

IDUG

2026

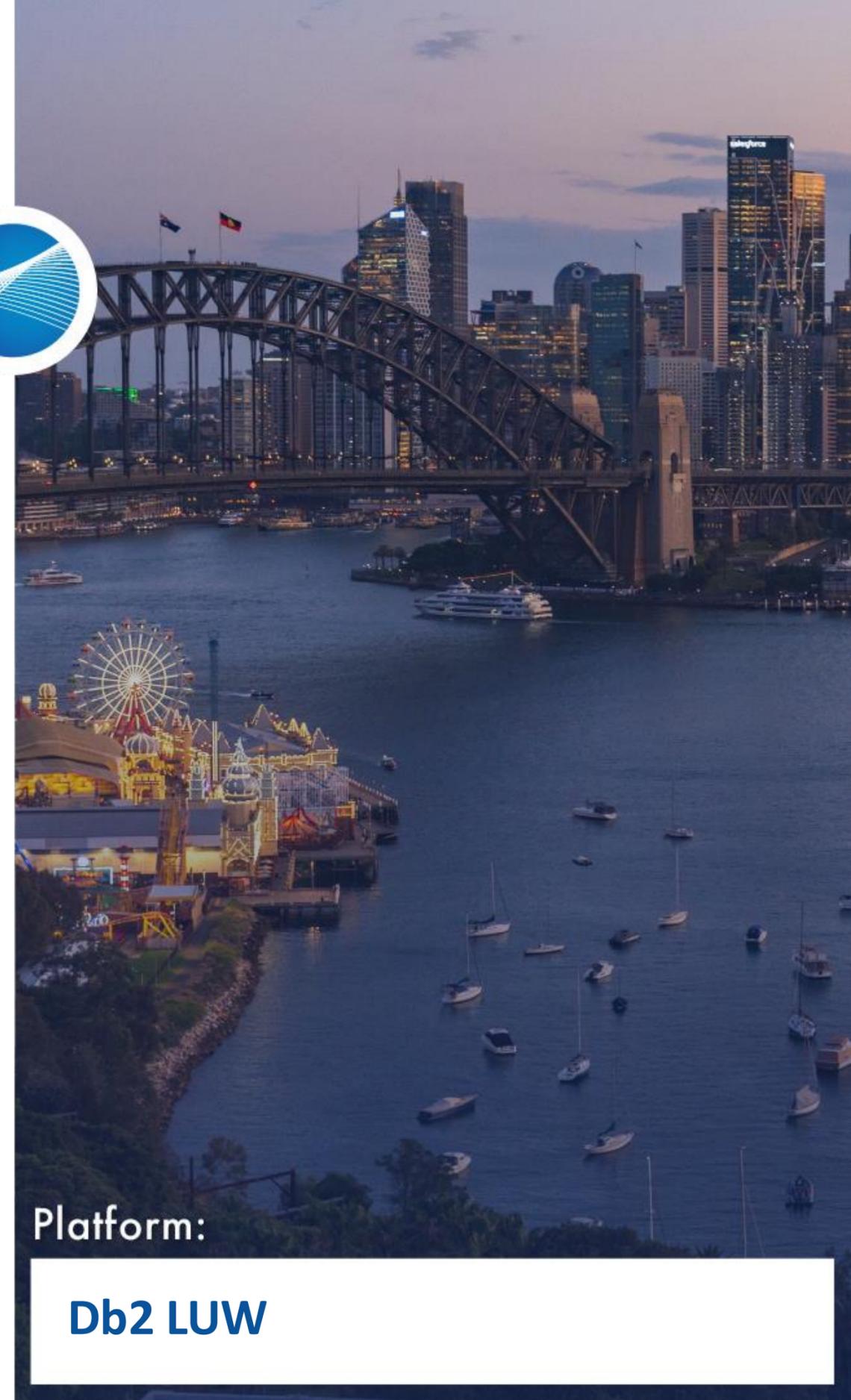
Sydney | March 16 - 18

AU Db2 TECH CONFERENCE

IBM Db2 Developer Extension for
VS Code

Greg Petrossian, *IBM*

Session Code: C12



Platform:

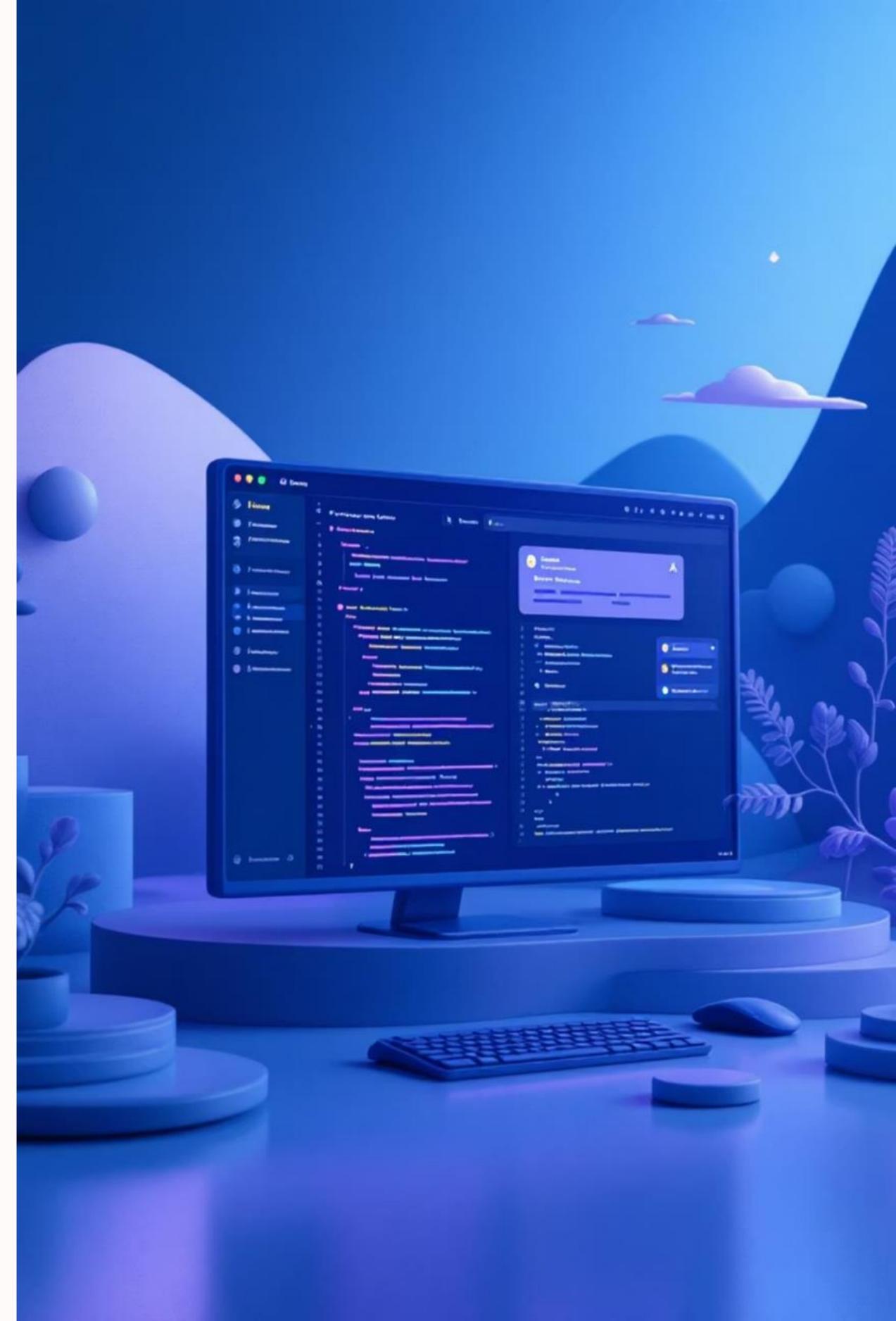
Db2 LUW



IBM Db2 Developer Extension for VS Code

Bringing Database Development into the Modern Era

One tool. One experience. Infinite productivity.





Today's Agenda

Introduction

The Problem: Monday 10:15 AM Scenario

Why Current Workflows Slow Developers Down

The Solution: Db2 Developer Extension for VS Code

Feature Demo

Key Benefits & Workflow Transformation

Closing the Four Critical Gaps

Real Impact: Productivity Gains

Who Benefits Across Data Roles

Roadmap: What's Coming Next

Q&A

IBM Db2 Developer Extension

An all-new, best-in-class development environment for Db2 developers embedded into Visual Studio Code.

Features:

- Syntax checking and highlighting
- Code completion and signature help
- SQL formatting
- Customizable code snippets
- DDL generation
- Manage Db2 connections
- Install and manage Db2 Community Edition database on localhost
- Explore database schemas, tables, views, procedures, and functions with details on database objects
- More coming soon

The screenshot displays the IBM Db2 Developer Extension interface within Visual Studio Code. The top bar shows the current table being viewed: `Table: DB2INST1.EMPLOYEE_INFO`. The breadcrumb navigation indicates the path: `Database:testdb | DB2INST1 / Tables / EMPLOYEE_INFO`. Below the navigation, there are tabs for `Properties`, `Columns`, `Constraints`, `Indexes`, and `Data`, with `Data` currently selected. A search bar prompts the user to "Enter SQL Expression". The data view shows "Displaying 4 rows" with a "Max rows: 1000" limit. The data is presented in a table with the following columns: `EMP_ID`, `FIRST_NAME`, `LAST_NAME`, `DEPARTMENT`, and `HIRE_DATE`. The rows displayed are:

EMP_ID	FIRST_NAME	LAST_NAME	DEPARTMENT	HIRE_DATE
101	John	Doe	Engineering	2023-01-15
102	Jane	Smith	Sales	2023-02-20
103	Bob	Johnson	Marketing	2023-03-10
221	Miran	Badzak	Product	2007-07-04

The sidebar on the left shows a tree view of the database schema, including connections, tables, views, procedures, functions, and various system objects. The bottom panel features an extension marketplace card for the **IBM Db2 Developer Extension**, which includes the IBM logo, the extension name, the publisher `ibm.com`, a download count of 717, a 5-star rating (2 reviews), and the supported operating systems: `For Db2 Linux, Unix and Windows`. The card also has an `Install` button, a checked `Auto Update` checkbox, and a settings gear icon.



Production Crisis: When Every Second Counts

- Monday • 10:15 AM
- A production query starts failing.
- Customers are reporting incorrect data.
- The team needs answers quickly — but the tools slow everyone down.

- Launch separate database client
- Hunt for connections credentials
- Configure SSL
- Copy queries between roles
- Export results manually

The Old Way
45 minutes of chaos

1

2

With Db2 Extension

10 minutes to resolution

- Open VS Code (already running)
- Setup local community instance for dev env
- Run saved query from query history
- Compare results instantly
- Fix and deploy



Feature Demos

Watch each capability in action

- Install Extension from Marketplace
- Create Connection:
 - Create Connection through Existing Server
 - Local install with Db2 Community Edition
- One-Click Connect
- Schema Tree, Table View & Generate DDL
- SQL Editor & Multi-Query Execution
- Query History Review
- New SQL File: Suggestions & Snippets
- End of Demo



IBM



The screenshot shows the Visual Studio Code extension marketplace interface. On the left, a sidebar lists various extensions, with the 'IBM Db2 Developer Extension' highlighted. The main panel displays the details for this extension, including its name, publisher (IBM), and a brief description. The 'Overview' section lists the tools provided by the extension, such as managing database connections and executing SQL queries. The 'Features' section details capabilities like connection management, schema browsing, and code generation. The 'Requirements' section lists the necessary system prerequisites. The 'Extension Settings' section shows the configuration options available for the extension. The 'Installation' table on the right provides technical details about the extension's package. The 'Categories' section shows the extension is classified as 'Other'.

IBM Db2 Developer Extension

IBM
VS Code Extension for Db2 Linux, Unix and Windows

Disable Uninstall Auto Update

DETAILS FEATURES CHANGELOG

VS Code Extension for Db2 Linux, Unix and Windows

A comprehensive VS Code extension for working with IBM Db2 for Linux, Unix, and Windows databases.

Overview

This extension provides tools for:

- Managing Db2 database connections
- Exploring database schemas, tables, and other objects
- Executing SQL queries
- Generating SQL and application code

Features

- Connection Management:** Create, edit, and manage Db2 database connections
- Schema Browser:** Explore database schemas, tables, views, procedures, and functions
- Object Explorer:** View detailed information about database objects
- SQL Editor:** Execute SQL queries and view results
- Code Generation:** Generate SQL queries and application code for database objects, with direct copy to SQL editor
- Secure Password Handling:** Option to save passwords or enter them only when needed

Requirements

- VS Code 1.103.0 or higher
- Java Runtime Environment (JRE) 17 or higher

Extension Settings

This extension provides the following settings:

- `db2-for-linux.servicePort`: Port number for the Db2 service (default: 3000)

Known Issues

Installation	Value
Identifier	ibm.db2-for-linux
Version	0.0.10
Last Updated	2 minutes ago
Source	VSOX
Size	138.42MB
Cache	6.07KB

Categories: Other

Install IBM Db2 Developer Extension

Install the IBM Db2 Developer Extension for VS Code to connect to and work with Db2 databases directly in your editor.



Enter your Db2 connection details to access and manage your database.

Host * AYUSHRASTOGI6-nnmbc-x86.fyre.ibm.com Port * 50000

Database * testdb Connection name (optional) Auto-generated if left empty

Connection URL
jdbc:db2://AYUSHRASTOGI6-nnmbc-x86.fyre.ibm.com:50000/testdb

Username * db2user1 Password * *****

Security

Use SSL

Save credentials

Test connection

Cancel Create connection

With User id & Pass

Enter your Db2 connection details to access and manage your database.

Host * AYUSHRASTOGI6-nnmbc-x86.fyre.ibm.com Port * 50000

Database * testdb Connection name (optional) Auto-generated if left empty

Connection URL
jdbc:db2://AYUSHRASTOGI6-nnmbc-x86.fyre.ibm.com:50000/testdb

Username * db2user1 Password * *****

Security

Use SSL

Certificate
None

Truststore Password * ***** Truststore Path * scripts/truststore.zh

Save credentials

Test connection

Cancel Create connection

With Using SSL

Create connection profile and use it forever

- Enter your connection details for once
- Option to connect your database securely using SSL
- Test and validate connection to make it future ready



This instance will utilize Db2 community edition license. Review information for this connection.

Host

localhost

Port (Internal Docker Port) - Must be between 1 and 65535

50000

Username (max 8 chars, alphanumeric + @\$\$_, starts with letter or @\$\$_)

db2inst1

Password (Required)

....

Database Name (max 8 chars, alphanumeric + @\$\$_, starts with letter)

testdb

Db2 instance creation in progress

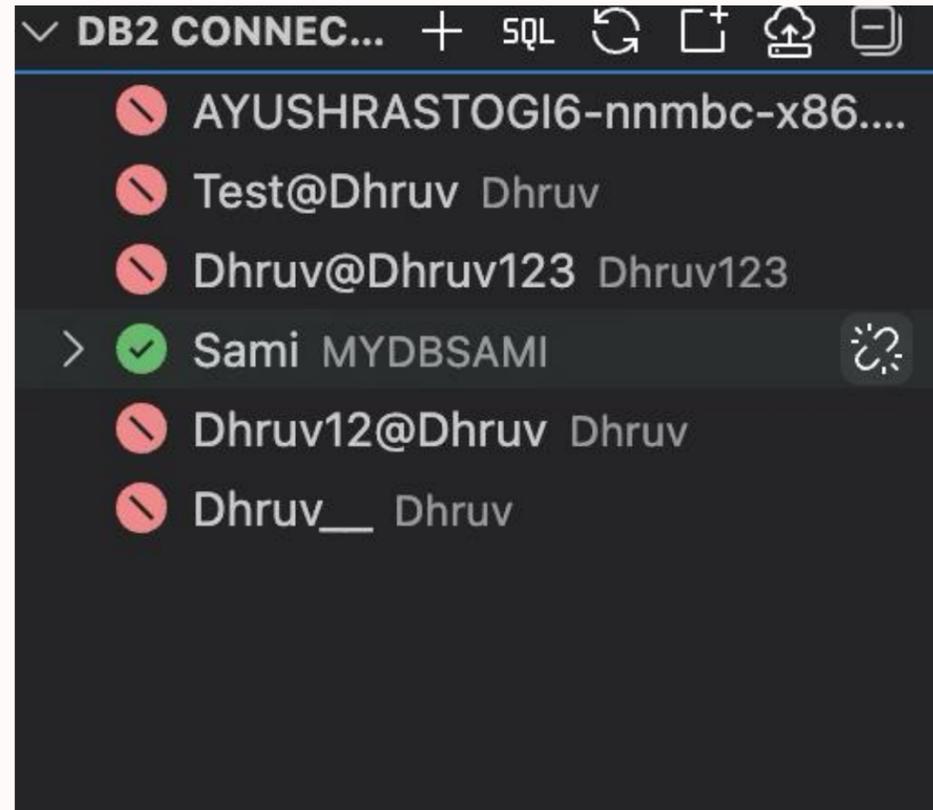
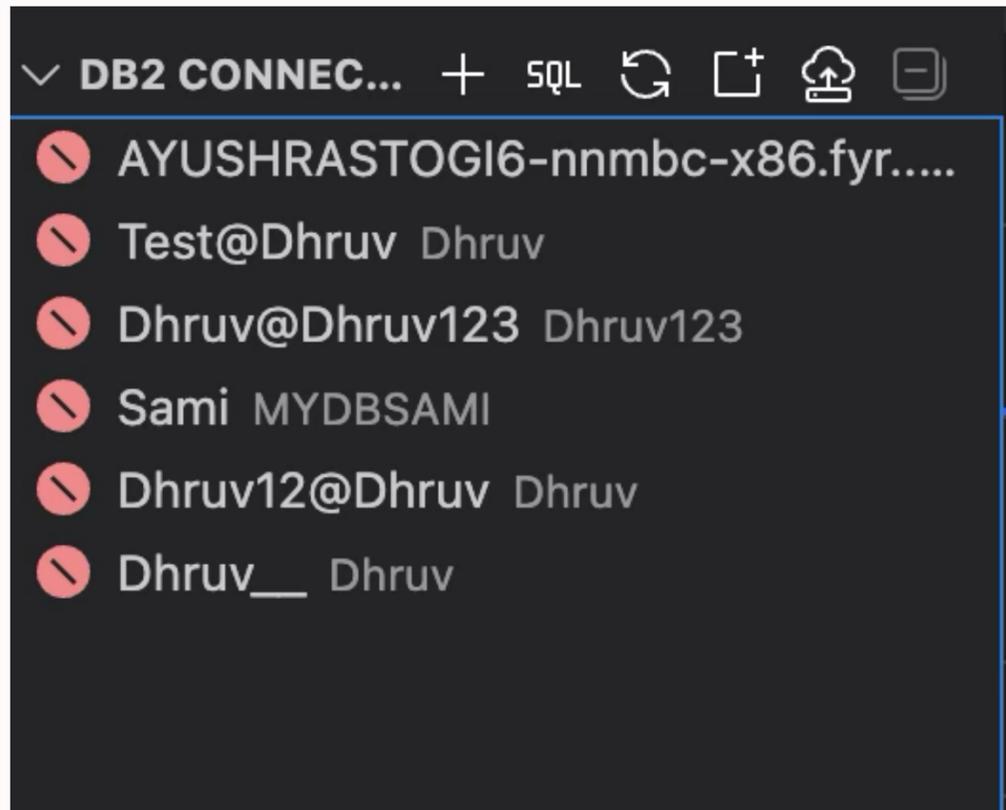
This process may take a few minutes.

- Environment Setup
- Container Runtime Setup
- Db2 Container Setup
- Db2 Engine Initialization
- Database Configuration
- Schema & Sample Data
- Verification & Completion

Install locally and connect using
Db2 Community Edition

Single click clean, error free setup with clear
steps and quick validation.

Creating instance...



One Click connection to Db2

- Single click to connect with Db2
- Maintain multiple connections simultaneously



Schema Explorer

Table Details

Explore Schema & Table Details

- View all schemas from your active connection in one place
- Instantly browse tables, functions, procedures, and objects inside each schema
- Navigate your database structure faster with a clean, organized layout

The screenshot shows the Schema Explorer interface with a tree view on the left and a list of objects on the right. The tree view is expanded to show the 'Tables' folder under the 'AYUSH' schema. The list of objects includes:

- SECURE_TABLE
- SECURE_TABLE3
- TABLE1
- TABLE10
- TABLE100
- TABLE101
- TABLE102
- TABLE103
- TABLE104
- TABLE105
- TABLE106
- TABLE107
- TABLE108
- TABLE109
- TABLE11
- TABLE110
- TABLE111
- TABLE112
- TABLE113
- TABLE114
- TABLE115
- TABLE116
- TABLE117
- TABLE118
- TABLE119
- TABLE12
- TABLE120

The screenshot shows the Table Details interface for the 'EMPLOYEES' table. The table is selected in the tree view on the left. The details panel on the right shows the following properties:

Property	Value
Name	EMPLOYEES
Schema	AYUSH
Database	TESTDB
Table space	USERSPACE1
Type	T
Encoding scheme	UTF-8
No. of primary key columns	0
Partition key	0
Restrict on drop	Yes
Append on	No
Control	
Auditing	No
Data capture	No
Owner	AYUSH
Cardinality	13
Statistics time	0001-01-01 00:00:00.0
Created time	2025-08-03 18:30:44.990
Altered time	2025-08-03 18:30:45.484

The screenshot shows the Table Details interface for the 'EMPLOYEES' table, with the 'Data' tab selected. The data is displayed in a table with 8 rows and 3 columns: EMP_ID, NAME, and DEPT_ID.

EMP_ID	NAME	DEPT_ID
1	Alice	101
2	Bob	102
3	Charlie	103
4	Anant	104
101	Ayush	20
102	John Doe2	10
107	Dhruv	503
100	dhruv	101



Generate DDL

Quickly generate common SQL queries directly from the object explorer.

With a single click, create DDL, SELECT, INSERT, UPDATE, or DELETE statements for any table—saving time and avoiding manual query writing.

The screenshot shows a database management tool interface. On the left, the 'Object Explorer' pane displays a tree view of the database structure. The 'AYUSH' database is expanded, and the 'Tables' folder is selected. The 'EMPLOYEES' table is highlighted. A context menu is open over the 'EMPLOYEES' table, with the 'Generate DDL' option selected. The main pane on the right displays the generated DDL queries for the 'EMPLOYEES' table.

```
DDL Queries - AYUSH.EMPLOYEES

CREATE TABLE "AYUSH"."EMPLOYEES" (
    "EMP_ID" INTEGER NOT NULL ,
    "NAME" VARCHAR(100 OCTETS) ,
    "DEPT_ID" INTEGER )
    IN "USERSPACE1"
    ORGANIZE BY ROW ;
ALTER TABLE "AYUSH"."EMPLOYEES"
    ADD PRIMARY KEY
        ("EMP_ID")
    ENFORCED ;

GRANT SELECT ON TABLE "AYUSH"."EMPLOYEES" TO USER "DB2USER1"
```



SQL Authoring & Execution

- Black Friday, 9:45 PM
- Db2 pricing queries failing
- Customers can't complete purchases
- Thousands in revenue lost per minute

- Search for right query syntax
- Manually write even simplest queries
- No history of last executed queries
- Can't execute multiple queries simultaneously

The Old Way

45 minutes of chaos

1

2

With Db2 Extension

10 minutes to resolution

- Start typing in any .sql file
- Smart keyword and template suggestion make the task easier than ever
- Auto syntax checker and highlighter ensure no errors in the first go only
- Signature help ensure right keywords are used

From panic to productivity — all within the editor you already live in. Priya resolved the crisis before midnight and saved Black Friday sales. That's the power of unified tooling.



Powerful Unified SQL Editor

- One SQL editor for everything
- Run multiple queries at the same time
- See results instantly without switching tabs

Sami Save Run

```
SELECT BIGINT1, REAL2, TIME3, FLOAT4, REAL5, INTEGER6, TIME7, TIME8, INTEGER9, FLOAT10 FROM WILDCAT.TABLE10;
```

Results 347871 rows Search result set Export

Query Results: 50 total rows Showing rows 1-50

BIGINT1	REAL2	TIME3	FLOAT4	REAL5
-810415470905375744	NULL	NULL	0.1532337892410477	0.09668232
-1250579724932263936	0.171152	11:31:01	0.900379371953833	NULL
NULL	0.82912785	05:22:42	NULL	0.61509746
NULL	0.15548538	21:04:04	0.3189156087991811	0.88072544
-2929404792977062912	NULL			
347839343891921920	0.7100:			
NULL	0.9812:			
2716459257439590400	0.3832:			
NULL	0.4801:			
3337560802657984512	0.4521:			

Items per page: 50 1 Select page 1 of 6958

AYUSHRASTOGI6-nnmbc-x86.fyr...@TESTDB

```
SELECT EMP_ID, NAME, DEPT_ID FROM AYUSH.EMPLOYEES;
```

Save Run

Results 64 rows in 4 queries Search result set Export

Query 1 (16 rows) Query 2 (16 rows) Query 3 (16 rows) Query 4 (16 rows)

Query 1 Results 16 rows (1021ms)

Query Results: 16 rows

EMP_ID	NAME	DEPT_ID
1	Alice	101
2	Bob	102
3	Charlie	103
4	Anant	104
101	Ayush	20
102	John Doe2	10
107	Dhruv	503
100	dhruv	101
500	Shritansh	202
5	Dhruv	105
10	Dhruv	105
6	Shakshi	108
12	sam	201
103	shubham	201
202	Arjun	10
210	Arjun	10



Smart Keyword Suggestions

Smart keyword suggestions directly inside SQL files, offering quick hints and speeding up query writing.

```
SELECT * FROM a Untitled-2 1
```

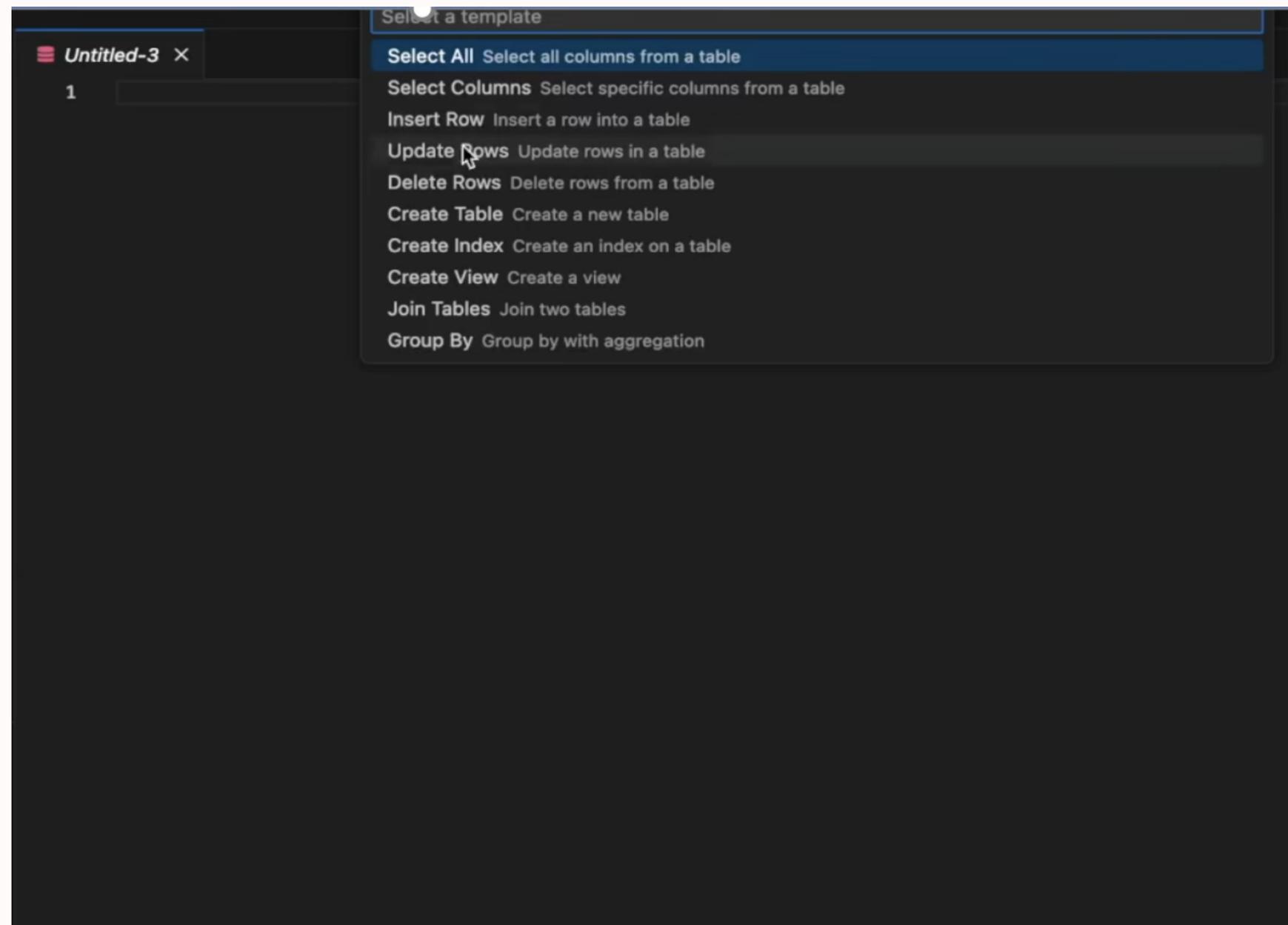
1 SELECT * FROM a

- ALTER
- Alter Table
- AND
- AS
- ASC
- AVG
- { } AYUSH
- UNION ALL



Template Suggestion:

- Access ready made templates for common Db2 tasks
- Quickly generate tables, procedures, and other objects
- Maintain speed and consistency across your workflow





Query History

- Manually save queries in notes/files.
- Re-run queries often because nothing gets stored.
- Hard to recall which query failed.
- Jump between logs and editor to check past outputs.
- No single place to review history.

The Old Way
45 minutes of chaos

1

With Db2 Extension
10 minutes to resolution

2

From panic to productivity — all within the editor you already live in. Priya resolved the crisis before midnight and saved Black Friday sales. That's the power of unified tooling.

- Here are crisp points you can use:
- Shows complete history of all executed queries — both successful and failed.
- Displays query text, execution status, timestamp, and result.
- Helps users quickly review past runs and debug failed queries without re-executing.
- Makes tracking workflow easier with a clean, organized history panel.



QUERY HISTORY

- ✓ Db2 SQL Editor: 03/02/2026, 11:57:37 (AYUSHRASTOGI6-n...
 - ✓ SELECT EMP_ID, NAME, DEPT_ID FROM AYUSH.EMPLOYEES;
 - ✓ SELECT EMP_ID, NAME, DEPT_ID FROM AYUSH.EMPLOYEES;
 - ✓ SELECT EMP_ID, NAME, DEPT_ID FROM AYUSH.EMPLOYEES;
 - ✓ SELECT EMP_ID, NAME, DEPT_ID FROM AYUSH.EMPLOYEES;
- ✓ Db2 SQL Editor: 03/02/2026, 11:56:37 (db2bridgesami1.fyre.ib...
 - ✗ SELECT BIGINT1, REAL2, TIME3, FLOAT4, REAL5, INTEGER6, ...
 - ✗ SELECT BIGINT1, REAL2, TIME3, FLOAT4, REAL5, INTEGER6, ...
 - ✗ SELECT BIGINT1, REAL2, TIME3, FLOAT4, REAL5, INTEGER6, ...
- ✓ Db2 SQL Editor: 03/02/2026, 11:46:17 (db2bridgesami1.fyre.ib...
 - ✓ SELECT BIGINT1, REAL2, TIME3, FLOAT4, REAL5, INTEGER6, ...

Db2 SQL Editor Query Status: Db2 SQL Editor

Status Result

File Db2 SQL Editor

Executed 03/02/2026, 11:57:37

Connection TESTDB@AYUSHRASTOGI6-nnmbc-x86.fyre.ibm.com

Statement SELECT EMP_ID, NAME, DEPT_ID FROM AYUSH.EMPLOYEES;

Return code 0

SQL code

SQL state

Message Query executed successfully

Elapsed time(ms) 1021

Status Result

Rows: 16 Execution Time: 1021 ms Search results Export

EMP_ID	NAME	DEPT_ID
1	Alice	101
2	Bob	102
3	Charlie	103
4	Anant	104
101	Ayush	20
102	John Doe2	10
107	Dhruv	503
100	dhruv	101
500	Shritansh	202
5	Dhruv	105
10	Dhruv	105
6	Shakshi	108
12	sam	201
103	shubham	201
202	Arjun	10
210	Arjun	10

Query history

- Persistent query history
- Query execution logs for future use
- See the older results and execution summary



Smart Snippet Suggestions

- Get intelligent SQL snippet suggestions as you type
- Write faster with instant, context aware completions tailored to your query.

```
SELECT * FROM schema.table FETCH FIRST 10 ROWS ONLY;
```

de

- Delete Statement
- Delete with Join
- <T> DECFLOAT
- <T> DECIMAL
- DELETED
- DESC
- <T> DATE
- <T> DOUBLE

Basic DELETE statement

Deletes rows from a table



One Extension. Endless Power.

Guided Connection Wizard

Simplified Db2 connection setup with easier SSL configuration. The new connection flow removes unnecessary steps and makes SSL setup straightforward, helping developers connect securely with less effort and fewer errors — and get productive faster.

Schema Explorer with Carbon UI

Schemas, tables, views and other objects in a beautiful tree structure. IBM Carbon Design brings consistency and polish to every interaction. Right-click menus provide instant access to common operations.

Persistent Query History

Every query you run is automatically tracked and timestamped. Search your history by table name, date, or keywords. Compare results side-by-side to spot what changed. Your debugging context is preserved forever.

Exportable Results

Export query results to CSV, JSON with one click.



Your Daily Workflows – Transformed

Onboarding New Developers

Before: 2 hours of frustrating setup and troubleshooting.

After: 15 minutes with guided wizard; productive on day one

Client Demonstrations

Before: Chaotic switching; live demos often broke.

After: Polished webview panels for smooth, consistent demos.

Production Debugging

Before: Pure guesswork, hours recreating investigations.

After: One-click comparison of current vs. historical data.

Db2 Local Instance Setup

Before: Black-box process with no feedback.

After: Visual progress and clear guidance at every step.



Four Critical Gaps We're Closing

Fragmented Tooling

- Developers juggle 5+ apps
- Different interfaces, shortcuts
- Context switching destroys flow

Complex Setup

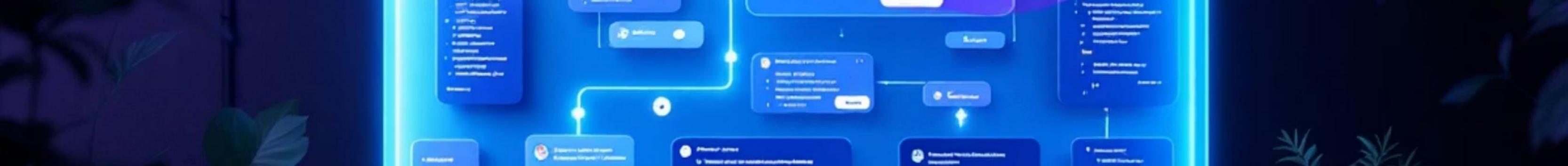
- Complex SSL/truststore setup
- Cryptic error messages
- New team members waste days connecting

Invisible Diagnostics

- Query history disappears
- No record of past queries
- Debugging requires recreating queries

Collaboration Chaos

- Manual sharing of results
- Teams can't reproduce issues
- Knowledge siloed in individual tools



The Future:

Query Optimization

Optimize your queries for better execution

AI Enabled optimization

Optimize the query with context aware AI

Stored Procedure Debugger

Debug stored procedure from extension only

More tools coming up

More tools and ideas coming up...





Q & A

What is the benefit of the schema explorer?

You can browse schemas, tables, procedures, and objects in one organized view without switching tools.

What problem does the Db2 Developer Extension solve?

It removes tool-switching, long setup times, SSL headaches, and scattered workflows by bringing everything into VS Code.

How does it help during production issues like the Black Friday crisis?

It gives quick access to saved queries, history, and comparison tools, reducing debugging time from 45 minutes to around 10.

What makes connection setup easier?

A guided wizard with SSL validation, real-time error checks, and reusable connection profiles.



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