



Monday.com

BI Integration

Installation Guide & Technical Documentation

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Introduction

The Monday.com BI Integration by Expanding Insights allows you to seamlessly connect your Monday.com boards to Power BI for advanced reporting and analytics. This service transforms your Monday.com data into a format optimised for Power BI, handling complex column types, subitems, and data transformations automatically.

Key Features

- Connect any Monday.com board to Power BI with a simple API call
- Full support for all Monday.com column types including status, dropdown, people, dates, and more
- Subitem support with automatic parent-child linking
- Intelligent caching for lightning-fast data refreshes
- Automatic schema detection and column title resolution
- Unlimited boards, refreshes, and rows

Pricing

Item	Details
Monthly Fee	\$100 USD per month
Boards	Unlimited
Refreshes	Unlimited
Rows	Unlimited
Free Trial	1 month (contact info@insightsxp.com)
Cancellation	Cancel anytime

Getting Started

Step 1: Purchase the Service

1. Visit www.expandinginsights.com/monday-bi-integration
2. Complete the purchase process
3. Note the email address used for registration

Your account must remain in good standing to use the service.

Step 2: Gather Your Monday.com Credentials

Finding Your Board ID

Your Board ID is the numeric identifier found in your Monday.com board URL:

`https://your-company.monday.com/boards/1234567891`

The Board ID in this example is 1234567891.

Generating Your API Key

1. Log into your Monday.com account
2. Click your profile picture in the top right corner
3. Select **Developers**
4. Click **My Access Tokens** in the left sidebar
5. Click **Show** to reveal your personal API token
6. Copy and securely store this token

⚠ Important: Keep your API key secure. Never share it publicly or commit it to version control.

Power BI Setup

There are two ways to connect to the Monday.com BI Integration: a simple API call for quick testing, or a reusable function for production use.

License Requirements

Software	Requirements
Power BI Desktop	Free (no license required)
Power BI Service	Pro or Premium Per User (for scheduled refresh)
Monday.com	Any paid plan (Standard, Pro, or Enterprise)

Option A: Simple API Call

For quick testing or simple reports, you can call the API directly:

1. In Power BI Desktop, click **Get Data > Blank Query**
2. Open the **Advanced Editor**
3. Paste the following code:

```
let
    Payload = Json.FromValue([
        email = "your.email@example.com",
        monday_api_key = "your_monday_api_key",
        board_or_workspace = "board",
        ID = "1234567891",
        items_or_subitems = "items",
        force_refresh = false
    ]),

    Response = Web.Contents(
        "https://api.expandinginsights.com/monday/export",
        [
            Headers = [#"Content-Type" = "application/json"],
            Content = Payload
        ]
    ),

    JsonResponse = Json.Document(Response),
    Data = Table.FromRecords(JsonResponse[data])
in
    Data
```

4. Replace the email and API key with your credentials
5. Replace the Board ID with your board

6. Click **Done** to execute

Option B: Reusable Function (Recommended)

For production use with multiple boards, we recommend setting up a reusable function with parameters. This approach is more secure and easier to maintain.

Step 1: Create Parameters

In Power BI Desktop, go to Home > Manage Parameters > New Parameter and create the following:

Parameter Name	Configuration
Email	Type: Text, Current Value: your registered email
MondayAPIKey	Type: Text, Current Value: your Monday.com API key
FullRefresh	Type: Text, Current Value: false

Step 2: Create the Function

1. Click **Get Data > Blank Query**
2. Rename the query to **fnMondayExport**
3. Open the **Advanced Editor**
4. Paste the function code from the appendix
5. Click **Done**

Step 3: Call the Function

Create a new query to load your board data:

```
let
    Source = fnMondayExport(
        "1234567891", // Your Board ID
        "items"        // "items" or "subitems"
    )
in
    Source
```

The second parameter controls whether to load items or subitems. Use "items" for main board items or "subitems" for subitems.

Security & Architecture

Expanding Insights takes data security seriously. This section outlines how your data is protected throughout the integration process.

Data Flow

- Power BI sends a request to our secure API endpoint
- Our service authenticates your request using your email and Monday.com API key
- Data is retrieved from Monday.com and transformed
- Transformed data is returned directly to Power BI

Encryption

- All data in transit is encrypted using TLS 1.2+
- All cached data is encrypted at rest using AES-256 encryption
- API credentials are never stored in plain text or logs

Infrastructure

- Hosted on Google Cloud with enterprise-grade security
- Fully scalable infrastructure that grows with your needs
- All data hosted in EU data centers

Access Controls

- Your cached data is isolated by your email address and board ID
- Only you can access your data using your registered email
- Your data is never shared with third parties and maintains controlled, governed access for support-use only.

Intelligent Caching

The Monday.com BI Integration includes an intelligent caching system designed to make your data refreshes lightning fast while ensuring you always have access to the latest data.

How Caching Works

- On your first data load, all items are retrieved from Monday.com and cached
- On subsequent loads, only items that have changed are retrieved from Monday.com
- Monday.com API rate limits can make data extraction slow and complex. Our service handles this for you - managing rate limits intelligently while delivering your data fast.

Performance Benefits

A typical board with 1,500 items:

Scenario	Typical Duration
First load (no cache)	12-18 minutes
Subsequent load (cached)	1-2 minutes
After minor changes	1.5-2.5 minutes

Schema Change Detection

If you add, remove, or rename columns in your Monday.com board, our system automatically detects these changes and refreshes the cache to ensure column names are accurate in Power BI.

Force Refresh

If you ever need to bypass the cache and reload all data from Monday.com, set the `FullRefresh` parameter to "True" for one refresh cycle, then set it back to "False".

Cache Security

- All cached data is encrypted at rest
- Cache is isolated per user and board
- Your data is never shared with third parties and maintains controlled, governed access for support-use only.

Support

Expanding Insights is committed to providing excellent support for all customers.

Contact Options

Channel	Details
Helpdesk	Submit tickets via our website
Email	support@insightsxp.com
Sales & Trials	info@insightsxp.com

Monitoring & Reliability

- 24/7 automated monitoring and alerting
- Proactive issue detection and resolution
- Cloud-based infrastructure with automatic scaling
- Regular maintenance windows communicated in advance

Terms & Conditions

Service Provider

This service is provided by Kingsley James Hoare trading as Expanding Insights.

Billing

- Subscription fee: \$100 USD per month
- Your account must be paid and in good standing to use the service
- Service access will be suspended until payment is received

Cancellation

You may cancel your subscription at any time. Upon cancellation, you will retain access until the end of your current billing period.

Pricing Changes

We are committed to providing stable, predictable pricing. In the event that pricing changes are necessary, we will provide at least 90 days advance notice to all customers. This notice period allows you to evaluate the changes and make informed decisions about your subscription.

Usage

- Unlimited boards per subscription
- Unlimited data refreshes
- Unlimited rows per board

We reserve the right to contact customers with exceptionally high usage patterns to discuss appropriate pricing arrangements.

Troubleshooting

Common Issues

"Column does not exist" error in Power BI Service

This occurs when columns are renamed in Monday.com after publishing to Power BI Service. Power BI stores the schema at publish time. Solution: Republish the report from Power BI Desktop after the column change.

Slow first refresh

The first refresh retrieves all data from Monday.com and populates the cache. This is expected behaviour. Subsequent refreshes will be significantly faster.

Authentication errors

Verify that your email parameter matches the email registered with Expanding Insights, and that your Monday.com API key is valid and has not been regenerated.

Missing data or items

Ensure your Monday.com API key has access to the board you are trying to load. The API key inherits the permissions of the user who generated it.

Appendix: Function Code

Copy and paste the following code to create the fnMondayExport function in Power BI:

```
// fnMondayExport
// Handles incremental refresh, full loads, and regional setting differences

(
    BoardID as text,
    ItemsOrSubitems as text,
    optional RangeStart as datetime,
    optional RangeEnd as datetime
) as table =>
let
    // Helper: Culture-invariant date formatting
    FormatDateForAPI = (inputDate as any) as nullable text =>
        if inputDate = null then null
        else
            let
                DateValue = if Value.Is(inputDate, type text) then
                    try Date.From(inputDate) otherwise null
                else if Value.Is(inputDate, type datetime) then
                    DateTime.Date(inputDate)
                else if Value.Is(inputDate, type date) then
                    inputDate
                else null,
            in DateValue,
            FormattedDate = if DateValue = null then null
            else
                Text.PadStart(Text.From(Date.Year(DateValue)), 4, "0") &
                Text.PadStart(Text.From(Date.Month(DateValue)), 2, "0") &
                Text.PadStart(Text.From(Date.Day(DateValue)), 2, "0")
        in FormattedDate,

    // Helper: Parse ISO datetime string
    ParseISODateTime = (isoString as any) as nullable datetime =>
        if isoString = null then null
        else if Value.Is(isoString, type datetime) then isoString
        else if Value.Is(isoString, type text) then
            try let
                CleanString = Text.Replace(isoString, "Z", ""),
                NormalizedString = Text.Replace(CleanString, "T", " "),
                Parsed = DateTime.From(NormalizedString)
            in Parsed otherwise null
        else null,

    SafeBoardID = if Value.Is(BoardID, type number) then
        Number.ToText(BoardID, "D", "en-US")
    else Text.Trim(BoardID),

    FormattedStart = FormatDateForAPI(RangeStart),
    FormattedEnd = FormatDateForAPI(RangeEnd),
    TodayFormatted = FormatDateForAPI(DateTime.LocalNow()),

    BasePayload = [
        email = Email,
        monday_api_key = MondayAPIKey,
        board_or_workspace = "board",
        ID = SafeBoardID,
```

```

        items_or_subitems = ItemsOrSubitems,
        force_refresh = FullRefresh
    ],

    PayloadWithDates = if FormattedStart <> null then
        Record.Combine({BasePayload, [
            range_start = FormattedStart,
            range_end = if FormattedEnd <> null then FormattedEnd else
TodayFormatted
        ]})
    else BasePayload,

    JsonPayload = Json.FromValue(PayloadWithDates),

    ResponseBytes = Web.Contents(
        "https://api.expandinginsights.com/monday/export",
        [
            Headers = [{"Content-Type" = "application/json"}],
            Content = JsonPayload,
            Timeout = #duration(0, 1, 0, 0),
            ManualStatusHandling = {400, 403, 429, 500, 502, 503, 504}
        ]
    ),

    ResponseText = Text.FromBinary(ResponseBytes, TextEncoding.Utf8),
    TrimmedResponse = Text.Trim(ResponseText),

    JsonResponse = try Json.Document(TrimmedResponse) otherwise
        error Error.Record("Parse Error", "Failed to parse API response",
TrimmedResponse),

    Result = if Record.HasFields(JsonResponse, "error") then
        error Error.Record("API Error", JsonResponse[error],
            if Record.HasFields(JsonResponse, "details") then
JsonResponse[details] else null)
    else if Record.HasFields(JsonResponse, "data") then JsonResponse[data]
    else error Error.Record("Unexpected Response", "Response missing 'data'
field", null),

    RawTable = if List.IsEmpty(Result) then
        #table>{"updated_at"}, {}
    else Table.FromRecords(Result, null, MissingField.UseNull),

    TableWithDateTypes = if Table.HasColumns(RawTable, "updated_at") then
        Table.TransformColumns(RawTable, {"updated_at", each
ParseISODateTime(_), type datetime}})
    else RawTable,

    FilteredTable = if RangeStart <> null and RangeEnd <> null then
        Table.SelectRows(TableWithDateTypes, each [updated_at] >= RangeStart
and [updated_at] < RangeEnd)
    else if RangeStart <> null then
        Table.SelectRows(TableWithDateTypes, each [updated_at] >= RangeStart)
    else TableWithDateTypes
in
    FilteredTable

```