



oneM2M API Part2

SeungMyeong JEONG (sm.jeong@keti.re.kr)

Korea Electronic Technology Institute

2020.11.12

The project "International Digital Cooperation - ICT Standardisation" is funded by the European Union



- Registration
- Container and contentInstance
- Discovery
- Subscription/Notification
- Group

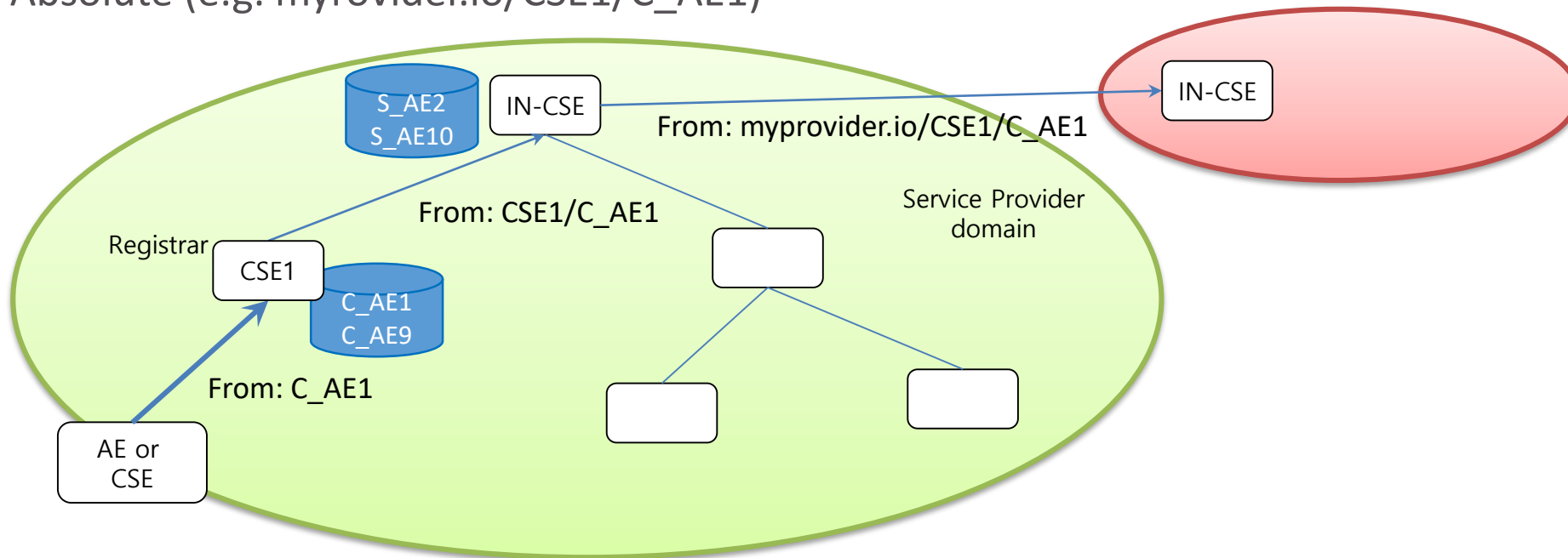


Registration

- AE Registration – <AE> resource
 - Represents meta-information on an AE after successful registration
 - Attributes
 - appName
 - App-ID
 - AE-ID
 - M2M-Ext-ID
 - trigger-Recipient-ID
 - triggerReferenceNumber
 - triggerEnable
 - pointOfAccess
 - registrationStatus
 - trackRegistrationPoints
 - ontologyRef
 - requestReachability
 - nodeLink
 - contentSerialization
 - e2eSecInfo
 - activityPatternElements
 - sessionCapabilities
 - supportedReleaseVersions
- 3GPP Network Interworking
- Vehicle Domain Support

Registration

- AE Registration – AE-ID Uniqueness
 - ID uniqueness shall be supported in the context of
 - Registrar CSE (e.g. C_AE1, S_AE2)
 - SP domain (e.g. CSE1/C_AE1, S_AE2)
 - Absolute (e.g. myprovider.io/CSE1/C_AE1)





Container and contentInstance

Container and contentInstance

- <container> resource

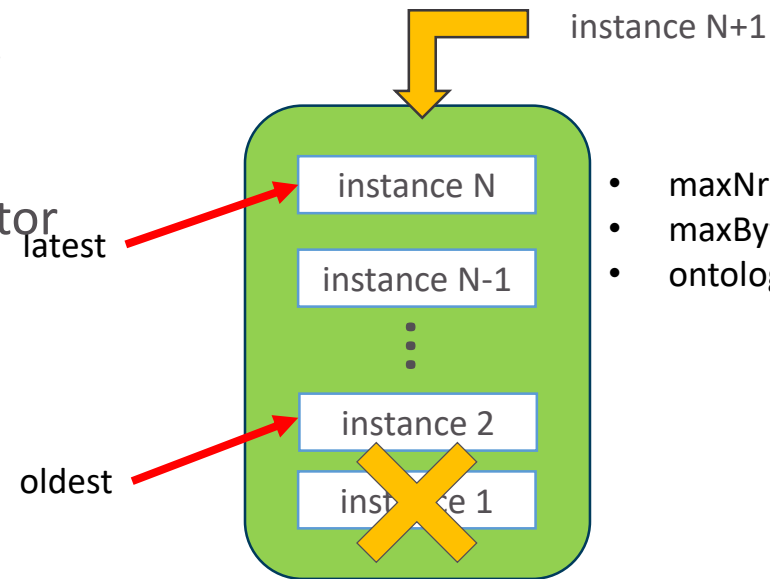
- Represents configurations of a data container managed by CSE

- Attributes

- maxNrOfInstances, maxByteSize, maxInstanceAge
- currentNrOfInstances, currentByteSize
- locationID, ontologyRef, creator, stateTag

- Child resources

- container, subscription, semanticDescriptor
- latest, oldest

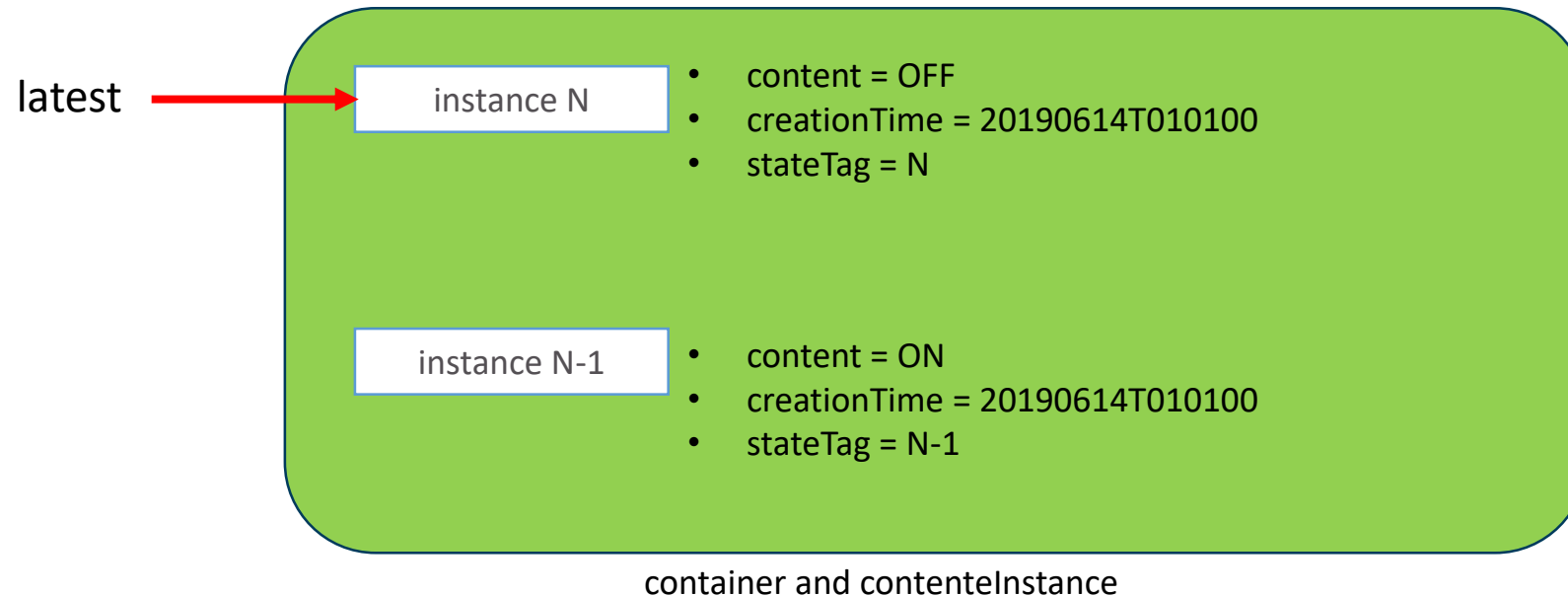


- maxNrOfInstances = N
- maxByteSize = 100
- ontologyRef = <oneM2MBaseOntology>

container and contentInstance

Container and contentInstance

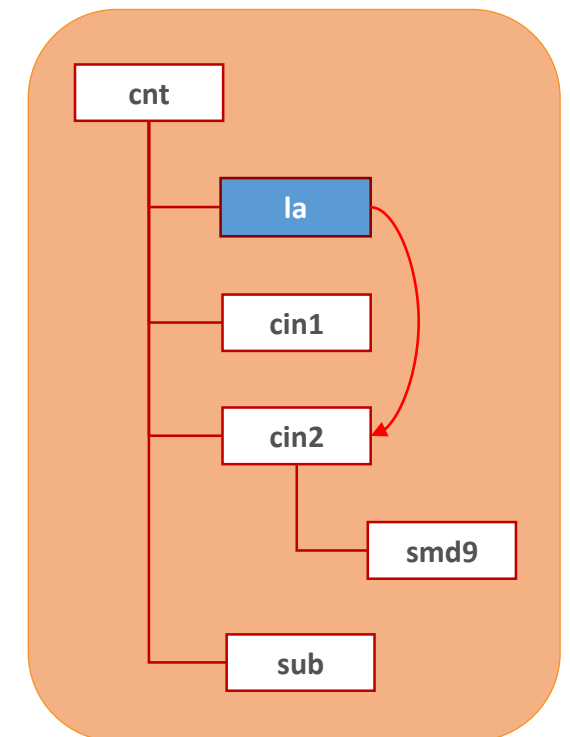
- <contentInstance> resource
 - Represents application data to be exchanged and its meta-information
 - Attributes
 - contentInfo, contentSize, contentRef, ontologyRef
 - creator, content, stateTag





Discovery

- Resource discovery using Filter Criteria
 - Filter conditions
 - createdBefore, createdAfter, modifiedSince, unmodifiedSince, stateTagSmaller, stateTagBigger, expireBefore, expireAfter
 - labels, labelsQuery, childLabels, parentLabels,
 - resourceType, childResourceType, parentResourceType
 - sizeAbove, sizeBelow, contentType, attribute, childAttribute, parentAttribute
 - semanticsFilter, filterOperation, contentFilterSyntax, contentFilterQuery
 - filterUsage, limit, level, offset
 - applyRelativePath
 - Discover all resources under CSEBase
 - {URL}?fu=1
 - Discover contentInstance resources only
 - {URL}?fu=1&ty=4
 - Discover contentInstance resources for 1 level depth only
 - {URL}?fu=1&ty=4&lvl=1
 - Discover resources created after a specific time
 - {URL}?fu=1&cra=20180503T144630





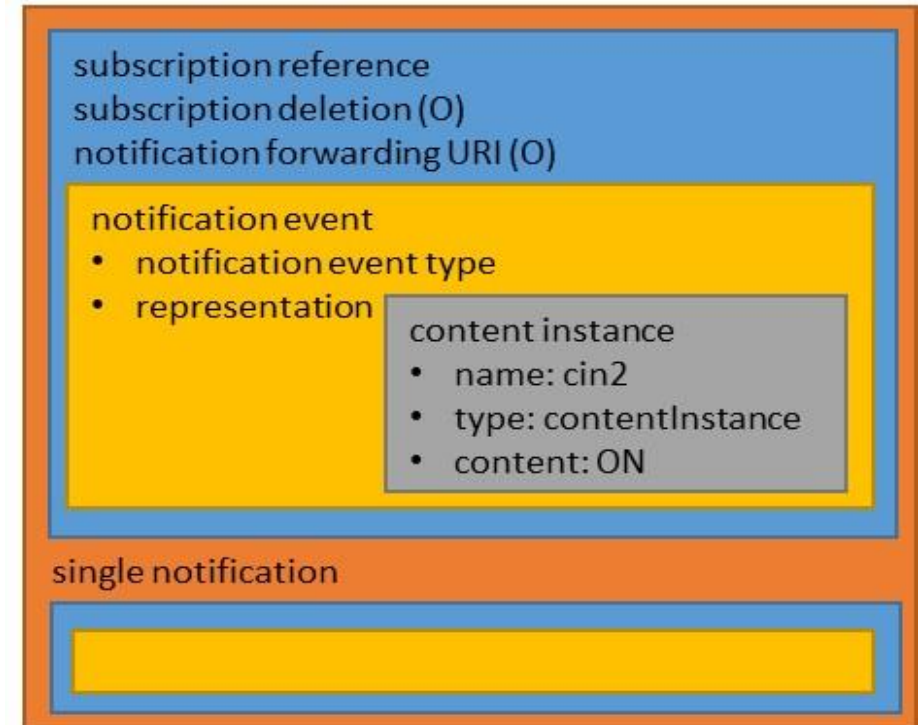
Subscription/Notification

- <subscription> resource
 - represents a subscription configuration to a target or its child resource
 - attributes
 - eventNotificationCriteria, notificationURI
 - expirationCounter
 - groupId, notificationForwardingURI
 - batchNotify, rateLimit, preSubscriptionNotify, pendingNotification, latestNotify
 - notificationContentType, notificationEventCat
 - subscriberURI, associatedCrossResourceSub
 - Notification target
 - represented as notificationURI attribute
 - this attribute also can include the notification serialization format (i.e. XML, JSON, CBOR)
 - E.g. <http://mydomain/notificationHandler?ct=json>

Subscription/Notification

- <subscription> resource
 - Event Type
 - target update, target delete, child creation, child deletion, etc.
 - Notification Event Criteria
 - similar to Filter Criteria parameter, but different
- Notification (object)
 - includes a subscription reference
 - Resource identifier of the <subscription> resource generating the notification

aggregated notification





Group

- <group> resource
 - represents a group of resources and its management
 - attributes
 - currentNrOfMembers
 - maxNrOfMembers
 - memberIDs
 - membersAccessControlPolicyIDs
 - memberType, memberTypeValidated, consistencyStrategy
 - groupName
 - semanticSupportIndicator
 - notifyAggregation
 - child resources
 - fanOutPoint, semanticFanOutPoint

