

# KYPO2 Trainings - API Reference

# Table of Contents

1. Overview .....	1
1.1. Version information .....	1
1.2. Contact information .....	1
1.3. URI scheme .....	1
1.4. Tags .....	1
2. Resources .....	1
2.1. Training Definitions.....	1
2.2. Training Instances .....	22
2.3. Training Runs .....	32
3. Definitions .....	46
3.1. AbstractLevelDTO .....	46
3.2. AccessTrainingRunDTO .....	47
3.3. AccessedTrainingRunDTO .....	47
3.4. AccessedTrainingRunRestResource.....	48
3.5. AssessmentLevelDTO .....	48
3.6. AssessmentLevelUpdatedDTO.....	49
3.7. AuthorRefDTO.....	49
3.8. BasicLevelInfoDTO .....	49
3.9. GameLevelDTO .....	50
3.10. GameLevelUpdatedDTO .....	51
3.11. HintDTO .....	52
3.12. InfoLevelDTO .....	52
3.13. InfoLevelUpdatedDTO.....	53
3.14. IsCorrectFlagDTO .....	53
3.15. Pageable .....	53
3.16. Pagination .....	54
3.17. PostHookDTO .....	54
3.18. PreHookDTO .....	54
3.19. SandboxDefinitionRefDTO.....	54
3.20. SandboxInstanceRefDTO .....	55
3.21. Sort .....	55
3.22. TrainingDefinitionCreatedDTO.....	55
3.23. TrainingDefinitionDTO.....	56
3.24. TrainingDefinitionRestResource .....	57
3.25. TrainingDefinitionUpdatedDTO .....	57
3.26. TrainingInstanceCreatedDTO .....	58
3.27. TrainingInstanceDTO .....	58
3.28. TrainingInstanceRestResource.....	59

3.29. TrainingInstanceUpdatedDTO .....	59
3.30. TrainingRunDTO .....	60
3.31. TrainingRunRestResource .....	60
3.32. UserRefDTO .....	61

# 1. Overview

Kypo Training API Reference Description.

## 1.1. Version information

*Version* : Version: 1.0.0

## 1.2. Contact information

*Contact* : Pavel Seda

*Contact Email* : [pavelseda@email.cz](mailto: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

Type	Name	Description	Schema
Query	<b>fields</b> <i>optional</i>	Fields which should be returned in REST API response	string
Body	<b>body</b> <i>optional</i>	Training Definition to be created	<a href="#">TrainingDefinitionCreateDTO</a>

## Responses

HTTP Code	Description	Schema
200	The requested resource has been created.	<a href="#">TrainingDefinitionCreateDTO</a>
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",  
  "prerequisites" : [ "string" ],  
  "outcomes" : [ "string" ],  
  "state" : "UNRELEASED",  
  "autIds" : [ 0 ],  
  "showStepperBar" : true,  
  "sandboxDefinitionRef" : 1  
}
```

## Example HTTP response

## Response 200

```
{
  "title" : "Photo Hunter",
  "description" : "Description of Photo Hunter",
  "prerequisites" : [ "string" ],
  "outcomes" : [ "string" ],
  "state" : "UNRELEASED",
  "autIds" : [ 0 ],
  "showStepperBar" : true,
  "sandboxDefinitionRef" : 1
}
```

### 2.1.2. Get all Training Definitions.

GET /kypo2-rest-training/training-definitions

#### Parameters

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

#### Responses

HTTP Code	Description	Schema
200	All training definitions found.	< <a href="#">TrainingDefinition DTO</a> > array
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	<b>body</b> <i>optional</i>	Training definition to be updated	<a href="#">TrainingDefinitionUpdateDTO</a>

### Responses

HTTP Code	Description	Schema
200	The requested resource has been updated.	<a href="#">TrainingDefinition DTO</a>
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",
  "prerequisites" : [ "string" ],
  "outcomes" : [ "string" ],
  "state" : "UNRELEASED",
  "autIds" : [ 0 ],
  "sandboxDefinitionRef" : 1,
  "showStepperBar" : false
}
```

### Example HTTP response

#### Response 200



```
{
  "id" : 1,
  "title" : "TrainingDefinition2",
  "description" : "Unreleased training definition",
  "prerequisites" : [ "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

Type	Name	Description	Schema
Path	<b>levelId</b> <i>required</i>	Id of wanted level	integer(int64)
Query	<b>fields</b> <i>optional</i>	Fields which should be returned in REST API response	string

##### Responses

HTTP Code	Description	Schema
200	Game level has been found.	<a href="#">AbstractLevelDTO</a>
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

Type	Name	Description	Schema
Path	<b>sandboxDefinitionId</b> <i>required</i>	Id of sandbox definition	integer(int64)
Query	<b>page</b> <i>optional</i>	Results page you want to retrieve (0..N)	integer
Query	<b>size</b> <i>optional</i>	Number of records per page.	integer
Query	<b>sort</b> <i>optional</i>	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.	< <a href="#">TrainingDefinition DTO</a> > array
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

Response 200

```
"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

Type	Name	Description	Schema
Path	<b>definitionId</b> <i>required</i>	Id of definition to which level is assigned	integer(int64)
Body	<b>body</b> <i>optional</i>	Assessment level to be updated	<a href="#">AssessmentLevelUpdateDTO</a>

#### 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

Type	Name	Description	Schema
Path	<b>definitionId</b> <i>required</i>	Id of definition to which level is assigned	integer(int64)
Body	<b>body</b> <i>optional</i>	Game level to be updated	<a href="#">GameLevelUpdateDTO</a>

### 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

Type	Name	Description	Schema
Path	<b>definitionId</b> <i>required</i>	Id of definition to which level is assigned	integer(int64)
Body	<b>body</b> <i>optional</i>	Info level to be updated	<a href="#">InfoLevelUpdateDTO</a>

### Responses

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

Type	Name	Description	Schema
Path	<b>definitionId</b> <i>required</i>	Id of training definition from which level is deleted	integer(int64)

Type	Name	Description	Schema
Path	<b>levelId</b> <i>required</i>	Id of level to be deleted	integer(int64)

## Responses

HTTP Code	Description	Schema
200	The level deleted.	<a href="#">BasicLevelInfoDTO</a>
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

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

## Responses

HTTP Code	Description	Schema
200	The level has been swapped to the left.	<a href="#">BasicLevelInfoDTO</a>
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	<b>definitionId</b> <i>required</i>	Id of training definition	integer(int64)
Path	<b>levelId</b> <i>required</i>	Id of level to be swapped	integer(int64)

## Responses

HTTP Code	Description	Schema
200	The level has been swapped to the right.	<a href="#">BasicLevelInfoDTO</a>
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

### Response 200

```
{
  "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

Type	Name	Description	Schema
Path	<b>definitionId</b> <i>required</i>	Id of definition for which is level created	integer(int64)
Path	<b>levelType</b> <i>required</i>	Level type	enum (GAME, ASSESSMENT, INFO)
Query	<b>fields</b> <i>optional</i>	Fields which should be returned in REST API response	string

#### Responses

HTTP Code	Description	Schema
200	successful operation	<a href="#">BasicLevelInfoDTO</a>
201	Level created.	<a href="#">AbstractLevelDTO</a>
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",  
  "order" : 1,  
  "levelType" : "GAME"  
}
```

#### Response 201

```
{  
  "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

Type	Name	Description	Schema
Path	<b>id</b> <i>required</i>	Id of training definition to be cloned	integer(int64)

## Responses

HTTP Code	Description	Schema
200	Training definition cloned.	<a href="#">TrainingDefinition DTO</a>
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

### Response 200

```
{
  "id" : 1,
  "title" : "TrainingDefinition2",
  "description" : "Unreleased training definition",
  "prerequisites" : [ "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	<b>id</b> <i>required</i>	ID of training definition to be retrieved.	integer(int64)
Query	<b>fields</b> <i>optional</i>	Fields which should be returned in REST API response	string

#### Responses

HTTP Code	Description	Schema
200	Training definition found.	<a href="#">TrainingDefinition DTO</a>
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

### Response 200

```
{
  "id" : 1,
  "title" : "TrainingDefinition2",
  "description" : "Unreleased training definition",
  "prerequisites" : [ "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 cannot be deleted

#### Parameters

Type	Name	Description	Schema
Path	<b>id</b> <i>required</i>	Id of training definition to be deleted	integer(int64)

#### Responses

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

Type	Name	Description	Schema
Query	<b>fields</b> <i>optional</i>	Fields which should be returned in REST API response	string
Body	<b>body</b> <i>optional</i>	Training instance to be created	<a href="#">TrainingInstanceCreateDTO</a>

### Responses

HTTP Code	Description	Schema
200	successful operation	<a href="#">TrainingInstanceDTO</a>
201	Training instance created.	<a href="#">TrainingInstanceCreateDTO</a>

HTTP Code	Description	Schema
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" : "2018-11-20T09:31:48",
  "endTime" : "2018-11-25T09:31:48",
  "title" : "December instance",
  "poolSize" : 20,
  "password" : "hunter",
  "trainingDefinitionId" : 1,
  "orgIds" : [ 0 ]
}
```

### Example HTTP response

#### Response 200

```

{
  "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",
    "prerequisites" : [ "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"
}

```

Response 201

```
{
  "startTime" : "2018-11-20T09:31:48",
  "endTime" : "2018-11-25T09:31:48",
  "title" : "December instance",
  "poolSize" : 20,
  "password" : "hunter",
  "trainingDefinitionId" : 1,
  "orgIds" : [ 0 ]
}
```

### 2.2.2. Get all training instances.

GET /kypo2-rest-training/training-instances

#### Parameters

Type	Name	Description	Schema
Query	<b>fields</b> <i>optional</i>	Fields which should be returned in REST API response	string
Body	<b>body</b> <i>optional</i>	Pagination support.	<a href="#">Pageable</a>
Body	<b>body</b> <i>optional</i>	Parameters for filtering the objects.	< string, < string > array > map

#### Responses

HTTP Code	Description	Schema
200	All training instances found.	< <a href="#">TrainingInstanceDTO</a> > array
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

##### Response 200

```
"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

Type	Name	Description	Schema
Body	<b>body</b> <i>optional</i>	Training instance to be updated	<a href="#">TrainingInstanceUpdateDTO</a>

#### 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" : "2019-10-19T10:23:54",
  "endTime" : "2019-10-25T10:23:54",
  "title" : "Concluded Instance",
  "poolSize" : 10,
  "password" : "hunter",
  "trainingDefinitionId" : 1,
  "orgIds" : [ 0 ]
}
```

## 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

Type	Name	Description	Schema
Path	<b>id</b> <i>required</i>	Training instance ID	integer(int64)
Query	<b>fields</b> <i>optional</i>	Fields which should be returned in REST API response	string

## Responses

HTTP Code	Description	Schema
200	Training instance found	<a href="#">TrainingInstanceDTO</a>
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

### Response 200

```

{
  "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",
    "prerequisites" : [ "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

Type	Name	Description	Schema
Path	<b>id</b> <i>required</i>	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

Type	Name	Description	Schema
Path	<b>instanceId</b> <i>required</i>	Id of training instance for which sandboxes are allocated	integer(int64)

## Responses

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	<b>instanceId</b> <i>required</i>	Training Instance Id	integer(int64)
Query	<b>fields</b> <i>optional</i>	Fields which should be returned in REST API response	string
Body	<b>body</b> <i>optional</i>	Pagination support.	<a href="#">Pageable</a>
Body	<b>body</b> <i>optional</i>	Parameters for filtering the objects.	< string, < string > array > map

#### Responses

HTTP Code	Description	Schema
200	All training runs in given training instance found.	< <a href="#">TrainingRunDTO</a> > 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. Access training run.

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

### Parameters

Type	Name	Description	Schema
Query	<b>password</b> <i>required</i>	password	string

### Responses

HTTP Code	Description	Schema
200	Training run accessed.	<a href="#">AccessTrainingRunDTO</a>
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
```

### 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"
  } ]
}

```

### 2.3.2. Get all training Runs.

GET /kypo2-rest-training/training-runs

#### Parameters

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

## Responses

HTTP Code	Description	Schema
200	All training runs found.	< <a href="#">TrainingRunDTO</a> > 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

### Response 200

```
"array"
```

## 2.3.3. Get all accessed training runs.

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

## Description

Returns training run which was accessed by logged in user

## Parameters

Type	Name	Description	Schema
Query	<b>fields</b> <i>optional</i>	Fields which should be returned in REST API response	string
Query	<b>page</b> <i>optional</i>	Results page you want to retrieve (0..N)	integer
Query	<b>size</b> <i>optional</i>	Number of records per page.	integer
Query	<b>sort</b> <i>optional</i>	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.	< <a href="#">AccessedTrainingRunDTO</a> > array
500	Unexpected condition was encountered.	No Content

## Produces

- `application/json`

## Example HTTP request

### Request path

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

### Request query

```
{
  "fields" : "string",
  "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	<b>runId</b> <i>required</i>	Training run Id	integer(int64)
Query	<b>fields</b> <i>optional</i>	Fields which should be returned in REST API response	string

#### Responses

HTTP Code	Description	Schema
200	Training run with given id found.	<a href="#">TrainingRunDTO</a>
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. Finish given training run

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

### Parameters

Type	Name	Description	Schema
Path	<b>runId</b> <i>required</i>	Training run ID	integer(int64)

### Responses

HTTP Code	Description	Schema
200	Training run resumed.	<a href="#">AccessTrainingRunDTO</a>
404	Training run with given id not found.	No Content
409	Cannot resume archived 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
```

## 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"
  } ]
}
```

## 2.3.6. Evaluate responses to assessment

```
PUT /kypo2-rest-training/training-runs/{runId}/assessment-evaluations
```

### Parameters

Type	Name	Description	Schema
Path	<b>runId</b> <i>required</i>	Training run ID	integer(int64)
Body	<b>body</b> <i>required</i>	Responses to assessment	string

### Responses

HTTP Code	Description	Schema
204	Responses to assessment evaluated and stored .	No Content
404	Training run with given id not found.	No Content
409	Current level of training is not assessment level.	No Content
500	Unexpected condition was encountered.	No Content

## Produces

- `application/json`

## Example HTTP request

### Request path

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

### Request body

```
{ }
```

## 2.3.7. 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

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

## Responses

HTTP Code	Description	Schema
200	Hint found.	<a href="#">HintDTO</a>
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
}
```

## 2.3.8. 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

Type	Name	Description	Schema
Path	<b>runId</b> <i>required</i>	Training run ID	integer(int64)
Query	<b>flag</b> <i>required</i>	Submitted flag	string

## Responses

HTTP Code	Description	Schema
200	Flag checked.	<a href="#">IsCorrectFlagDTO</a>
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
}
```

### 2.3.9. 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	<b>runId</b> <i>required</i>	Training run ID	integer(int64)
Query	<b>fields</b> <i>optional</i>	Fields which should be returned in REST API response	string

#### Responses

HTTP Code	Description	Schema
200	Next level found.	<a href="#">AbstractLevelDTO</a>
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"
}
```

### 2.3.10. Get current level of resumed training run

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

#### Parameters

Type	Name	Description	Schema
Path	<b>runId</b> <i>required</i>	Training run ID	integer(int64)

#### Responses

HTTP Code	Description	Schema
200	Training run resumed.	<a href="#">AccessTrainingRunDTO</a>
404	Training run with given id not found.	No Content
409	Cannot resume archived 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/resumption
```

## 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"
  } ]
}
```

## 2.3.11. 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

Type	Name	Description	Schema
Path	<b>runId</b> <i>required</i>	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
<b>id</b> <i>optional</i>	Main identifier of level. <b>Example :</b> <code>1</code>	integer(int64)
<b>levelType</b> <i>optional</i>	Type of the level. <b>Example :</b> <code>"GAME"</code>	enum (ASSESSMENT, INFO, GAME)
<b>maxScore</b> <i>optional</i>	The maximum score a participant can achieve during a level. <b>Example :</b> <code>20</code>	integer(int32)
<b>nextLevel</b> <i>optional</i>	Reference to the next abstract level (if it is null, then it is the last level) <b>Example :</b> <code>2</code>	integer(int64)

Name	Description	Schema
<b>postHook</b> <i>optional</i>	<b>Example :</b> <code>"PostHookDTO"</code>	<a href="#">PostHookDTO</a>
<b>preHook</b> <i>optional</i>	<b>Example :</b> <code>"PreHookDTO"</code>	<a href="#">PreHookDTO</a>
<b>title</b> <i>optional</i>	Short textual description of the level. <b>Example :</b> <code>"Game Level1"</code>	string

## 3.2. AccessTrainingRunDTO

Name	Description	Schema
<b>abstractLevelDTO</b> <i>optional</i>	First level in the current training run. <b>Example :</b> <code>"AbstractLevelDTO"</code>	<a href="#">AbstractLevelDTO</a>
<b>infoAboutLevels</b> <i>optional</i>	Information about all levels in training instance. <b>Example :</b> <code>[ "BasicLevelInfoDTO" ]</code>	< <a href="#">BasicLevelInfoDTO</a> > array

## 3.3. AccessedTrainingRunDTO

Already accessed training run by some participant.

Name	Description	Schema
<b>currentLevelOrder</b> <i>optional</i>	Current level order of training run. <b>Example :</b> <code>1</code>	integer(int32)
<b>id</b> <i>optional</i>	Main identifier of training run. <b>Example :</b> <code>1</code>	integer(int64)
<b>numberOfLevels</b> <i>optional</i>	The number of levels in the training instance. <b>Example :</b> <code>3</code>	integer(int32)
<b>possibleAction</b> <i>optional</i>	Possible action which can be executed with training Run. <b>Example :</b> <code>"RESULTS"</code>	enum (TRY_AGAIN, RESULTS)
<b>title</b> <i>optional</i>	Short textual description of the training instance. <b>Example :</b> <code>"Concluded Instance"</code>	string
<b>trainingInstanceEndDate</b> <i>optional</i>	End date of training instance for which the training run was created. <b>Example :</b> <code>"2017-10-19T10:23:54"</code>	string(date-time)

Name	Description	Schema
<b>trainingInstanceStartDate</b> <i>optional</i>	Start date of training instance for which the training run was created. <b>Example</b> : "2016-10-19T10:23:54"	string(date-time)

### 3.4. AccessedTrainingRunRestResource

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

### 3.5. AssessmentLevelDTO

*Polymorphism* : Composition

Name	Description	Schema
<b>assessmentType</b> <i>optional</i>	Type of assessment. <b>Example</b> : "TEST"	enum (TEST, QUESTIONNAIRE)
<b>id</b> <i>optional</i>	Main identifier of level. <b>Example</b> : 1	integer(int64)
<b>instructions</b> <i>optional</i>	Assessment instructions for participant. <b>Example</b> : "Fill me up"	string
<b>levelType</b> <i>optional</i>	Type of the level. <b>Example</b> : "GAME"	enum (ASSESSMENT, INFO, GAME)
<b>maxScore</b> <i>optional</i>	The maximum score a participant can achieve during a level. <b>Example</b> : 20	integer(int32)
<b>nextLevel</b> <i>optional</i>	Reference to the next abstract level (if it is null, then it is the last level) <b>Example</b> : 2	integer(int64)
<b>postHook</b> <i>optional</i>	<b>Example</b> : "PostHookDTO"	PostHookDTO
<b>preHook</b> <i>optional</i>	<b>Example</b> : "PreHookDTO"	PreHookDTO
<b>questions</b> <i>optional</i>	List of questions in this assessment as JSON. <b>Example</b> : "What is my mothers name?"	string

Name	Description	Schema
<b>title</b> <i>optional</i>	Short textual description of the level. <b>Example</b> : "Game Level1"	string

## 3.6. AssessmentLevelUpdatedTO

Assessment level to update.

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

## 3.7. AuthorRefDTO

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

## 3.8. BasicLevelInfoDTO

Name	Description	Schema
<b>id</b> <i>optional</i>	Main identifier of level. <b>Example</b> : 1	integer(int64)
<b>levelType</b> <i>optional</i>	Type of the level. <b>Example</b> : "GAME"	enum (ASSESSMENT, INFO, GAME)

Name	Description	Schema
<b>order</b> <i>optional</i>	Order of level among levels in training definition. <b>Example :</b> 1	integer(int32)
<b>title</b> <i>optional</i>	Short textual description of the level. <b>Example :</b> "Game Level1"	string

## 3.9. GameLevelDTO

*Polymorphism* : Composition

Name	Description	Schema
<b>attachments</b> <i>optional</i>	Downloadable files for level (pictures, source code...) <b>Example :</b> [ "string" ]	< string > array
<b>content</b> <i>optional</i>	The information and experiences that are directed towards a participant. <b>Example :</b> "Play me"	string
<b>estimatedDuration</b> <i>optional</i>	Estimated time taken by the player to resolve the level. <b>Example :</b> 25	integer(int32)
<b>flag</b> <i>optional</i>	Keyword found in game, used for access next level. <b>Example :</b> "secretFlag"	string
<b>hints</b> <i>optional</i>	Information which helps player resolve the level. <b>Example :</b> [ "HintDTO" ]	< HintDTO > array
<b>id</b> <i>optional</i>	Main identifier of level. <b>Example :</b> 1	integer(int64)
<b>incorrectFlagLimit</b> <i>optional</i>	How many times player can submit incorrect flag before displaying solution. <b>Example :</b> 5	integer(int32)
<b>levelType</b> <i>optional</i>	Type of the level. <b>Example :</b> "GAME"	enum (ASSESSMENT, INFO, GAME)
<b>maxScore</b> <i>optional</i>	The maximum score a participant can achieve during a level. <b>Example :</b> 20	integer(int32)
<b>nextLevel</b> <i>optional</i>	Reference to the next abstract level (if it is null, then it is the last level) <b>Example :</b> 2	integer(int64)
<b>postHook</b> <i>optional</i>	<b>Example :</b> "PostHookDTO"	PostHookDTO
<b>preHook</b> <i>optional</i>	<b>Example :</b> "PreHookDTO"	PreHookDTO

Name	Description	Schema
<b>solution</b> <i>optional</i>	Instruction how to get flag in game. <b>Example</b> : "This is how you do it"	string
<b>solutionPenalized</b> <i>optional</i>	Sign if displaying of solution is penalized. <b>Example</b> : true	boolean
<b>title</b> <i>optional</i>	Short textual description of the level. <b>Example</b> : "Game Level1"	string

## 3.10. GameLevelUpdateDTO

Game level to update.

Name	Description	Schema
<b>attachments</b> <i>optional</i>	Downloadable files for level (pictures, source code...) <b>Example</b> : [ "string" ]	< string > array
<b>content</b> <i>optional</i>	The information and experiences that are directed towards an player. <b>Example</b> : "Play me"	string
<b>estimatedDuration</b> <i>optional</i>	Estimated time taken by the player to resolve the level. <b>Example</b> : 20	integer(int32)
<b>flag</b> <i>required</i>	Keyword found in game, used for access next level. <b>Length</b> : 0 - 50 <b>Example</b> : "secretFlag"	string
<b>hints</b> <i>optional</i>	Information which helps participant resolve the level. <b>Example</b> : [ "HintDTO" ]	< HintDTO > array
<b>id</b> <i>required</i>	Main identifier of level. <b>Example</b> : 1	integer(int64)
<b>incorrectFlagLimit</b> <i>required</i>	How many times participant can submit incorrect flag before displaying solution. <b>Minimum value</b> : 0 <b>Example</b> : 5	integer(int32)
<b>maxScore</b> <i>required</i>	The maximum score a participant can achieve during a level. <b>Minimum value</b> : 0 <b>Maximum value</b> : 100 <b>Example</b> : 20	integer(int32)
<b>solution</b> <i>optional</i>	Instruction how to get flag in game. <b>Example</b> : "This is how you do it"	string
<b>solutionPenalized</b> <i>required</i>	Sign if displaying of solution is penalized. <b>Example</b> : false	boolean

Name	Description	Schema
<b>title</b> <i>required</i>	Short textual description of the level. <b>Example</b> : "Game Level1"	string

## 3.11. HintDTO

A brief textual description to aid the participant.

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

## 3.12. InfoLevelDTO

*Polymorphism* : Composition

Name	Description	Schema
<b>content</b> <i>optional</i>	The information and experiences that are directed towards a participant. <b>Example</b> : "Informational stuff"	string
<b>id</b> <i>optional</i>	Main identifier of level. <b>Example</b> : 1	integer(int64)
<b>levelType</b> <i>optional</i>	Type of the level. <b>Example</b> : "GAME"	enum (ASSESSMENT, INFO, GAME)
<b>maxScore</b> <i>optional</i>	The maximum score a participant can achieve during a level. <b>Example</b> : 20	integer(int32)
<b>nextLevel</b> <i>optional</i>	Reference to the next abstract level (if it is null, then it is the last level) <b>Example</b> : 2	integer(int64)
<b>postHook</b> <i>optional</i>	<b>Example</b> : "PostHookDTO"	PostHookDTO
<b>preHook</b> <i>optional</i>	<b>Example</b> : "PreHookDTO"	PreHookDTO

Name	Description	Schema
<b>title</b> <i>optional</i>	Short textual description of the level. <b>Example :</b> "Game Level1"	string

### 3.13. InfoLevelUpdatedDTO

Info level to update.

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

### 3.14. IsCorrectFlagDTO

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

### 3.15. Pageable

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



## 3.16. Pagination

Name	Description	Schema
<b>number</b> <i>optional</i>	Page number. <b>Example : 1</b>	integer(int32)
<b>numberOfElements</b> <i>optional</i>	Number of elements in page. <b>Example : 20</b>	integer(int32)
<b>size</b> <i>optional</i>	Page size. <b>Example : 20</b>	integer(int32)
<b>totalElements</b> <i>optional</i>	Total number of elements in this resource (in all Pages). <b>Example : 100</b>	integer(int64)
<b>totalPages</b> <i>optional</i>	Total number of pages. <b>Example : 5</b>	integer(int32)

## 3.17. PostHookDTO

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Name	Description	Schema
<b>id</b> <i>optional</i>	Main identifier of postHook. <b>Example : 8</b>	integer(int64)

## 3.18. PreHookDTO

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Name	Description	Schema
<b>id</b> <i>optional</i>	Main identifier of preHook. <b>Example : 4</b>	integer(int64)

## 3.19. SandboxDefinitionRefDTO

Name	Description	Schema
<b>id</b> <i>optional</i>	Main identifier of sandbox instance ref. <b>Example : 1</b>	integer(int64)
<b>sandboxDefinitionRef</b> <i>optional</i>	Reference to sandbox definition in another microservice. <b>Example : 1</b>	integer(int64)

## 3.20. SandboxInstanceRefDTO

Name	Description	Schema
<b>id</b> <i>optional</i>	Main identifier of sandbox instance ref. <b>Example :</b> 1	integer(int64)
<b>sandboxInstanceRef</b> <i>optional</i>	Reference to sandbox instance in another microservice. <b>Example :</b> 1	integer(int64)

## 3.21. Sort

Name	Description	Schema
<b>sorted</b> <i>optional</i>	<b>Example :</b> true	boolean
<b>unsorted</b> <i>optional</i>	<b>Example :</b> true	boolean

## 3.22. TrainingDefinitionCreatedDTO

Training definition to create.

Name	Description	Schema
<b>autIds</b> <i>required</i>	References to the authors of the training definition. <b>Example :</b> [ 0 ]	< integer(int64) > array
<b>description</b> <i>optional</i>	Description of training definition that is visible to the participant. <b>Example :</b> "Description of Photo Hunter"	string
<b>outcomes</b> <i>optional</i>	A list of knowledge and skills that the participant should learn by attending the training (if it is used for educational purposes) <b>Example :</b> [ "string" ]	< string > array
<b>prerequisites</b> <i>optional</i>	List of knowledge and skills necessary to complete the training. <b>Example :</b> [ "string" ]	< string > array
<b>sandboxDefinitionRef</b> <i>required</i>	Reference to the sandbox definition. <b>Example :</b> 1	integer(int64)
<b>showStepperBar</b> <i>required</i>	Sign if stepper bar should be displayed. <b>Example :</b> true	boolean

Name	Description	Schema
<b>state</b> <i>required</i>	Current state of training definition. <b>Example</b> : "UNRELEASED"	enum (PRIVATE, RELEASED, ARCHIVED, UNRELEASED)
<b>title</b> <i>required</i>	A name of the training/game (e.g., Photo Hunter) . <b>Example</b> : "Photo Hunter"	string

## 3.23. TrainingDefinitionDTO

A blueprint of abstract levels.

Name	Description	Schema
<b>authorRef</b> <i>optional</i>	References to the authors of the training definition. <b>Example</b> : [ "AuthorRefDTO" ]	< AuthorRefDTO > array
<b>basicLevelInfoDTOs</b> <i>optional</i>	Information about all levels in training definition. <b>Example</b> : [ "BasicLevelInfoDTO" ]	< BasicLevelInfoDTO > array
<b>canBeArchived</b> <i>optional</i>	<b>Example</b> : true	boolean
<b>description</b> <i>optional</i>	Description of training definition that is visible to the participant. <b>Example</b> : "Unreleased training definition"	string
<b>id</b> <i>optional</i>	Main identifier of training definition. <b>Example</b> : 1	integer(int64)
<b>outcomes</b> <i>optional</i>	A list of knowledge and skills that the participant should learn by attending the training (if it is used for educational purposes) <b>Example</b> : [ "string" ]	< string > array
<b>prerequisites</b> <i>optional</i>	List of knowledge and skills necessary to complete the training. <b>Example</b> : [ "string" ]	< string > array
<b>sandboxDefinitionRef</b> <i>optional</i>	Reference to the sandbox definition. <b>Example</b> : "SandboxDefinitionRefDTO"	SandboxDefinitionRefDTO
<b>showStepperBar</b> <i>optional</i>	Sign if stepper bar should be displayed. <b>Example</b> : false	boolean
<b>startingLevel</b> <i>optional</i>	Identifier of first level of training definition. <b>Example</b> : 4	integer(int64)

Name	Description	Schema
<b>state</b> <i>optional</i>	Current state of training definition. <b>Example</b> : "UNRELEASED"	enum (PRIVATE, RELEASED, ARCHIVED, UNRELEASED)
<b>title</b> <i>optional</i>	A name of the training/game (e.g., Photo Hunter) . <b>Example</b> : "TrainingDefinition2"	string

## 3.24. TrainingDefinitionRestResource

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

## 3.25. TrainingDefinitionUpdatedTO

Training definition to update.

Name	Description	Schema
<b>autIds</b> <i>required</i>	References to the authors of the training definition. <b>Example</b> : [ 0 ]	< integer(int64) > array
<b>description</b> <i>optional</i>	Description of training definition that is visible to the participant. <b>Example</b> : "Unreleased training definition"	string
<b>id</b> <i>required</i>	Main identifier of training definition. <b>Example</b> : 1	integer(int64)
<b>outcomes</b> <i>optional</i>	A list of knowledge and skills that the participant should learn by attending the training (if it is used for educational purposes) <b>Example</b> : [ "string" ]	< string > array
<b>prerequisites</b> <i>optional</i>	List of knowledge and skills necessary to complete the training. <b>Example</b> : [ "string" ]	< string > array
<b>sandboxDefinitionRef</b> <i>required</i>	Reference to the sandbox definition. <b>Example</b> : 1	integer(int64)

Name	Description	Schema
<b>showStepperBar</b> <i>required</i>	Sign if stepper bar should be displayed. <b>Example</b> : <code>false</code>	boolean
<b>state</b> <i>required</i>	Current state of training definition. <b>Example</b> : <code>"UNRELEASED"</code>	enum (PRIVATE, RELEASED, ARCHIVED, UNRELEASED)
<b>title</b> <i>required</i>	A name of the training/game (e.g., Photo Hunter) . <b>Example</b> : <code>"TrainingDefinition2"</code>	string

## 3.26. TrainingInstanceCreateDTO

Training Instance to create.

Name	Description	Schema
<b>endTime</b> <i>required</i>	Date when training instance ends. <b>Example</b> : <code>"2018-11-25T09:31:48"</code>	string(date-time)
<b>orgIds</b> <i>required</i>	Reference to users which organize training instance. <b>Example</b> : <code>[ 0 ]</code>	< integer(int64) > array
<b>password</b> <i>required</i>	Keyword which will be modified and then used for accessing training run. <b>Example</b> : <code>"hunter"</code>	string
<b>poolSize</b> <i>required</i>	Number of sandboxes that can be allocated. <b>Minimum value</b> : 1 <b>Maximum value</b> : 100 <b>Example</b> : 20	integer(int32)
<b>startTime</b> <i>required</i>	Date when training instance starts. <b>Example</b> : <code>"2018-11-20T09:31:48"</code>	string(date-time)
<b>title</b> <i>required</i>	Short textual description of the training instance. <b>Example</b> : <code>"December instance"</code>	string
<b>trainingDefinitionId</b> <i>required</i>	Reference to training definition from which is training instance created. <b>Example</b> : 1	integer(int64)

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

## 3.28. TrainingInstanceRestResource

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

## 3.29. TrainingInstanceUpdateDTO

Training Instance to update.

Name	Description	Schema
<b>endTime</b> <i>required</i>	Date when training instance ends. <b>Example</b> : "2019-10-25T10:23:54"	string(date-time)
<b>id</b> <i>required</i>	Main identifier of training instance. <b>Example</b> : 1	integer(int64)
<b>orgIds</b> <i>required</i>	Reference to users which organize training instance. <b>Example</b> : [ 0 ]	< integer(int64) > array

Name	Description	Schema
<b>password</b> <i>required</i>	Keyword which will be modified and then used for accessing training run. <b>Example</b> : "hunter"	string
<b>poolSize</b> <i>required</i>	Number of sandboxes that can be allocated. <b>Minimum value</b> : 1 <b>Maximum value</b> : 100 <b>Example</b> : 10	integer(int32)
<b>startTime</b> <i>required</i>	Date when training instance starts. <b>Example</b> : "2019-10-19T10:23:54"	string(date-time)
<b>title</b> <i>required</i>	Short textual description of the training instance. <b>Example</b> : "Concluded Instance"	string
<b>trainingDefinitionId</b> <i>required</i>	Reference to training definition from which is training instance created. <b>Example</b> : 1	integer(int64)

### 3.30. TrainingRunDTO

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

Name	Description	Schema
<b>endTime</b> <i>optional</i>	Date when training run ends. <b>Example</b> : "2022-10-19 10:23:54+02"	string(date-time)
<b>eventLogReference</b> <i>optional</i>	<b>Example</b> : "string"	string
<b>id</b> <i>optional</i>	Main identifier of training run. <b>Example</b> : 1	integer(int64)
<b>sandboxInstanceRef</b> <i>optional</i>	Reference to the received sandbox. <b>Example</b> : "SandboxInstanceRefDTO"	<a href="#">SandboxInstanceRef DTO</a>
<b>startTime</b> <i>optional</i>	Date when training run started. <b>Example</b> : "2016-10-19 10:23:54+02"	string(date-time)
<b>state</b> <i>optional</i>	Current state of training run. <b>Example</b> : "ALLOCATED"	enum (NEW, ALLOCATED, READY, ARCHIVED)

### 3.31. TrainingRunRestResource

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

### 3.32. UserRefDTO

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