

---

Cost

---

September 2, 2019

<b>1 Cost</b>	<b>1</b>
<b>2 Module Documentation</b>	<b>3</b>
2.1 Entities	3
2.1.0.1 ogit/Organization	3
2.1.0.2 ogit/Automation/MARSNode	4
2.1.0.3 ogit/Cost/PlanningTemplate	6
2.1.0.4 ogit/Cost/CostDistribution	7
2.1.0.5 ogit/Person	7
2.1.0.6 ogit/Cost/Budget	8
2.1.0.7 ogit/Cost/CostElement	8
2.1.0.8 ogit/Automation/MARSNodeTemplate	9
2.1.0.9 ogit/Cost/PlanningParameter	10
2.1.0.10 ogit/ServiceManagement/Offering	10
2.1.0.11 ogit/Automation/MARSModelTemplate	11
2.1.0.12 ogit/Asset	11
2.1.0.13 ogit/Parameter	12
2.2 Verbs	13
2.2.0.1 ogit/contains	13
2.2.0.2 ogit/specifies	13
2.2.0.3 ogit/covers	13
2.2.0.4 ogit/describes	14
2.2.0.5 ogit/contributes	14
2.2.0.6 ogit/associates	14
2.2.0.7 ogit/uses	15
2.2.0.8 ogit/plans	15
2.2.0.9 ogit/assumes	15
2.3 Attributes	16
2.3.0.1 ogit/Automation/serviceType	16
2.3.0.2 ogit/ServiceManagement/requirementId	16
2.3.0.3 ogit/Automation/serialNumber	16
2.3.0.4 ogit/Automation/servletName	17
2.3.0.5 ogit/Automation/cpuCoreCount	17
2.3.0.6 ogit/Automation/serviceId	17
2.3.0.7 ogit/manufacture	18
2.3.0.8 ogit/currency	18
2.3.0.9 ogit/category	18
2.3.0.10 ogit/ServiceManagement/isRequired	19
2.3.0.11 ogit/Automation/osVersion	19
2.3.0.12 ogit/endOfWarranty	19
2.3.0.13 ogit/postalCode	20
2.3.0.14 ogit/Automation/buildType	20

2.3.0.15 ogit/Automation/cpuManufacturer . . . . .	20
2.3.0.16 ogit/Automation/virtualMachineName . . . . .	21
2.3.0.17 ogit/email . . . . .	21
2.3.0.18 ogit/Automation/moveToProductionAt . . . . .	21
2.3.0.19 ogit/Automation/osServicePack . . . . .	22
2.3.0.20 ogit/alternativeName . . . . .	22
2.3.0.21 ogit/Automation/portNumberListener . . . . .	22
2.3.0.22 ogit/function . . . . .	23
2.3.0.23 ogit/Automation/memory . . . . .	23
2.3.0.24 ogit/Automation/companyName . . . . .	23
2.3.0.25 ogit/country . . . . .	24
2.3.0.26 ogit/businessCategory . . . . .	24
2.3.0.27 ogit/Automation/middlewareType . . . . .	24
2.3.0.28 ogit/Automation/serviceName . . . . .	25
2.3.0.29 ogit/Automation/licenseAvailability . . . . .	25
2.3.0.30 ogit/ServiceManagement/granularity . . . . .	25
2.3.0.31 ogit/notification . . . . .	26
2.3.0.32 ogit/sourceId . . . . .	26
2.3.0.33 ogit/uri . . . . .	26
2.3.0.34 ogit/Automation/cpuCount . . . . .	27
2.3.0.35 ogit/Automation/databaseSchema . . . . .	27
2.3.0.36 ogit/mobilePhone . . . . .	27
2.3.0.37 ogit/Automation/additionalMacAddress . . . . .	28
2.3.0.38 ogit/connectorId . . . . .	28
2.3.0.39 ogit/Automation/dataClassification . . . . .	28
2.3.0.40 ogit/Automation/firmwareVersion . . . . .	29
2.3.0.41 ogit/ipAddress . . . . .	29
2.3.0.42 ogit/unit . . . . .	29
2.3.0.43 ogit/Automation/installCount . . . . .	30
2.3.0.44 ogit/Automation/marsNodeFormalRepresentation . . . . .	30
2.3.0.45 ogit/city . . . . .	30
2.3.0.46 ogit/Automation/systemClass . . . . .	31
2.3.0.47 ogit/Automation/diskCount . . . . .	31
2.3.0.48 ogit/status . . . . .	31
2.3.0.49 ogit/Automation/domain . . . . .	32
2.3.0.50 ogit/Automation/lifecycle . . . . .	32
2.3.0.51 ogit/lastName . . . . .	32
2.3.0.52 ogit/Automation/cpuModel . . . . .	33
2.3.0.53 ogit/Automation/buildName . . . . .	33
2.3.0.54 ogit/Automation/appInstanceType . . . . .	33
2.3.0.55 ogit/modificationTime . . . . .	34
2.3.0.56 ogit/middleName . . . . .	34

---

2.3.0.57 ogit/Automation/diskSpace . . . . .	34
2.3.0.58 ogit/streetAddress . . . . .	35
2.3.0.59 ogit/serialNumber . . . . .	35
2.3.0.60 ogit/firstName . . . . .	35
2.3.0.61 ogit/macAddress . . . . .	36
2.3.0.62 ogit/Automation/osName . . . . .	36
2.3.0.63 ogit/title . . . . .	36
2.3.0.64 ogit/Automation/appServer . . . . .	37
2.3.0.65 ogit/lengthOfReportingPeriod . . . . .	37
2.3.0.66 ogit/Automation/deployStatus . . . . .	37
2.3.0.67 ogit/Automation/isDeployed . . . . .	38
2.3.0.68 ogit/name . . . . .	38
2.3.0.69 ogit/Automation/software . . . . .	38
2.3.0.70 ogit/description . . . . .	39
2.3.0.71 ogit/Automation/host . . . . .	39
2.3.0.72 ogit/Automation/appInfrastructureType . . . . .	39
2.3.0.73 ogit/Automation/virtualSystemName . . . . .	40
2.3.0.74 ogit/expirationDate . . . . .	40
2.3.0.75 ogit/officePhone . . . . .	40
2.3.0.76 ogit/phone . . . . .	41
2.3.0.77 ogit/Automation/osLicense . . . . .	41
2.3.0.78 ogit/fax . . . . .	41
2.3.0.79 ogit/Automation/databaseServer . . . . .	42
2.3.0.80 ogit/Automation/portNumber . . . . .	42
2.3.0.81 ogit/Automation/webServer . . . . .	42
2.3.0.82 ogit/Automation/softwareKey . . . . .	43
2.3.0.83 ogit/Automation/installPath . . . . .	43
2.3.0.84 ogit/Automation/licenseName . . . . .	43
2.3.0.85 ogit/Automation/contextPath . . . . .	44
2.3.0.86 ogit/Automation/cpuSpeed . . . . .	44
2.3.0.87 ogit/otherPhone . . . . .	44
2.3.0.88 ogit/isMutable . . . . .	45
2.3.0.89 ogit/Automation/servletClass . . . . .	45
2.3.0.90 ogit/Datacenter/rackUnit . . . . .	45
2.3.0.91 ogit/ServiceManagement/allowedForNewBusiness . . . . .	46
2.3.0.92 ogit/Automation/firewallStatus . . . . .	46
2.3.0.93 ogit/capacityAvailable . . . . .	46
2.3.0.94 ogit/Automation/exchangeRate . . . . .	47
2.3.0.95 ogit/Automation/patchNumber . . . . .	47
2.3.0.96 ogit/Automation/cpuType . . . . .	47
2.3.0.97 ogit/Automation/dataPrivacy . . . . .	48
2.3.0.98 ogit/webPage . . . . .	48

---

2.3.0.99 ogit/Automation/objectIdentifier . . . . .	48
2.3.0.100 ogit/Automation/fqdn . . . . .	49
2.3.0.101 ogit/Automation/osKey . . . . .	49
2.3.0.102 ogit/Automation/brand . . . . .	49
2.3.0.103 ogit/Automation/licenseType . . . . .	50
2.3.0.104 ogit/market . . . . .	50
2.3.0.105 ogit/Automation/virtualSystemType . . . . .	50
2.3.0.106 ogit/Automation/osManufacturer . . . . .	51
2.3.0.107 ogit/id . . . . .	51
2.3.0.108 ogit/creationTime . . . . .	51
2.3.0.109 ogit/Automation/adminUrl . . . . .	52
2.3.0.110 ogit/Automation/marsNodeType . . . . .	52
2.3.0.111 ogit/Automation/basicConfigId . . . . .	52
2.3.0.112 ogit/Automation/serviceStatus . . . . .	53
2.3.0.113 ogit/values . . . . .	53
2.3.0.114 ogit/validFrom . . . . .	53
2.3.0.115 ogit/Automation/systemType . . . . .	54
2.3.0.116 ogit/Automation/tcpPort . . . . .	54
2.3.0.117 ogit/position . . . . .	54
2.3.0.118 ogit/Automation/projectName . . . . .	54

# Chapter 1

## Cost

All elements for the cost model are in the Cost NTO and can be found in OGIT under „ogit/Cost“.

The cost model defines the cost structure of a vendor through a hierarchy of cost elements.

Planning templates describe assumptions about how many instances of a certain service with a certain parameterization the vendor will have to operate. Applying a price function to the cost model yields the price model.

### Cost element for a Service

There are three levels of cost elements:

- Top level, e.g. „Microsoft for MicProject in EU“
- Middle level, e.g. „OS Hosting“, „CPU“, „Memory“
- Bottom level, e.g. „HR“, „Licensing“, „Housing“, „Depreciation“

Between the different levels, for each cost element there could be two types of edges:

- Incoming
- outgoing

Each type of edge could have two types of connections:

- consistsOf
- contributesTo

A service, e.g. DBHosting has associated to it different types of costs. Let's call each one of them a cost element.

Each cost element could have an incoming and an outgoing edge, which connects it to another cost element and contains its weight indicating how much it contributes/consists in relation to another cost element.

E.g.: from the picture below we can understand that the CPU cost is consisting in 30% of HR cost. 5% of the HR cost contribute to the CPU costs.

Since currently in OGIT there are no edges with weights, the following approach to represent it through entities was taken:

---

## Cost Model Ontology

Each service offering is to be offered for a service with attributes defined for certain values or ranges. E.g.: price defined for Memory of size 14188 – 1572864.

Within one order, it could be specified the ordering of a service with attributes containing the concrete values of a range.

An implementation template consists of some interconnected MARS-Nodes.

Together with the values specified by the offering and the order it becomes a concrete implementation.

A *Planning Template* is an estimated planning of cost elements referring to:

- A. an Implementation Template,
- B. Planning Parameter with estimated average parameters for an order and concrete value of a parameter for an Offering and the planned number of service instances (volume attribute of entity PlanningTemplate.
- C. A PlanningTemplate will consist of a recursive set of sub-templates, connected through the edge has, where each one of them will represent a service.

As there could be some services that don't have any parameters, the additional edge plansCostFor from Planning↔Template to Service is required.

A Planning Parameter will contain a concrete value of a Parameter and the statistics derived from the expected distribution as attributes.

## Chapter 2

# Module Documentation

## 2.1 Entities

### 2.1.0.1 ogit/Organization

An identity that represents an organization, company, or some other grouping of Person objects. Entities of this type should be created with a predefined ID. Those IDs should be named like a domain name, i.e. a concatenation of some strings separated with a dot. If organization data is created from a LDAP then a mapping like "cn=John Doe,dc=example,dc=com" => "john\_doe.example.com" should be employed. The ogit/function attribute should be used to tell what kind of grouping an entity of type Organization is: company, department, group, ...

- id: <http://www.purl.org/ogit/Organization>
- valid-from: Thu May 21 00:00:00 UTC 2015
- creator: Peter Larem
- scope: SGO
- parent: ogit/Node

#### attributes

- mandatory:
  - [ogit/name](#)
- optional:
  - [ogit/businessCategory](#)
  - [ogit/city](#)
  - [ogit/country](#)
  - [ogit/description](#)
  - [ogit/email](#)
  - [ogit/function](#)
  - [ogit/phone](#)
  - [ogit/postalCode](#)
  - [ogit/sourceId](#)
  - [ogit/status](#)
  - [ogit/streetAddress](#)
  - [ogit/webPage](#)



## outgoing edges

- [ogit/plans](#) => [ogit/Cost/Budget](#)

## 2.1.0.2 ogit/Automation/MARSNode

Using this entity type to represent MARS nodes is deprecated. New applications should prefer the entity types from ogit/MARS NTO.

IT Objects will be represented in MARS Modell with MARS nodes. The MARS model builds upon four basic types of objects with a single type of relationship. Basically the objects which are in fact called "nodes" represent both views - the business perspective and the technical view. The technical components are modeled in the machine and software layers while the application and resource layers describe the business view of the IT environment.

- id: <http://www.purl.org/ogit/Automation/MARSNode>
- valid-from: Thu May 21 00:00:00 UTC 2015
- creator: Peter Larem
- scope: NTO
- parent: ogit/Node

## attributes

- optional:
  - [ogit/Automation/additionalMacAddress](#)
  - [ogit/Automation/adminUrl](#)
  - [ogit/Automation/appInfrastructureType](#)
  - [ogit/Automation/appInstanceType](#)
  - [ogit/Automation/appServer](#)
  - [ogit/Automation/basicConfigId](#)
  - [ogit/Automation/brand](#)
  - [ogit/Automation/buildName](#)
  - [ogit/Automation/buildType](#)
  - [ogit/Automation/companyName](#)
  - [ogit/Automation/contextPath](#)
  - [ogit/Automation/cpuCoreCount](#)
  - [ogit/Automation/cpuCount](#)
  - [ogit/Automation/cpuManufacturer](#)
  - [ogit/Automation/cpuModel](#)
  - [ogit/Automation/cpuSpeed](#)
  - [ogit/Automation/cpuType](#)
  - [ogit/Automation/dataClassification](#)
  - [ogit/Automation/dataPrivacy](#)
  - [ogit/Automation/databaseSchema](#)
  - [ogit/Automation/databaseServer](#)
  - [ogit/Automation/deployStatus](#)

- `ogit/Automation/diskCount`
- `ogit/Automation/diskSpace`
- `ogit/Automation/domain`
- `ogit/Automation/exchangeRate`
- `ogit/Automation/firewallStatus`
- `ogit/Automation/firmwareVersion`
- `ogit/Automation/fqdn`
- `ogit/Automation/host`
- `ogit/Automation/installCount`
- `ogit/Automation/installPath`
- `ogit/Automation/isDeployed`
- `ogit/Automation/licenseAvailability`
- `ogit/Automation/licenseName`
- `ogit/Automation/licenseType`
- `ogit/Automation/lifecycle`
- `ogit/Automation/marsNodeFormalRepresentation`
- `ogit/Automation/marsNodeType`
- `ogit/Automation/memory`
- `ogit/Automation/middlewareType`
- `ogit/Automation/moveToProductionAt`
- `ogit/Automation/objectIdentifier`
- `ogit/Automation/osKey`
- `ogit/Automation/osLicense`
- `ogit/Automation/osManufacturer`
- `ogit/Automation/osName`
- `ogit/Automation/osServicePack`
- `ogit/Automation/osVersion`
- `ogit/Automation/patchNumber`
- `ogit/Automation/portNumber`
- `ogit/Automation/portNumberListener`
- `ogit/Automation/projectName`
- `ogit/Automation/serialNumber`
- `ogit/Automation/serviceId`
- `ogit/Automation/serviceName`
- `ogit/Automation/serviceStatus`
- `ogit/Automation/serviceType`
- `ogit/Automation/servletClass`
- `ogit/Automation/servletName`
- `ogit/Automation/software`
- `ogit/Automation/softwareKey`
- `ogit/Automation/systemClass`
- `ogit/Automation/systemType`
- `ogit/Automation/tcpPort`
- `ogit/Automation/virtualMachineName`
- `ogit/Automation/virtualSystemName`

- [ogit/Automation/virtualSystemType](#)
- [ogit/Automation/webServer](#)
- [ogit/Datacenter/rackUnit](#)
- [ogit/connectorId](#)
- [ogit/creationTime](#)
- [ogit/endOfWarranty](#)
- [ogit/id](#)
- [ogit/ipAddress](#)
- [ogit/macAddress](#)
- [ogit/manufacturer](#)
- [ogit/modificationTime](#)
- [ogit/name](#)
- [ogit/serialNumber](#)

#### outgoing edges

- [ogit/associates](#) => [ogit/Cost/CostElement](#)

#### 2.1.0.3 [ogit/Cost/PlanningTemplate](#)

A Planning Template is an estimated planning of cost elements referring to an Implementation Template and a Planning Parameter. It will consist of a recursive set of sub-templates, connected through an edge, where each one of them will represent a service. For a general overview: see the NTO description on github.

- id: <http://www.purl.org/ogit/Cost/PlanningTemplate>
- valid-from: Thu May 21 00:00:00 UTC 2015
- creator: Peter Larem
- scope: NTO
- parent: [ogit/Node](#)

#### incoming edges

- [ogit/assumes](#) <= [ogit/Cost/PlanningParameter](#)
- [ogit/contains](#) <= [ogit/Cost/PlanningTemplate](#)

#### outgoing edges

- [ogit/contains](#) => [ogit/Cost/PlanningTemplate](#)
- [ogit/plans](#) => [ogit/Automation/MARSModelTemplate](#)
- [ogit/plans](#) => [ogit/Cost/CostElement](#)

#### 2.1.0.4 ogit/Cost/CostDistribution

Auxiliary structure to express the influence of CostElements on one another. For more detailed explanation please check definition of the entity ogit/CostModel/CostElement and for a general overview: see the NTO description on github.

- id: <http://www.purl.org/ogit/Cost/CostDistribution>
- valid-from: Thu May 21 00:00:00 UTC 2015
- creator: Peter Larem
- scope: NTO
- parent: ogit/Node

##### incoming edges

- [ogit/contributes](#) <= [ogit/Cost/CostElement](#)

##### outgoing edges

- [ogit/contains](#) => [ogit/Cost/CostElement](#)

#### 2.1.0.5 ogit/Person

A Person represents a human identity.

- id: <http://www.purl.org/ogit/Person>
- valid-from: Thu May 21 00:00:00 UTC 2015
- creator: Peter Larem
- scope: SGO
- parent: ogit/Node

##### attributes

- optional:
  - [ogit/alternativeName](#)
  - [ogit/email](#)
  - [ogit/fax](#)
  - [ogit/firstName](#)
  - [ogit/lastName](#)
  - [ogit/middleName](#)
  - [ogit/mobilePhone](#)
  - [ogit/notification](#)
  - [ogit/officePhone](#)
  - [ogit/otherPhone](#)
  - [ogit/position](#)
  - [ogit/sourceId](#)
  - [ogit/status](#)
  - [ogit/title](#)
  - [ogit/webPage](#)

## outgoing edges

- [ogit/uses](#) => [ogit/Cost/Budget](#)

2.1.0.6 [ogit/Cost/Budget](#)

The budget covers the CostElement. It is a list of all the money an Organisation or Business Unit plans to receive, and plans to pay out, over a specified period of time. For a general overview: see the NTO description on github.

- id: <http://www.purl.org/ogit/Cost/Budget>
- valid-from: Thu May 21 00:00:00 UTC 2015
- creator: Peter Larem
- scope: NTO
- parent: ogit/Node

## incoming edges

- [ogit/plans](#) <= [ogit/Organization](#)
- [ogit/uses](#) <= [ogit/Person](#)

## outgoing edges

- [ogit/covers](#) => [ogit/Cost/CostElement](#)

2.1.0.7 [ogit/Cost/CostElement](#)

The cost element is a type of cost for an activity, an ordered service or a business unit or budget. There are 3 levels of cost elements: Top Level, Middle Level, Bottom Level. Between the different levels, for each cost element there could be two types of edges: Incoming and Outgoing. Each type of edge could have two types of connections↔: consistsOf and contributesTo. E.g. a cost element CPU consists in 30% of a HR cost element. The HR cost element contributes in 40% to the cost of the CPU cost element. This percentage values will then be saved in the entity Distribution, which will be connected to the cost element. For a general overview: see the NTO description on github.

- id: <http://www.purl.org/ogit/Cost/CostElement>
- valid-from: Thu May 21 00:00:00 UTC 2015
- creator: Peter Larem
- scope: NTO
- parent: ogit/Node

## incoming edges

- [ogit/associates](#) <= [ogit/Automation/MARSNode](#)
- [ogit/associates](#) <= [ogit/Automation/MARSNodeTemplate](#)
- [ogit/associates](#) <= [ogit/Asset](#)
- [ogit/contains](#) <= [ogit/Cost/CostDistribution](#)
- [ogit/contains](#) <= [ogit/ServiceManagement/Offering](#)
- [ogit/covers](#) <= [ogit/Cost/Budget](#)
- [ogit/describes](#) <= [ogit/Parameter](#)
- [ogit/plans](#) <= [ogit/Cost/PlanningTemplate](#)

## outgoing edges

- [ogit/contributes](#) => [ogit/Cost/CostDistribution](#)

2.1.0.8 [ogit/Automation/MARSNodeTemplate](#)

Entity similar to MARSNode but used to create [ogit/Automation/MARSNodeTemplate](#)'s, which are used to define a vendor implementation template of an ordered service offering and to enable definition of cost elements ([ogit/Cost/CostElement](#)) attached to it. [Automation/MARSNode](#) can not be reused for template reasons.

- id: <http://www.purl.org/ogit/Automation/MARSNodeTemplate>
- valid-from: Thu May 21 00:00:00 UTC 2015
- creator: Peter Larem
- scope: NTO
- parent: [ogit/Node](#)

## attributes

- mandatory:
  - [ogit/Automation/marsNodeFormalRepresentation](#)
- optional:
  - [ogit/Automation/marsNodeType](#)
  - [ogit/status](#)

## outgoing edges

- [ogit/associates](#) => [ogit/Cost/CostElement](#)

### 2.1.0.9 ogit/Cost/PlanningParameter

A Planning Parameter describes a Planning Template. It will contain a concrete value of a Parameter and the statistics derived from the expected distribution as attributes. For a general overview: see the NTO description on github.

- id: <http://www.purl.org/ogit/Cost/PlanningParameter>
- valid-from: Thu May 21 00:00:00 UTC 2015
- creator: Peter Larem
- scope: NTO
- parent: ogit/Node

#### outgoing edges

- [ogit/assumes](#) => [ogit/Cost/PlanningTemplate](#)
- [ogit/specifies](#) => [ogit/Parameter](#)

### 2.1.0.10 ogit/ServiceManagement/Offering

This is a concrete offering from a vendor including one or more combined services from a catalog/collection/offering book.

- id: <http://www.purl.org/ogit/ServiceManagement/Offering>
- valid-from: Thu May 21 00:00:00 UTC 2015
- creator: Peter Larem
- scope: NTO
- parent: ogit/Node

#### attributes

- mandatory:
  - [ogit/id](#)
  - [ogit/name](#)
- optional:
  - [ogit/ServiceManagement/allowedForNewBusiness](#)
  - [ogit/capacityAvailable](#)
  - [ogit/category](#)
  - [ogit/currency](#)
  - [ogit/description](#)
  - [ogit/expirationDate](#)
  - [ogit/market](#)
  - [ogit/serialNumber](#)
  - [ogit/validFrom](#)

## outgoing edges

- [ogit/contains](#) => [ogit/Cost/CostElement](#)

2.1.0.11 [ogit/Automation/MARSModelTemplate](#)

Represents a set of interconnected MARSNodes, which will be used to define a vendor implementation template of an ordered service offering.

- id: <http://www.purl.org/ogit/Automation/MARSModelTemplate>
- valid-from: Thu May 21 00:00:00 UTC 2015
- creator: Peter Larem
- scope: NTO
- parent: [ogit/Node](#)

## attributes

- mandatory:
  - [ogit/name](#)
- optional:
  - [ogit/description](#)

## incoming edges

- [ogit/plans](#) <= [ogit/Cost/PlanningTemplate](#)

2.1.0.12 [ogit/Asset](#)

Assets represent a physical hold of a value and are situated in a location. Assets could correspond to one or more [ogit/Automation/MARSNode](#)'s and can be physical or virtual. Assets of a Service Provider include anything that could contribute to the delivery of a Service. Assets can have a type, for example: Management, Organisation, Process, Knowledge, People, Information, Applications, Infrastructure, Financial Capital.

- id: <http://www.purl.org/ogit/Asset>
- valid-from: Thu May 21 00:00:00 UTC 2015
- creator: Peter Larem
- scope: SGO
- parent: [ogit/Node](#)

## attributes

- optional:
  - [ogit/id](#)
  - [ogit/name](#)



## outgoing edges

- [ogit/associates](#) => [ogit/Cost/CostElement](#)

2.1.0.13 [ogit/Parameter](#)

Defines a parameter of an entity, for example: service, action, ticket, sla, etc.

- id: <http://www.purl.org/ogit/Parameter>
- valid-from: Thu May 21 00:00:00 UTC 2015
- creator: Peter Larem
- scope: SGO
- parent: [ogit/Node](#)

## attributes

- mandatory:
  - [ogit/name](#)
- optional:
  - [ogit/ServiceManagement/granularity](#)
  - [ogit/ServiceManagement/isRequired](#)
  - [ogit/ServiceManagement/requirementId](#)
  - [ogit/category](#)
  - [ogit/description](#)
  - [ogit/isMutable](#)
  - [ogit/lengthOfReportingPeriod](#)
  - [ogit/unit](#)
  - [ogit/uri](#)
  - [ogit/values](#)

## incoming edges

- [ogit/specifies](#) <= [ogit/Cost/PlanningParameter](#)

## outgoing edges

- [ogit/describes](#) => [ogit/Cost/CostElement](#)

## 2.2 Verbs

### 2.2.0.1 ogit/contains

This relationship indicates that something is part of something else. see also "includes"

- id: <http://www.purl.org/ogit/contains>
- valid-from: Thu May 21 00:00:00 UTC 2015
- creator: Peter Larem

#### Allowed Connection

- [ogit/Cost/CostDistribution](#) => [ogit/Cost/CostElement](#)
- [ogit/Cost/PlanningTemplate](#) => [ogit/Cost/PlanningTemplate](#)
- [ogit/ServiceManagement/Offering](#) => [ogit/Cost/CostElement](#)

### 2.2.0.2 ogit/specifies

One entity "specifies" another.

- id: <http://www.purl.org/ogit/specifies>
- valid-from: Thu May 21 00:00:00 UTC 2015
- creator: Peter Larem

#### Allowed Connection

- [ogit/Cost/PlanningParameter](#) => [ogit/Parameter](#)

### 2.2.0.3 ogit/covers

Verb showing which entity covers another entity.

- id: <http://www.purl.org/ogit/covers>
- valid-from: Thu May 21 00:00:00 UTC 2015
- creator: Peter Larem

#### Allowed Connection

- [ogit/Cost/Budget](#) => [ogit/Cost/CostElement](#)

#### 2.2.0.4 ogit/describes

This relationship allows to associate additional information with an entity. The "described" node can have many "describing" nodes.

- id: <http://www.purl.org/ogit/describes>
- valid-from: Thu May 21 00:00:00 UTC 2015
- creator: Peter Larem

##### Allowed Connection

- [ogit/Parameter](#) => [ogit/Cost/CostElement](#)

#### 2.2.0.5 ogit/contributes

Verb associates which entity contributes to another, for example could be used to express a distribution for the percentage of a cost element, which contributes to another cost element.

- id: <http://www.purl.org/ogit/contributes>
- valid-from: Thu May 21 00:00:00 UTC 2015
- creator: Peter Larem

##### Allowed Connection

- [ogit/Cost/CostElement](#) => [ogit/Cost/CostDistribution](#)

#### 2.2.0.6 ogit/associates

Verb indicating if an entity associates with another entity.

- id: <http://www.purl.org/ogit/associates>
- valid-from: Thu May 21 00:00:00 UTC 2015
- creator: Peter Larem

##### Allowed Connection

- [ogit/Automation/MARSNode](#) => [ogit/Cost/CostElement](#)
- [ogit/Automation/MARSNodeTemplate](#) => [ogit/Cost/CostElement](#)
- [ogit/Asset](#) => [ogit/Cost/CostElement](#)

### 2.2.0.7 ogit/uses

This relationship indicates that some entity is used by some other.

- id: <http://www.purl.org/ogit/uses>
- valid-from: Thu May 21 00:00:00 UTC 2015
- creator: Peter Larem

#### Allowed Connection

- [ogit/Person](#) => [ogit/Cost/Budget](#)

### 2.2.0.8 ogit/plans

Verb showing how one entity plans/predicts on the content of another entity

- id: <http://www.purl.org/ogit/plans>
- valid-from: Thu May 21 00:00:00 UTC 2015
- creator: Peter Larem

#### Allowed Connection

- [ogit/Cost/PlanningTemplate](#) => [ogit/Automation/MARSModelTemplate](#)
- [ogit/Cost/PlanningTemplate](#) => [ogit/Cost/CostElement](#)
- [ogit/Organization](#) => [ogit/Cost/Budget](#)

### 2.2.0.9 ogit/assumes

verb which allows to connect the planning parameters to a planning template

- id: <http://www.purl.org/ogit/assumes>
- valid-from: Thu May 21 00:00:00 UTC 2015
- creator: Peter Larem

#### Allowed Connection

- [ogit/Cost/PlanningParameter](#) => [ogit/Cost/PlanningTemplate](#)

## 2.3 Attributes

### 2.3.0.1 ogit/Automation/serviceType

Contains the Type of a service.

- id: <http://www.purl.org/ogit/Automation/serviceType>
- valid-from: Fri Jul 24 00:00:00 UTC 2015
- creator: Aymen Ayoub

used

- optional:
  - [ogit/Automation/MARSNode](#)

### 2.3.0.2 ogit/ServiceManagement/requirementId

IDs of the corresponding requirements that lead to the entity creation.

- id: <http://www.purl.org/ogit/ServiceManagement/requirementId>
- valid-from: Thu May 21 00:00:00 UTC 2015
- creator: Peter Larem

used

- optional:
  - [ogit/Parameter](#)

### 2.3.0.3 ogit/Automation/serialNumber

Contains a the serial number of a device/component.

- id: <http://www.purl.org/ogit/Automation/serialNumber>
- valid-from: Fri Jul 24 00:00:00 UTC 2015
- creator: Aymen Ayoub

used

- optional:
  - [ogit/Automation/MARSNode](#)

#### 2.3.0.4 ogit/Automation/servletName

Contains the name if the servlet.

- id: <http://www.purl.org/ogit/Automation/servletName>
- valid-from: Fri Jul 24 00:00:00 UTC 2015
- creator: Aymen Ayoub

used

- optional:
  - [ogit/Automation/MARSNode](#)

#### 2.3.0.5 ogit/Automation/cpuCoreCount

Contains the number of cpu cores.

- id: <http://www.purl.org/ogit/Automation/cpuCoreCount>
- valid-from: Mon Jul 27 00:00:00 UTC 2015
- creator: Aymen Ayoub

used

- optional:
  - [ogit/Automation/MARSNode](#)

#### 2.3.0.6 ogit/Automation/serviceId

Contains the Id of the service.

- id: <http://www.purl.org/ogit/Automation/serviceId>
- valid-from: Fri Jul 24 00:00:00 UTC 2015
- creator: Aymen Ayoub

used

- optional:
  - [ogit/Automation/MARSNode](#)

### 2.3.0.7 ogit/manufacture

Manufacturer of a device or component.

- id: <http://www.purl.org/ogit/manufacture>
- valid-from: Mon Jul 27 00:00:00 UTC 2015
- creator: Aymen Ayoub

used

- optional:
  - [ogit/Automation/MARSNode](#)

### 2.3.0.8 ogit/currency

A currency code, possibly according to ISO 4217.

- id: <http://www.purl.org/ogit/currency>
- valid-from: Thu May 21 00:00:00 UTC 2015
- creator: Peter Larem

used

- optional:
  - [ogit/ServiceManagement/Offering](#)

### 2.3.0.9 ogit/category

Used to categorize things.

- id: <http://www.purl.org/ogit/category>
- valid-from: Thu May 21 00:00:00 UTC 2015
- creator: Peter Larem

used

- optional:
  - [ogit/Parameter](#)
  - [ogit/ServiceManagement/Offering](#)

**2.3.0.10** `ogit/ServiceManagement/isRequired`

True if the value has to be specified for the Service to be provisioned. False otherwise.

- id: <http://www.purl.org/ogit/ServiceManagement/isRequired>
- valid-from: Thu May 21 00:00:00 UTC 2015
- creator: Peter Larem

used

- optional:
  - [ogit/Parameter](#)

**2.3.0.11** `ogit/Automation/osVersion`

Version of the Operating System.

- id: <http://www.purl.org/ogit/Automation/osVersion>
- valid-from: Mon Jul 27 00:00:00 UTC 2015
- creator: Philipp Pelchmann

used

- optional:
  - [ogit/Automation/MARSNode](#)

**2.3.0.12** `ogit/endOfWarranty`

End of warranty phase of a component

- id: <http://www.purl.org/ogit/endOfWarranty>
- valid-from: Thu May 21 00:00:00 UTC 2015
- creator: Peter Larem

used

- optional:
  - [ogit/Automation/MARSNode](#)



#### 2.3.0.13 ogit/postalCode

The postal code. For example, 60433.

- id: <http://www.purl.org/ogit/postalCode>
- valid-from: Thu May 21 00:00:00 UTC 2015
- creator: Peter Larem

used

- optional:
  - [ogit/Organization](#)

#### 2.3.0.14 ogit/Automation/buildType

Contains the build type of a component.

- id: <http://www.purl.org/ogit/Automation/buildType>
- valid-from: Wed Aug 19 00:00:00 UTC 2015
- creator: Aymen Ayoub

used

- optional:
  - [ogit/Automation/MARSNode](#)

#### 2.3.0.15 ogit/Automation/cpuManufacturer

Contains the manufacturer of the cpu of a device.

- id: <http://www.purl.org/ogit/Automation/cpuManufacturer>
- valid-from: Mon Jul 27 00:00:00 UTC 2015
- creator: Aymen Ayoub

used

- optional:
  - [ogit/Automation/MARSNode](#)

**2.3.0.16** `ogit/Automation/virtualMachineName`

Contains the name of the virtual machine.

- id: <http://www.purl.org/ogit/Automation/virtualMachineName>
- valid-from: Mon Jul 27 00:00:00 UTC 2015
- creator: Aymen Ayoub

used

- optional:
  - [ogit/Automation/MARSNode](#)

**2.3.0.17** `ogit/email`

An email address.

- id: <http://www.purl.org/ogit/email>
- valid-from: Thu May 21 00:00:00 UTC 2015
- creator: Peter Larem

used

- optional:
  - [ogit/Organization](#)
  - [ogit/Person](#)

**2.3.0.18** `ogit/Automation/moveToProductionAt`

Defines the time when something was actually moved to production. The values can combine date and time with time zone designator according to ISO 8601.

- id: <http://www.purl.org/ogit/Automation/moveToProductionAt>
- valid-from: Mon Jul 27 00:00:00 UTC 2015
- creator: Aymen Ayoub

used

- optional:
  - [ogit/Automation/MARSNode](#)

#### 2.3.0.19 ogit/Automation/osServicePack

Contains the service pack for the operating system.

- id: <http://www.purl.org/ogit/Automation/osServicePack>
- valid-from: Mon Jul 27 00:00:00 UTC 2015
- creator: Philipp Pelchmann

used

- optional:
  - [ogit/Automation/MARSNode](#)

#### 2.3.0.20 ogit/alternativeName

Alternative name of something. In context of a Person this can be the full name or an alias/nick name.

- id: <http://www.purl.org/ogit/alternativeName>
- valid-from: Thu May 21 00:00:00 UTC 2015
- creator: Peter Larem

used

- optional:
  - [ogit/Person](#)

#### 2.3.0.21 ogit/Automation/portNumberListener

Contains a port number listener.

- id: <http://www.purl.org/ogit/Automation/portNumberListener>
- valid-from: Fri Jul 24 00:00:00 UTC 2015
- creator: Aymen Ayoub

used

- optional:
  - [ogit/Automation/MARSNode](#)

## 2.3.0.22 ogit/function

Attribute used to specify a function that some entity does/provides. This is more specific than 'description'. Should contain a short string. At this level of specification it is still a free form string. However, unlike 'description', it is expected to contain some list of fixed values.

- id: <http://www.purl.org/ogit/function>
- valid-from: Thu May 21 00:00:00 UTC 2015
- creator: Peter Larem

used

- optional:
  - [ogit/Organization](#)

## 2.3.0.23 ogit/Automation/memory

Contains the total physical memory (RAM) in MB.

- id: <http://www.purl.org/ogit/Automation/memory>
- valid-from: Mon Jul 27 00:00:00 UTC 2015
- creator: Aymen Ayoub

used

- optional:
  - [ogit/Automation/MARSNode](#)

## 2.3.0.24 ogit/Automation/companyName

Contains the company name of a component.

- id: <http://www.purl.org/ogit/Automation/companyName>
- valid-from: Mon Nov 02 00:00:00 UTC 2015
- creator: Peter Larem

used

- optional:
  - [ogit/Automation/MARSNode](#)

#### 2.3.0.25 ogit/country

Name of a country.

- id: <http://www.purl.org/ogit/country>
- valid-from: Mon Jul 27 00:00:00 UTC 2015
- creator: Philipp Pelchmann

used

- optional:
  - [ogit/Organization](#)

#### 2.3.0.26 ogit/businessCategory

The category of a business.

- id: <http://www.purl.org/ogit/businessCategory>
- valid-from: Mon Jul 27 00:00:00 UTC 2015
- creator: Philipp Pelchmann

used

- optional:
  - [ogit/Organization](#)

#### 2.3.0.27 ogit/Automation/middlewareType

Contains information about the type of middleware. For example it database middleware, application server middleware or a message-oriented middleware.

- id: <http://www.purl.org/ogit/Automation/middlewareType>
- valid-from: Mon Jul 27 00:00:00 UTC 2015
- creator: Aymen Ayoub

used

- optional:
  - [ogit/Automation/MARSNode](#)

**2.3.0.28** `ogit/Automation/serviceName`

Contains the name of a service.

- id: <http://www.purl.org/ogit/Automation/serviceName>
- valid-from: Fri Jul 24 00:00:00 UTC 2015
- creator: Aymen Ayoub

used

- optional:
  - [ogit/Automation/MARSNode](#)

**2.3.0.29** `ogit/Automation/licenseAvailability`

The availability of the license of a component.

- id: <http://www.purl.org/ogit/Automation/licenseAvailability>
- valid-from: Fri Jul 24 00:00:00 UTC 2015
- creator: Peter Larem

used

- optional:
  - [ogit/Automation/MARSNode](#)

**2.3.0.30** `ogit/ServiceManagement/granularity`

Smallest value increment of a Parameter

- id: <http://www.purl.org/ogit/ServiceManagement/granularity>
- valid-from: Thu May 21 00:00:00 UTC 2015
- creator: Peter Larem

used

- optional:
  - [ogit/Parameter](#)

## 2.3.0.31 ogit/notification

A notification.

- id: <http://www.purl.org/ogit/notification>
- valid-from: Mon Jul 27 00:00:00 UTC 2015
- creator: Philipp Pelchmann

used

- optional:
  - [ogit/Person](#)

## 2.3.0.32 ogit/sourceId

The Id of the source system.

- id: <http://www.purl.org/ogit/sourceId>
- valid-from: Thu Jun 11 00:00:00 UTC 2015
- creator: Peter Larem

used

- optional:
  - [ogit/Organization](#)
  - [ogit/Person](#)

## 2.3.0.33 ogit/uri

Unified resource identifier

- id: <http://www.purl.org/ogit/uri>
- valid-from: Thu May 21 00:00:00 UTC 2015
- creator: Peter Larem

used

- optional:
  - [ogit/Parameter](#)

#### 2.3.0.34 ogit/Automation/cpuCount

An integer which shows the number of cps of a component.

- id: <http://www.purl.org/ogit/Automation/cpuCount>
- valid-from: Mon Jul 27 00:00:00 UTC 2015
- creator: Aymen Ayoub

used

- optional:
  - [ogit/Automation/MARSNode](#)

#### 2.3.0.35 ogit/Automation/databaseSchema

Contains information about the database schema. The schema is the skeleton structure that represents the logical view of the entire database

- id: <http://www.purl.org/ogit/Automation/databaseSchema>
- valid-from: Mon Jul 27 00:00:00 UTC 2015
- creator: Aymen Ayoub

used

- optional:
  - [ogit/Automation/MARSNode](#)

#### 2.3.0.36 ogit/mobilePhone

A mobile phone number.

- id: <http://www.purl.org/ogit/mobilePhone>
- valid-from: Thu May 21 00:00:00 UTC 2015
- creator: Peter Larem

used

- optional:
  - [ogit/Person](#)



**2.3.0.37** `ogit/Automation/additionalMacAddress`

Contains an additional MAC address

- id: <http://www.purl.org/ogit/Automation/additionalMacAddress>
- valid-from: Mon Jul 27 00:00:00 UTC 2015
- creator: Aymen Ayoub

used

- optional:
  - [ogit/Automation/MARSNode](#)

**2.3.0.38** `ogit/connectorId`

The Id of the connector.

- id: <http://www.purl.org/ogit/connectorId>
- valid-from: Thu Jun 11 00:00:00 UTC 2015
- creator: Aymen Ayoub

used

- optional:
  - [ogit/Automation/MARSNode](#)

**2.3.0.39** `ogit/Automation/dataClassification`

Data classification of a component.

- id: <http://www.purl.org/ogit/Automation/dataClassification>
- valid-from: Fri Jul 24 00:00:00 UTC 2015
- creator: Aymen Ayoub

used

- optional:
  - [ogit/Automation/MARSNode](#)

#### 2.3.0.40 ogit/Automation/firmwareVersion

Version of the firmware.

- id: <http://www.purl.org/ogit/Automation/firmwareVersion>
- valid-from: Mon Jul 27 00:00:00 UTC 2015
- creator: Aymen Ayoub

used

- optional:
  - [ogit/Automation/MARSNode](#)

#### 2.3.0.41 ogit/ipAddress

The IP address of a component/hardware device.

- id: <http://www.purl.org/ogit/ipAddress>
- valid-from: Wed May 27 00:00:00 UTC 2015
- creator: Aymen Ayoub

used

- optional:
  - [ogit/Automation/MARSNode](#)

#### 2.3.0.42 ogit/unit

Unit of measurement of some value.

- id: <http://www.purl.org/ogit/unit>
- valid-from: Thu May 21 00:00:00 UTC 2015
- creator: Peter Larem

used

- optional:
  - [ogit/Parameter](#)

#### 2.3.0.43 ogit/Automation/installCount

Contains an integer. This integer can be adjust automatically when software is added to or deleted from configuration items (CIs).

- id: <http://www.purl.org/ogit/Automation/installCount>
- valid-from: Mon Jul 27 00:00:00 UTC 2015
- creator: Aymen Ayoub

used

- optional:
  - [ogit/Automation/MARSNode](#)

#### 2.3.0.44 ogit/Automation/marsNodeFormalRepresentation

Obsolete attribute. Not used for HIRO  $\geq 6$ . Contains MARS in XML representation defined by MARSSchema2013.

- id: <http://www.purl.org/ogit/Automation/marsNodeFormalRepresentation>
- valid-from: Thu May 21 00:00:00 UTC 2015
- creator: Peter Larem

used

- mandatory:
  - [ogit/Automation/MARSNodeTemplate](#)
- optional:
  - [ogit/Automation/MARSNode](#)

#### 2.3.0.45 ogit/city

Name of a city.

- id: <http://www.purl.org/ogit/city>
- valid-from: Mon Jul 27 00:00:00 UTC 2015
- creator: Philipp Pelchmann

used

- optional:
  - [ogit/Organization](#)

**2.3.0.46** `ogit/Automation/systemClass`

Contains the class of the system.

- id: <http://www.purl.org/ogit/Automation/systemClass>
- valid-from: Mon Jul 27 00:00:00 UTC 2015
- creator: Aymen Ayoub

used

- optional:
  - [ogit/Automation/MARSNode](#)

**2.3.0.47** `ogit/Automation/diskCount`

An integer which shows the number of disks of a component.

- id: <http://www.purl.org/ogit/Automation/diskCount>
- valid-from: Mon Jul 27 00:00:00 UTC 2015
- creator: Aymen Ayoub

used

- optional:
  - [ogit/Automation/MARSNode](#)

**2.3.0.48** `ogit/status`

A status for an entity. At this level of specification no list of values is specified. However, applications using this attribute are expected to allow only a fixed list of values that seems usefual in the application's semantic context.

- id: <http://www.purl.org/ogit/status>
- valid-from: Thu May 21 00:00:00 UTC 2015
- creator: Peter Larem

used

- optional:
  - [ogit/Automation/MARSNodeTemplate](#)
  - [ogit/Organization](#)
  - [ogit/Person](#)

**2.3.0.49** `ogit/Automation/domain`

Contains the domain name.

- id: <http://www.purl.org/ogit/Automation/domain>
- valid-from: Mon Jul 27 00:00:00 UTC 2015
- creator: Aymen Ayoub

used

- optional:
  - [ogit/Automation/MARSNode](#)

**2.3.0.50** `ogit/Automation/lifecycle`

Contains the lifecycle state of a MARSNode. If value is 'decommissioned' this node is ignored by engine, graph and UI.

- id: <http://www.purl.org/ogit/Automation/lifecycle>
- valid-from: Thu May 11 00:00:00 UTC 2017
- creator: Philipp Kählitz

used

- optional:
  - [ogit/Automation/MARSNode](#)

**2.3.0.51** `ogit/lastName`

Last name of a person.

- id: <http://www.purl.org/ogit/lastName>
- valid-from: Thu May 21 00:00:00 UTC 2015
- creator: Peter Larem

used

- optional:
  - [ogit/Person](#)

#### 2.3.0.52 ogit/Automation/cpuModel

Contains the model of the cpu.

- id: <http://www.purl.org/ogit/Automation/cpuModel>
- valid-from: Mon Jul 27 00:00:00 UTC 2015
- creator: Aymen Ayoub

used

- optional:
  - [ogit/Automation/MARSNode](#)

#### 2.3.0.53 ogit/Automation/buildName

Contains the build name of a component.

- id: <http://www.purl.org/ogit/Automation/buildName>
- valid-from: Fri Jul 24 00:00:00 UTC 2015
- creator: Aymen Ayoub

used

- optional:
  - [ogit/Automation/MARSNode](#)

#### 2.3.0.54 ogit/Automation/appInstanceType

Contains the instance type.

- id: <http://www.purl.org/ogit/Automation/appInstanceType>
- valid-from: Fri Jul 24 00:00:00 UTC 2015
- creator: Aymen Ayoub

used

- optional:
  - [ogit/Automation/MARSNode](#)

**2.3.0.55 ogit/modificationTime**

Modification time.

- id: <http://www.purl.org/ogit/modificationTime>
- valid-from: Thu May 21 00:00:00 UTC 2015
- creator: Peter Larem

used

- optional:
  - [ogit/Automation/MARSNode](#)

**2.3.0.56 ogit/middleName**

Middle name of a person.

- id: <http://www.purl.org/ogit/middleName>
- valid-from: Mon Jul 27 00:00:00 UTC 2015
- creator: Philipp Pelchmann

used

- optional:
  - [ogit/Person](#)

**2.3.0.57 ogit/Automation/diskSpace**

An integer which contains the disk space in GB.

- id: <http://www.purl.org/ogit/Automation/diskSpace>
- valid-from: Mon Jul 27 00:00:00 UTC 2015
- creator: Aymen Ayoub

used

- optional:
  - [ogit/Automation/MARSNode](#)

#### 2.3.0.58 ogit/streetAddress

The street address. For example, Eschersheimer Landstr. 526-532

- id: <http://www.purl.org/ogit/streetAddress>
- valid-from: Thu May 21 00:00:00 UTC 2015
- creator: Peter Larem

used

- optional:
  - [ogit/Organization](#)

#### 2.3.0.59 ogit/serialNumber

A string representing a any kind of serial number. see <http://purl.org/goodrelations/v1#serialNumber>

- id: <http://www.purl.org/ogit/serialNumber>
- valid-from: Thu May 21 00:00:00 UTC 2015
- creator: Peter Larem

used

- optional:
  - [ogit/Automation/MARSNode](#)
  - [ogit/ServiceManagement/Offering](#)

#### 2.3.0.60 ogit/firstName

First name of a person

- id: <http://www.purl.org/ogit/firstName>
- valid-from: Thu May 21 00:00:00 UTC 2015
- creator: Peter Larem

used

- optional:
  - [ogit/Person](#)



**2.3.0.61 ogit/macAddress**

The mac address of a component.

- id: <http://www.purl.org/ogit/macAddress>
- valid-from: Wed May 27 00:00:00 UTC 2015
- creator: Aymen Ayoub

used

- optional:
  - [ogit/Automation/MARSNode](#)

**2.3.0.62 ogit/Automation/osName**

Contains operating system name.

- id: <http://www.purl.org/ogit/Automation/osName>
- valid-from: Mon Jul 27 00:00:00 UTC 2015
- creator: Philipp Pelchmann

used

- optional:
  - [ogit/Automation/MARSNode](#)

**2.3.0.63 ogit/title**

Title of any kind. In the context of a Person this can be a courtesy title, an academic title, or a job title.

- id: <http://www.purl.org/ogit/title>
- valid-from: Thu May 21 00:00:00 UTC 2015
- creator: Peter Larem

used

- optional:
  - [ogit/Person](#)

**2.3.0.64** `ogit/Automation/appServer`

Contains application server.

- id: <http://www.purl.org/ogit/Automation/appServer>
- valid-from: Fri Jul 24 00:00:00 UTC 2015
- creator: Aymen Ayoub

used

- optional:
  - [ogit/Automation/MARSNode](#)

**2.3.0.65** `ogit/lengthOfReportingPeriod`

Period in which the attribute is reported.

- id: <http://www.purl.org/ogit/lengthOfReportingPeriod>
- valid-from: Thu May 21 00:00:00 UTC 2015
- creator: Peter Larem

used

- optional:
  - [ogit/Parameter](#)

**2.3.0.66** `ogit/Automation/deployStatus`

String value, represents the status if an automation Knowledge Item is not deployed into an Automation Engine.

- id: <http://www.purl.org/ogit/Automation/deployStatus>
- valid-from: Mon Jan 25 00:00:00 UTC 2016
- creator: Peter Larem

used

- optional:
  - [ogit/Automation/MARSNode](#)

**2.3.0.67 ogit/Automation/isDeployed**

Obsolete attribute. Not used for HIRO  $\geq 6$ . Boolean value, true if an automation Knowledge Item is deployed into an Automation Engine.

- id: <http://www.purl.org/ogit/Automation/isDeployed>
- valid-from: Mon Jan 25 00:00:00 UTC 2016
- creator: Peter Larem

used

- optional:
  - [ogit/Automation/MARSNode](#)

**2.3.0.68 ogit/name**

Contains a name.

- id: <http://www.purl.org/ogit/name>
- valid-from: Thu May 21 00:00:00 UTC 2015
- creator: Peter Larem

used

- mandatory:
  - [ogit/Automation/MARSModelTemplate](#)
  - [ogit/Organization](#)
  - [ogit/Parameter](#)
  - [ogit/ServiceManagement/Offering](#)
- optional:
  - [ogit/Asset](#)
  - [ogit/Automation/MARSNode](#)

**2.3.0.69 ogit/Automation/software**

A software component.

- id: <http://www.purl.org/ogit/Automation/software>
- valid-from: Fri Jul 24 00:00:00 UTC 2015
- creator: Aymen Ayoub

used

- optional:
  - [ogit/Automation/MARSNode](#)

#### 2.3.0.70 ogit/description

Contains a description.

- id: <http://www.purl.org/ogit/description>
- valid-from: Thu May 21 00:00:00 UTC 2015
- creator: Peter Larem

used

- optional:
  - [ogit/Automation/MARSModelTemplate](#)
  - [ogit/Organization](#)
  - [ogit/Parameter](#)
  - [ogit/ServiceManagement/Offering](#)

#### 2.3.0.71 ogit/Automation/host

Contains the host name.

- id: <http://www.purl.org/ogit/Automation/host>
- valid-from: Mon Jul 27 00:00:00 UTC 2015
- creator: Aymen Ayoub

used

- optional:
  - [ogit/Automation/MARSNode](#)

#### 2.3.0.72 ogit/Automation/appInfrastructureType

Contains the application infrastructure type.

- id: <http://www.purl.org/ogit/Automation/appInfrastructureType>
- valid-from: Fri Jul 24 00:00:00 UTC 2015
- creator: Aymen Ayoub

used

- optional:
  - [ogit/Automation/MARSNode](#)

#### 2.3.0.73 ogit/Automation/virtualSystemName

Contains the name of the virtual system.

- id: <http://www.purl.org/ogit/Automation/virtualSystemName>
- valid-from: Mon Jul 27 00:00:00 UTC 2015
- creator: Aymen Ayoub

used

- optional:
  - [ogit/Automation/MARSNode](#)

#### 2.3.0.74 ogit/expirationDate

Defines a point in time when something becomes invalid the format is described at <http://purl.org/goodrelations/v1#validThrough>

- id: <http://www.purl.org/ogit/expirationDate>
- valid-from: Thu May 21 00:00:00 UTC 2015
- creator: Peter Larem

used

- optional:
  - [ogit/ServiceManagement/Offering](#)

#### 2.3.0.75 ogit/officePhone

The phone number in the office.

- id: <http://www.purl.org/ogit/officePhone>
- valid-from: Mon Jul 27 00:00:00 UTC 2015
- creator: Philipp Pelchmann

used

- optional:
  - [ogit/Person](#)

#### 2.3.0.76 ogit/phone

a phone number

- id: <http://www.purl.org/ogit/phone>
- valid-from: Thu May 21 00:00:00 UTC 2015
- creator: Peter Larem

used

- optional:
  - [ogit/Organization](#)

#### 2.3.0.77 ogit/Automation/osLicense

License of the Operating System.

- id: <http://www.purl.org/ogit/Automation/osLicense>
- valid-from: Mon Jul 27 00:00:00 UTC 2015
- creator: Philipp Pelchmann

used

- optional:
  - [ogit/Automation/MARSNode](#)

#### 2.3.0.78 ogit/fax

The number of a fax.

- id: <http://www.purl.org/ogit/fax>
- valid-from: Mon Jul 27 00:00:00 UTC 2015
- creator: Philipp Pelchmann

used

- optional:
  - [ogit/Person](#)

**2.3.0.79** `ogit/Automation/databaseServer`

Contains information about the database server.

- id: <http://www.purl.org/ogit/Automation/databaseServer>
- valid-from: Mon Jul 27 00:00:00 UTC 2015
- creator: Aymen Ayoub

used

- optional:
  - [ogit/Automation/MARSNode](#)

**2.3.0.80** `ogit/Automation/portNumber`

Contains a port number.

- id: <http://www.purl.org/ogit/Automation/portNumber>
- valid-from: Fri Jul 24 00:00:00 UTC 2015
- creator: Aymen Ayoub

used

- optional:
  - [ogit/Automation/MARSNode](#)

**2.3.0.81** `ogit/Automation/webServer`

Contains an webServer.

- id: <http://www.purl.org/ogit/Automation/webServer>
- valid-from: Fri Jul 24 00:00:00 UTC 2015
- creator: Aymen Ayoub

used

- optional:
  - [ogit/Automation/MARSNode](#)

**2.3.0.82** `ogit/Automation/softwareKey`

Contains the key of a software.

- id: <http://www.purl.org/ogit/Automation/softwareKey>
- valid-from: Fri Jul 24 00:00:00 UTC 2015
- creator: Aymen Ayoub

used

- optional:
  - [ogit/Automation/MARSNode](#)

**2.3.0.83** `ogit/Automation/installPath`

Contains the installation path of a component.

- id: <http://www.purl.org/ogit/Automation/installPath>
- valid-from: Fri Jul 24 00:00:00 UTC 2015
- creator: Aymen Ayoub

used

- optional:
  - [ogit/Automation/MARSNode](#)

**2.3.0.84** `ogit/Automation/licenseName`

Contains the license name of a component.

- id: <http://www.purl.org/ogit/Automation/licenseName>
- valid-from: Fri Jul 24 00:00:00 UTC 2015
- creator: Aymen Ayoub

used

- optional:
  - [ogit/Automation/MARSNode](#)



**2.3.0.85** ogit/Automation/contextPath

Contains the context path of a component.

- id: <http://www.purl.org/ogit/Automation/contextPath>
- valid-from: Fri Jul 24 00:00:00 UTC 2015
- creator: Aymen Ayoub

used

- optional:
  - [ogit/Automation/MARSNode](#)

**2.3.0.86** ogit/Automation/cpuSpeed

An floating point number which shows the cpu speed in GHZ.

- id: <http://www.purl.org/ogit/Automation/cpuSpeed>
- valid-from: Mon Jul 27 00:00:00 UTC 2015
- creator: Aymen Ayoub

used

- optional:
  - [ogit/Automation/MARSNode](#)

**2.3.0.87** ogit/otherPhone

The number of an other phone.

- id: <http://www.purl.org/ogit/otherPhone>
- valid-from: Mon Jul 27 00:00:00 UTC 2015
- creator: Philipp Pelchmann

used

- optional:
  - [ogit/Person](#)

**2.3.0.88** `ogit/isMutable`

True if the value can be changed. E.g. after a service is provisioned.

- id: <http://www.purl.org/ogit/isMutable>
- valid-from: Thu May 21 00:00:00 UTC 2015
- creator: Peter Larem

used

- optional:
  - [ogit/Parameter](#)

**2.3.0.89** `ogit/Automation/servletClass`

Contains the class of the servlet.

- id: <http://www.purl.org/ogit/Automation/servletClass>
- valid-from: Mon Jul 27 00:00:00 UTC 2015
- creator: Aymen Ayoub

used

- optional:
  - [ogit/Automation/MARSNode](#)

**2.3.0.90** `ogit/Datacenter/rackUnit`

The name of the RackUnit within a datacenter.

- id: <http://www.purl.org/ogit/Datacenter/rackUnit>
- valid-from: Thu Oct 15 00:00:00 UTC 2015
- creator: Aymen Ayoub

used

- optional:
  - [ogit/Automation/MARSNode](#)

**2.3.0.91** `ogit/ServiceManagement/allowedForNewBusiness`

If the value of this flag is true, the service could be offered in a store to new users for order. If flag is false, the service will only be available to users with already existing instances/entities of a specific service.

- id: <http://www.purl.org/ogit/ServiceManagement/allowedForNewBusiness>
- valid-from: Thu May 21 00:00:00 UTC 2015
- creator: Peter Larem

used

- optional:
  - [ogit/ServiceManagement/Offering](#)

**2.3.0.92** `ogit/Automation/firewallStatus`

Contains information about the firewall status.

- id: <http://www.purl.org/ogit/Automation/firewallStatus>
- valid-from: Mon Jul 27 00:00:00 UTC 2015
- creator: Aymen Ayoub

used

- optional:
  - [ogit/Automation/MARSNode](#)

**2.3.0.93** `ogit/capacityAvailable`

If the flag is true, then service can be ordered by new instance. If the flag is false, the service cannot temporarily be ordered due to capacity reasons.

- id: <http://www.purl.org/ogit/capacityAvailable>
- valid-from: Thu May 21 00:00:00 UTC 2015
- creator: Peter Larem

used

- optional:
  - [ogit/ServiceManagement/Offering](#)

**2.3.0.94** `ogit/Automation/exchangeRate`

Contains the data rate exchanged.

- id: <http://www.purl.org/ogit/Automation/exchangeRate>
- valid-from: Mon Jul 27 00:00:00 UTC 2015
- creator: Aymen Ayoub

used

- optional:
  - [ogit/Automation/MARSNode](#)

**2.3.0.95** `ogit/Automation/patchNumber`

Contains a patch number.

- id: <http://www.purl.org/ogit/Automation/patchNumber>
- valid-from: Fri Jul 24 00:00:00 UTC 2015
- creator: Aymen Ayoub

used

- optional:
  - [ogit/Automation/MARSNode](#)

**2.3.0.96** `ogit/Automation/cpuType`

Contains the cpu type of a device.

- id: <http://www.purl.org/ogit/Automation/cpuType>
- valid-from: Mon Jul 27 00:00:00 UTC 2015
- creator: Aymen Ayoub

used

- optional:
  - [ogit/Automation/MARSNode](#)

**2.3.0.97 ogit/Automation/dataPrivacy**

Data privacy of a component.

- id: <http://www.purl.org/ogit/Automation/dataPrivacy>
- valid-from: Fri Jul 24 00:00:00 UTC 2015
- creator: Aymen Ayoub

used

- optional:
  - [ogit/Automation/MARSNode](#)

**2.3.0.98 ogit/webPage**

A web page.

- id: <http://www.purl.org/ogit/webPage>
- valid-from: Mon Jul 27 00:00:00 UTC 2015
- creator: Philipp Pelchmann

used

- optional:
  - [ogit/Organization](#)
  - [ogit/Person](#)

**2.3.0.99 ogit/Automation/objectIdentifier**

Contains a system object identifier.

- id: <http://www.purl.org/ogit/Automation/objectIdentifier>
- valid-from: Mon Jul 27 00:00:00 UTC 2015
- creator: Aymen Ayoub

used

- optional:
  - [ogit/Automation/MARSNode](#)

**2.3.0.100 ogit/Automation/fqdn**

Contains a fully qualified domain name.

- id: <http://www.purl.org/ogit/Automation/fqdn>
- valid-from: Tue Jan 15 00:00:00 UTC 2019
- creator: Aymen Ayoub

used

- optional:
  - [ogit/Automation/MARSNode](#)

**2.3.0.101 ogit/Automation/osKey**

Product key for the Operating System.

- id: <http://www.purl.org/ogit/Automation/osKey>
- valid-from: Mon Jul 27 00:00:00 UTC 2015
- creator: Philipp Pelchmann

used

- optional:
  - [ogit/Automation/MARSNode](#)

**2.3.0.102 ogit/Automation/brand**

Contains the brand of a component/device.

- id: <http://www.purl.org/ogit/Automation/brand>
- valid-from: Tue Jan 15 00:00:00 UTC 2019
- creator: Aymen Ayoub

used

- optional:
  - [ogit/Automation/MARSNode](#)

**2.3.0.103** `ogit/Automation/licenseType`

Contains the license type of a component.

- id: <http://www.purl.org/ogit/Automation/licenseType>
- valid-from: Sun May 24 00:00:00 UTC 2015
- creator: Aymen Ayoub

used

- optional:
  - [ogit/Automation/MARSNode](#)

**2.3.0.104** `ogit/market`

Indicates market, for which an entity may be applicable.

- id: <http://www.purl.org/ogit/market>
- valid-from: Thu May 21 00:00:00 UTC 2015
- creator: Peter Larem

used

- optional:
  - [ogit/ServiceManagement/Offering](#)

**2.3.0.105** `ogit/Automation/virtualSystemType`

Contains the type of the virtual system.

- id: <http://www.purl.org/ogit/Automation/virtualSystemType>
- valid-from: Mon Jul 27 00:00:00 UTC 2015
- creator: Aymen Ayoub

used

- optional:
  - [ogit/Automation/MARSNode](#)

**2.3.0.106 ogit/Automation/osManufacturer**

Contains the manufacturer of the operating system.

- id: <http://www.purl.org/ogit/Automation/osManufacturer>
- valid-from: Mon Jul 27 00:00:00 UTC 2015
- creator: Aymen Ayoub

used

- optional:
  - [ogit/Automation/MARSNode](#)

**2.3.0.107 ogit/id**

General id.

- id: <http://www.purl.org/ogit/id>
- valid-from: Thu May 21 00:00:00 UTC 2015
- creator: Peter Larem

used

- mandatory:
  - [ogit/ServiceManagement/Offering](#)
- optional:
  - [ogit/Asset](#)
  - [ogit/Automation/MARSNode](#)

**2.3.0.108 ogit/creationTime**

Creation time of an entity.

- id: <http://www.purl.org/ogit/creationTime>
- valid-from: Thu May 21 00:00:00 UTC 2015
- creator: Peter Larem

used

- optional:
  - [ogit/Automation/MARSNode](#)



**2.3.0.109** `ogit/Automation/adminUrl`

Contains an URL (unified resource locator)

- id: <http://www.purl.org/ogit/Automation/adminUrl>
- valid-from: Fri Jul 24 00:00:00 UTC 2015
- creator: Aymen Ayoub

used

- optional:
  - [ogit/Automation/MARSNode](#)

**2.3.0.110** `ogit/Automation/marsNodeType`

Obsolete attribute. Not used for HIRO  $\geq 6$ . Contains The Type of the Mars Node. Should be one of Application, Machine, Software, Resource.

- id: <http://www.purl.org/ogit/Automation/marsNodeType>
- valid-from: Thu May 21 00:00:00 UTC 2015
- creator: Peter Larem

used

- optional:
  - [ogit/Automation/MARSNode](#)
  - [ogit/Automation/MARSNodeTemplate](#)

**2.3.0.111** `ogit/Automation/basicConfigId`

Contains the internal identifier of the basic configuration of a component .

- id: <http://www.purl.org/ogit/Automation/basicConfigId>
- valid-from: Wed May 27 00:00:00 UTC 2015
- creator: Aymen Ayoub

used

- optional:
  - [ogit/Automation/MARSNode](#)

**2.3.0.112** `ogit/Automation/serviceStatus`

Contains the status of a service.

- id: <http://www.purl.org/ogit/Automation/serviceStatus>
- valid-from: Fri Jul 24 00:00:00 UTC 2015
- creator: Aymen Ayoub

used

- optional:
  - [ogit/Automation/MARSNode](#)

**2.3.0.113** `ogit/values`

Represents a list of values. How to actually encode a list of values is left to the semantics of the entities using this attribute.

- id: <http://www.purl.org/ogit/values>
- valid-from: Thu May 21 00:00:00 UTC 2015
- creator: Peter Larem

used

- optional:
  - [ogit/Parameter](#)

**2.3.0.114** `ogit/validFrom`

Defines a point in time when something becomes valid.

- id: <http://www.purl.org/ogit/validFrom>
- valid-from: Thu May 21 00:00:00 UTC 2015
- creator: Peter Larem

used

- optional:
  - [ogit/ServiceManagement/Offering](#)

**2.3.0.115 ogit/Automation/systemType**

Contains the type of the system.

- id: <http://www.purl.org/ogit/Automation/systemType>
- valid-from: Mon Jul 27 00:00:00 UTC 2015
- creator: Aymen Ayoub

used

- optional:
  - [ogit/Automation/MARSNode](#)

**2.3.0.116 ogit/Automation/tcpPort**

The tcp port.

- id: <http://www.purl.org/ogit/Automation/tcpPort>
- valid-from: Fri Jul 24 00:00:00 UTC 2015
- creator: Aymen Ayoub

used

- optional:
  - [ogit/Automation/MARSNode](#)

**2.3.0.117 ogit/position**

Indicates user's position. This field contains a string value.

- id: <http://www.purl.org/ogit/position>
- valid-from: Tue Oct 18 00:00:00 UTC 2016
- creator: Arthur Shoba

used

- optional:
  - [ogit/Person](#)

**2.3.0.118 ogit/Automation/projectName**

Contains the project name of a component.

- id: <http://www.purl.org/ogit/Automation/projectName>
- valid-from: Mon Nov 02 00:00:00 UTC 2015
- creator: Peter Larem

used

- optional:
  - [ogit/Automation/MARSNode](#)