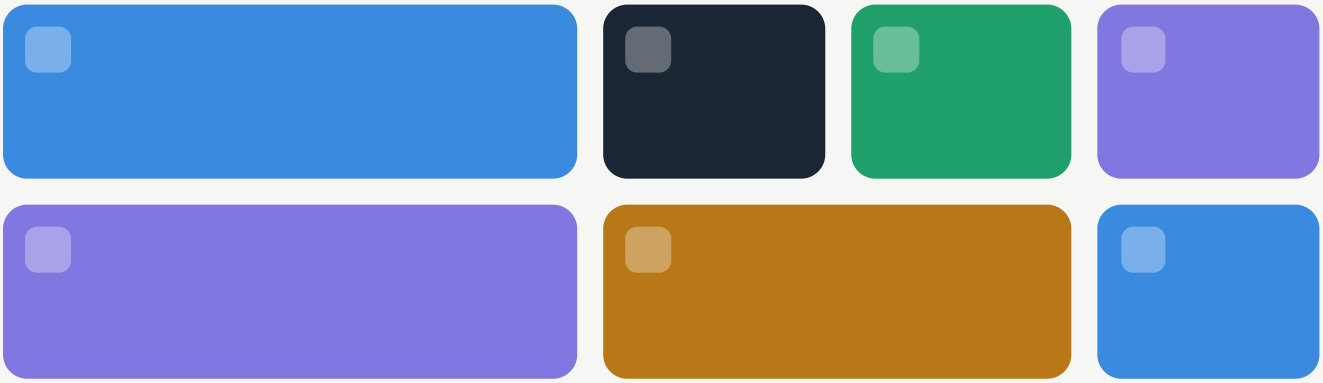
BPMSquare

CUSTOMER EDITION

REST API

How to connect other systems to BPMSquare: the REST API, the change feed and webhooks, connectors, the integration middleware and Data Workbench.

New way of customer relationship



REST API

Provided by **Snasquare**

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CHAPTER 2

REST API

> Screen names and button words may be refined as the product improves. If a name here is slightly different on your screen, look for the same idea nearby.

About this chapter

This chapter is the reference for the REST API, version 1. It lists every endpoint, what it needs, what you can filter on and what comes back. Each endpoint family has a real request and a real-shaped answer.

Read Chapter 1 first. It explains keys, scopes, modules and the limits that apply here.

All samples use made-up data. Example Trading LLC is the customer. The workspace address is `bpm.example.com`. Ids, references and amounts are invented, but the field names are exactly what the API returns. A few long answers are shortened and say so.

```
BASE=https://bpm.example.com/api/v1
KEY=bpm_live_xxxxxxxx
```

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The change feed (`/changes`) and the plain-English query (`/ask`) have their own chapters: Chapter 3 and Chapter 4.

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1. Conventions

- **Format.** Requests and answers are JSON. Send `Content-Type: application/json` with a body.
- **Ids.** Every record has a UUID `id` . Use it in paths and links. Business references such as `QT-2026-0042` are labels (Chapter 1, section 6).
- **Dates and times.** A date is `YYYY-MM-DD` . A time stamp is ISO 8601. Stored time stamps carry microseconds and a `+00:00` offset.
- **Money.** A plain JSON number in your workspace currency. Totals of quotations are before tax.
- **Missing values.** An absent value is `null` .
- **Links.** Rows and answers carry `_links` . Follow the ones that are endpoints in this guide. A few point at addresses that do not exist, for example the `self` link on a case (section 8).
- **Detail answers.** `GET /…/:id` returns `{ "data": { … }, "_links": { … } }` .
- **Cross-origin calls** are allowed. Keep your key on a server anyway.

2. Authentication and scopes

Send `Authorization: Bearer <key>` on every call. Create keys under **Settings > Integrations > API keys & developer**. Chapter 1, section 3 explains scoped keys, read and write, the objects a key can name, and which objects "All objects" does not reach.

An unknown, expired or revoked key gets `401` . A key without the right scope gets `403` . A module your workspace does not own gets `404` .

3. Lists, filters and totals

Every list endpoint answers in the same envelope:

```
{
  "data": [ { "…": "rows" } ],
  "meta": { "count": 1, "total": 1, "page": 1, "limit": 50, "has_more": false, "generated_at": "2026-10-28T08:15:30.412Z" },
  "_links": { "self": "/api/v1/accounts", "next": null, "prev": null }
}
```

`meta.aggregates` and `meta.groups` appear only when you ask for them. `next` and `prev` are relative links that repeat your query string. A list of quotations also has `_links.metadata`.

Query parameters

These work on every list endpoint. All are optional and they combine.

Parameter	What it does
`select`	Comma list of fields to return. Use dots for nested fields, such as `account.name`. Only the endpoint's queryable fields can be named.
`filter`	Clauses written `field:op:value`, joined with `;` (all must match). Operators: `eq`, `ne`, `gt`, `gte`, `lt`, `lte`, `like`, `in`, `isnull`. `like` means "contains", ignoring case. `in` takes a comma list. `isnull` takes `true` or `false`. Numbers compare as numbers, dates as ISO text. URL-encode the value (`;` is `%3B`).
`search`	Case-insensitive "contains" across the endpoint's searchable fields. Combined with `filter` by AND.
`sort`	Comma list of fields. A leading `-` means descending, for example `-total,ref`.
`page`, `limit`	1-based page number. `limit` defaults to 50 and is capped at 200.
`aggregate`	`count`, `sum:field`, `avg:field`, `min:field` or `max:field`, comma separated, over the whole filtered set. The answer is in `meta.aggregates` under keys such as `count` and `sum_total`. Numeric fields only.
`group_by`	Totals per distinct value of a field, in `meta.groups` as `[{ "key", "count", … }]`. A date field is grouped by `group_period`.
`group_period`	`day`, `week`, `month` (default), `quarter` or `year`. Only with a date `group_by`. Keys look like `2026-10`, `2026-Q4`, `2026-W44`. Dates that cannot be read group under `(none)`.
`group_limit`	Keep the top N groups (maximum 100). The rest are summed into one group called `Other`.
`having`	A filter on group totals, written `key:op:value`, for example `sum_total:gt:50000`. Operators: `eq`, `ne`, `gt`, `gte`, `lt`, `lte`. Needs `group_by`.
`group_sort`	`count`, `key` or an aggregate key. Descending unless you prefix `+`.
`count`	`only` returns `meta` and no rows.

A field name the endpoint does not list is a `422` that names the accepted fields.

Each endpoint also accepts a few shortcut parameters, such as `?status=`. They are shown with the endpoint and combine with `filter` by AND.

Some row fields cannot be used in `select`, `filter` or `sort`: `_links`, `custom_data` and `counts`. They appear in an unprojected row only.

Examples

Won quotations over 10,000, biggest first, only three columns:

```
curl -s -G -H "Authorization: Bearer $KEY" "$BASE/quotations" \
  --data-urlencode "filter=outcome:eq:won;total:gte:10000" \
  --data-urlencode "sort=-total" \
  --data-urlencode "select=ref,total,account.name"
```

Total value of won quotations by month, without the rows:

```
curl -s -G -H "Authorization: Bearer $KEY" "$BASE/quotations" \
  --data-urlencode "filter=outcome:eq:won" \
  --data-urlencode "group_by=created_at" --data-urlencode "group_period=month" \
  --data-urlencode "aggregate=count,sum:total" --data-urlencode "count=only"
```

```
{
  "data": [],
  "meta": {
    "count": 0, "total": 14, "page": 1, "limit": 50, "has_more": false,
    "aggregates": { "count": 14, "sum_total": 612400 },
    "groups": [
      { "key": "2026-09", "count": 6, "sum_total": 233900 },
      { "key": "2026-10", "count": 8, "sum_total": 378500 }
    ],
    "generated_at": "2026-10-28T08:15:30.412Z"
  },
  "_links": { "self": "/api/v1/quotations", "next": null, "prev": null }
}
```

4. Errors

Status	Body	When
400	`{"error":"Malformed JSON","message":"The request body could not be parsed as JSON."}` (some routes use `{"error":"Invalid JSON body"}` or a plain message)	The body is not JSON, or a required value in the query or body is badly formed.
401	`{"error":"Unauthorized","message":"Include header: Authorization: Bearer <tenant API key>. …"}`	No key, an unknown key, a revoked or expired key. Also on the metadata endpoints for a write-only key.

Status	Body	When
403	`{"error":"Forbidden","message":"This API key is not scoped for read access to \"accounts\"."}` (`write access` for a write)	The scope does not allow that object or that direction.
404	`{"error":"Not found"}` (quotations: `"Quotation not found"`; accounts also echo `"id"`)	An unknown id, an id that is not in your workspace, or a module you do not own.
409	`{"error":"…"}`	A business conflict, such as editing a superseded quotation, or billing a period that is already billed.
422	`{"error":"Validation failed","message":"2 fields rejected. See \"details\". Full field reference: GET /api/v1/metadata/quotations","details":[{"field":"…","message":"…"}]}`	An invalid body or an invalid list query. The message always names the quotations metadata address, whichever endpoint answered.
500	`{"error":"<message>"}`	A server or database error. Repeat later.
502, 503	`{"error":"AI service unavailable"}`, `{"error":"Not configured"}`	`POST /ask` only.

Treat `5xx` and `429` as "try again later". Do not repeat a `4xx` without changing the request.

5. ABM programs

Account-based marketing programs. Scope `abm_programs` (included in "All objects"). Module ABM. A program holds no personal data. The companies inside it are a separate object (section 6).

GET /abm-programs

Shortcut parameters: `status` (`draft`, `active`, `paused`, `completed`, `archived`), `kind` (`new_business`, `expansion`).

Queryable fields: `id`, `ref`, `name`, `kind`, `status`, `goal`, `goal_metric`, `goal_target`, `default_tier`, `starts_on`, `ends_on`, `targets_count`, `created_at`. Searchable: `ref`, `name`, `goal`.

```
curl -s -H "Authorization: Bearer $KEY" "$BASE/abm-programs?status=active"
```

```
{
  "data": [
    {
      "id": "6f0b4d18-2a57-4e93-a6c0-9b1e5a3f7c13",
      "ref": "ABM-0002",
      "name": "Gulf contractors 2026",
      "kind": "new_business",
      "goal": "Open 5 deals with top contractors",
      "goal_metric": "deals_opened",
      "goal_target": 5,
      "starts_on": "2026-09-01",
      "ends_on": "2026-12-31",
      "status": "active",
      "default_tier": "one_to_few",
      "owner_user_id": "11111111-2222-4333-8444-555555555555",
      "custom_data": null,
      "created_at": "2026-08-30T10:02:11.482113+00:00",
      "updated_at": "2026-10-20T07:44:09.113002+00:00",
      "targets_count": 12,
      "_links": {
        "self": "/api/v1/abm-programs/6f0b4d18-2a57-4e93-a6c0-9b1e5a3f7c13",
        "targets": "/api/v1/abm-programs/6f0b4d18-2a57-4e93-a6c0-9b1e5a3f7c13/targets"
      }
    }
  ],
  "meta": { "count": 1, "total": 1, "page": 1, "limit": 50, "has_more": false, "generated_at": "2026-10-
28T08:15:30.412Z" },
  "_links": { "self": "/api/v1/abm-programs", "next": null, "prev": null }
}
```


`goal_metric` is one of `deals_won`, `deals_opened`, `accounts_engaged`, `revenue`.

GET /abm-programs/:id

One program with its funnel, counted by company and never by person.

```
curl -s -H "Authorization: Bearer $KEY" "$BASE/abm-programs/6f0b4d18-2a57-4e93-a6c0-9b1e5a3f7c13"
```

```
{
  "data": {
    "id": "6f0b4d18-2a57-4e93-a6c0-9b1e5a3f7c13",
    "ref": "ABM-0002",
    "name": "Gulf contractors 2026",
    "kind": "new_business",
    "status": "active",
    "default_tier": "one_to_few",
    "funnel": { "targets": 12, "reached": 9, "engaged": 6, "inTalks": 3, "deals": 2, "won": 1, "lost": 0,
"dropped": 1 },
    "by_tier": [
      { "tier": "one_to_one", "targets": 2, "engaged": 2, "deals": 1, "won": 1 },
      { "tier": "one_to_few", "targets": 6, "engaged": 3, "deals": 1, "won": 0 },
      { "tier": "one_to_many", "targets": 4, "engaged": 1, "deals": 0, "won": 0 }
    ],
    "money": { "openValue": 480000, "wonValue": 150000, "openDeals": 1, "wonDeals": 1 },
    "_links": {
      "self": "/api/v1/abm-programs/6f0b4d18-2a57-4e93-a6c0-9b1e5a3f7c13",
      "targets": "/api/v1/abm-programs/6f0b4d18-2a57-4e93-a6c0-9b1e5a3f7c13/targets"
    }
  },
  "_links": { "self": "/api/v1/abm-programs/6f0b4d18-2a57-4e93-a6c0-9b1e5a3f7c13" }
}
```


The answer also carries every field of the list row (shortened here). An unknown id is `404 {"error":"Not found"}`.

---

6. ABM targets

One company inside one program. Scope `abm_targets`, which you must name (Chapter 1, section 3), because a buying group names people and their roles. Module ABM.

GET /abm-targets

Shortcut parameters: `progress` (`planned`, `reached`, `engaged`, `in_talks`, `deal_open`, `won`, `lost`, `dropped`), `tier` (`one_to_one`, `one_to_few`, `one_to_many`), `program_id`.

Queryable fields: `id`, `program_id`, `program_ref`, `program_name`, `account.id`, `account.name`, `tier`, `progress`, `progress_source`, `progress_changed_at`, `next_step`, `next_step_due`, `opportunity_id`, `people_count`, `created_at`. Searchable: `program_ref`, `program_name`, `account.name`, `next_step`.

```
curl -s -H "Authorization: Bearer $KEY" "$BASE/abm-targets?progress=engaged"
```

```
{
  "data": [
    {
      "id": "701c5e29-3b68-4fa4-b7d1-0c2f6b4a8d14",
      "program_id": "6f0b4d18-2a57-4e93-a6c0-9b1e5a3f7c13",
      "account_id": "3f2a9c1e-7b44-4d0a-9a51-0c6d2e8b1a01",
      "tier": "one_to_one",
      "progress": "engaged",
      "progress_source": "rule",
      "progress_changed_at": "2026-10-12T09:30:00+00:00",
      "owner_user_id": "11111111-2222-4333-8444-555555555555",
      "next_step": "Site visit with procurement",
      "next_step_due": "2026-11-05",
      "opportunity_id": null,
      "custom_data": null,
      "created_at": "2026-09-02T06:10:44.221903+00:00",
      "updated_at": "2026-10-12T09:30:00.118322+00:00",
      "program_ref": "ABM-0002",
      "program_name": "Gulf contractors 2026",
      "account": { "id": "3f2a9c1e-7b44-4d0a-9a51-0c6d2e8b1a01", "name": "Example Trading LLC" },
      "people_count": 3,
      "_links": {
        "self": "/api/v1/abm-targets/701c5e29-3b68-4fa4-b7d1-0c2f6b4a8d14",
        "program": "/api/v1/abm-programs/6f0b4d18-2a57-4e93-a6c0-9b1e5a3f7c13",
        "account": "/api/v1/accounts/3f2a9c1e-7b44-4d0a-9a51-0c6d2e8b1a01"
      }
    }
  ],
  "meta": { "count": 1, "total": 1, "page": 1, "limit": 50, "has_more": false, "generated_at": "2026-10-
28T08:16:02.004Z" },
  "_links": { "self": "/api/v1/abm-targets", "next": null, "prev": null }
}
```


`progress_source` is `rule` (set by an automatic rule) or `manual` (set by a person). Private notes and the reasons for progress or dropping a target are never returned.

GET /abm-targets/:id

The same row, plus `buying_group`: the contact id and role of each person, with no names, contact details or notes.

```
{
  "data": {
    "id": "701c5e29-3b68-4fa4-b7d1-0c2f6b4a8d14",
    "tier": "one_to_one",
    "progress": "engaged",
    "account": { "id": "3f2a9c1e-7b44-4d0a-9a51-0c6d2e8b1a01", "name": "Example Trading LLC" },
    "people_count": 1,
    "buying_group": [
      {
        "id": "81d2f6a3-4c79-4e05-98b1-1d3a7c5b9e20",
        "contact_id": "5c8e7d10-2b9a-4f63-a1d4-8e0b3c7f9a02",
        "role": "decision_maker",
        "is_primary": true,
        "_links": { "contact": "/api/v1/contacts/5c8e7d10-2b9a-4f63-a1d4-8e0b3c7f9a02" }
      }
    ],
    "_links": { "self": "/api/v1/abm-targets/701c5e29-3b68-4fa4-b7d1-0c2f6b4a8d14" }
  },
  "_links": { "self": "/api/v1/abm-targets/701c5e29-3b68-4fa4-b7d1-0c2f6b4a8d14" }
}
```


The other row fields are present too (shortened here). `role` is one of `decision_maker`, `influencer`, `user`, `blocker`, `unknown`. The `contact` link is not an endpoint. To read the person, use `GET /accounts/:id`.

GET /abm-programs/:id/targets

The companies of one program. Same rows, parameters and scope as `GET /abm-targets` (scope `abm_targets`). The `self` link is `/api/v1/abm-programs/:id/targets`. An unknown program id gives an empty list, not `404`.

```
curl -s -H "Authorization: Bearer $KEY" "$BASE/abm-programs/6f0b4d18-2a57-4e93-a6c0-9b1e5a3f7c13/targets?sort=-next_step_due"
```

---

7. Accounts

Companies you sell to. Scope `accounts`. Module Accounts. Read only.

GET /accounts

Shortcut parameter: `type` (`prospect`, `oem`, `direct`, `end_customer`).

Queryable fields: `id`, `name`, `type`, `city`, `phone`, `email`, `created_at`, `referred_by.name`. Searchable: `name`, `city`, `email`. Phone and email are stored encrypted and are decrypted for you.

```
curl -s -H "Authorization: Bearer $KEY" "$BASE/accounts?type=end_customer&search=example"
```

```
{
  "data": [
    {
      "id": "3f2a9c1e-7b44-4d0a-9a51-0c6d2e8b1a01",
      "name": "Example Trading LLC",
      "type": "end_customer",
      "city": "Dubai",
      "phone": "+971 4 555 0147",
      "email": "procurement@example.com",
      "referred_by": null,
      "created_at": "2026-03-04T05:22:10.331042+00:00",
      "counts": { "contacts": 2, "cases": 1, "assets": 3, "contracts": 0, "quotes": 4, "workOrders": 1,
"invoices": 2 },
      "_links": { "self": "/api/v1/accounts/3f2a9c1e-7b44-4d0a-9a51-0c6d2e8b1a01" }
    }
  ],
  "meta": { "count": 1, "total": 1, "page": 1, "limit": 50, "has_more": false, "generated_at": "2026-10-
28T08:17:40.220Z" },
  "_links": { "self": "/api/v1/accounts", "next": null, "prev": null }
}
```


`referred_by` is `{ "id", "name" }` or `null`.

GET /accounts/:id

The whole account with what is linked to it. The fields follow the account record. In a workspace with e-invoicing the buyer fields appear too. An individual's ID number is never returned.

```
curl -s -H "Authorization: Bearer $KEY" "$BASE/accounts/3f2a9c1e-7b44-4d0a-9a51-0c6d2e8b1a01"
```

```
{
  "data": {
    "id": "3f2a9c1e-7b44-4d0a-9a51-0c6d2e8b1a01",
    "tenant_id": "00000000-0000-4000-8000-000000000001",
    "ref": "ACC-0007",
    "name": "Example Trading LLC",
    "type": "end_customer",
    "address_line1": "Plot 14, Industrial Area 3",
    "address_line2": null,
    "city": "Dubai",
    "state": null,
    "postal_code": null,
    "country": "AE",
    "phone": "+971 4 555 0147",
    "phone2": null,
    "email": "procurement@example.com",
    "email2": null,
    "website": "https://www.example.com",
    "industry": "Trading",
    "employee_count": null,
    "annual_revenue": null,
    "gstin": null,
    "notes": null,
    "referred_by_account_id": null,
    "created_at": "2026-03-04T05:22:10.331042+00:00",
    "custom_data": null,
    "marketing_opt_out": false,
    "owner_user_id": null,
    "referred_by": null,
    "contacts": [
      {
        "id": "5c8e7d10-2b9a-4f63-a1d4-8e0b3c7f9a02",
        "ref": "CON-0003",
        "account_id": "3f2a9c1e-7b44-4d0a-9a51-0c6d2e8b1a01",
        "name": "Sara Khan",
        "role": "Procurement manager",
        "department": "Purchasing",
        "phone": "+971 50 555 0182",
        "email": "sara.khan@example.com",
        "custom_data": null
      }
    ],
    "sites": [],
    "assets": [],
    "cases": [],
    "quotes": [
      { "id": "b7d1e0c2-5a3f-4e18-8c92-6f4a1d9e2b03", "ref": "QT-2026-0042", "status": "draft", "total":
41050, "created_at": "2026-10-26T06:12:31.118820+00:00" }
    ],
    "contracts": [],
    "work_orders": [
      { "id": "ee3b1c52-7a94-4c06-8d1f-2b5a9e7c0d21", "ref": "WO-0011", "status": "scheduled",
"scheduled_for": "2026-11-03", "authorized_by": { "kind": "quote", "id": "b7d1e0c2-5a3f-4e18-8c92-
6f4a1d9e2b03" } }
    ],
    "invoices": []
  },
```

```
  "meta": { "generated_at": "2026-10-28T08:18:12.907Z" },
  "_links": { "self": "/api/v1/accounts/3f2a9c1e-7b44-4d0a-9a51-0c6d2e8b1a01", "collection":
"/api/v1/accounts" }
}
```


Some arrays are shown empty to keep the sample short. The `contacts` rows carry the contact record: phone and email are decrypted, and fields such as `phone2`, `website`, address fields, notes and birthday are present too. The `assets`, `cases`, `contracts` and `invoices` rows carry their own records. `sites` is always `[]` today.

Contact people are returned under the `accounts` scope. Give an integration that scope only if it may see them.

Errors: `404 {"error":"Not found","id":"…"}`.

---

8. Cases

Service cases (repair jobs). Scope `cases`. Module Cases. Read only. There is a list and no detail endpoint.

GET /cases

Shortcut parameters: `status` (`intake`, `inspection`, `report_sent`, `report_approved`, `quote_sent`, `quote_approved`, `in_repair`, `qa`, `ready`, `closed`, `buyback`, `scrapped`), `account_id`.

Queryable fields: `id`, `ref`, `type`, `status`, `equipment_label`, `complaint`, `disposition`, `has_loaner`, `intake_at`, `closed_at`, `account.id`, `account.name`, `technician_name`. Searchable: `ref`, `equipment_label`, `complaint`, `account.name`.

```
curl -s -H "Authorization: Bearer $KEY" "$BASE/cases?status=in_repair&account_id=3f2a9c1e-7b44-4d0a-9a51-
0c6d2e8b1a01"
```

```
{
  "data": [
    {
      "id": "c41d8f06-9e2b-47a3-b5c1-3a7e0d9f6b06",
      "ref": "CASE-0031",
      "type": "adhoc",
      "status": "in_repair",
      "equipment_label": "22 kW 3-ph induction motor, serial EX-2291",
      "complaint": "Overheating under load",
      "disposition": "repair",
      "has_loaner": false,
      "intake_at": "2026-10-20T07:05:00+00:00",
      "closed_at": null,
      "account": { "id": "3f2a9c1e-7b44-4d0a-9a51-0c6d2e8b1a01", "name": "Example Trading LLC" },
      "technician_name": "R. Menon",
      "_links": {
        "self": "/api/v1/cases/c41d8f06-9e2b-47a3-b5c1-3a7e0d9f6b06",
        "account": "/api/v1/accounts/3f2a9c1e-7b44-4d0a-9a51-0c6d2e8b1a01"
      }
    }
  ],
  "meta": { "count": 1, "total": 1, "page": 1, "limit": 50, "has_more": false, "generated_at": "2026-10-
28T08:19:01.511Z" },
  "_links": { "self": "/api/v1/cases", "next": null, "prev": null }
}
```


`type` is `amc`, `adhoc` or `direct`. `disposition` is `repair`, `buyback`, `scrap` or `null`. The row's `self` link points at `/api/v1/cases/:id`, which is not an endpoint. To find one case, filter the list: `?filter=ref:eq:CASE-0031`.

---

9. Employees

Staff records. These are personal data. Scope `employees`, which you must name. The workspace also needs the Business roles module. Without it the answer is `404` with the message "The employees module isn't enabled for this workspace."

GET /employees

Shortcut parameters: `status` (`active`, `inactive`), `department`.

Queryable fields: `id`, `employee_code`, `first_name`, `last_name`, `email`, `phone`, `department`, `designation`, `status`, `employment_type`, `wfm_role`, `valid_from`, `valid_to`, `created_at`. Searchable: `employee_code`, `first_name`, `last_name`, `email`, `department`, `designation`.

```
curl -s -H "Authorization: Bearer $KEY" "$BASE/employees?status=active&department=Workshop"
```

```
{
  "data": [
    {
      "id": "923e7a4b-5d8a-4b26-99f3-2e4b8d6c0f16",
      "employee_code": "EMP-0042",
      "first_name": "Ravi",
      "last_name": "Menon",
      "email": "ravi.menon@example.com",
      "phone": "+971 50 555 0120",
      "department": "Workshop",
      "designation": "Technician",
      "status": "active",
      "employment_type": "full_time",
      "wfm_role": "employee",
      "valid_from": "2025-01-01",
      "valid_to": null,
      "created_at": "2025-01-02T06:00:00.000000+00:00",
      "custom_data": null,
      "_links": { "self": "/api/v1/employees/923e7a4b-5d8a-4b26-99f3-2e4b8d6c0f16" }
    }
  ],
  "meta": { "count": 1, "total": 1, "page": 1, "limit": 50, "has_more": false, "generated_at": "2026-10-
28T08:20:11.003Z" },
  "_links": { "self": "/api/v1/employees", "next": null, "prev": null }
}
```


GET /employees/:id

The detail answer is the complete employee record, not the shorter list shape. Besides the list fields it carries internal columns such as `tenant_id`, `updated_at`, `shift_id`, `site_id`, `technician_id`, `self_service_override`, `remote_mode`, `enrolled_photo_path` and `consent_recorded_at`.

```
{
  "data": {
    "id": "923e7a4b-5d8a-4b26-99f3-2e4b8d6c0f16",
    "tenant_id": "00000000-0000-4000-8000-000000000001",
    "employee_code": "EMP-0042",
    "first_name": "Ravi",
    "last_name": "Menon",
    "email": "ravi.menon@example.com",
    "phone": "+971 50 555 0120",
    "department": "Workshop",
    "designation": "Technician",
    "valid_from": "2025-01-01",
    "valid_to": null,
    "status": "active",
    "employment_type": "full_time",
    "shift_id": null,
    "site_id": null,
    "wfm_role": "employee",
    "technician_id": null,
    "custom_data": null,
    "created_at": "2025-01-02T06:00:00.000000+00:00",
    "updated_at": "2026-09-01T06:00:00.000000+00:00",
    "_links": { "self": "/api/v1/employees/923e7a4b-5d8a-4b26-99f3-2e4b8d6c0f16" }
  },
  "_links": { "self": "/api/v1/employees/923e7a4b-5d8a-4b26-99f3-2e4b8d6c0f16" }
}
```


The sample is shortened. Do not build on the internal columns. They can change.

---

10. Estimates

Project estimates built from a template. Scope `estimates`, which you must name. Module Estimator. Only customer-safe fields are returned. Costs, margin, parameters, the model and the bill of materials are never returned.

GET /estimates

Shortcut parameters: `status` (`draft`, `quoted`, `won`, `lost`), `account_id`.

Queryable fields: `id`, `ref`, `name`, `status`, `currency`, `quoted_total`, `quoted_total_incl_vat`, `account.id`, `account.ref`, `account.name`, `contact.id`, `contact.ref`, `contact.name`, `template.name`, `created_at`, `updated_at`. Searchable: `ref`, `name`, `account.name`, `contact.name`, `template.name`.

```
curl -s -H "Authorization: Bearer $KEY" "$BASE/estimates?status=quoted"
```

```
{
  "data": [
    {
      "id": "812d6f3a-4c79-4a15-88e2-1d3a7c5b9e15",
      "ref": "EST-0009",
      "name": "Warehouse mezzanine, 400 m2",
      "status": "quoted",
      "currency": "AED",
      "quoted_total": 182500,
      "quoted_total_incl_vat": 191625,
      "account": { "id": "3f2a9c1e-7b44-4d0a-9a51-0c6d2e8b1a01", "ref": "ACC-0007", "name": "Example Trading
LLC" },
      "contact": { "id": "5c8e7d10-2b9a-4f63-a1d4-8e0b3c7f9a02", "ref": "CON-0003", "name": "Sara Khan" },
      "template": { "name": "Steel structure" },
      "custom_data": null,
      "created_at": "2026-10-10T06:00:00.000000+00:00",
      "updated_at": "2026-10-14T11:20:00.000000+00:00",
      "_links": { "self": "/api/v1/estimates/812d6f3a-4c79-4a15-88e2-1d3a7c5b9e15" }
    }
  ],
  "meta": { "count": 1, "total": 1, "page": 1, "limit": 50, "has_more": false, "generated_at": "2026-10-
28T08:21:30.700Z" },
  "_links": { "self": "/api/v1/estimates", "next": null, "prev": null }
}
```


`quoted_total` and `quoted_total_incl_vat` are `null` until the estimate has a price. `account`, `contact` and `template` are `null` when not set.

GET /estimates/:id

The same object as one list row, wrapped as `{ "data": { … }, "_links": { "self": "/api/v1/estimates/:id" } }`. An id that is not a UUID is `404`.

---

11. Inventory

Stocked spare parts and materials. Scope `inventory`. Module Purchasing. Read only.

GET /inventory

Shortcut parameters: `status` (`active`, `inactive`), `low_stock=true` (only items at or below their reorder level).

Queryable fields: `id`, `sku`, `name`, `description`, `category`, `uom`, `qty_on_hand`, `reorder_level`, `unit_cost`, `supplier_id`, `status`. Searchable: `sku`, `name`, `description`, `category`.

```
curl -s -H "Authorization: Bearer $KEY" "$BASE/inventory?low_stock=true&sort=qty_on_hand"
```

```
{
  "data": [
    {
      "id": "7d2b9e40-1c85-4a6f-93d8-e5a0b1c2d307",
      "sku": "BRG-6310-2RS",
      "name": "Deep groove ball bearing 6310-2RS",
      "description": "50 x 110 x 27 mm, sealed",
      "category": "Bearings",
      "uom": "Nos",
      "qty_on_hand": 4,
      "reorder_level": 6,
      "unit_cost": 38.5,
      "supplier_id": "2e6a4c18-8f03-4b97-a1e5-d9c7b3f0a508",
      "status": "active",
      "custom_data": null,
      "_links": { "self": "/api/v1/inventory/7d2b9e40-1c85-4a6f-93d8-e5a0b1c2d307" }
    }
  ],
  "meta": { "count": 1, "total": 1, "page": 1, "limit": 50, "has_more": false, "generated_at": "2026-10-
28T08:22:44.100Z" },
  "_links": { "self": "/api/v1/inventory", "next": null, "prev": null }
}
```


GET /inventory/:id

The complete inventory record (all columns) plus `_links`. It does not include stock movements.


```
{
  "data": {
    "id": "7d2b9e40-1c85-4a6f-93d8-e5a0b1c2d307",
    "ref": "INV-0018",
    "tenant_id": "00000000-0000-4000-8000-000000000001",
    "sku": "BRG-6310-2RS",
    "name": "Deep groove ball bearing 6310-2RS",
    "description": "50 x 110 x 27 mm, sealed",
    "category": "Bearings",
    "uom": "Nos",
    "supplier_id": "2e6a4c18-8f03-4b97-a1e5-d9c7b3f0a508",
    "qty_on_hand": 4,
    "reorder_level": 6,
    "unit_cost": 38.5,
    "status": "active",
    "notes": null,
    "custom_data": null,
    "created_at": "2026-02-11T09:00:00.000000+00:00",
    "_links": { "self": "/api/v1/inventory/7d2b9e40-1c85-4a6f-93d8-e5a0b1c2d307" }
  },
  "_links": { "self": "/api/v1/inventory/7d2b9e40-1c85-4a6f-93d8-e5a0b1c2d307" }
}
```


Errors: `404 {"error":"Not found"}`.

12. Invoices

Customer invoices. Scope `invoices`. Module Invoices. Read only. (A draft invoice can be raised from project hours, section 17.)

GET /invoices

Shortcut parameters: `status` (`draft`, `sent`, `partial`, `paid`, `overdue`, `cancelled`), `account_id`.

Queryable fields: `id`, `ref`, `status`, `account.id`, `account.name`, `quote_id`, `work_order_id`, `due_date`, `total`, `paid_amount`, `issued_at`, `einvoice_doc_type`, `einvoice_ready`. Searchable: `ref`, `account.name`. The two e-invoice fields exist only in a workspace with Saudi e-invoicing switched on.

```
curl -s -H "Authorization: Bearer $KEY" "$BASE/invoices?status=overdue&aggregate=count,sum:total"
```


```
{
  "data": [
    {
      "id": "61f0a3d9-4b7c-4e25-8a16-c3d5e9b1f709",
      "ref": "INV-2026-0113",
      "status": "overdue",
      "account": { "id": "3f2a9c1e-7b44-4d0a-9a51-0c6d2e8b1a01", "name": "Example Trading LLC" },
      "quote_id": "b7d1e0c2-5a3f-4e18-8c92-6f4a1d9e2b03",
      "work_order_id": null,
      "due_date": "2026-10-15",
      "total": 41050,
      "paid_amount": 10000,
      "issued_at": "2026-09-15T08:00:00+00:00",
      "_links": { "self": "/api/v1/invoices/61f0a3d9-4b7c-4e25-8a16-c3d5e9b1f709" }
    }
  ],
  "meta": { "count": 1, "total": 1, "page": 1, "limit": 50, "has_more": false, "aggregates": { "count": 1,
"sum_total": 41050 }, "generated_at": "2026-10-28T08:23:30.900Z" },
  "_links": { "self": "/api/v1/invoices", "next": null, "prev": null }
}
```

GET /invoices/:id


```
{
  "data": {
    "id": "61f0a3d9-4b7c-4e25-8a16-c3d5e9b1f709",
    "ref": "INV-2026-0113",
    "status": "overdue",
    "account": { "id": "3f2a9c1e-7b44-4d0a-9a51-0c6d2e8b1a01", "name": "Example Trading LLC" },
    "quote_id": "b7d1e0c2-5a3f-4e18-8c92-6f4a1d9e2b03",
    "work_order_id": null,
    "case_id": null,
    "contract_id": null,
    "due_date": "2026-10-15",
    "notes": null,
    "terms": "Net 30",
    "total": 41050,
    "paid_amount": 10000,
    "balance_due": 31050,
    "custom_data": null,
    "issued_at": "2026-09-15T08:00:00+00:00",
    "lines": [
      { "id": "a1c3e5b7-2d49-4f60-8b1a-3c5e7a9b1d22", "description": "Supply of 3-phase induction motor 22
kW", "uom": "Nos", "qty": 2, "rate": 18500, "amount": 37000 },
      { "id": "b2d4f6c8-3e5a-4071-9c2b-4d6f8b0c2e33", "description": "Installation and commissioning",
"uom": "Lot", "qty": 1, "rate": 4500, "amount": 4050 }
    ],
    "payments": [
      { "amount": 10000, "paid_on": "2026-10-01", "method": "bank_transfer" }
    ],
    "_links": { "self": "/api/v1/invoices/61f0a3d9-4b7c-4e25-8a16-c3d5e9b1f709" }
  },
  "_links": { "self": "/api/v1/invoices/61f0a3d9-4b7c-4e25-8a16-c3d5e9b1f709" }
}
```


A payment's `method` is the text recorded with the payment. In a workspace with e-invoicing the invoice also carries `einvoice_doc_type`, `einvoice_ready`, `einvoice_uuid`, `einvoice_seq`, `original_invoice_id`, `credit_reason` and `supply_date`, and each line carries `vat_category`, `vat_rate` and `vat_exemption_reason`. Errors: `404`.

---

13. Opportunities (deals)

The sales pipeline. Scope `opportunities`. Module Pipeline.

GET /opportunities

Shortcut parameters: `stage`, `outcome` (`open`, `won`, `lost`, `dropped`), `account_id`, `owner_id`. The default stages are `qualify`, `propose`, `negotiate`, `won`, `lost`. Each workspace can change the list.

Queryable fields: `id`, `ref`, `title`, `account_id`, `account_name`, `stage`, `outcome`, `amount`, `probability`, `expected_close`, `owner_id`, `source`, `competitor`, `created_at`, `closed_at`. Searchable: `ref`, `title`, `account_name`, `competitor`.

```
curl -s -H "Authorization: Bearer $KEY" "$BASE/opportunities?outcome=open&sort=-amount"
```


```
{
  "data": [
    {
      "id": "d3b7f1a4-62e8-45c9-9d0b-7a2e4c6f8b0b",
      "ref": "OPP-0021",
      "title": "22 kW motor replacement programme",
      "description": null,
      "account_id": "3f2a9c1e-7b44-4d0a-9a51-0c6d2e8b1a01",
      "contact_id": "5c8e7d10-2b9a-4f63-a1d4-8e0b3c7f9a02",
      "stage": "propose",
      "outcome": "open",
      "loss_reason": null,
      "amount": 41050,
      "currency": "AED",
      "probability": 50,
      "expected_close": "2026-12-01",
      "owner_id": "11111111-2222-4333-8444-555555555555",
      "source": "referral",
      "competitor": null,
      "custom_data": null,
      "created_at": "2026-10-05T07:00:00.000000+00:00",
      "updated_at": "2026-10-26T06:13:00.000000+00:00",
      "closed_at": null,
      "account_name": "Example Trading LLC",
      "_links": {
        "self": "/api/v1/opportunities/d3b7f1a4-62e8-45c9-9d0b-7a2e4c6f8b0b",
        "account": "/api/v1/accounts/3f2a9c1e-7b44-4d0a-9a51-0c6d2e8b1a01"
      }
    }
  ],
  "meta": { "count": 1, "total": 1, "page": 1, "limit": 50, "has_more": false, "generated_at": "2026-10-
28T08:24:20.000Z" },
  "_links": { "self": "/api/v1/opportunities", "next": null, "prev": null }
}
```


Internal columns (team and the reason for a probability override) are never returned.

GET /opportunities/:id

The list row plus `loss_note`, `lines`, and `quotes` (the standard quotes and quotations made from the deal, newest first).

```
{
  "data": {
    "id": "d3b7f1a4-62e8-45c9-9d0b-7a2e4c6f8b0b",
    "ref": "OPP-0021",
    "title": "22 kW motor replacement programme",
    "stage": "propose",
    "outcome": "open",
    "loss_reason": null,
    "loss_note": null,
    "amount": 41050,
    "currency": "AED",
    "probability": 50,
    "account_name": "Example Trading LLC",
    "lines": [
      {
        "id": "c3e5a7d9-4f5b-4182-8d3c-5e7a9c1d3f44",
        "sl_no": "1",
        "description": "22 kW IE3 motor",
        "uom": "Nos",
        "qty": 2,
        "rate": 18500,
        "discount_pct": 0,
        "amount": 37000,
        "product_id": "a85c2e71-0d94-4f3b-b6a8-1e7d3c9f5a0a",
        "group_id": null,
        "group_label": null,
        "break_of": null,
        "break_qty": null,
        "is_selected": true
      }
    ],
    "quotes": [
      { "object": "quotation", "id": "b7d1e0c2-5a3f-4e18-8c92-6f4a1d9e2b03", "ref": "QT-2026-0042",
"status": "draft", "subtotal": 41050, "total": 41050, "created_at": "2026-10-26T06:12:31.118820+00:00" }
    ],
    "_links": {
      "self": "/api/v1/opportunities/d3b7f1a4-62e8-45c9-9d0b-7a2e4c6f8b0b",
      "account": "/api/v1/accounts/3f2a9c1e-7b44-4d0a-9a51-0c6d2e8b1a01"
    }
  },
  "_links": { "self": "/api/v1/opportunities/d3b7f1a4-62e8-45c9-9d0b-7a2e4c6f8b0b" }
}
```


The other list fields are present too (shortened here). `quotes[].object` is `quotation` or `standard_quote`.

---

14. Pricing

Prices a document against your workspace's published pricing set-up. Scope `pricing`. A read scope is enough, although the method is `POST`. Module Pricing engine.

POST /price

Body:

Field	Type	Notes
`document.attributes`	object	Header attributes the rules match on, such as `document_type`, `customer.*`, `region`. Optional.
`document.lines`	array, required	1 to 200 lines.
`document.lines[].line_no`	integer	Defaults to `(index + 1) × 10`.
`document.lines[].attributes`	object	Product and line attributes the rules match on.
`document.lines[].quantity`, `.weight_kg`	number	Must be numbers.
`document.lines[].cost_items`	array	`[{ "path": string, "qty": number }]`.
`document.lines[].manual`	object	`{ CODE: { value, reason? } }`. Allowed only where a component's override policy permits it.
`options.trace`	`full` (default), `summary`, `none`	How much of the working to return.
`options.pricing_date`	`YYYY-MM-DD`	Defaults to today.
`options.config_version`	integer	Price against a specific version of the set-up. Defaults to the published one.
`options.pricing_area`, `options.procedure`, `options.currency`	string	`procedure` is required when the version has more than one.
`options.replay_of`	UUID	Re-price a stored pricing document instead of sending `document.lines`.

```
curl -s -X POST -H "Authorization: Bearer $KEY" -H "Content-Type: application/json" "$BASE/price" -d '{
  "document": {
    "attributes": { "document_type": "quotation", "customer": { "group": "contractor" }, "region": "AE" },
    "lines": [
      { "line_no": 10, "quantity": 2, "attributes": { "product": { "category": "Motors" } } }
    ]
  },
  "options": { "trace": "summary", "pricing_date": "2026-10-28" }
}'
```

```
{
  "data": {
    "pricing_date": "2026-10-28",
    "currency": "AED",
    "totals": { "net": 36000, "subtotals": { "NET": 36000 } },
    "lines": [
      {
        "line_no": 10,
        "net": 36000,
        "subtotals": { "NET": 36000 },
        "components": { "LIST": 37000, "DISC": -1000 },
        "trace": [
          { "step": 10, "component": "LIST", "status": "APPLIED", "calc_type": "PER_UNIT", "value": 18500,
"qty": 2, "result": 37000 },
          { "step": 20, "component": "DISC", "status": "APPLIED", "calc_type": "PERCENT", "value": -2.7,
"basis": 37000, "result": -1000 },
          { "step": 30, "subtotal": "NET", "status": "SUBTOTAL", "result": 36000 }
        ]
      }
    ]
  },
  "meta": {
    "config_version": 7,
    "procedure": "STANDARD",
    "calc_ms": 12,
    "trace": "summary",
    "generated_at": "2026-10-28T08:26:00.000Z",
    "document_id": "9b8a7c6d-5e4f-4031-b2a1-0f9e8d7c6b5a"
  },
  "_links": { "self": "/api/v1/price" }
}
```


Component codes, subtotal names, the procedure code and the amounts come from your own pricing set-up. The values above are only an illustration. A trace step can carry `step`, `component`, `subtotal`, `status`, `reason`, `rule_id`, `matched_on`, `specificity`, `calc_type`, `basis`, `value`, `qty`, `formula`, `values_used` and `result`.

With `trace: "full"`, every step is returned, including those marked `EXCLUDED` and `SKIPPED`. `summary` returns only `APPLIED` and `SUBTOTAL` steps. `none` leaves `trace` out.

Every call is stored. Its id is in `meta.document_id`. Send `"options": { "replay_of": "<document_id>" }` to price it again. The answer then echoes `meta.replay_of`.

Errors:

Status	Body
422	`{"error":"Invalid document","message":"document.lines must be a non-empty array."}`, and likewise `Invalid options`
422	`{"error":"AMBIGUOUS_RULE","message":"…"}`, `MISSING_REQUIRED_COMPONENT`, `FORMULA_ERROR` and the other pricing codes in `error`
409	`{"error":"Pricing configuration","message":"…"}`, for example when no pricing set-up is published

Status	Body
500	`{"error":"Pricing failed","message":"Unexpected error while pricing the document."}`

15. Products

The sellable catalogue. Scope `products`. Module Products. Read only. The cost price and the preferred supplier are internal and are never returned.

GET /products

Shortcut parameters: `status` (`active`, `inactive`), `category`, `sub_category`, `item_type` (a stable key such as `finished_product`, `raw_material`, `bom_kit`).

Queryable fields: `id`, `ref`, `sku`, `name`, `description`, `category`, `sub_category`, `item_type`, `uom`, `list_price`, `qty_breaks`, `tax_percent`, `status`. Searchable: `ref`, `sku`, `name`, `description`, `category`, `sub_category`.

```
curl -s -H "Authorization: Bearer $KEY" "$BASE/products?category=Motors"
```

```
{
  "data": [
    {
      "id": "a85c2e71-0d94-4f3b-b6a8-1e7d3c9f5a0a",
      "ref": "PRD-0014",
      "sku": "MOT-22-IE3",
      "name": "22 kW IE3 induction motor",
      "description": "415 V, 4 pole, B3 foot mount",
      "category": "Motors",
      "sub_category": "Induction",
      "item_type": "finished_product",
      "uom": "Nos",
      "list_price": 18500,
      "qty_breaks": [ { "from": 5, "rate": 17800 }, { "from": 10, "rate": null } ],
      "tax_percent": 5,
      "status": "active",
      "custom_data": null,
      "_links": { "self": "/api/v1/products/a85c2e71-0d94-4f3b-b6a8-1e7d3c9f5a0a" }
    }
  ],
  "meta": { "count": 1, "total": 1, "page": 1, "limit": 50, "has_more": false, "generated_at": "2026-10-
28T08:27:10.000Z" },
  "_links": { "self": "/api/v1/products", "next": null, "prev": null }
}
```

`qty_breaks` is a list of `{ from, rate }`. A `null` rate means that quantity is priced at the normal price.

GET /products/:id

The list row plus `created_at` and `updated_at`.

16. Project hours

One row for each worked session over the last 12 months, for project costing. Scope `projects`. Module Workforce projects. Read only.

GET /project-hours

Shortcut parameters: `project_id`, `account_id`.

Queryable fields: `date`, `project.id`, `project.ref`, `project.name`, `project.level`, `project.status`, `top_project.id`, `top_project.name`, `account.id`, `account.name`, `employee.id`, `employee.name`, `employment_type`, `minutes`, `hours`, `break_minutes`, `bill_rate`, `billable_amount`, `invoiced`, `assigned`. Searchable: `project.ref`, `project.name`, `top_project.name`, `account.name`, `employee.name`. The `employee.*` fields exist only for a key that also names `employees`. A session that is not assigned to a project shows `project.name = "Unassigned"`.

Hours per project for October, totals only:

```
curl -s -G -H "Authorization: Bearer $KEY" "$BASE/project-hours" \
  --data-urlencode "filter=date:gte:2026-10-01;date:lte:2026-10-31" \
  --data-urlencode "group_by=project.name" \
  --data-urlencode "aggregate=sum:hours,sum:billable_amount" \
  --data-urlencode "count=only"
```

```
{
  "data": [],
  "meta": {
    "count": 0, "total": 118, "page": 1, "limit": 50, "has_more": false,
    "aggregates": { "sum_hours": 912.5, "sum_billable_amount": 54750 },
    "groups": [
      { "key": "Plant retrofit", "count": 84, "sum_hours": 655, "sum_billable_amount": 39300 },
      { "key": "Unassigned", "count": 34, "sum_hours": 257.5, "sum_billable_amount": 15450 }
    ],
    "generated_at": "2026-10-28T08:28:00.000Z"
  },
  "_links": { "self": "/api/v1/project-hours", "next": null, "prev": null }
}
```

One row, when you leave out `count=only`:

```
{
  "id": "923e7a4b-5d8a-4b26-99f3-2e4b8d6c0f16:2026-10-14T04:00:00.000Z",
  "date": "2026-10-14",
  "project": { "id": "e9c4a7b2-1f58-4d36-a0e7-5b8d2c1f3a0c", "ref": "PRJ-0003", "name": "Plant retrofit",
"level": 0, "status": "active" },
  "top_project": { "id": "e9c4a7b2-1f58-4d36-a0e7-5b8d2c1f3a0c", "name": "Plant retrofit" },
  "account": { "id": "3f2a9c1e-7b44-4d0a-9a51-0c6d2e8b1a01", "name": "Example Trading LLC" },
  "employee": { "id": "923e7a4b-5d8a-4b26-99f3-2e4b8d6c0f16", "name": "Ravi Menon", "code": "EMP-0042" },
  "employment_type": "full_time",
  "minutes": 450,
  "hours": 7.5,
  "break_minutes": 30,
  "bill_rate": 60,
  "billable_amount": 450,
  "invoiced": false,
  "assigned": true
}
```


Rows have no `_links`. Treat the row `id` as opaque. Cost is never a column.

---

17. Projects

Workforce projects and their sub-projects. Scope `projects` (write for the invoice call). Module Workforce projects.

GET /projects

Shortcut parameters: `status` (`planned`, `active`, `on_hold`, `completed`, `cancelled`), `level` (`0` for a project, `1` to `3` for a sub-project), `parent_id`, `account_id`.

Queryable fields: `id`, `ref`, `name`, `code`, `level`, `parent_id`, `account_id`, `status`, `start_date`, `end_date`, `budget_hours`, `bill_rate`. Searchable: `ref`, `name`, `code`.

```
curl -s -H "Authorization: Bearer $KEY" "$BASE/projects?level=0&status=active"
```

```
{
  "data": [
    {
      "id": "e9c4a7b2-1f58-4d36-a0e7-5b8d2c1f3a0c",
      "ref": "PRJ-0003",
      "name": "Plant retrofit",
      "code": "PO-77812",
      "parent_id": null,
      "account_id": "3f2a9c1e-7b44-4d0a-9a51-0c6d2e8b1a01",
      "status": "active",
      "start_date": "2026-09-01",
      "end_date": "2026-12-31",
      "budget_hours": 1200,
      "bill_rate": 60,
      "custom_data": null,
      "created_at": "2026-08-25T06:00:00.000000+00:00",
      "updated_at": "2026-10-01T06:00:00.000000+00:00",
      "level": 0,
      "_links": {
        "self": "/api/v1/projects/e9c4a7b2-1f58-4d36-a0e7-5b8d2c1f3a0c",
        "hours": "/api/v1/projects/e9c4a7b2-1f58-4d36-a0e7-5b8d2c1f3a0c/hours?from=YYYY-MM-DD&to=YYYY-MM-DD"
      }
    }
  ],
  "meta": { "count": 1, "total": 1, "page": 1, "limit": 50, "has_more": false, "generated_at": "2026-10-
28T08:29:00.000Z" },
  "_links": { "self": "/api/v1/projects", "next": null, "prev": null }
}
```

GET /projects/:id


```
{
  "data": {
    "id": "f2d8b6c3-7a41-4e95-8b0d-4c9a1e7f2b0d",
    "ref": "PRJ-0003.1",
    "name": "Electrical works",
    "code": null,
    "parent_id": "e9c4a7b2-1f58-4d36-a0e7-5b8d2c1f3a0c",
    "account_id": "3f2a9c1e-7b44-4d0a-9a51-0c6d2e8b1a01",
    "status": "active",
    "start_date": "2026-09-01",
    "end_date": null,
    "budget_hours": 400,
    "bill_rate": null,
    "custom_data": null,
    "created_at": "2026-08-25T06:05:00.000000+00:00",
    "updated_at": "2026-08-25T06:05:00.000000+00:00",
    "level": 1,
    "parent": { "id": "e9c4a7b2-1f58-4d36-a0e7-5b8d2c1f3a0c", "ref": "PRJ-0003", "name": "Plant retrofit",
"_links": { "self": "/api/v1/projects/e9c4a7b2-1f58-4d36-a0e7-5b8d2c1f3a0c" } },
    "sub_projects": [],
    "links": { "site_ids": [], "employee_ids": ["923e7a4b-5d8a-4b26-99f3-2e4b8d6c0f16"], "shift_ids": [] },
    "_links": {
      "self": "/api/v1/projects/f2d8b6c3-7a41-4e95-8b0d-4c9a1e7f2b0d",
      "hours": "/api/v1/projects/f2d8b6c3-7a41-4e95-8b0d-4c9a1e7f2b0d/hours?from=YYYY-MM-DD&to=YYYY-MM-DD",
      "invoices": "/api/v1/projects/f2d8b6c3-7a41-4e95-8b0d-4c9a1e7f2b0d/invoices",
      "account": "/api/v1/accounts/3f2a9c1e-7b44-4d0a-9a51-0c6d2e8b1a01"
    }
  },
  "_links": { "self": "/api/v1/projects/f2d8b6c3-7a41-4e95-8b0d-4c9a1e7f2b0d" }
}
```


`sub_projects` rows are `{ id, ref, name, _links }`.

GET /projects/:id/hours

Worked hours for the project and everything under it, for a period. Totals only, with no per-person detail. Query: `from` and `to`, both `YYYY-MM-DD` and both required. `to` must be on or after `from`, and the window can be at most 366 days.

```
curl -s -H "Authorization: Bearer $KEY" "$BASE/projects/e9c4a7b2-1f58-4d36-a0e7-5b8d2c1f3a0c/hours?
from=2026-10-01&to=2026-10-31"
```

```
{
  "data": {
    "project_id": "e9c4a7b2-1f58-4d36-a0e7-5b8d2c1f3a0c",
    "from": "2026-10-01",
    "to": "2026-10-31",
    "deduct_breaks": true,
    "total_minutes": 39300,
    "total_hours": 655,
    "breakdown": [
      {
        "project_id": "e9c4a7b2-1f58-4d36-a0e7-5b8d2c1f3a0c",
        "name": "Plant retrofit",
        "ref": "PRJ-0003",
        "status": "active",
        "parent_id": null,
        "account_id": "3f2a9c1e-7b44-4d0a-9a51-0c6d2e8b1a01",
        "depth": 0,
        "own_minutes": 12000,
        "total_minutes": 39300,
        "employees": 5,
        "employees_total": 11,
        "sessions": 40,
        "_links": { "self": "/api/v1/projects/e9c4a7b2-1f58-4d36-a0e7-5b8d2c1f3a0c" }
      }
    ]
  },
  "_links": {
    "self": "/api/v1/projects/e9c4a7b2-1f58-4d36-a0e7-5b8d2c1f3a0c/hours?from=2026-10-01&to=2026-10-31",
    "project": "/api/v1/projects/e9c4a7b2-1f58-4d36-a0e7-5b8d2c1f3a0c"
  }
}
```


Errors: `400 {"error":"from and to (YYYY-MM-DD) are required"}`, `{"error":"to must be on or after from"}`, `{"error":"Pick a window of 366 days or fewer"}`; `404`.

GET /projects/:id/invoices

Every invoice raised from this project's hours, newest first. That includes invoices raised for its sub-projects, or for a parent project that covered it.

```
{
  "data": [
    {
      "id": "d4f6a8c0-5b7d-4293-8e4f-6a8c0e2b4d55",
      "project_id": "e9c4a7b2-1f58-4d36-a0e7-5b8d2c1f3a0c",
      "project_name": "Plant retrofit",
      "invoice_id": "61f0a3d9-4b7c-4e25-8a16-c3d5e9b1f709",
      "invoice_ref": "INV-2026-0113",
      "invoice_status": "draft",
      "period_from": "2026-09-01",
      "period_to": "2026-09-30",
      "granularity": "project",
      "minutes": 37200,
      "amount": 37200,
      "created_at": "2026-10-01T00:30:00.000000+00:00",
      "_links": {
        "invoice": "/api/v1/invoices/61f0a3d9-4b7c-4e25-8a16-c3d5e9b1f709",
        "project": "/api/v1/projects/e9c4a7b2-1f58-4d36-a0e7-5b8d2c1f3a0c"
      }
    }
  ],
  "_links": { "self": "/api/v1/projects/e9c4a7b2-1f58-4d36-a0e7-5b8d2c1f3a0c/invoices", "project":
"/api/v1/projects/e9c4a7b2-1f58-4d36-a0e7-5b8d2c1f3a0c" }
}
```


Needs the Workforce projects and Invoices modules (`404` otherwise). If a database update for project billing is still waiting in your workspace, the answer is `{"data":[],"pending_migration":true}`. Ask your BPMSquare contact.

POST /projects/:id/invoices

Raises a draft invoice for a period from the project's hours. The rate comes from a ladder: the project's rate, then the parent's rate, then the rate for the employment type, then the workspace default. Needs a key with **write** on `projects`.

Body field	Type	Notes
`from`, `to`	`YYYY-MM-DD`, required	At most 366 days apart.
`granularity`	`project` (default) or `sub_project`	One line for the project, or one line per sub-project.
`dry_run`	boolean	`true` returns the preview and writes nothing.
`top_up`	boolean	Bill only the hours added since the earlier invoice for the same period.

A dry run:

```
curl -s -X POST -H "Authorization: Bearer $KEY" -H "Content-Type: application/json" \
  "$BASE/projects/e9c4a7b2-1f58-4d36-a0e7-5b8d2c1f3a0c/invoices" \
  -d '{ "from": "2026-10-01", "to": "2026-10-31", "dry_run": true }'
```


```
{
  "data": {
    "project": { "id": "e9c4a7b2-1f58-4d36-a0e7-5b8d2c1f3a0c", "ref": "PRJ-0003", "name": "Plant retrofit",
"level": 0, "account_id": "3f2a9c1e-7b44-4d0a-9a51-0c6d2e8b1a01", "account_name": "Example Trading LLC" },
    "from": "2026-10-01",
    "to": "2026-10-31",
    "granularity": "project",
    "lines": [
      { "group_id": "e9c4a7b2-1f58-4d36-a0e7-5b8d2c1f3a0c", "group_label": "Plant retrofit", "description":
"Plant retrofit", "rate": 60, "source": "project", "employment_type": null, "minutes": 39300, "hours": 655,
"amount": 39300 }
    ],
    "minutes": 39300,
    "hours": 655,
    "subtotal": 39300,
    "tax": { "label": "VAT", "rate": 5, "inclusive": false, "amount": 1965 },
    "total": 41265,
    "due_date": "2026-11-27",
    "unassigned_minutes": 0,
    "conflicts": [],
    "top_up": null,
    "billed": [],
    "blockers": []
  },
  "_links": { "self": "/api/v1/projects/e9c4a7b2-1f58-4d36-a0e7-5b8d2c1f3a0c/invoices" }
}
```


`source` is `project`, `parent`, `employment_type` or `default`. `blockers` lists, in words, why an invoice cannot be raised now: no account, no hours, no rate, or the period is already billed. Cost and margin are removed from the preview.

Without `dry_run` the call creates the draft and answers `201`:


```
{
  "data": { "id": "61f0a3d9-4b7c-4e25-8a16-c3d5e9b1f709", "ref": "INV-2026-0114", "total": 41265, "status":
"draft" },
  "_links": { "invoice": "/api/v1/invoices/61f0a3d9-4b7c-4e25-8a16-c3d5e9b1f709", "project":
"/api/v1/projects/e9c4a7b2-1f58-4d36-a0e7-5b8d2c1f3a0c" }
}
```


Errors: `400` (`{"error":"Invalid JSON body"}`, the period text, `{"error":"granularity must be project or sub_project"}`), `403` (a read-only key), `404`, `409` (the first blocker, such as `Already invoiced on INV-… Bill the difference as a top-up instead.`, `Nothing to top up for that period.` or `Link this project to an account first.`), `503` (billing for projects is not ready in your workspace yet; ask your BPMSquare contact), `500`.

18. Purchase orders

Orders placed with your suppliers. Scope `purchase-orders`. Module Purchasing. Read only.

GET /purchase-orders

Shortcut parameters: `status` (`draft`, `sent`, `partially_received`, `received`, `cancelled`), `supplier_id`.

Queryable fields: `id`, `ref`, `status`, `supplier.id`, `supplier.name`, `quote_id`, `case_id`, `order_date`, `expected_date`, `total`, `created_at`. Searchable: `ref`, `supplier.name`.

```
curl -s -H "Authorization: Bearer $KEY" "$BASE/purchase-orders?status=sent"
```


```
{
  "data": [
    {
      "id": "14a9e5c7-3b02-4d68-b7f1-9c6d0a2e8b0e",
      "ref": "PO-2026-0057",
      "status": "sent",
      "supplier": { "id": "2e6a4c18-8f03-4b97-a1e5-d9c7b3f0a508", "name": "Example Bearings FZE" },
      "quote_id": null,
      "case_id": "c41d8f06-9e2b-47a3-b5c1-3a7e0d9f6b06",
      "order_date": "2026-10-22",
      "expected_date": "2026-11-05",
      "total": 1540,
      "created_at": "2026-10-22T07:30:00.000000+00:00",
      "_links": { "self": "/api/v1/purchase-orders/14a9e5c7-3b02-4d68-b7f1-9c6d0a2e8b0e" }
    }
  ],
  "meta": { "count": 1, "total": 1, "page": 1, "limit": 50, "has_more": false, "generated_at": "2026-10-
28T08:30:10.000Z" },
  "_links": { "self": "/api/v1/purchase-orders", "next": null, "prev": null }
}
```

GET /purchase-orders/:id


```
{
  "data": {
    "id": "14a9e5c7-3b02-4d68-b7f1-9c6d0a2e8b0e",
    "ref": "PO-2026-0057",
    "status": "sent",
    "supplier": { "id": "2e6a4c18-8f03-4b97-a1e5-d9c7b3f0a508", "name": "Example Bearings FZE", "email":
"sales@example.com", "phone": "+971 6 555 0190" },
    "quote_id": null,
    "case_id": "c41d8f06-9e2b-47a3-b5c1-3a7e0d9f6b06",
    "order_date": "2026-10-22",
    "expected_date": "2026-11-05",
    "notes": null,
    "terms": null,
    "total": 1540,
    "custom_data": null,
    "created_at": "2026-10-22T07:30:00.000000+00:00",
    "lines": [
      {
        "id": "e5a7c9b1-6d8f-4304-9f5e-7a9c1e3b5d66",
        "inventory_item_id": "7d2b9e40-1c85-4a6f-93d8-e5a0b1c2d307",
        "description": "Deep groove ball bearing 6310-2RS",
        "uom": "Nos",
        "qty_ordered": 40,
        "qty_received": 0,
        "rate": 38.5,
        "amount": 1540
      }
    ],
    "_links": { "self": "/api/v1/purchase-orders/14a9e5c7-3b02-4d68-b7f1-9c6d0a2e8b0e" }
  },
  "_links": { "self": "/api/v1/purchase-orders/14a9e5c7-3b02-4d68-b7f1-9c6d0a2e8b0e" }
}
```


Errors: `404`.

---

19. Quotations

The only object you can write. A quotation is a header plus ordered lines. Lines can be grouped into additive groups or into mutually exclusive alternatives. Scope `quotations` (write for `POST`, `PATCH` and `DELETE`). Module Quotations. `GET /metadata/quotations` serves the live field reference.

GET /quotations

Shortcut parameters: `status` (a status your workspace uses; the defaults are `draft`, `sent`, `approved`, `rejected`), `account_id`.

Queryable fields: `id`, `ref`, `status`, `total`, `revision`, `outcome`, `loss_reason`, `created_at`, `quote_date`, `valid_until`, `line_count`, `account.id`, `account.name`, `invoice_count`, `invoiced_total`, `paid_total`, `balance_due`. Searchable: `ref`, `account.name`. The four invoice fields add up the quotation's own invoices that

are not cancelled, so you can follow a quotation through to cash.

```
curl -s -G -H "Authorization: Bearer $KEY" "$BASE/quotations" \
  --data-urlencode "filter=status:eq:draft;total:gte:10000" \
  --data-urlencode "sort=-total" --data-urlencode "aggregate=sum:total"
```


```
{
  "data": [
    {
      "id": "b7d1e0c2-5a3f-4e18-8c92-6f4a1d9e2b03",
      "ref": "QT-2026-0042",
      "status": "draft",
      "total": 41050,
      "revision": 1,
      "outcome": "open",
      "loss_reason": null,
      "created_at": "2026-10-26T06:12:31.118820+00:00",
      "quote_date": "2026-10-26",
      "valid_until": "2026-11-25",
      "account": { "id": "3f2a9c1e-7b44-4d0a-9a51-0c6d2e8b1a01", "name": "Example Trading LLC" },
      "line_count": 2,
      "invoice_count": 0,
      "invoiced_total": 0,
      "paid_total": 0,
      "balance_due": 0,
      "_links": {
        "self": "/api/v1/quotations/b7d1e0c2-5a3f-4e18-8c92-6f4a1d9e2b03",
        "pdf": "/quotations/b7d1e0c2-5a3f-4e18-8c92-6f4a1d9e2b03/print",
        "account": "/api/v1/accounts/3f2a9c1e-7b44-4d0a-9a51-0c6d2e8b1a01"
      }
    }
  ],
  "meta": { "count": 1, "total": 1, "page": 1, "limit": 50, "has_more": false, "aggregates": { "sum_total":
41050 }, "generated_at": "2026-10-28T08:31:00.000Z" },
  "_links": { "self": "/api/v1/quotations", "metadata": "/api/v1/metadata/quotations", "next": null, "prev":
null }
}
```


The `pdf` link is a page on your workspace address, not an API path.

GET /quotations/:id

```
curl -s -H "Authorization: Bearer $KEY" "$BASE/quotations/b7d1e0c2-5a3f-4e18-8c92-6f4a1d9e2b03"
```

```
{
  "data": {
    "id": "b7d1e0c2-5a3f-4e18-8c92-6f4a1d9e2b03",
    "ref": "QT-2026-0042",
    "account_id": "3f2a9c1e-7b44-4d0a-9a51-0c6d2e8b1a01",
    "contact_id": "5c8e7d10-2b9a-4f63-a1d4-8e0b3c7f9a02",
    "entity_id": null,
    "type": "quotation",
    "status": "draft",
    "business_status": null,
    "outcome": "open",
    "name": "Supply of 22 kW motors and installation",
    "ref_no": null,
    "pr_no": null,
    "po_number": null,
    "po_amount": null,
    "quote_date": "2026-10-26",
    "valid_until": "2026-11-25",
    "inquiry_date": null,
    "submitted_at": null,
    "closed_at": null,
    "updated_at": "2026-10-26T06:12:31.118820+00:00",
    "notes": null,
    "terms": "Payment 30 days from invoice.",
    "scope_of_work": null,
    "discount_type": "pct",
    "discount_pct": 0,
    "discount_fixed": 0,
    "gst_rate": 5,
    "asset_ids": [],
    "selected_option_id": null,
    "custom_data": null,
    "meta": null,
    "total": 41050,
    "revision": 1,
    "superseded_by": null,
    "created_at": "2026-10-26T06:12:31.118820+00:00",
    "account": { "id": "3f2a9c1e-7b44-4d0a-9a51-0c6d2e8b1a01", "name": "Example Trading LLC" },
    "contact": { "id": "5c8e7d10-2b9a-4f63-a1d4-8e0b3c7f9a02", "name": "Sara Khan" },
    "lines": [
      {
        "id": "0e4c6a91-3d27-4b85-9f10-a2c8d5e7b104",
        "sl_no": "1",
        "description": "Supply of 3-phase induction motor 22 kW",
        "uom": "Nos",
        "qty": 2,
        "rate": 18500,
        "discount_pct": 0,
        "amount": 37000,
        "group_id": null,
        "group_label": null,
        "group_type": null,
        "group_description": null,
        "category": "material",
        "deduction": 0,
        "inventory_item_id": null
      },
```

```
      {
        "id": "9a1f3b52-6c48-4d07-8e39-b1d2c4a6f205",
        "sl_no": "2",
        "description": "Installation and commissioning",
        "uom": "Lot",
        "qty": 1,
        "rate": 4500,
        "discount_pct": 10,
        "amount": 4050,
        "group_id": null,
        "group_label": null,
        "group_type": null,
        "group_description": null,
        "category": "labour",
        "deduction": 0,
        "inventory_item_id": null
      }
    ],
    "line_count": 2,
    "totals": { "subtotal": 41050, "discount": 0, "deductions": 0, "total": 41050 },
    "_links": {
      "self": "/api/v1/quotations/b7d1e0c2-5a3f-4e18-8c92-6f4a1d9e2b03",
      "account": "/api/v1/accounts/3f2a9c1e-7b44-4d0a-9a51-0c6d2e8b1a01",
      "pdf": "/quotations/b7d1e0c2-5a3f-4e18-8c92-6f4a1d9e2b03/print"
    }
  },
  "_links": { "self": "/api/v1/quotations/b7d1e0c2-5a3f-4e18-8c92-6f4a1d9e2b03", "metadata":
"/api/v1/metadata/quotations" }
}
```


Lines come in natural order of `sl_no` (1, 2, 10). `total` is before tax. `gst_rate` is shown for display and is not added to `total`.

POST /quotations

Creates a quotation with its lines and answers `201`. Only `account_id` is required. The reference (`ref`) is made by your workspace's quotation numbering. `GET /metadata/quotations` is the live and authoritative list of fields.

Field	Type	Notes
`account_id`	uuid, required	Must belong to your workspace, else `404`.
`contact_id`	uuid	Must belong to your workspace.
`entity_id`	string (64)	The issuing legal entity. Leave out for the default.
`type`	`quotation`, `technical`, `budgetary`, `supply`, `repair`	Defaults to `quotation`. `technical` hides pricing on the document.
`status`	string (40)	A status from your workspace's quotation statuses. Defaults to `draft`. A closed status needs `outcome` set to won, lost or dropped.

Field	Type	Notes
`business_status`	`pending`, `po_received`	
`outcome`	`open`, `won`, `lost`, `dropped`	Defaults to `open`.
`name`	string (300)	The title.
`ref_no`, `pr_no`, `po_number`	string (100)	Your own references.
`po_amount`	number, 0 or more	
`quote_date`, `valid_until`, `inquiry_date`	`YYYY-MM-DD`	
`submitted_at`, `closed_at`	ISO 8601	Stored as you give them. Never stamped for you on create.
`notes`, `terms`	text	
`scope_of_work`	rich text	Cleaned on the server.
`discount_type`	`pct`, `fixed`	Defaults to `pct`.
`discount_pct`	number, 0 to 100	
`discount_fixed`	number, 0 or more	Capped at the subtotal.
`gst_rate`	number, 0 to 100	`null` means no tax row. It is not part of `total`.
`asset_ids`	list of uuid	Every id must be in your workspace.
`selected_option_id`	string (64)	The `group_id` of the alternative group that counts.
`custom_data`	object	Keyed by your custom field keys.
`meta`	object	Free form. Stored untouched.
`lines`	list, at most 200	See below.

Line fields:

Field	Notes
`description`	Required.
`sl_no`	String (40). Your serial label.
`uom`	String (20).

Field	Notes
`qty`	0 or more. Defaults to 1.
`rate`	0 or more. Defaults to 0.
`discount_pct`	0 to 100.
`group_id`, `group_label`, `group_description`	Group a set of lines.
`group_type`	`additive` (default) or `alternative`.
`category`	`labour`, `material`, `testing`, `transport`.
`deduction`	0 or more. Honoured only on `material` lines.
`inventory_item_id`	uuid in your workspace. For reporting only.

These fields are read-only. Sending one is a `422`: `id`, `ref`, `total`, `updated_at`, `revision`, `superseded_by`, `created_at`, and on lines `id` and `amount`. An unknown field is rejected, not ignored. A number may be sent as a string that looks like a number.

How money is worked out:

- `amount = qty × rate × (1 − discount_pct / 100)`.
- `subtotal` is the sum of the effective lines. A line in an alternative group other than `selected_option_id` is left out.
- `total = subtotal − header discount − material deductions`.
- A percentage discount is rounded to a whole unit.

```
curl -s -X POST -H "Authorization: Bearer $KEY" -H "Content-Type: application/json" "$BASE/quotations" -d '{
  "account_id": "3f2a9c1e-7b44-4d0a-9a51-0c6d2e8b1a01",
  "contact_id": "5c8e7d10-2b9a-4f63-a1d4-8e0b3c7f9a02",
  "name": "Supply of 22 kW motors and installation",
  "quote_date": "2026-10-26",
  "valid_until": "2026-11-25",
  "gst_rate": 5,
  "terms": "Payment 30 days from invoice.",
  "lines": [
    { "sl_no": "1", "description": "Supply of 3-phase induction motor 22 kW", "uom": "Nos", "qty": 2,
"rate": 18500, "category": "material" },
    { "sl_no": "2", "description": "Installation and commissioning", "uom": "Lot", "qty": 1, "rate": 4500,
"discount_pct": 10, "category": "labour" }
  ]
}'
```

The `201` answer is `{ "data": { … } }` with the same quotation object as `GET /quotations/:id` (without `account` and `contact`), plus `lines`, `line_count`, `totals` and `_links`. The new quotation has `status: "draft"`, `outcome: "open"`, `revision: 1` and `total: 41050`. The creation is recorded in Change history with the actor `api:v1`.

A `422` looks like this:

```
{
  "error": "Validation failed",
  "message": "2 fields rejected. See \"details\". Full field reference: GET /api/v1/metadata/quotations",
  "details": [
    { "field": "total", "message": "Read-only: this value is calculated by the server and cannot be set directly." },
    { "field": "lines[0].qty", "message": "must be >= 0" }
  ]
}
```

Other `422` messages: `Unknown status "x". Allowed values are tenant-configured …`, `Set an outcome (won, lost, or dropped) when creating a quotation directly in a closed status.` and `A rejected quotation can't be marked won.`

Other errors: `400` malformed JSON; `403` a read-only or wrongly scoped key; `404` with `{"error":"Account not found in this tenant"}` (also `Contact not found in this tenant`, `One or more assets not found in this tenant`, `One or more inventory items not found in this tenant`); `500`.

PATCH /quotations/:id

Send only the fields you want to change. They are the same fields as `POST`, and none is required.

- `lines`, when present, **replaces all lines**. Send the complete set. Leave `lines` out to keep them as they are.
- The total is always worked out again.
- Moving off a closed status sets `outcome` back to `open`, unless you send one.
- `submitted_at` is stamped the first time the status leaves its starting value. `closed_at` is stamped when `outcome` leaves `open`. A value you send always wins.
- A superseded version (one with `superseded_by` set) is read-only. Edit the latest version.

```
curl -s -X PATCH -H "Authorization: Bearer $KEY" -H "Content-Type: application/json" \
  "$BASE/quotations/b7d1e0c2-5a3f-4e18-8c92-6f4a1d9e2b03" -d '{ "status": "sent", "valid_until": "2026-12-15" }'
```

The `200` answer is `{ "data": { … } }`, the updated quotation as in `POST`, with `status: "sent"`, `valid_until: "2026-12-15"` and `submitted_at` stamped.

Errors: `404 {"error":"Quotation not found"}`; `409 {"error":"This version has been superseded and is read-only -- edit the latest version instead."}`; `422` (also `Unknown status`, the closed-status rules, the rejected-won rule, and `Set an outcome (won, lost, or dropped) before closing this quotation -- or before clearing the outcome on one that's already closed.`); `500`.

Replacing lines is not atomic with the header update. If the call fails part-way, read the quotation back and repeat it.

DELETE /quotations/:id

```
curl -s -X DELETE -H "Authorization: Bearer $KEY" "$BASE/quotations/b7d1e0c2-5a3f-4e18-8c92-6f4a1d9e2b03"
```

```
{ "data": { "id": "b7d1e0c2-5a3f-4e18-8c92-6f4a1d9e2b03", "ref": "QT-2026-0042", "deleted": true } }
```

The deletion is kept in your workspace's deleted-records log and in Change history. Errors: `404`.

---

20. RFQs

Requests for quotation sent to suppliers. Scope `rfqs`, which you must name, because supplier prices are commercially sensitive. Module RFQ. Read only.

GET /rfqs

Shortcut parameters: `status` (`draft`, `sent`, `partially_replied`, `replied`, `awarded`, `closed`, `cancelled`), `origin_type` (`standard_quote`, `quote`, `opportunity`, `case`, `inspection_report`, `work_order`, `fence_project`, `pricing`, `manual`), `origin_id`.

Queryable fields: `id`, `ref`, `title`, `status`, `origin_type`, `origin_id`, `origin_label`, `respond_by`, `required_by`, `created_at`, `updated_at`. Searchable: `ref`, `title`, `origin_label`. Supplier prices are on the detail endpoint only.

```
curl -s -H "Authorization: Bearer $KEY" "$BASE/rfqs?status=sent"
```

```
{
  "data": [
    {
      "id": "28b3d7f9-5c16-4a40-9e82-0d1f6a3c7b0f",
      "ref": "RFQ-0012",
      "title": "Bearings for case CASE-0031",
      "status": "sent",
      "origin_type": "case",
      "origin_id": "c41d8f06-9e2b-47a3-b5c1-3a7e0d9f6b06",
      "origin_label": "CASE-0031",
      "respond_by": "2026-11-01",
      "required_by": "2026-11-10",
      "delivery_terms": "DAP Dubai",
      "currency": "AED",
      "custom_data": null,
      "created_at": "2026-10-21T08:00:00.000000+00:00",
      "updated_at": "2026-10-22T07:00:00.000000+00:00",
      "_links": { "self": "/api/v1/rfqs/28b3d7f9-5c16-4a40-9e82-0d1f6a3c7b0f" }
    }
  ],
  "meta": { "count": 1, "total": 1, "page": 1, "limit": 50, "has_more": false, "generated_at": "2026-10-
28T08:32:00.000Z" },
  "_links": { "self": "/api/v1/rfqs", "next": null, "prev": null }
}
```


GET /rfqs/:id

The RFQ with its lines, its suppliers and their quoted prices. Never returned: the reply-link token, internal notes and message bodies.

```
{
  "data": {
    "id": "28b3d7f9-5c16-4a40-9e82-0d1f6a3c7b0f",
    "ref": "RFQ-0012",
    "title": "Bearings for case CASE-0031",
    "status": "sent",
    "origin_type": "case",
    "origin_id": "c41d8f06-9e2b-47a3-b5c1-3a7e0d9f6b06",
    "origin_label": "CASE-0031",
    "requested_by": "11111111-2222-4333-8444-555555555555",
    "buyer_id": null,
    "respond_by": "2026-11-01",
    "required_by": "2026-11-10",
    "delivery_terms": "DAP Dubai",
    "currency": "AED",
    "notes_to_supplier": null,
    "custom_data": null,
    "created_at": "2026-10-21T08:00:00.000000+00:00",
    "updated_at": "2026-10-22T07:00:00.000000+00:00",
    "lines": [
      {
        "id": "f6b8d0c2-7e90-4415-8a6f-8b0d2f4c6e77",
        "sl_no": 1,
        "product_id": null,
        "description": "Deep groove ball bearing 6310-2RS",
        "spec": "50 x 110 x 27 mm",
        "uom": "Nos",
        "qty": 40,
        "required_by": "2026-11-10",
        "status": "open",
        "awarded_response_id": null,
        "awarded_unit_cost": null
      }
    ],
    "suppliers": [
      {
        "id": "07c9e1d3-8fa1-4526-9b70-9c1e3a5d7f88",
        "supplier_id": "2e6a4c18-8f03-4b97-a1e5-d9c7b3f0a508",
        "supplier_name": "Example Bearings FZE",
        "status": "replied",
        "sent_at": "2026-10-21T09:00:00+00:00",
        "viewed_at": "2026-10-21T10:00:00+00:00",
        "replied_at": "2026-10-22T06:30:00+00:00",
        "supplier_quote_ref": "EB-Q-2210",
        "currency": "AED",
        "incoterm": "DAP",
        "freight_amount": 120,
        "payment_terms": "30 days",
        "valid_until": "2026-11-30"
      }
    ],
    "responses": [
      {
        "id": "18d0f2e4-90b2-4637-8c81-0d2f4b6e8a99",
        "rfq_supplier_id": "07c9e1d3-8fa1-4526-9b70-9c1e3a5d7f88",
        "rfq_line_id": "f6b8d0c2-7e90-4415-8a6f-8b0d2f4c6e77",
        "status": "quoted",
```

```
        "unit_price": 38.5,
        "currency": "AED",
        "fx_rate": 1,
        "lead_time_days": 7,
        "moq": 10,
        "offered_description": null,
        "valid_until": "2026-11-30",
        "source": "link",
        "is_awarded": false,
        "submitted_at": "2026-10-22T06:30:00+00:00"
      }
    ],
    "_links": { "self": "/api/v1/rfqs/28b3d7f9-5c16-4a40-9e82-0d1f6a3c7b0f" }
  },
  "_links": { "self": "/api/v1/rfqs/28b3d7f9-5c16-4a40-9e82-0d1f6a3c7b0f" }
}
```


Value lists:

Field	Values
`lines[].status`	`open`, `awarded`, `no_award`, `cancelled`
`suppliers[].status`	`pending`, `sent`, `viewed`, `replied`, `declined`, `expired`, `cancelled`
`responses[].status`	`quoted`, `no_quote`, `alternative`
`responses[].source`	`link`, `buyer`, `upload`, `email`

Errors: `404`.

21. Sales orders

Scope `sales_orders` (included in "All objects"). Module Sales Orders. Read only. Never returned: the creator and owner ids, the cancellation note, contact details of a party, the order type's template, attachments, and any cost or margin.

GET /sales-orders

Shortcut parameters: `status` (`draft`, `confirmed`, `cancelled` for orders made in BPMSquare; an order that came from your ERP carries the ERP's own word in `status_label`), `account_id`, `source_id` (the quote or deal it was made from).

Queryable fields: `id`, `ref`, `status`, `status_label`, `spine`, `origin`, `type.id`, `type.name`, `pricing_mode`, `currency`, `customer_po`, `source_type`, `source_id`, `opportunity_id`, `subtotal`, `discount_total`, `tax_total`, `shipping_amount`, `total`, `line_count`, `credit_check`, `price_check`, `stock_check`, `invoice_count`, `invoiced_total`, `paid_total`, `requested_date`, `expected_date`, `confirmed_at`, `sent_at`, `account.id`, `account.name`, `contact_id`, `created_at`, `updated_at`. Searchable: `ref`, `customer_po`, `account.name`.

```
curl -s -H "Authorization: Bearer $KEY" "$BASE/sales-orders?status=confirmed"
```


```
{
  "data": [
    {
      "id": "3c7e1a85-9d24-4b60-a3f7-6e8b2d0c4a10",
      "ref": "SO-0004",
      "type": { "id": "4d8f2b96-0e35-4c71-b4a8-7f9c3e1d5a11", "name": "Standard order" },
      "origin": "bpmsquare",
      "status": "confirmed",
      "status_label": null,
      "spine": "open",
      "account": { "id": "3f2a9c1e-7b44-4d0a-9a51-0c6d2e8b1a01", "name": "Example Trading LLC" },
      "contact_id": "5c8e7d10-2b9a-4f63-a1d4-8e0b3c7f9a02",
      "bill_to": { "name": "Example Trading LLC", "address": "Plot 14, Industrial Area 3, Dubai" },
      "ship_to": { "name": "Example Trading LLC, Jebel Ali store", "address": "Warehouse 6, Jebel Ali" },
      "customer_po": "PO-77812",
      "source_type": "standard_quote",
      "source_id": "5e9a3c07-1f46-4d82-95b9-8a0d4f2e6b12",
      "opportunity_id": null,
      "currency": "AED",
      "pricing_mode": "internal",
      "subtotal": 41050,
      "discount_total": 0,
      "tax_total": 2052.5,
      "shipping_amount": 0,
      "total": 43102.5,
      "requested_date": "2026-11-20",
      "expected_date": "2026-11-24",
      "confirmed_at": "2026-10-27T05:00:00+00:00",
      "sent_at": null,
      "line_count": 2,
      "credit_check": "passed",
      "price_check": null,
      "stock_check": "warning",
      "invoice_count": 0,
      "invoiced_total": 0,
      "paid_total": 0,
      "custom_data": null,
      "created_at": "2026-10-27T04:40:00.000000+00:00",
      "updated_at": "2026-10-27T05:00:00.000000+00:00",
      "_links": {
        "self": "/api/v1/sales-orders/3c7e1a85-9d24-4b60-a3f7-6e8b2d0c4a10",
        "pdf": "/sales-orders/3c7e1a85-9d24-4b60-a3f7-6e8b2d0c4a10/print",
        "account": "/api/v1/accounts/3f2a9c1e-7b44-4d0a-9a51-0c6d2e8b1a01"
      }
    }
  ],
  "meta": { "count": 1, "total": 1, "page": 1, "limit": 50, "has_more": false, "generated_at": "2026-10-
28T08:33:00.000Z" },
  "_links": { "self": "/api/v1/sales-orders", "next": null, "prev": null }
}
```


Value lists:

Field	Values
`spine`	`open`, `in_progress`, `completed`, `cancelled`
`origin`	`bpmsquare`, `erp`
`pricing_mode`	`internal`, `external`
`source_type`	`standard_quote`, `quotation`, `opportunity`, `lead`, `email`, `order`, `direct`, `erp`
`credit_check`, `price_check`, `stock_check`	`passed`, `warning`, `failed`, `not_run`, or `null`

GET /sales-orders/:id

The list object plus `notes`, `terms`, `lines`, `erp_documents`, `erp_checks` and `erp_transfers`.

```
{
  "data": {
    "id": "3c7e1a85-9d24-4b60-a3f7-6e8b2d0c4a10",
    "ref": "SO-0004",
    "status": "confirmed",
    "total": 43102.5,
    "line_count": 2,
    "notes": "Deliver to the Jebel Ali store.",
    "terms": "Payment 30 days from invoice.",
    "lines": [
      {
        "id": "29e1a3f5-a1c3-4748-9d92-1e3a5c7f9b00",
        "line_no": 1,
        "product_id": "a85c2e71-0d94-4f3b-b6a8-1e7d3c9f5a0a",
        "description": "22 kW IE3 induction motor",
        "printed_text": "415 V, 4 pole",
        "qty": 2,
        "uom": "Nos",
        "unit_price": 18500,
        "discount_pct": 0,
        "tax_pct": 5,
        "line_total": 37000,
        "requested_date": "2026-11-20",
        "confirmed_qty": 2,
        "confirmed_date": "2026-11-24",
        "availability_source": "master",
        "availability_at": "2026-10-27T05:01:00+00:00"
      }
    ],
    "erp_documents": [
      { "kind": "invoice", "number": "90001234", "date": "2026-11-25", "due_date": "2026-12-25", "amount":
43102.5, "currency": "AED", "status": "Open", "status_spine": "open", "erp_id": "0090001234", "fetched_at":
"2026-11-26T01:00:00+00:00" }
    ],
    "erp_checks": [
      { "kind": "credit", "status": "passed", "message": "Within credit limit.", "checked_at": "2026-10-
27T05:00:30+00:00", "stale": false }
    ],
    "erp_transfers": [
      { "attempted_at": "2026-10-27T05:02:00+00:00", "result": "sent", "erp_number": "0000451122", "step":
null, "message": null }
    ],
    "_links": { "self": "/api/v1/sales-orders/3c7e1a85-9d24-4b60-a3f7-6e8b2d0c4a10" }
  },
  "_links": { "self": "/api/v1/sales-orders/3c7e1a85-9d24-4b60-a3f7-6e8b2d0c4a10" }
}
```


All the header fields of the list row are present too (shortened here). Value lists: `availability_source` is `erp` or `master`. `erp_documents[].kind` is `delivery` or `invoice`. `status_spine` is `open`, `delivered`, `paid` or `cancelled`. `erp_checks[].kind` is `credit`, `price` or `stock`. `erp_transfers[].result` is `sent`, `failed` or `already_sent`. Errors: `404`.

22. Standard quotes

Scope `standard_quotes` (included in "All objects"). Module Standard Quotes, which is separate from Quotations. Read only. Never returned: line margin checks, the supplier-request link, the template, authorship, print options and contact details.

GET /standard-quotes

Shortcut parameters: `status` (`draft`, `sent`, `accepted`, `rejected`, `expired`), `account_id`, `opportunity_id`.

Queryable fields: `id`, `ref`, `status`, `inquiry_date`, `valid_until`, `sent_at`, `closed_at`, `subtotal`, `header_discount_pct`, `tax_pct`, `shipping_amount`, `total`, `line_count`, `account.id`, `account.name`, `contact_id`, `opportunity_id`, `created_at`, `updated_at`. Searchable: `ref`, `account.name`.

```
curl -s -H "Authorization: Bearer $KEY" "$BASE/standard-quotes?status=sent&sort=-total"
```


```
{
  "data": [
    {
      "id": "5e9a3c07-1f46-4d82-95b9-8a0d4f2e6b12",
      "ref": "SQ-0031",
      "status": "sent",
      "inquiry_date": "2026-10-20",
      "valid_until": "2026-11-20",
      "sent_at": "2026-10-24T08:00:00+00:00",
      "closed_at": null,
      "subtotal": 41050,
      "header_discount_pct": 0,
      "tax_pct": 5,
      "shipping_amount": 0,
      "total": 43102.5,
      "account": { "id": "3f2a9c1e-7b44-4d0a-9a51-0c6d2e8b1a01", "name": "Example Trading LLC" },
      "contact_id": "5c8e7d10-2b9a-4f63-a1d4-8e0b3c7f9a02",
      "opportunity_id": "d3b7f1a4-62e8-45c9-9d0b-7a2e4c6f8b0b",
      "line_count": 2,
      "custom_data": null,
      "created_at": "2026-10-20T07:00:00.000000+00:00",
      "updated_at": "2026-10-24T08:00:00.000000+00:00",
      "_links": {
        "self": "/api/v1/standard-quotes/5e9a3c07-1f46-4d82-95b9-8a0d4f2e6b12",
        "pdf": "/standard-quotes/5e9a3c07-1f46-4d82-95b9-8a0d4f2e6b12/print",
        "account": "/api/v1/accounts/3f2a9c1e-7b44-4d0a-9a51-0c6d2e8b1a01"
      }
    }
  ],
  "meta": { "count": 1, "total": 1, "page": 1, "limit": 50, "has_more": false, "generated_at": "2026-10-
28T08:34:00.000Z" },
  "_links": { "self": "/api/v1/standard-quotes", "next": null, "prev": null }
}
```

GET /standard-quotes/:id

The list object plus `intro_text`, `notes`, `terms` and `lines`.


```
{
  "data": {
    "id": "5e9a3c07-1f46-4d82-95b9-8a0d4f2e6b12",
    "ref": "SQ-0031",
    "status": "sent",
    "total": 43102.5,
    "line_count": 2,
    "intro_text": "Thank you for your enquiry.",
    "notes": null,
    "terms": "Valid for 30 days.",
    "lines": [
      {
        "id": "3af2b4c6-b2d4-4859-8ea3-2f4b6d8a0c11",
        "sl_no": "1",
        "description": "22 kW IE3 induction motor",
        "uom": "Nos",
        "qty": 2,
        "rate": 18500,
        "discount_pct": 0,
        "amount": 37000,
        "product_id": "a85c2e71-0d94-4f3b-b6a8-1e7d3c9f5a0a",
        "group_id": null,
        "group_label": null,
        "group_type": null,
        "break_of": null,
        "break_qty": null,
        "is_selected": true,
        "show_on_pdf": true
      }
    ],
    "_links": {
      "self": "/api/v1/standard-quotes/5e9a3c07-1f46-4d82-95b9-8a0d4f2e6b12",
      "pdf": "/standard-quotes/5e9a3c07-1f46-4d82-95b9-8a0d4f2e6b12/print",
      "account": "/api/v1/accounts/3f2a9c1e-7b44-4d0a-9a51-0c6d2e8b1a01"
    }
  },
  "_links": { "self": "/api/v1/standard-quotes/5e9a3c07-1f46-4d82-95b9-8a0d4f2e6b12" }
}
```


The other header fields of the list row are present too (shortened here). Errors: `404`.

---

23. API index, metadata and OpenAPI

These endpoints answer for any key with read access. A write-only key gets `401`. They are not held back by modules.

GET /

The API describes itself: name, version `1.0`, how to authenticate, `start_here`, the `endpoints` map, `conventions`, `query`, `access_control`, `webhooks`, `ask` and `coming_soon`.

```
curl -s -H "Authorization: Bearer $KEY" "$BASE"
```

```
{
  "name": "BPMSquare REST API",
  "version": "1.0",
  "generated_at": "2026-10-28T08:35:00.000Z",
  "authentication": "Bearer token …",
  "start_here": {
    "openapi": "GET /api/v1/openapi.json …",
    "metadata": "GET /api/v1/metadata …",
    "quotation_fields": "GET /api/v1/metadata/quotations …",
    "changes": "GET /api/v1/changes?since=<cursor> …"
  },
  "endpoints": { "GET /api/v1/accounts": "List all accounts", "…": "…" },
  "conventions": { "errors": "…", "totals": "…", "children": "…", "unknown_fields": "…" }
}
```

The answer is shortened here. The index lists most endpoints but not all. This chapter is the complete list.

GET /metadata

Lists the entities that have field-level descriptions. Only `quotations` has one today.

```
{
  "description": "Machine-readable description of every entity the v1 API exposes for writing: …",
  "entities": [
    {
      "key": "quotations",
      "entity": "quotation",
      "description": "A customer quotation: a header carrying commercial terms plus an ordered set of line
items, …",
      "endpoint": "/api/v1/quotations",
      "field_count": 35,
      "children": ["quote_line"],
      "_links": { "metadata": "/api/v1/metadata/quotations", "collection": "/api/v1/quotations" }
    }
  ],
  "documented_count": 1,
  "not_yet_documented": { "message": "These endpoints are read-only and have no field-level metadata yet.
…", "endpoints": ["/api/v1/accounts", "/api/v1/cases", "…"] },
  "_links": { "self": "/api/v1/metadata", "api_index": "/api/v1" }
}
```

`field_count` is the number of quotation fields. It can grow, so do not hard-code it.

GET /metadata/:entity

`GET /metadata/quotations` returns every quotation field with `field`, `type`, `label`, `description`, `required_on_create` and `writable`. Where they apply it also gives `computed`, `read_only`, `allowed_values`, `min`, `max`, `max_length`, `default`, `relation` and `example`. The same is given for the `lines` child (with `max_items: 200`), and for `relations`. Any other entity answers `404 {"error":"Unknown entity","message":"No metadata for \"x\".","available":["quotations"]}`.


```
{
  "data": {
    "entity": "quotation",
    "plural": "quotations",
    "table": "quotes",
    "endpoint": "/api/v1/quotations",
    "fields": [
      { "field": "account_id", "type": "uuid", "label": "Account", "description": "The customer this
quotation is for. …", "required_on_create": true, "writable": true, "relation": { "entity": "account",
"endpoint": "/api/v1/accounts" } },
      { "field": "total", "type": "number", "label": "Total", "description": "subtotal - header discount -
material deductions …", "required_on_create": false, "writable": false, "computed": true }
    ],
    "children": [ { "key": "lines", "max_items": 200, "entity": "quote_line", "fields": [ { "field":
"description", "type": "text", "required_on_create": true, "writable": true } ] } ],
    "relations": [ { "field": "account_id", "entity": "account", "endpoint": "/api/v1/accounts" } ]
  },
  "usage": { "create": "POST /api/v1/quotations …", "read_one": "GET /api/v1/quotations/:id", "update":
"PATCH /api/v1/quotations/:id …", "delete": "DELETE /api/v1/quotations/:id", "notes": ["…"] },
  "_links": { "self": "/api/v1/metadata/quotations", "all_metadata": "/api/v1/metadata", "collection":
"/api/v1/quotations" }
}
```


The answer is shortened here.

GET /openapi.json

An OpenAPI 3.0.3 file for the API. Its server is `/api/v1` and it uses bearer security. Import it into Postman, Insomnia, an integration platform or a code generator. The quotation entity has a full schema with `POST`, `PATCH` and `DELETE`. Every other list endpoint gets a generic list path and detail path with the shared query parameters. `/changes`, `/price` and `/ask` are included.

```
curl -s -H "Authorization: Bearer $KEY" "$BASE/openapi.json" -o bpmsquare-openapi.json
```

The file is generated, and it does not match the API in a few places. If you generate a client from it, know these:

- It lists `GET /cases/{id}`. That endpoint does not exist.
- It does not list `/project-hours`, `/projects/{id}/hours`, `/projects/{id}/invoices` (`GET` and `POST`), `/abm-programs/{id}/targets`, `/metadata`, `/metadata/{entity}`, `/openapi.json` itself, or the index.
- Its shared query parameters leave out `group_period`, `group_limit`, `having` and `group_sort`. The API accepts them.
- Detail answers for objects other than quotations are described only as "OK", with no schema.