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| CHANGE REQUEST | |
| Meeting ID:\* | SDS #49 |
| Source:\* | Andreas Kraft, DT, [A.Kraft@telekom.de](mailto:A.Kraft@telekom.de)  Andreas Neubacher, DT, [Andreas.Neubacher@magenta.at](mailto:Andreas.Neubacher@magenta.at) |
| Date:\* | 2021-02-01 |
| Reason for Change/s:\* | Short names consolidation TS-0004 |
| CR against: Release\* | Release 4 |
| CR against: WI\* | Active WI-xxxx  MNT maintenance / < Work Item number(optional)>  Is this a mirror CR? Yes  No  mirror CR number: (Note to Rapporteur - use latest agreed revision)  STE Small Technical Enhancements / < Work Item number (optional)>  Only ONE of the above shall be ticked |
| CR against: TS/TR\* | TS-0004, V4.3.0 |
| Clauses \* | 8.2 |
| Type of change: \* | Editorial change  Bug Fix or Correction  Change to existing feature or functionality  New feature or functionality  Only ONE of the above shall be ticked |
| Impacted other TS/TR(s) |  |
| Post Freeze checking:\* | This CR contains only essential changes and corrections? YES  NO  This CR may break backwards compatibility with the last approved version of the TS? YES  NO |
| Template Version: January 2017 (Do not modify) | |

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GUIDELINES for Change Requests:

Provide an informative introduction containing the problem(s) being solved, and a summary list of proposals.

Each CR should contain changes related to only one particular issue/problem.

In case of a correction, and the change apply to previous releases, a separate “mirror CR” should be posted at the same time of this CR

Mirror CR: applies only when the text, including clause numbering are exactly the same.

Companion CR: applies when the change means the same but the baselines differ in some way (e.g. clause number).

Follow the principle of completeness, where all changes related to the issue or problem within a deliverable are simultaneously proposed to be made E.g. A change impacting 5 tables should not only include a proposal to change only 3 tables. Includes any changes to references, definitions, and acronyms in the same deliverable.

Follow the drafting rules.

All pictures must be editable.

Check spelling and grammar to the extent practicable.

Use Change bars for modifications.

The change should include the current and surrounding clauses to clearly show where a change is located and to provide technical context of the proposed change. Additions of complete clauses need not show surrounding clauses as long as the proposed clause number clearly shows where the new clause is proposed to be located.

Multiple changes in a single CR shall be clearly separated by horizontal lines with embedded text such as, start of change 1, end of change 1, start of new clause, end of new clause.

When subsequent changes are made to content of a CR, then the accepted version should not show changes over changes. The accepted version of the CR should only show changes relative to the baseline approved text.

Introduction

This CR proposes to consolidate the short name tables from TS-0022 and TS-0032 in TS-0004. This is part of consolidating short names for the “m2m” namespace in TS-0004.

Change 1 proposes to add the short name definitions. Conflicts are marked, but not resolved.

Change 2 proposes the addition of a reference to TS-0032.

**NOTE: This CR does NOT take the changes from SDS-2020-0377 into account.**

### \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Start of Change 1 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

## 8.2 Short names

### 8.2.1 Introduction

XML, JSON and CBOR representations require encoding of the names of primitive parameters, resource attributes, resource types and complex data type members. Whenever a protocol binding transfers such a name over a oneM2M reference point, it shall use a shortened form of that name, rather than the full name that is used elsewhere in this and other oneM2M specifications. Short names enable payload reduction on involved telecommunication interfaces.

The mapping between the full names and their shortened form is given in the clauses 8.2.2 to 8.2.5.

These names are case-sensitive. A oneM2M implementation shall use the letter casing given in these clauses.

### 8.2.2 Primitive parameters

In protocol bindings primitive parameter names shall be translated into short names of Table 8.2.2‑1.

Table 8.2.2‑1: Primitive parameter short names

| Parameter Name | XSD long name | Occurs in | Short Name |
| --- | --- | --- | --- |
| ***Operation*** | operation | Request | ***op*** |
| ***To*** | to | Request, Response | ***to*** |
| ***From*** | from | Request, Response | ***fr*** |
| ***Request Identifier*** | requestIdentifier | Request, Response | ***rqi*** |
| ***Resource Type*** | resourceType | Request | ***ty*** |
|  |  |  |  |
| ***Content*** | primitiveContent | Request, Response | ***pc*** |
| ***Role IDs*** | roleIDs | Request | ***rids*** |
| ***Originating Timestamp*** | originatingTimestamp | Request, Response | ***ot*** |
| ***Request Expiration Timestamp*** | requestExpirationTimestamp | Request | ***rqet*** |
| ***Result Expiration Timestamp*** | resultExpirationTimestamp | Request, Response | ***rset*** |
| ***Operation Execution Time*** | operationExecutionTime | Request | ***oet*** |
| ***Response Type*** | responseType | Request | ***rt*** |
| ***Result Persistence*** | resultPersistence | Request | ***rp*** |
| ***Result Content*** | resultContent | Request | ***rcn*** |
| ***Event Category*** | eventCategory | Request, Response | ***ec*** |
| ***Delivery Aggregation*** | deliveryAggregation | Request | ***da*** |
| ***Group Request Identifier*** | groupRequestIdentifier | Request | ***gid*** |
| ***Filter Criteria*** | filterCriteria | Request | ***fc*** |
| ***Desired Identifier Result Type*** | desiredIdentifierResultType | Request | ***drt*** |
| ***Response Status Code*** | responseStatusCode | Response | ***rsc*** |
| ***Tokens*** | tokens | Request | ***tkns*** |
| ***Token IDs*** | tokenIDs | Request | ***tids*** |
| ***Token Request Indicator*** | tokenRequestIndicator | Request | ***tqi*** |
| ***Local Token IDs*** | localTokenIDs | Request | ***ltids*** |
| ***Group Request Target Members*** | groupRequestTargetMembers | Request | ***grtm*** |
| ***Assigned Token Identifiers*** | assignedTokenIdentifiers | Response | ***ati*** |
| ***Token Request Information*** | tokenRequestInformation | Response | ***tqf*** |
| ***Content Status*** | contentStatus | Response | ***cnst*** |
| ***Content Offset*** | contentOffset | Response | ***cnot*** |
| ***Authorization Signature Indicator*** | authorSignIndicator | Request | ***asi*** |
| ***Authorization Signature Request Information*** | authorSignReqInfo | Response | ***asri*** |
| ***Authorization Signature*** | authorSigns | Request | ***aus*** |
| ***Authorization Relationship Indicator*** | authorRelIndicator | Request | ***auri*** |
| ***Semantic Query Indicator*** | semanticQueryIndicator | Request | ***sqi*** |
| ***Release Version Indicator*** | releaseVersionIndicator | Request, Response | ***rvi*** |
| ***Vendor Information*** | vendorInformation | Request, Response | ***vsi*** |

XML serialized representations of primitives employ root elements to differentiate between request and response primitive types (see clause 8.3). These elements are also embedded in some oneM2M-defined complex datatypes. These root element names shall be translated into short names as in Table 8.2.2‑2. Their short name serialization shall include the namespace prefix.

Table 8.2.2‑2: Primitive root element short names

| **Root Element Name** | **Occurs in** | **Short Name** |
| --- | --- | --- |
| *m2m:requestPrimitive* | Request, transaction | ***rqp*** |
| *m2m:responsePrimitive* | Response,  aggregatedResponse, transaction | ***rsp*** |

### 8.2.3 Resource attributes

In protocol bindings, resource attributes names shall be translated into short names shown in the following tables.

Table 8.2.3‑1: Resource attribute short names (1/6)

| Attribute Name | Occurs in | Short Name |
| --- | --- | --- |
| *accessControlPolicyIDs* | All except accessControlPolicy, contentInstance | ***acpi*** |
| *announcedAttribute* | All announceable resources | ***aa*** |
| *announceTo* | All announceable resources | ***at*** |
| *announceSyncType* | All announceable resources | ***ast*** |
| *creationTime* | All | ***ct*** |
| *expirationTime* | All except contentInstance, CSEBase | ***et*** |
| labels | All (optional) | ***lbl*** |
| *lastModifiedTime* | All | ***lt*** |
| *link* | All | ***lnk*** |
| *parentID* | All | ***pi*** |
| *resourceID* | All | ***ri*** |
| resourceType | All | ***ty\**** |
| *stateTag* | container, contentInstance, delivery, request | ***st*** |
| *resourceName* | All | ***rn*** |
| *privileges* | accessControlPolicy | ***pv*** |
| *selfPrivileges* | accessControlPolicy | ***pvs*** |
| *authorizationDecisionResourceIDs* | accessControlPolicy | ***adri*** |
| *authorizationPolicyResourceIDs* | accessControlPolicy | ***apri*** |
| *authorizationInformationResourceIDs* | accessControlPolicy | ***airi*** |
| *App-ID* | AE | ***api*** |
| *AE-ID* | AE | ***aei*** |
| *AE-IDList* | AEContactListPerCSE | ***ail*** |
| *appName* | AE | ***apn*** |
| *pointOfAccess* | AE, CSEBase, remoteCSE, registration | ***poa*** |
| *ontologyRef* | AE, container, contentInstance, semanticDescriptor. flexContainer, timeSeries | ***or*** |
| *nodeLink* | AE, CSEBase, remoteCSE, flexContainer | ***nl*** |
| contentSerialization | AE | ***csz*** |
| *registrationStatus* | AE | ***regs*** |
| *trackRegistrationPoints* | AE | ***trps*** |
| *sessionCapabilities* | AE | ***scp*** |
| *activityPatternElements* | AE, remoteCSE | ***ape*** |
| *triggerEnable* | AE, remoteCSE | ***tren*** |
| *enableTimeCompensation* | AE, remoteCSE | ***etc*** |
| *creator* | container, contentInstance, eventConfig, group, pollingChannel, statsCollect, statsConfig, subscription, semanticDescriptor, notificationTargetPolicy, flexContainer, timeSeries, crossResourceSubscription, backgroundDataTransfer | ***cr*** |
| *maxNrOfInstances* | container, timeSeries, flexContainer | ***mni*** |
| *maxByteSize* | container, timeSeries, flexContainer | ***mbs*** |
| *maxInstanceAge* | container, timeSeries, flexContainer | ***mia*** |
| *currentNrOfInstances* | container, timeSeries, flexContainer | ***cni*** |
| *location* | *CSEBase*, *remoteCSE*, *AE*, *container*, *flexContainer*, *timeSeries, deviceInfo* | ***loc*** |
| *holder* | All except contentInstance, timeSeriesInstance, flexContainerInstance, accessControlPolicy, pollingChannel | ***hld*** |

Table 8.2.3‑2: Resource attribute short names (2/6)

| Attribute Name | Occurs in | Short Name |
| --- | --- | --- |
| *currentByteSize* | container,timeSeries, flexContainer | ***cbs*** |
| *locationID* | container | ***li*** |
| *disableRetrieval* | container | ***disr*** |
| *contentInfo* | contentInstance, timeSeries | ***cnf*** |
| *contentSize* | contentInstance, timeSeriesInstance, flexContainer, flexContainerInstance | ***cs*** |
| *contentRef* | contentInstance | ***conr*** |
| *containerDefinition* | flexContainer | ***cnd*** |
| *primitiveContent* | request | ***pc\**** |
| *content* | contentInstance, timeSeriesInstance | ***con*** |
| *deletionCnt* | contentInstance | ***dcnt*** |
| *cseType* | CSEBase, remoteCSE | ***cst*** |
| *CSE-ID* | CSEBase, remoteCSE, service SubscribedNode, AEContactListPerCSE | ***csi*** |
| *supportedResourceType* | CSEBase | ***srt*** |
| *notificationCongestionPolicy* | CSEBase | ***ncp*** |
| *currentTime* | CSEBase | ***ctm*** |
| *source* | delivery | ***sr*** |
| *target* | delivery, request | ***tg*** |
| *lifespan* | delivery | ***ls*** |
| *eventCat* | delivery | ***ec*** |
| *deliveryMetaData* | delivery | ***dmd*** |
| *aggregatedRequest* | delivery | ***arq*** |
| *eventID* | eventConfig, statsCollect | ***evi*** |
| *eventType* | eventConfig | ***evt*** |
| *evenStart* | eventConfig | ***evs*** |
| *eventEnd* | eventConfig | ***eve*** |
| *operationType* | eventConfig | ***opt*** |
| *dataSize* | eventConfig | ***ds*** |
| *eventResourceTypes* | eventConfig | ***erts*** |
| *eventResourceIDs* | eventConfig | ***eris*** |
| *execStatus* | execInstance | ***exs*** |
| *execResult* | execInstance | ***exr*** |
| *execDisable* | execInstance | ***exd*** |
| *execTarget* | execInstance, mgmtCmd | ***ext*** |
| *execMode* | execInstance, mgmtCmd | ***exm*** |
| *execFrequency* | execInstance, mgmtCmd | ***exf*** |
| *execDelay* | execInstance, mgmtCmd | ***exy*** |
| *execNumber* | execInstance, mgmtCmd | ***exn*** |
| *execReqArgs* | execInstance, mgmtCmd | ***exra*** |
| *execEnable* | mgmtCmd | ***exe*** |
| *memberType* | group | ***mt*** |
| *specializationType* | group | ***spty*** |
| *currentNrOfMembers* | group | ***cnm*** |
| *maxNrOfMembers* | group | ***mnm*** |
| *memberIDs* | group, backgroundDataTransfer | ***mid*** |
| *membersAccessControlPolicyIDs* | group | ***macp*** |
| *memberTypeValidated* | group | ***mtv*** |
| *consistencyStrategy* | group | ***csy*** |
| *semanticSupportIndicator* | group | ***ssi*** |
| *notifyAggregation* | group | ***nar*** |
| *groupName* | group, subscription | ***gn*** |
| *locationSource* | locationPolicy | ***los*** |
| *locationUpdatePeriod* | locationPolicy | ***lou*** |
| *locationTargetID* | locationPolicy | ***lot*** |
| *locationServer* | locationPolicy | ***lor*** |
| *locationContainerID* | locationPolicy | ***loi*** |
| *locationContainerName* | locationPolicy | ***lon*** |
| *locationStatus* | locationPolicy | ***lost*** |
| *authID* | locationPolicy | ***aid*** |
| *retrieveLastKnownLocation* | locationPolicy | ***rlkl*** |
| *locationUpdateEventCriteria* | locationPolicy | ***luec*** |
| *locationInformationType* | locationPolicy | ***lit*** |
| *geographicalTargetArea* | locationPolicy | ***gta*** |
| *geofenceEventCriteria* | locationPolicy | ***gec*** |
| *description* | mgmtCmd, mgmtObj, all management resources from firmware, ontology, ontologyMappingAlgorithm | ***dc*** |
| *cmdType* | mgmtCmd | ***cmt*** |
| *mgmtDefinition* | mgmtObj, all management resources from firmware | ***mgd*** |
| *objectIDs* | mgmtObj | ***obis*** |

Table 8.2.3‑3: Resource attribute short names (3/6)

| Attribute Name | Occurs in | Short Name |
| --- | --- | --- |
| *objectPaths* | mgmtObj | ***obps*** |
| *mgmtSchema* | mgmtObj | ***mgs*** |
| *nodeID* | node | ***ni*** |
| *hostedCSELink* | node | ***hcl*** |
| *mgmtClientAddress* | node | ***mgca*** |
| *hostedAELinks* | node | ***hael*** |
| *hostedServiceLinks* | node | ***hsl*** |
| *networkID* | node | ***nid*** |
| *roamingStatus* | node | ***rms*** |
| *nodeType* | node | ***nty*** |
| *CSEBase* | remoteCSE | ***cb\**** |
| *M2M-Ext-ID* | remoteCSE, AE, locationPolicy, triggerRequest | ***mei*** |
| *Trigger-Recipient-ID* | remoteCSE, triggerRequest | ***tri*** |
| *requestReachability* | remoteCSE | ***rr*** |
| *triggerReferenceNumber* | remoteCSE | ***trn*** |
| *descendantCSEs* | remoteCSE | ***dcse*** |
| *multicastCapability* | remoteCSE | ***mtcc*** |
| *originator* | request | ***org*** |
| *metaInformation* | request | ***mi*** |
| *requestStatus* | request | ***rs*** |
| *operationResult* | request | ***ors*** |
| *operation* | request | ***op\**** |
| *requestID* | request | ***rid*** |
| *scheduleElement* | schedule | ***se*** |
| *networkCoordinated* | schedule | ***nco*** |
| *deviceIdentifier* | serviceSubscribedNode | ***di*** |
| *ruleLinks* | serviceSubscribedNode | ***rlk*** |
| *niddRequired* | serviceSubscribedNode | ***nrq*** |
| *statsCollectID* | statsCollect | ***sci*** |
| *collectingEntityID* | statsCollect | ***cei*** |
| *collectedEntityID* | statsCollect | ***cdi*** |
| *devStatus* | areaNwkDeviceInfo | ***ss*** |
| *statsRuleStatus* | statsCollect | ***srs*** |
| *statModel* | statsCollect | ***sm*** |
| *collectPeriod* | statsCollect | ***cp*** |
| *eventNotificationCriteria* | subscription | ***enc*** |
| *expirationCounter* | subscription, crossResourceSubscription | ***exc*** |
| *notificationURI* | subscription, crossResourceSubscription | ***nu*** |
| *groupID* | subscription | ***gpi*** |
| *notificationForwardingURI* | subscription | ***nfu*** |
| *batchNotify* | subscription | ***bn*** |
| *rateLimit* | subscription | ***rl*** |
| *preSubscriptionNotify* | subscription | ***psn*** |
| *pendingNotification* | subscription | ***pn*** |
| *notificationStoragePriority* | subscription | ***nsp*** |
| *latestNotify* | subscription | ***ln*** |
| *notificationContentType* | subscription | ***nct*** |
| *notificationEventCat* | subscription, crossResourceSubscription | ***nec*** |
| *subscriberURI* | subscription, crossResourceSubscription | ***su*** |
| *version* | firmware, software, token | ***vr*** |
| *URL* | firmware, software | ***url*** |
| *update* | firmware | ***ud*** |
| *updateStatus* | firmware | ***uds*** |
| *install* | software | ***in*** |
| *uninstall* | software | ***un*** |
| *installStatus* | software | ***ins*** |
| *activate* | software | ***act*** |
| *deactivate* | software | ***dea*** |
| *activeStatus* | software, areaNwkInfo | ***acts*** |
| *memAvailable* | memory | ***mma*** |
| *memTotal* | memory | ***mmt*** |

Table 8.2.3‑4: Resource attribute short names (4/6)

| Attribute Name | Occurs in | Short Name |
| --- | --- | --- |
| *areaNwkType* | areaNwkInfo | ***ant*** |
| *listOfDevices* | areaNwkInfo | ***ldv*** |
| *devId* | areaNwkDeviceInfo | ***dvd*** |
| *devType* | areaNwkDeviceInfo | ***dvt*** |
| *areaNwkId* | areaNwkDeviceInfo | ***awi*** |
| *sleepInterval* | areaNwkDeviceInfo | ***sli*** |
| *sleepDuration* | areaNwkDeviceInfo | ***sld*** |
| *listOfNeighbors* | areaNwkDeviceInfo | ***lnh*** |
| *batteryLevel* | battery | ***btl*** |
| *batteryStatus* | battery | ***bts*** |
| *deviceLabel* | deviceInfo | ***dlb*** |
| *manufacturer* | deviceInfo | ***man*** |
| *model* | deviceInfo | ***mod*** |
| *deviceType* | deviceInfo | ***dty*** |
| *fwVersion* | deviceInfo | ***fwv*** |
| *swVersion* | deviceInfo | ***swv*** |
| *hwVersion* | deviceInfo | ***hwv*** |
| *manufacturerDetailsLink* | deviceInfo | ***mfdl*** |
| *manufacturingDate* | deviceInfo | ***mfd*** |
| *subModel* | deviceInfo | ***smod*** |
| *deviceName* | deviceInfo | ***dvnm*** |
| *osVersion* | deviceInfo | ***osv*** |
| *country* | deviceInfo | ***cnty*** |
| *systemTime* | deviceInfo | ***syst*** |
| *supportURL* | deviceInfo | ***spur*** |
| *presentationURL* | deviceInfo | ***purl*** |
| *protocol* | deviceInfo | ***ptl*** |
| *capabilityName* | deviceCapability | ***can*** |
| *attached* | deviceCapability | ***att*** |
| *capabilityActionStatus* | deviceCapability | ***cas*** |
| *enable* | deviceCapability, allJoynSvcObject | ***ena*** |
| *disable* | deviceCapability | ***dis*** |
| *currentState* | deviceCapability | ***cus*** |
| *reboot* | reboot | ***rbo*** |
| *factoryReset* | reboot | ***far*** |
| *logTypeId* | eventLog | ***lgt*** |
| *logData* | eventLog | ***lgd*** |
| *logStatus* | eventLog | ***lgst*** |
| *logStart* | eventLog | ***lga*** |
| *logStop* | eventLog | ***lgo*** |
| *firmwareName* | firmware | ***fwn*** |
| *softwareName* | software | ***swn*** |
| *cmdhPolicyName* | cmdhPolicy | ***cpn*** |
| *mgmtLink* | cmdhPolicy, activeCmdhPolicy, cmdhDefaults, cmdhNetworkAccessRules, cmdhNwAccessRule | ***cmlk*** |
| *activeCmdhPolicyLink* | activeCmdhPolicy | ***acmlk*** |
| *order* | cmdhDefEcValue, cmdhLimits | ***od*** |
| *defEcValue* | cmdhDefEcValue | ***dev*** |
| *requestOrigin* | cmdhDefEcValue, cmdhLimits | ***ror*** |
| *requestContext* | cmdhDefEcValue, cmdhLimits | ***rct*** |
| *requestContextNotification* | cmdhDefEcValue, cmdhLimits | ***rctn*** |
| *requestCharacteristics* | cmdhDefEcValue, cmdhLimits | ***rch*** |
| *applicableEventCategories* | cmdhNetworkAccessRules | ***aecs*** |
| *applicableEventCategory* | cmdhEcDefParamValues, cmdhBuffer | ***aec*** |
| *defaultRequestExpTime* | cmdhEcDefParamValues | ***dqet*** |
| *defaultResultExpTime* | cmdhEcDefParamValues | ***dset*** |
| *defaultOpExecTime* | cmdhEcDefParamValues | ***doet*** |
| *defaultRespPersistence* | cmdhEcDefParamValues | ***drp*** |
| *defaultDelAggregation* | cmdhEcDefParamValues | ***dda*** |
| *limitsEventCategory* | cmdhLimits | ***lec*** |
| *limitsRequestExpTime* | cmdhLimits | ***lqet*** |
| *limitsResultExpTime* | cmdhLimits | ***lset*** |
| *limitsOpExecTime* | cmdhLimits | ***loet*** |
| *limitsRespPersistence* | cmdhLimits | ***lrp*** |
| *limitsDelAggregation* | cmdhLimits | ***lda*** |
| *targetNetwork* | cmdhNwAccessRule | ***ttn*** |

Table 8.2.3‑5: Resource attribute short names (5/6)

| Attribute Name | Occurs in | Short Name |
| --- | --- | --- |
| *minReqVolume* | cmdhNwAccessRule | ***mrv*** |
| *spreadingWaitTime* | cmdhNwAccessRule | ***swt*** |
| *backOffParameters* | cmdhNwAccessRule | ***bop*** |
| *otherConditions* | cmdhNwAccessRule | ***ohc*** |
| *maxBufferSize* | cmdhBuffer | ***mbfs*** |
| *storagePriority* | cmdhBuffer | ***sgp*** |
| *applicableCredIDs* | serviceSubscribedAppRule | ***apci*** |
| *allowedApp-IDs* | serviceSubscribedAppRule | ***aai*** |
| *allowedAEs* | serviceSubscribedAppRule | ***aae*** |
| *allowedRole-IDs* | serviceSubscribedAppRule | ***ari*** |
| *notificationTargetURI* | notificationTargetMgmtPolicyRef | ***ntu*** |
| *notificationPolicyID* | notificationTargetMgmtPolicyRef | ***npi*** |
| *action* | notificationTargetPolicy | ***acn*** |
| *policyLabel* | notificationTargetPolicy | ***plbl*** |
| *rulesRelationship* | notificationTargetPolicy | ***rrs*** |
| *creator* | notificationTargetPolicy | ***cr*** |
| *deletionRules* | policyDeletionRules | ***dr*** |
| *deletionRulesRelation* | policyDeletionRules | ***drr*** |
| *dynamicAuthorizationConsultationIDs* | All resources having an accessControlPolicyID attribute | ***daci*** |
| *dynamicAuthorizationEnabled* | dynamicAuthorizationConsultation | ***dae*** |
| *dynamicAuthorizationPoA* | dynamicAuthorizationConsultation | ***dap*** |
| *dynamicAuthorizationLifetime* | dynamicAuthorizationConsultation | ***dal*** |
| *descriptorRepresentation* | semanticDescriptor | ***dcrp*** |
| *semanticOpExec* | semanticDescriptor | ***soe*** |
| *descriptor* | semanticDescriptor | ***dsp*** |
| *relatedSemantics* | semanticDescriptor | ***rels*** |
| *semanticValidated* | semanticDescriptor | ***svd*** |
| *validationEnable* | semanticDescriptor | ***vlde*** |
| *periodicInterval* | timeSeries | ***pei*** |
| *missingDataDetect* | timeSeries | ***mdd*** |
| *missingDataMaxNr* | timeSeries | ***mdn*** |
| *missingDataList* | timeSeries | ***mdlt*** |
| *missingDataCurrentNr* | timeSeries | ***mdc*** |
| *missingDataDetectTimer* | timeSeries | ***mdt*** |
| *dataGenerationTime* | timeSeriesInstance | ***dgt*** |
| *sequenceNr* | timeSeriesInstance | ***snr*** |
| *roleID* | role | ***rlid*** |
| *roleName* | role | ***rlnm*** |
| *tokenLink* | role | ***rltl*** |
| *tokenID* | token | ***tkid*** |
| *tokenObject* | token | ***tkob*** |
| *issuer* | token, role | ***tkis*** |
| *holder* | token, role | ***tkhd*** |
| *notBefore* | token, role | ***tknb*** |
| *notAfter* | token, role | ***tkna*** |
| *tokenName* | token | ***tknm*** |
| *audience* | token | ***tkau*** |
| *permissions* | token | ***tkps*** |
| *extension* | token | ***tkex*** |
| *e2eSecInfo* | CSEBase, remoteCSE, AE | ***esi*** |
| *supportedReleaseVersions* | CSEBase, remoteCSE, AE | ***srv*** |

Table 8.2.3‑6: Resource attribute short names (6/6)

| Attribute Name | Occurs in | Short Name |
| --- | --- | --- |
| *serviceName* | genericInterworkingService | ***gisn*** |
| *operationName* | genericInterworkingOperationInstance | ***gion*** |
| *inputDataPointLinks* | genericInterworkingService, genericInterworkingOperationInstance | ***giip*** |
| *outputDataPointLinks* | genericInterworkingService, genericInterworkingOperationInstance | ***giop*** |
| *inputLinks* | genericInterworkingOperationInstance | ***giil*** |
| *outputLinks* | genericInterworkingOperationInstance | ***giol*** |
| *operationState* | genericInterworkingOperationInstance | ***gios*** |
| *direction* | allJoynApp | ***dir*** |
| *objectPath* | allJoynSvcObject | ***ajop*** |
| *interfaceIntrospectXmlRef* | allJoynInterface | ***ajir*** |
| *input* | allJoynMethodCall | ***inp*** |
| *callStatus* | allJoynMethodCall | ***clst*** |
| *output* | allJoynMethodCall | ***out*** |
| *currentValue* | allJoynProperty | ***crv*** |
| *requestedValue* | allJoynProperty | ***rqv*** |
| *decision* | authorizationDecision | ***dec*** |
| *status* | authorizationDecision, authorizationPolicy, authorizationInformation | ***sus*** |
| *to* | authorizationDecision, authorizationPolicy | ***to\**** |
| *from* | authorizationDecision, authorizationInformation | ***fr\**** |
| *requestedResourceType* | authorizationDecision | ***rrt*** |
| *operation* | authorizationDecision | ***op\**** |
| *filterUsage* | authorizationDecision | ***fu*** |
| *roleIDs* | authorizationDecision, authorizationInformation | ***rids\**** |
| *tokenIDs* | authorizationDecision, authorizationInformation | ***tids\**** |
| *tokens* | authorizationDecision | ***tkns\**** |
| *requestTime* | authorizationDecision | ***rtm*** |
| *originatorLocation* | authorizationDecision | ***olo*** |
| *originatorIP* | authorizationDecision | ***oip*** |
| *policies* | authorizationPolicy | ***ps*** |
| *combiningAlgorithm* | authorizationPolicy | ***ca*** |
| *ontologyFormat* | ontology | ***ontf*** |
| *ontologyContent* | ontology | ***ontc*** |
| *sourceOntology* | ontologyMapping | ***sont*** |
| *targetOntology* | ontologyMapping | ***tont*** |
| *mappingPolicy* | ontologyMapping | ***mpol*** |
| *mappingAlgorithmLinks* | ontologyMapping | ***mpal*** |
| *mappingResultFormat* | ontologyMapping | ***mprf*** |
| *mappingResult* | ontologyMapping | ***mpr*** |
| *executable* | ontologyMappingAlgorithm | ***exec*** |
| *algorithmType* | ontologyMappingAlgorithm | ***algt*** |
| *mappingThreshold* | ontologyMappingAlgorithm | ***mpth*** |
| *memberFilter* | semanticMashupJobProfile | ***mbft*** |
| *smiID* | semanticMashupJobProfile | ***miid*** |
| *inputDescriptor* | semanticMashupJobProfile | ***iptd*** |
| *outputDescriptor* | semanticMashupJobProfile | ***uptd*** |
| *functionDescriptor* | semanticMashupJobProfile | ***fucd*** |
| *smjpID* | semanticMashupInstance | ***mjid*** |
| *smjpInputParameter* | semanticMashupInstance, semanticMashupResult | ***jpin*** |
| *memberStoreType* | semanticMashupInstance | ***mst*** |
| *mashupMember* | semanticMashupInstance | ***msm*** |
| *resultGenType* | semanticMashupInstance | ***rgt*** |
| *periodForResultGen* | semanticMashupInstance | ***prg*** |
| *mashupResultFormat* | semanticMashupResult | ***mrf*** |
| *mashupResult* | semanticMashupResult | ***mrt*** |
| *ruleRepresentation* | reasoningRules | ***rrep*** |
| *ruleRepresentationFormat* | reasoningRules | ***rrepf*** |
| *reasoningType* | reasoningJobInstance | ***rtyp*** |
| *reasoningMode* | reasoningJobInstance | ***rmod*** |
| *reasoningPeriod* | reasoningJobInstance | ***rper*** |
| *factSet* | reasoningJobInstance | ***rfst*** |
| *ruleSet* | reasoningJobInstance | ***rrst*** |
| *resultRepresentation* | reasoningJobInstance | ***rsrp*** |
| *resultRepresentationFormat* | reasoningJobInstance | ***rsrpf*** |
| *numberImpactedCSEs* | AEContactList | ***nic*** |
| *externalGroupID* | LocalMulticastGroup, remoteCSE | ***egid*** |
| *multicastAddress* | LocalMulticastGroup | ***mad*** |
| *multicastGroupFanoutTarget* | LocalMulticastGroup | ***mgft*** |
| *memberList* | LocalMulticastGroup | ***mli*** |
| *responseTarget* | LocalMulticastGroup | ***rstt*** |
| *responseTimeWindow* | LocalMulticastGroup | ***rstw*** |
| *TMGI* | LocalMulticastGroup | ***tmgi*** |
| *sessionOriginatorID* | multimediaSession | ***soi*** |
| *acceptedSessionDescriptions* | multimediaSession | ***asd*** |
| *offeredSessionDescriptions* | multimediaSession | ***osd*** |
| *sessionState* | multimediaSession | ***sst*** |
| *triggerPurpose* | triggerRequest | ***tpe*** |
| *triggerStatus* | triggerRequest | ***tst*** |
| *triggerValidityTime* | triggerRequest | ***tvt*** |
| *triggerInfoAE-ID* | triggerRequest | ***tiae*** |
| *triggerInfoAddress* | triggerRequest | ***tia*** |
| *triggerInfoOperation* | triggerRequest | ***tio*** |
| *targetedResourceType* | triggerRequest | ***tirt*** |
| *triggerReference* | triggerRequest | ***trf*** |
| *regularResourcesAsTarget* | crossResourceSubscription | ***rrat*** |
| *subscriptionResourcesAsTarget* | crossResourceSubscription | ***srat*** |
| *timeWindowType* | crossResourceSubscription | ***twt*** |
| *timeWindowSize* | crossResourceSubscription | ***tws*** |
| *eventNotificationCriteriaSet* | crossResourceSubscription | ***encs*** |
| *associatedCrossResourceSub* | subscription | ***acrs*** |
| *volumePerNode* | backgroundDataTransfer | ***vpn*** |
| *numberOfNodes* | backgroundDataTransfer | ***non*** |
| *desiredTimeWindow* | backgroundDataTransfer | ***dtw*** |
| *transferSelectionGuidance* | backgroundDataTransfer | ***tsg*** |
| *geographicInformation* | backgroundDataTransfer | ***ggi*** |
| *groupLink* | backgroundDataTransfer | ***gli*** |
| *transactionLockTime* | transactionMgmt, transaction | ***tltm*** |
| *transactionExecuteTime* | transactionMgmt, transaction | ***text*** |
| *transactionCommitTime* | transactionMgmt, transaction | ***tct*** |
| *transactionExpirationTime* | transactionMgmt | ***tept*** |
| *transactionMode* | transactionMgmt | ***tmd*** |
| *transactionLockType* | transactionMgmt, transaction | ***tltp*** |
| *transactionControl* | transactionMgmt, transaction | ***tctl*** |
| *transactionState* | transactionMgmt, transaction | ***trst*** |
| *transactionMaxRetries* | transactionMgmt | ***tmr*** |
| *transactionMgmtHandling* | transactionMgmt | ***tmh*** |
| *requestPrimitives* | transactionMgmt | ***rqps*** |
| *responsePrimitives* | transactionMgmt | ***rsps*** |
| *transactionID* | transaction | ***tid*** |
| *sessionEndpoints* | e2eQosSession | ***eqse*** |
| *e2eQosRequirements* | e2eQosSession | ***eqsr*** |
| *e2eQosPolicies* | e2eQosSession | ***eqsp*** |
| *e2eQosStatus* | e2eQosSession | ***eqss*** |
| *beaconRequester* | timeSyncBeacon | ***bcnr*** |
| *beaconCriteria* | timeSyncBeacon | ***bcnc*** |
| *beaconInterval* | timeSyncBeacon | ***bcni*** |
| *beaconThreshold* | timeSyncBeacon | ***bcnt*** |
| NOTE: \* marked short names have been already assigned in Table 8.2.2-1. | | |

### 8.2.4 Resource types

In protocol bindings resource type names shall be translated into short names of Table 8.2.4‑1.

Table 8.2.4‑1: Resource and specialization type short names

| Resource Type Name | Short Name |
| --- | --- |
| accessControlPolicy | ***acp*** |
| accessControlPolicyAnnc | ***acpA*** |
| AE | ***ae*** |
| AEAnnc | ***aeA*** |
| container | ***cnt*** |
| containerAnnc | ***cntA*** |
| contentInstance | ***cin*** |
| contentInstanceAnnc | ***cinA*** |
| CSEBase | ***cb*** |
| delivery | ***dlv*** |
| eventConfig | ***evcg*** |
| execInstance | ***exin*** |
| group | ***grp*** |
| groupAnnc | ***grpA*** |
| locationPolicy | ***lcp*** |
| locationPolicyAnnc | ***lcpA*** |
| m2mServiceSubscriptionProfile | ***mssp*** |
| mgmtCmd | ***mgc*** |
| node | ***nod*** |
| nodeAnnc | ***nodA*** |
| pollingChannel | ***pch*** |
| remoteCSE | ***csr*** |
| remoteCSEAnnc | ***csrA*** |
| request | ***req*** |
| schedule | ***sch*** |
| scheduleAnnc | ***schA*** |
| serviceSubscribedAppRule | ***asar*** |
| serviceSubscribedNode | ***svsn*** |
| statsCollect | ***stcl*** |
| statsConfig | ***stcg*** |
| subscription | ***sub*** |
| firmware | ***fwr*** |
| firmwareAnnc | ***fwrA*** |
| software | ***swr*** |
| softwareAnnc | ***swrA*** |
| memory | ***mem*** |
| memoryAnnc | ***memA*** |
| areaNwkInfo | ***ani*** |
| areaNwkInfoAnnc | ***aniA*** |
| areaNwkDeviceInfo | ***andi*** |
| areaNwkDeviceInfoAnnc | ***andiA*** |
| battery | ***bat*** |
| batteryAnnc | ***batA*** |
| deviceInfo | ***dvi*** |
| deviceInfoAnnc | ***dviA*** |
| deviceCapability | ***dvc*** |
| deviceCapabilityAnnc | ***dvcA*** |
| reboot | ***rbo \**** |
| rebootAnnc | ***rboA*** |
| eventLog | ***evl*** |
| eventLogAnnc | ***evlA*** |
| cmdhPolicy | ***cmp*** |
| activeCmdhPolicy | ***acmp*** |
| cmdhDefaults | ***cmdf*** |
| cmdhDefEcValue | ***cmdv*** |
| cmdhEcDefParamValues | ***cmpv*** |
| cmdhLimits | ***cml*** |
| cmdhNetworkAccessRules | ***cmnr*** |
| cmdhNwAccessRule | ***cmwr*** |
| cmdhBuffer | ***cmbf*** |
| notificationTargetMgmtPolicyRef | ***ntpr*** |
| notificationTargetPolicy | ***ntp*** |
| policyDeletionRules | ***pdr*** |
| *dynamicAuthorizationConsultation* | ***dac*** |
| *semanticDescriptor* | ***smd*** |
| *semanticDescriptorAnnc* | ***smdA*** |
| *timeSeries* | ***ts*** |
| *timeSeriesAnnc* | ***tsA*** |
| timeSeriesInstance | ***tsi*** |
| *timeSeriesInstanceAnnc* | ***tsiA*** |
| role | ***rol*** |
| token | ***tk*** |
| genericInterworkingService | ***gis*** |
| genericInterworkingService*Annc* | ***gisA*** |
| genericInterworkingOperationInstance | ***gio*** |
| genericInterworkingOperationInstance*Annc* | ***gioA*** |
| svcObjWrapper | ***ajsw*** |
| svcObjWrapper*Annc* | ***ajswA*** |
| svcFwWrapper | ***ajfw*** |
| svcFwWrapper*Annc* | ***ajfwA*** |
| allJoynApp | ***ajap*** |
| allJoynApp*Annc* | ***ajapA*** |
| allJoynSvcObject | ***ajso*** |
| allJoynSvcObject*Annc* | ***ajsoA*** |
| allJoynInterface | ***ajif*** |
| allJoynInterface*Annc* | ***ajifA*** |
| allJoynMethod | ***ajmd*** |
| allJoynMethod*Annc* | ***ajmdA*** |
| allJoynMethodCall | ***ajmc*** |
| allJoynMethodCall*Annc* | ***ajmcA*** |
| allJoynProperty | ***ajpr*** |
| allJoynProperty*Annc* | ***ajprA*** |
| authorizationDecision | ***auds*** |
| authorizationPolicy | ***aupy*** |
| authorizationInformation | ***auif*** |
| ontologyRepository | ***ontr*** |
| ontologyRepositoryAnnc | ***ontrA*** |
| ontology | ***ont*** |
| ontologyAnnc | ***ontA*** |
| ontologyMapping | ***ontm*** |
| ontologyMappingAnnc | ***ontmA*** |
| ontologyMappingAlgorithm | ***omal*** |
| ontologyMappingAlgorithmAnnc | ***omalA*** |
| ontologyMappingAlgorithmRepository | ***omar*** |
| ontologyMappingAlgorithmRepositoryAnnc | ***omarA*** |
| semanticMashupJobProfile | ***smjp*** |
| semanticMashupJobProfile*Annc* | ***smjpA*** |
| semanticMashupInstance | ***smi*** |
| semanticMashupInstance*Annc* | ***smiA*** |
| semanticMashupResult | ***smr*** |
| semanticMashupResult*Annc* | ***smrA*** |
| semanticRuleRepository | ***srr*** |
| semanticRuleRepositoryAnnc | ***srrA*** |
| reasoningRules | ***rrul*** |
| reasoningRulesAnnc | ***rrulA*** |
| reasoningJobInstance | ***rji*** |
| reasoningJobInstanceAnnc | ***rjiA*** |
| AEContactList | ***alst*** |
| AEContactListPerCSE | ***alpc*** |
| localMulticastGroup | ***lmg*** |
| multimediaSession | ***mms*** |
| multimediaSessionAnnc | ***mmsA*** |
| triggerRequest | ***tgr*** |
| crossResourceSubscription | ***crs*** |
| backgroundDataTransfer | ***bdt*** |
| transaction | ***trac*** |
| transactionMgmt | ***tram*** |
| e2eQosSession | ***eqs*** |
| timeSyncBeacon | ***tsb*** |
| NOTE: \* marked short names have been already assigned in attribute Tables 8.2.3-1 to 8.2.3-5. | |

### 

### 8.2.5 Complex data types members

In protocol bindings complex data types member names shall be translated into short names of Table 8.2.5-1.

Table 8.2.5‑1: Complex data type member short names

| Member Name | Occurs in | Short Name |
| --- | --- | --- |
| createdBefore | filterCriteria, eventNotificationCriteria | ***crb*** |
| createdAfter | filterCriteria, eventNotificationCriteria | ***cra*** |
| modifiedSince | filterCriteria, eventNotificationCriteria | ***ms*** |
| unmodifiedSince | filterCriteria, eventNotificationCriteria | ***us*** |
| stateTagSmaller | filterCriteria, eventNotificationCriteria | ***sts*** |
| stateTagBigger | filterCriteria, eventNotificationCriteria | ***stb*** |
| expireBefore | filterCriteria, eventNotificationCriteria | ***exb*** |
| expireAfter | filterCriteria, eventNotificationCriteria | ***exa*** |
| labels | filterCriteria, eventNotificationCriteria | ***lbl\**** |
| labelsQuery | filterCriteria | ***lbq*** |
| resourceType | filterCriteria, accessControlObjectDetails | ***ty\**** |
| sizeAbove | filterCriteria, eventNotificationCriteria | ***sza*** |
| sizeBelow | filterCriteria, eventNotificationCriteria | ***szb*** |
| contentType | filterCriteria | ***cty*** |
| limit | filterCriteria | ***lim*** |
| attribute | filterCriteria, eventNotificationCriteria | ***atr*** |
| contentFilterSyntax | filterCriteria | ***cfs*** |
| contentFilterQuery | filterCriteria | ***cfq*** |
| level | filterCriteria | ***lvl*** |
| offset | filterCriteria | ***ofst*** |
| geoQuery | filterCriteria | ***gq*** |
| geometryType | geoQuery | ***gmty*** |
| geometry | geoQuery | ***geom*** |
| geoSpatialFunction | geoQuery | ***gsf*** |
| notificationEventType | eventNotificationCriteria, notificationEvent | ***net*** |
| operationMonitor | eventNotificationCriteria, notificationEvent | ***om*** |
| representation | notificationEvent | ***rep*** |
| filterUsage | filterCriteria | ***fu\**** |
| eventCatType | eventCat | ***ect*** |
| eventCatNo | eventCat | ***ecn*** |
| number | batchNotify | ***num*** |
| duration | batchNotify | ***dur*** |
| notification | aggregatedNotification,  Request Primitive Content | ***sgn*** |
| notificationEvent | notification | ***nev*** |
| verificationRequest | notification | ***vrq*** |
| subscriptionDeletion | notification | ***sud*** |
| subscriptionReference | notification | ***sur*** |
| creator | notification | ***cr\**** |
| notificationForwardingURI | notification | ***nfu\**** |
| notificationTarget | notification | ***ntt*** |
| targetRemovalRequest | notification | ***trr*** |
| targetRemovalAllowance | notification | ***tra*** |
| IPEDiscoveryRequest | notification | ***idr*** |
| AERegistrationPointChange | notification | ***aerp*** |
| AEReferenceIDChange | notification | ***aerid*** |
| trackingID1 | notification | ***tid1*** |
| trackingID2 | notification | ***tid2*** |
| filterCriteria | IPEDiscoveryRequest | ***fc\**** |
| operation | operationMonitor, dynAuthDasRequest | ***op\**** |
| operations | operationMonitor, filterCriteria | ***ops*** |
| originator | operationMonitor, IPEDiscoveryRequest, dynAuthDasRequest | ***or\**** |
| action | actionStatus, e2eQosPolicy | ***acn\**** |
| status | actionStatus, e2eQosPolicy | ***sus\**** |
| childResource | All except execInstance, announced resource, management resources from firmware | ***ch*** |
| accessControlRule | privileges, selfPrivileges | ***acr*** |
| accessControlOriginators | accessControlRule | ***acor*** |
| accessControlOperations | accessControlRule | ***acop*** |
| accessControlContexts | accessControlRule | ***acco*** |
| accessControWindow | accessControlContexts | ***actw*** |
| accessControlIpAddresses | accessControlContexts | ***acip*** |
| ipv4Addresses | accessControlIpAddress | ***ipv4*** |
| ipv6Addresses | accessControlIpAddress | ***ipv6*** |
| accessControlLocationRegion | accessControlContexts | ***aclr*** |
| countryCode | accessControlLocationRegion | ***accc*** |
| circRegion | accessControlLocationRegion | ***accr*** |
| name | attribute, anyArgType, mgmtLinkRef, childResourceRef, contentRef | ***nm\**** |
| specializationType | childResourceRef, accessControlObjectDetails | ***spty\**** |
| containerDefinition | specializationType | ***cnd\**** |
| mgmtDefinition | specializationType | ***mgd\**** |
| value | attribute | ***val*** |
| type | anyArgType, childResourceRef, mgmtLinkRef, location | ***typ*** |
| maxNrOfNotify | rateLimit | ***mnn*** |
| timeWindow | rateLimit | ***tww*** |
| scheduleEntry | scheduleElement | ***sce*** |
| aggregatedNotification | Request Primitive Content | ***agn*** |
| attributeList | Request Primitive Content | ***atrl*** |
| securityInfo | Request Primitive Content, Response Primitive Content | ***seci*** |
| aggregatedResponse | Response Primitive Content | ***agr*** |
| resource | Response Primitive Content | ***rce*** |
| URIList | Response Primitive Content | ***uril*** |
| debugInfo | Response Primitive Content | ***dbg*** |
| queryResult | Response Primitive Content | ***qres*** |
| anyArg | resetArgsType, rebootArgsType, uploadArgsType, downloadArgsType, softwareInstallArgsType softwareUpdateArgsType, softwareUninstallArgsType, execReqArgsListType | ***any*** |
| fileType | downloadArgsType | ***ftyp*** |
| URI | resourceWrapper, dynAuthTokenReqInfo, certProvCmdArgs | ***uri*** |
| URL | downloadArgsType | ***url\**** |
| username | uploadArgsType, downloadArgsType, softwareUpdateArgsType, softwareUninstallArgsType | ***unm*** |
| password | uploadArgsType, downloadArgsType, softwareUpdateArgsType, softwareUninstallArgsType | ***pwd*** |
| filesize | downloadArgsType | ***fsi*** |
| targetFile | downloadArgsType | ***tgf*** |
| delaySeconds | downloadArgsType | ***dss*** |
| successURL | downloadArgsType | ***surl*** |
| startTime | downloadArgsType | ***stt*** |
| completeTime | downloadArgsType | ***cpt*** |
| UUID | softwareInstallArgsType softwareUpdateArgsType, softwareUninstallArgsType | ***uuid*** |
| executionEnvRef | softwareInstallArgsType softwareUpdateArgsType, softwareUninstallArgsType | ***eer*** |
| version | softwareUninstallArgsType, tokenClaimSet | ***vr\**** |
| reset | execReqArgsListType | ***rst*** |
| reboot | execReqArgsListType | ***rbo\**** |
| upload | execReqArgsListType | ***uld*** |
| download | execReqArgsListType | ***dld*** |
| softwareInstall | execReqArgsListType | ***swin*** |
| softwareUpdate | execReqArgsListType | ***swup*** |
| softwareUninstall | execReqArgsListType | ***swun*** |
| tracingOption | deliveryMetaData | ***tcop*** |
| tracingInfo | deliveryMetaData | ***tcin*** |
| responseTypeValue | responseTypeInfo | ***rtv*** |
| notificationURI | responseTypeInfo | ***nu*** |
| timeOfDay | deletionContexts | ***tod*** |
| locationRegions | deletionContexts | ***lr*** |
| URIReference | contentRef | ***urir*** |
| semanticsFilter | filterCriteria | ***smf*** |
| missingData | eventNotificationCriteria | ***md*** |
| tokenID | tokenClaimSet, dynAuthLocalTokenIdAssignments | ***tkid*** |
| holder | tokenClaimSet | ***tkhd\**** |
| issuer | tokenClaimSet | ***tkis\**** |
| notBefore | tokenClaimSet | ***tknb\**** |
| notAfter | tokenClaimSet | ***tkna\**** |
| tokenName | tokenClaimSet | ***tknm\**** |
| audience | tokenClaimSet | ***tkau\**** |
| permissions | tokenClaimSet | ***tkps\**** |
| extension | tokenClaimSet | ***tkex\**** |
| permission | tokenPermissions | ***pm*** |
| resourceIDs | tokenPermission | ***ris*** |
| privileges | tokenPermission, setOfPermissions | ***pv\**** |
| roleIDs | tokenPermission | ***rids\**** |
| localTokenIdAssignment | dynAuthLocalTokenIdAssignments | ***ltia*** |
| localTokenID | dynAuthLocalTokenIdAssignment | ***lti*** |
| dasInfo | dynAuthTokenReqInfo | ***dasi*** |
| securedDasRequest | dynAuthTokenReqInfo | ***sdr*** |
| filterOperation | filterCriteria, eventNotificationCriteria | ***fo*** |
| targetedResourceType | dynAuthDasRequest | ***trt*** |
| originatorIP | dynAuthDasRequest | ***oip\**** |
| ipv4Address | dynAuthDasRequest, ipAddress | ***ip4*** |
| ipv6Address | dynAuthDasRequest, ipAddress | ***ip6*** |
| originatorLocation | dynAuthDasRequest | ***olo\**** |
| originatorRoleIDs | dynAuthDasRequest | ***orid*** |
| requestTimestamp | dynAuthDasRequest | ***rts*** |
| targetedResourceID | dynAuthDasRequest | ***trid*** |
| proposedPrivilegesLifetime | dynAuthDasRequest | ***ppl*** |
| roleIDsFromACPs | dynAuthDasRequest | ***rfa*** |
| tokenIDs | dynAuthDasRequest | ***tids*** |
| dynamicACPInfo | dynAuthDasResponse | ***dai*** |
| grantedPrivileges | dynAuthDasResponse | ***gp*** |
| privilegesLifetime | dynAuthDasResponse | ***pl*** |
| tokens | dynAuthDasResponse | ***tkns*** |
| securityInfoType | securityInfo | ***sit*** |
| dasRequest | securityInfo, dynAuthTokenReqInfo | ***dreq*** |
| dasResponse | securityInfo | ***dres*** |
| dynAuthRelMapRequest | securityInfo | ***darq*** |
| dynAuthRelMapResponse | securityInfo | ***dars*** |
| esprimRandObject | securityInfo | ***ero*** |
| esprimObject | securityInfo | ***epo*** |
| escertkeMessage | securityInfo | ***eckm*** |
| resourceRef | listOfChildResourceRef | ***rrf*** |
| resourceRefList | Response Primitive Content | ***rrl*** |
| esprimRandID | originatorESPrimRandObject, receiverESPrimRandObject | ***esri*** |
| esprimRandValue | originatorESPrimRandObject, receiverESPrimRandObject | ***esrv*** |
| esprimRandExpiry | originatorESPrimRandObject, receiverESPrimRandObject | ***esrx*** |
| esprimKeyGenAlgID | originatorESPrimRandObject | ***esk*** |
| esprimKeyGenAlgIDs | receiverESPrimRandObject | ***esks*** |
| esprimProtocolAndAlgIDs | originatorESPrimRandObject, receiverESPrimRandObject | ***espa*** |
| supportede2ESecFeatures | e2eSecInfo | ***esf*** |
| certificates | e2eSecInfo | ***escert*** |
| sharedReceiverESPrimRandObject | e2eSecInfo | ***esro*** |
| networkAction | backOffParameters | ***nwa*** |
| initialBackoffTime | backOffParameters | ***ibt*** |
| additionalBackoffTime | backOffParameters | ***abt*** |
| maximumBackoffTime | backOffParameters | ***mbt*** |
| optionalRandomBackoffTime | backOffParameters | ***rbt*** |
| backOffParametersSet | backOffParameters | ***bops*** |
| dataLink | listOfDataLinks | ***dali*** |
| attributeName | dataLink | ***atn*** |
| dataContainerID | dataLink | ***dcid*** |
| accessControlAuthenticationFlag | accessControlRule | ***acaf*** |
| accessControlObjectDetails | accessControlRule | ***acod*** |
| dataLinkEntry | listOfDataLinks | ***dle*** |
| childResourceType | accessControlObjectDetails, eventNotificationCriteria, filterCriteria | ***chty*** |
| parentResourceType | filterCriteria | ***pty*** |
| childLabels | filterCriteria | ***clbl*** |
| parentLabels | filterCriteria | ***palb*** |
| childAttribute | filterCriteria | ***catr*** |
| parentAttribute | filterCriteria | ***patr*** |
| applyRelativePath | filterCriteria | ***arp*** |
| sessionDescription | sessionDescriptions | ***sdc*** |
| activityPattern | activityPatternElements | ***apt*** |
| stationaryIndication | activityPattern | ***sti*** |
| dataSizeIndicator | activityPattern | ***dsi*** |
| eventNotificationCriteriaEntry | eventNotificationCriteriaSet | ***encn*** |
| memberURI | mashupMembers | ***muri*** |
| memberValue | mashupMembers | ***mvl*** |
| coordinates | location | ***crd*** |
| qosLevel | e2eQosRequirements | ***qosl*** |
| resourceIDList | e2eQosRequirements | ***ril*** |
| sessionSchedule | e2eQosRequirements | ***ssch*** |
| numOfRequests | e2eQosRequirements | ***nor*** |
| numOfBytes | e2eQosRequirements | ***nob*** |
| accessControlUserIDs | accessControlContexts | ***acui*** |
| timeSyncBeaconReference | timeSyncBeaconNotification | ***tbr*** |
| currentTime | timeSyncBeaconNotification | ***ctm\**** |
| timeOffset | timeSyncBeaconNotification | ***tost*** |
| NOTE: \* marked short names have been already assigned in attribute Table 8.2.3-1 to Table 8.2.3-6. | | |

### 8.2.6 Trigger payload fields

Trigger payload fields shall be translated into short names of Table 8.2.6‑1.

Table 8.2.6‑1: Trigger payload field short names

| Member Name | Short Name |
| --- | --- |
| *triggerPayload (root element)* | ***tgp*** |
| *triggerPurpose* | ***tpe\**** |
| *triggerInfoAddress* | ***tia\**** |
| *triggerInfoOperation* | ***tio\**** |
| *triggerInfoResourceType* | ***tirt\**** |
| *triggerInfoAE-ID* | ***tiae\**** |
| *triggerInfoPoA* | ***tipa*** |
| *triggerInfoSerializationTypes* | ***tist*** |
| NOTE: \* marked short names have been already assigned in attribute Table 8.2.3-1 to Table 8.2.3-6. | |

### 8.2.7 Field device specific attributes defined in TS-0022

The following sub-clauses and tables present the attribute short names as defined in [38].

### 8.2.7.1 Common and Field Device Configuration specific oneM2M Resource attributes

In protocol bindings, resource attribute names shall be translated into short names of table 8.2.7.1-1.

Table 8.2.7.1-1: Common and Field Device Configuration specific oneM2M Attribute Short Names

| **Attribute Name** | **Occurs in** | **Short Name** | **Notes** |
| --- | --- | --- | --- |
| *originatorID* | registration | ***oid*** |  |
| *appID* | registration | ***apid*** |  |
| *externalID* | registration | ***eid*** |  |
| *triggerRecipientID* | registration | ***tri*** |  |
| *containerPath* | dataCollection | ***cntp*** |  |
| *reportingSchedule* | dataCollection | ***rpsc*** |  |
| *measurementSchedule* | dataCollection | ***mesc*** |  |
| *SUID* | authenticationProfile | ***suid*** |  |
| *TLSCiphersuites* | authenticationProfile | ***tlcs*** |  |
| *symmKeyID* | authenticationProfile | ***aski*** |  |
| *symmKeyValue* | authenticationProfile | ***skv*** |  |
| *MAFKeyRegLabels* | authenticationProfile | ***mkrl*** |  |
| *MAFKeyRegDuration* | authenticationProfile | ***mkrd*** |  |
| *mycertFingerprint* | authenticationProfile | ***mcfp*** |  |
| *rawPubKeyID* | authenticationProfile | ***rpki*** |  |
| *SUIDs* | myCertFileCred | ***suids*** |  |
| *myCertFileFormat* | myCertFileCred | ***mcff*** |  |
| *myCertFileContent* | myCertFileCred | ***mcfc*** |  |
| *certFingerprint* | trustAnchorCred | ***cfp*** |  |

### 8.2.7.2 Field Device Configuration specific oneM2M Resource types

In protocol bindings, resource type names of the <mgmtObj> specializations shall be translated into the short names of table 8.2.7.2-1.

Table 8.2.7.2-1: Field Device Configuration specific Resource Type Short Names

| **ResourceType Name** | **Short Name** |
| --- | --- |
| *registration* | ***reg*** |
| *registrationAnnc* | ***regA*** |
| *dataCollection* | ***datc*** |
| *dataCollectionAnnc* | ***datcA*** |
| *authenticationProfile* | ***autp*** |
| *MAFClientRegCfg* | ***macrc*** |
| *MEFClientRegCfg* | ***mecrc*** |
| *myCertFileCred* | ***nycfc*** |
| *trustAnchorCred* | ***tac*** |

### 8.2.8 MAF & MEF specific attributes defined in TS-0032

The following sub-clauses and tables present the attribute short names as defined in [55].

### 8.2.8.1 Security-specific oneM2M Resource attributes

In protocol bindings resource attributes names shall be translated into short names of table 8.2.8.1-1.

**Table 8.2.8.1-1: Security-specific oneM2M Attribute Short Names**

| **Attribute Name** | **Occurs in** | **Short Name** | **Notes** |
| --- | --- | --- | --- |
| *adminFQDN* | mafClientReg, mefClientReg, symmKeyReg | ***adfq*** |  |
| *SUID* | symmKeyReg | ***suid*** |  |
| *assignedSymmKeyID* | mafClientReg, mefClientReg | ***aski*** |  |
| *targetIDs* | symmKeyReg | ***tgis*** |  |
| *keyValue* | symmKeyReg | ***kv*** |  |
| *cmdID* | mefClientCmd | ***mcci*** |  |
| *cmdDescription* | mefClientCmd | ***mccd*** |  |
| *cmdStatusCode* | mefClientCmd | ***mccs*** |  |

### 8.2.8.2 Security-specific oneM2M Resource types

In protocol bindings resource type names shall be translated into short names of table 8.2.8.2-1.

**Table 8.2.8.2-1: Security-specific Resource Type Short Names**

| **Attribute Name** | **Short Name** |
| --- | --- |
| *MAFBase* | maf |
| *MEFBase* | mef |
| *mafClientReg* | macr |
| *mefClientReg* | mecr |
| *symmKeyReg* | mkr |
| *mefClientCmd* | mcc |

### 8.2.8.3 Security-specific oneM2M Complex data type members

In protocol bindings complex data types member names shall be translated into short names of table 8.2.8.3-1.

NOTE: The member names of the security configuration parameters mefClientRegCfg, mafClientRegCfg, mefKeyRegCfg and mafKeyRegCfg are defined in clause 12.4 of oneM2M TS-0003 [7].

**Table 8.2.8.3-1: Security-specific oneM2M Complex data type member short names**

| **Member Name** | **Occurs in** | **Short Name** | **Notes** |
| --- | --- | --- | --- |
| fqdn | mefClientRegCfg, mefKeyRegCfg  mafClientRegCfg, mafKeyRegCfg | ***fq*** |  |
| adminFQDN | mefClientRegCfg, mafClientRegCfg | ***adfq\**** | See note |
| httpPort | mefClientRegCfg, mafClientRegCfg | ***hpt*** |  |
| coapPort | mefClientRegCfg, mafClientRegCfg | ***cpt*** |  |
| websocketPort | mefClientRegCfg, mafClientRegCfg | ***wpt*** |  |
| ppsk | mefClientRegCfg, mafClientRegCfg | ***pk*** |  |
| rpsk | mefClientRegCfg, mafClientRegCfg | ***rk*** |  |
| certAuth | mefClientRegCfg, mafClientRegCfg | ***cert*** |  |
| credID | mefClientRegCfg, mafClientRegCfg | ***crdi*** |  |
| caCerts | mefClientRegCfg, mafClientRegCfg | ***cact*** |  |
| SUID | mefKeyRegCfg, mafClientRegCfg, authProfileMONodeArgs | ***suid\**** | See note |
| targetIDs | mefKeyRegCfg, mafClientRegCfg | ***tgis\**** | See note |
| targetID | cmdDescription | ***tgi*** |  |
| cmdClassID | cmdDescription | ***ccid*** |  |
| cmdArgs | cmdDescription | ***cma*** |  |
| certProvProtocolID | certProvCmdArgs | ***cppi*** |  |
| certSubjectType | certProvCmdArgs | ***cst*** |  |
| certSubjectID | certProvCmdArgs | ***csi*** |  |
| deviceConfigURI | devCfgCmdArgs | ***dcu*** |  |
| objectPath | MONodeCmdArgs | ***ajop\**** |  |
| objectTypeID | MONodeCmdArgs | ***otyp*** |  |
| objectTypeSpecificArgs | MONodeCmdArgs | ***otsa*** |  |
| retryDuration | noMoreCmdArgs | ***rdu*** |  |
| noMoreCmdArgs | cmdArgs | ***nmca*** |  |
| certProvCmdArgs | cmdArgs | ***cpca*** |  |
| devCfgCmdArgs | cmdArgs | ***dcca*** |  |
| MONodeCmdArgs | cmdArgs | ***nnca*** |  |
| NOTE: \* marked short names have been already assigned to an attribute in table 8.2.8.1-1. | | | |

### \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* End of Change 1 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

### \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Start of Change 2 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

## 2.1 Normative references

References are either specific (identified by date of publication and/or edition number or version number) or non‑specific. For specific references, only the cited version applies. For non-specific references, the latest version of the referenced document (including any amendments) applies.

The following referenced documents are necessary for the application of the present document.

[1] W3C Recommendation (26 November 2008): "Extensible Markup Language (XML) 1.0 (Fifth Edition)".

[2] IETF RFC 3986: "Uniform Resource Identifier (URI): Generic Syntax".

[3] W3C Recommendation (2004): "XML Schema Part 2: Datatypes Second Edition".

[4] Void.

[5] Void.

[6] oneM2M TS-0001: "Functional Architecture".

[7] oneM2M TS-0003: "Security Solutions".

[8] IEEE 754-2008: "IEEE Standard for Floating-Point Arithmetic".

NOTE: Available at <http://ieeexplore.ieee.org/servlet/opac?punumber=4610933>.

[9] IETF RFC 4648: "The Base16, Base32, and Base64 Data Encodings".

[10] IETF RFC 2045: "Multipurpose Internet Mail Extensions (MIME) Part One: Format of Internet Message Bodies".

[11] IETF RFC 3987: "Internationalized Resource Identifiers (IRIs)".

[12] Void.

[13] Void.

[14] IETF RFC 6733: "Diameter Base Protocol".

[15] 3GPP TS 23.682: "Architecture enhancements to facilitate communications with packet data networks and applications".

[16] Void.

[17] 3GPP TS 23.003: "Numbering, addressing and identification".

[18] Void.

[19] IETF RFC 8259: "The JavaScript Object Notation (JSON) Data Interchange Format".

[20] IETF RFC 5234: "Augmented BNF for Syntax Specifications: ABNF".

[21] IETF RFC 3629: "UTF-8, a transformation format of ISO 10646".

[22] oneM2M TS-0008: "CoAP Protocol Binding".

[23] oneM2M TS-0009: "HTTP Protocol Binding".

[24] oneM2M TS-0010: "MQTT Protocol Binding".

[25] oneM2M TS-0011: "Common Terminology".

[26] IETF RFC 6838: "Media Type Specifications and Registration Procedures".

[27] ISO 8601:2004: "Data elements and interchange formats -- Information interchange -- Representation of dates and times".

[28] OMA-TS-REST\_NetAPI\_TerminalLocation: "Open Mobile Alliance; RESTful Network API for Terminal Location", Version 1.0.

[29] IETF RFC 4632: "Classless Inter-domain Routing (CIDR): The Internet Address Assignment and Aggregation Plan".

[30] IETF RFC 5952: "A Recommendation for IPv6 Address Text Representation".

[31] 3GPP TS 32.299: "Telecommunication management; Charging management; Diameter charging applications".

[32] IETF RFC 4006: "Diameter Credit-Control Application".

[33] W3C Recommendation: "SPARQL 1.1 Query Language".

[34] W3C Recommendation: "RDF 1.1 XML Syntax".

[35] IETF RFC 4122: "A Universally Unique IDentifier (UUID) URN Namespace".

[36] oneM2M TS-0012: "oneM2M Base Ontology".

[37] oneM2M TS-0021: "oneM2M and AllJoyn Interworking".

[38] oneM2M TS-0022: "Field Device Configuration".

[39] IETF RFC 7049 (October 2013): "Concise Binary Object Representation (CBOR)".

[40] oneM2M TS-0023: "Home Appliances Information Model and Mapping".

[41] ISO 3166-1:2013: "Codes for the representation of names of countries and their subdivisions -- Part 1: Country codes".

[42] oneM2M TS-0020: "WebSocket Protocol Binding".

[43] oneM2M TS-0026: "3GPP Interworking".

[44] W3C Recommendation: "OWL 2 Web Ontology Language: Structural Specification and Functional-Style Syntax (Second Edition)".

[45] W3C Recommendation: "OWL 2 Web Ontology Language XML Serialization (Second Edition)".

[46] W3C Recommendation: "OWL 2 Web Ontology Language: Mapping to RDF Graphs (Second Edition)".

[47] W3C Recommendation: "RDF 1.1 Turtle: Terse RDF Triple Language".

[48] W3C Note: "OWL 2 Web Ontology Language Manchester Syntax (Second Edition)".

[49] W3C Recommendation: "JSON-LD 1.1: A JSON-based Serialization for Linked Data".

[50] oneM2M TS-0034: "Semantics Support".

[51] 3GPP TS 29.122: "T8 reference point for Northbound Application Programming Interfaces (APIs)".

[52] IETF RFC 4566: "SDP: Session Description Protocol".

[53] IETF RFC 7946: "The GeoJSON Format".

[54] W3C Recommendation: "RIF Core Dialect (Second Edition)".

[55] oneM2M TS-0032: “MAF and MEF Interface Specification”

### \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* End of Change 2 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*