CIM Core Model V2.5

LDAP Mapping Specification

DSP0123 ***Status: Final***

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DMTF LDAP Schema for the CIM V2.5 Core Information Model

April 15, 2002

Abstract

This document presents an LDAP schema for the CIM version 2.5 Core Information Model [3].

Internal Change History

Version 1.0 (Prelim)	May 21, 2001	Initial Preliminary Version
Version 1.1 (Prelim)	January 7, 2002	Multiple fixes: Addition of Client Considerations and DN reference Consideration sections Minor fixes to BNF from Felix Quevedo Changed Dates from current date to last saved date
Version 1.2 (Prelim)	March 16, 2002	Removal of Reference 5 (LDAP Guidelines) and copy of text to this document (related to data type mappings – Section 2.7).
Version 1.0 (Final)	April 15, 2002	V1.0 Final Version / Corrected arrayIndex and dlmIdentifyingDescription to be SINGLE-VALUEd in dlmOtherIdentifyingInfoInstance

Table of Contents

1 Introduction

This document presents an LDAPv3 [1,2,5] schema for the DMTF CIM Core 2.5 Model [3]. Abstract CIM classes are mapped to abstract LDAP classes. Concrete CIM classes are mapped to structural and auxiliary LDAP classes. CIM associations are mapped using a combination of auxiliary classes and structural LDAP classes.

The content, naming and structure rules provided here are suggestions and may be modified as needed to support a particular directory structure. In addition, the attribute and object class descriptive fields are provided for human clarity. Directory administrators do not need to subclass/instantiate everything in this schema verbatim. They are free to choose the subset that meets their particular needs. In particular, this means:

- If your directory implementation does not support content, naming or structure rules, comment them out.
- If your directory implementation does not support description fields of greater than some length, those may be commented out.
- If you directory implementation requires a certain ordering of classes and attributes (e.g. to avoid forward references) feel free to re-order as necessary.
- If your directory implementation and application can make use of substring matching, feel free to add substring-matching clauses as appropriate.

2 LDAP Mapping Considerations

2.1 Differences from the Core CIM Model

The LDAP schema presented here differs from the Core CIM Model in that not all classes in the CIM Core Model have been mapped in this model. Specifically, the CIM_StatisticalInformation class and its subclasses, the CIM_Statistics association class and its subclasses, and the DependencyContext association have not been mapped.

This LDAP schema is not mapped one-to-one, class for class, from CIM. It uses the following approaches:

- Abstract CIM classes (including associations) are mapped to abstract LDAP object classes. This has the side effect that the reference properties of an abstract CIM association are not mapped to attributes.
- Concrete CIM classes are mapped to a trio of LDAP classes:
    - an abstract class, which mirrors the CIM class hierarchy through the LDAP object class hierarchy mechanism
    - an auxiliary class, which allows for the CIM information to be attached to a pre-existing directory object instance
    - a structural class
- CIM associations are mapped according to their cardinality and properties. The cases for mapping associations are explained further in section 2.8.

2.2 Changes from previous versions

This version of the LDAP schema has changes to the ABNF to correct errors that have been pointed out by directory implementers. Specifically, the syntax rules are now numeric object identifiers and equality rules have been added for multi-valued attributes.

The first version of this schema lacked the mapping from CIM concrete classes to multiple LDAP classes. Also, the method of naming reference attributes was changed to provide additional clarity and specificity when an instance of a structural LDAP class participates in different associations.

This version no longer requires DIT containment for weak associations. These are just considered a different flavor of one-to-many associations. Because of the use of structural LDAP objects to represent certain associations, cimAssociationInstance is no longer used in this mapping.

Finally, the scheme for the textual identification of the elements of the LDAP schema is changed. Previously, LDAP object classes were identified as cimXXName, where XX was initially derived from the version of CIM from which the LDAP class was mapped. (If the CIM class changed later, XX would change in a subsequent mapping, but not necessarily in alignment with the revised CIM version number.) This was chosen for convenience only. As it leads to misunderstandings regarding synchronization with CIM versions, it has been dropped for a simpler scheme in this and subsequent versions. The new scheme for LDAP object classes is dlmXName for the mapping of the CIM class “Name”, where X is “1” in this version and increased by one each time the CIM class changes and a new LDAP class is produced. For consistency and to avoid confusion, the prefix “dlm” (DMTF LDAP Mapping) is used in the identification of other LDAP schema elements such as attributes. The exceptions to this naming change are the attributes arrayIndex, orderedCimKeys and orderedCimModelPath, which retain their name from the previous mapping version.

2.3 Client Considerations

The attribute and object class definitions in this document provide addition syntactical definitions (e.g. enumeration, format, etc.) beyond that specifiable via LDAP ABNF. Clients that store information must conform to the syntactical definitions of this specification. Clients that retrieve information must be prepared to receive attribute values that do not conform to this specification. Application designers should be thoughtful and ensure that client behavior in such cases is consistent with the application.

2.4 DN Reference Considerations

This mapping makes extensive use of DN references as an option to the designer. Designers should be aware that use of such pointers is subject to referential integrity considerations, as directories do not ensure referential integrity of attributes.

2.5 Helper Classes

2.5.1 dlmOtherIdentifyingInfoInstance

CIM defines the concept of an ordered array, which LDAP does not support. In the Core CIM Model, indexed arrays are only used in two abstract classes (CIM_ComputerSystem and CIM_LogicalDevice) to tie the values of two property arrays together. In the LDAP mapping, these properties are replaced with separate instances of dlmOtherIdentifyingInfoInstance that each contain a single pair of attribute values and are DIT contained by the parent class. The attribute dlmOtherIdentifyingInfo is defined in Section 3.3 and reused here and the attribute arrayIndex is defined as the RDN for this class. Finally, the structure rule is provided as a template to be filled in with structure rule pointers to structural rules defined for concrete sub-classes of dlm1ComputerSystem and dlm1LogicalDevice. This class can also be DIT contained by classes that have the auxiliary class flavor of ComputerSystem and LogicalDevice attached. However, LDAP does not provide structure rule syntax rich enough to express this concept, so this is stated as a meta-rule here.

```
   ( 1.3.6.1.4.1.412.100.1.2.5 NAME 'arrayIndex'
     DESC 'The index of this child.'
     SYNTAX 1.3.6.1.4.1.1466.115.121.1.15 SINGLE-VALUE
     EQUALITY caseIgnoreMatch
   )

   ( 1.3.6.1.4.1.412.100.2.2.101 NAME 'dlmIdentifyingDescription'
     DESC 'A free-form string providing explanation and
           details behind the entries in the dlmOtherIdentifyingInfo
           attribute.'
     SYNTAX 1.3.6.1.4.1.1466.115.121.1.15 SINGLE-VALUE
     EQUALITY caseIgnoreMatch
   )

   ( 1.3.6.1.4.1.412.100.2.1.3.92 NAME
'dlmOtherIdentifyingInfoInstance'
     DESC 'Helper class to tie indexed arrays in Core Model together.'
     SUP top
     MUST ( arrayIndex )
     MAY ( dlmOtherIdentifyingInfo $ dlmIdentifyingDescription )
   )

   ( 1.3.6.1.4.1.412.100.2.3.3.9 NAME
'dlmOtherIdentifyingInfoInstanceNameForm'
     OC dlmOtherIdentifyingInfoInstance
     MUST ( arrayIndex )
   )

   ( <core-sr-9> NAME 'dlmOtherIdentifyingInfoInstanceStructureRule'
     FORM dlmOtherIdentifyingInfoInstanceNameForm
   )
```

2.6 Naming considerations

To support naming in the LDAP mapping of the CIM Core Model, the attribute orderedCimKeys is defined, to provide the RDN for directory implementations.

```
( 1.3.6.1.4.1.412.100.1.2.1 NAME 'orderedCimKeys'
  DESC 'The model path for the instance. May be used as an RDN.'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15 SINGLE-VALUE
  EQUALITY caseIgnoreMatch
)
```

The value of this attribute is constructed by ordering the CIM keys [formatted as "<className>.<key>=<value>[,<key>=<value>]*"] of the object in the US-ASCII collation order of the property names. For an instance with propagated keys in the CIM namespace, the value of this attribute takes one of two forms: either it includes all of the instance's keys, or it includes only the non-propagated ones. Ordinarily the propagated keys will be included when the DIT hierarchy in which an instance appears does not reflect the CIM naming hierarchy represented by the propagation of keys via weak associations. When the DIT hierarchy does mirror the CIM naming hierarchy, the propagated keys are unnecessary and may be omitted. By consulting the CIM Schema, a directory client can tell whether propagated keys may have been included.

In a previous version of this specification, the value of orderedCimKeys never included propagated keys. A second attribute, orderedCimModelPath, was used when propagated keys were required. Now that orderedCimKeys includes the case where propagated keys are included, orderedCimModelPath can be marked as "obsolete".

```
( 1.3.6.1.4.1.412.100.1.2.2 NAME 'orderedCimModelPath'
  DESC 'The model path for the instance (with propagated keys). May
        be used as an RDN.'
  OBSOLETE
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15 SINGLE-VALUE
  EQUALITY caseIgnoreMatch
)
```

2.7 Syntax Conversions

This section discusses specific conversions needed for the CIM Core Model. Other mappings may define additional conversion procedures.

2.7.1 CIM String and LDAP DirectoryString

Strings in CIM are stored as UCS-2 characters, while LDAP DirectoryStrings are stored in UTF-8 format. Other character sets may be used by non-conforming implementations. In most situations, the selected programming environment provides a consistent character set; however, some applications may need to perform character set translation. When such translation is required, it should be done in accordance with RFC 2279 [4].

2.7.2 CIM DateTime and LDAP GeneralizedTime

CIM DateTime is used to store both timestamps and intervals in UCS-2. LDAP GeneralizedTime stores timestamps in a subset of UTF-8. DateTime properties that store moments may be mapped to Generalized Time. This assumes that the semantics of a property are clear and that the property will never contain an interval value.

While both CIM DateTime and Directory Generalized Time are used to store a date and a time combination as a string, there are several syntactic differences in the formats. They are:

- The character set used (see previous discussion).
- Reduced accuracy is represented differently.
- DateTime is a fixed length string. Generalized Time is a variable length format.
- DateTime uses hundreds of minutes ("mmm") to specify offset from UTC. Generalized Time uses hours and minutes ("hhmm").
- DateTime uses zero minutes offset to specify UTC. Generalized Times uses a “Z”.
- Generalized Time allows for either a period “.” or a comma “,” to be used as the decimal separator. DateTime requires a period.

2.7.2.1 Accuracy

Both CIM DateTime and directory Generalized Time provides for specifying times with reduced precision. However, the mechanism is not the same. CIM DateTime is a fixed length format so fields that are not significant must be replaced with a placeholder. The “*” asterisk is used. Generalized Time is variable length syntax. Non-significant fields may be omitted starting from the right up to the entire time portion of the string. The entire date must be present.

When mapping from Generalized Time to DateTime, all omitted fields in the Generalized Time value must be present in the DateTime value and filled with asterisks.

When mapping from DateTime to Generalized Time, all contiguous asterisk-filled fields starting from the right most (microseconds) up to the first date field, may be omitted. Any remaining asterisk-filled fields must be zero filled. Note: the semantics of non-significant fields embedded in a DateTime value is unclear.

2.7.2.2 Mapping algorithms

DateTime to Generalized Time:

1. Perform character set translation as required.
2. Map asterisks as described above.
3. If the UTC offset is +000 it is replaced with a “Z”. Otherwise the UTC offset is translated from minutes to hours and minutes format.

Generalized Time to DateTime:

1. Zero pad or truncate the decimal portion of the seconds to be exactly six digits. If there are no decimal seconds specified then use the decimal point “.” and six asterisks.
2. If the value is in UTC (that is, it is followed by a “Z”), the “Z” is replaced with +000. Otherwise, the UTC offset is translated from hours and minutes (“hhmm”) format to minutes (“mmm”) format.
3. If a comma is used as the decimal separator, replace it with a period.
4. Perform character set translation as required.

2.8 Associations

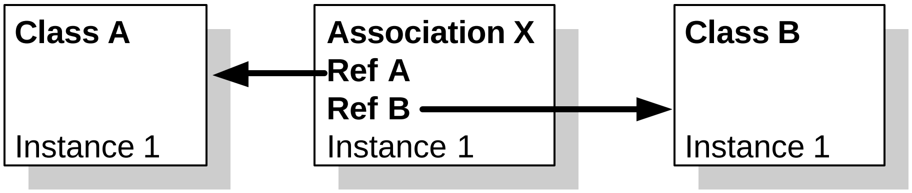
2.8.1 Types of associations

The various types of associations that may be encountered in CIM can be categorized as follows:

- One-to-one
- One-to-one with properties
- One-to-many
- One-to-many with properties
- Many-to-many
- Many-to-many with properties.

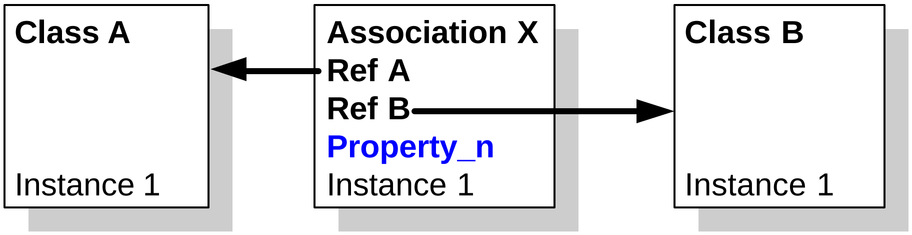
Each of these can be illustrated as follows

2.8.1.1 One-to-One



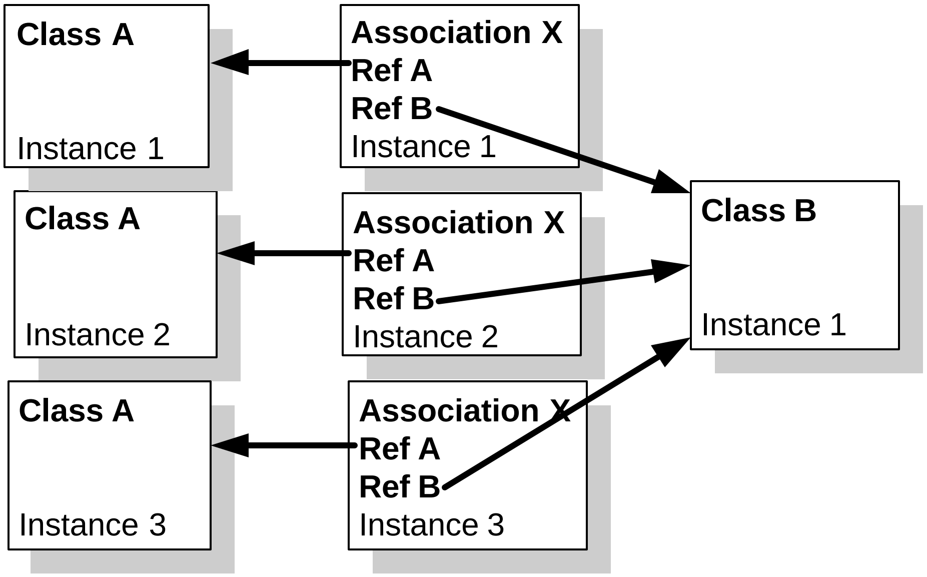
An instance of class A or class B can be referenced by no more than one instance of association X.

2.8.1.2 One-to-One with properties



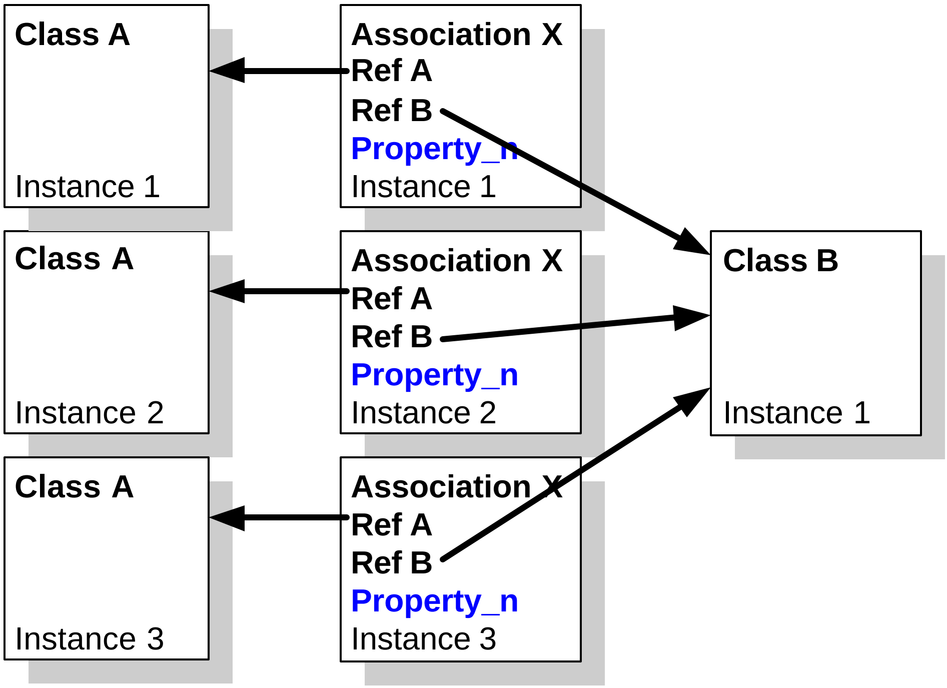
An instance of class A or class B can be referenced by no more than one instance of association X. The association instance has one or more properties that characterize the relationship. For example, if the association represented a serial link, it could have a property stating the speed of the link.

2.8.1.3 One-to-many



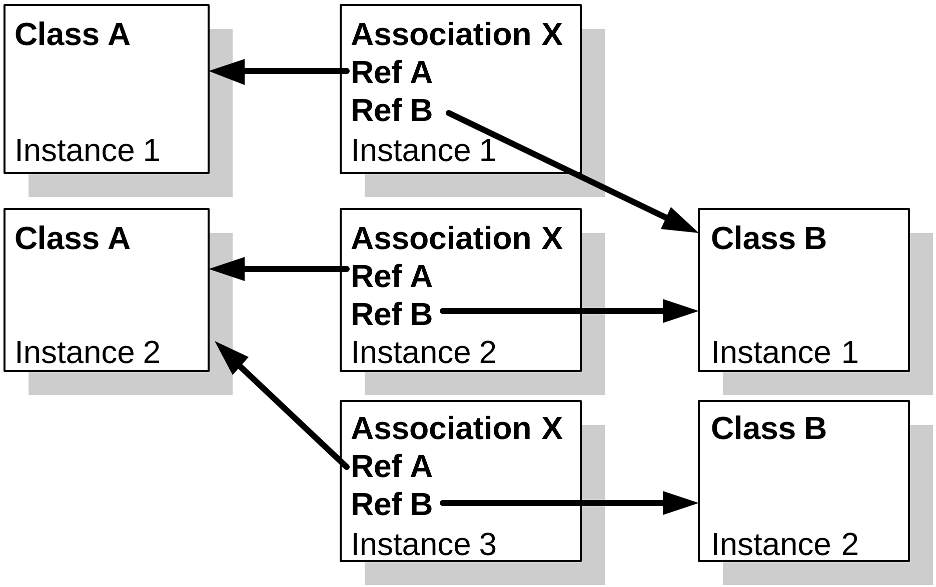
A single instance of class A may be referenced by no more than one instance of association X. A single instance of class B may be referenced by any number of instances of association X. Note: Ref B is not an array. There is an instance of association X for every A, B pair that is associated.

2.8.1.4 One-to-many with properties

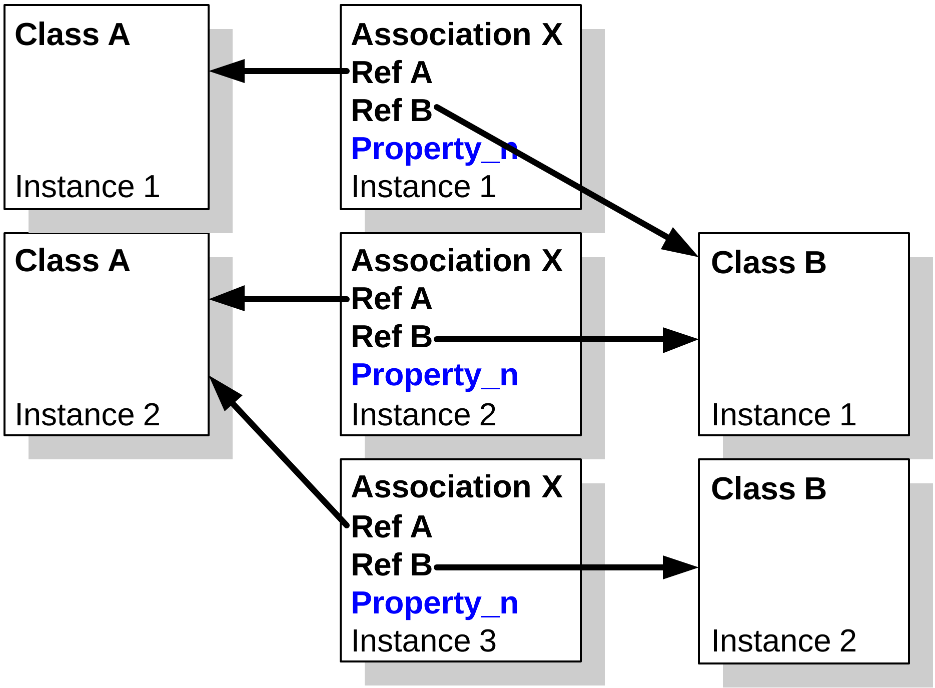


Each instance of the association has one or more properties that characterize the relationship. For example a network switch may connect to many workstations (assume each workstation can only support a single connection) in a star topology. Each link can be half or full duplex. A property contained in the association class could be used to model this.

2.8.1.5 Many-to-many



2.8.1.6 Many-to-many with properties



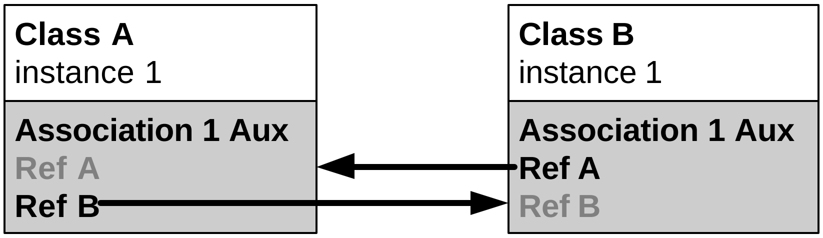
2.8.2 Mapping Associations

There are three distinct models used for mapping non-abstract associations in this document. Each has its own conventions for how such associations are not only mapped, but also implemented in the directory. The following sections discuss these conventions.

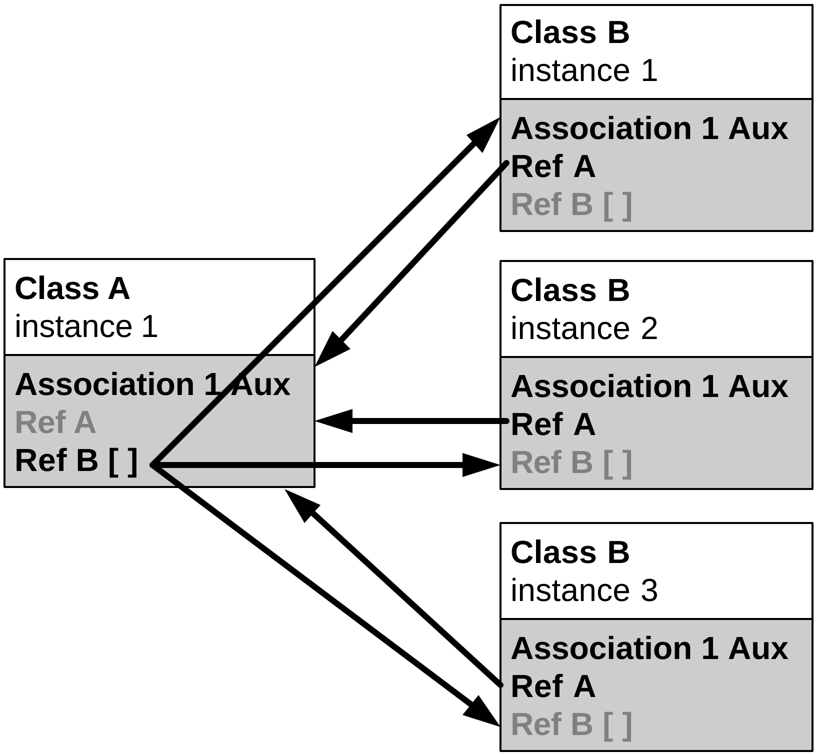
Since all associations have referential properties, the term "additional properties" in the remainder of this section refers to non-referential properties. The approach in Section 2.6.2.3 may also be used to map associations with no additional properties and 1-to-1 or 1-to-many associations with additional properties, if necessary.

2.8.2.1 No Additional Properties

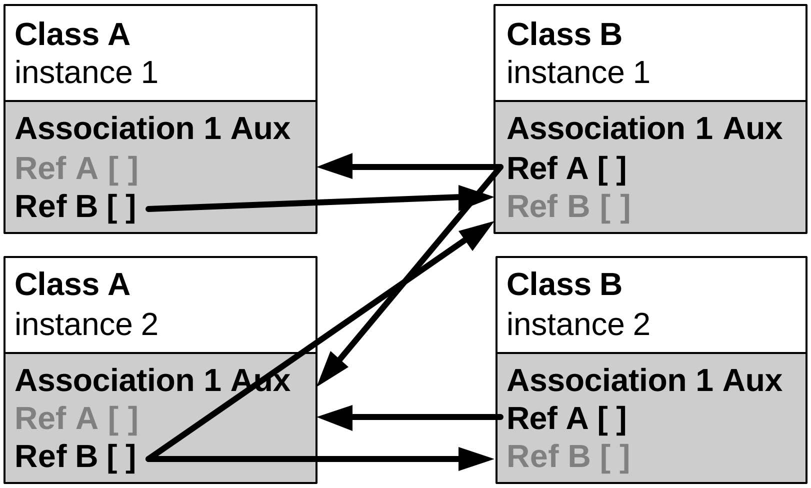
If a non-abstract association has no additional properties, then it is mapped as an auxiliary class that contains both referential properties as optional DN attributes. This class is attached to all structural objects that participate in the association, with the proper attribute being populated for that particular structural object. An example of this type of association is CIM_HostedService.



One-to-One



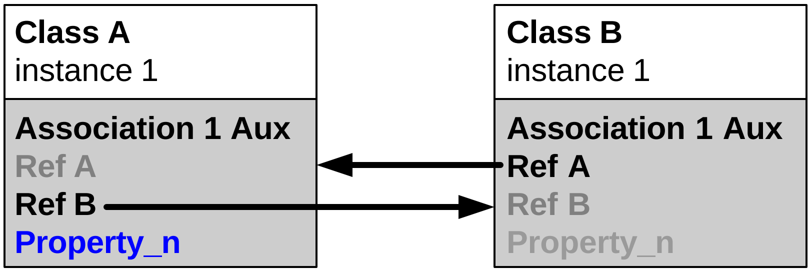
One-to-many



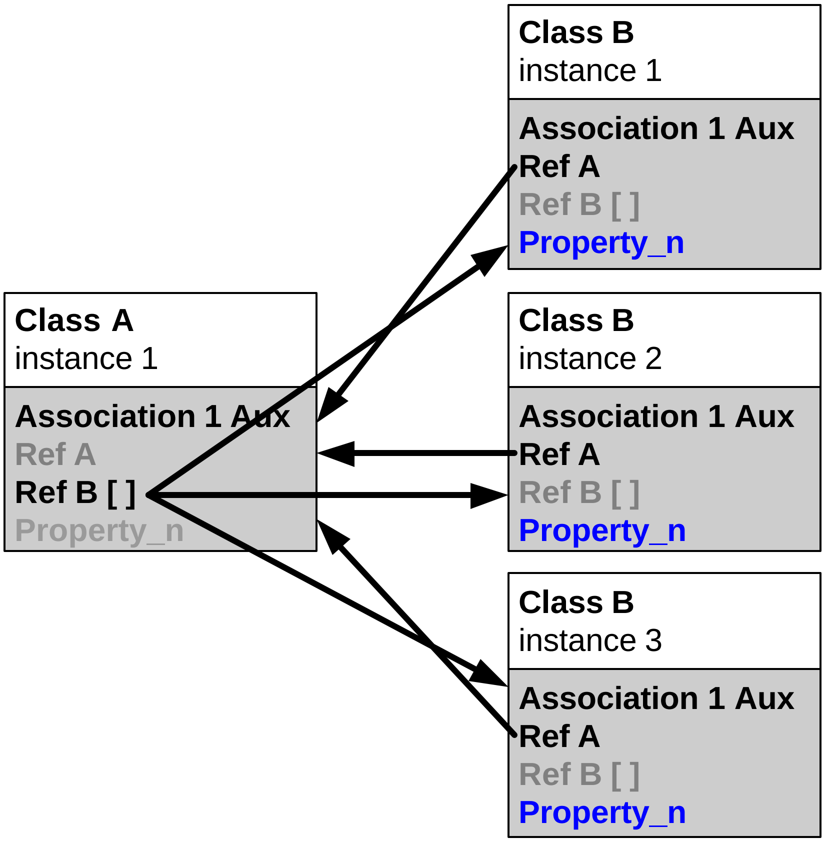
Many-to-Many

2.8.2.2 Additional Properties, 1-to-1 or 1-to-many

If a non-abstract association has additional properties, then the mapping is determined by the cardinality of the referential properties. In the case of a 1-to-1 or 1-to-many cardinality, the association is mapped as an auxiliary class with all properties mapped as optional attributes. The auxiliary class is attached to all structural objects participating in the association, with the referential attribute set appropriately. The additional properties are set for the auxiliary class that is attached to the many side of a 1-to-many association. The Core Model does not have an example of this class of association.



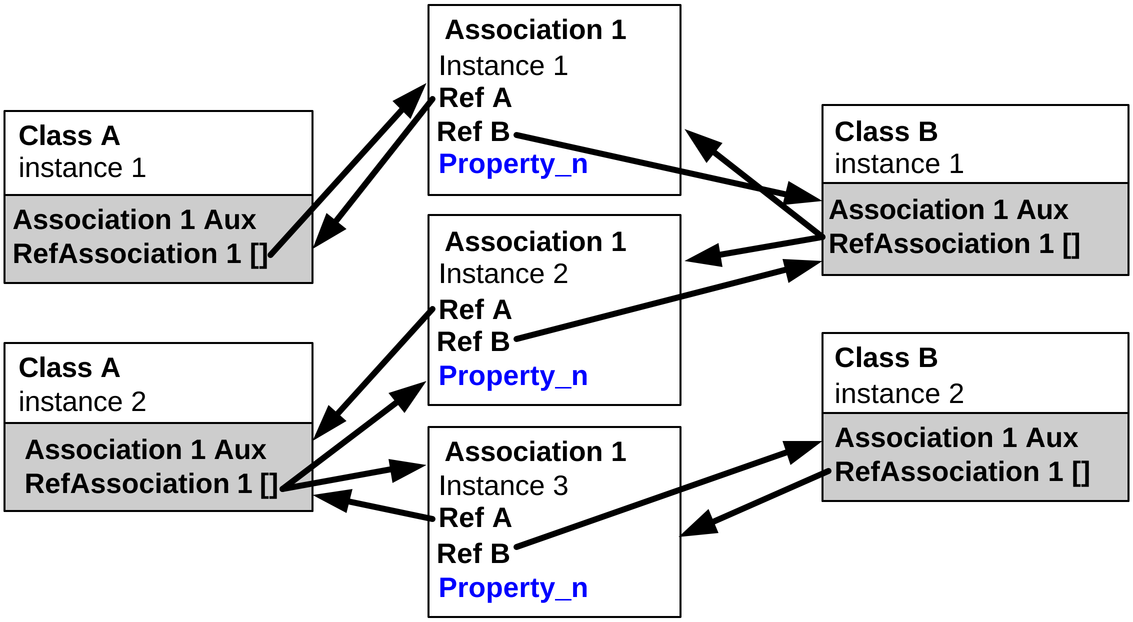
One-to-one with properties



One-to-many with properties

2.8.2.3 Additional Properties, many-to-many

For a non-abstract association with additional properties and a many-to-many cardinality, the most flexible mapping is to use a structural LDAP class that contains all properties of the association as optional attributes. Since this is a separate object in the directory, helper auxiliary classes are provided that are attached to the structural objects in the directory participating in the association. These helper classes contain a single optional attribute that points to the particular instance of the association that this object participates in. There is an instance of the structural class for every instance of the association. An example of this type of association is CIM_ServiceServiceDependency.



Many-to-many with properties

This approach may also be used to map associations with no additional properties and 1-to-1 or 1-to-many associations with additional properties, if necessary.

2.8.2.4 Weak associations

Weak associations are one-to-one, or one-to-many and may or may not have properties. They may and should be mapped using the appropriate mechanism above. Weak implies additional semantics that maps well to DIT containment. Instances of weak classes may but are not required to be stored as children of the entries they are weak to. When such storage is used, application may utilize this to optimize association traversal.

3 Class Definitions

3.1 ManagedElement

This abstract class provides a base for non-association classes in CIM. Its addition is one of the major changes between CIM v2.2 and CIM v2.3.

```
( 1.3.6.1.4.1.412.100.2.2.103 NAME 'dlmCaption'
  DESC 'The Caption property is a short textual
        description (oneline string) of the object.'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15{64} SINGLE-VALUE
  EQUALITY caseIgnoreMatch
)

( 1.3.6.1.4.1.412.100.2.2.104 NAME 'dlmDescription'
  DESC 'The Description property provides a textual
        description of the object.'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15 SINGLE-VALUE
  EQUALITY caseIgnoreMatch
)

( 1.3.6.1.4.1.412.100.2.1.3.1 NAME 'dlm1ManagedElement'
  DESC 'ManagedElement is an abstract class that provides
        a common superclass (or top of the inheritance tree)
        for the non-association classes in the CIM Schema.'
  SUP top ABSTRACT
  MAY ( dlmCaption $ dlmDescription $ orderedCimModelPath
       $ orderedCimKeys )
)
```

3.2 ManagedSystemElement

This is the base class for the system element hierarchy. Any distinguishable component of a system is a candidate for inclusion in this class. Examples of this are logical components, such as files and devices (for example, disk drives and controllers), and physical components (such as chips and cards).

```
( 1.3.6.1.4.1.412.100.2.2.105 NAME 'dlmInstallDate'
  DESC 'A datetime value indicating when the object was
        installed. A lack of a value does not indicate that
        the object is not installed.'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.24 SINGLE-VALUE
  EQUALITY generalizedTimeMatch
)
```

```
( 1.3.6.1.4.1.412.100.2.2.106 NAME 'dlmName'
  DESC 'The Name property defines the label by which the
        object is known. When subclassed, the Name property
        can be overridden to be a Key property.'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15{256} SINGLE-VALUE
  EQUALITY caseIgnoreMatch
)

( 1.3.6.1.4.1.412.100.2.2.107 NAME 'dlmStatus'
  DESC 'A string indicating the current status of the
        object. Various operational and non-operational
        statuses are defined. Operational statuses are "OK",
        "Degraded", "Stressed" and "Pred Fail". "Stressed"
        indicates that the Element is functioning, but needs
        attention. Examples of "Stressed" states are overload,
        overheated, etc. The condition "Pred Fail" (failure
        predicted) indicates that an Element is functioning
        properly but predicting a failure in the near future.
        An example is a SMART-enabled hard drive.
        Non-operational statuses can also be specified. These
        are "Error", "NonRecover", "Starting", "Stopping",
        "Stopped", "Service", "No Contact" and "Lost Comm".
        "NonRecover" indicates that a non-recoverable error
        has occurred. "Service" describes an Element being
        configured, maintained, cleaned, or otherwise
        administered. This status could apply during
        mirror-resilvering of a disk, reload of a user
        permissions list, or other administrative task. Not
        all such work is on-line, yet the Element is neither
        "OK" nor in one of the other states. "No Contact"
        indicates that the current instance of the monitoring
        system has knowledge of this Element but has never
        been able to establish communications with it. "Lost
        Comm" indicates that the ManagedSystemElement is known
        to exist and has been contacted successfully in the
        past, but is currently unreachable."Stopped" indicates
        that the ManagedSystemElement is known to exist, it is
        not operational (i.e. it is unable to provide service
        to users), but it has not failed. It has purposely
        been made non-operational. The Element may have never
        been "OK", the Element may have initiated its own
        stop, or a management system may have initiated the
        stop.  Value Mappings are "OK", "Error", "Degraded",
        "Unknown", "Pred Fail", "Starting", "Stopping",
        "Service", "Stressed", "NonRecover", "No Contact",
        "Lost Comm", "Stopped".'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15{10} SINGLE-VALUE
  EQUALITY caseIgnoreMatch
)

( 1.3.6.1.4.1.412.100.2.1.3.2 NAME 'dlm1ManagedSystemElement'
  DESC 'ManagedSystemElement is the base class for the
        System Element hierarchy. Membership Criteria: Any
        distinguishable component of a System is a candidate
        for inclusion in this class. Examples: software
        components, such as files; and devices, such as disk
```

```
         drives and controllers, and physical components such
         as chips and cards.'
   SUP dlm1ManagedElement ABSTRACT
   MAY ( dlmInstallDate $ dlmName $ dlmStatus )
 )
```

3.3 PhysicalElement

This class acts as the base class for any component of a system that has a distinct physical identity. Instances of this class can be defined in terms of labels that can be physically attached to the object. All processes, files, and logical devices are NOT considered to be physical elements. For example, it is not possible to attach a label to a modem. It is only possible to attach a label to the card that implements the modem. The same card could also implement a LAN adapter. This is an example of a single physical element (the card) hosting more than one logical device.

```
 ( 1.3.6.1.4.1.412.100.2.2.108 NAME 'dlmCreationClassName'
   DESC 'CreationClassName indicates the name of the class
         or the subclass used in the creation of an instance.
         When used with the other key properties of this class,
         this property allows all instances of this class and
         its subclasses to be uniquely identified.'
   SYNTAX 1.3.6.1.4.1.1466.115.121.1.15{256} SINGLE-VALUE
   EQUALITY caseIgnoreMatch
 )

 ( 1.3.6.1.4.1.412.100.2.2.109 NAME 'dlmManufactureDate'
   DESC 'Date that this PhysicalElement was manufactured.'
   SYNTAX 1.3.6.1.4.1.1466.115.121.1.24 SINGLE-VALUE
   EQUALITY generalizedTimeMatch
 )

 ( 1.3.6.1.4.1.412.100.2.2.110 NAME 'dlmManufacturer'
   DESC 'The name of the organization responsible for
         producing the PhysicalElement. This may be the entity
         from whom the Element is purchased, but this is not
         necessarily true. The latter information is contained
         in the Vendor property of Product.'
   SYNTAX 1.3.6.1.4.1.1466.115.121.1.15{256} SINGLE-VALUE
   EQUALITY caseIgnoreMatch
 )

 ( 1.3.6.1.4.1.412.100.2.2.111 NAME 'dlmModel'
   DESC 'The name by which the PhysicalElement is
         generally known.'
   SYNTAX 1.3.6.1.4.1.1466.115.121.1.15{64} SINGLE-VALUE
   EQUALITY caseIgnoreMatch
 )

 ( 1.3.6.1.4.1.412.100.2.2.112 NAME 'dlmOtherIdentifyingInfo'
   DESC 'OtherIdentifyingInfo captures additional data,
         beyond that of Tag information, that could be used to
         identify a Physical Element. One example is bar code
         data associated with an Element that also has an asset
```

```
            tag. Note that if only bar code data is available and
            is unique/able to be used as an Element key, this
            property would be NULL and the bar code data used as
            the class key, in the Tag property.'
      SYNTAX 1.3.6.1.4.1.1466.115.121.1.15 SINGLE-VALUE
      EQUALITY caseIgnoreMatch
    )

    ( 1.3.6.1.4.1.412.100.2.2.113 NAME 'dlmPartNumber'
      DESC 'The part number assigned by the organization
            responsible for producing or manufacturing the
            PhysicalElement.'
      SYNTAX 1.3.6.1.4.1.1466.115.121.1.15{256} SINGLE-VALUE
      EQUALITY caseIgnoreMatch
    )

    ( 1.3.6.1.4.1.412.100.2.2.114 NAME 'dlmPoweredOn'
      DESC 'Boolean indicating that the PhysicalElement is
            powered on (TRUE), or is currently off (FALSE).'
      SYNTAX 1.3.6.1.4.1.1466.115.121.1.7 SINGLE-VALUE
    )

    ( 1.3.6.1.4.1.412.100.2.2.115 NAME 'dlmSKU'
      DESC 'The stock keeping unit number for this
            PhysicalElement.'
      SYNTAX 1.3.6.1.4.1.1466.115.121.1.15{64} SINGLE-VALUE
      EQUALITY caseIgnoreMatch
    )

    ( 1.3.6.1.4.1.412.100.2.2.116 NAME 'dlmSerialNumber'
      DESC 'A manufacturer-allocated number used to identify
            the Physical Element.'
      SYNTAX 1.3.6.1.4.1.1466.115.121.1.15{64} SINGLE-VALUE
      EQUALITY caseIgnoreMatch
    )

    ( 1.3.6.1.4.1.412.100.2.2.117 NAME 'dlmTag'
      DESC 'An arbitrary string that uniquely identifies the
            Physical Element and serves as the Element"s key.  The
            Tag property can contain information such as asset tag
            or serial number data. The key for PhysicalElement is
            placed very high in the object hierarchy in order to
            independently identify the hardware/entity, regardless
            of physical placement in or on Cabinets, Adapters, etc.
            For example, a hotswappable or removeable component
            may be taken from its containing (scoping) Package and
            be temporarily unused.  The object still continues to
            exist - and may even be inserted into a different
            scoping container.  Therefore, the key for Physical
            Element is an arbitrary string and is defined
            independently of any placement or location-oriented
            hierarchy.'
      SYNTAX 1.3.6.1.4.1.1466.115.121.1.15{256} SINGLE-VALUE
      EQUALITY caseIgnoreMatch
    )
```

```
( 1.3.6.1.4.1.412.100.2.2.118 NAME 'dlmVersion'
  DESC 'A string indicating the version of the
        PhysicalElement.'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15{64} SINGLE-VALUE
  EQUALITY caseIgnoreMatch
)

( 1.3.6.1.4.1.412.100.2.1.3.3 NAME 'dlm1PhysicalElement'
  DESC 'Subclasses of PhysicalElement define any
        component of a System that has a distinct physical
        identity. Instances of this class can be defined in
        terms of labels that can be physically attached to the
        object. All Processes, Files, and LogicalDevices are
        not considered to be Physical Elements. For example,
        it is not possible to attach a label to a modem. It is
        only possible to attach a label to the card that
        implements the modem. The same card could also
        implement a LAN  adapter. These are tangible Managed
        System Elements (usually actual hardware items) that
        have a physical manifestation of some sort. A Managed
        System Element is not necessarily a discrete
        component. For example, it is possible for a single
        Card (which is a type of Physical Element) to host
        more than one Logical Device. The card would be
        represented by a single Physical Element associated
        with multiple Logical Devices.'
  SUP dlm1ManagedSystemElement ABSTRACT
  MAY ( dlmCreationClassName $ dlmManufactureDate $
        dlmManufacturer $ dlmModel $ dlmOtherIdentifyingInfo $
        dlmPartNumber $ dlmPoweredOn $ dlmSKU $ dlmSerialNumber $
        dlmTag $ dlmVersion )
)
```

3.4 LogicalElement

This class is the base class for all the components of a system that represent logical entities, such as files, processes, and logical devices.

```
( 1.3.6.1.4.1.412.100.2.1.3.4 NAME 'dlm1LogicalElement'
  DESC 'LogicalElement is a base class for all the
        components of a System that represent logical
        entities, such as Files, Processes, and
        Logical Devices.'
  SUP dlm1ManagedSystemElement ABSTRACT
)
```

3.5 System

This class is a logical element that aggregates an enumerable set of managed system elements and operates as a functional whole. Within any particular subclass of system, there is a well-defined list of managed system element classes whose instances must be aggregated.

```
( 1.3.6.1.4.1.412.100.2.2.119 NAME 'dlmNameFormat'
  DESC 'The System object and its derivatives are Top
        Level Objects of CIM. They provide the scope for
        numerous components. Having unique System keys is
        required. A heuristic can be defined in individual
        System subclasses to attempt to always generate the
        same System Name Key. The NameFormat property
        identifies how the System name was generated, using
        the subclass" heuristic.'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15{64} SINGLE-VALUE
  EQUALITY caseIgnoreMatch
)

( 1.3.6.1.4.1.412.100.2.2.120 NAME 'dlmPrimaryOwnerContact'
  DESC 'A string that provides information on how the
        primary system owner can be reached (e.g. phone
        number, email address, ...).'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15{256} SINGLE-VALUE
  EQUALITY caseIgnoreMatch
)

( 1.3.6.1.4.1.412.100.2.2.121 NAME 'dlmPrimaryOwnerName'
  DESC 'The name of the primary system owner.'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15{64} SINGLE-VALUE
  EQUALITY caseIgnoreMatch
)

( 1.3.6.1.4.1.412.100.2.2.122 NAME 'dlmRoles'
  DESC 'An array (bag) of strings that specify the roles
        this System plays in the IT-environment. Subclasses of
        System may override this property to define explicit
        Roles values. Alternately, a Working Group may
        describe the heuristics, conventions and guidelines
        for specifying Roles. For example, for an instance of
        a networking system, the Roles property might contain
        the string, "Switch" or "Bridge".'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  EQUALITY caseIgnoreMatch
)

( 1.3.6.1.4.1.412.100.2.1.3.5 NAME 'dlm1System'
  DESC 'A System is a LogicalElement that aggregates an
        enumerable set of Managed System Elements. The
        aggregation operates as a functional whole. Within any
        particular subclass of System, there is a well-defined
        list of Managed System Element classes whose instances
        must be aggregated.'
  SUP dlm1LogicalElement ABSTRACT
  MAY ( dlmCreationClassName $ dlmName $ dlmNameFormat $
        dlmPrimaryOwnerContact $ dlmPrimaryOwnerName $
        dlmRoles )
)
```

3.6 ComputerSystem

This class is derived from System and represents a special collection of managed system elements that provide compute capabilities. Thus, it serves as aggregation point to associate one or more of the following elements: file systems, operating systems, processors and memory (volatile and/or non-volatile storage).

```
( 1.3.6.1.4.1.412.100.2.2.123 NAME 'dlmDedicated'
  DESC 'Enumeration indicating whether the ComputerSystem
        is a special-purpose System (ie, dedicated to a
        particular use), versus being "general purpose". For
        example, one could specify that the System is
        dedicated to "Print" (value=11) or acts as a "Hub"
        (value=8).  Values are 0="Not Dedicated",
        1="Unknown", 2="Other", 3="Storage", 4="Router",
        5="Switch", 6="Layer 3 Switch", 7="Central Office
        Switch", 8="Hub", 9="Access Server", 10="Firewall",
        11="Print", 12="I/O", 13="Web Caching",
        14="Management"'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.27
  EQUALITY integerMatch
)

( 1.3.6.1.4.1.412.100.2.1.3.6 NAME 'dlm1ComputerSystem'
  DESC 'A class derived from System that is a special
        collection of ManagedSystemElements. This collection
        provides compute capabilities and serves as
        aggregation point to associate one or more of the
        following elements: FileSystem, OperatingSystem,
        Processor and Memory (Volatile and/or NonVolatile
        Storage).'
  SUP dlm1System ABSTRACT
  MAY ( dlmDedicated $ dlmNameFormat )
)
```

3.7 AdminDomain Classes

This class represents a special grouping of MSEs that are all administered by the same user, group of users or policy.

```
( 1.3.6.1.4.1.412.100.2.1.3.93 NAME 'dlm1AdminDomain'
  DESC 'This is a special grouping of
        ManagedSystemElements. The grouping is viewed as a
        single entity, reflecting that all of its components
        are administered similarly - either by the same user,
        group of users or policy. It serves as an aggregation
        point to associate one or more of the following
        elements: network devices, such as routers and
        switches, servers, and other resources that can be
        accessed by end systems. This grouping of devices
        plays an essential role in ensuring that the same
        administrative policy and actions are applied to all
```

```
            of the devices in the grouping. The specific behavior
            and/or semantics of the AdminDomain can be identified
            through its aggregated and associated entities.'
      SUP dlm1System ABSTRACT
    )

    ( 1.3.6.1.4.1.412.100.2.1.3.94 NAME 'dlm1AdminDomainAuxClass'
      DESC 'This is a special grouping of
            ManagedSystemElements. The grouping is viewed as a
            single entity, reflecting that all of its components
            are administered similarly - either by the same user,
            group of users or policy. It serves as an aggregation
            point to associate one or more of the following
            elements: network devices, such as routers and
            switches, servers, and other resources that can be
            accessed by end systems. This grouping of devices
            plays an essential role in ensuring that the same
            administrative policy and actions are applied to all
            of the devices in the grouping. The specific behavior
            and/or semantics of the AdminDomain can be identified
            through its aggregated and associated entities.'
      SUP dlm1AdminDomain AUXILIARY
    )

    ( 1.3.6.1.4.1.412.100.2.1.3.95 NAME 'dlm1AdminDomainInstance'
      DESC 'This is a special grouping of
            ManagedSystemElements. The grouping is viewed as a
            single entity, reflecting that all of its components
            are administered similarly - either by the same user,
            group of users or policy. It serves as an aggregation
            point to associate one or more of the following
            elements: network devices, such as routers and
            switches, servers, and other resources that can be
            accessed by end systems. This grouping of devices
            plays an essential role in ensuring that the same
            administrative policy and actions are applied to all
            of the devices in the grouping. The specific behavior
            and/or semantics of the AdminDomain can be identified
            through its aggregated and associated entities.'
      SUP dlm1AdminDomain
    )

    ( 1.3.6.1.4.1.412.100.2.3.3.10 NAME
'dlm1AdminDomainInstanceNameForm1'
      OC dlm1AdminDomainInstance
      MUST ( orderedCimKeys )
    )

    ( <core-sr-10> NAME 'dlm1AdminDomainInstanceStructureRule1'
      Form dlm1AdminDomainInstanceNameForm1
    )
```

The following content rule specifies the auxiliary classes that may be attached to dlm1AdminDomainInstance.

```
   ( 1.3.6.1.4.1.412.100.2.1.3.95 NAME
'dlm1AdminDomainInstanceContentRule'
     DESC 'Aux classes that can attach to
           dlm1AdminDomainInstance.'
     AUX ( dlm1SynchronizedHelper $
           dlm1ElementConfigurationAuxClass $
           dlm1ElementSettingAuxClass $
           dlm1DefaultSettingAuxClass $
           dlm1ProvidesServiceToElementAuxClass $
           dlm1StatisticsAuxClass $ dlm1CollectedMSEsAuxClass $
           dlm1SystemComponentAuxClass $
           dlm1MemberOfCollectionAuxClass $
           dlm1SystemDeviceAuxClass )
   )
```

3.8 LogicalDevice

This class represents an abstraction or emulation of a hardware entity that may or may not be realized in physical hardware. Any characteristics of a logical device that are used to manage its operation or configuration are contained in, or associated with, this object.

```
   ( 1.3.6.1.4.1.412.100.2.2.124 NAME 'dlmAdditionalAvailability'
     DESC 'Additional availability and status of the Device,
           beyond that specified in the Availability property. The
           Availability property denotes the primary status and
           availability of the Device. In some cases, this will
           not be sufficient to denote the complete status of the
           Device.  In those cases, the AdditionalAvailability
           property can be used to provide further information.
           For example, a Device"s primary Availability may be
           "Off line" (value=8), but it may also be in a low
           power state (AdditonalAvailability value=14), or the
           Device could be running Diagnostics (Additional
           Availability value=5, "In Test").  Values are
           1="Other", 2="Unknown", 3="Running/Full Power",
           4="Warning", 5="In Test", 6="Not Applicable", 7="Power
           Off", 8="Off Line", 9="Off Duty", 10="Degraded",
           11="Not Installed", 12="Install Error", 13="Power Save
           - Unknown", 14="Power Save - Low Power Mode", 15="Power
           Save - Standby", 16="Power Cycle", 17="Power Save -
           Warning", 18="Paused", 19="Not Ready", 20="Not
           Configured", 21="Quiesced"'
     SYNTAX 1.3.6.1.4.1.1466.115.121.1.27
     EQUALITY integerMatch
   )

   ( 1.3.6.1.4.1.412.100.2.2.125 NAME 'dlmAvailability'
     DESC 'The primary availability and status of the
           Device. (Additional status information can be
           specified using the AdditionalAvailability array
           property.) For example, the Availability property
           indicates that the Device is running and has full
           power (value=3), or is in a warning (4), test (5),
           degraded (10) or power save state (values 13-15 and
           17). Regarding the Power Save states, these are
           defined as follows: Value 13 ("Power Save - Unknown\
           Values are 1="Other", 2="Unknown", 3="Running/Full
           Power", 4="Warning", 5="In Test", 6="Not Applicable",
           7="Power Off", 8="Off Line", 9="Off Duty",
           10="Degraded", 11="Not Installed", 12="Install Error",
           13="Power Save - Unknown", 14="Power Save - Low Power
           Mode", 15="Power Save - Standby", 16="Power Cycle",
           17="Power Save - Warning", 18="Paused", 19="Not
           Ready", 20="Not Configured", 21="Quiesced"'
     SYNTAX 1.3.6.1.4.1.1466.115.121.1.27 SINGLE-VALUE
     EQUALITY integerMatch
   )

   ( 1.3.6.1.4.1.412.100.2.2.126 NAME 'dlmDeviceID'
     DESC 'An address or other identifying information to
           uniquely name the LogicalDevice.'
     SYNTAX 1.3.6.1.4.1.1466.115.121.1.15{64} SINGLE-VALUE
     EQUALITY caseIgnoreMatch
   )

   ( 1.3.6.1.4.1.412.100.2.2.127 NAME 'dlmErrorCleared'
     DESC 'ErrorCleared is a boolean property indicating
           that the error reported in LastErrorCode is now
           cleared.'
     SYNTAX 1.3.6.1.4.1.1466.115.121.1.7 SINGLE-VALUE
   )

   ( 1.3.6.1.4.1.412.100.2.2.128 NAME 'dlmErrorDescription'
     DESC 'ErrorDescription is a free-form string supplying
           more information about the error recorded in
           LastErrorCode, and information on any corrective
           actions that may be taken.'
     SYNTAX 1.3.6.1.4.1.1466.115.121.1.15 SINGLE-VALUE
     EQUALITY caseIgnoreMatch
   )

   ( 1.3.6.1.4.1.412.100.2.2.129 NAME 'dlmLastErrorCode'
     DESC 'LastErrorCode captures the last error code
           reported by the LogicalDevice.'
     SYNTAX 1.3.6.1.4.1.1466.115.121.1.27 SINGLE-VALUE
     EQUALITY integerMatch
   )

   ( 1.3.6.1.4.1.412.100.2.2.130 NAME 'dlmMaxQuiesceTime'
     DESC 'Maximum time in milliseconds, that a Device can
           run in a "Quiesced" state. A Device"s state is defined
           in its Availability and Additional Availability
           properties, where "Quiesced" is conveyed by the value
           21. What occurs at the end of the time limit is
           device-specific. The Device may unquiesce, may offline
           or take other action. A value of 0 indicates that a
           Device can remain quiesced indefinitely. The value is
           considered to be MilliSeconds.'
     SYNTAX 1.3.6.1.4.1.1466.115.121.1.27 SINGLE-VALUE
     EQUALITY integerMatch
   )
   ( 1.3.6.1.4.1.412.100.2.2.131 NAME 'dlmPowerManagementCapabilities'
     DESC 'Indicates the specific power-related capabilities
           of a LogicalDevice. The array values, 0="Unknown",
           1="Not Supported" and 2="Disabled" are
           self-explanatory. The value, 3="Enabled" indicates
           that the power management features are currently
           enabled but the exact feature set is unknown or the
           information is unavailable. "Power Saving Modes
           Entered Automatically" (4) describes that a Device can
           change its power state based on usage or other
           criteria. "Power State Settable" (5) indicates that
           the SetPowerState method is supported. "Power Cycling
           Supported" (6) indicates that the SetPowerState method
           can be invoked with the PowerState input variable set
           to 5 ("Power Cycle"). "Timed Power On Supported" (7)
           indicates that the SetPowerState method can be invoked
           with the Power State input variable set to 5 ("Power
           Cycle")  Values are 0="Unknown", 1="Not Supported",
           2="Disabled", 3="Enabled", 4="Power Saving Modes
           Entered Automatically", 5="Power State Settable",
           6="Power Cycling Supported", 7="Timed Power On
           Supported"'
     SYNTAX 1.3.6.1.4.1.1466.115.121.1.27
     EQUALITY integerMatch
   )

   ( 1.3.6.1.4.1.412.100.2.2.132 NAME 'dlmPowerManagementSupported'
     DESC 'Boolean indicating that the Device can be power
           managed - ie, put into a power save state. This
           boolean does not indicate that power management
           features are currently enabled, or if enabled, what
           features are supported. Refer to the
           PowerManagementCapabilities array for this
           information. If this boolean is false, the integer
           value 1, for the string, "Not Supported", should be
           the only entry in the PowerManagementCapabilities
           array.'
     SYNTAX 1.3.6.1.4.1.1466.115.121.1.7 SINGLE-VALUE
   )

   ( 1.3.6.1.4.1.412.100.2.2.133 NAME 'dlmPowerOnHours'
     DESC 'The number of consecutive hours that this Device
           has been powered, since its last power cycle. The
           value is considered to be Hours.'
     SYNTAX 1.3.6.1.4.1.1466.115.121.1.27 SINGLE-VALUE
     EQUALITY integerMatch
   )

   ( 1.3.6.1.4.1.412.100.2.2.134 NAME 'dlmStatusInfo'
     DESC 'The StatusInfo property indicates whether the
           Logical Device is in an enabled (value = 3), disabled
           (value = 4) or some other (1) or unknown (2) state. If
           this property does not apply to the LogicalDevice, the
           value, 5 ("Not Applicable”).  Values are 1="Other",
           2="Unknown", 3="Enabled", 4="Disabled", 5="Not
           Available"'
     SYNTAX 1.3.6.1.4.1.1466.115.121.1.27 SINGLE-VALUE
```

```
    EQUALITY integerMatch
  )

  ( 1.3.6.1.4.1.412.100.2.2.135 NAME 'dlmTotalPowerOnHours'
    DESC 'The total number of hours that this Device has
          been powered. The value is considered to be Hours.'
    SYNTAX 1.3.6.1.4.1.1466.115.121.1.27 SINGLE-VALUE
    EQUALITY integerMatch
  )

  ( 1.3.6.1.4.1.412.100.2.1.3.7 NAME 'dlm1LogicalDevice'
    DESC 'An abstraction or emulation of a hardware entity,
          that may or may not be Realized in physical hardware.
          Any characteristics of a LogicalDevice that are used
          to manage its operation or configuration are contained
          in, or associated with, the LogicalDevice object.
          Examples of the operational properties of a Printer
          would be paper sizes supported, or detected errors.
          Examples of the configuration properties of a Sensor
          Device would be threshold settings. Various
          configurations could exist for a LogicalDevice. These
          configurations could be contained in Setting objects
          and associated with the LogicalDevice.'
    SUP dlm1LogicalElement ABSTRACT
    MAY ( dlmAdditionalAvailability $ dlmAvailability $
          dlmCreationClassName $ dlmDeviceID $ dlmErrorCleared $
          dlmErrorDescription $ dlmLastErrorCode $ dlmMaxQuiesceTime $
          dlmPowerManagementCapabilities $
          dlmPowerManagementSupported $ dlmPowerOnHours $
          dlmStatusInfo $ dlmTotalPowerOnHours )
  )
```

3.9 Service

This class represents a Logical Element that contains the information necessary to represent and manage the functionality provided by a device and/or software feature. A service is a general-purpose object to configure and manage the implementation of functionality. It is not the functionality itself.

```
  ( 1.3.6.1.4.1.412.100.2.2.136 NAME 'dlmStartMode'
    DESC 'StartMode is a string value indicating whether
          the Service is automatically started by a System,
          Operating System, etc. or only started upon request.
          Value Mappings are "Automatic", "Manual"'
    SYNTAX 1.3.6.1.4.1.1466.115.121.1.15{10} SINGLE-VALUE
    EQUALITY caseIgnoreMatch
  )

  ( 1.3.6.1.4.1.412.100.2.2.137 NAME 'dlmStarted'
    DESC 'Started is a boolean indicating whether the
          Service has been started (TRUE), or stopped (FALSE).'
    SYNTAX 1.3.6.1.4.1.1466.115.121.1.7 SINGLE-VALUE
  )
```

```
( 1.3.6.1.4.1.412.100.2.1.3.8 NAME 'dlm1Service'
  DESC 'A Service is a Logical Element that contains the
        information necessary to represent and manage the
        functionality provided by a Device and/or
        SoftwareFeature. A Service is a general-purpose object
        to configure and manage the implementation of
        functionality.  It is not the functionality itself.'
  SUP dlm1LogicalElement ABSTRACT
  MAY ( dlmCreationClassName $ dlmName $ dlmStartMode $
        dlmStarted )
)
```

3.10 ServiceAccessPoint

This class represents the ability to use or invoke a service. Access points represent that a service is made available to other entities for use.

```
( 1.3.6.1.4.1.412.100.2.1.3.9 NAME 'dlm1ServiceAccessPoint'
  DESC 'ServiceAccessPoint represents the ability to
        utilize or invoke a Service.  Access points represent
        that a Service is made available to other entities for
        use.'
  SUP dlm1LogicalElement ABSTRACT
  MAY ( dlmCreationClassName $ dlmName )
)
```

3.11 Collection

This abstract class provides a common superclass for classes that represent collections of managed elements.

```
( 1.3.6.1.4.1.412.100.2.1.3.10 NAME 'dlm1Collection'
  DESC 'Collection is an abstract class that provides a
        common superclass for data elements that represent
        collections of ManagedElements and its subclasses.'
  SUP dlm1ManagedElement ABSTRACT
)
```

3.12 CollectionOfMSEs

This object allows the grouping of ManagedSystemElement objects for associating settings and configurations. It is abstract to require further definition and semantic refinement in subclasses. As this object does not carry any state or status information, it only represents a grouping or 'bag' of elements. So, it is incorrect to subclass groups that have state/status from this class - an example is RedundancyGroup (which is subclassed from LogicalElement).

Collections typically aggregate 'like' objects, and represent an optimization. Without collections, one is forced to define individual associations, to tie settings and configuration objects to individual ManagedSystemElements. There may be much duplication in assigning the same setting to multiple objects. In addition, using this object allows the determination that the setting and configuration associations are indeed the same for the collection's members. This information would otherwise be obtained by defining the collection in a proprietary way, and then querying the associations to determine if the collection set is completely covered.

```
( 1.3.6.1.4.1.412.100.2.2.138 NAME 'dlmCollectionID'
  DESC 'The identification of the Collection object. When
        subclassed, the CollectionID property can be overridden
        to be a Key property.'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15{256} SINGLE-VALUE
  EQUALITY caseIgnoreMatch
)

( 1.3.6.1.4.1.412.100.2.1.3.11 NAME 'dlm1CollectionOfMSEs'
  DESC 'The CollectionOfMSEs object allows the grouping
        of ManagedSystemElements for various identification
        purposes and to reduce the complexity of
        associating Settings and Configurations. It is
        abstract to require further definition and semantic
        refinement in subclasses. The CollectionOfMSEs object
        does not carry any state or status information, but
        only represents a grouping or "bag" of Elements. For
        this reason, it is incorrect to subclass groups that
        have state/status from CollectionOfMSEs - an example
        is Redundancy Group (which is subclassed
        from LogicalElement).   Collections typically
        aggregate "like" objects, but are not required to do
        so.  They simply identify "bags" and may represent an
        optimization. This is especially true with respect to
        their association to Settings and Configurations.
        Without Collections, one is forced to define
        individual ElementSetting and ElementConfiguration
        associations, to tie Settings and Configuration
        objects to individual ManagedSystemElements. There may
        be much duplication in assigning the same Setting to
        multiple objects. In addition, using the Collection
        object allows the determination that the Setting and
        Configuration associations are indeed the same for the
        Collection"s members. This information would otherwise
        be obtained by defining the Collection in a
        proprietary manner, and then querying the
        ElementSetting and ElementConfiguration associations
        to determine if the Collection set is completely
        covered.'
  SUP dlm1Collection ABSTRACT
  MAY ( dlmCollectionID )
)
```

3.13 Configuration Classes

This object allows the grouping of sets of parameters (defined in Setting objects) and dependencies for one or more managed system elements. The configuration object represents a certain behavior, or a desired functional state for the managed system elements. The desired functional state is typically driven by external requirements such as time or location. For example, to connect to a Mail System from 'home', a dependency on a modem exists, but a dependency on a network adapter exists at 'work'. Settings for the pertinent logical devices can be defined and aggregated by the configuration. Therefore, two 'Connect to Mail' configurations may be defined grouping the relevant dependencies and setting objects.

```
( 1.3.6.1.4.1.412.100.2.1.3.12 NAME 'dlm1Configuration'
  DESC 'The Configuration object allows the grouping of
        sets of parameters (defined in Setting objects) and
        dependencies for one or more ManagedSystemElements.
        The Configuration object represents a certain
        behavior, or a desired functional state for the
        ManagedSystemElements. The desired functional state is
        typically driven by external requirements such as time
        or location. For example, to connect to a Mail System
        from "home", a dependency on a modem exists, but a
        dependency on a network adapter exists at "work".
        Settings for the pertinent LogicalDevices (in this
        example, POTSModem and NetworkAdapter) can be defined
        and aggregated by the Configuration. Therefore, two
        "Connect to Mail" Configurations may be defined
        grouping the relevant dependencies and Setting
        objects.'
  SUP dlm1ManagedElement ABSTRACT
  MAY ( dlmName )
)

( 1.3.6.1.4.1.412.100.2.1.3.13 NAME 'dlm1ConfigurationAuxClass'
  DESC 'The Configuration object allows the grouping of
        sets of parameters (defined in Setting objects) and
        dependencies for one or more ManagedSystemElements.
        The Configuration object represents a certain
        behavior, or a desired functional state for the
        ManagedSystemElements. The desired functional state is
        typically driven by external requirements such as time
        or location. For example, to connect to a Mail System
        from "home", a dependency on a modem exists, but a
        dependency on a network adapter exists at "work".
        Settings for the pertinent LogicalDevices (in this
        example, POTSModem and NetworkAdapter) can be defined
        and aggregated by the Configuration. Therefore, two
        "Connect to Mail" Configurations may be defined
        grouping the relevant dependencies and Setting
        objects.'
  SUP dlm1Configuration AUXILIARY
)

( 1.3.6.1.4.1.412.100.2.1.3.14 NAME 'dlm1ConfigurationInstance'
  DESC 'The Configuration object allows the grouping of
        sets of parameters (defined in Setting objects) and
        dependencies for one or more ManagedSystemElements.
        The Configuration object represents a certain
        behavior, or a desired functional state for the
```

```
            ManagedSystemElements. The desired functional state is
            typically driven by external requirements such as time
            or location. For example, to connect to a Mail System
            from "home", a dependency on a modem exists, but a
            dependency on a network adapter exists at "work".
            Settings for the pertinent LogicalDevices (in this
            example, POTSModem and NetworkAdapter) can be defined
            and aggregated by the Configuration. Therefore, two
            "Connect to Mail" Configurations may be defined
            grouping the relevant dependencies and Setting
            objects.'
      SUP dlm1Configuration
   )

   ( 1.3.6.1.4.1.412.100.2.3.3.1 NAME
'dlm1ConfigurationInstanceNameForm1'
      OC dlm1ConfigurationInstance
      MUST ( orderedCimKeys )
   )

   ( <core-sr-1> NAME 'dlm1ConfigurationInstanceStructureRule1'
      Form dlm1ConfigurationInstanceNameForm1
   )
```

The following content rule specifies the auxiliary classes that may be attached to dlm1ConfigurationInstance.

```
   ( 1.3.6.1.4.1.412.100.2.1.3.14 NAME
'dlm1ConfigurationInstanceContentRule'
      DESC 'Aux classes that can attach to
            dlm1ConfigurationInstance.'
      AUX ( dlm1ElementConfigurationAuxClass $
            dlm1CollectionConfigurationAuxClass $
            dlm1ProvidesServiceToElementAuxClass $
            dlm1StatisticsAuxClass $
            dlm1ConfigurationComponentAuxClass $
            dlm1MemberOfCollectionAuxClass $
            dlm1SettingContextAuxClass )
   )
```

3.14 Setting

This class represents configuration-related and operational parameters for one or more managed system element(s). A managed system element may have multiple setting objects associated with it. The current operational values for an element's parameters are reflected by properties in the element itself or by properties in its associations. These properties do not have to be the same values present in the setting object. For example, a modem may have a setting baud rate of 56Kb/sec but be operating at 19.2Kb/sec.

```
   ( 1.3.6.1.4.1.412.100.2.2.139 NAME 'dlmSettingID'
      DESC 'The identifier by which the Setting object is
```

```
            known.'
      SYNTAX 1.3.6.1.4.1.1466.115.121.1.15{256} SINGLE-VALUE
      EQUALITY caseIgnoreMatch
    )

    ( 1.3.6.1.4.1.412.100.2.1.3.15 NAME 'dlm1Setting'
      DESC 'The Setting class represents
            configuration-related and operational parameters for
            one or more ManagedSystem Element(s). A
            ManagedSystemElement may have multiple Setting objects
            associated with it. The current operational values for
            an Element"s parameters are reflected by properties in
            the Element itself or by properties in its
            associations. These properties do not have to be the
            same values present in the Setting object. For
            example, a modem may have a Setting baud rate of
            56Kb/sec but be operating at 19.2Kb/sec.'
      SUP dlm1ManagedElement ABSTRACT
      MAY ( dlmSettingID )
    )
```

3.15 Product Classes

This concrete class is a collection of physical elements, software features and/or other products, acquired as a unit. Acquisition implies an agreement between supplier and consumer that may have implications to product licensing, support and warranty.

```
    ( 1.3.6.1.4.1.412.100.2.2.140 NAME 'dlmIdentifyingNumber'
      DESC 'Product identification such as a serial number on
            software, a die number on a hardware chip, or (for
            non-commercial Products) a project number.'
      SYNTAX 1.3.6.1.4.1.1466.115.121.1.15{64} SINGLE-VALUE
      EQUALITY caseIgnoreMatch
    )

    ( 1.3.6.1.4.1.412.100.2.2.141 NAME 'dlmSKUNumber'
      DESC 'Product SKU (stock keeping unit) information.'
      SYNTAX 1.3.6.1.4.1.1466.115.121.1.15{64} SINGLE-VALUE
      EQUALITY caseIgnoreMatch
    )

    ( 1.3.6.1.4.1.412.100.2.2.142 NAME 'dlmVendor'
      DESC 'The name of the Product"s supplier, or entity
            selling the Product (the manufacturer, reseller, OEM,
            etc.). Corresponds to the Vendor property in the
            Product object in the DMTF Solution Exchange Standard.'
      SYNTAX 1.3.6.1.4.1.1466.115.121.1.15{256} SINGLE-VALUE
      EQUALITY caseIgnoreMatch
    )

    ( 1.3.6.1.4.1.412.100.2.2.143 NAME 'dlmWarrantyDuration'
      DESC 'If this Product is under warranty, the duration
            of the warranty in days. The value is considered to be
            Days.'
      SYNTAX 1.3.6.1.4.1.1466.115.121.1.27 SINGLE-VALUE
      EQUALITY integerMatch
    )

    ( 1.3.6.1.4.1.412.100.2.2.144 NAME 'dlmWarrantyStartDate'
      DESC 'If this Product is under warranty, the start date
            of the warranty.'
      SYNTAX 1.3.6.1.4.1.1466.115.121.1.24 SINGLE-VALUE
      EQUALITY generalizedTimeMatch
    )

    ( 1.3.6.1.4.1.412.100.2.1.3.16 NAME 'dlm1Product'
      DESC 'Product is a concrete class that is a collection
            of PhysicalElements, SoftwareFeatures and/or other
            Products, acquired as a unit. Acquisition implies an
            agreement between supplier and consumer which may have
            implications to Product licensing, support and
            warranty. Non-commercial (e.g., in-house developed
            Products) should also be identified as an instance of
            Product.'
      SUP dlm1ManagedElement ABSTRACT
      MAY ( dlmIdentifyingNumber $ dlmName $ dlmSKUNumber $
            dlmVendor $ dlmVersion $ dlmWarrantyDuration $
            dlmWarrantyStartDate )
    )

    ( 1.3.6.1.4.1.412.100.2.1.3.17 NAME 'dlm1ProductAuxClass'
      DESC 'Product is a concrete class that is a collection
            of PhysicalElements, SoftwareFeatures and/or other
            Products, acquired as a unit. Acquisition implies an
            agreement between supplier and consumer which may have
            implications to Product licensing, support and
            warranty. Non-commercial (e.g., in-house developed
            Products) should also be identified as an instance of
            Product.'
      SUP dlm1Product AUXILIARY
    )

    ( 1.3.6.1.4.1.412.100.2.1.3.18 NAME 'dlm1ProductInstance'
      DESC 'Product is a concrete class that is a collection
            of PhysicalElements, SoftwareFeatures and/or other
            Products, acquired as a unit. Acquisition implies an
            agreement between supplier and consumer which may have
            implications to Product licensing, support and
            warranty. Non-commercial (e.g., in-house developed
            Products) should also be identified as an instance of
            Product.'
      SUP dlm1Product
    )

    ( 1.3.6.1.4.1.412.100.2.3.3.2 NAME 'dlm1ProductInstanceNameForm1'
      OC dlm1ProductInstance
      MUST ( orderedCimKeys )
    )

    ( <core-sr-2> NAME 'dlm1ProductInstanceStructureRule1'
      Form dlm1ProductInstanceNameForm1
    )
```

The following content rule specifies the auxiliary classes that may be attached to dlm1ProductInstance.

```
( 1.3.6.1.4.1.412.100.2.1.3.18 NAME 'dlm1ProductInstanceContentRule'
  DESC 'Aux classes that can attach to
        dlm1ProductInstance.'
  AUX ( dlm1CompatibleProductHelper $
        dlm1ProductProductDependencyHelper $
        dlm1ProductSupportAuxClass $ dlm1ProductFRUAuxClass $
        dlm1ProvidesServiceToElementAuxClass $
        dlm1StatisticsAuxClass $
        dlm1ProductParentChildAuxClass $
        dlm1FRUIncludesProductAuxClass $
        dlm1MemberOfCollectionAuxClass $
        dlm1ProductPhysicalElementsAuxClass )
)
```

3.16 SupportAccess Classes

These classes define how to obtain help for a product.

```
( 1.3.6.1.4.1.412.100.2.2.145 NAME 'dlmCommunicationInfo'
  DESC 'CommunicationInfo provides the details of the
        Communication Mode. For example, if the
        CommunicationMode is "Phone", CommunicationInfo
        specifies the phone number to be called.'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15 SINGLE-VALUE
  EQUALITY caseIgnoreMatch
)

( 1.3.6.1.4.1.412.100.2.2.146 NAME 'dlmCommunicationMode'
  DESC 'CommunicationMode defines the form of
        communication in order to obtain support. For example,
        phone communication (value =2), fax (3) or email (8)
        can be specified.  Values are 1="Other", 2="Phone",
        3="Fax", 4="BBS", 5="Online Service", 6="Web Page",
        7="FTP", 8="E-mail"'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.27 SINGLE-VALUE
  EQUALITY integerMatch
)

( 1.3.6.1.4.1.412.100.2.2.147 NAME 'dlmLocale'
  DESC 'Locale defines the geographic region and/or
        language dialect to which this Support resource
        pertains.'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15{64} SINGLE-VALUE
  EQUALITY caseIgnoreMatch
)

( 1.3.6.1.4.1.412.100.2.2.148 NAME 'dlmSupportAccessId'
  DESC 'SupportAccessID is an arbitrary, free form string
        defined by the Product Vendor or by the organization
        that deploys the Product.  This property, since it is
        a key, should be unique throughout the enterprise.'
```

```
     SYNTAX 1.3.6.1.4.1.1466.115.121.1.15{256} SINGLE-VALUE
     EQUALITY caseIgnoreMatch
   )

   ( 1.3.6.1.4.1.412.100.2.1.3.19 NAME 'dlm1SupportAccess'
     DESC 'SupportAccess defines how to obtain
           assistance for a Product.'
     SUP dlm1ManagedElement ABSTRACT
     MAY ( dlmCommunicationInfo $ dlmCommunicationMode $
           dlmDescription $ dlmLocale $ dlmSupportAccessId )
   )

   ( 1.3.6.1.4.1.412.100.2.1.3.20 NAME 'dlm1SupportAccessAuxClass'
     DESC 'SupportAccess defines how to obtain
           assistance for a Product.'
     SUP dlm1SupportAccess AUXILIARY
   )

   ( 1.3.6.1.4.1.412.100.2.1.3.21 NAME 'dlm1SupportAccessInstance'
     DESC 'SupportAccess defines how to obtain
           assistance for a Product.'
     SUP dlm1SupportAccess
   )

   ( 1.3.6.1.4.1.412.100.2.3.3.3 NAME
'dlm1SupportAccessInstanceNameForm1'
     OC dlm1SupportAccessInstance
     MUST ( orderedCimKeys )
   )

   ( <core-sr-3> NAME 'dlm1SupportAccessInstanceStructureRule1'
     Form dlm1SupportAccessInstanceNameForm1
   )
```

The following content rule specifies the auxiliary classes that may be attached to dlm1SupportAccessInstance.

```
   ( 1.3.6.1.4.1.412.100.2.1.3.21 NAME
'dlm1SupportAccessInstanceContentRule'
     DESC 'Aux classes that can attach to
           dlm1SupportAccessInstance.'
     AUX ( dlm1ProductSupportAuxClass $
           dlm1ProvidesServiceToElementAuxClass $
           dlm1StatisticsAuxClass $
           dlm1MemberOfCollectionAuxClass )
   )
```

3.17 FRU Classes

These classes model vendor-defined collections of products and/or physical elements that are associated with a product for supporting, maintaining or upgrading that product at the customer's location. FRU is an acronym for 'field replaceable unit'.

```
( 1.3.6.1.4.1.412.100.2.2.149 NAME 'dlmFRUNumber'
  DESC 'FRU ordering information.'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15{64} SINGLE-VALUE
  EQUALITY caseIgnoreMatch
)

( 1.3.6.1.4.1.412.100.2.2.150 NAME 'dlmRevisionLevel'
  DESC 'The FRU"s revision level.'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15{64} SINGLE-VALUE
  EQUALITY caseIgnoreMatch
)

( 1.3.6.1.4.1.412.100.2.1.3.22 NAME 'dlm1FRU'
  DESC 'The FRU class is a vendor-defined collection of
        Products and/or PhysicalElements that is associated
        with a Product for the purpose of supporting,
        maintaining or upgrading that Product at the
        customer"s location. FRU is an acronym for "field
        replaceable unit". '
  SUP dlm1ManagedElement ABSTRACT
  MAY ( dlmDescription $ dlmFRUNumber $
        dlmIdentifyingNumber $ dlmName $ dlmRevisionLevel $
        dlmVendor )
)

( 1.3.6.1.4.1.412.100.2.1.3.23 NAME 'dlm1FRUAuxClass'
  DESC 'The FRU class is a vendor-defined collection of
        Products and/or PhysicalElements that is associated
        with a Product for the purpose of supporting,
        maintaining or upgrading that Product at the
        customer"s location. FRU is an acronym for "field
        replaceable unit". '
  SUP dlm1FRU AUXILIARY
)

( 1.3.6.1.4.1.412.100.2.1.3.24 NAME 'dlm1FRUInstance'
  DESC 'The FRU class is a vendor-defined collection of
        Products and/or PhysicalElements that is associated
        with a Product for the purpose of supporting,
        maintaining or upgrading that Product at the
        customer"s location. FRU is an acronym for "field
        replaceable unit". '
  SUP dlm1FRU
)

( 1.3.6.1.4.1.412.100.2.3.3.4 NAME 'dlm1FRUInstanceNameForm1'
  OC dlm1FRUInstance
  MUST ( orderedCimKeys )
)

( <core-sr-4> NAME 'dlm1FRUInstanceStructureRule1'
  Form dlm1FRUInstanceNameForm1
)
```

The following content rule specifies the auxiliary classes that may be attached to dlm1FRUInstance.

```
   ( 1.3.6.1.4.1.412.100.2.1.3.24 NAME 'dlm1FRUInstanceContentRule'
     DESC 'Aux classes that can attach to dlm1FRUInstance.'
     AUX ( dlm1ProductFRUAuxClass $
           dlm1ProvidesServiceToElementAuxClass $
           dlm1StatisticsAuxClass $
           dlm1MemberOfCollectionAuxClass $
           dlm1FRUPhysicalElementsAuxClass $
           dlm1FRUIncludesProductAuxClass )
   )
```

3.18 StatisticalInformation

This is the root class for collections of statistical data.

```
   ( 1.3.6.1.4.1.412.100.2.1.3.96 NAME 'dlm1StatisticalInformation'
     DESC 'StatisticalInformation is a root class for any
           arbitrary collection of statistical data and/or
           metrics applicable to one or more
           ManagedSystemElements.'
     SUP dlm1ManagedElement ABSTRACT
     MAY ( dlmName )
   )
```

3.19 SystemStatisticalInformation Classes

These classes handle statistics associated with either a system entry or one of its subclasses.

```
   ( 1.3.6.1.4.1.412.100.2.1.3.97 NAME
'dlm1SystemStatisticalInformation'
     DESC 'Statistical information associated with a System
           object or one of its subclasses.'
     SUP dlm1StatisticalInformation ABSTRACT
     MAY ( dlmCreationClassName $ dlmName )
   )

   ( 1.3.6.1.4.1.412.100.2.1.3.98 NAME
'dlm1SystemStatisticalInformationAuxClass'
     DESC 'Statistical information associated with a System
           object or one of its subclasses.'
     SUP dlm1SystemStatisticalInformation AUXILIARY
   )

   ( 1.3.6.1.4.1.412.100.2.1.3.99 NAME
'dlm1SystemStatisticalInformationInstance'
     DESC 'Statistical information associated with a System
           object or one of its subclasses.'
     SUP dlm1SystemStatisticalInformation
   )

   ( 1.3.6.1.4.1.412.100.2.3.3.11 NAME
'dlm1SystemStatisticalInformationInstanceNameForm1'
     OC dlm1SystemStatisticalInformationInstance
     MUST ( orderedCimKeys )
   )

   ( <core-sr-11> NAME
'dlm1SystemStatisticalInformationInstanceStructureRule1'
```

```
     Form dlm1SystemStatisticalInformationInstanceNameForm1
   )
```

The following content rule specifies the auxiliary classes that may be attached to dlm1SystemStatisticalInformationInstance.

```
   ( 1.3.6.1.4.1.412.100.2.1.3.99 NAME
'dlm1SystemStatisticalInformationInstanceContentRule'
     DESC 'Aux classes that can attach to
           dlm1SystemStatisticalInformationInstance.'
     AUX ( dlm1StatisticsAuxClass $
           dlm1RelatedStatisticsAuxClass $
           dlm1ProvidesServiceToElementAuxClass $
           dlm1MemberOfCollectionAuxClass )
   )
```

3.20 ServiceStatisticalInformation Classes

These classes model statistical information for a service entity or one of its subclasses.

```
   ( 1.3.6.1.4.1.412.100.2.1.3.100 NAME
'dlm1ServiceStatisticalInformation'
     DESC 'Statistical information associated with a Service
           object or one of its subclasses.'
     SUP dlm1StatisticalInformation ABSTRACT
     MAY ( dlmCreationClassName $ dlmName )
   )

   ( 1.3.6.1.4.1.412.100.2.1.3.101 NAME
'dlm1ServiceStatisticalInformationAuxClass'
     DESC 'Statistical information associated with a Service
           object or one of its subclasses.'
     SUP dlm1ServiceStatisticalInformation AUXILIARY
   )

   ( 1.3.6.1.4.1.412.100.2.1.3.102 NAME
'dlm1ServiceStatisticalInformationInstance'
     DESC 'Statistical information associated with a Service
           object or one of its subclasses.'
     SUP dlm1ServiceStatisticalInformation
   )

   ( 1.3.6.1.4.1.412.100.2.3.3.12 NAME
'dlm1ServiceStatisticalInformationInstanceNameForm1'
     OC dlm1ServiceStatisticalInformationInstance
     MUST ( orderedCimKeys )
   )

   ( <core-sr-12> NAME
'dlm1ServiceStatisticalInformationInstanceStructureRule1'
     Form dlm1ServiceStatisticalInformationInstanceNameForm1
   )
```

The following content rule specifies the auxiliary classes that may be attached to dlm1ServiceStatisticalInformationInstance.

```
   ( 1.3.6.1.4.1.412.100.2.1.3.102 NAME
'dlm1ServiceStatisticalInformationInstanceContentRule'
     DESC 'Aux classes that can attach to
           dlm1ServiceStatisticalInformationInstance.'
     AUX ( dlm1StatisticsAuxClass $
           dlm1RelatedStatisticsAuxClass $
           dlm1ProvidesServiceToElementAuxClass $
           dlm1MemberOfCollectionAuxClass )
   )
```

3.21 SAPStatisticalInformation Classes

These classes model the statistical information for a service access point or one of its subclasses.

```
   ( 1.3.6.1.4.1.412.100.2.1.3.103 NAME 'dlm1SAPStatisticalInformation'
     DESC 'Statistical information associated with a Service
           AccessPoint object or one of its subclasses.'
     SUP dlm1StatisticalInformation ABSTRACT
     MAY ( dlmCreationClassName $ dlmName )
   )

   ( 1.3.6.1.4.1.412.100.2.1.3.104 NAME
'dlm1SAPStatisticalInformationAuxClass'
     DESC 'Statistical information associated with a Service
           AccessPoint object or one of its subclasses.'
     SUP dlm1SAPStatisticalInformation AUXILIARY
   )

   ( 1.3.6.1.4.1.412.100.2.1.3.105 NAME
'dlm1SAPStatisticalInformationInstance'
     DESC 'Statistical information associated with a Service
           AccessPoint object or one of its subclasses.'
     SUP dlm1SAPStatisticalInformation
   )

   ( 1.3.6.1.4.1.412.100.2.3.3.13 NAME
'dlm1SAPStatisticalInformationInstanceNameForm1'
     OC dlm1SAPStatisticalInformationInstance
     MUST ( orderedCimKeys )
   )

   ( <core-sr-13> NAME
'dlm1SAPStatisticalInformationInstanceStructureRule1'
     Form dlm1SAPStatisticalInformationInstanceNameForm1
   )
```

The following content rule specifies the auxiliary classes that may be attached to dlm1SAPStatisticalInformationInstance.

```
   ( 1.3.6.1.4.1.412.100.2.1.3.105 NAME
'dlm1SAPStatisticalInformationInstanceContentRule'
     DESC 'Aux classes that can attach to
           dlm1SAPStatisticalInformationInstance.'
     AUX ( dlm1StatisticsAuxClass $
           dlm1RelatedStatisticsAuxClass $
           dlm1ProvidesServiceToElementAuxClass $
           dlm1MemberOfCollectionAuxClass )
   )
```

3.22 DeviceStatisticalInformation Classes

These classes model statistics for a logical device or one of its subclasses.

```
   ( 1.3.6.1.4.1.412.100.2.1.3.106 NAME
'dlm1DeviceStatisticalInformation'
     DESC 'Statistical information associated with a
           LogicalDevice or one of its subclasses.'
     SUP dlm1StatisticalInformation ABSTRACT
     MAY ( dlmCreationClassName $ dlmName )
   )

   ( 1.3.6.1.4.1.412.100.2.1.3.107 NAME
'dlm1DeviceStatisticalInformationAuxClass'
     DESC 'Statistical information associated with a
           LogicalDevice or one of its subclasses.'
     SUP dlm1DeviceStatisticalInformation AUXILIARY
   )

   ( 1.3.6.1.4.1.412.100.2.1.3.108 NAME
'dlm1DeviceStatisticalInformationInstance'
     DESC 'Statistical information associated with a
           LogicalDevice or one of its subclasses.'
     SUP dlm1DeviceStatisticalInformation
   )

   ( 1.3.6.1.4.1.412.100.2.3.3.14 NAME
'dlm1DeviceStatisticalInformationInstanceNameForm1'
     OC dlm1DeviceStatisticalInformationInstance
     MUST ( orderedCimKeys )
   )

   ( <core-sr-14> NAME
'dlm1DeviceStatisticalInformationInstanceStructureRule1'
     Form dlm1DeviceStatisticalInformationInstanceNameForm1
   )
```

The following content rule specifies the auxiliary classes that may be attached to dlm1DeviceStatisticalInformationInstance.

```
   ( 1.3.6.1.4.1.412.100.2.1.3.108 NAME
'dlm1DeviceStatisticalInformationInstanceContentRule'
     DESC 'Aux classes that can attach to
           dlm1DeviceStatisticalInformationInstance.'
     AUX ( dlm1StatisticsAuxClass $
           dlm1RelatedStatisticsAuxClass $
           dlm1ProvidesServiceToElementAuxClass $
           dlm1MemberOfCollectionAuxClass )
   )
```

3.23 PhysicalStatisticalInformation Classes

These classes model statistics associated with a physical element or one of its subclasses.

```
   ( 1.3.6.1.4.1.412.100.2.1.3.109 NAME
'dlm1PhysicalStatisticalInformation'
     DESC 'Statistical information associated with a
           PhysicalElement or one of its subclasses.'
     SUP dlm1StatisticalInformation ABSTRACT
     MAY ( dlmCreationClassName $ dlmName )
   )

   ( 1.3.6.1.4.1.412.100.2.1.3.110 NAME
'dlm1PhysicalStatisticalInformationAuxClass'
     DESC 'Statistical information associated with a
           PhysicalElement or one of its subclasses.'
     SUP dlm1PhysicalStatisticalInformation AUXILIARY
   )

   ( 1.3.6.1.4.1.412.100.2.1.3.111 NAME
'dlm1PhysicalStatisticalInformationInstance'
     DESC 'Statistical information associated with a
           PhysicalElement or one of its subclasses.'
     SUP dlm1PhysicalStatisticalInformation
   )

   ( 1.3.6.1.4.1.412.100.2.3.3.15 NAME
'dlm1PhysicalStatisticalInformationInstanceNameForm1'
     OC dlm1PhysicalStatisticalInformationInstance
     MUST ( orderedCimKeys )
   )

   ( <core-sr-15> NAME
'dlm1PhysicalStatisticalInformationInstanceStructureRule1'
     Form dlm1PhysicalStatisticalInformationInstanceNameForm1
   )
```

The following content rule specifies the auxiliary classes that may be attached to dlm1PhysicalStatisticalInformationInstance.

```
   ( 1.3.6.1.4.1.412.100.2.1.3.111 NAME
'dlm1PhysicalStatisticalInformationInstanceContentRule'
     DESC 'Aux classes that can attach to
           dlm1PhysicalStatisticalInformationInstance.'
     AUX ( dlm1StatisticsAuxClass $
           dlm1RelatedStatisticsAuxClass $
           dlm1ProvidesServiceToElementAuxClass $
           dlm1MemberOfCollectionAuxClass )
   )
```

3.24 CollectedCollections Classes

These classes represent that a CollectionOfMSEs may itself be contained in another CollectionOfMSEs object.

```
   ( 1.3.6.1.4.1.412.100.2.1.3.25 NAME 'dlm1CollectedCollections'
     DESC 'CollectedCollections is an aggregation
           association representing that a CollectionOfMSEs may
           itself be contained in a CollectionOfMSEs.'
     SUP top ABSTRACT
   )

   ( 1.3.6.1.4.1.412.100.2.2.151 NAME
'dlmCollectedCollectionsCollectionRef'
     DESC 'The "higher level" or parent element in the
           aggregation. Values of this attribute point to entries
           of class dlmCollectionOfMSEs.'
     SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
     EQUALITY distinguishedNameMatch
   )

   ( 1.3.6.1.4.1.412.100.2.2.152 NAME
'dlmCollectedCollectionsCollectionInCollectionRef'
     DESC 'The "collected" Collection. Values of this
           attribute point to entries of class
           dlmCollectionOfMSEs.'
     SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
     EQUALITY distinguishedNameMatch
   )

   ( 1.3.6.1.4.1.412.100.2.1.3.26 NAME
'dlm1CollectedCollectionsAuxClass'
     DESC 'CollectedCollections is an aggregation
           association representing that a CollectionOfMSEs may
           itself be contained in a CollectionOfMSEs.'
     SUP dlm1CollectedCollections AUXILIARY
     MAY ( dlmCollectedCollectionsCollectionRef $
           dlmCollectedCollectionsCollectionInCollectionRef )
   )
```

3.25 LogicalIdentity

This class represents an abstract and generic association, showing that two LogicalElements represent different aspects of the same underlying entity. This relationship conveys what could be defined with multiple inheritance. It is restricted to the 'logical' aspects of a ManagedSystemElement. In most scenarios, the equivalence of keys or some other identifying properties of the related elements determines the identity relationship. The association should only be used in well-understood scenarios. This is why the association is abstract - allowing more concrete definition and clarification in subclasses.

```
   ( 1.3.6.1.4.1.412.100.2.1.3.27 NAME 'dlm1LogicalIdentity'
     DESC 'LogicalIdentity is an abstract and generic
           association, indicating that two LogicalElements
           represent different aspects of the same underlying
           entity. This relationship conveys what could be
           defined with multiple inheritance. It is restricted to
           the "logical" aspects of a ManagedSystem Element. In
           most scenarios, the Identity relationship is
           determined by the equivalence of Keys or some other
           identifying properties of the related Elements. The
           association should only be used in well understood
           scenarios. This is why the association is abstract -
           allowing more concrete definition and clarification in
           subclasses. One of the scenarios where this
           relationship is reasonable is to represent that a
           Device is both a "bus" entity and a "functional"
           entity. For example, a Device could be both a USB
           (bus) and a Keyboard (functional) entity.'
     SUP top ABSTRACT
   )
```

3.26 ConfigurationComponent Classes

This association aggregates 'lower-level' configuration objects into a 'high-level' configuration. This enables the assembly of complex configurations by grouping together simpler ones.

```
   ( 1.3.6.1.4.1.412.100.2.1.3.28 NAME 'dlm1ConfigurationComponent'
     DESC 'ConfigurationComponent aggregates "lower-level"
           Configuration objects into a "high-level"
           Configuration. This enables the assembly of complex
           Configurations by grouping together simpler ones. For
           example, a logon policy for the United States could
           consist of two Configuration groups, one for the east
           coast and one for the west coast. Each of these could
           in turn consist of multiple Configurations to handle
           different aspects of the logon process.'
     SUP top ABSTRACT
   )

   ( 1.3.6.1.4.1.412.100.2.2.153 NAME
'dlmConfigurationComponentConfigComponentRef'
     DESC 'A Configuration that is part of a "higher-level"
           Configuration. Values of this attribute point to
           entries of class dlmConfiguration.'
     SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
     EQUALITY distinguishedNameMatch
   )

   ( 1.3.6.1.4.1.412.100.2.2.154 NAME
'dlmConfigurationComponentConfigGroupRef'
     DESC 'The Configuration that aggregates additional
           Configurations. Values of this attribute point to
           entries of class dlmConfiguration.'
     SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
     EQUALITY distinguishedNameMatch
   )

   ( 1.3.6.1.4.1.412.100.2.1.3.29 NAME
'dlm1ConfigurationComponentAuxClass'
     DESC 'ConfigurationComponent aggregates "lower-level"
           Configuration objects into a "high-level"
           Configuration. This enables the assembly of complex
```

```
            Configurations by grouping together simpler ones. For
            example, a logon policy for the United States could
            consist of two Configuration groups, one for the east
            coast and one for the west coast. Each of these could
            in turn consist of multiple Configurations to handle
            different aspects of the logon process.'
      SUP dlm1ConfigurationComponent AUXILIARY
      MAY ( dlmConfigurationComponentConfigComponentRef $
            dlmConfigurationComponentConfigGroupRef )
    )
```

3.27 ElementConfiguration Classes

This association relates a configuration object to one or more managed system elements. The configuration object represents a certain behavior, or a desired functional state for the associated managed system elements.

```
    ( 1.3.6.1.4.1.412.100.2.1.3.30 NAME 'dlm1ElementConfiguration'
      DESC 'This association relates a Configuration object
            to one or more ManagedSystemElements. The
            Configuration object represents a certain behavior, or
            a desired functional state for the associated
            ManagedSystemElements.'
      SUP top ABSTRACT
    )

    ( 1.3.6.1.4.1.412.100.2.2.155 NAME
'dlmElementConfigurationConfigurationRef'
      DESC 'The Configuration object that groups the Settings
            and dependencies associated with the
            ManagedSystemElement. Values of this attribute point
            to entries of class dlmConfiguration.'
      SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
      EQUALITY distinguishedNameMatch
    )

    ( 1.3.6.1.4.1.412.100.2.2.156 NAME
'dlmElementConfigurationElementRef'
      DESC 'The ManagedSystemElement. Values of this attribute point
            to entries of class dlmManagedSystemElement.'
      SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
      EQUALITY distinguishedNameMatch
    )

    ( 1.3.6.1.4.1.412.100.2.1.3.31 NAME
'dlm1ElementConfigurationAuxClass'
      DESC 'This association relates a Configuration object
            to one or more ManagedSystemElements. The
            Configuration object represents a certain behavior, or
            a desired functional state for the associated
            ManagedSystemElements.'
      SUP dlm1ElementConfiguration AUXILIARY
      MAY ( dlmElementConfigurationConfigurationRef $
            dlmElementConfigurationElementRef )
    )
```

3.28 CollectionConfiguration Classes

These classes relate a Configuration object to one or more CollectionOfMSEs objects. The Configuration object represents a certain behavior, or a desired functional state for the associated collection.

```
   ( 1.3.6.1.4.1.412.100.2.1.3.32 NAME 'dlm1CollectionConfiguration'
     DESC 'This association relates a Configuration object
           to one or more CollectionOfMSEs objects. The
           Configuration object represents a certain behavior, or
           a desired functional state for the associated
           Collection.'
     SUP top ABSTRACT
   )

   ( 1.3.6.1.4.1.412.100.2.2.157 NAME
'dlmCollectionConfigurationCollectionRef'
     DESC 'The CollectionOfMSEs. Values of this attribute
           point to entries of class dlmCollectionOfMSEs.'
     SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
     EQUALITY distinguishedNameMatch
   )

   ( 1.3.6.1.4.1.412.100.2.2.158 NAME
'dlmCollectionConfigurationConfigurationRef'
     DESC 'The Configuration object that groups the Settings
           and dependencies associated with the Collection. Values
           of this attribute point to entries of class
           dlmConfiguration.'
     SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
     EQUALITY distinguishedNameMatch
   )

   ( 1.3.6.1.4.1.412.100.2.1.3.33 NAME
'dlm1CollectionConfigurationAuxClass'
     DESC 'This association relates a Configuration object
           to one or more CollectionOfMSEs objects. The
           Configuration object represents a certain behavior, or
           a desired functional state for the associated
           Collection.'
     SUP dlm1CollectionConfiguration AUXILIARY
     MAY ( dlmCollectionConfigurationCollectionRef $
           dlmCollectionConfigurationConfigurationRef )
   )
```

3.29 ElementSetting Classes

These classes represent the association between managed system elements and the setting class(es) defined for them.

```
   ( 1.3.6.1.4.1.412.100.2.1.3.34 NAME 'dlm1ElementSetting'
     DESC 'ElementSetting represents the association between
           Managed SystemElements and the Setting class(es)
           defined for them.'
```

```
    SUP top ABSTRACT
  )

  ( 1.3.6.1.4.1.412.100.2.2.159 NAME 'dlmElementSettingElementRef'
    DESC 'The ManagedSystemElement. Values of this
          attribute point to entries of class
          dlmManagedSystemElement.'
    SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
    EQUALITY distinguishedNameMatch
  )

  ( 1.3.6.1.4.1.412.100.2.2.160 NAME 'dlmElementSettingSettingRef'
    DESC 'The Setting object associated with the
          ManagedSystem Element. Values of this attribute point
          to entries of class dlmSetting.'
    SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
    EQUALITY distinguishedNameMatch
  )

  ( 1.3.6.1.4.1.412.100.2.1.3.35 NAME 'dlm1ElementSettingAuxClass'
    DESC 'ElementSetting represents the association between
          Managed SystemElements and the Setting class(es)
          defined for them.'
    SUP dlm1ElementSetting AUXILIARY
    MAY ( dlmElementSettingElementRef $
          dlmElementSettingSettingRef )
  )
```

3.30 DefaultSetting Classes

These classes represent the association between a ManagedSystemElement and the single Setting class that is defined to be the default setting for this element.

```
  ( 1.3.6.1.4.1.412.100.2.1.3.36 NAME 'dlm1DefaultSetting'
    DESC 'DefaultSetting represents the association between
          a Managed SystemElement and the single Setting class
          that is defined to be the default setting for this
          Element.'
    SUP dlm1ElementSetting ABSTRACT
  )

  ( 1.3.6.1.4.1.412.100.2.2.161 NAME 'dlmDefaultSettingElementRef'
    DESC 'The ManagedSystemElement. Values of this
          attribute point to entries of class
          dlmManagedSystemElement.'
    SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
    EQUALITY distinguishedNameMatch
  )

  ( 1.3.6.1.4.1.412.100.2.2.162 NAME 'dlmDefaultSettingSettingRef'
    DESC 'The Setting object which is the default. The
          value of this attribute points to an entry of class
          dlmSetting.'
    SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
    EQUALITY distinguishedNameMatch
  )

  ( 1.3.6.1.4.1.412.100.2.1.3.37 NAME 'dlm1DefaultSettingAuxClass'
    DESC 'DefaultSetting represents the association between
          a Managed SystemElement and the single Setting class
          that is defined to be the default setting for this
          Element.'
    SUP dlm1DefaultSetting AUXILIARY
    MAY ( dlmDefaultSettingElementRef $
          dlmDefaultSettingSettingRef )
  )
```

3.31 SettingContext Classes

These classes associate a setting with one or more configuration objects. For example, a network adapter's settings could change based on the site/network to which its hosting computer system is attached.

```
( 1.3.6.1.4.1.412.100.2.1.3.38 NAME 'dlm1SettingContext'
  DESC 'This relationship associates Configuration
        objects with Setting objects. For example, a
        NetworkAdapter"s Settings could change based on the
        site/network to which its hosting ComputerSystem is
        attached. In this case, the ComputerSystem would have
        two different Configuration objects, corresponding to
        the differences in network configuration for the two
        network segments. Configuration A would aggregate a
        Setting object for the NetworkAdapter when operating
        on segment \"ANet\", whereas Configuration B would
        aggregate a different NetworkAdapter Setting object,
        specific to segment \"BNet\". Note that many Settings
        of the computer are independent of the network
        Configuration. For example, both Configurations A and
        B would aggregate the same Setting object for the
        ComputerSystem"s MonitorResolution.'
  SUP top ABSTRACT
)

( 1.3.6.1.4.1.412.100.2.2.163 NAME 'dlmSettingContextContextRef'
  DESC 'The Configuration object that aggregates the
        Setting. Values of this attribute point to entries of
        class dlmConfiguration.'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
  EQUALITY distinguishedNameMatch
)

( 1.3.6.1.4.1.412.100.2.2.164 NAME 'dlmSettingContextSettingRef'
  DESC 'An aggregated Setting. Values of this attribute
        point to entries of class dlmSetting.'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
  EQUALITY distinguishedNameMatch
)

( 1.3.6.1.4.1.412.100.2.1.3.39 NAME 'dlm1SettingContextAuxClass'
  DESC 'This relationship associates Configuration
```

```
            objects with Setting objects. For example, a
            NetworkAdapter"s Settings could change based on the
            site/network to which its hosting ComputerSystem is
            attached. In this case, the ComputerSystem would have
            two different Configuration objects, corresponding to
            the differences in network configuration for the two
            network segments. Configuration A would aggregate a
            Setting object for the NetworkAdapter when operating
            on segment \"ANet\", whereas Configuration B would
            aggregate a different NetworkAdapter Setting object,
            specific to segment \"BNet\". Note that many Settings
            of the computer are independent of the network
            Configuration. For example, both Configurations A and
            B would aggregate the same Setting object for the
            ComputerSystem"s MonitorResolution.'
      SUP dlm1SettingContext AUXILIARY
      MAY ( dlmSettingContextContextRef $
            dlmSettingContextSettingRef )
   )
```

3.32 CollectionSetting Classes

These classes represent the association between a CollectionOfMSEs class and the Setting class(es) defined for them.

```
   ( 1.3.6.1.4.1.412.100.2.1.3.40 NAME 'dlm1CollectionSetting'
     DESC 'CollectionSetting represents the association
           between a CollectionOfMSEs class and the Setting
           class(es) defined for them.'
     SUP top ABSTRACT
   )

   ( 1.3.6.1.4.1.412.100.2.2.165 NAME
'dlmCollectionSettingCollectionRef'
     DESC 'The CollectionOfMSEs. Values of this attribute
           point to entries of class dlmCollectionOfMSEs.'
     SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
     EQUALITY distinguishedNameMatch
   )

   ( 1.3.6.1.4.1.412.100.2.2.166 NAME 'dlmCollectionSettingSettingRef'
     DESC 'The Setting object associated with the
           Collection. Values of this attribute point to entries
           of class dlmSetting.'
     SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
     EQUALITY distinguishedNameMatch
   )

   ( 1.3.6.1.4.1.412.100.2.1.3.41 NAME 'dlm1CollectionSettingAuxClass'
     DESC 'CollectionSetting represents the association
           between a CollectionOfMSEs class and the Setting
           class(es) defined for them.'
     SUP dlm1CollectionSetting AUXILIARY
     MAY ( dlmCollectionSettingCollectionRef $
           dlmCollectionSettingSettingRef )
   )
```

3.33 Dependency

This abstract class represents a generic association used to establish dependency relationships between objects.

```
   ( 1.3.6.1.4.1.412.100.2.1.3.42 NAME 'dlm1Dependency'
     DESC 'Dependency is a generic association used to
           establish dependency relationships between
           ManagedElements.'
     SUP top ABSTRACT
   )
```

3.34 ServiceAccessBySAP Classes

These classes identify the access points for a service. For example, Netware, MacIntosh or Windows service access points may access a printer, which may be hosted on different system.

```
   ( 1.3.6.1.4.1.412.100.2.1.3.43 NAME 'dlm1ServiceAccessBySAP'
     DESC 'ServiceAccessBySAP is an association that
           identifies the access points for a Service. For
           example, a printer may be accessed by Netware,
           MacIntosh or Windows ServiceAccessPoints, potentially
           hosted on different Systems.'
     SUP dlm1Dependency ABSTRACT
   )

   ( 1.3.6.1.4.1.412.100.2.2.167 NAME
'dlmServiceAccessBySAPAntecedentRef'
     DESC 'The Service. Values of this attribute point to
           entries of class dlmService.'
     SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
     EQUALITY distinguishedNameMatch
   )

   ( 1.3.6.1.4.1.412.100.2.2.168 NAME
'dlmServiceAccessBySAPDependentRef'
     DESC 'An Access Point for a Service. Access points are
           dependent in this relationship since they have no
           function without a corresponding Service. Values of
           this attribute point to entries of class
           dlmServiceAccessPoint.'
     SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
     EQUALITY distinguishedNameMatch
   )

   ( 1.3.6.1.4.1.412.100.2.1.3.44 NAME 'dlm1ServiceAccessBySAPAuxClass'
     DESC 'ServiceAccessBySAP is an association that
           identifies the access points for a Service. For
           example, a printer may be accessed by Netware,
           MacIntosh or Windows ServiceAccess Points, potentially
           hosted on different Systems.'
     SUP dlm1ServiceAccessBySAP AUXILIARY
     MAY ( dlmServiceAccessBySAPAntecedentRef $
           dlmServiceAccessBySAPDependentRef )
   )
```

3.35 HostedService

This class maps the association between a Service and the System on which it resides. While this could be represented with DIT containment, this class is provided to allow for more general relationships.

```
( 1.3.6.1.4.1.412.100.2.1.3.45 NAME 'dlm1HostedService'
  DESC 'HostedService is an association between a Service
        and the System on which the functionality resides.  The
        cardinality of this association is 1-to-many.  A System
        may host many Services. Services are weak with respect
        to their hosting System. Heuristic:  A Service is
        hosted on the System where the LogicalDevices or
        SoftwareFeatures that implement the Service are
        located.  The model does not represent Services hosted
        across multiple systems.  This is modeled as an
        ApplicationSystem that acts as an aggregation point
        for Services, that are each located on a single host.'
  SUP dlm1Dependency ABSTRACT
)

( 1.3.6.1.4.1.412.100.2.2.169 NAME 'dlmHostedServiceDependentRef'
  DESC 'The Service hosted on the System. Values of this
        attribute point to entries of class dlmService.'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
  EQUALITY distinguishedNameMatch
)

( 1.3.6.1.4.1.412.100.2.2.170 NAME 'dlmHostedServiceAntecedentRef'
  DESC 'The hosting System. The value of this attribute
        points to an entry of class dlmSystem.'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.12 SINGLE-VALUE
  EQUALITY distinguishedNameMatch
)

( 1.3.6.1.4.1.412.100.2.1.3.46 NAME 'dlm1HostedServiceAuxClass'
  DESC 'HostedService is an association between a Service
        and the System on which the functionality resides.  The
        cardinality of this association is 1-to-many.  A System
        may host many Services. Services are weak with respect
        to their hosting System. Heuristic:  A Service is
        hosted on the System where the LogicalDevices or
        SoftwareFeatures that implement the Service are
        located.  The model does not represent Services hosted
        across multiple systems.  This is modeled as an
        ApplicationSystem that acts as an aggregation point
        for Services, that are each located on a single host.'
  SUP dlm1HostedService AUXILIARY
  MAY ( dlmHostedServiceDependentRef $
        dlmHostedServiceAntecedentRef )
)
```

3.36 HostedAccessPoint

These classes map an association between a ServiceAccessPoint and the System that provides it. Like HostedService, this is provided for more general representations than what is available through DIT containment.

```
   ( 1.3.6.1.4.1.412.100.2.1.3.47 NAME 'dlm1HostedAccessPoint'
     DESC 'HostedAccessPoint is an association between a
           ServiceAccessPoint and the System on which it is
           provided.  The cardinality of this association is
           1-to-many and is weak with respect to the System. Each
           System may host many ServiceAccessPoints.  Heuristic:
           If the implementation of the ServiceAccessPoint is
           modeled, it must be implemented by a Device or
           SoftwareFeature that is part of the System hosting the
          ServiceAccessPoint.'
     SUP dlm1Dependency ABSTRACT
   )

   ( 1.3.6.1.4.1.412.100.2.2.171 NAME
'dlmHostedAccessPointDependentRef'
     DESC 'The SAP(s) that are hosted on this System. Values
           of this attribute point to entries of class
           dlmServiceAccessPoint.'
     SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
     EQUALITY distinguishedNameMatch
   )

   ( 1.3.6.1.4.1.412.100.2.2.172 NAME
'dlmHostedAccessPointAntecedentRef'
     DESC 'The hosting System. The value of this attribute
           points to an entry of class dlmSystem.'
     SYNTAX 1.3.6.1.4.1.1466.115.121.1.12 SINGLE-VALUE
     EQUALITY distinguishedNameMatch
   )

   ( 1.3.6.1.4.1.412.100.2.1.3.48 NAME 'dlm1HostedAccessPointAuxClass'
     DESC 'HostedAccessPoint is an association between a
           Service AccessPoint and the System on which it is
           provided.  The cardinality of this association is
           1-to-many and is weak with respect to the System. Each
           System may host many ServiceAccessPoints.  Heuristic:
           If the implementation of the ServiceAccessPoint is
           modeled, it must be implemented by a Device or
           SoftwareFeature that is part of the System hosting the
           ServiceAccessPoint.'
     SUP dlm1HostedAccessPoint AUXILIARY
     MAY ( dlmHostedAccessPointDependentRef $
           dlmHostedAccessPointAntecedentRef )
   )
```

3.37 ProvidesServiceToElement Classes

These classes map an association is used to describe that ManagedSystemElements may be dependent on the functionality of one or more Services.

```
   ( 1.3.6.1.4.1.412.100.2.1.3.49 NAME 'dlm1ProvidesServiceToElement'
     DESC 'ProvidesServiceToElement is used to describe that
           ManagedElements may be dependent on the
           functionality of one or more Services. An example is
           that a Processor and an Enclosure (PhysicalElement)
           are dependent on AlertOnLAN Services to signal an
           incomplete or erroneous boot, and hardware-related
           errors.'
     SUP dlm1Dependency ABSTRACT
   )

   ( 1.3.6.1.4.1.412.100.2.2.173 NAME
'dlmProvidesServiceToElementDependentRef'
     DESC 'The ManagedSystemElement dependent on the Service.
           Values of this attribute point to entries of class
           dlmManagedElement.'
     SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
     EQUALITY distinguishedNameMatch
   )

   ( 1.3.6.1.4.1.412.100.2.2.174 NAME
'dlmProvidesServiceToElementAntecedentRef'
     DESC 'The Service provided. Values of this attribute
           point to entries of class dlmService.'
     SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
     EQUALITY distinguishedNameMatch
   )

   ( 1.3.6.1.4.1.412.100.2.1.3.50 NAME
'dlm1ProvidesServiceToElementAuxClass'
     DESC 'ProvidesServiceToElement is used to describe that
           ManagedElements may be dependent on the
           functionality of one or more Services. An example is
           that a Processor and an Enclosure (PhysicalElement)
           are dependent on AlertOn LAN Services to signal an
           incomplete or erroneous boot, and hardware-related
           errors.'
     SUP dlm1ProvidesServiceToElement AUXILIARY
     MAY ( dlmProvidesServiceToElementDependentRef $
           dlmProvidesServiceToElementAntecedentRef )
   )
```

3.38 ServiceServiceDependency Classes

These classes map an association between two services, showing that the latter is required to be present, required to have completed, or must be absent for the former Service to provide its functionality. For example, boot Services may be dependent on underlying BIOS disk and initialization services. For initialization services, the boot service is simply dependent on the initialization services completing.

```
   ( 1.3.6.1.4.1.412.100.2.2.175 NAME 'dlmRestartService'
     DESC 'This Boolean property describes that the antecedent
           service must be restarted after the dependent
           operation is complete.'
     SYNTAX 1.3.6.1.4.1.1466.115.121.1.7 SINGLE-VALUE
   )

   ( 1.3.6.1.4.1.412.100.2.2.176 NAME 'dlmTypeOfDependency'
     DESC 'The nature of the Service to Service dependency.
           This property describes that the associated Service
           must have completed (value=2), must be started (3) or
           must not be started (4) in order for the Service to
           function.  Values are 0="Unknown", 1="Other",
           2="Service Must Have Completed", 3="Service Must Be
           Started", 4="Service Must Not Be Started"'
     SYNTAX 1.3.6.1.4.1.1466.115.121.1.27 SINGLE-VALUE
     EQUALITY integerMatch
   )

   ( 1.3.6.1.4.1.412.100.2.1.3.51 NAME 'dlm1ServiceServiceDependency'
     DESC 'ServiceServiceDependency is an association
           between a Service and another Service, indicating that
           the latter is required to be present, required to have
           completed, or must be absent for the former Service to
           provide its functionality. For example, Boot Services
           may be dependent upon underlying BIOS Disk and
           initialization Services. In the case of the
           initialization Services, the Boot Service is simply
           dependent on the init Services completing.  For the
           Disk Services, Boot Services may actually utilize the
           SAPs of this Service.  This usage dependency is
           modeled via the ServiceSAPDependency association.'
     SUP dlm1ProvidesServiceToElement ABSTRACT
     MAY ( dlmRestartService $ dlmTypeOfDependency )
   )

   ( 1.3.6.1.4.1.412.100.2.2.177 NAME
'dlmServiceServiceDependencyAntecedentRef'
     DESC 'The required Service. The value of this attribute
           points to an entry of class dlmService.'
     SYNTAX 1.3.6.1.4.1.1466.115.121.1.12 SINGLE-VALUE
     EQUALITY distinguishedNameMatch
   )

   ( 1.3.6.1.4.1.412.100.2.2.178 NAME
'dlmServiceServiceDependencyDependentRef'
     DESC 'The Service that is dependent on an underlying
           Service. The value of this attribute points to an
           entry of class dlmService.'
     SYNTAX 1.3.6.1.4.1.1466.115.121.1.12 SINGLE-VALUE
     EQUALITY distinguishedNameMatch
   )
   ( 1.3.6.1.4.1.412.100.2.1.3.52 NAME
'dlm1ServiceServiceDependencyInstance'
     DESC 'ServiceServiceDependency is an association
           between a Service and another Service, indicating that
           the latter is required to be present, required to have
           completed, or must be absent for the former Service to
           provide its functionality. For example, Boot Services
           may be dependent upon underlying BIOS Disk and
           initialization Services. In the case of the
           initialization Services, the Boot Service is simply
           dependent on the init Services completing.  For the
           Disk Services, Boot Services may actually utilize the
           SAPs of this Service.  This usage dependency is
           modeled via the ServiceSAPDependency association.'
     SUP dlm1ServiceServiceDependency
     MAY ( dlmServiceServiceDependencyAntecedentRef $
           dlmServiceServiceDependencyDependentRef )
   )

   ( 1.3.6.1.4.1.412.100.2.3.3.5 NAME
'dlm1ServiceServiceDependencyInstanceNameForm1'
     OC dlm1ServiceServiceDependencyInstance
     MUST ( orderedCimKeys )
   )

   ( <core-sr-5> NAME
'dlm1ServiceServiceDependencyInstanceStructureRule1'
     Form dlm1ServiceServiceDependencyInstanceNameForm1
   )

   ( 1.3.6.1.4.1.412.100.2.2.179 NAME
'dlmServiceServiceDependencyHelperRef'
     DESC 'Pointer to ServiceServiceDependencyInstance.'
     SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
     EQUALITY distinguishedNameMatch
   )

   ( 1.3.6.1.4.1.412.100.2.1.3.53 NAME
'dlm1ServiceServiceDependencyHelper'
     DESC 'Helper class for finding ServiceServiceDependency.'
     SUP top AUXILIARY
     MAY ( dlmServiceServiceDependencyHelperRef )
   )
```

3.39 ServiceSAPDependency Classes

These classes map an association between a service and a service access point showing that the referenced SAP is used by the service to provide its functionality. For example, boot services may invoke BIOS disk services (interrupts) to function.

```
   ( 1.3.6.1.4.1.412.100.2.1.3.54 NAME 'dlm1ServiceSAPDependency'
     DESC 'ServiceSAPDependency is an association between a
           Service and a ServiceAccessPoint indicating that the
           referenced SAP is utilized by the Service to provide
           its functionality. For example, Boot Services may
```

```
            invoke BIOS" Disk Services (interrupts) in order to
            function.'
      SUP dlm1Dependency ABSTRACT
   )

   ( 1.3.6.1.4.1.412.100.2.2.180 NAME
'dlmServiceSAPDependencyDependentRef'
      DESC 'The Service that is dependent on an underlying
            SAP. Values of this attribute point to entries of
            class dlmService.'
      SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
      EQUALITY distinguishedNameMatch
   )

   ( 1.3.6.1.4.1.412.100.2.2.181 NAME
'dlmServiceSAPDependencyAntecedentRef'
      DESC 'The required ServiceAccessPoint. Values of this
            attribute point to entries of class
            dlmServiceAccessPoint'
      SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
      EQUALITY distinguishedNameMatch
   )

   ( 1.3.6.1.4.1.412.100.2.1.3.55 NAME
'dlm1ServiceSAPDependencyAuxClass'
      DESC 'ServiceSAPDependency is an association between a
            Service and a ServiceAccessPoint indicating that the
            referenced SAP is utilized by the Service to provide
            its functionality. For example, Boot Services may
            invoke BIOS" Disk Services (interrupts) in order to
            function.'
      SUP dlm1ServiceSAPDependency AUXILIARY
      MAY ( dlmServiceSAPDependencyDependentRef $
            dlmServiceSAPDependencyAntecedentRef )
   )
```

3.40 SAPSAPDependency Classes

These classes model an association between two service access points showing that the latter is required in order for the former to use or connect with its service. For example, to print at a network printer, local print access points must use underlying network-related SAPs, or protocol endpoints, to send the print request.

```
   ( 1.3.6.1.4.1.412.100.2.1.3.56 NAME 'dlm1SAPSAPDependency'
     DESC 'SAPSAPDependency is an association between a
            ServiceAccessPoint and another AccessPoint
            indicating that the latter is required in order for
            the former ServiceAccessPoint to utilize or connect
            with its Service. For example, to print at a network
            printer, local Print Access Points must utilize
            underlying network-related SAPs, or ProtocolEndpoints,
            in order to send the print request.'
     SUP dlm1Dependency ABSTRACT
   )
   ( 1.3.6.1.4.1.412.100.2.2.182 NAME
'dlmSAPSAPDependencyAntecedentRef'
     DESC 'The required ServiceAccessPoint. Values of this
           attribute point to entries of class
           dlmServiceAccessPoint.'
     SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
     EQUALITY distinguishedNameMatch
   )

   ( 1.3.6.1.4.1.412.100.2.2.183 NAME 'dlmSAPSAPDependencyDependentRef'
     DESC 'The ServiceAccessPoint that is dependent on an
           underlying SAP. Values of this attribute point to
           entries of class dlmServiceAccessPoint.'
     SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
     EQUALITY distinguishedNameMatch
   )

   ( 1.3.6.1.4.1.412.100.2.1.3.57 NAME 'dlm1SAPSAPDependencyAuxClass'
     DESC 'SAPSAPDependency is an association between a
           ServiceAccessPoint and another AccessPoint
           indicating that the latter is required in order for
           the former ServiceAccessPoint to utilize or connect
           with its Service. For example, to print at a network
           printer, local Print Access Points must utilize
           underlying network-related SAPs, or ProtocolEndpoints,
           in order to send the print request.'
     SUP dlm1SAPSAPDependency AUXILIARY
     MAY ( dlmSAPSAPDependencyAntecedentRef $
           dlmSAPSAPDependencyDependentRef )
   )
```

3.41 Realizes Classes

These classes define the mapping between a logical device and the physical element that implements the device.

```
   ( 1.3.6.1.4.1.412.100.2.1.3.58 NAME 'dlm1Realizes'
     DESC 'Realizes is the association that defines the
           mapping between a Logical Device and the physical
           element that implements the Device.'
     SUP dlm1Dependency ABSTRACT
   )

   ( 1.3.6.1.4.1.412.100.2.2.184 NAME 'dlmRealizesDependentRef'
     DESC 'The LogicalDevice. Values of this attribute point
           to entries of class dlmLogicalDevice.'
     SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
     EQUALITY distinguishedNameMatch
   )

   ( 1.3.6.1.4.1.412.100.2.2.185 NAME 'dlmRealizesAntecedentRef'
     DESC 'The physical element that implements the
           Device. Values of this attribute point to entries of
           class dlmPhysicalElement.'
     SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
     EQUALITY distinguishedNameMatch
   )

   ( 1.3.6.1.4.1.412.100.2.1.3.59 NAME 'dlm1RealizesAuxClass'
     DESC 'Realizes is the association that defines the
           mapping between a Logical Device and the physical
           element that implements the Device.'
     SUP dlm1Realizes AUXILIARY
     MAY ( dlmRealizesDependentRef $
           dlmRealizesAntecedentRef )
   )
```

3.42 MemberOfCollection Classes

These classes establish membership of ManagedElement objects in a collection.

```
   ( 1.3.6.1.4.1.412.100.2.1.3.60 NAME 'dlm1MemberOfCollection'
     DESC 'MemberOfCollection is an aggregation used to
           establish membership of ManagedElements in a
           Collection.'
     SUP top ABSTRACT
   )

   ( 1.3.6.1.4.1.412.100.2.2.186 NAME
'dlmMemberOfCollectionCollectionRef'
     DESC 'The Collection that aggregates members. Values of
           this attribute point to entries of class dlmCollection.'
     SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
     EQUALITY distinguishedNameMatch
   )

   ( 1.3.6.1.4.1.412.100.2.2.187 NAME 'dlmMemberOfCollectionMemberRef'
     DESC 'The aggregated member of the collection. Values
           of this attribute point to entries of class
           dlmManagedElement.'
     SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
     EQUALITY distinguishedNameMatch
   )

   ( 1.3.6.1.4.1.412.100.2.1.3.61 NAME 'dlm1MemberOfCollectionAuxClass'
     DESC 'MemberOfCollection is an aggregation used to
           establish membership of ManagedElements in a
           Collection.'
     SUP dlm1MemberOfCollection AUXILIARY
     MAY ( dlmMemberOfCollectionCollectionRef $
           dlmMemberOfCollectionMemberRef )
   )
```

3.43 CollectedMSEs Classes

These classes represent a generic association used to establish the members of the grouping object, CollectionOfMSEs.

```
( 1.3.6.1.4.1.412.100.2.1.3.62 NAME 'dlm1CollectedMSEs'
  DESC 'CollectedMSEs is a generic association used to
        establish the members of the grouping object,
        CollectionOf MSEs.'
  SUP dlm1MemberOfCollection ABSTRACT
)

( 1.3.6.1.4.1.412.100.2.2.188 NAME 'dlmCollectedMSEsCollectionRef'
  DESC 'The grouping or "bag" object that represents the
        Collection. Values of this attribute point to entries
        of class dlmCollectionOfMSEs.'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
  EQUALITY distinguishedNameMatch
)

( 1.3.6.1.4.1.412.100.2.2.189 NAME 'dlmCollectedMSEsMemberRef'
  DESC 'The members of the Collection. Values of this
        attribute point to entries of class
        dlmManagedSystemElement.'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
  EQUALITY distinguishedNameMatch
)

( 1.3.6.1.4.1.412.100.2.1.3.63 NAME 'dlm1CollectedMSEsAuxClass'
  DESC 'CollectedMSEs is a generic association used to
        establish the members of the grouping object,
        CollectionOf MSEs.'
  SUP dlm1CollectedMSEs AUXILIARY
  MAY ( dlmCollectedMSEsCollectionRef $
        dlmCollectedMSEsMemberRef )
)
```

3.44 Component

This abstract class maps a generic association used to establish 'part of' relationships between managed system elements. For example, the system component association defines parts of a system.

```
( 1.3.6.1.4.1.412.100.2.1.3.64 NAME 'dlm1Component'
  DESC 'Component is a generic association used to
        establish "part of" relationships between Managed
        System Elements. For example, the SystemComponent
        association defines parts of a System.'
  SUP top ABSTRACT
)
```

3.45 SystemComponent Classes

These classes specialize dlmComponent to establish relationships between a system and the managed system elements of which it is composed.

```
( 1.3.6.1.4.1.412.100.2.1.3.65 NAME 'dlm1SystemComponent'
  DESC 'SystemComponent is a specialization of the
        Component association that establishes "part of"
```

```
            relationships between a System and the Managed System
            Elements of which it is composed.'
      SUP dlm1Component ABSTRACT
   )

   ( 1.3.6.1.4.1.412.100.2.2.190 NAME
'dlmSystemComponentPartComponentRef'
      DESC 'The child element that is a component of a
            System. Values of this attribute point to entries of
            class dlmManagedSystemElement.'
      SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
      EQUALITY distinguishedNameMatch
   )

   ( 1.3.6.1.4.1.412.100.2.2.191 NAME
'dlmSystemComponentGroupComponentRef'
      DESC 'The parent System in the Association. Values of
            this attribute point to entries of class dlmSystem.'
      SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
      EQUALITY distinguishedNameMatch
   )

   ( 1.3.6.1.4.1.412.100.2.1.3.66 NAME 'dlm1SystemComponentAuxClass'
      DESC 'SystemComponent is a specialization of the
            Component association that establishes "part of"
            relationships between a System and the Managed System
            Elements of which it is composed.'
      SUP dlm1SystemComponent AUXILIARY
      MAY ( dlmSystemComponentPartComponentRef $
            dlmSystemComponentGroupComponentRef )
   )
```

3.46 SystemDevice Classes

These classes model the aggregation of a LogicalDevices by a System.

```
   ( 1.3.6.1.4.1.412.100.2.1.3.67 NAME 'dlm1SystemDevice'
      DESC 'LogicalDevices are aggregated by a System.
            This relationship is made explicit by the SystemDevice
            association.'
      SUP dlm1SystemComponent ABSTRACT
   )

   ( 1.3.6.1.4.1.412.100.2.2.192 NAME 'dlmSystemDevicePartComponentRef'
      DESC 'The LogicalDevice that is a component of a
            System. Values of this attribute point to entries of
            class dlmLogicalDevice.'
      SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
      EQUALITY distinguishedNameMatch
   )

   ( 1.3.6.1.4.1.412.100.2.2.193 NAME
'dlmSystemDeviceGroupComponentRef'
      DESC 'The parent system in the Association. The value
            of this attribute points to an entry of class
            dlmSystem.'
```

```
     SYNTAX 1.3.6.1.4.1.1466.115.121.1.12 SINGLE-VALUE
     EQUALITY distinguishedNameMatch
   )

   ( 1.3.6.1.4.1.412.100.2.1.3.68 NAME 'dlm1SystemDeviceAuxClass'
     DESC 'LogicalDevices are aggregated by a System.
           This relationship is made explicit by the SystemDevice
           association.'
     SUP dlm1SystemDevice AUXILIARY
     MAY ( dlmSystemDevicePartComponentRef $
           dlmSystemDeviceGroupComponentRef )
   )
```

3.47 ServiceComponent Classes

These classes model a set of subordinate services that are aggregated together to form a higher-level service.

```
   ( 1.3.6.1.4.1.412.100.2.1.3.69 NAME 'dlm1ServiceComponent'
     DESC 'The ServiceComponent aggregation models a set of
           subordinate Services that are aggregated together to
           form a higher-level service.'
     SUP dlm1Component ABSTRACT
   )

   ( 1.3.6.1.4.1.412.100.2.2.194 NAME
'dlmServiceComponentGroupComponentRef'
     DESC 'The parent Service. Values of this attribute
           point to entries of class dlmService.'
     SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
     EQUALITY distinguishedNameMatch
   )

   ( 1.3.6.1.4.1.412.100.2.2.195 NAME
'dlmServiceComponentPartComponentRef'
     DESC 'The component Service. Values of this attribute
           point to entries of class dlmService.'
     SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
     EQUALITY distinguishedNameMatch
   )

   ( 1.3.6.1.4.1.412.100.2.1.3.70 NAME 'dlm1ServiceComponentAuxClass'
     DESC 'The ServiceComponent aggregation models a set of
           subordinate Services that are aggregated together to
           form a higher-level service.'
     SUP dlm1ServiceComponent AUXILIARY
     MAY ( dlmServiceComponentGroupComponentRef $
           dlmServiceComponentPartComponentRef )
   )
```

3.48 ProductParentChild Classes

These classes define a parent child hierarchy among products. For example, a product may come bundled with other products.

```
( 1.3.6.1.4.1.412.100.2.1.3.71 NAME 'dlm1ProductParentChild'
  DESC 'The ProductParentChild association defines a
        parent child hierarchy among Products.  For example, a
        Product may come bundled with other Products.'
  SUP top ABSTRACT
)

( 1.3.6.1.4.1.412.100.2.2.196 NAME 'dlmProductParentChildChildRef'
  DESC 'The child Product in the association. Values of
        this attribute point to entries of class dlmProduct.'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
  EQUALITY distinguishedNameMatch
)

( 1.3.6.1.4.1.412.100.2.2.197 NAME 'dlmProductParentChildParentRef'
  DESC 'The parent Product in the association. Values of
        this attribute point to entries of class dlmProduct.'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
  EQUALITY distinguishedNameMatch
)

( 1.3.6.1.4.1.412.100.2.1.3.72 NAME 'dlm1ProductParentChildAuxClass'
  DESC 'The ProductParentChild association defines a
        parent child hierarchy among Products.  For example, a
        Product may come bundled with other Products.'
  SUP dlm1ProductParentChild AUXILIARY
  MAY ( dlmProductParentChildChildRef $
        dlmProductParentChildParentRef )
)
```

3.49 CompatibleProduct Classes

These classes model an association between products and can describe a wide variety of information. For example, it can show that the two referenced products interoperate, that they can be installed together, that one can be the physical container for the other, etc.

```
( 1.3.6.1.4.1.412.100.2.2.198 NAME 'dlmCompatibilityDescription'
  DESC 'CompatibilityDescription is a free-form string
        defining how the two referenced Products interoperate
        or are compatible, any limitations to compatibility,
        etc.'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15 SINGLE-VALUE
  EQUALITY caseIgnoreMatch
)

( 1.3.6.1.4.1.412.100.2.1.3.73 NAME 'dlm1CompatibleProduct'
  DESC 'CompatibleProduct is an association between
        Products that can indicate a wide variety of
        information. For example, it can indicate that the two
        referenced Products interoperate, that they can be
        installed together, that one can be the physical
        container for the other, etc. The string property,
        CompatibilityDescription, defines how the Products
        interoperate or are compatible, any limitations
```

```
           regarding interoperability or installation, ...'
     SUP top ABSTRACT
     MAY ( dlmCompatibilityDescription )
   )

   ( 1.3.6.1.4.1.412.100.2.2.199 NAME
'dlmCompatibleProductCompatibleProductRef'
     DESC 'The compatible Product. The value of this
           attribute points to an entry of class dlmProduct.'
     SYNTAX 1.3.6.1.4.1.1466.115.121.1.12 SINGLE-VALUE
     EQUALITY distinguishedNameMatch
   )

   ( 1.3.6.1.4.1.412.100.2.2.200 NAME 'dlmCompatibleProductProductRef'
     DESC 'The Product for which compatible offerings are
           defined. The value of this attribute points to an
           entry of class dlmProduct.'
     SYNTAX 1.3.6.1.4.1.1466.115.121.1.12 SINGLE-VALUE
     EQUALITY distinguishedNameMatch
   )

   ( 1.3.6.1.4.1.412.100.2.1.3.74 NAME 'dlm1CompatibleProductInstance'
     DESC 'CompatibleProduct is an association between
           Products that can indicate a wide variety of
           information. For example, it can indicate that the two
           referenced Products interoperate, that they can be
           installed together, that one can be the physical
           container for the other, etc. The string property,
           CompatibilityDescription, defines how the Products
           interoperate or are compatible, any limitations
           regarding interoperability or installation, ...'
     SUP dlm1CompatibleProduct
     MAY ( dlmCompatibleProductCompatibleProductRef $
           dlmCompatibleProductProductRef )
   )

   ( 1.3.6.1.4.1.412.100.2.3.3.6 NAME
'dlm1CompatibleProductInstanceNameForm1'
     OC dlm1CompatibleProductInstance
     MUST ( orderedCimKeys )
   )

   ( <core-sr-6> NAME 'dlm1CompatibleProductInstanceStructureRule1'
     Form dlm1CompatibleProductInstanceNameForm1
   )

   ( 1.3.6.1.4.1.412.100.2.2.201 NAME 'dlmCompatibleProductHelperRef'
     DESC 'Pointer to CompatibleProductInstance.'
     SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
     EQUALITY distinguishedNameMatch
   )

   ( 1.3.6.1.4.1.412.100.2.1.3.75 NAME 'dlm1CompatibleProductHelper'
     DESC 'Helper class for finding CompatibleProduct.'
     SUP top AUXILIARY
     MAY ( dlmCompatibleProductHelperRef )
   )
```

3.50 ProductProductDependency Classes

These classes model an association between two products, showing that one must be installed, or must be absent, for the other to function. This is conceptually equivalent to the service to service dependency association.

```
   ( 1.3.6.1.4.1.412.100.2.1.3.76 NAME 'dlm1ProductProductDependency'
     DESC 'ProductProductDependency is an association
           between two Products, indicating that one must be
           installed, or must be absent, for the other to
           function. This is conceptually equivalent to the
           ServiceServiceDependency association.'
     SUP top ABSTRACT
     MAY ( dlmTypeOfDependency )
   )

   ( 1.3.6.1.4.1.412.100.2.2.202 NAME
'dlmProductProductDependencyDependentProductRef'
     DESC 'The Product that is dependent on another Product.
           The value of this attribute points to an entry of class
           dlmProduct.'
     SYNTAX 1.3.6.1.4.1.1466.115.121.1.12 SINGLE-VALUE
     EQUALITY distinguishedNameMatch
   )

   ( 1.3.6.1.4.1.412.100.2.2.203 NAME
'dlmProductProductDependencyRequiredProductRef'
     DESC 'The required Product. The value of this attribute
           points to an entry of class dlmProduct.'
     SYNTAX 1.3.6.1.4.1.1466.115.121.1.12 SINGLE-VALUE
     EQUALITY distinguishedNameMatch
   )

   ( 1.3.6.1.4.1.412.100.2.1.3.77 NAME
'dlm1ProductProductDependencyInstance'
     DESC 'ProductProductDependency is an association
           between two Products, indicating that one must be
           installed, or must be absent, for the other to
           function. This is conceptually equivalent to the
           ServiceServiceDependency association.'
     SUP dlm1ProductProductDependency
     MAY ( dlmProductProductDependencyDependentProductRef $
           dlmProductProductDependencyRequiredProductRef )
   )

   ( 1.3.6.1.4.1.412.100.2.3.3.7 NAME
'dlm1ProductProductDependencyInstanceNameForm1'
     OC dlm1ProductProductDependencyInstance
     MUST ( orderedCimKeys )
   )

   ( <core-sr-7> NAME
'dlm1ProductProductDependencyInstanceStructureRule1'
     Form dlm1ProductProductDependencyInstanceNameForm1
   )
   ( 1.3.6.1.4.1.412.100.2.2.204 NAME
'dlmProductProductDependencyHelperRef'
     DESC 'Pointer to ProductProductDependencyInstance.'
     SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
     EQUALITY distinguishedNameMatch
   )

   ( 1.3.6.1.4.1.412.100.2.1.3.78 NAME
'dlm1ProductProductDependencyHelper'
     DESC 'Helper class for finding ProductProductDependency.'
     SUP top AUXILIARY
     MAY ( dlmProductProductDependencyHelperRef )
   )
```

3.51 ProductSupport Classes

These classes represent the association between products and support access that conveys how support is obtained for the product. This is a many-to-many relationship, implying that various types of support are available for a product, and that the same support object can provide help for multiple products.

```
   ( 1.3.6.1.4.1.412.100.2.1.3.79 NAME 'dlm1ProductSupport'
     DESC 'ProductSupport is an association between Product
           and SupportAccess that conveys how support is obtained
           for the Product.  This is a many-to-many relationship,
           implying that various types of Support are available
           for a Product, and that the same Support object can
           provide assistance for multiple Products.'
     SUP top ABSTRACT
   )

   ( 1.3.6.1.4.1.412.100.2.2.205 NAME 'dlmProductSupportProductRef'
     DESC 'The Product. Values of this attribute point to
           entries of class dlmProduct.'
     SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
     EQUALITY distinguishedNameMatch
   )

   ( 1.3.6.1.4.1.412.100.2.2.206 NAME 'dlmProductSupportSupportRef'
     DESC 'Support for the Product. Values of this attribute
           point to entries of class dlmSupportAccess.'
     SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
     EQUALITY distinguishedNameMatch
   )

   ( 1.3.6.1.4.1.412.100.2.1.3.80 NAME 'dlm1ProductSupportAuxClass'
     DESC 'ProductSupport is an association between Product
           and SupportAccess that conveys how support is obtained
           for the Product.  This is a many-to-many relationship,
           implying that various types of Support are available
           for a Product, and that the same Support object can
           provide assistance for multiple Products.'
     SUP dlm1ProductSupport AUXILIARY
```

```
    MAY ( dlmProductSupportProductRef $
          dlmProductSupportSupportRef )
  )
```

3.52 ProductFRU Classes

These classes provide information regarding what product components have been or are being replaced.

```
  ( 1.3.6.1.4.1.412.100.2.1.3.81 NAME 'dlm1ProductFRU'
    DESC 'ProductFRU is an association between Product and
          FRU that provides information regarding what Product
          components have been or are being replaced.  The
          association is one to many, conveying that a Product
          can have many FRUs, and that a particular instance of
          a FRU is only applied to one (instance of a) Product.'
    SUP top ABSTRACT
  )

  ( 1.3.6.1.4.1.412.100.2.2.207 NAME 'dlmProductFRUFRURef'
    DESC 'The FRU. Values of this attribute point to
          entries of class dlmFRU.'
    SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
    EQUALITY distinguishedNameMatch
  )

  ( 1.3.6.1.4.1.412.100.2.2.208 NAME 'dlmProductFRUProductRef'
    DESC 'The Product to which the FRU is applied. The
          value of this attribute points to an entry of class
          dlmProduct.'
    SYNTAX 1.3.6.1.4.1.1466.115.121.1.12 SINGLE-VALUE
    EQUALITY distinguishedNameMatch
  )

  ( 1.3.6.1.4.1.412.100.2.1.3.82 NAME 'dlm1ProductFRUAuxClass'
    DESC 'ProductFRU is an association between Product and
          FRU that provides information regarding what Product
          components have been or are being replaced.  The
          association is one to many, conveying that a Product
          can have many FRUs, and that a particular instance of
          a FRU is only applied to one (instance of a) Product.'
    SUP dlm1ProductFRU AUXILIARY
    MAY ( dlmProductFRUFRURef $ dlmProductFRUProductRef )
  )
```

3.53 ProductPhysicalElements Classes

These classes show the physical elements that make up a product.

```
  ( 1.3.6.1.4.1.412.100.2.1.3.83 NAME 'dlm1ProductPhysicalElements'
    DESC 'Indicates the PhysicalElements that make up a
          Product.'
    SUP top ABSTRACT
  )
```

```
   ( 1.3.6.1.4.1.412.100.2.2.209 NAME
'dlmProductPhysicalElementsComponentRef'
     DESC 'The PhysicalElement which is a part of the
           Product. Values of this attribute point to entries of
           class dlmPhysicalElement.'
     SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
     EQUALITY distinguishedNameMatch
   )

   ( 1.3.6.1.4.1.412.100.2.2.210 NAME
'dlmProductPhysicalElementsProductRef'
     DESC 'The Product. The value of this attribute points
           to an entry of class dlmProduct.'
     SYNTAX 1.3.6.1.4.1.1466.115.121.1.12 SINGLE-VALUE
     EQUALITY distinguishedNameMatch
   )

   ( 1.3.6.1.4.1.412.100.2.1.3.84 NAME
'dlm1ProductPhysicalElementsAuxClass'
     DESC 'Indicates the PhysicalElements that make up a
           Product.'
     SUP dlm1ProductPhysicalElements AUXILIARY
     MAY ( dlmProductPhysicalElementsComponentRef $
           dlmProductPhysicalElementsProductRef )
   )
```

3.54 FRUPhysicalElements Classes

These classes show the physical elements that make up a FRU.

```
   ( 1.3.6.1.4.1.412.100.2.1.3.85 NAME 'dlm1FRUPhysicalElements'
     DESC 'Indicates the PhysicalElements that make up a
           FRU.'
     SUP top ABSTRACT
   )

   ( 1.3.6.1.4.1.412.100.2.2.211 NAME 'dlmFRUPhysicalElementsFRURef'
     DESC 'The FRU. The value of this attribute points to an
           entry of class dlmFRU.'
     SYNTAX 1.3.6.1.4.1.1466.115.121.1.12 SINGLE-VALUE
     EQUALITY distinguishedNameMatch
   )

   ( 1.3.6.1.4.1.412.100.2.2.212 NAME
'dlmFRUPhysicalElementsComponentRef'
     DESC 'The PhysicalElement which is a part of the FRU.
           Values of this attribute point to entries of class
           dlmPhysicalElement.'
     SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
     EQUALITY distinguishedNameMatch
   )

   ( 1.3.6.1.4.1.412.100.2.1.3.86 NAME
'dlm1FRUPhysicalElementsAuxClass'
     DESC 'Indicates the PhysicalElements that make up a
           FRU.'
     SUP dlm1FRUPhysicalElements AUXILIARY
     MAY ( dlmFRUPhysicalElementsFRURef $
           dlmFRUPhysicalElementsComponentRef )
   )
```

3.55 FRUIncludesProduct Classes

These classes show that a FRU may be composed of other product(s).

```
   ( 1.3.6.1.4.1.412.100.2.1.3.87 NAME 'dlm1FRUIncludesProduct'
     DESC 'Indicates that a FRU may be composed of other
           Product(s).'
     SUP top ABSTRACT
   )

   ( 1.3.6.1.4.1.412.100.2.2.213 NAME 'dlmFRUIncludesProductFRURef'
     DESC 'The FRU. The value of this attribute points to an
           entry of class dlmFRU.'
     SYNTAX 1.3.6.1.4.1.1466.115.121.1.12 SINGLE-VALUE
     EQUALITY distinguishedNameMatch
   )

   ( 1.3.6.1.4.1.412.100.2.2.214 NAME
'dlmFRUIncludesProductComponentRef'
     DESC 'The Product which is a part of the FRU. Values of
           this attribute point to entries of class dlmProduct.'
     SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
     EQUALITY distinguishedNameMatch
   )

   ( 1.3.6.1.4.1.412.100.2.1.3.88 NAME 'dlm1FRUIncludesProductAuxClass'
     DESC 'Indicates that a FRU may be composed of other
           Product(s).'
     SUP dlm1FRUIncludesProduct AUXILIARY
     MAY ( dlmFRUIncludesProductFRURef $
           dlmFRUIncludesProductComponentRef )
   )
```

3.56 Statistics

This association relates StatisticalInformation to ManagedElements.

```
   ( 1.3.6.1.4.1.412.100.2.1.3.112 NAME 'dlm1Statistics'
     DESC 'Statistics is an association that relates Managed
           Elements to the StatisticalGroup(s) that apply to them.'
     SUP top ABSTRACT
   )

   ( 1.3.6.1.4.1.412.100.2.2.220 NAME 'dlmStatisticsElementRef'
     DESC 'The ManagedElement for which statistical or
           metric data is defined. Values of this attribute point
           to entries of class dlmManagedElement.'
     SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
     EQUALITY distinguishedNameMatch
   )
```

```
( 1.3.6.1.4.1.412.100.2.2.221 NAME 'dlmStatisticsStatsRef'
  DESC 'The statistic information/object. Values of this
        attribute point to entries of class
        dlmStatisticalInformation.'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
  EQUALITY distinguishedNameMatch
)

( 1.3.6.1.4.1.412.100.2.1.3.113 NAME 'dlm1StatisticsAuxClass'
  DESC 'Statistics is an association that relates Managed
        Elements to the StatisticalGroup(s) that apply to them.'
  SUP dlm1Statistics AUXILIARY
  MAY ( dlmStatisticsElementRef $ dlmStatisticsStatsRef )
)
```

3.57 SystemStatistics

This association relates SystemStatisticalInformation to a System.

```
( 1.3.6.1.4.1.412.100.2.1.3.114 NAME 'dlm1SystemStatistics'
  DESC 'SystemStatistics relates the
        SystemStatisticalInformation class to the System to
        which it applies.'
  SUP dlm1Statistics ABSTRACT
)

( 1.3.6.1.4.1.412.100.2.2.222 NAME 'dlmSystemStatisticsElementRef'
  DESC 'The System to which the statistics apply. The
        value of this attribute points to an entry of class
        dlmSystem.'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.12 SINGLE-VALUE
  EQUALITY distinguishedNameMatch
)

( 1.3.6.1.4.1.412.100.2.2.223 NAME 'dlmSystemStatisticsStatsRef'
  DESC 'The statistical object. Values of this attribute
        point to entries of class dlmSystemStatisticalInformation.'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
  EQUALITY distinguishedNameMatch
)

( 1.3.6.1.4.1.412.100.2.1.3.115 NAME 'dlm1SystemStatisticsAuxClass'
  DESC 'SystemStatistics relates the SystemStatisticalInformation
        class to the System to which it applies.'
  SUP dlm1SystemStatistics AUXILIARY
  MAY ( dlmSystemStatisticsElementRef $
        dlmSystemStatisticsStatsRef )
)
```

3.58 ServiceStatistics

This association relates ServiceStatisticalInformation to its Service.

```
( 1.3.6.1.4.1.412.100.2.1.3.116 NAME 'dlm1ServiceStatistics'
  DESC 'ServiceStatistics relates the
        ServiceStatisticalInformation class to the Service to
        which it applies.'
```

```
    SUP dlm1Statistics ABSTRACT
  )

  ( 1.3.6.1.4.1.412.100.2.2.224 NAME 'dlmServiceStatisticsElementRef'
    DESC 'The Service to which the statistics apply. The
          value of this attribute points to an entry of class
          dlmService.'
    SYNTAX 1.3.6.1.4.1.1466.115.121.1.12 SINGLE-VALUE
    EQUALITY distinguishedNameMatch
  )

  ( 1.3.6.1.4.1.412.100.2.2.225 NAME 'dlmServiceStatisticsStatsRef'
    DESC 'The statistical object. Values of this attribute
          point to entries of class
          dlmServiceStatisticalInformation.'
    SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
    EQUALITY distinguishedNameMatch
  )

  ( 1.3.6.1.4.1.412.100.2.1.3.117 NAME 'dlm1ServiceStatisticsAuxClass'
    DESC 'ServiceStatistics relates the
          ServiceStatisticalInformation class to the Service to
          which it applies.'
    SUP dlm1ServiceStatistics AUXILIARY
    MAY ( dlmServiceStatisticsElementRef $
          dlmServiceStatisticsStatsRef )
  )
```

3.59 SAPStatistics Classes

This association relates SAPStatisticalInformation to its ServiceAccessPoint.

```
  ( 1.3.6.1.4.1.412.100.2.1.3.118 NAME 'dlm1SAPStatistics'
    DESC 'SAPStatistics relates the
          SAPStatisticalInformation class to the
          ServiceAccessPoint to which it applies.'
    SUP dlm1Statistics ABSTRACT
  )

  ( 1.3.6.1.4.1.412.100.2.2.226 NAME 'dlmSAPStatisticsElementRef'
    DESC 'The ServiceAccessPoint to which the statistics
          apply. The value of this attribute points to an entry
          of class dlmServiceAccessPoint.'
    SYNTAX 1.3.6.1.4.1.1466.115.121.1.12 SINGLE-VALUE
    EQUALITY distinguishedNameMatch
  )

  ( 1.3.6.1.4.1.412.100.2.2.227 NAME 'dlmSAPStatisticsStatsRef'
    DESC 'The statistical object. Values of this attribute
          point to entries of class
          dlmSAPStatisticalInformation.'
    SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
    EQUALITY distinguishedNameMatch
  )
```

```
( 1.3.6.1.4.1.412.100.2.1.3.119 NAME 'dlm1SAPStatisticsAuxClass'
  DESC 'SAPStatistics relates the
        SAPStatisticalInformation class to the
        ServiceAccessPoint to which it applies.'
  SUP dlm1SAPStatistics AUXILIARY
  MAY ( dlmSAPStatisticsElementRef $
        dlmSAPStatisticsStatsRef )
)
```

3.60 DeviceStatistics Classes

These classes relate DeviceStatisticalInformation to its Logical Device.

```
( 1.3.6.1.4.1.412.100.2.1.3.120 NAME 'dlm1DeviceStatistics'
  DESC 'DeviceStatistics relates the
        DeviceStatisticalInformation class to the
        LogicalDevice to which it applies.'
  SUP dlm1Statistics ABSTRACT
)

( 1.3.6.1.4.1.412.100.2.2.228 NAME 'dlmDeviceStatisticsElementRef'
  DESC 'The Device to which the statistics apply. The
        value of this attribute points to an entry of class
        dlmLogicalDevice.'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.12 SINGLE-VALUE
  EQUALITY distinguishedNameMatch
)

( 1.3.6.1.4.1.412.100.2.2.229 NAME 'dlmDeviceStatisticsStatsRef'
  DESC 'The statistical object. Values of this attribute
        point to entries of class
        dlmDeviceStatisticalInformation.'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
  EQUALITY distinguishedNameMatch
)

( 1.3.6.1.4.1.412.100.2.1.3.121 NAME 'dlm1DeviceStatisticsAuxClass'
  DESC 'DeviceStatistics relates the
        DeviceStatisticalInformation class to the
        LogicalDevice to which it applies.'
  SUP dlm1DeviceStatistics AUXILIARY
  MAY ( dlmDeviceStatisticsElementRef $
        dlmDeviceStatisticsStatsRef )
)
```

3.61 PhysicalStatistics Classes

These classes relate PhysicalStatisticalInformation to its PhysicalElement.

```
( 1.3.6.1.4.1.412.100.2.1.3.122 NAME 'dlm1PhysicalStatistics'
  DESC 'PhysicalStatistics relates the
        PhysicalStatisticalInformation class to the
        PhysicalElement to which it applies.'
  SUP dlm1Statistics ABSTRACT
)

( 1.3.6.1.4.1.412.100.2.2.230 NAME 'dlmPhysicalStatisticsElementRef'
  DESC 'The PhysicalElement to which the statistics
```

```
            apply. The value of this attribute points to an entry
            of class dlmPhysicalElement.'
      SYNTAX 1.3.6.1.4.1.1466.115.121.1.12 SINGLE-VALUE
      EQUALITY distinguishedNameMatch
    )

    ( 1.3.6.1.4.1.412.100.2.2.231 NAME 'dlmPhysicalStatisticsStatsRef'
      DESC 'The statistical object. Values of this attribute
            point to entries of class
            dlmPhysicalStatisticalInformation.'
      SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
      EQUALITY distinguishedNameMatch
    )

    ( 1.3.6.1.4.1.412.100.2.1.3.123 NAME 'dlm1PhysicalStatisticsAuxClass'
      DESC 'PhysicalStatistics relates the
            PhysicalStatisticalInformation class to the
            PhysicalElement to which it applies.'
      SUP dlm1PhysicalStatistics AUXILIARY
      MAY ( dlmPhysicalStatisticsElementRef $
            dlmPhysicalStatisticsStatsRef )
    )
```

3.62 RelatedStatistics Classes

These classes allow hierarchies or dependencies between related Statistical Information classes.

```
    ( 1.3.6.1.4.1.412.100.2.1.3.124 NAME 'dlm1RelatedStatistics'
      DESC 'RelatedStatistics is an association that defines
            hierarchies and/or dependencies of related Statistical
            Information classes.'
      SUP top ABSTRACT
    )

    ( 1.3.6.1.4.1.412.100.2.2.232 NAME
'dlmRelatedStatisticsRelatedStatsRef'
      DESC 'The related statistics or metrics. Values of this
            attribute point to entries of class
            dlmStatisticalInformation.'
      SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
      EQUALITY distinguishedNameMatch
    )

    ( 1.3.6.1.4.1.412.100.2.2.233 NAME 'dlmRelatedStatisticsStatsRef'
      DESC 'The statistic information/object. Values of this
            attribute point to entries of class
            dlmStatisticalInformation.'
      SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
      EQUALITY distinguishedNameMatch
    )

    ( 1.3.6.1.4.1.412.100.2.1.3.125 NAME 'dlm1RelatedStatisticsAuxClass'
      DESC 'RelatedStatistics is an association that defines
            hierarchies and/or dependencies of related Statistical
            Information classes.'
      SUP dlm1RelatedStatistics AUXILIARY
```

```
  MAY ( dlmRelatedStatisticsRelatedStatsRef $
        dlmRelatedStatisticsStatsRef )
)
```

3.63 Synchronized Classes

These classes indicate that two logical elements were aligned or made to be equivalent at the specified point in time. Preservation of synchronization is determined by the value of the dlmSyncMaintained attribute.

```
( 1.3.6.1.4.1.412.100.2.2.215 NAME 'dlmSyncMaintained'
  DESC 'Boolean indicating whether synchronization is
        maintained.'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.7 SINGLE-VALUE
)

( 1.3.6.1.4.1.412.100.2.2.216 NAME 'dlmWhenSynced'
  DESC 'The point in time that the Elements were
        synchronized.'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.24 SINGLE-VALUE
  EQUALITY generalizedTimeMatch
)

( 1.3.6.1.4.1.412.100.2.1.3.89 NAME 'dlm1Synchronized'
  DESC 'Indicates that two LogicalElements were aligned
        or made to be equivalent at the specified point in
        time. If the boolean property SyncMaintained is TRUE,
        then synchronization of the Elements is preserved.
        Both like and unlike objects may be synchronized. For
        example, two WatchDog timers may be aligned, or the
        contents of a LogicalFile may be synchronized with the
        contents of a StorageExtent.'
  SUP top ABSTRACT
  MAY ( dlmSyncMaintained $ dlmWhenSynced )
)

( 1.3.6.1.4.1.412.100.2.2.217 NAME 'dlmSynchronizedSyncedElementRef'
  DESC 'SyncedElement represents another LogicalElement
        that is synchronized with the entity referenced as
        SystemElement. The value of this attribute points to
        an entry of class dlmLogicalElement.'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.12 SINGLE-VALUE
  EQUALITY distinguishedNameMatch
)

( 1.3.6.1.4.1.412.100.2.2.218 NAME 'dlmSynchronizedSystemElementRef'
  DESC 'SystemElement represents one LogicalElement that
        is synchronized with the entity referenced as
        SyncedElement. The value of this attribute points to
        an entry of class dlmLogicalElement.'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.12 SINGLE-VALUE
  EQUALITY distinguishedNameMatch
)
```

```
   ( 1.3.6.1.4.1.412.100.2.1.3.90 NAME 'dlm1SynchronizedInstance'
     DESC 'Indicates that two LogicalElements were aligned
           or made to be equivalent at the specified point in
           time. If the boolean property SyncMaintained is TRUE,
           then synchronization of the Elements is preserved.
           Both like and unlike objects may be synchronized. For
           example, two WatchDog timers may be aligned, or the
           contents of a LogicalFile may be synchronized with the
          contents of a StorageExtent.'
     SUP dlm1Synchronized
     MAY ( dlmSynchronizedSyncedElementRef $
           dlmSynchronizedSystemElementRef )
   )

   ( 1.3.6.1.4.1.412.100.2.3.3.8 NAME
'dlm1SynchronizedInstanceNameForm1'
     OC dlm1SynchronizedInstance
     MUST ( orderedCimKeys )
   )

   ( <core-sr-8> NAME 'dlm1SynchronizedInstanceStructureRule1'
     Form dlm1SynchronizedInstanceNameForm1
   )

   ( 1.3.6.1.4.1.412.100.2.2.219 NAME 'dlmSynchronizedHelperRef'
     DESC 'Pointer to SynchronizedInstance.'
     SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
     EQUALITY distinguishedNameMatch
   )

   ( 1.3.6.1.4.1.412.100.2.1.3.91 NAME 'dlm1SynchronizedHelper'
     DESC 'Helper class for finding Synchronized.'
     SUP top AUXILIARY
     MAY ( dlmSynchronizedHelperRef )
   )
```

4 References

Request For Comments (RFC) and Internet Draft documents are available from numerous mirror sites.

[1] M. Wahl, T. Howes, S. Kille, "Lightweight Directory Access Protocol (v3)," RFC 2251, December 1997.

[2] M. Wahl, A. Coulbeck, T. Howes, S. Kille, "Lightweight Directory Access Protocol (v3): Attribute Syntax Definitions," RFC 2252, December 1997.

[3] CIM, "CIM Core Model, v2.5," http://www.dmtf.org/spec/cims.html.

[4] F. Yergeau, "UTF-8, a transformation format of ISO 10646," RFC 2279, January 1998.

[5] M. Wahl, S. Kille, T. Howes, "Lightweight Directory Access Protocol (v3): UTF-8 String Representation of Distinguished Names," RFC 2253, December 1997

5 Acknowledgment

This work is a product of the DMTF LDAP Mapping Working Group and has benefited from many comments and discussions during this group's meetings.

6 Structural Rules

The following table states the structural rules defined in this document.

Rule	Structural Class	RDN Attribute	Superior Rules	Defined
<core-sr-10>	dlm1AdminDomainInstance	orderedCimKeys	*	3.7
<core-sr-1>	dlm1ConfigurationInstance	orderedCimKeys	*	3.13
<core-sr-2>	dlm1ProductInstance	orderedCimKeys	*	3.15
<core-sr-3>	dlm1SupportAccessInstance	orderedCimKeys	*	3.16
<core-sr-4>	dlm1FRUInstance	orderedCimKeys	*	3.17
<core-sr-11>	dlm1SystemStatisticalInformationInstance	orderedCimKeys	*	3.19
<core-sr-12>	Dlm1ServiceStatisticalInformationInstance	orderedCimKeys	*	3.20
<core-sr-13>	Dlm1SAPStatisticalInformationInstance	orderedCimKeys	*	3.21
<core-sr-14>	Dlm1DeviceStatisticalInformationInstance	orderedCimKeys	*	3.22
<core-sr-15>	Dlm1physicalStatisticalInformationInstance	orderedCimKeys	*	3.23
<core-sr-5>	dlm1ServiceServiceDependencyInstance	orderedCimKeys	*	3.38
<core-sr-6>	dlm1CompatibleProductInstance	orderedCimKeys	*	3.49
<core-sr-7>	dlm1ProductProductDependencyInstance	orderedCimKeys	*	3.50
<core-sr-8>	dlm1SynchronizedInstance	orderedCimKeys	*	3.63
<core-sr-9>	dlmOtherIdentifyingInfoInstance	arrayIndex	**	2.5.1

* This mapping document does not provide suggestions regarding DIT placement of mapped top-level CIM objects.

** The superiors for this rule are not defined in this mapping. In subsequent DMTF CIM mapping documents that define mappings of non-abstract subclasses of CIM_ComputerSystem and CIM_LogicalDevice, it will be possible to define the possible superiors for cimOtherIdentifyingInfoInstance.

7 OID Assignments

The following three tables provide the summary of OID assignments made in this document.

7.1 Object Classes

OID	Object Class Name	Section
1.3.6.1.4.1.412.100.2.1.3.92	dlmOtherIdentifyingInfoInstance	2.5.1
1.3.6.1.4.1.412.100.2.1.3.1	dlm1ManagedElement	3.1
1.3.6.1.4.1.412.100.2.1.3.2	dlm1ManagedSystemElement	3.2
1.3.6.1.4.1.412.100.2.1.3.3	dlm1PhysicalElement	3.3
1.3.6.1.4.1.412.100.2.1.3.4	dlm1LogicalElement	3.4
1.3.6.1.4.1.412.100.2.1.3.5	dlm1System	3.5
1.3.6.1.4.1.412.100.2.1.3.6	dlm1ComputerSystem	3.6
1.3.6.1.4.1.412.100.2.1.3.93	dlm1AdminDomain	3.7
1.3.6.1.4.1.412.100.2.1.3.94	dlm1AdminDomainAuxClass	3.7
1.3.6.1.4.1.412.100.2.1.3.95	dlm1AdminDomainInstance	3.7
1.3.6.1.4.1.412.100.2.1.3.7	dlm1LogicalDevice	3.8
1.3.6.1.4.1.412.100.2.1.3.8	dlm1Service	3.9
1.3.6.1.4.1.412.100.2.1.3.9	dlm1ServiceAccessPoint	3.10
1.3.6.1.4.1.412.100.2.1.3.10	dlm1Collection	3.11
1.3.6.1.4.1.412.100.2.1.3.11	dlm1CollectionOfMSEs	3.12
1.3.6.1.4.1.412.100.2.1.3.12	dlm1Configuration	3.13
1.3.6.1.4.1.412.100.2.1.3.13	dlm1ConfigurationAuxClass	3.13
1.3.6.1.4.1.412.100.2.1.3.14	dlm1ConfigurationInstance	3.13
1.3.6.1.4.1.412.100.2.1.3.15	dlm1Setting	3.14
1.3.6.1.4.1.412.100.2.1.3.16	dlm1Product	3.15
1.3.6.1.4.1.412.100.2.1.3.17	dlm1ProductAuxClass	3.15
1.3.6.1.4.1.412.100.2.1.3.18	dlm1ProductInstance	3.15
1.3.6.1.4.1.412.100.2.1.3.19	dlm1SupportAccess	3.16
1.3.6.1.4.1.412.100.2.1.3.20	dlm1SupportAccessAuxClass	3.16
1.3.6.1.4.1.412.100.2.1.3.21	dlm1SupportAccessInstance	3.16
1.3.6.1.4.1.412.100.2.1.3.22	dlm1FRU	3.17
1.3.6.1.4.1.412.100.2.1.3.23	dlm1FRUAuxClass	3.17
1.3.6.1.4.1.412.100.2.1.3.24	dlm1FRUInstance	3.17
1.3.6.1.4.1.412.100.2.1.3.96	dlm1StatisticalInformation	3.18
1.3.6.1.4.1.412.100.2.1.3.97	dlm1SystemStatisticalInformation	3.19
1.3.6.1.4.1.412.100.2.1.3.98	dlm1SystemStatisticalInformationAuxClass	3.19
1.3.6.1.4.1.412.100.2.1.3.99	dlm1SystemStatisticalInformationInstance	3.19
1.3.6.1.4.1.412.100.2.1.3.100	dlm1ServiceStatisticalInformation	3.20

OID	Object Class Name	Section
1.3.6.1.4.1.412.100.2.1.3.101	dlm1ServiceStatisticalInformationAuxClass	3.20
1.3.6.1.4.1.412.100.2.1.3.102	dlm1ServiceStatisticalInformationInstance	3.20
1.3.6.1.4.1.412.100.2.1.3.103	dlm1SAPStatisticalInformation	3.21
1.3.6.1.4.1.412.100.2.1.3.104	dlm1SAPStatisticalInformationAuxClass	3.21
1.3.6.1.4.1.412.100.2.1.3.105	dlm1SAPStatisticalInformationInstance	3.21
1.3.6.1.4.1.412.100.2.1.3.106	dlm1DeviceStatisticalInformation	3.22
1.3.6.1.4.1.412.100.2.1.3.107	dlm1DeviceStatisticalInformationAuxClass	3.22
1.3.6.1.4.1.412.100.2.1.3.108	dlm1DeviceStatisticalInformationInstance	3.22
1.3.6.1.4.1.412.100.2.1.3.109	dlm1PhysicalStatisticalInformation	3.23
1.3.6.1.4.1.412.100.2.1.3.110	dlm1PhysicalStatisticalInformationAuxClass	3.23
1.3.6.1.4.1.412.100.2.1.3.111	dlm1PhysicalStatisticalInformationInstance	3.23
1.3.6.1.4.1.412.100.2.1.3.25	dlm1CollectedCollections	3.24
1.3.6.1.4.1.412.100.2.1.3.26	dlm1CollectedCollectionsAuxClass	3.24
1.3.6.1.4.1.412.100.2.1.3.27	dlm1LogicalIdentity	3.25
1.3.6.1.4.1.412.100.2.1.3.28	dlm1ConfigurationComponent	3.26
1.3.6.1.4.1.412.100.2.1.3.29	dlm1ConfigurationComponentAuxClass	3.26
1.3.6.1.4.1.412.100.2.1.3.30	dlm1ElementConfiguration	3.27
1.3.6.1.4.1.412.100.2.1.3.31	dlm1ElementConfigurationAuxClass	3.27
1.3.6.1.4.1.412.100.2.1.3.32	dlm1CollectionConfiguration4.28	
1.3.6.1.4.1.412.100.2.1.3.33	dlm1CollectionConfigurationAuxClass	3.28
1.3.6.1.4.1.412.100.2.1.3.34	dlm1ElementSetting	3.29
1.3.6.1.4.1.412.100.2.1.3.35	dlm1ElementSettingAuxClass	3.29
1.3.6.1.4.1.412.100.2.1.3.36	dlm1DefaultSetting	3.30
1.3.6.1.4.1.412.100.2.1.3.37	dlm1DefaultSettingAuxClass	3.30
1.3.6.1.4.1.412.100.2.1.3.38	dlm1SettingContext	3.31
1.3.6.1.4.1.412.100.2.1.3.39	dlm1SettingContextAuxClass	3.31
1.3.6.1.4.1.412.100.2.1.3.40	dlm1CollectionSetting	3.32
1.3.6.1.4.1.412.100.2.1.3.41	dlm1CollectionSettingAuxClass	3.32
1.3.6.1.4.1.412.100.2.1.3.42	dlm1Dependency	3.33
1.3.6.1.4.1.412.100.2.1.3.43	dlm1ServiceAccessBySAP	3.34
1.3.6.1.4.1.412.100.2.1.3.44	dlm1ServiceAccessBySAPAuxClass	3.34
1.3.6.1.4.1.412.100.2.1.3.45	dlm1HostedService	3.35
1.3.6.1.4.1.412.100.2.1.3.46	dlm1HostedServiceAuxClass	3.35
1.3.6.1.4.1.412.100.2.1.3.47	dlm1HostedAccessPoint	3.36
1.3.6.1.4.1.412.100.2.1.3.48	dlm1HostedAccessPointAuxClass	3.36
1.3.6.1.4.1.412.100.2.1.3.49	dlm1ProvidesServiceToElement	3.37
1.3.6.1.4.1.412.100.2.1.3.50	dlm1ProvidesServiceToElementAuxClass	3.37
1.3.6.1.4.1.412.100.2.1.3.51	dlm1ServiceServiceDependency	3.38
1.3.6.1.4.1.412.100.2.1.3.52	dlm1ServiceServiceDependencyInstance	3.38
1.3.6.1.4.1.412.100.2.1.3.53	dlm1ServiceServiceDependencyHelper	3.38
1.3.6.1.4.1.412.100.2.1.3.54	dlm1ServiceSAPDependency	3.39

OID	Object Class Name	Section
1.3.6.1.4.1.412.100.2.1.3.55	dlm1ServiceSAPDependencyAuxClass	3.39
1.3.6.1.4.1.412.100.2.1.3.56	dlm1SAPSAPDependency	3.40
1.3.6.1.4.1.412.100.2.1.3.57	dlm1SAPSAPDependencyAuxClass	3.40
1.3.6.1.4.1.412.100.2.1.3.58	dlm1Realizes	3.41
1.3.6.1.4.1.412.100.2.1.3.59	dlm1RealizesAuxClass	3.41
1.3.6.1.4.1.412.100.2.1.3.60	dlm1MemberOfCollection	3.42
1.3.6.1.4.1.412.100.2.1.3.61	dlm1MemberOfCollectionAuxClass	3.42
1.3.6.1.4.1.412.100.2.1.3.62	dlm1CollectedMSEs	3.43
1.3.6.1.4.1.412.100.2.1.3.63	dlm1CollectedMSEsAuxClass	3.43
1.3.6.1.4.1.412.100.2.1.3.64	dlm1Component	3.44
1.3.6.1.4.1.412.100.2.1.3.65	dlm1SystemComponent	3.45
1.3.6.1.4.1.412.100.2.1.3.66	dlm1SystemComponentAuxClass	3.45
1.3.6.1.4.1.412.100.2.1.3.67	dlm1SystemDevice	3.46
1.3.6.1.4.1.412.100.2.1.3.68	dlm1SystemDeviceAuxClass	3.46
1.3.6.1.4.1.412.100.2.1.3.69	dlm1ServiceComponent	3.47
1.3.6.1.4.1.412.100.2.1.3.70	dlm1ServiceComponentAuxClass	3.47
1.3.6.1.4.1.412.100.2.1.3.71	dlm1ProductParentChild	3.48
1.3.6.1.4.1.412.100.2.1.3.72	dlm1ProductParentChildAuxClass	3.48
1.3.6.1.4.1.412.100.2.1.3.73	dlm1CompatibleProduct	3.49
1.3.6.1.4.1.412.100.2.1.3.74	dlm1CompatibleProductInstance	3.49
1.3.6.1.4.1.412.100.2.1.3.75	dlm1CompatibleProductHelper	3.49
1.3.6.1.4.1.412.100.2.1.3.76	dlm1ProductProductDependency	3.50
1.3.6.1.4.1.412.100.2.1.3.77	dlm1ProductProductDependencyInstance	3.50
1.3.6.1.4.1.412.100.2.1.3.78	dlm1ProductProductDependencyHelper	3.50
1.3.6.1.4.1.412.100.2.1.3.79	dlm1ProductSupport	3.51
1.3.6.1.4.1.412.100.2.1.3.80	dlm1ProductSupportAuxClass	3.51
1.3.6.1.4.1.412.100.2.1.3.81	dlm1ProductFRU	3.52
1.3.6.1.4.1.412.100.2.1.3.82	dlm1ProductFRUAuxClass	3.52
1.3.6.1.4.1.412.100.2.1.3.83	dlm1ProductPhysicalElements	3.53
1.3.6.1.4.1.412.100.2.1.3.84	dlm1ProductPhysicalElementsAuxClass	3.53
1.3.6.1.4.1.412.100.2.1.3.85	dlm1FRUPhysicalElements	3.54
1.3.6.1.4.1.412.100.2.1.3.86	dlm1FRUPhysicalElementsAuxClass	3.54
1.3.6.1.4.1.412.100.2.1.3.87	dlm1FRUIncludesProduct	3.55
1.3.6.1.4.1.412.100.2.1.3.88	dlm1FRUIncludesProductAuxClass	3.55
1.3.6.1.4.1.412.100.2.1.3.112	dlm1Statistics	3.56
1.3.6.1.4.1.412.100.2.1.3.113	dlm1StatisticsAuxClass	3.56
1.3.6.1.4.1.412.100.2.1.3.114	dlm1SystemStatistics	3.57
1.3.6.1.4.1.412.100.2.1.3.115	dlm1SystemStatisticsAuxClass	3.57
1.3.6.1.4.1.412.100.2.1.3.116	dlm1ServiceStatistics	3.58
1.3.6.1.4.1.412.100.2.1.3.117	dlm1ServiceStatisticsAuxClass	3.58
1.3.6.1.4.1.412.100.2.1.3.118	dlm1SAPStatistics	3.59

OID	Object Class Name	Section
1.3.6.1.4.1.412.100.2.1.3.119	dlm1SAPStatisticsAuxClass	3.59
1.3.6.1.4.1.412.100.2.1.3.120	dlm1DeviceStatistics	3.60
1.3.6.1.4.1.412.100.2.1.3.121	dlm1DeviceStatisticsAuxClass	3.60
1.3.6.1.4.1.412.100.2.1.3.122	dlm1PhysicalStatistics	3.61
1.3.6.1.4.1.412.100.2.1.3.123	dlm1PhysicalStatisticsAuxClass	3.61
1.3.6.1.4.1.412.100.2.1.3.124	dlm1RelatedStatistics	3.62
1.3.6.1.4.1.412.100.2.1.3.125	dlm1RelatedStatisticsAuxClass	3.62
1.3.6.1.4.1.412.100.2.1.3.89	dlm1Synchronized	3.63
1.3.6.1.4.1.412.100.2.1.3.90	dlm1SynchronizedInstance	3.63
1.3.6.1.4.1.412.100.2.1.3.91	dlm1SynchronizedHelper	3.63

7.2 Attributes

OID	Attribute Name	Section
1.3.6.1.4.1.412.100.1.2.5	arrayIndex	2.5.1
1.3.6.1.4.1.412.100.2.2.101	dlmIdentifyingDescription	2.5.1
1.3.6.1.4.1.412.100.1.2.1	orderedCimKeys	2.6
1.3.6.1.4.1.412.100.1.2.2	orderedCimModelPath	2.6
1.3.6.1.4.1.412.100.2.2.103	dlmCaption	3.1
1.3.6.1.4.1.412.100.2.2.104	dlmDescription	3.1
1.3.6.1.4.1.412.100.2.2.105	dlmInstallDate	3.2
1.3.6.1.4.1.412.100.2.2.106	dlmName	3.2
1.3.6.1.4.1.412.100.2.2.107	dlmStatus	3.2
1.3.6.1.4.1.412.100.2.2.108	dlmCreationClassName	3.3
1.3.6.1.4.1.412.100.2.2.109	dlmManufactureDate	3.3
1.3.6.1.4.1.412.100.2.2.110	dlmManufacturer	3.3
1.3.6.1.4.1.412.100.2.2.111	dlmModel	3.3
1.3.6.1.4.1.412.100.2.2.112	dlmOtherIdentifyingInfo	3.3
1.3.6.1.4.1.412.100.2.2.113	dlmPartNumber	3.3
1.3.6.1.4.1.412.100.2.2.114	dlmPoweredOn	3.3
1.3.6.1.4.1.412.100.2.2.115	dlmSKU	3.3
1.3.6.1.4.1.412.100.2.2.116	dlmSerialNumber	3.3
1.3.6.1.4.1.412.100.2.2.117	dlmTag	3.3
1.3.6.1.4.1.412.100.2.2.118	dlmVersion	3.3
1.3.6.1.4.1.412.100.2.2.119	dlmNameFormat	3.5
1.3.6.1.4.1.412.100.2.2.120	dlmPrimaryOwnerContact	3.5
1.3.6.1.4.1.412.100.2.2.121	dlmPrimaryOwnerName	3.5
1.3.6.1.4.1.412.100.2.2.122	dlmRoles	3.5
1.3.6.1.4.1.412.100.2.2.123	dlmDedicated	3.6
1.3.6.1.4.1.412.100.2.2.124	dlmAdditionalAvailability	3.8
1.3.6.1.4.1.412.100.2.2.125	dlmAvailability	3.8
1.3.6.1.4.1.412.100.2.2.126	dlmDeviceID	3.8

OID	Attribute Name	Section
1.3.6.1.4.1.412.100.2.2.127	dlmErrorCleared	3.8
1.3.6.1.4.1.412.100.2.2.128	dlmErrorDescription	3.8
1.3.6.1.4.1.412.100.2.2.129	dlmLastErrorCode	3.8
1.3.6.1.4.1.412.100.2.2.130	dlmMaxQuiesceTime	3.8
1.3.6.1.4.1.412.100.2.2.131	dlmPowerManagementCapabilities	3.8
1.3.6.1.4.1.412.100.2.2.132	dlmPowerManagementSupported	3.8
1.3.6.1.4.1.412.100.2.2.133	dlmPowerOnHours	3.8
1.3.6.1.4.1.412.100.2.2.134	dlmStatusInfo	3.8
1.3.6.1.4.1.412.100.2.2.135	dlmTotalPowerOnHours	3.8
1.3.6.1.4.1.412.100.2.2.136	dlmStartMode	3.9
1.3.6.1.4.1.412.100.2.2.137	dlmStarted	3.9
1.3.6.1.4.1.412.100.2.2.138	dlmCollectionID	3.12
1.3.6.1.4.1.412.100.2.2.139	dlmSettingID	3.14
1.3.6.1.4.1.412.100.2.2.140	dlmIdentifyingNumber	3.15
1.3.6.1.4.1.412.100.2.2.141	dlmSKUNumber	3.15
1.3.6.1.4.1.412.100.2.2.142	dlmVendor	3.15
1.3.6.1.4.1.412.100.2.2.143	dlmWarrantyDuration	3.15
1.3.6.1.4.1.412.100.2.2.144	dlmWarrantyStartDate	3.15
1.3.6.1.4.1.412.100.2.2.145	dlmCommunicationInfo	3.16
1.3.6.1.4.1.412.100.2.2.146	dlmCommunicationMode	3.16
1.3.6.1.4.1.412.100.2.2.147	dlmLocale	3.16
1.3.6.1.4.1.412.100.2.2.148	dlmSupportAccessId	3.16
1.3.6.1.4.1.412.100.2.2.149	dlmFRUNumber	3.17
1.3.6.1.4.1.412.100.2.2.150	dlmRevisionLevel	3.17
1.3.6.1.4.1.412.100.2.2.151	dlmCollectedCollectionsCollectionRef	3.24
1.3.6.1.4.1.412.100.2.2.152	dlmCollectedCollectionsCollectionIn CollectionRef	3.24
1.3.6.1.4.1.412.100.2.2.153	dlmConfigurationComponentConfig ComponentRef	3.26
1.3.6.1.4.1.412.100.2.2.154	dlmConfigurationComponentConfigGroupRef	3.26
1.3.6.1.4.1.412.100.2.2.155	dlmElementConfigurationConfigurationRef	3.27
1.3.6.1.4.1.412.100.2.2.156	dlmElementConfigurationElementRef	3.27
1.3.6.1.4.1.412.100.2.2.157	dlmCollectionConfigurationCollectionRef	3.28
1.3.6.1.4.1.412.100.2.2.158	dlmCollectionConfigurationConfigurationRef	3.28
1.3.6.1.4.1.412.100.2.2.159	dlmElementSettingElementRef	3.29
1.3.6.1.4.1.412.100.2.2.160	dlmElementSettingSettingRef	3.29
1.3.6.1.4.1.412.100.2.2.161	dlmDefaultSettingElementRef	3.30
1.3.6.1.4.1.412.100.2.2.162	dlmDefaultSettingSettingRef	3.30
1.3.6.1.4.1.412.100.2.2.163	dlmSettingContextContextRef	3.31
1.3.6.1.4.1.412.100.2.2.164	dlmSettingContextSettingRef	3.31
1.3.6.1.4.1.412.100.2.2.165	dlmCollectionSettingCollectionRef	3.32

OID	Attribute Name	Section
1.3.6.1.4.1.412.100.2.2.166	dlmCollectionSettingSettingRef	3.32
1.3.6.1.4.1.412.100.2.2.167	dlmServiceAccessBySAPAntecedentRef	3.34
1.3.6.1.4.1.412.100.2.2.168	dlmServiceAccessBySAPDependentRef	3.34
1.3.6.1.4.1.412.100.2.2.169	dlmHostedServiceDependentRef	3.35
1.3.6.1.4.1.412.100.2.2.170	dlmHostedServiceAntecedentRef	3.35
1.3.6.1.4.1.412.100.2.2.171	dlmHostedAccessPointDependentRef	3.36
1.3.6.1.4.1.412.100.2.2.172	dlmHostedAccessPointAntecedentRef	3.36
1.3.6.1.4.1.412.100.2.2.173	dlmProvidesServiceToElementDependentRef	3.37
1.3.6.1.4.1.412.100.2.2.174	dlmProvidesServiceToElementAntecedent Ref	3.37
1.3.6.1.4.1.412.100.2.2.175	dlmRestartService	3.38
1.3.6.1.4.1.412.100.2.2.176	dlmTypeOfDependency	3.38
1.3.6.1.4.1.412.100.2.2.177	dlmServiceServiceDependencyAntecedent Ref	3.38
1.3.6.1.4.1.412.100.2.2.178	dlmServiceServiceDependencyDependent Ref	3.38
1.3.6.1.4.1.412.100.2.2.179	dlmServiceServiceDependencyHelperRef	3.38
1.3.6.1.4.1.412.100.2.2.180	dlmServiceSAPDependencyDependentRef	3.39
1.3.6.1.4.1.412.100.2.2.181	dlmServiceSAPDependencyAntecedentRef	3.39
1.3.6.1.4.1.412.100.2.2.182	dlmSAPSAPDependencyAntecedentRef	3.40
1.3.6.1.4.1.412.100.2.2.183	dlmSAPSAPDependencyDependentRef	3.40
1.3.6.1.4.1.412.100.2.2.184	dlmRealizesDependentRef	3.41
1.3.6.1.4.1.412.100.2.2.185	dlmRealizesAntecedentRef	3.41
1.3.6.1.4.1.412.100.2.2.186	dlmMemberOfCollectionCollectionRef	3.42
1.3.6.1.4.1.412.100.2.2.187	dlmMemberOfCollectionMemberRef	3.42
1.3.6.1.4.1.412.100.2.2.188	dlmCollectedMSEsCollectionRef	3.43
1.3.6.1.4.1.412.100.2.2.189	dlmCollectedMSEsMemberRef	3.43
1.3.6.1.4.1.412.100.2.2.190	dlmSystemComponentPartComponentRef	3.45
1.3.6.1.4.1.412.100.2.2.191	dlmSystemComponentGroupComponentRef	3.45
1.3.6.1.4.1.412.100.2.2.192	dlmSystemDevicePartComponentRef	3.46
1.3.6.1.4.1.412.100.2.2.193	dlmSystemDeviceGroupComponentRef	3.46
1.3.6.1.4.1.412.100.2.2.194	dlmServiceComponentGroupComponentRef	3.47
1.3.6.1.4.1.412.100.2.2.195	dlmServiceComponentPartComponentRef	3.47
1.3.6.1.4.1.412.100.2.2.196	dlmProductParentChildChildRef	3.48
1.3.6.1.4.1.412.100.2.2.197	dlmProductParentChildParentRef	3.48
1.3.6.1.4.1.412.100.2.2.198	dlmCompatibilityDescription	3.49
1.3.6.1.4.1.412.100.2.2.199	dlmCompatibleProductCompatibleProduct Ref	3.49
1.3.6.1.4.1.412.100.2.2.200	dlmCompatibleProductProductRef	3.49
1.3.6.1.4.1.412.100.2.2.201	dlmCompatibleProductHelperRef	3.49

OID	Attribute Name	Section
1.3.6.1.4.1.412.100.2.2.202	dlmProductProductDependencyDependentProductRef	3.50
1.3.6.1.4.1.412.100.2.2.203	dlmProductProductDependencyRequiredProductRef	3.50
1.3.6.1.4.1.412.100.2.2.204	dlmProductProductDependencyHelperRef	3.50
1.3.6.1.4.1.412.100.2.2.205	dlmProductSupportProductRef	3.51
1.3.6.1.4.1.412.100.2.2.206	dlmProductSupportSupportRef	3.51
1.3.6.1.4.1.412.100.2.2.207	dlmProductFRUFRURef	3.52
1.3.6.1.4.1.412.100.2.2.208	dlmProductFRUProductRef	3.52
1.3.6.1.4.1.412.100.2.2.209	dlmProductPhysicalElementsComponentRef	3.53
1.3.6.1.4.1.412.100.2.2.210	dlmProductPhysicalElementsProductRef	3.53
1.3.6.1.4.1.412.100.2.2.211	dlmFRUPhysicalElementsFRURef	3.54
1.3.6.1.4.1.412.100.2.2.212	dlmFRUPhysicalElementsComponentRef	3.54
1.3.6.1.4.1.412.100.2.2.213	dlmFRUIncludesProductFRURef	3.55
1.3.6.1.4.1.412.100.2.2.214	dlmFRUIncludesProductComponentRef	3.55
1.3.6.1.4.1.412.100.2.2.220	dlmStatisticsElementRef	3.56
1.3.6.1.4.1.412.100.2.2.221	dlmStatisticsStatsRef	3.56
1.3.6.1.4.1.412.100.2.2.222	dlmSystemStatisticsElementRef	3.57
1.3.6.1.4.1.412.100.2.2.223	dlmSystemStatisticsStatsRef	3.57
1.3.6.1.4.1.412.100.2.2.224	dlmServiceStatisticsElementRef	3.58
1.3.6.1.4.1.412.100.2.2.225	dlmServiceStatisticsStatsRef	3.58
1.3.6.1.4.1.412.100.2.2.226	dlmSAPStatisticsElementRef	3.59
1.3.6.1.4.1.412.100.2.2.227	dlmSAPStatisticsStatsRef	3.59
1.3.6.1.4.1.412.100.2.2.228	dlmDeviceStatisticsElementRef	3.60
1.3.6.1.4.1.412.100.2.2.229	dlmDeviceStatisticsStatsRef	3.60
1.3.6.1.4.1.412.100.2.2.230	dlmPhysicalStatisticsElementRef	3.61
1.3.6.1.4.1.412.100.2.2.231	dlmPhysicalStatisticsStatsRef	3.61
1.3.6.1.4.1.412.100.2.2.232	dlmRelatedStatisticsRelatedStatsRef	3.62
1.3.6.1.4.1.412.100.2.2.233	dlmRelatedStatisticsStatsRef	3.62
1.3.6.1.4.1.412.100.2.2.215	dlmSyncMaintained	3.63
1.3.6.1.4.1.412.100.2.2.216	dlmWhenSynced	3.63
1.3.6.1.4.1.412.100.2.2.217	dlmSynchronizedSyncedElementRef	3.63
1.3.6.1.4.1.412.100.2.2.218	dlmSynchronizedSystemElementRef	3.63
1.3.6.1.4.1.412.100.2.2.219	dlmSynchronizedHelperRef	3.63

7.3 Name Forms

OID	Name Form Name	Section
1.3.6.1.4.1.412.100.2.3.3.9	dlmOtherIdentifyingInfoInstanceNameForm	2.5.1
1.3.6.1.4.1.412.100.2.3.3.10	dlm1AdminDomainInstanceNameForm1	3.7
1.3.6.1.4.1.412.100.2.3.3.1	dlm1ConfigurationInstanceNameForm1	3.13
1.3.6.1.4.1.412.100.2.3.3.2	dlm1ProductInstanceNameForm1	3.15

1.3.6.1.4.1.412.100.2.3.3.3	dlm1SupportAccessInstanceNameForm1	3.16
1.3.6.1.4.1.412.100.2.3.3.4	dlm1FRUInstanceNameForm1	3.17
1.3.6.1.4.1.412.100.2.3.3.11	dlm1SystemStatisticalInformationInstanceNameForm1	3.19
1.3.6.1.4.1.412.100.2.3.3.12	dlm1ServiceStatisticalInformationInstanceNameForm1	3.20
1.3.6.1.4.1.412.100.2.3.3.13	dlm1SAPStatisticalInformationInstanceNameForm1	3.21
1.3.6.1.4.1.412.100.2.3.3.14	dlm1DeviceStatisticalInformationInstanceNameForm1	3.22
1.3.6.1.4.1.412.100.2.3.3.15	dlm1PhysicalStatisticalInformationInstanceNameForm1	3.23
1.3.6.1.4.1.412.100.2.3.3.5	dlm1ServiceServiceDependencyInstanceNameForm1	3.38
1.3.6.1.4.1.412.100.2.3.3.6	dlm1CompatibleProductInstanceNameForm1	3.49
1.3.6.1.4.1.412.100.2.3.3.7	dlm1ProductProductDependencyInstanceNameForm1	3.50
1.3.6.1.4.1.412.100.2.3.3.8	dlm1SynchronizedInstanceNameForm1	3.63