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1. Overview

Kypo Training API Reference Description.

1.1. Version information

Version: 1.0.0

1.2. Contact information

Contact: Pavel Seda

Contact Email: pavelseda@email.cz

1.3. URI scheme

Host: localhost:8080

BasePath:/kypo2-rest-training

Schemes: HTTP, HTTPS

1.4. Tags

• Training definitions

• Training instances

• Training runs

2. Resources

2.1. Training Definitions

2.1.1. Create Training Definition

POST /kypo2-rest-training/training-definitions

Parameters

Туре	Name	Description	Schema
Query	fields optional	Fields which should be returned in REST API response	string
Body	body optional	Training Definition to be created	TrainingDefinitionCr eateDTO

Responses

HTTP Code	Description	Schema
200	The requested resource has been created.	TrainingDefinition CreateDTO
400	Given training definition is not valid	No Content
500	Unexpected condition was encountered.	No Content

Consumes

• application/json

Produces

• application/json

Example HTTP request

Request path

```
/kypo2-rest-training/training-definitions
```

Request query

```
{
    "fields" : "string"
}
```

Request body

```
{
  "title" : "Photo Hunter",
  "description" : "Description of Photo Hunter",
  "prerequisities" : [ "string" ],
  "outcomes" : [ "string" ],
  "state" : "UNRELEASED",
  "authorRef" : [ {
      "id" : 1,
      "authorRefLogin" : "Designer1"
  } ],
  "showStepperBar" : true,
  "sandboxDefinitionRef" : {
      "id" : 1,
      "sandboxDefinitionRef" : 1
  }
}
```

Example HTTP response

Response 200

```
"title" : "Photo Hunter",
  "description" : "Description of Photo Hunter",
  "prerequisities" : [ "string" ],
  "outcomes" : [ "string" ],
  "state" : "UNRELEASED",
  "authorRef" : [ {
      "id" : 1,
      "authorRefLogin" : "Designer1"
    } ],
  "showStepperBar" : true,
  "sandboxDefinitionRef" : {
      "id" : 1,
      "sandboxDefinitionRef" : 1
  }
}
```

2.1.2. Get all Training Definitions.

```
GET /kypo2-rest-training/training-definitions
```

Parameters

Туре	Name	Description	Schema
Query	fields optional	Fields which should be returned in REST API response	string
Query	page optional	Results page you want to retrieve (0N)	integer
Query	size optional	Number of records per page.	integer
Query	sort optional	Sorting criteria in the format: property(,asc desc). Default sort order is ascending. Multiple sort criteria are supported.	< string > array(multi)
Body	body optional	Parameters for filtering the objects.	< string, < string > array > map

Responses

HTTP Code	Description	Schema
200	All training definitions found.	<pre></pre>
500	Unexpected condition was encountered.	No Content

Produces

• application/json

Example HTTP request

Request path

```
/kypo2-rest-training/training-definitions
```

Request query

```
{
    "fields" : "string",
    "page" : 0,
    "size" : 0,
    "sort" : "asc"
}
```

Request body

{ }

Example HTTP response

Response 200

"array"

2.1.3. Update Training Definition

PUT /kypo2-rest-training/training-definitions

Description

Only unreleased training definition can be updated

Parameters

Type	Name	Description	Schema
Body	body optional	Training definition to be updated	TrainingDefinitionU pdateDTO

Responses

HTTP Code	Description	Schema
200	The requested resource has been updated.	TrainingDefinition DTO
400	Given training definition is not valid	No Content
404	Training definition with given id not found.	No Content
409	Cannot edit released or archived training definition.	No Content
500	Unexpected condition was encountered.	No Content

Consumes

• application/json

Produces

• application/json

Example HTTP request

Request path

```
/kypo2-rest-training/training-definitions
```

Request body

```
{
 "id" : 1,
 "title" : "TrainingDefinition2",
 "description" : "Unreleased training definition",
 "prerequisities" : [ "string" ],
 "outcomes" : [ "string" ],
 "state" : "UNRELEASED",
 "authorRef" : [ {
   "id" : 1,
   "authorRefLogin" : "Designer1"
 } ],
 "sandBoxDefinitionRef" : {
   "id" : 1,
   "sandboxDefinitionRef" : 1
 },
 "showStepperBar" : false,
 "startingLevel" : 4
}
```

Example HTTP response

```
"id" : 1,
 "title" : "TrainingDefinition2",
 "description": "Unreleased training definition",
 "prerequisities" : [ "string" ],
 "outcomes" : [ "string" ],
 "state" : "UNRELEASED",
  "authorRef" : [ {
   "id" : 1,
   "authorRefLogin" : "Designer1"
 } ],
 "sandBoxDefinitionRef" : {
   "id" : 1,
   "sandboxDefinitionRef" : 1
 },
  "startingLevel" : 4,
 "basicLevelInfoDTOs" : [ {
   "id" : 1,
   "title" : "Game Level1",
   "order" : 1,
   "levelType" : "GAME"
 }],
 "showStepperBar" : false,
 "canBeArchived" : true
}
```

2.1.4. Find level by ID

GET /kypo2-rest-training/training-definitions/levels/{levelId}

Parameters

Туре	Name	Description	Schema
Path	levelId required	Id of wanted level	integer(int64)
Query	fields optional	Fields which should be returned in REST API response	string

HTTP Code	Description	Schema
200	Game level has been found.	AbstractLevelDTO
404	Level with given id not found.	No Content

HTTP Code	Description	Schema
500	Unexpected condition was encountered.	No Content

Produces

• application/json

Example HTTP request

Request path

```
/kypo2-rest-training/training-definitions/levels/0
```

Request query

```
{
    "fields" : "string"
}
```

Example HTTP response

Response 200

```
"id" : 1,
  "title" : "Game Level1",
  "maxScore" : 20,
  "nextLevel" : 2,
  "preHook" : {
      "id" : 4
    },
  "postHook" : {
      "id" : 8
    },
  "levelType" : "GAME"
}
```

2.1.5. Get all training definition by sandbox definition id

```
GET /kypo2-rest-training/training-definitions/sandbox-
definitions/{sandboxDefinitionId}
```

Parameters

Туре	Name	Description	Schema
Path	sandboxDefini tionId required	Id of sandbox definition	integer(int64)
Query	page optional	Results page you want to retrieve (0N)	integer
Query	size optional	Number of records per page.	integer
Query	sort optional	Sorting criteria in the format: property(,asc desc). Default sort order is ascending. Multiple sort criteria are supported.	< string > array(multi)

Responses

HTTP Code	Description	Schema
200	All training definitions by sandbox definition found.	<pre>< TrainingDefinition DTO > array</pre>
500	Unexpected condition was encountered.	No Content

Produces

• application/json

Example HTTP request

Request path

```
/kypo2-rest-training/training-definitions/sandbox-definitions/0
```

Request query

```
{
    "page" : 0,
    "size" : 0,
    "sort" : "asc"
}
```

Example HTTP response

"array"

2.1.6. Update specific assessment level in given training definition

PUT /kypo2-rest-training/training-definitions/{definitionId}/assessment-levels

Description

Level can be deleted only in unreleased training definition

Parameters

Туре	Name	Description	Schema
Path	definitionId required	Id of definition to which level is assigned	integer(int64)
Body	body optional	Assessment level to be updated	AssessmentLevelUpd ateDTO

Responses

HTTP Code	Description	Schema
200	Assessment level updated.	No Content
400	Given assessment level is not valid.	No Content
404	Level not found in definition.	No Content
409	Cannot edit released or archived training definition.	No Content
500	Unexpected condition was encountered.	No Content

Consumes

• application/json

Produces

• application/json

Example HTTP request

Request path

/kypo2-rest-training/training-definitions/0/assessment-levels

Request body

```
"id" : 3,
"title" : "Assessment Level1",
"maxScore" : 40,
"questions" : "What is my fathers name?",
"instructions" : "Fill me up fast",
"type" : "TEST"
}
```

2.1.7. Update specific game level in given training definition

```
PUT /kypo2-rest-training/training-definitions/{definitionId}/game-levels
```

Description

Level can be updated only in unreleased training definition

Parameters

Туре	Name	Description	Schema
Path	definitionId required	Id of definition to which level is assigned	integer(int64)
Body	body optional	Game level to be updated	GameLevelUpdateDT O

Responses

HTTP Code	Description	Schema
200	Game level updated.	No Content
400	Given game level is not valid.	No Content
404	Level not found in definition.	No Content
409	Cannot edit released or archived training definition.	No Content
500	Unexpected condition was encountered.	No Content

Consumes

• application/json

Produces

• application/json

Example HTTP request

Request path

```
/kypo2-rest-training/training-definitions/0/game-levels
```

Request body

```
"id" : 1,
 "title" : "Game Level1",
 "maxScore" : 20,
 "flag" : "secretFlag",
 "content" : "Play me",
 "solution" : "This is how you do it",
 "solutionPenalized" : false,
 "estimatedDuration" : 20,
 "attachments" : [ "string" ],
 "incorrectFlagLimit" : 5,
 "hints" : [ {
   "id" : 1,
   "title" : "Hint1",
   "content" : "Very good advice",
   "hintPenalty" : 10
 } ]
}
```

2.1.8. Update specific info level in given training definition

```
PUT /kypo2-rest-training/training-definitions/{definitionId}/info-levels
```

Description

Level can be deleted only in unreleased training definition

Parameters

Туре	Name	Description	Schema
Path	definitionId required	Id of definition to which level is assigned	integer(int64)
Body	body optional	Info level to be updated	InfoLevelUpdateDTO

HTTP Code	Description	Schema
200	Info level updated.	No Content
400	Given info level is not valid.	No Content
404	Level not found in definition.	No Content
409	Cannot edit released or archived training definition.	No Content
500	Unexpected condition was encountered.	No Content

Consumes

• application/json

Produces

• application/json

Example HTTP request

Request path

```
/kypo2-rest-training/training-definitions/0/info-levels
```

Request body

```
"id" : 2,
  "title" : "Info Level1",
  "content" : "Informational stuff"
}
```

2.1.9. Delete specific level from definition

DELETE /kypo2-rest-training/training-definitions/{definitionId}/levels/{levelId}

Description

Level can be deleted only in unreleased training definition

Parameters

Туре	Name	Description	Schema
Path	definitionId required	Id of training definition from which level is deleted	integer(int64)

Туре	Name	Description	Schema
Path	levelId required	Id of level to be deleted	integer(int64)

Responses

HTTP Code	Description	Schema
200	The level deleted.	BasicLevelInfoDT O
404	Level with given id not found.	No Content
409	Cannot edit released or archived training definition.	No Content
500	Unexpected condition was encountered.	No Content

Produces

• application/json

Example HTTP request

Request path

```
/kypo2-rest-training/training-definitions/0/levels/0
```

Example HTTP response

Response 200

```
{
    "id" : 1,
    "title" : "Game Level1",
    "order" : 1,
    "levelType" : "GAME"
}
```

2.1.10. Swap level to the left

 $PUT \ / kypo2-rest-training/training-definitions/\{definitionId\}/levels/\{levelId\}/swap-left$

Description

The first one level cannot be swapped to the left

Parameters

Туре	Name	Description	Schema
Path	definitionId required	Id of training definition	integer(int64)
Path	levelId required	Id of level to be swapped	integer(int64)

Responses

HTTP Code	Description	Schema
200	The level has been swapped to the left.	BasicLevelInfoDT O
404	Training definition with given id not found.	No Content
409	Cannot edit released or archived training definition or cannot swap first level to the left.	No Content
500	Unexpected condition was encountered.	No Content

Produces

• application/json

Example HTTP request

Request path

```
/kypo2-rest-training/training-definitions/0/levels/0/swap-left
```

Example HTTP response

Response 200

```
{
   "id" : 1,
   "title" : "Game Level1",
   "order" : 1,
   "levelType" : "GAME"
}
```

2.1.11. Swap level to the right

 $PUT \ / kypo2-rest-training/training-definitions/\{definitionId\}/levels/\{levelId\}/swap-right$

Description

The last one level cannot be swapped to the right

Parameters

Type	Name	Description	Schema
Path	definitionId required	Id of training definition	integer(int64)
Path	levelId required	Id of level to be swapped	integer(int64)

Responses

HTTP Code	Description	Schema
200	The level has been swapped to the right.	BasicLevelInfoDT O
404	Training definition with given id not found.	No Content
409	Cannot edit released or archived training definition or cannot swap last level to the right.	No Content
500	Unexpected condition was encountered.	No Content

Produces

• application/json

Example HTTP request

Request path

/kypo2-rest-training/training-definitions/0/levels/0/swap-right

Example HTTP response

```
{
  "id" : 1,
  "title" : "Game Level1",
  "order" : 1,
  "levelType" : "GAME"
}
```

2.1.12. Create level

POST /kypo2-rest-training/training-definitions/{definitionId}/levels/{levelType}

Description

Creates only default level for given training definition

Parameters

Туре	Name	Description	Schema
Path	definitionId required	Id of definition for which is level created	integer(int64)
Path	levelType required	Level type	enum (game, assessment, info)
Query	fields optional	Fields which should be returned in REST API response	string

Responses

HTTP Code	Description	Schema
200	Level created.	AbstractLevelDTO
404	Training definition with given id not found.	No Content
409	Cannot create level in released or archived training definition.	No Content
500	Unexpected condition was encountered.	No Content

Produces

• application/json

Example HTTP request

Request path

```
/kypo2-rest-training/training-definitions/0/levels/string
```

Request query

```
{
   "fields" : "string"
}
```

Example HTTP response

Response 200

```
"id" : 1,
   "title" : "Game Level1",
   "maxScore" : 20,
   "nextLevel" : 2,
   "preHook" : {
      "id" : 4
   },
   "postHook" : {
      "id" : 8
   },
   "levelType" : "GAME"
}
```

2.1.13. Clone training definition

```
POST /kypo2-rest-training/training-definitions/{id}
```

Description

Only released and archived training definitions can be cloned

Parameters

Туре	Name	Description	Schema
Path	id required	Id of training definition to be cloned	integer(int64)

HTTP Code	Description	Schema
200	Training definition cloned.	TrainingDefinition DTO
404	Training definition with given id not found.	No Content
409	Cannot copy unreleased training definition.	No Content
500	Unexpected condition was encountered.	No Content

Produces

• application/json

Example HTTP request

Request path

/kypo2-rest-training/training-definitions/0

Example HTTP response

```
"id" : 1,
 "title" : "TrainingDefinition2",
 "description": "Unreleased training definition",
 "prerequisities" : [ "string" ],
 "outcomes" : [ "string" ],
 "state" : "UNRELEASED",
  "authorRef" : [ {
   "id" : 1,
   "authorRefLogin" : "Designer1"
 } ],
  "sandBoxDefinitionRef" : {
   "id" : 1,
   "sandboxDefinitionRef" : 1
 },
  "startingLevel" : 4,
 "basicLevelInfoDTOs" : [ {
   "id" : 1,
   "title" : "Game Level1",
   "order" : 1,
   "levelType" : "GAME"
 }],
 "showStepperBar" : false,
 "canBeArchived" : true
}
```

2.1.14. Get Training Definition by Id.

```
GET /kypo2-rest-training/training-definitions/{id}
```

Parameters

Type	Name	Description	Schema
Path	id required	ID of training definition to be retrieved.	integer(int64)
Query	fields optional	Fields which should be returned in REST API response	string

HTTP Code	Description	Schema
200	Training definition found.	TrainingDefinition DTO
404	Training definition with given id not found.	No Content

HTTP Code	Description	Schema
500	Unexpected condition was encountered.	No Content

Produces

• application/json

Example HTTP request

Request path

```
/kypo2-rest-training/training-definitions/0
```

Request query

```
{
    "fields" : "string"
}
```

Example HTTP response

```
"id" : 1,
 "title": "TrainingDefinition2",
 "description": "Unreleased training definition",
 "prerequisities" : [ "string" ],
 "outcomes" : [ "string" ],
 "state" : "UNRELEASED",
 "authorRef" : [ {
   "id" : 1,
   "authorRefLogin" : "Designer1"
 } ],
 "sandBoxDefinitionRef" : {
   "id" : 1,
   "sandboxDefinitionRef" : 1
 },
 "startingLevel" : 4,
 "basicLevelInfoDTOs" : [ {
   "id" : 1,
    "title" : "Game Level1",
   "order" : 1,
   "levelType" : "GAME"
 } ],
 "showStepperBar" : false,
 "canBeArchived" : true
}
```

2.1.15. Delete training definition

```
DELETE /kypo2-rest-training/training-definitions/{id}
```

Description

Released training definition canont be deleted

Parameters

Туре	Name	Description	Schema
Path	id required	Id of training definition to be deleted	integer(int64)

HTTP Code	Description	Schema
200	Training definition deleted.	No Content

HTTP Code	Description	Schema
404	Training definition or one of levels cannot be found.	No Content
409	Cannot delete released training definition.	No Content
500	Unexpected condition was encountered.	No Content

Produces

• application/json

Example HTTP request

Request path

/kypo2-rest-training/training-definitions/0

2.2. Training Instances

2.2.1. Create training instance

POST /kypo2-rest-training/training-instances

Description

This can only be done by the organizer or administrator

Parameters

Туре	Name	Description	Schema
Query	fields optional	Fields which should be returned in REST API response	string
Body	Training instance to be created optional		TrainingInstanceCre ateDTO

HTTP Code	Description	Schema
200	successful operation	TrainingInstanceD TO

HTTP Code	Description	Schema
201	Training instance created.	TrainingInstanceC reateDTO
400	Given training instance is not valid.	No Content
500	Unexpected condition was encountered.	No Content

Consumes

application/json

Produces

application/json

Example HTTP request

Request path

```
/kypo2-rest-training/training-instances
```

Request query

```
{
    "fields" : "string"
}
```

Request body

```
"startTime" : "2018-10-19 10:23:54+02",
  "endTime": "2018-10-25 10:23:54+02",
 "title" : "December instance",
  "poolSize" : 20,
  "password" : "hunter",
  "trainingDefinition" : {
    "id" : 1,
    "title": "TrainingDefinition2",
    "description" : "Unreleased training definition",
    "prerequisities" : [ "string" ],
    "outcomes" : [ "string" ],
    "state" : "UNRELEASED",
    "authorRef" : [ {
     "id" : 1,
      "authorRefLogin" : "Designer1"
    "sandBoxDefinitionRef" : {
     "id" : 1,
     "sandboxDefinitionRef" : 1
    },
    "startingLevel" : 4,
    "basicLevelInfoDTOs" : [ {
      "id" : 1,
      "title" : "Game Level1",
      "order" : 1,
     "levelType" : "GAME"
    }],
    "showStepperBar" : false,
    "canBeArchived" : true
 },
  "organizers" : [ {
    "id" : 1,
   "userRefLogin" : "Organizer1"
 } ]
}
```

Example HTTP response

```
"id" : 1,
  "startTime" : "2016-10-19 10:23:54+02",
 "endTime": "2017-10-19 10:23:54+02",
 "title" : "Concluded Instance",
  "poolSize" : 5,
  "trainingDefinition" : {
    "id" : 1,
    "title": "TrainingDefinition2",
    "description" : "Unreleased training definition",
    "prerequisities" : [ "string" ],
    "outcomes" : [ "string" ],
    "state" : "UNRELEASED",
    "authorRef" : [ {
     "id" : 1,
      "authorRefLogin" : "Designer1"
    "sandBoxDefinitionRef" : {
     "id" : 1,
     "sandboxDefinitionRef" : 1
    },
    "startingLevel" : 4,
    "basicLevelInfoDTOs" : [ {
      "id" : 1,
      "title" : "Game Level1",
      "order" : 1,
     "levelType" : "GAME"
    }],
    "showStepperBar" : false,
    "canBeArchived" : true
 },
 "organizers" : [ {
    "id" : 1,
   "userRefLogin" : "Organizer1"
 } ],
 "password" : "string"
}
```

```
"startTime" : "2018-10-19 10:23:54+02",
  "endTime": "2018-10-25 10:23:54+02",
 "title" : "December instance",
  "poolSize" : 20,
  "password" : "hunter",
  "trainingDefinition" : {
    "id" : 1,
    "title": "TrainingDefinition2",
    "description" : "Unreleased training definition",
    "prerequisities" : [ "string" ],
    "outcomes" : [ "string" ],
    "state" : "UNRELEASED",
    "authorRef" : [ {
     "id" : 1,
      "authorRefLogin" : "Designer1"
    "sandBoxDefinitionRef" : {
     "id" : 1,
      "sandboxDefinitionRef" : 1
    },
    "startingLevel" : 4,
    "basicLevelInfoDTOs" : [ {
      "id" : 1,
      "title" : "Game Level1",
      "order" : 1,
      "levelType" : "GAME"
    }],
    "showStepperBar" : false,
    "canBeArchived" : true
 },
  "organizers" : [ {
    "id" : 1,
    "userRefLogin" : "Organizer1"
 } ]
}
```

2.2.2. Get all training instances.

```
GET /kypo2-rest-training/training-instances
```

Parameters

Туре	Name	Description	Schema
Query	fields optional	Fields which should be returned in REST API response	string

Туре	Name	Description	Schema
Body	body optional	Pagination support.	Pageable
Body	body optional	Parameters for filtering the objects.	< string, < string > array > map

Responses

HTTP Code	Description	Schema
200	All training instances found.	<pre> < TrainingInstanceD TO > array</pre>
500	Unexpected condition was encountered.	No Content

Produces

application/json

Example HTTP request

Request path

```
/kypo2-rest-training/training-instances
```

Request query

```
{
    "fields" : "string"
}
```

Request body

```
{ }
```

Example HTTP response

```
"array"
```

2.2.3. Update training instance

PUT /kypo2-rest-training/training-instances

Description

This can only be done by organizer of training instance or administrator

Parameters

Туре	Name	Schema
Body	Training instance to be updated optional	TrainingInstanceUpdateDTO

Responses

HTTP Code	Description	Schema
200	successful operation	string
404	The requested resource was not found	No Content
409	The requested resource was not deleted because of its finish time	No Content

Consumes

• application/json

Produces

• application/json

Example HTTP request

Request path

/kypo2-rest-training/training-instances

Request body

```
"id" : 1,
  "startTime" : "2016-10-19 10:23:54+02",
  "endTime": "2017-10-19 10:23:54+02",
  "title" : "Concluded Instance",
  "poolSize" : 10,
  "password" : "hunter",
  "trainingDefinition" : {
    "id" : 1,
    "title" : "TrainingDefinition2",
    "description": "Unreleased training definition",
    "prerequisities" : [ "string" ],
    "outcomes" : [ "string" ],
    "state" : "UNRELEASED",
    "authorRef" : [ {
      "id" : 1,
     "authorRefLogin" : "Designer1"
    "sandBoxDefinitionRef" : {
      "id": 1,
      "sandboxDefinitionRef" : 1
    },
    "startingLevel" : 4,
    "basicLevelInfoDTOs" : [ {
      "id" : 1,
      "title" : "Game Level1",
      "order" : 1,
      "levelType" : "GAME"
    } ],
    "showStepperBar" : false,
    "canBeArchived" : true
 },
  "organizers" : [ {
   "id" : 1,
    "userRefLogin" : "Organizer1"
 } ]
}
```

Example HTTP response

Response 200

```
"string"
```

2.2.4. Get training instance by Id.

```
GET /kypo2-rest-training/training-instances/{id}
```

Description

Returns training instance by id and also contains particular training definition in it.

Parameters

Туре	Name	Description	Schema
Path	id required	Training instance ID	integer(int64)
Query	fields optional	Fields which should be returned in REST API response	string

Responses

HTTP Code	Description	Schema
200	Training instance found	TrainingInstanceD TO
404	Training instance with given id not found.	No Content
500	Unexpected condition was encountered.	No Content

Produces

application/json

Example HTTP request

Request path

```
/kypo2-rest-training/training-instances/0
```

Request query

```
{
    "fields" : "string"
}
```

Example HTTP response

```
"id" : 1,
 "startTime" : "2016-10-19 10:23:54+02",
 "endTime": "2017-10-19 10:23:54+02",
 "title" : "Concluded Instance",
  "poolSize" : 5,
 "trainingDefinition" : {
    "id" : 1,
    "title": "TrainingDefinition2",
    "description" : "Unreleased training definition",
    "prerequisities" : [ "string" ],
    "outcomes" : [ "string" ],
    "state" : "UNRELEASED",
    "authorRef" : [ {
     "id" : 1,
      "authorRefLogin" : "Designer1"
    "sandBoxDefinitionRef" : {
     "id" : 1,
      "sandboxDefinitionRef" : 1
   },
    "startingLevel" : 4,
    "basicLevelInfoDTOs" : [ {
      "id" : 1,
      "title" : "Game Level1",
      "order" : 1,
      "levelType" : "GAME"
    }],
    "showStepperBar" : false,
    "canBeArchived" : true
 },
 "organizers" : [ {
    "id" : 1,
   "userRefLogin" : "Organizer1"
 } ],
 "password" : "string"
}
```

2.2.5. Delete training instance

```
DELETE /kypo2-rest-training/training-instances/{id}
```

Description

This can only be done by organizer of training instance or administrator

Parameters

Туре	Name	Description	Schema
Path	id required	Id of training instance to be deleted	integer(int64)

Responses

HTTP Code	Description	Schema
200	Training instance updated.	No Content
400	Given training instance is not valid.	No Content
404	Training instance with given id not found.	No Content
409	Starting time of instance must be in future.	No Content
500	Unexpected condition was encountered.	No Content

Produces

• application/json

Example HTTP request

Request path

/kypo2-rest-training/training-instances/0

2.2.6. Allocate sandboxes

POST /kypo2-rest-training/training-instances/{instanceId}/sandbox-instances

Parameters

Туре	Name	Description	Schema
Path	instanceId required	Id of training instance for which sandboxes are allocated	integer(int64)

HTTP Code	Description	Schema
200	Sandboxes have been allocated.	No Content
404	Training instance with given id not found.	No Content

HTTP Code	Description	Schema
500	Unexpected condition was encountered.	No Content

Produces

• application/json

Example HTTP request

Request path

/kypo2-rest-training/training-instances/0/sandbox-instances

2.2.7. Get all training runs of specific training instance

GET /kypo2-rest-training/training-instances/{instanceId}/training-runs

Description

This can only be done by organizer of training instance or administrator

Parameters

Type	Name	Description	Schema
Path	instanceId required	Training Instance Id	integer(int64)
Query	fields required	Fields which should be returned in REST API response	string
Body	body optional	Pagination support.	Pageable
Body	body optional	Parameters for filtering the objects.	< string, < string > array > map

Responses

HTTP Code	Description	Schema
200	All training runs in given training instance found.	< TrainingRunDTO > array
500	Unexpected condition was encountered.	No Content

Produces

• application/json

Example HTTP request

Request path

```
/kypo2-rest-training/training-instances/0/training-runs
```

Request query

```
{
    "fields" : "string"
}
```

Request body

```
{ }
```

Example HTTP response

Response 200

```
"array"
```

2.3. Training Runs

2.3.1. Get all training Runs.

```
GET /kypo2-rest-training/training-runs
```

Parameters

Туре	Name	Description	Schema
Query	fields optional	Fields which should be returned in REST API response	string
Query	page optional	Results page you want to retrieve (0N)	integer
Query	size optional	Number of records per page.	integer

Туре	Name	Description	Schema
Query	sort optional	Sorting criteria in the format: property(,asc desc). Default sort order is ascending. Multiple sort criteria are supported.	< string > array(multi)
Body	body optional	Pagination support.	Pageable
Body	body optional	Parameters for filtering the objects.	< string, < string > array > map

Responses

HTTP Code	Description	Schema
200	All training runs found.	< TrainingRunDTO > array
500	Unexpected condition was encountered.	No Content

Produces

• application/json

Example HTTP request

Request path

```
/kypo2-rest-training/training-runs
```

Request query

```
{
    "fields" : "string",
    "page" : 0,
    "size" : 0,
    "sort" : "asc"
}
```

Request body

```
{ }
```

Example HTTP response

```
"array"
```

2.3.2. Access training run.

```
POST /kypo2-rest-training/training-runs/access
```

Parameters

Туре	Name	Description	Schema
Query	password required	password	string

Responses

HTTP Code	Description	Schema
200	Training run accessed.	AccessTrainingRu nDTO
404	There is no training instance with given password or first level not found in database.	No Content
500	Some error occurred during getting info about sandboxes.	No Content
503	There is no available sandbox, wait a minute and try again.	No Content

Produces

• application/json

Example HTTP request

Request path

```
/kypo2-rest-training/training-runs/access
```

Request query

```
{
    "password" : "string"
}
```

Example HTTP response

Response 200

```
{
 "abstractLevelDTO" : {
   "id" : 1,
    "title" : "Game Level1",
    "maxScore" : 20,
    "nextLevel" : 2,
    "preHook" : {
     "id" : 4
   },
    "postHook" : {
     "id" : 8
   "levelType" : "GAME"
 "infoAboutLevels" : [ {
   "id" : 1,
    "title" : "Game Level1",
   "order" : 1,
   "levelType" : "GAME"
 } ]
}
```

2.3.3. Get all accessed training runs.

```
GET /kypo2-rest-training/training-runs/accessed
```

Description

Returns training run which was accessed by logged in user

Parameters

Туре	Name	Description	Schema
Query	page optional	Results page you want to retrieve (0N)	integer
Query	size optional	Number of records per page.	integer
Query	sort optional	Sorting criteria in the format: property(,asc desc). Default sort order is ascending. Multiple sort criteria are supported.	< string > array(multi)

Responses

HTTP Code	Description	Schema
200	All accessed training runs found.	<pre> < AccessedTraining RunDTO > array</pre>
500	Unexpected condition was encountered.	No Content

Produces

• application/json

Example HTTP request

Request path

```
/kypo2-rest-training/training-runs/accessed
```

Request query

```
{
    "page" : 0,
    "size" : 0,
    "sort" : "asc"
}
```

Example HTTP response

Response 200

```
"array"
```

2.3.4. Get training run by Id.

```
GET /kypo2-rest-training/training-runs/{runId}
```

Parameters

Type	Name	Description	Schema
Path	runId required	Training run Id	integer(int64)

Туре	Name	Description	Schema
Query	fields optional	Fields which should be returned in REST API response	string

Responses

HTTP Code	Description	Schema
200	Training run with given id found.	TrainingRunDTO
404	Training run with given id not found.	No Content
500	Unexpected condition was encountered.	No Content

Produces

• application/json

Example HTTP request

Request path

```
/kypo2-rest-training/training-runs/0
```

Request query

```
{
    "fields" : "string"
}
```

Example HTTP response

Response 200

```
"id" : 1,
    "startTime" : "2016-10-19 10:23:54+02",
    "endTime" : "2022-10-19 10:23:54+02",
    "eventLogReference" : "string",
    "state" : "ALLOCATED",
    "sandboxInstanceRef" : {
        "id" : 1,
        "sandboxInstanceRef" : 1
    }
}
```

2.3.5. Get hint of game level.

GET /kypo2-rest-training/training-runs/{runId}/hints/{hintId}

Description

Returns hint if given training runs exists and current level is game level

Parameters

Туре	Name	Description	Schema
Path	hintId required	Hint ID	integer(int64)
Path	runId required	Training run ID	integer(int64)
Query	fields optional	Fields which should be returned in REST API response	string

Responses

HTTP Code	Description	Schema
200	Hint found.	HintDTO
400	Current level is not game level and does not have hints.	No Content
404	Hint with given id not found.	No Content
409	Hint with given id is not in current level of training run.	No Content
500	Unexpected condition was encountered.	No Content

Produces

• application/json

Example HTTP request

Request path

/kypo2-rest-training/training-runs/0/hints/0

Request query

```
{
   "fields" : "string"
}
```

Example HTTP response

Response 200

```
"id" : 1,
  "title" : "Hint1",
  "content" : "Very good advice",
  "hintPenalty" : 10
}
```

2.3.6. Get boolean about flag correctness

```
GET /kypo2-rest-training/training-runs/{runId}/is-correct-flag
```

Description

Current level of given training run must be game level

Parameters

Туре	Name	Description	Schema
Path	runId required	Training run ID	integer(int64)
Query	flag required	Submitted flag	string

Responses

HTTP Code	Description	Schema
200	Flag checked.	IsCorrectFlagDTO
400	Current level is not game level and does not have flag.	No Content
404	Training run with given id not found.	No Content
500	Unexpected condition was encountered.	No Content

Produces

• application/json

Example HTTP request

Request path

```
/kypo2-rest-training/training-runs/0/is-correct-flag
```

Request query

```
{
    "flag" : "string"
}
```

Example HTTP response

Response 200

```
{
   "remainingAttempts" : 3,
   "correct" : false
}
```

2.3.7. Get level of given training run.

```
GET /kypo2-rest-training/training-runs/{runId}/next-levels
```

Description

Returns (assessment, game, info) level if any next level exists and training run as well

Parameters

Type	Name	Description	Schema
Path	runId required	Training run ID	integer(int64)
Query	fields optional	Fields which should be returned in REST API response	string

Responses

HTTP Code	Description	Schema
200	Next level found.	AbstractLevelDTO
404	There is no next level or could not be found in database.	No Content
500	Unexpected condition was encountered.	No Content

Produces

• application/json

Example HTTP request

Request path

```
/kypo2-rest-training/training-runs/0/next-levels
```

Request query

```
{
    "fields" : "string"
}
```

Example HTTP response

Response 200

```
"id" : 1,
  "title" : "Game Level1",
  "maxScore" : 20,
  "nextLevel" : 2,
  "preHook" : {
      "id" : 4
    },
  "postHook" : {
      "id" : 8
    },
  "levelType" : "GAME"
}
```

2.3.8. Get solution of game level.

```
GET /kypo2-rest-training/training-runs/{runId}/solutions
```

Description

Returns solution if given training runs exists and current level is game level

Parameters

Туре	Name	Description	Schema
Path	runId required	Training run ID	integer(int64)

Responses

HTTP Code	Description	Schema
200	Solution found.	string
400	Current level is not game level and does not have solution.	No Content
404	Training run with given id cannot be found.	No Content
500	Unexpected condition was encountered.	No Content

Produces

• application/json

Example HTTP request

Request path

/kypo2-rest-training/training-runs/0/solutions

Example HTTP response

Response 200

"string"

3. Definitions

3.1. AbstractLevelDTO

Superclass for classes GameLevelDTO, AssessmentLevelDTO and InfoLevelDTO

Name	Description	Schema
id optional	Main identifier of level. Example: 1	integer(int64)
levelType optional	Type of the level. Example: "GAME"	enum (ASSESSMENT, INFO, GAME)
maxScore optional	The maximum score a participant can achieve during a level. Example: 20	integer(int32)
nextLevel optional	Reference to the next abstract level (if it is null, then it is the last level) Example: 2	integer(int64)
postHook optional	Example: "PostHookDTO"	PostHookDTO
preHook optional	Example: "PreHookDTO"	PreHookDTO
title optional	Short textual description of the level. Example : "Game Level1"	string

3.2. AccessTrainingRunDTO

.

Name	Description	Schema
abstractLevel DTO optional	First level in the current training run. Example: "AbstractLevelDTO"	AbstractLevelDTO
infoAboutLev els optional	Information about all levels in training instance. Example: ["BasicLevelInfoDTO"]	< BasicLevelInfoDTO > array

${\bf 3.3.}\ Accessed Training RunDTO$

Already accessed training run by some participant.

Name	Description	Schema
currentLevelO rder optional	Current level order of training run. Example: 1	integer(int32)
id optional	Main identifier of training run. Example : 1	integer(int64)

Name	Description	Schema
numberOfLev els optional	The number of levels in the training instance. Example : 3	integer(int32)
possibleActio n optional	Possible action which can be executed with training Run. Example : "RESULTS"	enum (TRY_AGAIN, RESULTS)
title optional	Short textual description of the training instance. Example : "Concluded Instance"	string
trainingInstan ceEndDate optional	End date of training instance for which the training run was created. Example: "2017-10-19 10:23:54+02"	string(date-time)
trainingInstan ceStartDate optional	Start date of training instance for which the training run was created. Example: "2016-10-19 10:23:54+02"	string(date-time)

${\bf 3.4.}\ Accessed Training Run Rest Resource$

Name	Description	Schema
content optional	Retrieved Accessed Training Runs from databases. Example : ["AccessedTrainingRunDTO"]	<pre>< AccessedTrainingRu nDTO > array</pre>
pagination optional	Pagination including: page number, number of elements in page, size, total elements and total pages. Example: "Pagination"	Pagination

3.5. AssessmentLevelDTO

Polymorphism : Composition

Name	Description	Schema
assessmentTy pe optional	Type of assessment. Example: "TEST"	enum (TEST, QUESTIONNAIRE)
id optional	Main identifier of level. Example: 1	integer(int64)
instructions optional	Assessment instructions for participant. Example : "Fill me up"	string
levelType optional	Type of the level. Example: "GAME"	enum (ASSESSMENT, INFO, GAME)

Name	Description	Schema
maxScore optional	The maximum score a participant can achieve during a level. Example: 20	integer(int32)
nextLevel optional	Reference to the next abstract level (if it is null, then it is the last level) Example: 2	integer(int64)
postHook optional	Example: "PostHookDTO"	PostHookDTO
preHook optional	Example: "PreHookDTO"	PreHookDTO
questions optional	List of questions in this assessment as JSON. Example : "What is my mothers name?"	string
title optional	Short textual description of the level. Example : "Game Level1"	string

${\bf 3.6.}\ Assessment Level Update DTO$

Assessment level to update.

Name	Description	Schema
id required	Main identifier of level. Example: 3	integer(int64)
instructions optional	Instructions of assessment level to update. Example: "Fill me up fast"	string
maxScore required	Maximum score of assessment level to update. Have to be filled in range from 0 to 100. Minimum value: 0 Maximum value: 100 Example: 40	integer(int32)
questions optional	Questions of assessment level to update. Example : "What is my fathers name?"	string
title required	Short textual description of the level. Example: "Assessment Level1"	string
type required	Type of assessment level to update. Example: "TEST"	enum (TEST, QUESTIONNAIRE)

3.7. AuthorRefDTO

Name	Description	Schema
authorRefLogi n optional	Reference to user in another microservice. Example: "Designer1"	string
id optional	Main identifier of author. Example : 1	integer(int64)

3.8. BasicLevelInfoDTO

Name	Description	Schema
id optional	Main identifier of level. Example: 1	integer(int64)
levelType optional	Type of the level. Example: "GAME"	enum (ASSESSMENT, INFO, GAME)
order optional	Order of level among levels in training definition. Example: 1	integer(int32)
title optional	Short textual description of the level. Example: "Game Level1"	string

3.9. GameLevelDTO

 ${\it Polymorphism}: {\tt Composition}$

Name	Description	Schema
attachments optional	Downloadable files for level (pictures, source code) Example : ["string"]	< string > array
content optional	The information and experiences that are directed towards a participant. Example: "Play me"	string
estimatedDur ation optional	Estimated time taken by the player to resolve the level. Example : 25	integer(int32)
flag optional	Keyword found in game, used for access next level. Example : "secretFlag"	string
hints optional	Information which helps player resolve the level. Example : ["HintDTO"]	< HintDTO > array
id optional	Main identifier of level. Example: 1	integer(int64)
incorrectFlag Limit optional	How many times player can submit incorrect flag before displaying solution. Example: 5	integer(int32)

Name	Description	Schema
levelType optional	Type of the level. Example: "GAME"	enum (ASSESSMENT, INFO, GAME)
maxScore optional	The maximum score a participant can achieve during a level. Example: 20	integer(int32)
nextLevel optional	Reference to the next abstract level (if it is null, then it is the last level) Example: 2	integer(int64)
postHook optional	Example: "PostHookDTO"	PostHookDTO
preHook optional	Example: "PreHookDTO"	PreHookDTO
solution optional	Instruction how to get flag in game. Example: "This is how you do it"	string
solutionPenali zed optional	Sign if displaying of solution is penalized. Example : true	boolean
title optional	Short textual description of the level. Example : "Game Level1"	string

3.10. GameLevelUpdateDTO

Game level to update.

Name	Description	Schema
attachments optional	Downloadable files for level (pictures, source code) Example : ["string"]	< string > array
content optional	The information and experiences that are directed towards an player. Example : "Play me"	string
estimatedDur ation optional	Estimated time taken by the player to resolve the level. Example : 20	integer(int32)
flag required	Keyword found in game, used for access next level. Length: 0 - 50 Example: "secretFlag"	string
hints optional	Information which helps participant resolve the level. Example : ["HintDTO"]	< HintDTO > array
id required	Main identifier of level. Example: 1	integer(int64)

Name	Description	Schema
incorrectFlag Limit required	How many times participant can submit incorrect flag before displaying solution. Minimum value: 0 Example: 5	integer(int32)
maxScore required	The maximum score a participant can achieve during a level. Minimum value: 0 Maximum value: 100 Example: 20	integer(int32)
solution optional	Instruction how to get flag in game. Example: "This is how you do it"	string
solutionPenali zed required	Sign if displaying of solution is penalized. Example : false	boolean
title required	Short textual description of the level. Example : "Game Level1"	string

3.11. HintDTO

A brief textual description to aid the participant.

Name	Description	Schema
content optional	The information and experiences that are directed towards a participant. Example: "Very good advice"	string
hintPenalty optional	The number of points the participant loses after receiving the hint. Example : 10	integer(int32)
id optional	Main identifier of hint. Example : 1	integer(int64)
title optional	Short textual description of the hint. Example : "Hint1"	string

3.12. InfoLevelDTO

 ${\it Polymorphism}: {\it Composition}$

Name	Description	Schema
content optional	The information and experiences that are directed towards a participant. Example: "Informational stuff"	string

Name	Description	Schema
id optional	Main identifier of level. Example: 1	integer(int64)
levelType optional	Type of the level. Example: "GAME"	enum (ASSESSMENT, INFO, GAME)
maxScore optional	The maximum score a participant can achieve during a level. Example : 20	integer(int32)
nextLevel optional	Reference to the next abstract level (if it is null, then it is the last level) Example: 2	integer(int64)
postHook optional	Example: "PostHookDTO"	PostHookDTO
preHook optional	Example: "PreHookDTO"	PreHookDTO
title optional	Short textual description of the level. Example : "Game Level1"	string

3.13. InfoLevelUpdateDTO

Info level to update.

Name	Description	Schema
content optional	The information and experiences that are directed towards a participant. Example: "Informational stuff"	string
id required	Main identifier of level. Example : 2	integer(int64)
title required	Short textual description of the level. Example: "Info Level1"	string

3.14. IsCorrectFlagDTO

Name	Description	Schema
correct optional	True/false if flag has been correct/incorrect. Example : false	boolean
remainingAtte mpts optional	Number of attempts to submit a bad flag. Example : 3	integer(int32)

3.15. Pageable

Name	Description	Schema
offset optional	Example: 0	integer(int64)
pageNumber optional	Example: 0	integer(int32)
pageSize optional	Example: 0	integer(int32)
paged optional	Example: true	boolean
sort optional	Example: "Sort"	Sort
unpaged optional	Example: true	boolean

3.16. Pagination

Name	Description	Schema
number optional	Page number. Example: 0	integer(int32)
numberOfEle ments optional	Number of elements in page. Example : 0	integer(int32)
size optional	Page size. Example: 0	integer(int32)
totalElements optional	Total number of elements in this resource (in all Pages). Example : 0	integer(int64)
totalPages optional	Total number of pages. Example: 0	integer(int32)

3.17. PostHookDTO

.

Name	Description	Schema
id optional	Main identifier of postHook. Example : 8	integer(int64)

3.18. PreHookDTO

•

Name	Description	Schema
id optional	Main identifier of preHook. Example : 4	integer(int64)

3.19. SandboxDefinitionRefDTO

Name	Description	Schema
id optional	Main identifier of sandbox instance ref. Example : 1	integer(int64)
sandboxDefini tionRef optional	Reference to sandbox definition in another microservice. Example : 1	integer(int64)

3.20. SandboxInstanceRefDTO

Name	Description	Schema
id optional	Main identifier of sandbox instance ref. Example : 1	integer(int64)
sandboxInsta nceRef optional	Reference to sandbox instance in another microservice. Example : 1	integer(int64)

3.21. Sort

Name	Description	Schema
sorted optional	Example: true	boolean
unsorted optional	Example: true	boolean

3.22. TrainingDefinitionCreateDTO

Training definition to create.

Name	Description	Schema
authorRef required	References to the authors of the training definition. Example : ["AuthorRefDTO"]	< AuthorRefDTO > array

Name	Description	Schema
description optional	Description of training definition that is visible to the participant. Example: "Description of Photo Hunter"	string
outcomes optional	A list of knowledge and skills that the participant should learn by attending the training (if it is used for educational purposes) Example: ["string"]	< string > array
prerequisities optional	List of knowledge and skills necessary to complete the training. Example: ["string"]	< string > array
sandboxDefini tionRef required	Reference to the sandbox definition. Example : "SandboxDefinitionRefDTO"	SandboxDefinitionR efDTO
showStepperB ar required	Sign if stepper bar should be displayed. Example : true	boolean
state required	Current state of training definition. Example: "UNRELEASED"	enum (PRIVATED, RELEASED, ARCHIVED, UNRELEASED)
title required	A name of the training/game (e.g., Photo Hunter). Example : "Photo Hunter"	string

3.23. TrainingDefinitionDTO

A blueprint of abstract levels.

Name	Description	Schema
authorRef optional	References to the authors of the training definition. Example : ["AuthorRefDTO"]	< AuthorRefDTO > array
basicLevelInf oDTOs optional	<pre>Information about all levels in training definition. Example: ["BasicLevelInfoDTO"]</pre>	< BasicLevelInfoDTO > array
canBeArchive d optional	Example: true	boolean
description optional	Description of training definition that is visible to the participant. Example: "Unreleased training definition"	string
id optional	Main identifier of training definition. Example : 1	integer(int64)

Name	Description	Schema
outcomes optional	A list of knowledge and skills that the participant should learn by attending the training (if it is used for educational purposes) Example: ["string"]	< string > array
prerequisities optional	List of knowledge and skills necessary to complete the training. Example: ["string"]	< string > array
sandBoxDefin itionRef optional	Reference to the sandbox definition. Example : "SandboxDefinitionRefDTO"	SandboxDefinitionR efDTO
showStepperB ar optional	Sign if stepper bar should be displayed. Example : false	boolean
startingLevel optional	Identifier of first level of training definition. Example : 4	integer(int64)
state optional	Current state of training definition. Example : "UNRELEASED"	enum (PRIVATED, RELEASED, ARCHIVED, UNRELEASED)
title optional	A name of the training/game (e.g., Photo Hunter). Example : "TrainingDefinition2"	string

${\bf 3.24.}\ Training Definition Rest Resource$

Name	Description	Schema
content optional	Retrieved Training Definitions from databases. Example: ["TrainingDefinitionDTO"]	<pre></pre>
pagination optional	Pagination including: page number, number of elements in page, size, total elements and total pages. Example: "Pagination"	Pagination

${\bf 3.25.\ Training Definition Update DTO}$

Training definition to update.

Name	Description	Schema
authorRef required	References to the authors of the training definition. Example : ["AuthorRefDTO"]	< AuthorRefDTO > array

Name	Description	Schema
description optional	Description of training definition that is visible to the participant. Example: "Unreleased training definition"	string
id required	Main identifier of training definition. Example : 1	integer(int64)
outcomes optional	A list of knowledge and skills that the participant should learn by attending the training (if it is used for educational purposes) Example: ["string"]	< string > array
prerequisities optional	List of knowledge and skills necessary to complete the training. Example: ["string"]	< string > array
sandBoxDefin itionRef required	Reference to the sandbox definition. Example : "SandboxDefinitionRefDTO"	SandboxDefinitionR efDTO
showStepperB ar required	Sign if stepper bar should be displayed. Example : false	boolean
startingLevel required	Identifier of first level of training definition. Example : 4	integer(int64)
state required	Current state of training definition. Example: "UNRELEASED"	enum (PRIVATED, RELEASED, ARCHIVED, UNRELEASED)
title required	A name of the training/game (e.g., Photo Hunter). Example : "TrainingDefinition2"	string

3.26. TrainingInstanceCreateDTO

Training Instance to create.

Name	Description	Schema
endTime required	Date when training instance ends. Example : "2018-10-25 10:23:54+02"	string(date-time)
organizers required	Reference to users which organize training instance. Example : ["UserRefDTO"]	< UserRefDTO > array
password required	Keyword which will be modified and then used for accessing training run. Example: "hunter"	string

Name	Description	Schema
poolSize required	Number of sandboxes that can be allocated. Minimum value: 1 Maximum value: 100 Example: 20	integer(int32)
startTime required	Date when training instance starts. Example : "2018-10-19 10:23:54+02"	string(date-time)
title required	Short textual description of the training instance. Example : "December instance"	string
trainingDefini tion required	Reference to training definition from which is training instance created. Example: "TrainingDefinitionDTO"	TrainingDefinitionD TO

3.27. TrainingInstanceDTO

A session of attending a concrete training, which involves a deployment of the training definition in one or more sandbox instances that are then assigned to participants. The instance comprises one or more game runs.

Name	Description	Schema
endTime optional	Date when training instance ends. Example: "2017-10-19 10:23:54+02"	string(date-time)
id optional	Main identifier of training instance. Example : 1	integer(int64)
organizers optional	Reference to users which organize training instance. Example : ["UserRefDTO"]	< UserRefDTO > array
password optional	Example: "string"	string
poolSize optional	Number of sandboxes that can be allocated. Example : 5	integer(int32)
startTime optional	Date when training instance starts. Example : "2016-10-19 10:23:54+02"	string(date-time)
title optional	Short textual description of the training instance. Example : "Concluded Instance"	string
trainingDefini tion optional	Reference to training definition from which is training instance created. Example: "TrainingDefinitionDTO"	TrainingDefinitionD TO

${\bf 3.28.\ Training Instance Rest Resource}$

Name	Description	Schema
content optional	Retrieved Training Instances from databases. Example : ["TrainingInstanceDTO"]	<pre>< TrainingInstanceDT O > array</pre>
pagination optional	Pagination including: page number, number of elements in page, size, total elements and total pages. Example: "Pagination"	Pagination

${\bf 3.29. \ Training Instance Update DTO}$

Training Instance to update.

Name	Description	Schema
endTime required	Date when training instance ends. Example: "2017-10-19 10:23:54+02"	string(date-time)
id required	Main identifier of training instance. Example : 1	integer(int64)
organizers required	Reference to users which organize training instance. Example : ["UserRefDTO"]	< UserRefDTO > array
password required	Keyword which will be modified and then used for accessing training run. Example: "hunter"	string
poolSize required	Number of sandboxes that can be allocated. Minimum value: 1 Maximum value: 100 Example: 10	integer(int32)
startTime required	Date when training instance starts. Example : "2016-10-19 10:23:54+02"	string(date-time)
title required	Short textual description of the training instance. Example : "Concluded Instance"	string
trainingDefini tion required	Reference to training definition from which is training instance created. Example: "TrainingDefinitionDTO"	TrainingDefinitionD TO

3.30. TrainingRunDTO

The act, or a recording, of performing actions during training from a perspective of one concrete participant.

Name	Description	Schema
endTime optional	Date when training run ends. Example : "2022-10-19 10:23:54+02"	string(date-time)

Name	Description	Schema
eventLogRefer ence optional	Example: "string"	string
id optional	Main identifier of training run. Example : 1	integer(int64)
sandboxInsta nceRef optional	Reference to the received sandbox. Example : "SandboxInstanceRefDTO"	SandboxInstanceRef DTO
startTime optional	Date when training run started. Example: "2016-10-19 10:23:54+02"	string(date-time)
state optional	Current state of training run. Example: "ALLOCATED"	enum (NEW, ALLOCATED, READY, ARCHIVED)

3.31. TrainingRunRestResource

Name	Description	Schema
content optional	Retrieved Training Runs from databases. Example: ["TrainingRunDTO"]	< TrainingRunDTO > array
pagination optional	Pagination including: page number, number of elements in page, size, total elements and total pages. Example: "Pagination"	Pagination

3.32. UserRefDTO

Name	Description	Schema
id optional	Main identifier of user ref. Example : 1	integer(int64)
userRefLogin optional	Reference to user in another microservice. Example: "Organizer1"	string