1.1466.115.121.1.26{256} )

attributetype ( 2.16.840.1.101.2.2.1.118
              NAME 'mailDomains'
              DESC 'The domains that a messaging gateway will bridge'
              EQUALITY caseIgnoreMatch
              SUBSTR caseIgnoreSubstringsMatch
              SYNTAX 1.3.6.1.4.1.1466.115.121.1.15 )

attributetype (0.9.2342.19200300.100.1.10
              NAME 'manager'
              EQUALITY distinguishedNameMatch
              SYNTAX 1.3.6.1.4.1.1466.115.121.1.12 )

attributetype ( 2.16.840.1.101.2.2.1.162
              NAME 'maxMessageSize'
              DESC 'The maximum message size (in kilobytes) which may be received by the
mailbox'
              EQUALITY integerMatch
              SINGLE-VALUE
              SYNTAX 1.3.6.1.4.1.1466.115.121.1.27 )

attributetype (2.5.4.31
              NAME 'member'
              SUP distinguishedName )

attributeType (2.6.5.2.14
              NAME ('mhsDLRelatedLists' 'mhs-dl-related-lists')
              SUP distinguishedName
              SYNTAX '1.3.6.1.4.1.1466.115.121.1.12' )

attributeType (2.6.5.2.4
              NAME ('mhsDLSubmitPermissions' 'mhs-dl-submit-permissions')
              EQUALITY 'caseIgnoreMatch'
              SUBSTR 'caseIgnoreSubstringsMatch'
              SYNTAX 1.3.6.1.4.1.1466.115.121.1.15 )

attributeType (2.6.5.2.0
              NAME ('mhsMaximumContentLength' 'mhs-maximum-content-length')
              EQUALITY integerMatch
              SINGLE-VALUE
              SYNTAX '1.3.6.1.4.1.1466.115.121.1.27' )

attributeType (2.6.5.2.6
              NAME ('mhsORAddresses' 'mhs-or-addresses')
              EQUALITY 'caseIgnoreMatch'
              SUBSTR 'caseIgnoreSubstringsMatch'
              SYNTAX 1.3.6.1.4.1.1466.115.121.1.15 )
```

```
attributetype ( 2.16.840.1.101.2.2.1.119
              NAME 'militaryFacsimileNumber'
              DESC 'A military facsimile number, such as a DSN or DSTF number'
              SUP aCPTelephoneFaxNumber )

attributetype ( 2.16.840.1.101.2.2.1.160
              NAME 'militaryIPPhoneNumber'
              DESC 'A military telephone number that identifies an IP subscriber'
              SUP aCPTelephoneFaxNumber
              SYNTAX 1.3.6.1.4.1.1466.115.121.1.44 )

attributetype ( 2.16.840.1.101.2.2.1.120
              NAME 'militaryTelephoneNumber'
              SUP aCPTelephoneFaxNumber )

attributetype ( 2.16.840.1.101.2.2.1.64
              NAME 'minimize'
              DESC 'Whether the entry is under the MINIMIZE condition'
              EQUALITY booleanMatch
              SINGLE-VALUE
              SYNTAX 1.3.6.1.4.1.1466.115.121.1.7 )

attributetype ( 2.16.840.1.101.2.2.1.65
              NAME 'minimizeOverride'
              DESC 'Whether the Message Conversion System (MCS) can override the MINIMIZE
condition'
              EQUALITY booleanMatch
              SINGLE-VALUE
              SYNTAX 1.3.6.1.4.1.1466.115.121.1.7 )

attributetype (0.9.2342.19200300.100.1.41
              NAME ( 'mobile' 'mobileTelephoneNumber' )
              EQUALITY telephoneNumberMatch
              SUBSTR telephoneNumberSubstringsMatch
              SYNTAX 1.3.6.1.4.1.1466.115.121.1.50 )

attributetype ( 2.16.840.1.101.2.2.1.163
              NAME 'msgProtocolInfoCapability'
              DESC 'The messaging protocols supported by the mailbox'
              EQUALITY integerMatch
              SINGLE-VALUE
              SYNTAX 1.3.6.1.4.1.1466.115.121.1.27 )


attributeType (2.5.4.41
              NAME 'name'
              EQUALITY caseIgnoreMatch
              SUBSTR caseIgnoreSubstringsMatch
              SYNTAX '1.3.6.1.4.1.1466.115.121.1.15')

attributetype ( 2.16.840.1.101.2.2.1.56
              NAME 'nameClassification'
              DESC 'The security classification of the name of the entry itself'
              EQUALITY integerMatch
              SYNTAX 1.3.6.1.4.1.1466.115.121.1.27)

attributetype (2.16.840.1.101.2.2.1.68
               NAME 'nationality'
               DESC 'The name of the country which owns the entry'
               SUP name
               SINGLE-VALUE
               SYNTAX 1.3.6.1.4.1.1466.115.121.1.44)

attributetype (2.5.4.0
               NAME 'objectClass'
               EQUALITY objectIdentifierMatch
               SYNTAX 1.3.6.1.4.1.1466.115.121.1.38 )

attributetype ( 2.5.4.11
              NAME ( 'ou' 'organizationalUnitName' )
              SUP name )
```

```
attributetype ( 2.5.4.10
                NAME ( 'o' 'organizationName' )
                SUP name )

attributetype (2.5.4.32
                NAME 'owner'
                SUP distinguishedName )

attributetype (0.9.2342.19200300.100.1.42
                NAME ( 'pager' 'pagerTelephoneNumber' )
                EQUALITY telephoneNumberMatch
                SUBSTR telephoneNumberSubstringsMatch
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.50 )

attributetype (0.9.2342.19200300.100.1.7
                NAME 'photo'
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.23{25000} )

attributetype ( 2.5.4.19
                NAME 'physicalDeliveryOfficeName'
                EQUALITY caseIgnoreMatch
                SUBSTR caseIgnoreSubstringsMatch
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.15{128} )

attributetype ( 2.16.840.1.101.2.2.1.71
                NAME 'plaAddressees'
                DESC 'The list of action and information addressees of the collective'
                EQUALITY caseIgnoreMatch
                SUBSTR caseIgnoreSubstringsMatch
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.44)

attributetype ( 2.16.840.1.101.2.2.1.70
                NAME 'plaNameACP127'
                DESC 'The ACP127/JANAP128 plain language address'
                SUP name
                SINGLE-VALUE
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.44)

attributetype ( 2.16.840.1.101.2.2.1.72
                NAME 'plaReplace'
                DESC 'Whether the Message Conversion System (MCS), should replace alternate
spellings with the "primary", or correct, spelling'
                EQUALITY booleanMatch
                SINGLE-VALUE
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.7 )

attributetype ( 2.16.840.1.101.2.2.1.125
                NAME 'positionNumber'
                DESC 'An individual's position and possibly roles and duties, with the
organization'
                EQUALITY caseIgnoreMatch
                SUBSTR caseIgnoreSubstringsMatch
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.15 )

attributetype ( 2.5.4.16
                NAME 'postalAddress'
                EQUALITY caseIgnoreListMatch
                SUBSTR caseIgnoreListSubstringsMatch
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.41 )

attributetype ( 2.5.4.17
                NAME 'postalCode'
                EQUALITY caseIgnoreMatch
                SUBSTR caseIgnoreSubstringsMatch
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.15{40} )

attributetype ( 2.5.4.18
                NAME 'postOfficeBox'
                EQUALITY caseIgnoreMatch
                SUBSTR caseIgnoreSubstringsMatch
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.15{40} )

attributetype (2.5.4.28
```

```
                NAME 'preferredDeliveryMethod'
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.14
                SINGLE-VALUE )

    attributetype (2.16.840.1.113730.3.1.39
                NAME 'preferredLanguage'
                DESC 'RFC2798: preferred written or spoken language for a person'
                EQUALITY caseIgnoreMatch
                SUBSTR caseIgnoreSubstringsMatch
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
                SINGLE-VALUE )

    attributetype ( 2.16.840.1.101.2.2.1.73
                NAME 'primarySpellingACP127'
                DESC 'The correct PLA spelling'
                EQUALITY caseIgnoreMatch
                SUBSTR caseIgnoreSubstringsMatch
                SINGLE-VALUE
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.44 )

    attributetype ( 2.16.840.1.101.2.2.1.126
                NAME 'proprietaryMailboxes'
                DESC 'Mailboxes within the local proprietary domain, such as CC:Mail'
                EQUALITY caseIgnoreMatch
                SUBSTR caseIgnoreSubstringsMatch
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.15 )

    attributetype ( 2.16.840.1.101.2.2.1.74
                NAME 'publish'
                DESC 'Whether the PLA should be published in the Message Address Directory or
the ACP117'
                EQUALITY booleanMatch
                SINGLE-VALUE
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.7 )

    attributetype ( 2.16.840.1.101.2.2.1.133
                NAME 'rank'
                DESC 'The military or civilian rank of an individual'
                EQUALITY caseIgnoreMatch
                SUBSTR caseIgnoreSubstringsMatch
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.15 )

    attributetype ( 2.16.840.1.101.2.2.1.75
                NAME 'recapDueDate'
                DESC 'The date and time when the list is expected to be recapped or validated'
                EQUALITY generalizedTimeMatch
                SINGLE-VALUE
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.24 )

    attributetype (2.5.4.26
                NAME 'registeredAddress'
                SUP postalAddress
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.41 )

    attributetype ( 2.16.840.1.101.2.2.1.76
                NAME 'remarks'
                EQUALITY caseIgnoreMatch
                SUBSTR caseIgnoreSubstringsMatch
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.15 )

    attributetype ( 2.16.840.1.101.2.2.1.77
                NAME 'rI'
                DESC 'The rI (Routing Indicator) for a user's PLA name'
                EQUALITY caseIgnoreMatch
                SUBSTR caseIgnoreSubstringsMatch
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.44 )

    attributetype ( 2.16.840.1.101.2.2.1.78
                NAME 'rIClassification'
                DESC 'The highest security classification of data allowed to process by the
entry'
                EQUALITY integerMatch
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.27)
```

```
attributetype ( 2.16.840.1.101.2.2.1.79
                NAME 'rIInfo'
                DESC 'Routing indicators with associated properties'
                EQUALITY caseIgnoreMatch
                SUBSTR caseIgnoreSubstringsMatch
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.15 )

attributetype (2.5.4.33
                NAME 'roleOccupant'
                SUP distinguishedName )

attributetype (0.9.2342.19200300.100.1.6
                NAME 'roomNumber'
                EQUALITY caseIgnoreMatch
                SUBSTR caseIgnoreSubstringsMatch
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.15{256} )

attributetype ( 2.5.4.14
                NAME 'searchGuide'
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.15 )

attributetype ( 2.16.840.1.101.2.2.1.80
                NAME 'secondPartyAddressees'
                DESC 'The second party addressees who are expected to take appropriate action
on message'
                EQUALITY caseIgnoreMatch
                SUSBTR caseIgnoreSubstringsMatch
                SYNTAX 1.3.6.1.4.1.1466.115.121.44 )

attributetype (0.9.2342.19200300.100.1.21
                NAME 'secretary'
                EQUALITY distinguishedNameMatch
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.12 )

attributetype ( 2.16.840.1.101.2.2.1.81
                NAME 'section'
                DESC 'Whether the receiving PLA requires message sectioning to be performed'
                EQUALITY booleanMatch
                SINGLE-VALUE
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.7 )

attributetype ( 2.16.840.1.101.2.2.1.127
                NAME 'secureFacsimileNumber'
                DESC 'The facsimile number that is used for secure communications'
                SUP aCPTelephoneFaxNumber )

attributetype ( 2.16.840.1.101.2.2.1.128
                NAME 'secureTelephoneNumber'
                DESC 'The telephone number of a secure device, such as STU II or STU III'
                SUP aCPTelephoneFaxNumber )

attributetype (2.5.4.34
                NAME 'seeAlso'
                SUP distinguishedName )

attributetype (2.5.4.5
                NAME 'serialNumber'
                EQUALITY caseIgnoreMatch
                SUBSTR caseIgnoreSubstringsMatch
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.44{64} )

attributetype ( 2.16.840.1.101.2.2.1.129
                NAME 'serviceNumber'
                DESC 'The staff identifier number, such as payroll references, medical records,
human resources and duty rosters'
                EQUALITY caseIgnoreMatch
                SUBSTR caseIgnoreSubstringsMatch
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.15 )

attributetype ( 2.16.840.1.101.2.2.1.82
                NAME 'serviceOrAgency'
                DESC 'The service or agency to which the PLA belongs'
```

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                EQUALITY caseIgnoreMatch
                SUBSTR caseIgnoreSubstringsMatch
                SINGLE-VALUE
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.44 )

 attributetype ( 2.16.840.1.101.2.2.1.83
                NAME 'sHD'
                DESC 'The sHD (special Handling Designator) which an entity, address or routing
indicator can support'
                EQUALITY caseIgnoreMatch
                SUBSTR caseIgnoreSubstringsMatch
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.44 )

 attributetype ( 2.16.840.1.101.2.2.1.84
                NAME 'shortTitle'
                DESC 'The PLA name used for Signal Intelligence (SIGINT) related
communications'
                EQUALITY caseIgnoreMatch
                SUBSTR caseIgnoreSubstringsMatch
                SINGLE-VALUE
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.44 )

 attributetype ( 2.16.840.1.101.2.2.1.85
                NAME 'sigad'
                DESC 'The PLA name used for sensitive SIGINT related communications'
                EQUALITY caseIgnoreMatch
                SUBSTR caseIgnoreSubstringsMatch
                SINGLE-VALUE
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.44 )

 attributetype ( 2.16.840.1.101.2.2.1.86
                NAME 'spot'
                DESC 'The special project address list or collective'
                EQUALITY caseIgnoreMatch
                SUBSTR caseIgnoreSubstringsMatch
                SINGLE-VALUE
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.44 )

 attributetype ( 2.5.4.8
                NAME ( 'st' 'stateOrProvinceName' )
                SUP name )

 attributetype ( 2.5.4.9
                NAME ( 'street' 'streetAddress' )
                EQUALITY caseIgnoreMatch
                SUBSTR caseIgnoreSubstringsMatch
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.15{128} )


 attributetype ( 2.5.4.52
                NAME 'supportedAlgorithms'
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.49)

 attributetype (2.5.4.4
                NAME ( 'sn' 'surname' )
                SUP name )

 attributetype ( 2.16.840.1.101.2.2.1.87
                NAME 'tARE'
                DESC 'The delivery responsibility for a message that is received by an
intermediary'
                EQUALITY booleanMatch
                SINGLE-VALUE
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.7 )

 attributetype ( 2.16.840.1.101.2.2.1.96
                NAME 'tCC'
                DESC 'The handling instruction used in the routing indicator'
                EQUALITY caseIgnoreMatch
                SUBSTR caseIgnoreSubstringsMatch
                SINGLE-VALUE
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.44 )
```

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attributetype ( 2.16.840.1.101.2.2.1.144
              NAME 'tCCG'
              DESC 'A group of message handling instructions used in the routing indicator'
              EQUALITY caseIgnoreMatch
              SUBSTR caseIgnoreSubstringsMatch
              SYNTAX 1.3.6.1.4.1.1466.115.121.1.44 )

attributetype ( 2.5.4.20
              NAME 'telephoneNumber'
              EQUALITY telephoneNumberMatch
              SUBSTR telephoneNumberSubstringsMatch
              SYNTAX 1.3.6.1.4.1.1466.115.121.1.50{32} )

attributetype (2.5.4.22
              NAME 'teletexTerminalIdentifier'
              SYNTAX 1.3.6.1.4.1.1466.115.121.1.51 )

attributetype (2.5.4.21
              NAME 'telexNumber'
              SYNTAX 1.3.6.1.4.1.1466.115.121.1.52 )

attributetype ( 2.5.4.12
              NAME 'title'
              SUP name )

attributetype ( 2.16.840.1.101.2.2.1.69
              NAME 'transferStation'
              DESC 'Whether a message for the entry should be sent to a communications
processing and routing system, called a transfer station. For example, NAVCOMPARS'
              EQUALITY booleanMatch
              SINGLE-VALUE
              SYNTAX 1.3.6.1.4.1.1466.115.121.1.7 )

attributetype ( 2.16.840.1.101.2.2.1.97
              NAME 'tRC'
              DESC 'The classification of data used in the routing indicator'
              EQUALITY caseIgnoreMatch
              SUBSTR caseIgnoreSubstringsMatch
              SINGLE-VALUE
              SYNTAX 1.3.6.1.4.1.1466.115.121.1.44 )

attributetype (0.9.2342.19200300.100.1.1
              NAME ( 'uid' 'userid' )
              DESC 'RFC1274: user identifier'
              EQUALITY caseIgnoreMatch
              SUBSTR caseIgnoreSubstringsMatch
              SYNTAX 1.3.6.1.4.1.1466.115.121.1.15{256} )

attributetype ( 2.16.840.1.101.2.2.1.145
              NAME 'usdConversion'
              DESC 'The organizational address that is used when other types of address are
not appropriate'
              EQUALITY caseIgnoreMatch
              SUBSTR caseIgnoreSubstringsMatch
              SYNTAX 1.3.6.1.4.1.1466.115.121.1.15 )

attributetype (2.5.4.36
              NAME 'userCertificate'
              EQUALITY CertificateExactMatch
              SYNTAX 1.3.6.1.4.1.1466.115.121.1.8 )

attributetype (2.5.4.35
              NAME 'userPassword'
              EQUALITY octetStringMatch
              SYNTAX 1.3.6.1.4.1.1466.115.121.1.40{128} )

attributetype (2.16.840.1.113730.3.1.216
              NAME 'userPKCS12'
              DESC 'RFC2798: PKCS #12 PFX PDU for exchange of personal identity information'
              EQUALITY octetStringMatch
              SYNTAX 1.3.6.1.4.1.1466.115.121.1.40 )

attributetype (2.16.840.1.113730.3.1.40
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                NAME 'userSMIMECertificate'
                DESC 'RFC2798: PKCS#7 SignedData used to support S/MIME'
                EQUALITY octetStringMatch
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.40 )

 attributetype ( 2.16.840.1.101.2.1.5.167
                NAME 'webAccessCapability'
                DESC 'Whether the entry is capable of accessing a web-based Bulletin Board
service to download or access information'
                EQUALITY booleanMatch
                SINGLE-VALUE
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.7)

 attributetype (2.5.4.24
                NAME 'x121Address'
                EQUALITY numericStringMatch
                SUBSTR numericStringSubstringsMatch
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.36{15} )

 attributetype (2.5.4.45
                NAME 'x500UniqueIdentifier'
                EQUALITY bitStringMatch
                SYNTAX 1.3.6.1.4.1.1466.115.121.1.6 )
```