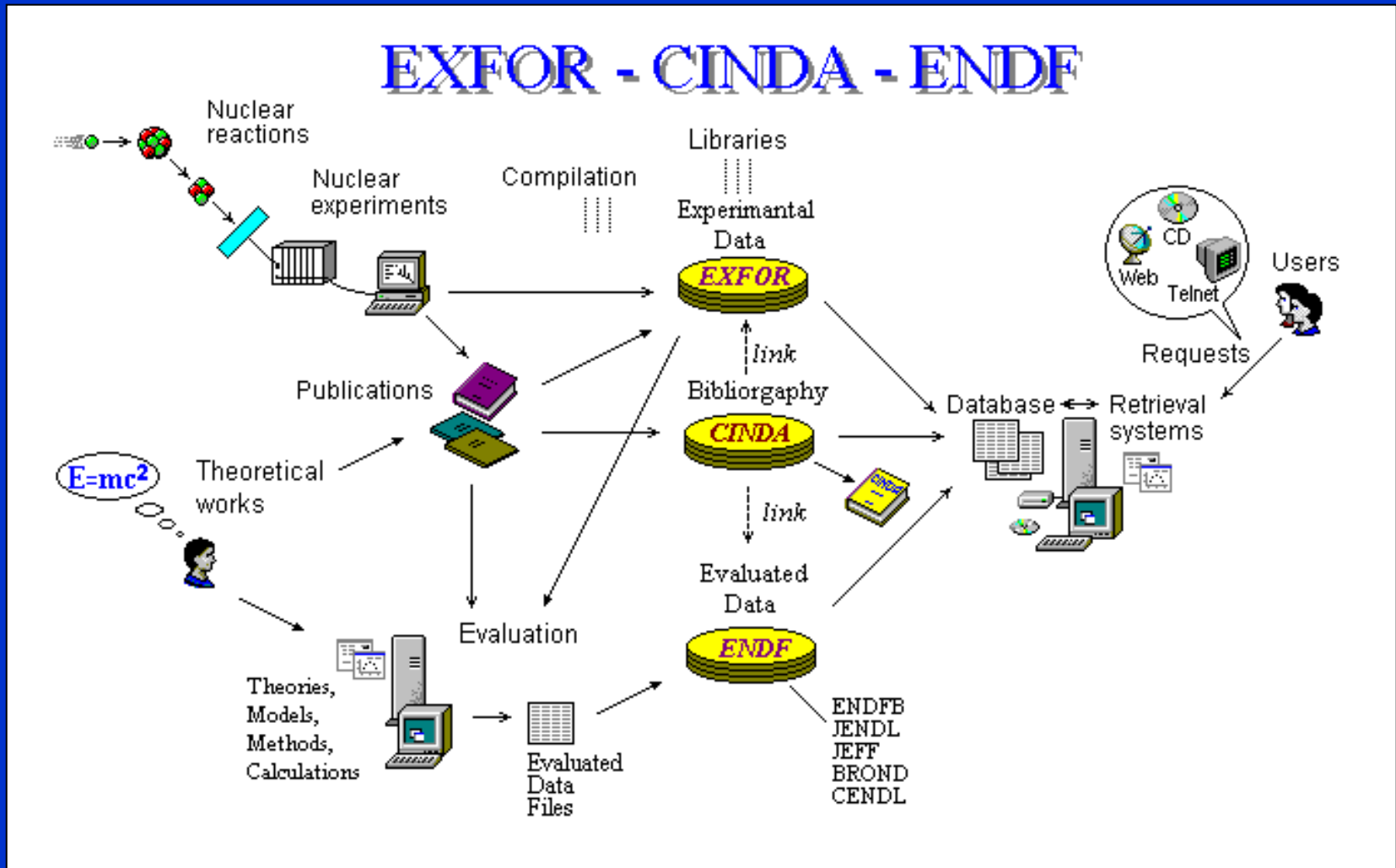


# **EXFOR and CINDA.**

## **Databases and interfaces: system design**

*V.Zerkin, IAEA-NDS, Dec-2003*

# Nuclear Reaction Databases



# Database Maintenance and User Access

## Maintenance

Load  
Update  
Backup



## Retrievals

Web  
CD-ROM  
Applications

# Project “Nuclear Database Migration”

## Migration to New Technology:

- Relational Databases
- Platform Independent Programming

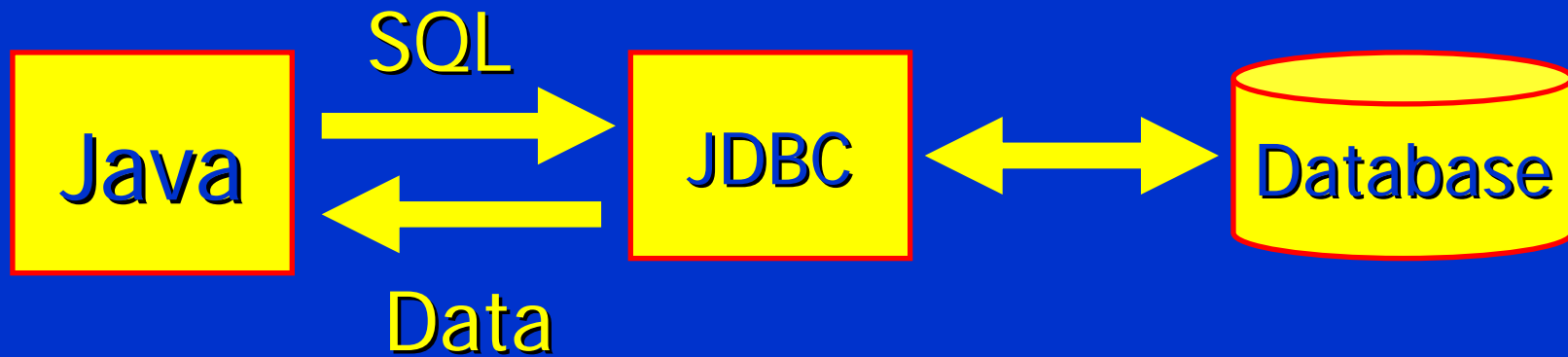
## Basic elements of the technology:

- Languages: Java, SQL, C
- Operating Systems: Linux, Windows, VMS
- Databases: MS-Access, MySQL, SyBase, ...

# New Generation of Nuclear Databases and Services

- **Universal Solution**  
(for Centers)
  - Internet (national)
  - LAN (institutional)
  - PC (individual)
- **Better Service**  
(for users)
  - More Criteria,
  - Codes Explanation,
  - Advanced Utilities
- **Co-operation**  
(for programmers)
  - No More Monopoly,
  - Code Exchange,
  - Application Access
- **Availability,  
Protected Future**  
(for all)
  - Low cost (free),
  - Platform independence,
  - Portability

# Access to database in the system

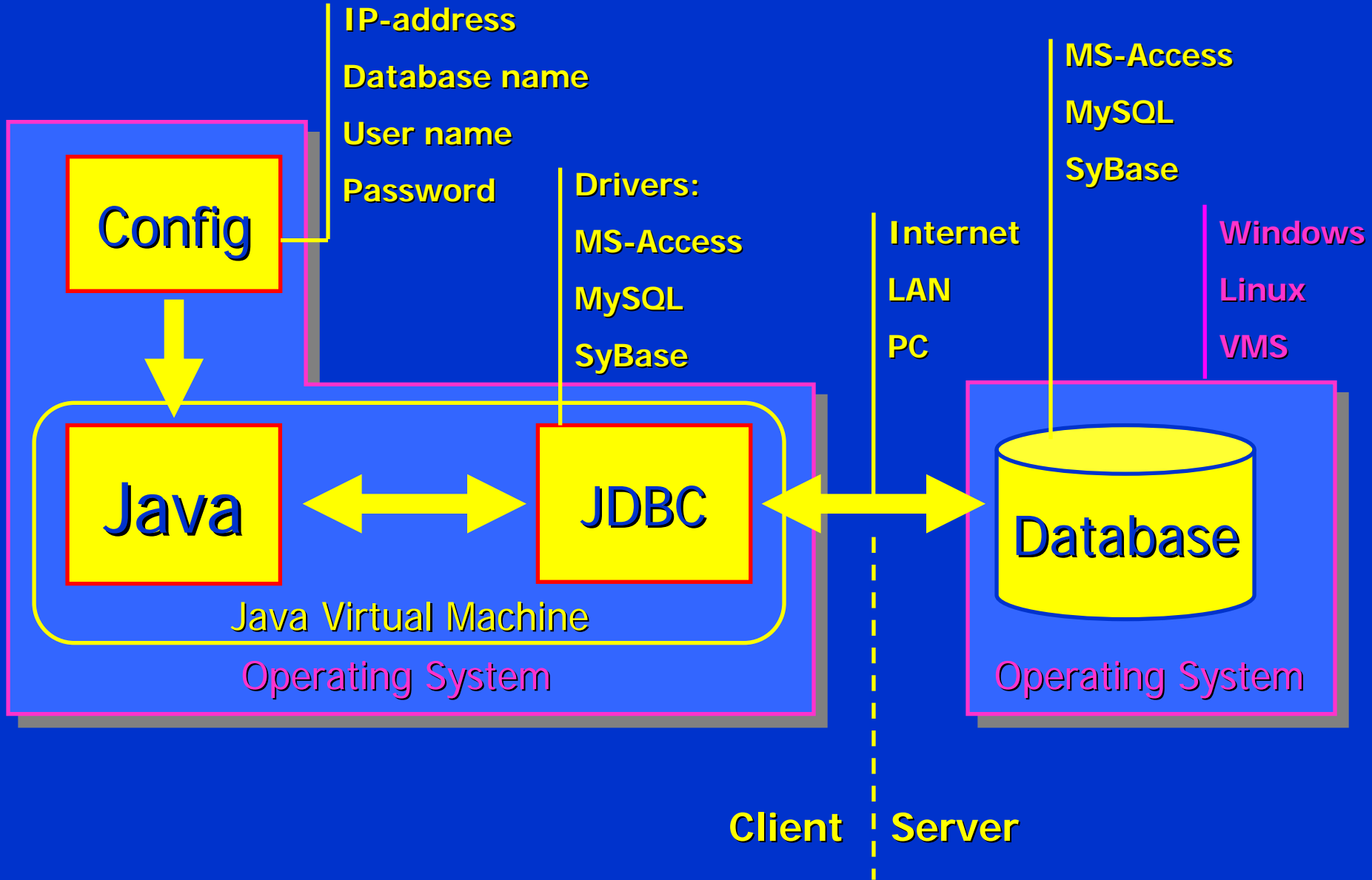


Java – Programming language (multi-platform)

SQL – Structured Query Language

JDBC – Java DataBase Connectivity

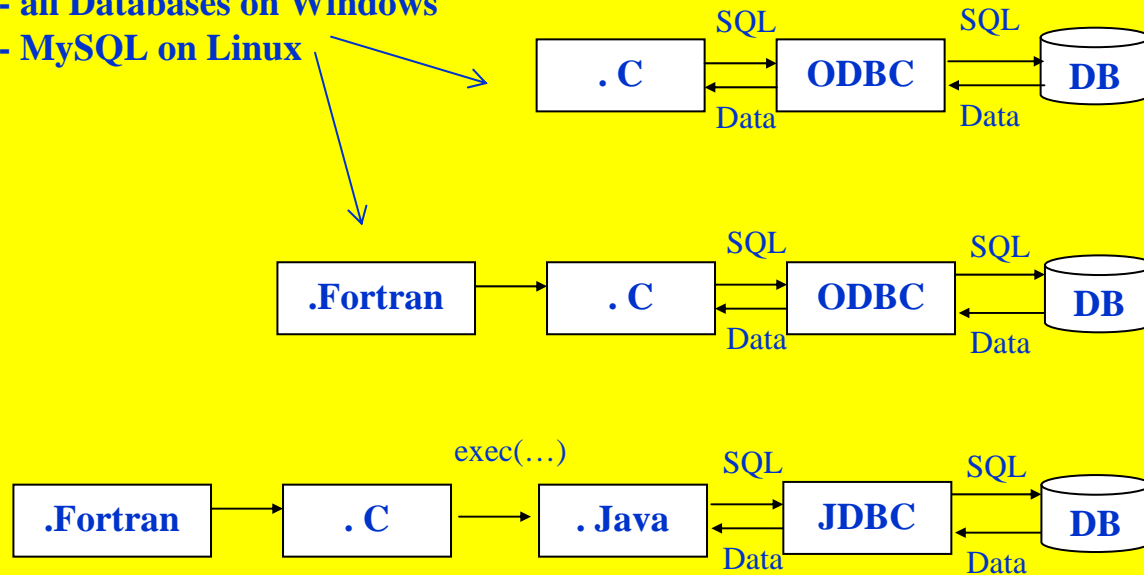
# Access to database: configuration



# Access from C and Fortran

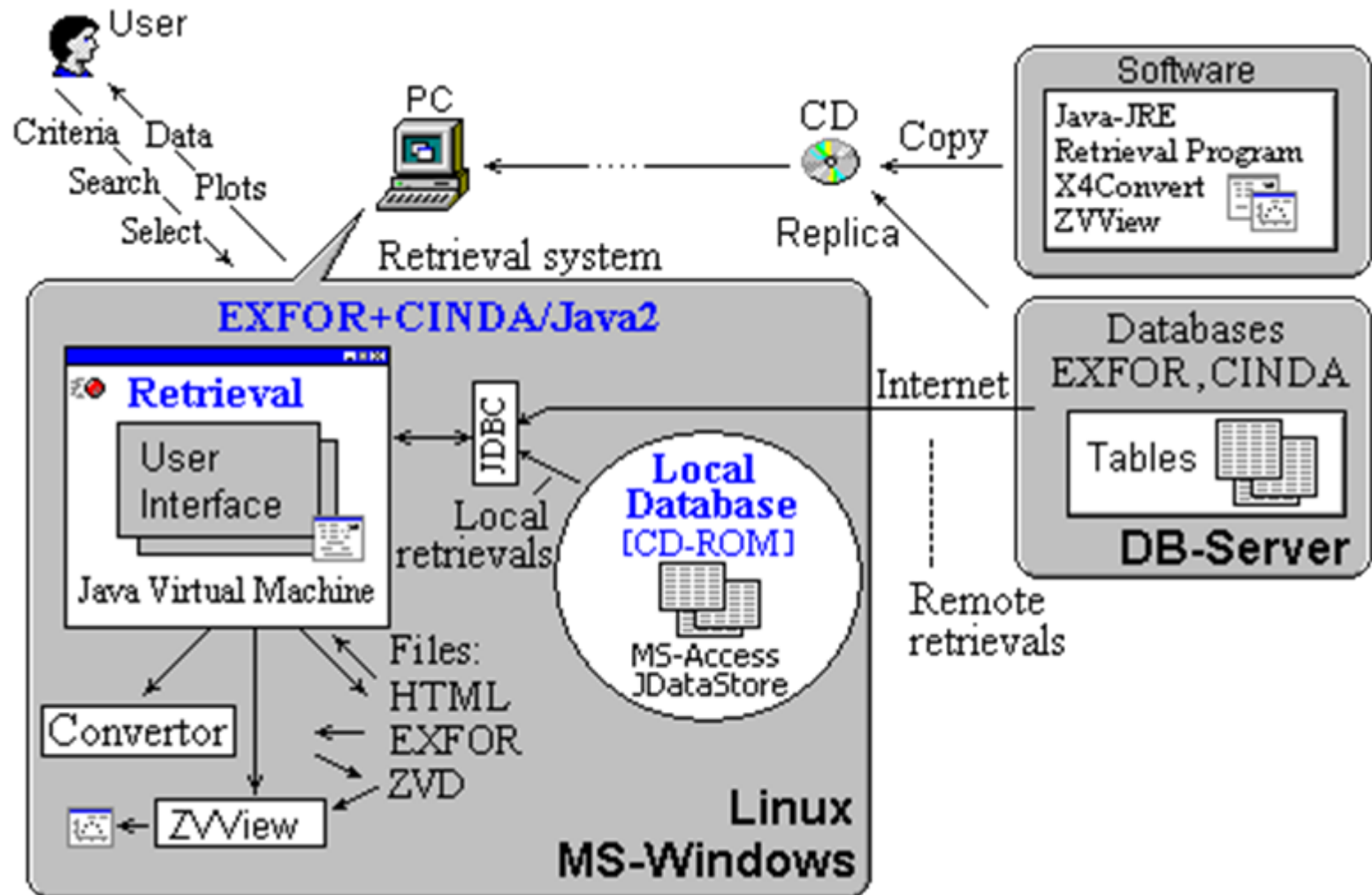
Tested platforms:

- all Databases on Windows
- MySQL on Linux





# EXFOR-CINDA on CD-ROM



# EXFOR database maintenance

## Create/Update Database Schema

Create tables and indexes

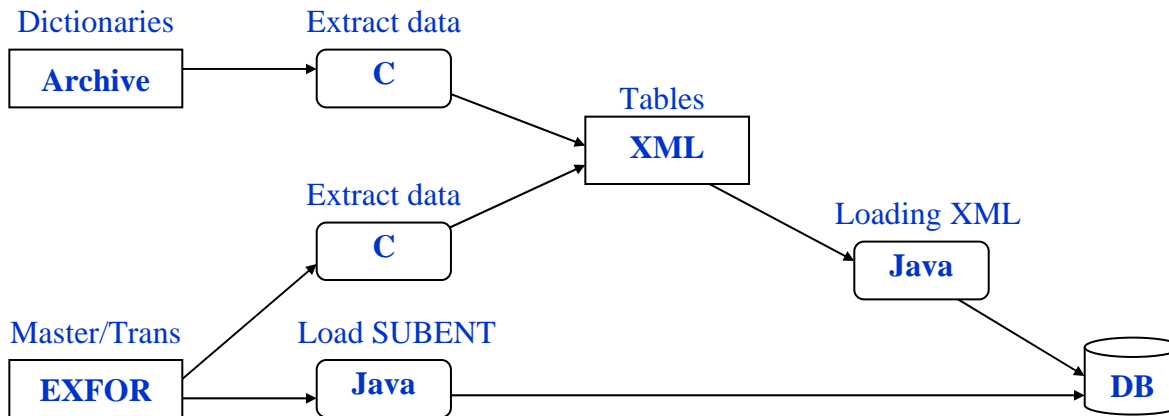
SQL

Execute SQL

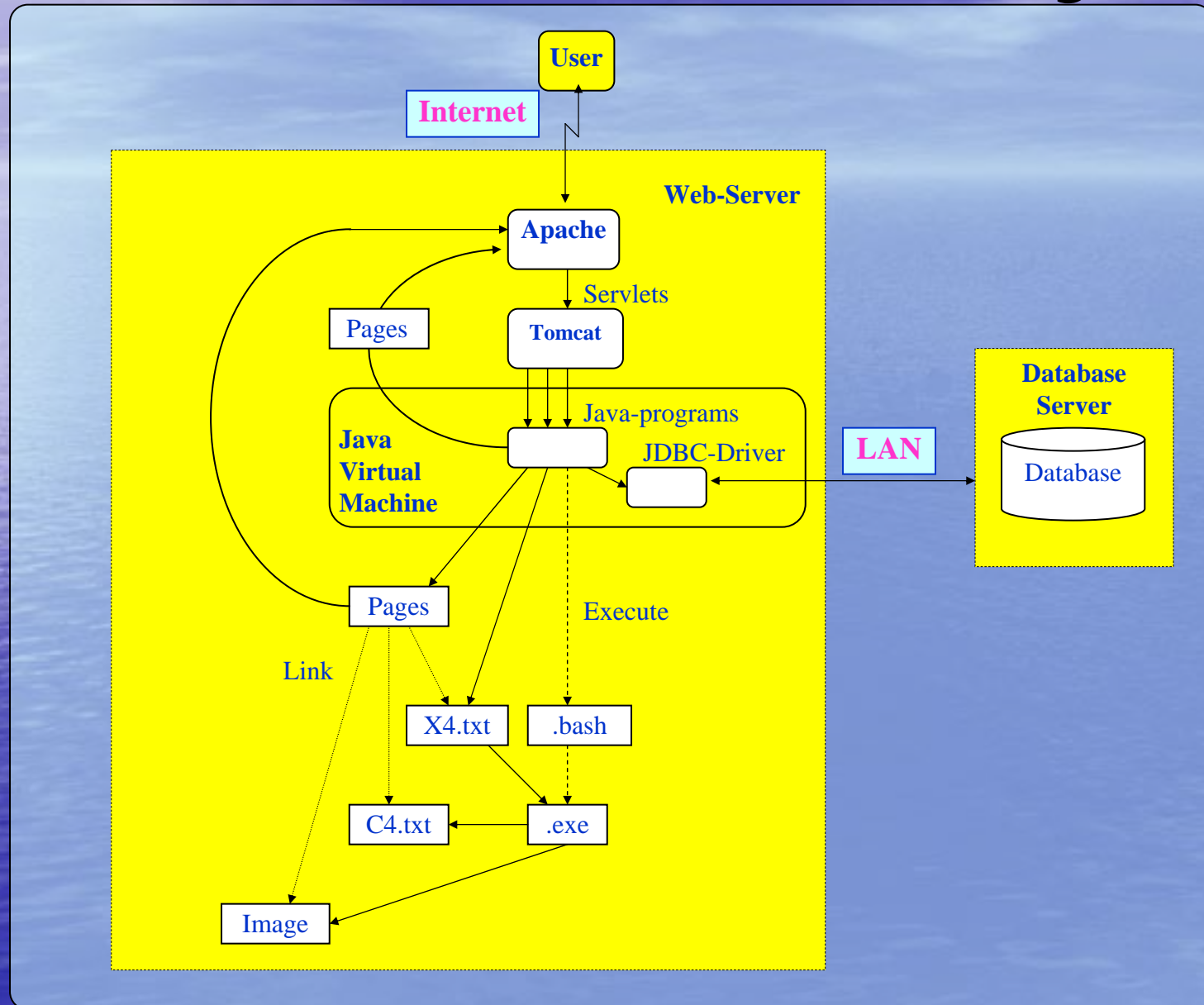
Java

DB

## Load/Update EXFOR Database



# EXFOR Web Retrieval System



# EXFOR Database Schema

