

4.3 Model Service

Model Service

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Model Service

A Model is basically a technical building plan which could be created or imported.

Create a new model in project

URL / Resource / JSON Structure

Resource: projects/<project_id>/divisions

URL: https://api-stage.bimplus.net/v2/<team_slug>/projects/<project_id>/divisions

Example: https://api-stage.bimplus.net/v2/bimplus/projects/743a24f9-baaa-41b9-90b3-91717238043c/divisions

JSON Structure:

Name	Mandatory / Optional	Type	Description
id	will be ignored	string(guid)	Id of the model/division
name	mandatory	string	Name of the model
description	optional	string	Short description of the model
projectId	will be ignored	string (guid)	Id of the project to which the model belongs
topologyId	optional	string (guid)	Id of the topology to which the model belongs
disciplines	optional	object	The discipline list of the model
status	will be ignored	string(enum)	The status of the imported file. It could be one of the following <ul style="list-style-type: none">• PREPARING (Uploading the file)• PENDING (Waiting in the queue after upload to be processed)• PROCESSING (Processing)• DONE (Processed)• DONE_REFRESHED (Processed & sent the notification)• FAILED• UNKNOWN• EMPTY (Default, if none of above)
revisionObjects	will be ignored	JSON Object	The list of revisions
teamSlug	will be ignored	string	Slug of the team to which the model belongs
url	will be ignored	string	The link for downloading the model
fileType	will be ignored	string	Content-type of file
inputType	will be ignored	string	Type of file (eg: ifc, Allplan etc)
created	will be ignored	string(date)	Creation date of the model
createdby	will be ignored	JSON object	The user who created this model
changed	will be ignored	string(date)	Update date of the model
changedBy	will be ignored	JSON object	User who updated the model
size	will be ignored	int	size in bytes
sizeMB	will be ignored	string	size in MB
importFileName	will be ignored	string	The file name of the model
importFileSize	will be ignored	int	Size of the import file in bytes

HTTP Method

POST

Description

Creates a new model in project using project id.

Request

Headers

Authorization: BimPlus 9c1874a62c974dcfa75e0132c423a088
Content-Type: application/json

JSON

```
{
  "name": "Model D",
  "description": "Creating a model via API"
}
```

Response

Status

Status: 201 Created

JSON

```
{
  "name": "Model D",
  "description": "Creating a model via API",
  "projectId": "743a24f9-baaa-41b9-90b3-91717238043c",
  "topologyId": "0fb09e03-20fc-42d9-a60b-254803950519",
  "disciplines": [
    "0f106af0-a919-44c5-b211-15bd5ef620b6",
    "33826b01-c267-4b25-9f8e-79ac2953c443",
    "30114b52-bc05-47c1-80b5-c7d5485d5840",
    "09e623d4-1e12-4a77-b358-ea1d0b28e4a7"
  ],
  "url": "/bimplus/divisions/2e0ca9e9-dd11-48d0-bd31-5a65225fe28a/download",
  "fileType": "Ifc",
  "inputType": "UNKNOWN",
  "created": "2015-11-06T09:34:45",
  "createdby": {
    "id": "71e0ac3b-fa49-e540-ac2f-8caff3dd72ed",
    "email": "jayaraj.purushothaman@gmail.com"
  },
  "changed": "2015-11-06T09:39:04",
  "changedby": {
    "id": "71e0ac3b-fa49-e540-ac2f-8caff3dd72ed",
    "email": "jayaraj.purushothaman@gmail.com"
  },
  "size": 7216128,
  "sizeMB": "6,88",
  "importFileName": "SMC Building.ifc",
  "status": "DONE_REFRESHED",
  "id": "2e0ca9e9-dd11-48d0-bd31-5a65225fe28a"
}
```

Get the whole model list present under different projects inside a team

URL / Resource / JSON Structure

Resource: divisions

URL: https://api-stage.bimplus.net/v2/<team_slug>/divisions

Example: https://api-stage.bimplus.net/v2/bimplus/divisions

HTTP Method

GET

Description

This API iterates through all the projects inside a team & gives back the whole model list. The response does not contain the lists of revisions objects.

Request

Headers
Authorization: BimPlus 9c1874a62c974dcfa75e0132c423a088 Content-Type: application/json

Response

Status
Status: 200 OK

JSON

```
[
  {
    "name": "Model A - Vogel",
    "description": null,
    "projectId": "743a24f9-baaa-41b9-90b3-91717238043c",
    "topologyId": "fc4be8b1-bf85-4c6f-b9c2-bac6474ddb1d",
    "teamSlug": "my-company",
    "url": "/my-company/divisions/d81494b9-9731-4d2e-8fbe-da62f5270182/download",
    "fileType": "Unknown",
    "inputType": "IFC_IMPORT",
    "created": "2015-07-07T09:21:15",
    "createdby": {
      "id": "7c555899-5a5f-44d1-930e-284930678bed",
      "email": "testuser@nemetschek.com"
    },
    "changed": "2015-07-07T09:21:16",
    "changedby": {
      "id": "7c555899-5a5f-44d1-930e-284930678bed",
      "email": "testuser@nemetschek.com"
    },
    "size": 39216128,
    "sizeMB": "37,4",
    "importFileName": "Vogel_bim.ifczip",
    "importFileSize": 12631230,
    "id": "d81494b9-9731-4d2e-8fbe-da62f5270182"
  },
  {
    "name": "Model B - house sketchup",
    "description": null,
    "projectId": "743a24f9-baaa-41b9-90b3-91717238043c",
    "topologyId": "2d20d707-9c18-44c0-92f4-282948cd5cf5",
    "id": "deec1913-2c6e-4580-a40f-7e1ad33a6300",
    "teamSlug": "my-company",
    "url": "/my-company/divisions/e687b45b-d90d-4361-94ab-baf269588c0a/download",
    "fileType": "Unknown",
    "inputType": "SKP_IMPORT",
    "created": "2015-07-06T09:21:15",
    "createdby": {
      "id": "7c555899-5a5f-44d1-930e-284930678bed",
      "email": "testuser@nemetschek.com"
    },
    "changed": "2015-07-06T09:22:16",
    "changedby": {
      "id": "7c555899-5a5f-44d1-930e-284930678bed",
      "email": "testuser@nemetschek.com"
    },
    "size": 21451776,
    "sizeMB": "20,46",
    "importFileName": "House.skp",
    "importFileSize": 439882,
    "id": "e687b45b-d90d-4361-94ab-baf269588c0a"
  }
]
```

Get the list of existing models inside a project

URL / Resource / JSON Structure

Resource: projects/<project_id>/divisions

URL: https://api-stage.bimplus.net/v2/<team_slug>/projects/<project_id>/divisions

Example: <https://api-stage.bimplus.net/v2/bimplus-gmbh/projects/743a24f9-baaa-41b9-90b3-91717238043c/divisions>

URL / Resource / JSON Structure

Optional query parameters

Name	Type	Default value	Description
modifyonly	boolean	false	When query parameter "modifyonly=true" is defined, the API function returns all divisions which user can modify

HTTP Method

GET

Description

Gets the list of existing models inside a project.

Request

Headers
Authorization: BimPlus 9c1874a62c974dcfa75e0132c423a088 Content-Type: application/json

Response

Status
Status: 200 OK

JSON
[{ "name": "Model A - Vogel", "description": null, "projectId": "743a24f9-baaa-41b9-90b3-91717238043c", "topologyId": "fc4be8b1-bf85-4c6f-b9c2-bac6474ddb1d", "teamSlug": "my-company", "revisionObjects": [{ "id": "b9cc9bb0-26fd-432e-b024-f7f41ba2c7d2", "name": "First Revision", "description": "First Revision", "projectId": "743a24f9-baaa-41b9-90b3-91717238043c", "divisionId": "d81494b9-9731-4d2e-8f8e-da62f5270182", "revisionNr": 1, "created": "2015-07-07T09:21:15", "createdby": { "id": "7c555899-5a5f-44d1-930e-284930678bed", "email": "testuser@nemetschek.com" }, "topologyId": "fc4be8b1-bf85-4c6f-b9c2-bac6474ddb1d", "inputType": "IFC_IMPORT" },], "url": "/my-company/divisions/d81494b9-9731-4d2e-8f8e-da62f5270182/download", "fileType": "Unknown", "inputType": "IFC_IMPORT", "created": "2015-07-07T09:21:15", "createdby": { "id": "7c555899-5a5f-44d1-930e-284930678bed", "email": "testuser@nemetschek.com" } },]

```

    },
    "changed": "2015-07-07T09:21:16",
    "changedby": {
      "id": "7c555899-5a5f-44d1-930e-284930678bed",
      "email": "testuser@nemetschek.com"
    },
    "size": 39216128,
    "sizeMB": "37,4",
    "importFileName": "Vogel_bim.ifczip",
    "importFileSize": 12631230,
    "id": "d81494b9-9731-4d2e-8fbe-da62f5270182"
  },
  {
    "name": "Model B - house sketchup",
    "description": null,
    "projectId": "743a24f9-baaa-41b9-90b3-91717238043c",
    "topologyId": "2d20d707-9c18-44c0-92f4-282948cd5cf5",
    "id": "deec1913-2c6e-4580-a40f-7e1ad33a6300",
    "teamSlug": "my-company",
    "revisionObjects": [
      {
        "id": "c86a33d9-6538-4c01-8e79-cb48839a7703",
        "name": "Revision 1",
        "description": "",
        "projectId": "743a24f9-baaa-41b9-90b3-91717238043c",
        "divisionId": "e687b45b-d90d-4361-94ab-baf269588c0a",
        "revisionNr": 1,
        "created": "2015-07-06T09:21:15",
        "createdby": {
          "id": "7c555899-5a5f-44d1-930e-284930678bed",
          "email": "testuser@nemetschek.com"
        },
        "topologyId": "2d20d707-9c18-44c0-92f4-282948cd5cf5",
        "inputType": "SKP_IMPORT"
      }
    ],
    "url": "/my-company/divisions/e687b45b-d90d-4361-94ab-baf269588c0a/download",
    "fileType": "Unknown",
    "inputType": "SKP_IMPORT",
    "created": "2015-07-06T09:21:15",
    "createdby": {
      "id": "7c555899-5a5f-44d1-930e-284930678bed",
      "email": "testuser@nemetschek.com"
    },
    "changed": "2015-07-06T09:22:16",
    "changedby": {
      "id": "7c555899-5a5f-44d1-930e-284930678bed",
      "email": "testuser@nemetschek.com"
    },
    "size": 21451776,
    "sizeMB": "20,46",
    "importFileName": "House.skp",
    "importFileSize": 439882,
    "id": "e687b45b-d90d-4361-94ab-baf269588c0a"
  }
]

```

Get the model details

URL / Resource / JSON Structure

Resource: divisions/<division_id>

URL: https://api-stage.bimplus.net/v2/<team_slug>/divisions/<division_id>

Example: <https://api-stage.bimplus.net/v2/bimplus-gmbh/divisions/e687b45b-d90d-4361-94ab-baf269588c0a>

HTTP Method

GET

Description

Get all the details of a model using its id.

Request

Headers

Authorization: BimPlus 9c1874a62c974dcfa75e0132c423a088
Content-Type: application/json

Response

Status

Status: 200 OK

JSON

```
{
  "name": "Model A - Vogel",
  "description": null,
  "projectId": "743a24f9-baaa-41b9-90b3-91717238043c",
  "topologyId": "fc4be8b1-bf85-4c6f-b9c2-bac6474ddb1d",
  "disciplines": [
    "0f106af0-a919-44c5-b211-15bd5ef620b6",
    "33826b01-c267-4b25-9f8e-79ac2953c443",
    "a330fde2-1a2f-48ed-a6e3-90b92965dca6"
  ],
  "url": "/my-company/divisions/d81494b9-9731-4d2e-8fbe-da62f5270182/download",
  "fileType": "Unknown",
  "inputType": "IFC_IMPORT",
  "created": "2015-07-07T09:21:15",
  "createdby": {
    "id": "7c555899-5a5f-44d1-930e-284930678bed",
    "email": "testuser@nemetschek.com"
  },
  "changed": "2015-07-07T09:21:16",
  "changedby": {
    "id": "7c555899-5a5f-44d1-930e-284930678bed",
    "email": "testuser@nemetschek.com"
  },
  "size": 39216128,
  "sizeMB": "37,4",
  "importFileName": "Vogel_bim.ifczip",
  "importFileSize": 12631230,
  "status": "DONE",
  "id": "d81494b9-9731-4d2e-8fbe-da62f5270182"
}
```

Detect model change

URL / Resource / JSON Structure

Resource: divisions/<division_id>

URL: https://api-stage.bimplus.net/v2/<team_slug>/divisions/<division_id>

HTTP Method

HEAD

Description

This method checks if the model has changed or not, and returns model's current ETag.

In the request, include models ETag into http header "If-None-Match", and then the response will be :

- a) 304 NotModified if current model's ETag is identical (means model has not changed)
- b) 200 OK if model has changed, and returns current models ETag as "ETag" header in the response.

The "If-None-Match" header is not mandatory. If not present, the response will always return 200 OK with current ETag.

Request

Headers
Authorization: BimPlus 9c1874a62c974dcfa75e0132c423a088 Content-Type: application/json If-None-Match: "f9efd399-4631-4a77-b40a-31fb099f42a4"

Response

Status
Status: 304 NotModified - if model not changed or Status: 200 OK - if model has changed, or "If-None-Match" header was not included in request

Headers
Etag: "f9efd399-4631-4a77-b40a-31fb099f42a4"

Get the list of disciplines from the model

URL / Resource / JSON Structure

Resource: divisions/<division_id>/disciplines

URL: https://api-stage.bimplus.net/v2/<team_slug>/divisions/<division_id>/disciplines

Example: <https://api-stage.bimplus.net/v2/bimplus-gmbh/divisions/e687b45b-d90d-4361-94ab-baf269588c0a/disciplines>

HTTP Method

GET

Description

Get list of all disciplines of a model using its id.

Request

Headers
Authorization: BimPlus 9c1874a62c974dcfa75e0132c423a088 Content-Type: application/json

Response

Status
Status: 200 OK

JSON

```
[
  {
    "category": "/1/",
    "name": "ID_BuildingModel",
    "ifcType": null,
    "id": "0f106af0-a919-44c5-b211-15bd5ef620b6"
  },
  {
    "category": "/2/",
    "name": "ID_RoomModel",
    "ifcType": null,
    "id": "09e623d4-1e12-4a77-b358-ea1d0b28e4a7"
  }
]
```

Update the model

URL / Resource / JSON Structure

Resource: divisions/<division_id>

URL: https://api-stage.bimplus.net/v2/<team_slug>/divisions/<division_id>

Example: <https://api-stage.bimplus.net/v2/bimplus-gmbh/divisions/e687b45b-d90d-4361-94ab-baf269588c0a>

JSON Structure:

Name	Mandatory / Optional	Type	Description
id	will be ignored	string(guid)	Id of the model/division
name	mandatory	string	Name of the model
description	optional	string	Short description of the model
projectId	will be ignored	string (guid)	Id of the project to which the model belongs
topologyId	optional	string (guid)	Id of the topology to which the model belongs
disciplines	optional	object	The discipline list of the model
status	will be ignored	string(enum)	The status of the imported file. It could be one of the following <ul style="list-style-type: none">• PREPARING (Uploading the file)• PENDING (Waiting in the queue after upload to be processed)• PROCESSING (Processing)• DONE (Processed)• DONE_REFRESHED (Processed & sent the notification)• FAILED• UNKNOWN
revisionObjects	will be ignored	JSON Object	The list of revisions
teamSlug	will be ignored	string	Slug of the team to which the model belongs
url	will be ignored	string	The link for downloading the model
fileType	will be ignored	string	Content-type of file
inputType	will be ignored	string	Type of file (eg: ifc, Allplan etc)
created	will be ignored	string(date)	Creation date of the model
createdby	will be ignored	JSON object	The user who created this model
changed	will be ignored	string(date)	Update date of the model
size	will be ignored	int	size in bytes
sizeMB	will be ignored	string	size in MB
importFileName	will be ignored	string	The file name of the model
importFileSize	will be ignored	int	Size of the import file in bytes

HTTP Method

PUT

Description

Update specified model. Only name and description can be updated.

Request

Headers

Authorization: BimPlus 9c1874a62c974dcfa75e0132c423a088
Content-Type: application/json

JSON

```
{
  "name": "Model D",
  "description": "Updating the model D"
}
```

Response

Status

Status: 200 OK

JSON

```
{
  "name": "Model D",
  "description": "Updating the model D",
  "projectId": "743a24f9-baaa-41b9-90b3-91717238043c",
  "topologyId": "fc4be8b1-bf85-4c6f-b9c2-bac6474ddb1d",
  "disciplines": [
    "0f106af0-a919-44c5-b211-15bd5ef620b6",
    "33826b01-c267-4b25-9f8e-79ac2953c443",
    "a330fde2-1a2f-48ed-a6e3-90b92965dca6"
  ],
  "url": "/my-company/divisions/d81494b9-9731-4d2e-8fbe-da62f5270182/download",
  "fileType": "Unknown",
  "inputType": "IFC_IMPORT",
  "created": "2015-07-07T09:21:15",
  "createdby": {
    "id": "7c555899-5a5f-44d1-930e-284930678bed",
    "email": "testuser@nemetschek.com"
  },
  "changed": "2015-07-07T09:21:16",
  "changedby": {
    "id": "7c555899-5a5f-44d1-930e-284930678bed",
    "email": "testuser@nemetschek.com"
  },
  "size": 39216128,
  "sizeMB": "37,4",
  "importFileName": "Vogel_bim.ifczip",
  "importFileSize": 12631230,
  "status": "DONE",
  "id": "d81494b9-9731-4d2e-8fbe-da62f5270182"
}
```

[Download the model](#)

URL / Resource / JSON Structure

Resource: divisions/<division_id>/download

URL: https://api-stage.bimplus.net/v2/<team_slug>/divisions/<division_id>/download

Example: <https://api-stage.bimplus.net/v2/bimplus/divisions/743a24f9-baaa-41b9-90b3-91717238043c/download>

Query parameters

Name	Mandatory/Optional	Description
api-token	optional	If the client cannot use the token in the header of the request, token can be specified in query parameters e.g. <team_slug>/divisions/<division_id>/download?api-token=9c1874a62c974dcfa75e0132c423a088
revision	optional	Specify revision number, If set, the call will return the import file of the revision, otherwise it's the current import file.

HTTP Method

GET

Description

Download the already uploaded model. There also exists a GET method for downloading the model where you can pass the "token" as a query parameter.

Request

Headers
Authorization: BimPlus 9c1874a62c974dcfa75e0132c423a088 Content-Type: application/json

Response

Returns file data. The response is of Content-Type: application/octet-stream.

Status
Status: 200 OK

Delete the model

URL / Resource / JSON Structure

Resource: divisions/<division_id>

URL: https://api-stage.bimplus.net/v2/<team_slug>/divisions/<division_id>

Example: <https://api-stage.bimplus.net/v2/bimplus-gmbh/divisions/e687b45b-d90d-4361-94ab-baf269588c0a>

HTTP Method

DELETE

Description

Deletes a specified model using its id.

Request

Headers
Authorization: BimPlus 9c1874a62c974dcfa75e0132c423a088 Content-Type: application/json

Response

Status
Status: 200 OK