The hidden problem of Firebird setup: Firebird clients' versions
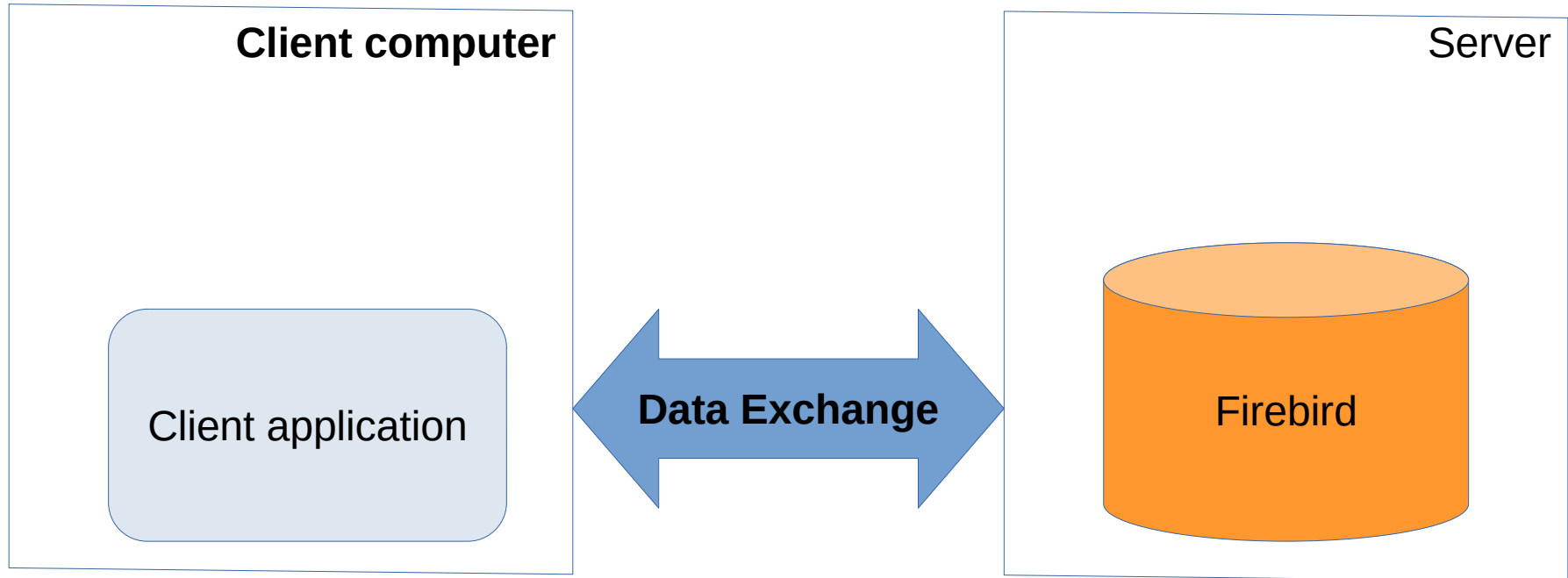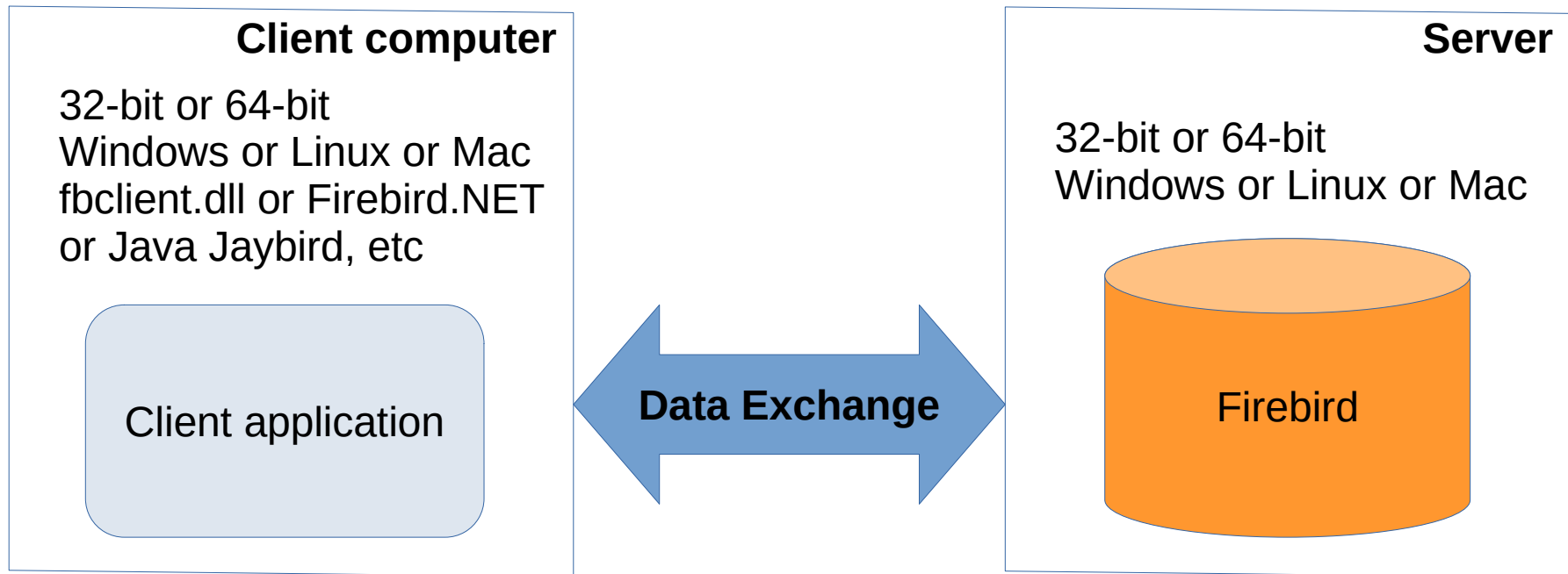
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Client-Server — what does it mean?

Client computer

Client application

Data Exchange

Server

Firebird

Client-Server — what does it mean?

Client computer

32-bit or 64-bit
Windows or Linux or Mac
fbclient.dll or Firebird.NET
or Java Jaybird, etc

Client application

Data Exchange

Server

32-bit or 64-bit
Windows or Linux or Mac

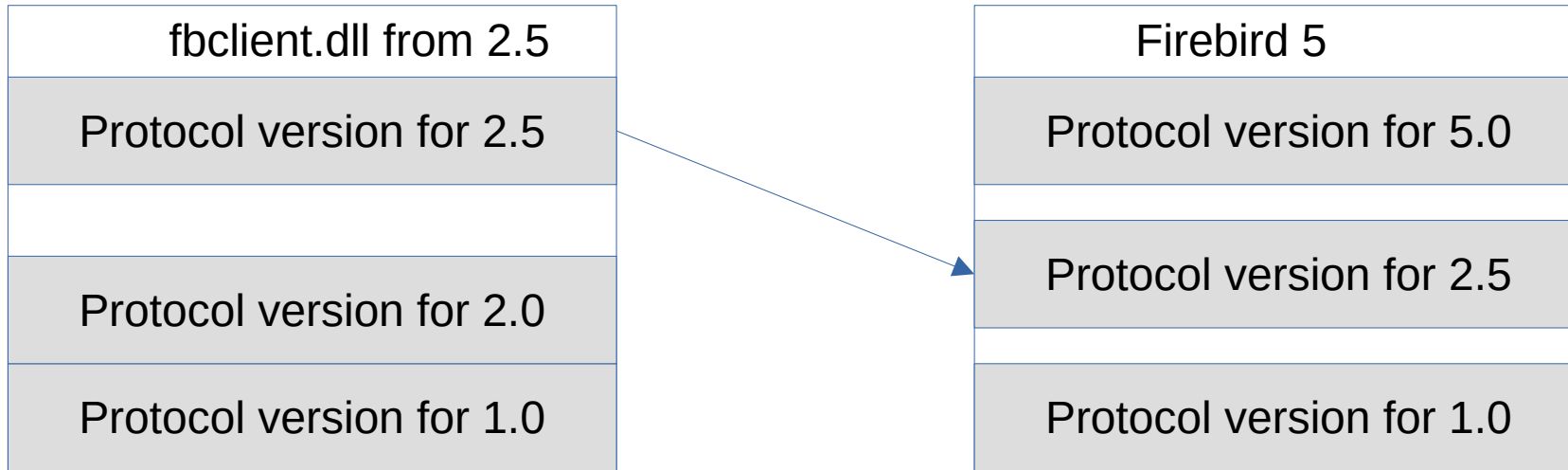Firebird

Network protocol

- To implement exchange between different clients and server, Firebird network protocol has **various versions**, which indicate a set of supported features

- While connection is established, client and server are negotiating what level to use

- The minimal supported level will be used

The lowest compatible version will be chosen

fbclient.dll from 2.5
Protocol version for 2.5
Protocol version for 2.0
Protocol version for 1.0

Firebird 5
Protocol version for 5.0
Protocol version for 2.5
Protocol version for 1.0

Protocol changes

- In Firebird 3 there were many changes to improve communication over Internet

- Many small improvements and bug fixes even between minor releases — the big difference is between 2.5.0 and 2.5.9, 3.0.0 and 3.0.12

Possible problems due to old client

- If you use old client version, there could be the folowing symptoms
  - Disconnects (lot of errors 104/10054 in firebird.log)
  - Loss of performance, depending on the network configuration
  - Lack of information in MON$ tables
  - «Strange» errors

How to identify versions of Firebird clients?

- **SELECT DISTINCT MON$CLIENT_VERSION FROM MON$ATTACHMENTS**

  - It will show client versions

  - If NULL is shown, can be old version of fbclient.dll or old version of Firebird.NET or Jaybird, etc.

What to do?

- Update fbclient.dll to the same version as your server (3.0.12, 4.0.5, 5.0.1, etc)

- Update non-native drivers to the latest possible versions — Jaybird, Firebird.NET, etc

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- Vlad Khorsun and Alexey Kovyazin

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Thank you!

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