

---

SaaS

---

May 25, 2021

<b>1 SaaS</b>	<b>1</b>
<b>2 Module Documentation</b>	<b>2</b>
2.1 Entities	2
2.1.0.1 ogit/SaaS/Component	2
2.1.0.2 ogit/SaaS/Deployment	3
2.1.0.3 ogit/Configuration	3
2.1.0.4 ogit/SaaS/Integration	4
2.1.0.5 ogit/SaaS/DeploymentTemplate	4
2.1.0.6 ogit/Attachment	5
2.1.0.7 ogit/Auth/Account	6
2.1.0.8 ogit/SaaS/ComponentInstance	6
2.1.0.9 ogit/SaaS/IntegrationType	7
2.1.0.10 ogit/Timeseries	8
2.1.0.11 ogit/SaaS/ConfigurationTemplate	8
2.2 Verbs	9
2.2.0.1 ogit/contains	9
2.2.0.2 ogit/generates	9
2.2.0.3 ogit/configures	9
2.2.0.4 ogit/belongs	10
2.2.0.5 ogit/uses	10
2.2.0.6 ogit/Auth/uses	10
2.3 Attributes	11
2.3.0.1 ogit/comment	11
2.3.0.2 ogit/email	11
2.3.0.3 ogit/Version/major	11
2.3.0.4 ogit/sourceId	12
2.3.0.5 ogit/url	12
2.3.0.6 ogit/isPermanent	12
2.3.0.7 ogit/unit	13
2.3.0.8 ogit/status	13
2.3.0.9 ogit/createdAt	13
2.3.0.10 ogit/accessControl	14
2.3.0.11 ogit/Auth/Account/statusReason	14
2.3.0.12 ogit/Version/patch	14
2.3.0.13 ogit/content	15
2.3.0.14 ogit/Auth/Account/type	15
2.3.0.15 ogit/name	15
2.3.0.16 ogit/description	16
2.3.0.17 ogit/Auth/Account/acceptedProjectTerms	16
2.3.0.18 ogit/Auth/Account/acceptedTerms	16
2.3.0.19 ogit/Version/minor	17

---

2.3.0.20	ogit/lastUpdatedBy	17
2.3.0.21	ogit/type	17
2.3.0.22	ogit/Auth/Account/allowCookies	18
2.3.0.23	ogit/isMutable	18
2.3.0.24	ogit/sourceTable	18
2.3.0.25	ogit/creator	19
2.3.0.26	ogit/lastUpdatedAt	19
2.3.0.27	ogit/id	19
2.3.0.28	ogit/Auth/Account/acceptedPrivacy	20
2.3.0.29	ogit/size	20
2.3.0.30	ogit/instance	20

# Chapter 1

## SaaS

### Overview

This NTO model a software-as-a-service offering. It defines entities for both

- templates/offerings
- instantiated services

## Chapter 2

# Module Documentation

## 2.1 Entities

### 2.1.0.1 ogit/SaaS/Component

Entities of this kind form the catalogue of components a SaaS Deployment can consist of

- id: <http://www.purl.org/ogit/SaaS/Component>
- valid-from: Tue Jan 14 00:00:00 UTC 2020
- creator: FCO
- scope: NTO
- parent: ogit/Node

#### attributes

- mandatory:
  - [ogit/Version/major](#)
  - [ogit/Version/minor](#)
  - [ogit/Version/patch](#)
  - [ogit/name](#)
- optional:
  - [ogit/description](#)
  - [ogit/status](#)

#### incoming edges

- [ogit/configures](#) <= [ogit/SaaS/ConfigurationTemplate](#)

### 2.1.0.2 ogit/SaaS/Deployment

represents a Deployment in any possible state. Will be instantiated from a DeploymentTemplate

- id: <http://www.purl.org/ogit/SaaS/Deployment>
- valid-from: Tue Jan 14 00:00:00 UTC 2020
- creator: FCO
- scope: NTO
- parent: ogit/Node

#### attributes

- mandatory:
  - [ogit/id](#)
  - [ogit/status](#)
- optional:
  - [ogit/comment](#)
  - [ogit/sourceId](#)
  - [ogit/status](#)

#### incoming edges

- [ogit/contains](#) <= [ogit/SaaS/Deployment](#)

#### outgoing edges

- [ogit/contains](#) => [ogit/SaaS/ComponentInstance](#)
- [ogit/contains](#) => [ogit/SaaS/Deployment](#)

### 2.1.0.3 ogit/Configuration

An entity reflects individual configuration for an instance

- id: <http://www.purl.org/ogit/Configuration>
- valid-from: Sun Nov 15 00:00:00 UTC 2020
- creator: Kaushik Gondaliya
- scope: SGO
- parent: ogit/Node

**attributes**

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

**incoming edges**

- [ogit/uses](#) <= [ogit/SaaS/Integration](#)

**2.1.0.4 ogit/SaaS/Integration****External integrations for HIRO**

- id: <http://www.purl.org/ogit/SaaS/Integration>
- valid-from: Tue May 18 00:00:00 UTC 2021
- creator: [dcassidy@arago.co](mailto:dcassidy@arago.co)
- scope: NTO
- parent: ogit/Node

**attributes**

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

**outgoing edges**

- [ogit/uses](#) => [ogit/SaaS/IntegrationType](#)
- [ogit/uses](#) => [ogit/Configuration](#)

**2.1.0.5 ogit/SaaS/DeploymentTemplate**

Specifies templates that can be instantiated as a Deployment. When instantiated all contained Configuration↔ Templates will be instantiated as ComponentConfigs

- id: <http://www.purl.org/ogit/SaaS/DeploymentTemplate>
- valid-from: Tue Jan 14 00:00:00 UTC 2020
- creator: FCO
- scope: NTO
- parent: ogit/Node

**attributes**

- mandatory:
  - [ogit/Version/major](#)
  - [ogit/Version/minor](#)
  - [ogit/Version/patch](#)
  - [ogit/name](#)
- optional:
  - [ogit/description](#)
  - [ogit/status](#)

**outgoing edges**

- [ogit/contains](#) => [ogit/SaaS/ConfigurationTemplate](#)

**2.1.0.6 ogit/Attachment**

This entity defines a file attachment that an IT service, issue, task or a ticket might have. The attachment itself is not saved in GraphIT, instead it contains an external url link for it.

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

**attributes**

- optional:
  - [ogit/accessControl](#)
  - [ogit/content](#)
  - [ogit/createdAt](#)
  - [ogit/creator](#)
  - [ogit/id](#)
  - [ogit/lastUpdatedAt](#)
  - [ogit/lastUpdatedBy](#)
  - [ogit/name](#)
  - [ogit/size](#)
  - [ogit/sourceTable](#)
  - [ogit/type](#)
  - [ogit/url](#)



## outgoing edges

- [ogit/belongs](#) => [ogit/SaaS/ComponentInstance](#)

2.1.0.7 [ogit/Auth/Account](#)

An account is used for authentication and authorization.

- id: <http://www.purl.org/ogit/Auth/Account>
- valid-from: Mon Jan 01 00:00:00 UTC 2018
- creator: arago GmbH
- scope: NTO
- parent: [ogit/Node](#)

## attributes

- mandatory:
  - [ogit/Auth/Account/type](#)
  - [ogit/name](#)
  - [ogit/status](#)
- optional:
  - [ogit/Auth/Account/acceptedPrivacy](#)
  - [ogit/Auth/Account/acceptedProjectTerms](#)
  - [ogit/Auth/Account/acceptedTerms](#)
  - [ogit/Auth/Account/allowCookies](#)
  - [ogit/Auth/Account/statusReason](#)
  - [ogit/email](#)

## outgoing edges

- [ogit/Auth/uses](#) => [ogit/SaaS/ComponentInstance](#)

2.1.0.8 [ogit/SaaS/ComponentInstance](#)

An instance of a Component within a Deployment

- id: <http://www.purl.org/ogit/SaaS/ComponentInstance>
- valid-from: Tue Jan 14 00:00:00 UTC 2020
- creator: FCO
- scope: NTO
- parent: [ogit/Node](#)

**attributes**

- mandatory:
  - [ogit/id](#)
- optional:
  - [ogit/sourceId](#)
  - [ogit/status](#)

**incoming edges**

- [ogit/Auth/uses](#) <= [ogit/Auth/Account](#)
- [ogit/belongs](#) <= [ogit/Attachment](#)
- [ogit/contains](#) <= [ogit/SaaS/Deployment](#)

**outgoing edges**

- [ogit/generates](#) => [ogit/Timeseries](#)

**2.1.0.9 ogit/SaaS/IntegrationType**

Type of HIRO integration. Used for defining required configurations.

- id: <http://www.purl.org/ogit/SaaS/IntegrationType>
- valid-from: Tue May 18 00:00:00 UTC 2021
- creator: [dcassidy@arago.co](mailto:dcassidy@arago.co)
- scope: NTO
- parent: ogit/Node

**attributes**

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

**incoming edges**

- [ogit/uses](#) <= [ogit/SaaS/Integration](#)

## 2.1.0.10 ogit/Timeseries

A time series is a sequence of data points, measured typically at successive points in time spaced at uniform time intervals.

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

## attributes

- optional:
  - [ogit/description](#)
  - [ogit/instance](#)
  - [ogit/isMutable](#)
  - [ogit/isPermanent](#)
  - [ogit/name](#)
  - [ogit/unit](#)

## incoming edges

- [ogit/generates](#) <= [ogit/SaaS/ComponentInstance](#)

## 2.1.0.11 ogit/SaaS/ConfigurationTemplate

Specifies a certain installation flavor of a Component. Might fix same configuration parameters and provide defaults for some others. Will be used within DeploymentTemplate to form a deployable template of several components

- id: <http://www.purl.org/ogit/SaaS/ConfigurationTemplate>
- valid-from: Tue Jan 14 00:00:00 UTC 2020
- creator: FCO
- scope: NTO
- parent: ogit/Node

## attributes

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

## incoming edges

- [ogit/contains](#) <= [ogit/SaaS/DeploymentTemplate](#)

## outgoing edges

- [ogit/configures](#) => [ogit/SaaS/Component](#)

## 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/SaaS/Deployment](#) => [ogit/SaaS/ComponentInstance](#)
- [ogit/SaaS/Deployment](#) => [ogit/SaaS/Deployment](#)
- [ogit/SaaS/DeploymentTemplate](#) => [ogit/SaaS/ConfigurationTemplate](#)

### 2.2.0.2 ogit/generates

Verb indicating if an entity generates another entity.

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

#### Allowed Connection

- [ogit/SaaS/ComponentInstance](#) => [ogit/Timeseries](#)

### 2.2.0.3 ogit/configures

The `from` entity, contains configuration data for the `to` entity

- id: <http://www.purl.org/ogit/configures>
- valid-from: Mon Apr 27 00:00:00 UTC 2015
- creator: [cwalker@arago.de](mailto:cwalker@arago.de)

#### Allowed Connection

- [ogit/SaaS/ConfigurationTemplate](#) => [ogit/SaaS/Component](#)

#### 2.2.0.4 ogit/belongs

Verb showing if one entity belongs to another.

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

##### Allowed Connection

- [ogit/Attachment](#) => [ogit/SaaS/ComponentInstance](#)

#### 2.2.0.5 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/SaaS/Integration](#) => [ogit/SaaS/IntegrationType](#)
- [ogit/SaaS/Integration](#) => [ogit/Configuration](#)

#### 2.2.0.6 ogit/Auth/uses

Denotes use of an Application.

- id: <http://www.purl.org/ogit/Auth/uses>
- valid-from: Mon Jan 01 00:00:00 UTC 2018
- creator: arago GmbH

##### Allowed Connection

- [ogit/Auth/Account](#) => [ogit/SaaS/ComponentInstance](#)

## 2.3 Attributes

### 2.3.0.1 ogit/comment

Contains a comment.

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

used

- optional:
  - [ogit/SaaS/Deployment](#)

### 2.3.0.2 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/Auth/Account](#)

### 2.3.0.3 ogit/Version/major

major version according to <https://semver.org/>

- id: <http://www.purl.org/ogit/Version/major>
- valid-from: Fri May 25 00:00:00 UTC 2018
- creator: [fotto@arago.de](mailto:fotto@arago.de)

used

- mandatory:
  - [ogit/SaaS/Component](#)
  - [ogit/SaaS/DeploymentTemplate](#)

#### 2.3.0.4 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/SaaS/ComponentInstance](#)
  - [ogit/SaaS/Deployment](#)

#### 2.3.0.5 ogit/url

Contains an URL (unified resource locator)

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

used

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

#### 2.3.0.6 ogit/isPermanent

If value equals "true" vertex can not be updated or deleted. E.g. after a service is provisioned.

- id: <http://www.purl.org/ogit/isPermanent>
- valid-from: Fri Mar 05 00:00:00 UTC 2021
- creator: Vitaly Teremasov

used

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

#### 2.3.0.7 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/Timeseries](#)

#### 2.3.0.8 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

- mandatory:
  - [ogit/Auth/Account](#)
  - [ogit/SaaS/Deployment](#)
- optional:
  - [ogit/SaaS/Component](#)
  - [ogit/SaaS/ComponentInstance](#)
  - [ogit/SaaS/Deployment](#)
  - [ogit/SaaS/DeploymentTemplate](#)

#### 2.3.0.9 ogit/createdAt

Defines a point in time when a ticket/incident/event etc was created or recorded.

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

used

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



#### 2.3.0.10 `ogit/accessControl`

The access control level of this Node. Value could mean different things to different applications / policies. Initial intent is that policies would treat "public-read" (inspired by Amazon AWS S3 ACLs) to mean anyone would have read-only access to this node.

- id: <http://www.purl.org/ogit/accessControl>
- valid-from: Thu Mar 26 00:00:00 UTC 2015
- creator: Chris Walker

used

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

#### 2.3.0.11 `ogit/Auth/Account/statusReason`

Status Reason of an `ogit/Auth/Account`

- id: <http://www.purl.org/ogit/Auth/Account/statusReason>
- valid-from: Mon Jan 01 00:00:00 UTC 2018
- creator: arago GmbH

used

- optional:
  - [ogit/Auth/Account](#)

#### 2.3.0.12 `ogit/Version/patch`

patch version according to <https://semver.org/>

- id: <http://www.purl.org/ogit/Version/patch>
- valid-from: Fri May 25 00:00:00 UTC 2018
- creator: [fotto@arago.de](mailto:fotto@arago.de)

used

- mandatory:
  - [ogit/SaaS/Component](#)
  - [ogit/SaaS/DeploymentTemplate](#)

#### 2.3.0.13 ogit/content

A string holding any type of content: plain string, XML fragments, RDF documents, ...

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

used

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

#### 2.3.0.14 ogit/Auth/Account/type

Type of an account. Values: person, application

- id: <http://www.purl.org/ogit/Auth/Account/type>
- valid-from: Mon Jan 01 00:00:00 UTC 2018
- creator: arago GmbH

used

- mandatory:
  - [ogit/Auth/Account](#)

#### 2.3.0.15 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/Auth/Account](#)
  - [ogit/SaaS/Component](#)
  - [ogit/SaaS/DeploymentTemplate](#)
  - [ogit/SaaS/Integration](#)
  - [ogit/SaaS/IntegrationType](#)
- optional:
  - [ogit/Attachment](#)
  - [ogit/Configuration](#)
  - [ogit/Timeseries](#)

#### 2.3.0.16 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/Configuration](#)
  - [ogit/SaaS/Component](#)
  - [ogit/SaaS/ConfigurationTemplate](#)
  - [ogit/SaaS/DeploymentTemplate](#)
  - [ogit/SaaS/Integration](#)
  - [ogit/SaaS/IntegrationType](#)
  - [ogit/Timeseries](#)

#### 2.3.0.17 ogit/Auth/Account/acceptedProjectTerms

Flag about whether HIRO Project terms were accepted

- id: <http://www.purl.org/ogit/Auth/Account/acceptedProjectTerms>
- valid-from: Mon Jan 01 00:00:00 UTC 2018
- creator: arago GmbH

used

- optional:
  - [ogit/Auth/Account](#)

#### 2.3.0.18 ogit/Auth/Account/acceptedTerms

Flag about whether usage terms were accepted

- id: <http://www.purl.org/ogit/Auth/Account/acceptedTerms>
- valid-from: Mon Jan 01 00:00:00 UTC 2018
- creator: arago GmbH

used

- optional:
  - [ogit/Auth/Account](#)

#### 2.3.0.19 ogit/Version/minor

minor version according to <https://semver.org/>

- id: <http://www.purl.org/ogit/Version/minor>
- valid-from: Fri May 25 00:00:00 UTC 2018
- creator: [fotto@arago.de](mailto:fotto@arago.de)

used

- mandatory:
  - [ogit/SaaS/Component](#)
  - [ogit/SaaS/DeploymentTemplate](#)

#### 2.3.0.20 ogit/lastUpdatedBy

Defines the last person or process who updated an entity.

- id: <http://www.purl.org/ogit/lastUpdatedBy>
- valid-from: Mon Jul 20 00:00:00 UTC 2015
- creator: Aymen Ayoub

used

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

#### 2.3.0.21 ogit/type

Type of an an entity.

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

used

- mandatory:
  - [ogit/SaaS/Integration](#)
- optional:
  - [ogit/Attachment](#)

#### 2.3.0.22 `ogit/Auth/Account/allowCookies`

Flag about whether cookies are allowed

- id: <http://www.purl.org/ogit/Auth/Account/allowCookies>
- valid-from: Mon Jan 01 00:00:00 UTC 2018
- creator: arago GmbH

used

- optional:
  - [ogit/Auth/Account](#)

#### 2.3.0.23 `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/Timeseries](#)

#### 2.3.0.24 `ogit/sourceTable`

Contains the source table, that stores where the data are coming from.

- id: <http://www.purl.org/ogit/sourceTable>
- valid-from: Thu Aug 20 00:00:00 UTC 2015
- creator: Aymen Ayoub

used

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

#### 2.3.0.25 ogit/creator

Creator of an entity.

- id: <http://www.purl.org/ogit/creator>
- valid-from: Thu Aug 20 00:00:00 UTC 2015
- creator: Aymen Ayoub

used

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

#### 2.3.0.26 ogit/lastUpdatedAt

Defines latest date and time when a ticket or it's comment was updated. The format of this value could be according to ISO 8601.

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

used

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

#### 2.3.0.27 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/SaaS/ComponentInstance](#)
  - [ogit/SaaS/ConfigurationTemplate](#)
  - [ogit/SaaS/Deployment](#)
- optional:
  - [ogit/Attachment](#)
  - [ogit/Configuration](#)

#### 2.3.0.28 [ogit/Auth/Account/acceptedPrivacy](#)

Flag about whether privacy terms were accepted

- id: <http://www.purl.org/ogit/Auth/Account/acceptedPrivacy>
- valid-from: Mon Jan 01 00:00:00 UTC 2018
- creator: arago GmbH

used

- optional:
  - [ogit/Auth/Account](#)

#### 2.3.0.29 [ogit/size](#)

The size, e.g. of a file.

- id: <http://www.purl.org/ogit/size>
- valid-from: Thu Mar 26 00:00:00 UTC 2015
- creator: arago Technologies

used

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

#### 2.3.0.30 [ogit/instance](#)

Defines the name of an instance.

- id: <http://www.purl.org/ogit/instance>
- valid-from: Wed Aug 03 00:00:00 UTC 2016
- creator: Philipp Pelchmann

used

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