Credential
(See User Model (Credential))

Privilege
(See User Model (Authorization))

AuthorizedPrivilege
(See User Model (Authorization))

Identity
(See User Model (Identity))

StorageHardwareID
(See User Model (Identity))

RemoteIdentity
(See User Model (Identity))

ManagedSystemElement
(See Core Model)

Collection
(See Core Model)

LogicalElement
(See Core Model)

AccountGroup (E)
InstanceID: string {key]

Account
(See User Model (Account))

ManagedElement
(See Core Model)

SignedCredential {E}
(See User Model (PublicKey))

UnsignedCredential {E}
(See User Model (PublicKey))

SharedCredential {E}
(See User Model (SharedSecret))

KerberosCredential {E}
(See User Model (Kerberos))

NamedCredential {E}
(See User Model (SharedSecret))

SecuritySensitivity
(See User Model (Authorization))

Collection
(See Core Model)
EnabledLogicalElement
(See Core Model)

Service
(See Core Model)

SecurityService

AuthorizationService
(See User Model (Authorization Services))

PrivilegeManagementService
(See User Model (Authorization Services))

CertificateAuthority
(See User Model (PublicKey))

Notary
(See User Model (Authentication Services))

KerberosKeyDistributionCenter
(See User Model (Kerberos))

LocalCredentialManagementService
(See User Model (Authentication Services))

SharedSecretService
(See User Model (SharedSecret))

PublicKeyManagementService
(See User Model (PublicKey))

AuthenticationService
(See User Model (Authentication Services))

CredentialManagementService
(See User Model (Authentication Services))

VerificationService
(See User Model (Authentication Services))

IdentityManagementService
(See User Model (Authentication Services))

AccountManagementService
(See User Model (AccountManagementService))

ServiceAccessPoint
(See Core Model)

CredentialManagementSAP
(See User Model (Authentication Services))

KerberosKeyDistributionCenter
(See User Model (Kerberos))

PublicKeyManagementService
(See User Model (PublicKey))

SharedSecretService
(See User Model (SharedSecret))

PublicKeyManagementService
(See User Model (PublicKey))
ManagedElement
(See Core Model)

RoleLimitedToTarget

Collection
(See Core Model)

Role

Group

OtherRoleInformation

CreationClassName: string {key}
Name: string {key}
ObjectClass: String []
BusinessCategory: string[]
CommonName: string[]
Descriptions: string[]
DestinationIndicator: string[]
FacsimileTelephoneNumber: string[]
InternationalSDNNumber: string[]
OU: string[]
PhysicalDeliveryOfficeName: string[]
PostalAddress: string[]
PostalCode: string[]
PostOfficeBox: string[]
PreferredDeliveryMethod: string
RegisteredAddress:string[]
SeeAlso: string[]
StateOrProvince: string[]
Street: string[]
TelephoneNumber: string[]
TeletexTerminalIdentifier: string[]
TelexNumber: string[]
X121Address: string[]

0..1
MoreRoleInfo

0..1
MoreGroupInfo

OtherGroupInformation

CreationClassName: string {key}
Name: string {key}
ObjectClass: String []
BusinessCategory: string[]
CommonName: string[]
Descriptions: string[]
OrganizationName: string[]
OU: string[]
Owner: string[]
SeeAlso: string[]

SystemAdministratorRole

SystemAdministratorGroup

System

EnabledLogicalElement
(See Core Model)

LogicalElement
(See Core Model)

ManagedSystemElement
(See Core Model)
Authorization Services

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<td>SecurityService</td>
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<td>AuthorizationService</td>
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</table>

PrivilegeManagementService

- **ChangeAccess(**
  - [IN] Subject: ref ManagedElement {required},
  - [IN] Target: ref ManagedElement {required},
  - [IN] PrivilegePolicies: ref PrivilegePropagationRules [],
  - [IN, OUT] Privileges: string [] {embeddedobject});
  - uint32 (enum)

- **ShowAccess(**
  - [IN] Subject: ref ManagedElement,
  - [IN] Target: ref ManagedElement,
  - [OUT] OutSubjects: ref ManagedElement[],
  - [OUT] OutTargets: ref ManagedElement[],
  - [OUT] Privileges: string [] {embeddedobject});
  - uint32 (enum)

- **AssignAccess(**
  - [IN] Subject: ref ManagedElement {required},
  - [IN] PrivilegeGranted: boolean,
  - [IN] Activities: uint16 [] {enum},
  - [IN] ActivityQualifiers: string [],
  - [IN] QualifierFormats: uint16 [] {enum},
  - [IN] Target: ref ManagedElement {required},
  - [IN, OUT] Privilege: ref AuthorizedPrivilege);
  - uint32 (enum)

- **RemoveAccess(**
  - [IN] Subject: ref ManagedElement,
  - [IN] Privilege: ref AuthorizedPrivilege,
  - [IN] Target: ref ManagedElement): uint32 (enum)

RoleBasedManagementService

- **CreateRole(**
  - [IN] RoleTemplate: string {EmbeddedInstance},
  - [IN] System: ref System,
  - [IN] Privileges: string [] {Required, EmbeddedInstance},
  - [IN] RoleLimitedToTargets: ref ManagedElement[],
  - [IN, OUT] Role: ref Role);
  - uint32 (enum)

- **DeleteRole(**
  - [IN] Role: ref Role);
  - uint32 (enum)

- **ModifyRole(**
  - [IN] Privileges: string [] {Required, EmbeddedInstance},
  - [IN] RoleTemplate: string {EmbeddedInstance},
  - [IN] RoleLimitedToTargets: ref ManagedElement[],
  - [IN] Role: ref Role);
  - uint32 (enum)

- **AssignRoles(**
  - [IN] Identity: ref Identity,
  - [IN] Roles: ref Role[]);
  - uint32 (enum)

- **ShowRoles(**
  - [IN] Identity: ref Identity,
  - [IN] Target: ref ManagedElement,
  - [OUT] Roles: string[] {EmbeddedInstance},
  - [OUT] Privileges: string[] {EmbeddedInstance});
  - uint32 (enum)

RoleBasedManagementCapabilities

- **SupportedMethods: uint16[]**
AccountManagementService

CreateAccount(
    [IN] System: ref ComputerSystem {required},
    [IN] AccountTemplate: string
    {required, embeddedinstance},
    [OUT] Account: ref Account,
    [OUT] Identities: ref Identity[]);

uint32 {enum} E

AccountManagementCapabilities {E}

OperationsSupported: uint16[]

ElementCapabilities

AccountSettingData {E}

PasswordHistoryDepth: uint16
MaximumPasswordExpiration: datetime
ComplexPasswordRulesEnforced: uint16[]
InactivityTimeout: datetime
MaximumSuccessiveLoginFailures: uint16
ManagedElement
(See Core Model)

ElementSecuritySensitivity

SecuritySensitivity
InstanceID: string (key)
SecurityLevel: string

Privilege
InstanceID: string (key)
PrivilegeGranted: boolean (True)
Activities: uint16 []
ActivityQualifiers: string []
QualifierFormats: uint16 []
RepresentsAuthorizationRights: boolean (False)

AuthorizedTarget
AuthorizedSubject

AuthorizedPrivilege
Account

ManagedElement
(See Core Model)

ManagedSystemElement
(See Core Model)

LogicalElement
(See Core Model)

EnabledLogicalElement
(See Core Model)

Service
(See Core Model)

Identity
(See User Model (Identity))

System
(See Core Model)

SecurityService
(See User Model (Overview Security))

IdentityManagementService

AccountManagementService

Account

ConcreteIdentity

SystemCreationClassName: string {key}
SystemName: string{key}
CreationClassName: string {key}
Name: string{key}
UserID: string
ObjectClass: String []
Descriptions: string[]
Host: string[]
LocalityName: string[]
OrganizationName: string[]
OU: string[]
SeeAlso: string[]
UserCertificate: string[] {octetstring}
UserPassword: string[] {octetstring}
PasswordHistoryDepth: uint16 {E}
PasswordExpiration: datetime {E}
ComplexPasswordRulesEnforced: uint16[] {E}
InactivityTimeout: datetime {E}
MaximumSuccessiveLoginFailures uint16 {E}
LastLogin: datetime {E}

AccountOnSystem

AccountMapsToAccount

ElementCapabilities

AccountCapabilities {E}

PasswordHistory: uint16
MaximumPasswordAge : datetime
DisableOnInactivity: boolean
ComplexPasswordRulesEnforced: uint16[]
InactivityTimeout: datetime
MaximumSuccessiveLoginFailures uint16

AccountSettingData {E}

PasswordHistoryDepth: uint16
MaximumPasswordExpiration: datetime
ComplexPasswordRulesEnforced: uint16[]
InactivityTimeout: datetime
MaximumSuccessiveLoginFailures uint16

ElementCapabilities

AccountCapabilities (E)

SettingsDefineCapabilities

AccountSettingData (E)
Credential
(See User Model (Credential))

ManagedElement
(See Core Model)

ManagedSystemElement
(See Core Model)

LogicalElement
(See Core Model)

EnabledLogicalElement
(See Core Model)

Service
(See Core Model)

SecurityService
(See User Model (Overview Security))

AuthenticationService
(See User Model (Authentication Services))

CredentialManagementService
(See User Model (Authentication Services))

KerberosKeyDistributionCenter
Protocol: uint16 (enum)

KerberosCredential (E)

InstanceID: string (key)
AccessesService: string
RemoteID: string
TicketType: uint16 (enum)

ServiceAffectsElement

Trust Hierarchy

0..1
Antecedent: ref ManagedElement (*)
Dependent: ref ManagedElement (*)

Dependency(from Core)

MoreGroupInfo
Antecedent: ref Group {1}
Dependent: ref OtherGroupInformation {0..1}

MoreOrganizationInfo
Antecedent: ref Organization {1}
Dependent: ref OtherOrganizationInformation {0..1}

MoreOrgUnitInfo
Antecedent: ref OrgUnit {1}
Dependent: ref OtherOrgUnitInformation {0..1}

MorePersonInfo
Antecedent: ref Person {1}
Dependent: ref OtherPersonInformation {0..1}

MoreRoleInfo
Antecedent: ref Role {1}
Dependent: ref OtherRoleInformation {0..1}

SystemAdministrator
Antecedent: ref System (*)
Dependent: ref UserEntity (*)

SystemAdministratorGroup
Antecedent: ref System (*)
Dependent: ref Group (*)

SystemAdministratorRole
Antecedent: ref System (*)
Dependent: ref Role (*)
Dependency(from Core)
Antecedent: ref ManagedElement (*)
Dependent: ref ManagedElement (*)

CAHasPublicCertificate
Antecedent: ref PublicKeyCertificate (*)
Dependent: ref CertificateAuthority (*)

TrustHierarchy
Antecedent: ref CredentialManagementService {0..1}
Dependent: ref CredentialManagementService (*)

CredentialContext
ElementInContext: ref Credential {key, *}
ElementProvidingContext: ref ManagedElement {key, *}
**CollectionInOrganization**
- Parent: ref OrganizationalEntity {0..1}
- Child: ref Collection (*)

**CollectionInSystem**
- Parent: ref System {0..1}
- Child: ref Collection (*)

**MemberOfCollection (from Core)**
- Collection: ref Collection (*)
- Member: ref ManagedElement (*)

**OrgStructure**
- Parent: ref OrganizationalEntity {0..1}
- Child: ref OrganizationalEntity (*)

**SystemComponent (from Core)**
- GroupComponent: ref System (*)
- PartComponent: ref ManagedSystemElement (*)

**AccountOnSystem**
- GroupComponent: ref System {1}
- PartComponent: ref Account {weak, *}
ManagedElement
(See Core Model)

ManagedSystemElement
(See Core Model)

LogicalElement
(See Core Model)

EnabledLogicalElement
(See Core Model)

System
(See Core Model)

Service
(See Core Model)

SecurityService
(See User Model
(Overview Security))

AuthorizationService
(See User Model
(Authorization Services))

AccessControlInformation
CreationClassName: string [key]
Name: string [key]
SecurityClassification: string
AccessType: string [ ]
AccessQualifier: string [ ]
Permission: string [ ]

HostedACI

AuthorizationSubject

AuthorizationTarget
AuthenticationRequirement {D}

HostedAuthenticationRequirement {D}

ManagedElement
(See Core Model)

ManagedSystemElement
(See Core Model)

LogicalElement
(See Core Model)

AuthenticationTarget {D}

AuthenticationService
(See User Model (Authentication Services))

CredentialManagementService
(See User Model (Authentication Services))

AccountManagementService
(See User Model (Account))

System
(See Core Model)

Service
(See Core Model)

AuthenticationService
(See User Model (Authentication Services))

AuthenticateForUse {D}

RequiresCredentialsFrom {D}

ManagesAccountOnSystem {D}

RequiresCredentialsFrom {D}

RequiresCredentialsFrom {D}
Dependency (from Core)
Antecedent: ref ManagedElement (*)
Dependent: ref ManagedElement (*)

ManagedCredential (D)
Antecedent: ref CredentialManagementService (0..1)
Dependent: ref Credential (*)

CASignsPublicKeyCertificate (D)
Antecedent: ref CertificateAuthority (1)
Dependent: ref PublicKeyCertificate (W, *)
SerialNumber: string
Signature: uint8 [] (octetstring)
Expires: datetime (D)
CRLDistributionPoint: string

IKESecretIsNamed (D)
Antecedent: ref SharedSecretService (1)
Dependent: ref NamedSharedIKESecret (W, *)

KDCIssuesKerberosTicket (D)
Antecedent: ref KerberosKeyDistributionCenter (1)
Dependent: ref KerberosTicket (W, *)

LocallyManagedPublicKey (D)
Antecedent: ref PublicKeyManagementService (1)
Dependent: ref UnsignedPublicKey (W, *)

SharedSecretIsShared (D)
Antecedent: ref SharedSecretService (1)
Dependent: ref SharedSecret (W, *)
Version 2.9 Preliminary
* DMTFCR01222: Add CredentialContext
* DMTFCR01302: Add RoleLimitedToTarget
* DMTFCR01342: Add Privilege.QualifierFormats.SCSI Command
  Add Privilege.RepresentsAuthorizationRights
  Add PrivilegeManagementService.ChangeAccess()
  Add PrivilegeManagementService.ShowAccess()
* DMTFCR01380 Clarification of CredentialContext
Version 2.10:

**CIM_AccountGroup**
- <change cr="DMTFCR01083" type = "new"> Add PrivilegeManagementCapabilities </change>
- <change cr="DMTFCR01501" type = "new"> Create AccountGroup and Define relationship to ChangeAccess, ShowAccess, Roles, and authorizationPolicy. </change>

**CIM_AccountIdentity**
- <change cr="DMTFCR01503" type = "deprecate"> Deprecate AccountIdentity, SecurityServiceForSystem, ManagesAccountOnSystem, and ServiceUsesSecurityService </change>

**CIM_CollectionInSystem**
- <change cr="DMTFCR01502" type = "deprecate"> Deprecated CollectionInSystem in favor of OwningCollectionElement </change>
- <change cr="DMTFCR01145" type = "deprecate"> Deprecated CollectionInSystem in favor of HostedCollection </change>

**CIM_Credential**
- <change cr="DMTFCR01514" type = "change"> Fix description of timestamp in Credential </change>

**CIM_CredentialContext**
- <change cr="CIMCoreCR00750" type = "change"> Clarification of CredentialContext </change>
- <change cr="DMTFCR01379" type = "new"> Add Credential Context </change>
- <change cr="DMTFCR01222" type = "new"> Define a CredentialContext association </change>

**CIM_GatewayPathID**
- <change cr="DMTFCR01299" type = "change"> Add iSCSI support to the enum of ID Types used for SCSI LUN Masking </change>

**CIM_Group**
- <change cr="DMTFCR01515" type = "change"> Clarify inteeded use for LDAP, not general </change>

**CIM_IdentityContext**
- <change cr="DMTFCR01380" type = "change"> Clarify IdentityContext cardinalities </change>

**CIM_ManagesAccountOnSystem**
- <change cr="DMTFCR01503" type = "deprecate"> Deprecate AccountIdentity, SecurityServiceForSystem, ManagesAccountOnSystem, and ServiceUsesSecurityService </change>

**CIM_Privilege**
- <change cr="DMTFCR01547" type = "change"> Fix enumeration conflict generated by DMTFCR01442 </change>
- <change cr="DMTFCR01342" type = "change"> Change and Show Access Rights </change>

**CIM_PrivilegeManagementCapabilities**
- <change cr="DMTFCR01083" type = "new"> Add PrivilegeManagementCapabilities </change>

**CIM_PrivilegeManagementService**
- <change cr="DMTFCR01501" type = "change"> Fix enumeration conflict generated by DMTFCR01442 </change>
- <change cr="DMTFCR01342" type = "change"> Change and Show Access Rights </change>
- <change cr="DMTFCR01083" type = "change"> Add PrivilegeManagementCapabilities </change>

**CIM_PrivilegePropagationRule**
- <change cr="DMTFCR01342" type = "new"> Change and Show Access Rights </change>

**CIM_SecurityServiceForSystem**
- <change cr="DMTFCR01503" type = "deprecate"> Deprecate AccountIdentity, SecurityServiceForSystem, ManagesAccountOnSystem, and ServiceUsesSecurityService </change>

**CIM_ServiceUsesSecurityService**
- <change cr="DMTFCR01503" type = "deprecate"> Deprecate AccountIdentity, SecurityServiceForSystem, ManagesAccountOnSystem, and ServiceUsesSecurityService </change>

**CIM_StorageHardwareID**
- <change cr="DMTFCR01299" type = "change"> Add iSCSI support to the enum of ID Types used for SCSI LUN Masking </change>

**CIM_StorageHardwareIDManagementService**
- <change cr="DMTFCR01299" type = "change"> Add iSCSI support to the enum of ID Types used for SCSI LUN Masking </change>
Version 2.13:
Change:
CIM_StorageHardwareID
Version 2.14:
Change:
CIM_Account
CIM_AssignedIdentity
CIM_StorageHardwareIDManagementService
CIM_RoleBasedAuthorizationService
CIM_Role

New:
CIM_AccountCapabilities
CIM_AccountManagementCapabilities
CIM_AccountSettingData
CIM_ElementSecuritySensitivity
CIM_IdentityManagementService
CIM_IdentitySecurityClearance
CIM_OrgEntityManagementService
CIM_PrivilegeManagementCapabilities
CIM_SecuritySensitivity
Version 2.15:
New:
CIM_RoleBasedManagementCapabilities
Version 2.16:
Change:
CIM_AccountManagementService
New:
  CIM_RemoteIdentity
  CIM_KerberosCredential
  CIM_NamedCredential
  CIM_SharedCredential
  CIM_SignedCredential
  CIM_UnsignedCredential

Deprecated:
  CIM_CASignsPublicKeyCertificate
  CIM_IKESecretIsNamed
  CIM_KDCIssuesKerberosTicket
  CIM_KerberosTicket
  CIM_LocallyManagedPublicKey
  CIMManagedCredential
  CIM_NamedSharedIKESecret
  CIM_PublicKeyCertificate
  CIM_SharedSecretIsShared
  CIM_UnsignedPublicKey
  CIM_SharedSecret
Version 2.17:
Change:
Credential
SignedCredential
RemoteIdentity

New:
X509Infrastructure
X509Certificate
Keystore

Deprecated: