# Parthenos Entities Minimal ‘Metadata’ Document

This document offers a specification of the minimal ‘metadata’ that should be collected with regards to the entities referred to in the Parthenos Entities model for the provisioning of the Parthenos Registry. The function of the Parthenos registry is to gather the minimal ‘metadata’ information in order to allow the identification of distinct datasets, software and services and to connect these to the appropriate actors responsible for the generation of maintenance of these objects. The metadata set then is kept as light as possible with an emphasis that all objects represented in the register are traceable.

Precise provenance information would form part of the richer, actual metadata(s) about a data object. This would form part of the general content cloud supported by the Parthenos Architecture and would be accessed by indeces generated for specific ends.

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Document History

|  |  |  |  |
| --- | --- | --- | --- |
| Version/date | Date | Changes/approval | Author/Approved by |
| V 1.0 | 25/5/2016 | Initial version | George, Martin |
| V 1.1 | 2/6/2016 | Identification of potential mandatory elements in certain services | George, Martin |
| V 1.2 | 3/6/2016 | Continued discussion on mandatory elements, add of mandatory column | George, Martin |
| V 1.3 | 7/6/2016 | Edits and considerations concerning curation | George, Martin |
| V 1.5 | 10/6/2016 | Update to align with discussions of Joint WP5/6 meeting in Crete | George |
| V 1.6 | N/A |  |  |
| V 1.7 | N/A |  |  |
| V 1.8 | 30/8/2106 | Aligned to V1.8 of Parthenos Entities Model,  Basic editing of mistakes | George |

## Services

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Label | Man.? | Field Type | Description | CRM Translation | Comment |
| **ID** | Yes | String | The identifier used to indicate the service | PE1->P1->E42 |  |
| **Typology** | Yes | Controlled Vocabulary  (Determines Constraints) | * Hosting service * Digital Hosting Service   Software Hosting Service  Data Hosting Service  Data E-Services  S/W Computing E-Service  S/W Delivery E-Service   * Physical Hosting Service * E Service * Curating Service * Digital Curating Service   Software Curating Service  Curated Software E-Service  Data Curating Service  Curated Data E-Service   * Physical Curating Service | Place in Service IsA hierarchy | n.b. in fact the class will vary depending on the type Controlled Vocabularyed, but the attributes below hold for all instances of PE1 Service class except where if conditions have been introduced. |
| **Title** | Yes | String | The name by which the service is known or referred to | PE1->P1->E41 |  |
| **Description** | No | Long Text | A textual description of the service, brief history, and intended usage.  This textual attribute could also describe the community/users of the service, and its popularity within a community. | PE1->P3->E62 |  |
| **Competence** | Yes | Controlled Vocabulary | The ability of a service to do something successfully: is a relation that connects a *service* with an *activity type* | PE1->p2->E55 |  |
| **Provided by** | Yes | Link  (Actor) | The actor that provides the service,   e.g., for a curating service we keep the curator | PE1->PP2->E39->P1->E41 | N.B. the semantic path will differ based upon our leve of knowledge |
| **Declared Begin/End of operation** | No | Date-Date | The date that the service providers indicates as the beginning and/or ending of the offer of the service | PE1->PP42->E61 |  |
| **Last confirmation** | Yes | Date | The date that it is confirmed that the service still exists | PE1->P4->E52->P81->E61 |  |
| **Date of Registration (w/Parthenos)** | Conditionally |  | The date when registered with Parthenos (acts as at least first confirmation of existence of service… must be running when added). |  | This would actually be meta meta data on the act of registering this very service. Could be implemented as named graph or by rules. |
| **Availability** | No | Controlled Vocabulary | E.g., 24/7, 24/5, on request, unknown, periodic (.e.g. business hours) | PE1->p2->E55 |  |
| **Conditions of use/rights Type** | Yes | Controlled Vocabulary | Indicate the type of conditions that the use of this service are subject to (Open Access, Open Access - required registration, license-based, on request, embargo) | PE1->p104->E30->p2->E55 |  |
| **Conditions of Use / Rights Text** | Yes (Conditionally) | Link  (Document) | Link to the actual text outlinging conditions of use | PE1->p104->E30 | If there are restriction conditions then how to manage must be documented. |
| **Contact Person** | No | Link (Actor) | E.g., the contact person of the actor that provides the service | Follow path of service ‘Provided by’ and switch E39 for E21:  E21->p76->E51 |  |
| **Communication address** | Yes | String | E.g., the contact method for this particular service (regardless of providers address) | Follow path of service provider and then add from E39:  E39->p76->E51 | n.b. E39 is the service provider |

### If Hosting Service

(+Service)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Hosts Object | No | Reverse Link (Object - open) | Indicate the object hosted by the hosting service | PE2->PP4->E70 | If hosting service has objects, display these under hosting service, hierarchically. |

### If Digital Hosting Service

(+Service + Hosting Service)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Hosts Digital Object** | No | Reverse Link  (Object – restrict – digital object) | Indicate the digital object hosted | PE5->PP6->D1 | If hosting service has objects, display these under hosting service, hierarchically. |
| **Preservation Activity Type** | No | Controlled Vocabulary | Indicate the type of preservation activity undertaken on hosted digital object | PE5->P9->**D12**->P2->E55 | Snapshot, Backup, Give Copy |

### If Software Hosting Service

(+Service + Hosting Service + Digital Hosting Service)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Hosts Software Object** | No | Reverese Link  (Object – restrict - Software) | Indicate the software object hosted | PE6->PP7->D14 | If hosting service has objects, display these under hosting service, hierarchically. |

### If Data Hosting Service

(+Service + Hosting Service + Digital Hosting Service)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Hosts Dataset** | No | Reverse Link  (Object – restrict - Dataset) | Indicate the dataset hosted | PE6->PP8->PE18 | If hosting service has objects, display these under hosting service, hierarchically. |

### If E-Service

(+Service)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Online Access Point** | Yes | String | *URL where the service can be accessed by a client application* | PE8->PP28->PE29 |  |
| **Authorization** | Yes (Conditionally) | Controlled Vocabulary | Authentication and authorisation policies (*e.g., OAUTH, SAML)* | PE8->P70i->**E30**->P2->E55”AuthorizationPolicies’ | n.b. end point is E30 Document. But since these documents will all be of same type, this can be recorded this way |
| **Protocol** | Yes | Controlled Vocabulary | Links the service to the access protocol, considered as a form of software, which it invokes  e.g. SOAP/REST | PE8->PP29->D14 |  |
| **Protocol Parameters** | Yes (Conditionally) | Link | Links to the documentation of parameters fo the protocol invoked | PE8->29->D14->p70i->E30  PE8->29->D14->p70i->E30->P2->E55 |  |

### If Curation Service

(+Service)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Curates** | No | Reverse Link  (Object) | Link the curation service to the general object it curates | PE3->PP32->PE32 | If curation service is service for some curated holding, display it. |

### If Digital Curation Service

(+Service + Curation Service)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Curates Digital Holding** | No | Reverse Link  (Object – Physical Holding) | Link the curation service to the volatile digital object that it manages | PE10->PP11->PE20 | If curation service is service for some curated holding, display it. |
| **Aggregates from** |  | Link (Service) | Indicates from which service data is pulled into the digitally curated |  |  |

### If Software Curation Service

(+Service + Curation Service + Digital Curation Service)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Curates Software** | No | Reverse Link  (Object – Volatile Software) | Link the curation service to the volatile software that it manages | PE11->12->D14 | If curation service is service for some curated holding, display it. |

### If Data Curation Service

(+Service + Curation Service + Digital Curation Service)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Curates Volatile Dataset** | No | Reverse Link  (Object – Volatile Dataset) | Link the curation service to the volatile dataset that it manages | PE12->13->PE24 | If curation service is service for some curated holding, display it. |

If Sofware Computing E-Service

(+ E-Services + Software Hosting Services )

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Runs on Request** | Yes | Reverse Link  (Object – restrict - Software) | Indicate the software object the service runs on request | PE13->PP14->D14 |  |

If Software Delivery E-Service

(+E-Services + Software Hosting Services )

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Delivers on Request** | Yes | Reverse Link  (Object – restrict - Software) | Indicate the software object the service delivers on request | PE14->PP15->D14 |  |

### If Data E-Services

(+ E-Services)

If Curated Software E-Service

(+ Data E-Services + Software curation Services)

If Curated Data E-Service

(+ Data E-services + Data curation Services)

## Object

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Label | Man | Field Type | Description | CRM Translation | Comment |
| **ID** | Yes | String | The identifier used to indicate the object | E70->P1->E42 | n.b. in fact the class will vary depending on the type selected, but the attributes below hold for all instances of PE1 Service class except where if conditions have been introduced. |
| **Other IDs**  **& Type & Attributor** | No | String | Additional identifiers given to the object. Type can be recorded in order to indicate kind of ID. The actor who bestowed the ID can also be recorded. | E70->p140i->E13->p141->E42  +  E70->p140i->E13->p141->E42->p2->E55  +E70-p140i->E13->p14->E39 |  |
| **Typology** | Yes | Controlled Vocabulary  (Determines Constraints) | * Physical Object * Digital Object   Dataset  Volatile Dataset  Persistent Dataset  Software  Volatile Software  Persistent Software | Place in IsA starting from E70 Thing |  |
| **Title** | Yes | String | The name by which the object is known or referred to | E70->P1->E41 |  |
| **Description** | No | Long Text | A textual description of the object | E70->P3->E62 |  |

### If Physical Object

(+ Object)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Label |  | Field Type | Description | CRM Translation | Comment |
| **Is or was part of** | No | Reverse Link  (Object – Restrict Curated Holding) | Here we indicate the physical collection of which this physical object had been a part | E70->p46i->E78 |  |

### If Curated Holding

(+Object + Physical Object)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Label |  | Field Type | Description | CRM Translation | Comment |
| **Curated by** | Yes | Link (Service – Restrict Physical Curation Service) | Here we indicate the curation service that is responsible for the maintenance of this physical collection | E78->p147i->E87 |  |
| **Had Curation Plan** | Yes | Link  (Curation Plan) | Here we indicate the curation plan associated to this curated holding. | E78->P147i->E87->PP31->PE28 |  |

### If Digital Object

(+Object)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Label |  | Field Type | Description | CRM Translation | Comment |
|  |  |  |  |  |  |
| Hosted by | Yes | Link (Service – Restrict to Digital Hosting Service) | Here we indicate the digital hosting service responsible for the hosting of this digital object. | D1->PP6i->PE5 |  |
| Is / Was Part of | Yes | Link  (Object – Restrict Digital Object | Here we indicate digital objects of which this digital object has formed part. | D1->P106i-D1 |  |

If Dataset

(+ Object + Digital Object)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Label |  | Field Type | Description | CRM Translation | Comment |
| Hosted by | Yes | Link (Service – Restrict Data Hosting Service) | Here we indicate the data hosting service responsible for the hosting of dataset | PE18->PP8i->PE7 |  |
| Encoding Type | Yes | Controlled Vocabulary | Here we indicate the encoding(s) of the dataset in question | PE18->L11i->D7->P33->E29->P2-E55 |  |
| Schema/Format | No | Link  (Object – Restrict Persistent Software) | Here indicate the schema used to structure the dataset. | PE18->l11i->D7->L23->D14 |  |
| Subject | No | Controlled Vocabulary | Here we indicate the role that the dataset can play in research | PE18->P129->E55 |  |
| Spatiotemporal Coverage | No | Controlled Vocabulary | Here we indicate the geographic scope for which the dataset has relevance. | PE18->E2 |  |
| Created by | Yes | Link  (Actor) | Here we link the dataset to its creator | PE18->L11i->D7->P14->E39 |  |

### If Software

(+ Object + Digital Object)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Label |  | Field Type | Description | CRM Translation | Comment |
| Hosted by | No | Link (Service – Restrict Software Hosting Service) | Here we indicate the software hosting service responsible for the hosting of the software object. | D14->PP7i->PE6 |  |
| Delivered on request by | No | Reverse Link (Service – Restrict S/W Delivery E-Service) | Here we indicate the software delivery e-service capable of delivering the software to a client. | D14->PP15i->PE14 |  |
| Run on Request by | No | Reverse Link (Service – Restrict S/W Computing E-Service) | Here we indicate the software computing e-service capable of delivering the software to a client. | D14->PP14i->PE13 |  |
| Configurations | No | Link (Object – Restrict Digital Object) | Here we indicate all configurations that define the behaviour of the software (RDF schema, #include) |  |  |
| Programming language | No | Controlled Vocabulary | Here we indicate the programming language used in creating the software | D14->L11i->D7->P33->E29 |  |
| Executes processes of type | Yes | Controlled Vocabulary | Here we indicate the kind of process types that the software (typically an algorithm) can execute | D14->P103-> E55 |  |

### If Volatile Digital Object

(+ Object + Digital Object)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Label |  | Field Ty | Description | CRM Translation | Comment |
| Curated by | Yes | Link  (Service – Restrict to Digital Curating Service) | Here we indicate the digital curating service responsible for the curation of this object. | PE20->PP11i->PE10 |  |
| Has Snapshot | No | Reverse Link (Object – Restrict Persistent Digital Object) | Here we indicate the snapshot that gives the identity to a volatile data object. In order for a volatile data object to have proper provenance it must at any time have one official snapshot that is known to the curator of the object. | PE20->PP17->PE19 |  |
| Is Part Of | No | Link (Object – Restrict Digital Object) | Here we can indicate the parts of a volatile data object. A volatile data object can be made up of volatile as much as persistent data objects. If it has as component as volatile data object, this object in turn, in order to have proper provenance must have its own snapshot. | PE20->PP18->D1 |  |
| **Has Curation Plan** | Yes | Link | Link the curation service to the curation plan which it implements | PE3->PP31->PE28 |  |

### If Persistent Digital Object

(+ Object + Digital Object)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Label |  | Field Type | Description | CRM Translation | Comment |
| Is Part Of | No | Link (Object – Restrict Persistent Data Object) | Here we indicate the persistent data object that forms a distinct part of the overall persistent data object in question.  N.B. a persistent data object can have as part any other type of persistent digital object. It cannot have a volatile data object as part. | PE19->PP16->PE19 |  |
| Is Snapshot of | No | Link (Object – Restrict Volatile Data Object) | If the persistent data object stands as the identifying snapshot for some volatile data object, this can be indicated here. | PE19->PP17i->PE20 |  |
| Same as | No | Link (Object – Restrict Persistent Data Object) |  |  |  |
| Compilation Date | Yes | Date | Here we indicate the date when the current encoding was fixed. | PE19->L11i-D7->P4->E52->P81->E61 |  |
| File Size | Yes | Integer | Here we indicate file size in bytes | PE19->p43->**E54**  +  PE19->p43->**E54**->2->E55 | Where dimension type is constant as ‘byte’ |
| Checksum | Yes | Integer | Here we indicate the checksum of the persistent dataset. | PE22->p39i->E16->p40->E54  +  PE19->p39i->E16->p40->E54  ->p2->E55 | Where dimension type is constant as ‘checksum’ |

### If Volatile Dataset

(+Object + Digital Object + Dataset+ Volatile Digital Object)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Label |  | Field Type | Description | CRM Translation | Comment |
| Curated by | Yes | Link (Service – Restrict Data Curating Service) | A link between the volatile dataset object and the data curation service that is responsible for its curation. | PE24->PP13i->PE12 |  |
| Has Snapshot | No | Link (Object – Restrict Persistent Dataset) | Here we link to the dataset which is the snapshot of this volatile dataset. | PE24->PP24->PE22 |  |
| Is Part Of | No | Link (Object – Restrict Digital Object) | Here we link to the parts of this volatile dataset. These parts can be persistent or volatile, dataset or software. | PE24->PP23->PE18 |  |

### If Persistent Dataset

(+Object + Digital Object + Dataset+ Persistent Digital Object)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Label |  | Field Type | Description | CRM Translation | Comment |
| Is Part Of | No | Link (Object – Restrict Persistent Dataset) | Here we indicate all distinct persistent datasets that form part of this dataset (all of which in turn can be documented in their own right). | PE22->PP22->PE22 |  |
| Is Snapshot of | No | Link (Object – Restrict Volatile Dataset) | Here we indicate the volatile dataset of which this persistent dataset was or is a snapshot. | PE22->PP24i->PE24 |  |

### If Volatile Software

(+Object + Digital Object + Software + Volatile Digital Object)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Label |  | Field Type | Description | CRM Translation | Comment |
| Curated by | Yes | Link (Service – Restrict to Software Cura | A link between the volatile software object and the software curation service that is responsible for its curation. | PE23->PP12i->PE11 |  |
| Is Part Of | No | Link (Object – Restrict Software) | Here we link to the distinct parts of the software that can be identified whether also volatile or persistent. | PE23->PP21->D14 |  |
| Has Release | No | Link (Object – Restrict Persistent Software) | Here we link to the official release of the volatile software. | PE23->PP22->PE21 |  |

### If Persistent Software

(+Object + Digital Object + Software + Persistent Digital Object)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Label |  | Field Type | Description | CRM Translation | Comment |
| Is Part Of | No | Link (Object – Restrict Persistent Software) | Here we link the persistent software to its component parts. | PE21->PP19->PE21 |  |
| Is Release of | No | Link (Restrict – Volatile Software) | Here we link to the volatile software of which this persistent software is a release. | PE21->PP22i->PE23 |  |

## Actor

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Label |  | Field Type | Description | CRM Translation | Comment |
| **ID** | Yes | String | The identifier used to indicate the actor | E39->P1->E42 |  |
| **Typology** | Yes | Controlled Vocabulary  (Determines Constraints) | Person  Institution  Team  Research | Place in IsA hierarchy from E39 |  |
| **Appelation** | Yes | String | The name by which the actor is known or referred to | E39>P1->E41 |  |
| **Description** | No | Long Text | A textual description of the actor | E39->P3->E62 |  |
| **Legal Address** | No | String | Here we give the legal address for the actor | E39->p76->E45  +  E39->p76->E45->p2->E55 | Where type is a constant “Legal Address” |
| **Mailing Address** | No | String | Here we give the mailing address for the actor | E39->p76->E45  +  E39->p76->E45->p2->E55 | Where type is a constant “Legal Address” |
| **Contact Person** | No | Link (Actor – Restrict Person) | Here we link to the designated contact person for this actor. | E39->PP27->E39 |  |
| **Phone** | No | String |  | E39->p76->E51  +  E39->p76->E51-p2->E55 | Where type is constant ‘Phone’ |
| **Email** | No | String |  | E39->p76->E51  +  E39->p76->E51-p2->E55 | Where type is constant ‘email’ |
| **Provides Service** | No | Reverse Link Link (Service) | Here we indicate the services the actor provides | E39->PP2i->PE1 |  |
| **Requests Service** | No | Reverse Link (Service) | Here we indicate the services the actor requests. | E39->PP3i->PE1 |  |

If Team

(+Actor)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Label |  | Field Type | Description | CRM Translation | Comment |
| Legal Statuses | Yes | Controlled Vocabulary | Team or Department | E74->p2->E55 |  |
| Beginning of Existence | No | Date | Here we indicate when the team/department /institution came into existence | E74->P95i->E66->P4->E52 |  |
| End of Existence | No | Date | Here we indicate when the team/department /institution ceased existing | E74->P99i->E68->P4->E52 |  |
| Merged with | No | Link (Actor – Restrict Institution) | Here we indicate an team/department /institution with which an team/department /institution merged. |  |  |
| Merged Date | No | Date | Here we indicate the date of the merge event |  |  |
| Is Member of | No | Link (Actor – Restrict Team) | Here we indicate any membership which the team/department /institution might have with a team | E74->P143->E85->P144->E74 |  |
| Date of Joining Team | No | Date | Here we indicate when an team/department /institution joined a team/department /institution. | E74->P143->E85->p4->E52 |  |
| Is no longer member of | No | Link (Actor – Restrict Team) | Here we indicate what team/department /institution was left. | E74->p145i->E86->P146->E74 |  |
| Date of Leaving | No | Date | Here we indicate when an team/department /institution left a team/department /institution. | E74->p145i->E86->PP->E52 |  |
| Has Individual Member | No | Link (Actor – Restrict Person) | Here we indicate individual members of a team/department/institution. | E74->p107->E39 |  |

If Institution

(+actor+team)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Label |  | Field Type | Description | CRM Translation | Comment |
| Legal Statuses | Yes | Controlled Vocabulary | Choose from  Public Body  Non-Profit  International Organization  Research Organization  Legal Person | E40->p2->E55 |  |

If Research Infrastructure

(+actor+team)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Label |  | Field Type | Description | CRM Translation | Comment |
| Maintains | Yes | Link (Services – Restrict Project) | Here we indicate the project that the RI is responsible for maintaining. | PE25->PP25->PE26 |  |

### If Person

(+Actor)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Label |  | Field Type | Description | CRM Translation | Comment |
| Is Member of team | Yes | Link (Actor – Restrict Team) | Here we indicate the team of which an individual person is a member | E21->P143->E85->P144->E74 |  |
| Member Since | No | Date | Here we indicate when the individual joined the team as a date. | E21->P143->E85->p4->E52 |  |
| Left Team | No | Link (Actor – Restrict Team) | Here we indicate the team from which an individual left. | E21->p145i->E86->P146->E74 |  |
| Left Team on Date | No |  | Here we indicate the date of the departure from the team. | E21->p145i->E86->PP->E52 |  |
| Is Member of institution | No | Link (Ator – Restrict Institution) | Here we indicate the insitution of which an individual person is an employee. | E21->P143->E85->P144->E40 |  |
| Member Since | No | Date | Here we indicate the date from which the individual isa memerb of the insitution. | E21->P143->E85->p4->E52 |  |
| Left Institiution | No | Link (Ator – Restrict Institution) | Here we indicate the institutino from which an individual ceased to be a member | E21->p145i->E86->P146->E40 |  |
| Left Institution on Date | No | Date | Here we indicate the date upon which the individual ceased to be a member of the institution. | E21->p145i->E86->PP->E52 |  |