

UCO Version 0.4.0 Release Notes

Focus:

UCO Version 0.4.0 is primarily focused on fixing syntax & structural errors, splitting domain assertions into companion files and moving some controlled vocabulary enumerations into a separate vocabulary namespace using a new specification approach.

Focus Exceptions:

- The *editor_annotation* ontology is postponed to a further release to allow for more documentation regarding its inclusion in UCO

Changes (these are changes to ontologies, classes or properties in the preexisting ontology)

Breaking Changes (these are changes to ontologies, classes or properties in the preexisting ontology that make the new release non-backward-compatible)

- uco-core: Modified core:ExternalReference to be subClassOf core:Facet rather than core:UcoObject - Issue #38
- uco-observable: the range for observable:partitionID is changed from integer to string - Issue #160
- uco-investigation: the *rdfs:range* for *investigation:authorizationType* was changed from <https://unifiedcyberontology.org/ontology/uco/core#ControlledVocabulary> to *string* - Issue #75
- uco-investigation: the *rdfs:range* for *investigation:investigationStatus* was changed from <https://unifiedcyberontology.org/ontology/uco/core#ControlledVocabulary> to *string* - Issue #75
- uco-core: the *rdfs:range* for *core:kindOfRelationship* was changed from <https://unifiedcyberontology.org/ontology/uco/core#ControlledVocabulary> to *string* - Issue #75
- uco-core: the *rdfs:range* for *core:role* was changed from <https://unifiedcyberontology.org/ontology/uco/core#ControlledVocabulary> to *string* - Issue #75
- uco-core: the *rdfs:range* for *core:specVersion* was changed from <https://unifiedcyberontology.org/ontology/uco/core#ControlledVocabulary> to *string* - Issue #75
- uco-core: the owl:onClass range of the "id" property restriction on the core:UcoObject class was changed to owl:onDataRange <https://unifiedcyberontology.org/ontology/uco/types#Identifier> - Issue #196
- Due to the change in vocabulary definitions (*uco-vocab* versus *enumerations*), the following table details the where the enumerations are now defined in the vocabulary namespace to support the range changes that occurred to the Classes/DatatypeProperty:

Deprecated Enumeration Name	Vocabulary Location
observable:ActionTypeEnum	vocab:ActionTypeVocab
observable:ActionArgumentNameEnum	vocab:ActionArgumentNameVocab
observable:ActionNameEnum	vocab:ActionNameVocab
action:ActionRelationshipTypeEnum	vocab:ActionRelationshipTypeVocab
action:ActionStatusTypeEnum	vocab:ActionStatusTypeVocab
observable:AccountType	vocab:AccountTypeVocab
observable:BitnessEnum	vocab:BitnessVocab
observable:CharacterEncodingEnum	vocab:CharacterEncodingVocab
observable:CyberItemRelationshipEnum	vocab:CyberItemRelationshipVocab
observable:CyberItemStateEnum	vocab:CyberItemStateVocab
observable:DiskTypeEnum	vocab:DiskTypeVocab
observable:EndiannessTypeEnum	vocab:EndiannessTypeVocab
core:HashNameEnum	vocab:HashNameVocab
investigation:InvestigationFormEnum	vocab:InvestigationFormVocab
observable:LibraryTypeEnum	vocab:LibraryTypeVocab
observable:MemoryBlockTypeEnum	vocab:MemoryBlockTypeVocab
observable:PartitionTypeEnum	vocab:PartitionTypeVocab
observable:ProcessorArchEnum	vocab:ProcessorArchVocab

observable:RegionalRegistryTypeEnum	vocab:RegionalRegistryTypeVocab
observable:SIMFormEnum	vocab:SIMFormVocab
observable:SIMTypeEnum	vocab:SIMTypeVocab
observable:TaskActionTypeEnum	vocab:TaskActionTypeVocab
observable:TaskFlagEnum	vocab:TaskFlagVocab
observable:TaskPriorityEnum	vocab:TaskPriorityVocab
observable:TaskStatusEnum	vocab:TaskStatusVocab
observable:ThreadRunningStatusEnum	vocab:ThreadRunningStatusVocab
time:TimestampPrecision	vocab:TimestampPrecisionVocab
action:TrendEnum	vocab:TrendVocab
observable:TriggerFrequencyEnum	vocab:TriggerFrequencyVocab
observable:TriggerTypeEnum	vocab:TriggerTypeVocab
observable:UnixProcessStateEnum	vocab:UnixProcessStateVocab
observable:WhoisContactTypeEnum	vocab:WhoisContactTypeVocab
observable:WhoisDNSSECTypeEnum	vocab:WhoisDNSSECTypeVocab
observable:WhoisStatusTypeEnum	vocab:WhoisStatusTypeVocab
observable:WindowsDriveTypeEnum	vocab:WindowsDriveTypeVocab
observable:WindowsVolumeAttributeEnum	vocab:WindowsVolumeAttributeVocab

Range Changes (these are changes to the "range" of a property that are not breaking changes: typically these are broadening in the scope of the range)

Changes (these are general changes to the preexisting ontology that are not breaking or range changes)

- uco-observable : Corrected typo in PDFFile - Issue #138
- uco-observable: Correct casing of "picturetype" - Issue #143
- uco-master: newly added domain assertion files were added to the uco-master import statements - Issue #147 and Issue #104
- uco-action: added import statements for vocabulary namespace - Issue #75
- uco-core: added import statements for vocabulary namespace - Issue #75
- uco-observable: added import statements for vocabulary namespace - Issue #75
- uco-observable: Updated observable:omment to observable:taskComment - Issue #137
- uco-master: added the import for uco-time into uco-master - Issue #148
- uco-action: Modified action:ActionPattern to be a subclassOf action:Action in addition to pattern:Pattern - Issue #159
- uco-action: all domain assertions (*rdfs:domain*) were removed from the main turtle file (*action.ttl*) and added to a companion file (*action-da.ttl*) - Issue #147 and Issue #104
- uco-core: all domain assertions (*rdfs:domain*) were removed from the main turtle file (*core.ttl*) and added to a companion file (*core-da.ttl*) - Issue #147 and Issue #104
- uco-identity: all domain assertions (*rdfs:domain*) were removed from the main turtle file (*identity.ttl*) and added to a companion file (*identity-da.ttl*) - Issue #147 and Issue #104
- uco-investigation: all domain assertions (*rdfs:domain*) were removed from the main turtle file (*investigation.ttl*) and added to a companion file (*investigation-da.ttl*) - Issue #147 and Issue #104
- uco-location: all domain assertions (*rdfs:domain*) were removed from the main turtle file (*location.ttl*) and added to a companion file (*location-da.ttl*) - Issue #147 and Issue #104
- uco-marking: all domain assertions (*rdfs:domain*) were removed from the main turtle file (*marking.ttl*) and added to a companion file (*marking-da.ttl*) - Issue #147 and Issue #104
- uco-observable: all domain assertions (*rdfs:domain*) were removed from the main turtle file (*observable.ttl*) and added to a companion file (*observable-da.ttl*) - Issue #147 and Issue #104
- uco-pattern: all domain assertions (*rdfs:domain*) were removed from the main turtle file (*pattern.ttl*) and added to a companion file (*pattern-da.ttl*) - Issue #147 and Issue #104
- uco-tool: all domain assertions (*rdfs:domain*) were removed from the main turtle file (*tool.ttl*) and added to a companion file (*tool-da.ttl*) - Issue #147 and Issue #104

- uco-types: all domain assertions (*rdfs:domain*) were removed from the main turtle file (*types.ttl*) and added to a companion file (*types-da.ttl*) - Issue #147 and Issue #104
- The *vocabulary* namespace was created, replacing enumerations that were included in the original ontologies. A full list of vocabulary definitions can be found in the section titled "Vocabulary Additions/Changes".
- Removed many extraneous tool and editor artifacts (e.g., .project and catalog files)

Deprecations/Deletions (classes or properties that were deprecated from the ontology)

- As part of introducing the new vocabulary namespace, some enumerations were removed. The following enumerations were removed and have been covered in the vocab namespace listed in the above Changes section:
- uco-observable: Removed observable:ActionTypeEnum - Issue #75
- uco-observable: Removed observable:ActionArgumentNameEnum - Issue #75
- uco-observable: Removed observable:ActionNameEnum - Issue #75
- uco-action: Removed action:ActionRelationshipTypeEnum - Issue #75
- uco-action: Removed action:ActionStatusTypeEnum - Issue #75
- uco-observable: Removed observable:AccountTypeEnum - Issue #75
- uco-observable: Removed observable:BitnessEnum - Issue #75
- uco-observable: Removed observable:CharacterEncodingEnum - Issue #75
- uco-observable: Removed observable:CyberItemRelationshipEnum - Issue #75
- uco-observable: Removed observable:CyberItemStateEnum - Issue #75
- uco-observable: Removed observable:DiskTypeEnum - Issue #75
- uco-observable: Removed observable:EndiannessTypeEnum - Issue #75
- uco-core: Removed core:HashNameEnum - Issue #75
- uco-investigation: Removed investigation:InvestigationFormEnum - Issue #75
- uco-observable: Removed observable:LibraryTypeEnum - Issue #75
- uco-observable: Removed observable:MemoryBlockTypeEnum - Issue #75
- uco-observable: Removed observable:PartitionTypeEnum - Issue #75
- uco-observable: Removed observable:ProcessorArchEnum - Issue #75
- uco-observable: Removed observable:RegionalRegistryTypeEnum - Issue #75
- uco-observable: Removed observable:SIMFormEnum - Issue #75
- uco-observable: Removed observable:SIMTypeEnum - Issue #75
- uco-observable: Removed observable:TaskActionTypeEnum - Issue #75
- uco-observable: Removed observable:TaskFlagEnum - Issue #75
- uco-observable: Removed observable:TaskPriorityEnum - Issue #75
- uco-observable: Removed observable:TaskStatusEnum - Issue #75
- uco-observable: Removed observable:ThreadRunningStatusEnum - Issue #75
- uco-time: Removed time:TimestampPrecision - Issue #75
- uco-action: Removed action:TrendEnum - Issue #75
- uco-observable: Removed observable:TriggerFrequencyEnum - Issue #75
- uco-observable: Removed observable:TriggerTypeEnum - Issue #75
- uco-observable: Removed observable:UnixProcessStateEnum - Issue #75
- uco-observable: Removed observable:WhoisContactTypeEnum - Issue #75
- uco-observable: Removed observable:WhoisDNSSECTypeEnum - Issue #75
- uco-observable: Removed observable:WhoisStatusTypeEnum - Issue #75
- uco-observable: Removed observable:WindowsDriveTypeEnum - Issue #75
- uco-observable: Removed observable:WindowsVolumeAttributeEnum - Issue #75

Additions

Class Additions (classes that were added)

- uco-observable: Added new Observation Action class - Issue #157

Property Additions (properties that were added)

- uco-core: added *modifiedTime* property and it's domain assertion - Issue #164

Vocabulary Additions/Changes (vocabularies that were added or modified)

The following vocabularies were added in this release as refactored representations of the corresponding enumeration deletions listed in the Deprecations /Deletions section above. (related Issue #75):

1. vocab:AccountTypeVocab
2. vocab:ActionArgumentNameVocab
3. vocab:ActionNameVocab
4. vocab:ActionRelationshipTypeVocab
5. vocab:ActionStatusTypeVocab
6. vocab:ActionTypeVocab
7. vocab:BitnessVocab
8. vocab:CharacterEncodingVocab
9. vocab:CyberItemRelationshipVocab
10. vocab:CyberItemStateVocab
11. vocab:DiskTypeVocab
12. vocab:EndiannessTypeVocab
13. vocab:HashNameVocab
14. vocab:InvestigationFormVocab
15. vocab:LibraryTypeVocab
16. vocab:MemoryBlockTypeVocab
17. vocab:PartitionTypeVocab
18. vocab:ProcessorArchVocab
19. vocab:RegionalRegistryTypeVocab
20. vocab:RegistryDatatypeVocab
21. vocab:SIMFormVocab
22. vocab:SIMTypeVocab
23. vocab:TaskActionTypeVocab
24. vocab:TaskFlagVocab
25. vocab:TaskPriorityVocab
26. vocab:TaskStatusVocab
27. vocab:ThreadRunningStatusVocab
28. vocab:TimestampPrecisionVocab
29. vocab:TrendVocab
30. vocab:TriggerFrequencyVocab
31. vocab:TriggerTypeVocab
32. vocab:UnixProcessStateVocab
33. vocab:WhoisContactTypeVocab
34. vocab:WhoisDNSSECTypeVocab
35. vocab:WhoisStatusTypeVocab
36. vocab:WindowsDriveTypeVocab
37. vocab:WindowsVolumeAttributeVocab

Annotation Changes

- uco-observable: Corrected typo in the `rdfs:comment` of `processorArchitecture`, "Specifies" - Issue #140
- uco-observable: Corrected two double quotes to single double quotes for *rdfs:comment* strings during a normalization review with `rdf-toolkit`
- uco-observable: removed triple quotes from single-line Turtle strings - Issue #96