



# VEGA JDBC DRIVER



VEGA50FT



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# Database support

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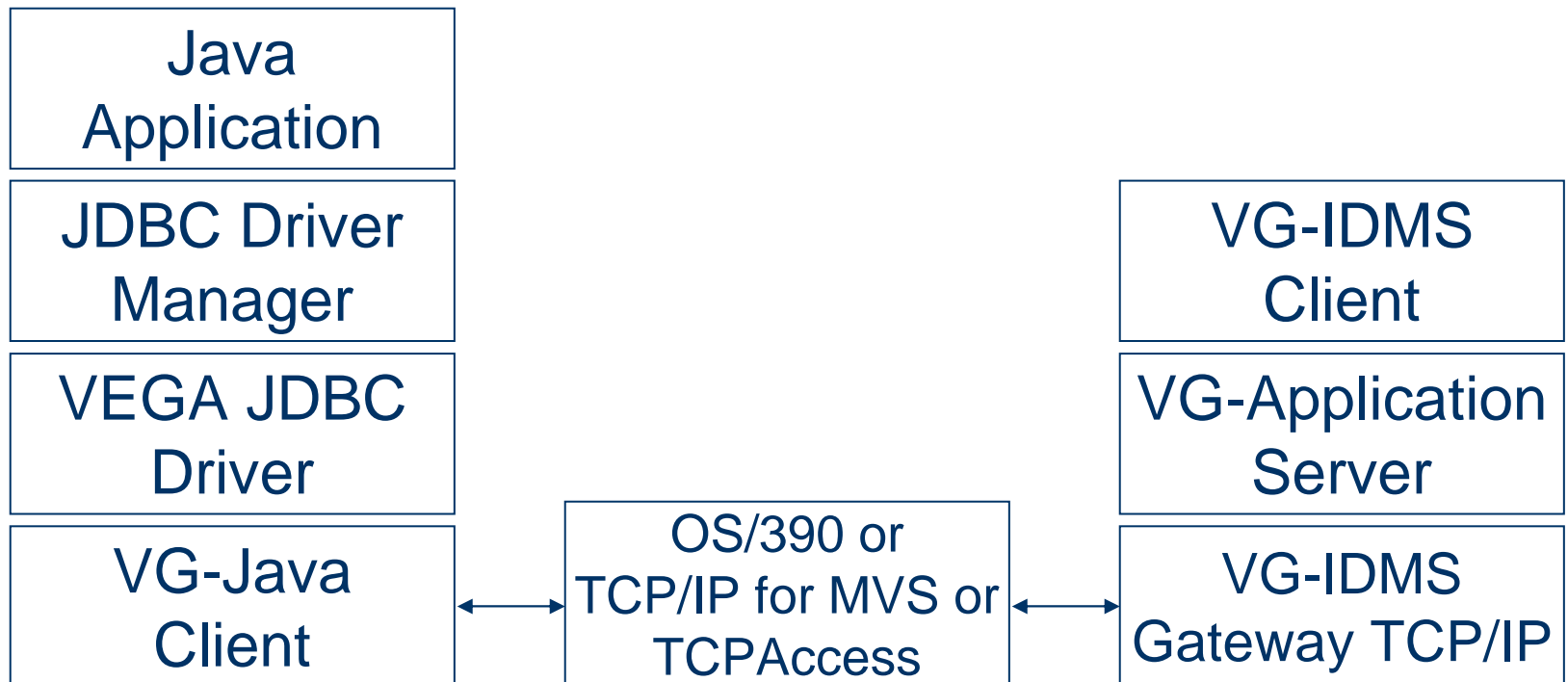
- ◆ CA-IDMS/SQL
  - including table procedures
- ◆ CA-IDMS/DML
  - via VEGA stored procedures
- ◆ DB2
  - via VEGA DB2 interface for CA-IDMS

# Prerequisites

- ◆ JRE 1.2.2 or later required
- ◆ To access CA-IDMS
  - VG-Java Client (VG-Application Server is included)
  - VG-IDMS Client (VG-IDMS Gateway TCP/IP Option is included)
- ◆ Additionally, to access DB2
  - VG-IDMS/DB2 Server
    - access DB2 directly from CA-IDMS using DB2 Call Attachment Facility (CAF)

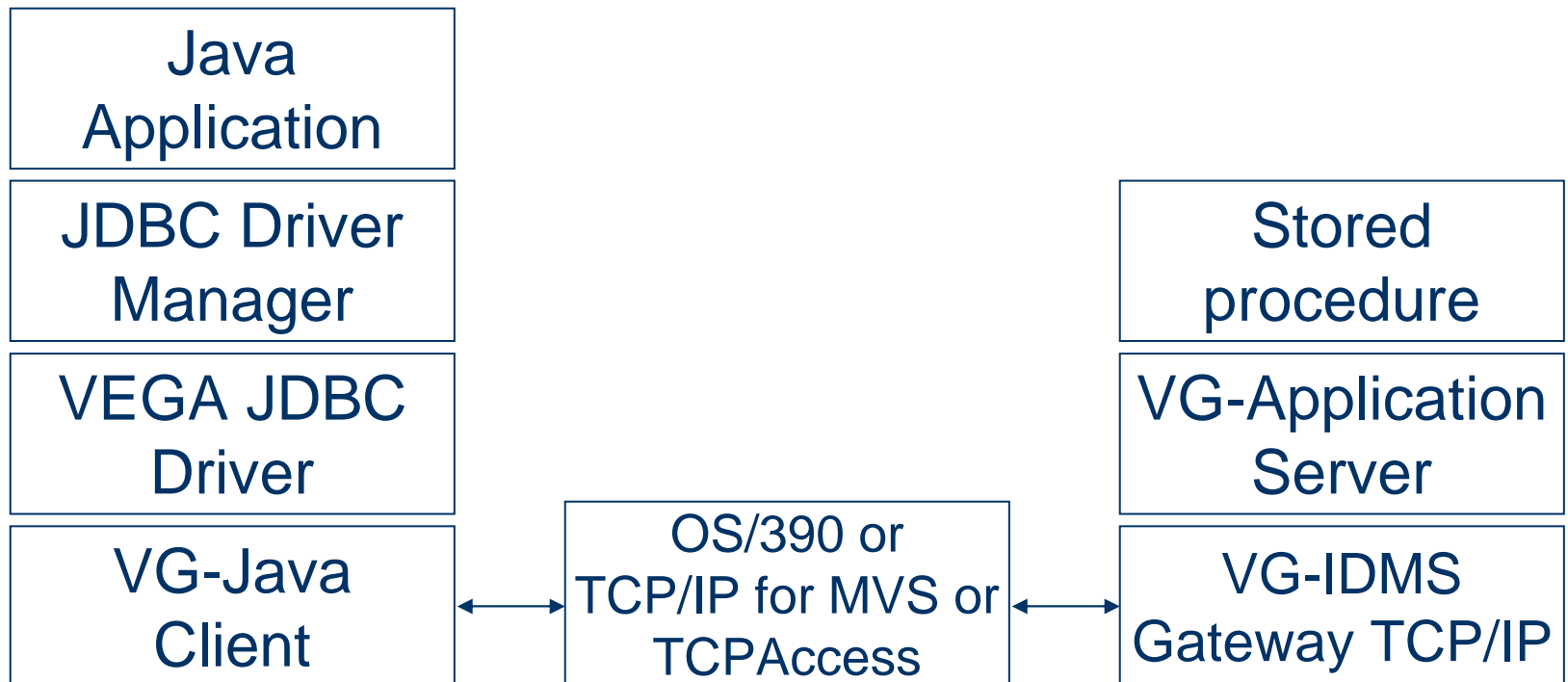
# Architecture

- Access CA-IDMS/SQL and/or DB2



# Architecture

- Access CA-IDMS using stored procedures





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# Driver features

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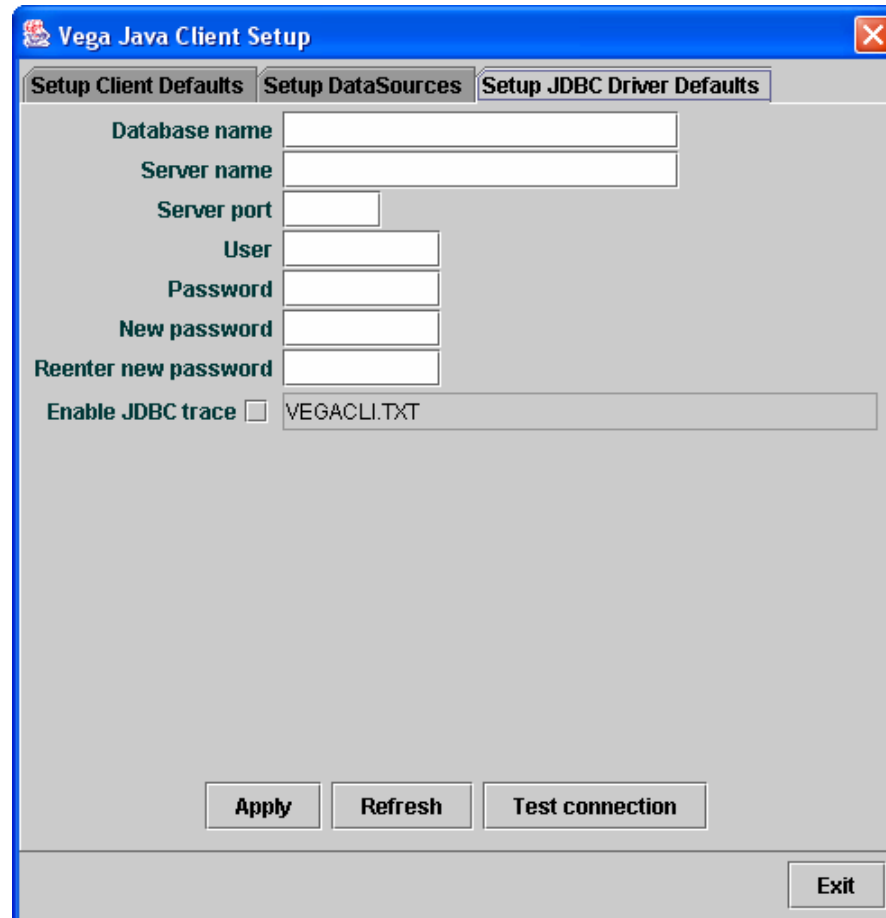
- ◆ JDBC 2.1 compatible
- ◆ Pass-through SQL
  - Syntax checking in the target system
  - Target SQL fully supported
- ◆ Supports Stored Procedures
- ◆ Supports JNDI and DataSources



# Driver features

- ◆ Internal bulk fetch enabled
  - if there is no 'for update of' clause in select
  - in all catalog functions
- ◆ Catalog functions implemented as VEGA stored procedures

# Setup Driver Defaults



The screenshot shows a Windows-style dialog box titled "Vega Java Client Setup". It has three tabs: "Setup Client Defaults", "Setup DataSources", and "Setup JDBC Driver Defaults", with the third tab selected. The dialog contains several input fields and a checkbox:

- Database name: [text box]
- Server name: [text box]
- Server port: [text box]
- User: [text box]
- Password: [text box]
- New password: [text box]
- Reenter new password: [text box]
- Enable JDBC trace:  [text box containing "VEGACLI.TXT"]

At the bottom of the dialog, there are four buttons: "Apply", "Refresh", "Test connection", and "Exit".



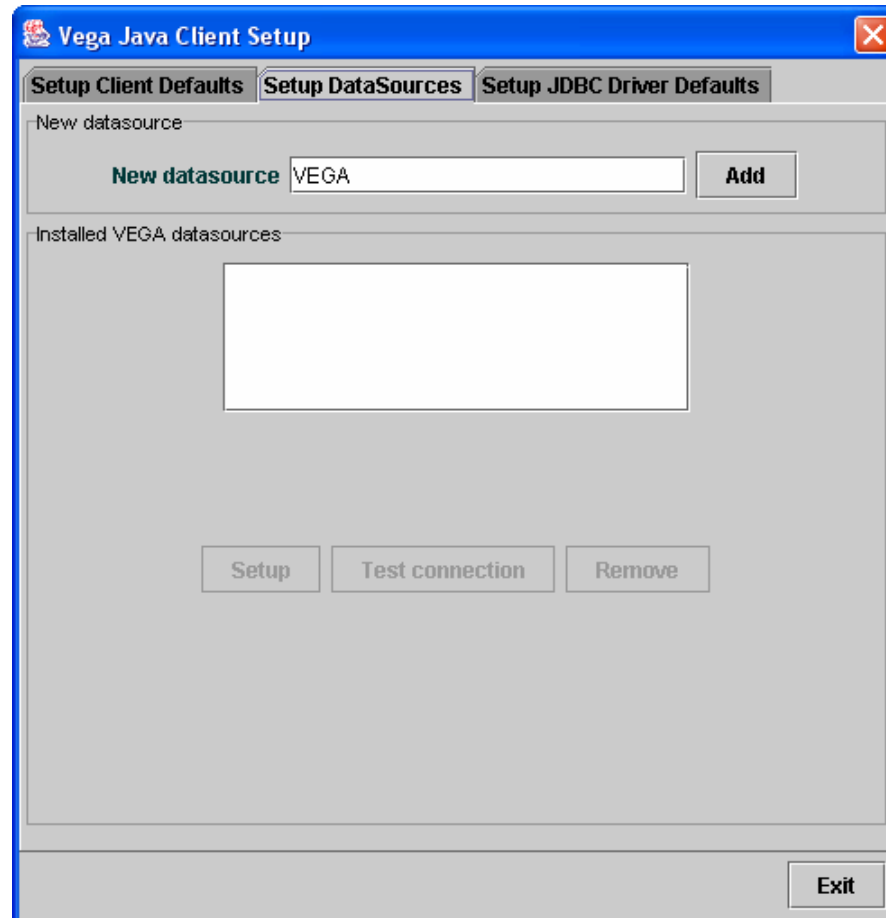
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# Setup Driver

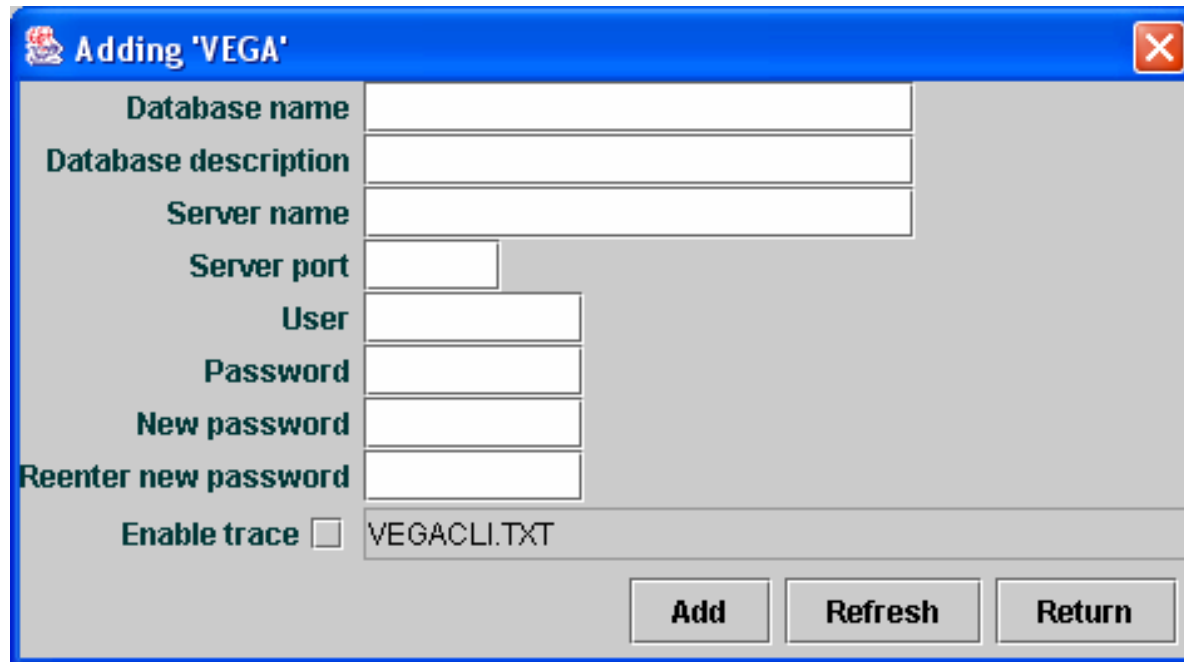
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- ◆ Optional fields override VG-Java Client defaults
  - there is no default for new password
- ◆ Signon and password change are supported in CA-IDMS R12 and later
- ◆ All attributes can be set in
  - URL in DriverManager.getConnection method or
  - Using DataSource methods

# Setup DataSources



# Setup DataSource



The image shows a Windows-style dialog box titled "Adding 'VEGA'". It contains several input fields for database configuration: "Database name", "Database description", "Server name", "Server port", "User", "Password", "New password", and "Reenter new password". At the bottom, there is a checkbox for "Enable trace" which is currently unchecked, and a text field containing "VEGACLI.TXT". Three buttons are located at the bottom right: "Add", "Refresh", and "Return".

Database name	<input type="text"/>
Database description	<input type="text"/>
Server name	<input type="text"/>
Server port	<input type="text"/>
User	<input type="text"/>
Password	<input type="text"/>
New password	<input type="text"/>
Reenter new password	<input type="text"/>
Enable trace <input type="checkbox"/>	VEGACLI.TXT



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# Setup DataSource

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- ◆ Optional fields override JDBC Driver defaults
  - there is no default for new password
- ◆ Signon and password change are supported in CA-IDMS R12 and later
- ◆ user, password and new password can be set in `DataSource.getConnection`
- ◆ Set/get methods for each attribute

# Stored procedures

- ◆ A stored procedure is
  - a DC-COBOL program
- ◆ Stored procedures can
  - use any CA-IDMS service except Mapping
  - also use external services
    - DB2
    - MQSeries
    - TCP/IP

# Stored procedures

- ◆ How to call
  - JDBC short-hand syntax
    - { call proc [ (p1[, p2][, ...] ) ] }
  - VEGA extension syntax
    - call proc [ (p1[, p2][, ...] ) ]
- ◆ Restrictions
  - return values not supported
  - output parameters are part of result set



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# Stored procedures

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- ◆ Terminal emulation available
  - to make life easier, because non-terminal tasks are difficult to test
  - emulates the JDBC driver functionality

# Stored Procedure structure

- ◆ Always 3 call parameters
  - output scratch name
  - permanent work area kept across multiple CALLs
  - input from the driver
- ◆ Required functions
  - response to 'PROCINFO'
    - describe optional result set and input parameters
  - response to 'EXECUTE'
    - process request and optionally return data

# Data description

- ◆ Stored procedure sends description of the result set and optional input parameters to JDBC driver
  - Example:

Col1	Col2	Col3	P1	P2
data to JDBC	data to JDBC	data to JDBC	data from JDBC	data from JDBC

# Procedure output

- ◆ Procedure writes all output to a scratch area
  - at least one record
    - contains sqlca (sqlcode and sqlstate)
  - optional data records
  - eod record (sqlcode=100)
- ◆ After goback
  - VG-Application Server sends the data to JDBC Driver



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# Where to use

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- ◆ In mission-critical applications
- ◆ If CA-IDMS SQL Option not available
  - VEGA supports CA-IDMS 10.2x and later
- ◆ To access multiple database systems
  - CA-IDMS
  - DB2
- ◆ To access MQSeries when it is not available on Java platform
- ◆ To reuse existing business logic in stored procedures

# End of Presentation

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