

BI & Reporting: **fast connect** iDempiere to Metabase

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About Me

Murilo Habermann Torquato

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- co-founder devCoffee
- ***piere world since 2008





Agenda

1. Quick Metabase overview
2. iDempiere database connection
3. Demo panel using Garden World client data
4. Embedding Metabase inside iDempiere
5. Core changes for better embedding (patch proposal)

1

Quick Metabase Overview

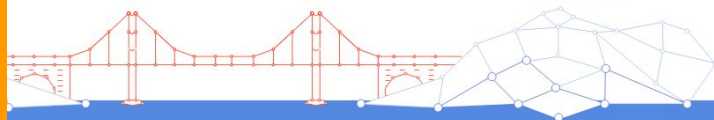
Let's start with the basics



From <https://www.metabase.com/>

Metabase is the **easy, open source** way for **everyone in your company** to ask questions and learn from data.

Get started



Ask your own questions

Explore on your own

Easily filter and group your data to find just what you're looking for, all without ever writing a line of sql or having to wait on a co-worker.

See connections

It just takes a click to see individual records and explore connections between your data, so you can move from who, to what effortlessly.

Visualize results

Move from your data to beautiful graphs and charts with just a few clicks.

Explore your own



idempiere • c_order

Save Filter + Summarize IP C

c_order_id	ad_client_id	ad_org_id	ad_orgtrx_id	ad_user_id	amountrefunded (R\$)	amounttendered (R\$)	bill_bpartner_id	bill_location_id	bill_user_id	c_activity_id	c_bpartner_id
100	11	11					112	108		112	
101	11	11					112	108		112	
102	11	11					117	112		117	
104	11	11		103			114	109		114	
105	11	11					120	114		120	
1000000	11	11			0	0	121	115		121	
106	11	11					121	115		121	
108	11	11					118	113		118	

Visualization Settings

Showing 8 rows

Cancel

ad_org - name

Is

Search the list

- Fertilizer
- Furniture
- HQ
- Store Central
- Store East
- Store North
- Stores
- Store South
- Store West

See Connections



idempiere = c_order = 100

Search... Ask a question Browse Data Save IP C

c_order 100

c_order_id	100
ad_client_id	11
ad_org_id	11
ad_orgrx_id	Empty
ad_user_id	Empty
amountrefunded	Empty
amounttendered	Empty
bill_bpartner_id	112
bill_location_id	108
bill_user_id	Empty
c_activity_id	Empty
c_bpartner_id	112
c_bpartner_location_id	108
c_campaign_id	Empty
c_cashline_id	100
c_cashplanline_id	Empty
c_charge_id	Empty
c_conversiontype_id	Empty
c_currency_id	100















This c_order is connected to:

- 0 b_buyertunds
- 0 b_sellertunds
- 0 c_allocationlines
- 1 c_invoice
- 0 c_opportunities
- 0 c_orders via ref_order_id
- 0 c_orders via quotationorder_id
- 0 c_orders via link_order_id
- 0 c_orderlandedcosts
- 1

Visualize Results



Choose a visualization

 Line	 Bar	 Combo
 Area	 Row	
 Scatter	 Pie	 Funnel
 Trend	 Progress	 Gauge
 Number	 Table	 Map

SQL when you need it



The screenshot shows a data visualization interface. At the top, there is a search bar and navigation icons. Below that, a table name 'devcoffe.brsp' is visible. The main area contains a SQL query:

```
1 select
2   split_part(coordinates, ' ', 2)::numeric as latitude,
3   split_part(coordinates, ' ', 1)::numeric as longitude,
4   split_part(coordinates, ' ', 3)::numeric as altitude,
5   bp_name
6 from
7   c_bpartner bp
8 left join
9   c_bpartner_location bpl on bpl.c_bpartner_id = bp.c_bpartner_id
10 left join
11   c_location l on l.c_location_id = bpl.c_location_id
12 left join
13   c_city c on c.c_city_id = l.c_city_id
```

Below the query is a map visualization of the region around São Paulo, Brazil. The map shows various cities and roads, with several blue location pins indicating the results of the SQL query. The interface includes a 'Visualization' button and a 'Settings' button at the bottom left, and a share icon at the bottom right.



And...

Dashboards

Let everyone on your team create, organize and share collections of data.



Open Source

Metabase is built and maintained by a dedicated team, and is open source.



Simple to Set Up

Start out simple and run Metabase on your own laptop, or set it up for your entire company on your own servers (java -jar or docker images)



2

iDempiere database connection

simple step...

Connect to **your** database



Database type:
PostgreSQL

Name:
jdempiere

Host:
[redacted]@office.com

Port:
5432

Database name:
mht_jdempiere

Database username:
brepr

Database password:
●●●●●●●●●●●●●●●●

Additional JDBC connection string options:
prepareThreshold=0

Use an SSH-tunnel for database connections
Some database installations can only be accessed by connecting through an SSH bastion host. This option also provides an extra layer of security when a VPN is not available. Enabling this is usually slower than a direct connection.

This is a large database, so let me choose when Metabase syncs and scans
By default, Metabase does a lightweight hourly sync and an intensive daily scan of field values. If you have a large database, we recommend turning this on and reviewing when and how often the field value scan happens.

Automatically run queries when doing simple filtering and summarizing
When this is on, Metabase will automatically run queries when users do simple explorations with the Summarize and Filter buttons when viewing a table or chart. You can turn this off if querying this database is slow. This setting doesn't affect drill-through or SQL queries.

Save

Actions

Sync database schema now

Re-scan field values now

Danger Zone

Discard saved field values

Remove this database

Your database has been added!

We took a look at your data, and we have some automated explorations that we can show you!

I'm good thanks

Explore this data

Connect to **your** database



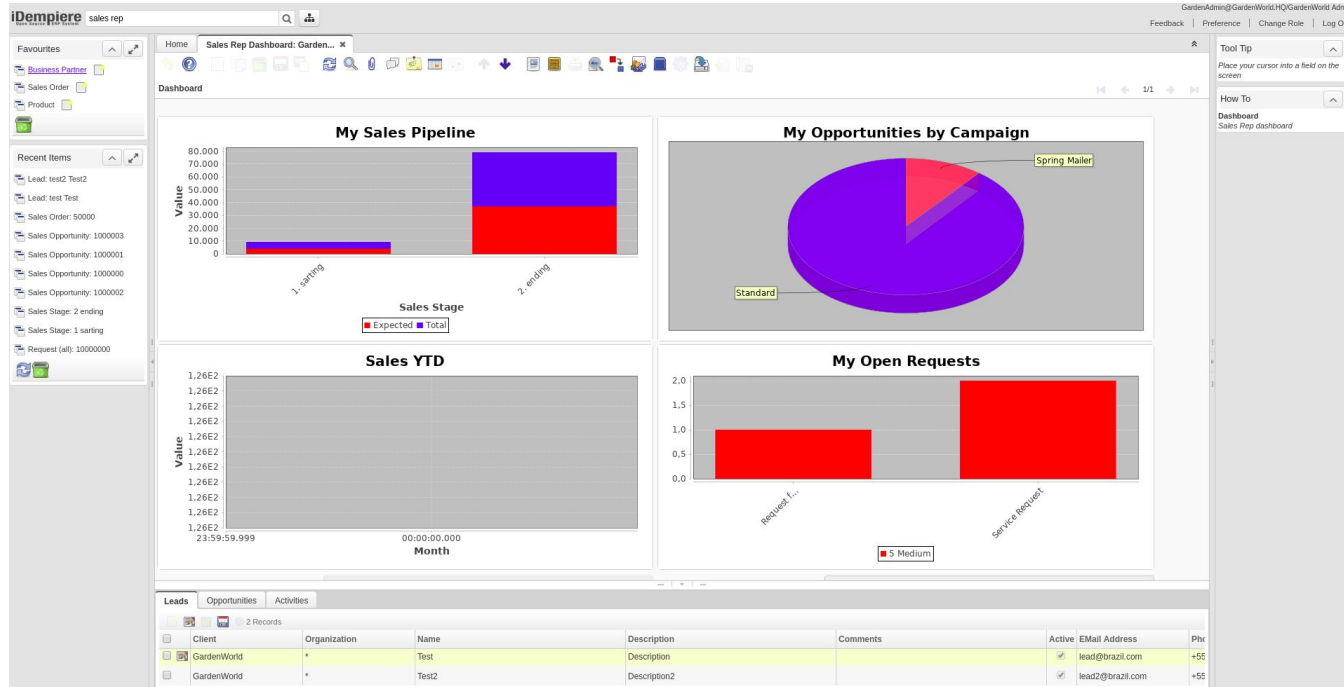
- Check to manually scan large production databases
- Some instances may need "sslmode=disable" for JDBC
- Explore admin general settings
 - Disable Friendly Table and Field Names
- Use a DB Replica!

3

Demo panel using Garden World client data

simple step...

Sales Rep Dashboard Window

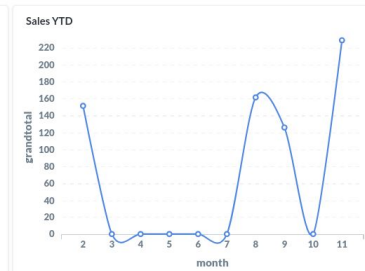
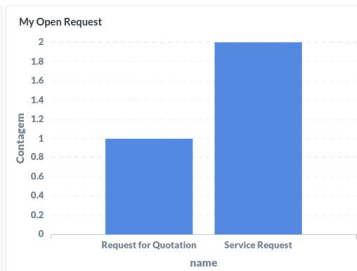


Sales Rep Dashboard (metabase)



Sales Rep Dashboard

ID
101



Leads

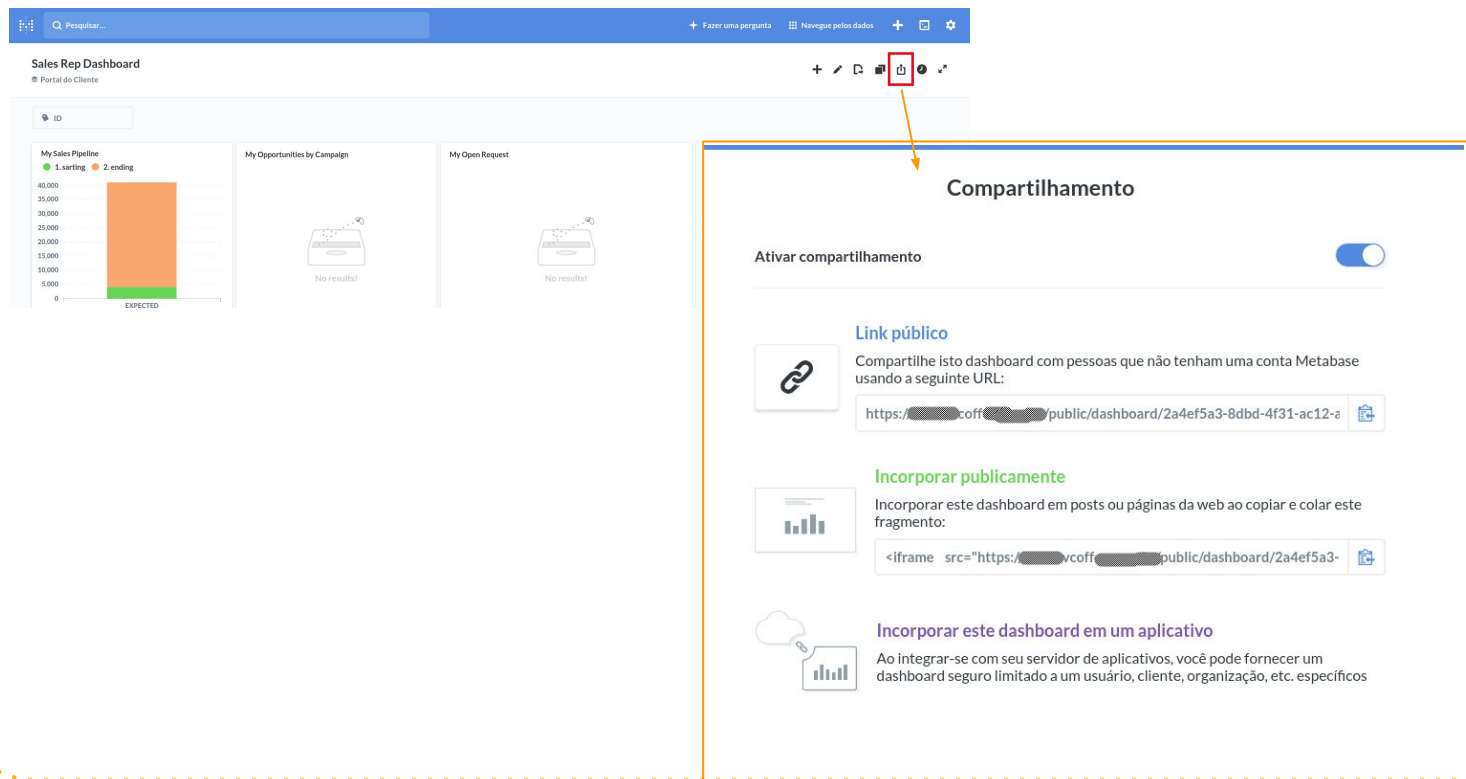
value	name	description	email	phone	phone2
test2	Test2	Description2	lead2@brazil.com	+5555555	+556666666
test	Test	Description	lead@brazil.com	+55199191919	+551991919192131

4

Embedding Metabase inside iDempiere

simple step...

Share metabase dashboard with others



The image shows a screenshot of the Metabase interface. At the top, there is a search bar and navigation options. Below that, the dashboard title "Sales Rep Dashboard" is visible. A red box highlights the share icon in the top right corner of the dashboard area. An arrow points from this icon to a modal window titled "Compartilhamento" (Sharing). This modal window contains three options for sharing the dashboard: "Ativar compartilhamento" (Toggle), "Link público" (Public link), and "Incorporar publicamente" (Embed publicly). Each option includes a brief description and a code snippet for sharing.

Compartilhamento

Ativar compartilhamento

Link público
Compartilhe isto dashboard com pessoas que não tenham uma conta Metabase usando a seguinte URL:
`https://[redacted].coff/[redacted]/public/dashboard/2a4ef5a3-8dbd-4f31-ac12-a`

Incorporar publicamente
Incorporar este dashboard em posts ou páginas da web ao copiar e colar este fragmento:
`<iframe src="https://[redacted].coff/[redacted]/public/dashboard/2a4ef5a3-`

Incorporar este dashboard em um aplicativo
Ao integrar-se com seu servidor de aplicativos, você pode fornecer um dashboard seguro limitado a um usuário, cliente, organização, etc. específicos

Embbded as Dashboard Content



Dashboard Content

Client: GardenWorld Organization: [dropdown]

Name: Metabase Demonstration

Active

Column No: 1 Line No: 0.0

Description: Metabase Demonstration

HTML: `<iframe src="https://[redacted]vcd/[redacted]public/dashboard/2a4ef5a3-8dbd-4f31-ac12-aa7a35acd7dd" frameborder="0" width="800" height="600">`

Gadget URI: [empty]

Goal: [dropdown]

Window: [dropdown]

Process: [dropdown]

Chart: [dropdown]

Collapsible Collapsed By Default

Show in Dashboard Show on Login

Dashboard Content Access

1 Records

Organization	Dashboard Content	User/Contact	Role	Active
HQ	Metabase Demonstration	GardenAdmin	GardenWorld Admin	<input checked="" type="checkbox"/>

Embed as Dashboard Content



The screenshot shows the iDempiere CRM interface with a Metabase dashboard embedded in a window titled "Metabase Demonstration". The dashboard, titled "Sales Rep Dashboard", includes the following components:

- My Sales Pipeline:** A bar chart showing "EXPECTED" values for different types, with a scale from 0 to 40,000.
- My Opportuniti...:** A card with a laptop icon and a magnifying glass.
- My Open Request:** A card with a laptop icon and a magnifying glass.
- Sales YTD:** A line chart showing "grand total" over "month", with a scale from 0 to 200.
- Leads Table:** A table with columns: value, name, description, email, phone, phone2. It contains one row: test2, Test2, Description2, lead2@brazil.com, +5555555, +556666666.
- Footer:** "Powered by Metabase"

The iDempiere interface also shows a sidebar with "Favourites" (Business Partner, Sales Order, Product), "Recent Items" (Dashboard Content: Metabase Demonstration, Lead: test2 Test2, Sales Order: 50000, etc.), and "Performance" gauges for "Total Open Service Requests: 20%" and "Invoice Revenue: 0%".

Embbded as Context Help



The screenshot displays a software interface with two main panels. The left panel is a form for a product named 'Assembly Area'. It includes fields for Client (GardenWorld), Search Key (Assembly Area), Name (Assembly Area), Description, Comment/Help, Document Note, UPCI/EAN, SKU, and various checkboxes like 'Active', 'Summary Level', 'Manufactured', 'Phantom', 'Purchased', and 'Sold'. There are also dropdown menus for Product Category (Resources), Tax Category (Standard), UOM (Hour), Product Type (Resource), and Part Type. The right panel shows a 'QtyOnHand By Category' donut chart with a total of 386. The chart is divided into six segments: Bush... (9.07%), Ch... (23.32%), Patio (14.77%), Stan... (3.11%), Tools (34.97%), and Trees (14.77%). The chart is powered by Metabase.

Category	Percentage
Bush...	9.07%
Ch...	23.32%
Patio	14.77%
Stan...	3.11%
Tools	34.97%
Trees	14.77%
TOTAL	386

** also possible as UI Virtual Column (HTML), QuickInfo...

5

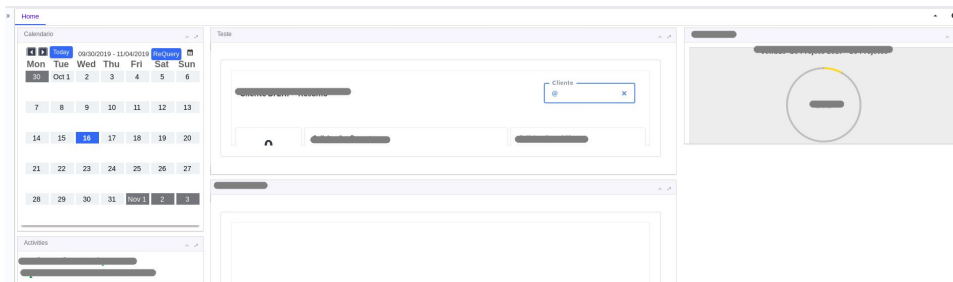
Core changes for better embedding

simple step...

Small core modifications...



- IDEMPIERE-4057
 - Branch default-IDEMPIERE-4057 at <https://bitbucket.org/devcoffee/idempiere>
 - Dashboard panel configures column width as proportional by comma separator (logilite)
 - By default all panel columns are equal



- Dashboard Content enhancement to parse context variables on HTML field content
 - Allows injection of UUID or other information for filtering users data from context (maybe it's helpfull a login validator for some cases)

Any Questions?



Thank you!

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