

Full-Documentation of BaseX

BaseX-Team

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This is the full documentation of BaseX. BaseX is a native, open-source XML database and efficient XQuery/XQuery Full-Text processor. It supports very large XML instances and offers a visual, interactive frontend.

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Chapter 1. Introduction

BaseX is a native, open-source XML database and efficient XQuery/XQuery Full Text processor. It supports very large XML instances and offers a visual, interactive frontend. BaseX is written in Java and freely available for download. It is developed by the Database and Information Systems Group at the University of Konstanz.

Prerequisites

Operating System

BaseX was tested on the following platforms:

- Windows 2000, XP, Vista, 7
- Linux: Debian/Ubuntu, SuSE, Redhat
- Max OS X (10.4+)
- OpenBSD (4.3)

Every other platform with a Java VM should be able to run BaseX.

Software

To run any version of BaseX, you need version 1.5 or later of the Java runtime environment (JRE) or development kit (JDK).

The latest version of Java can be downloaded at <http://www.java.com> or <http://java.sun.com>.

Hardware

BaseX works with very limited resources (400 MHz, 64 MB RAM). To work with larger databases, however, you might benefit from more RAM. If you encounter main memory limits, there are several things you can try:

- Increase Java's virtual memory
- Switch off database indexes
- Use BaseX's internal XML parser

Installation

BaseX works without any installation. The following files can be downloaded [<http://www.inf.uni-konstanz.de/dbis/basex/download.php>] from the homepage:

- *BaseX.jar*: simple JAR file
- *BaseX.exe*: a JAR file, which is wrapped into a Windows executable
- *BaseX-XQJ.jar*: XQuery for Java [<http://www.inf.uni-konstanz.de/dbis/basex/download.php?dl=BaseX55-xqj.jar>] Database API

- *BaseX-XMLDB.jar*: XML:DB [http://www.inf.uni-konstanz.de/dbis/basex/download.php?dl=BaseX55-xmlldb.jar] Database API
- *BaseX-Complete.zip*: JAR files, sources, documentation and files to build the project

The JAR file and the Windows executable can be launched with a simple double-click. The "Complete" package contains the following files and directories (selection):

Project Directory

doc	Project documentation
etc	Various files for project handling
src	Project sources
.project	Eclipse [http://www.eclipse.org/] project file
makefile	Linux Makefile
BaseX.jar	Public JAR file
license.txt	Licensing Information
readme.txt	Project Information
build.xml	Ant [http://ant.apache.org/] Build file
input.xml	XML sample document

In the etc folder, you find Linux scripts and Windows batch files which can be moved into your PATH environment to speedup execution.

Quick Start

By double-clicking the JAR file, the graphical interface is launched. If you start BaseX on the command line, or use the scripts mentioned above, you have some more options:

Console version

```
java -cp BaseX.jar org.basex.BaseX
```

Running the server and a client instance

```
java -cp BaseX.jar org.basex.BaseXServer  
java -cp BaseX.jar org.basex.BaseXClient
```

GUI version (granting more memory)

```
java -Xmx512m -jar BaseX.jar
```

Starting with BaseX GUI

Starting with BaseX Console

Using BaseX as Server

Starting BaseX as a service

Chapter 2. Working with the BaseX Console

Launching BaseX in console mode

Your Text

Description of the Console Features

Your Text

Chapter 3. Working with the BaseX GUI

Launching BaseX in GUI mode

Your Text

Description of all the Views in the GUI

Your Text

Description of the GUI Features

Your Text

Chapter 4. General Information

Location of BaseX Files

Your Text

Chapter 5. Description of BaseX-Features

XQuery Implementation

Your Text

XQuery Full-Text Implementation

Your Text

Description of the Indexes

Your Text

Chapter 6. Developer's Guide

Programming with BaseX API

Your Text

Programming with XML:DB API

Your Text

Programming with XQuery API

Your Text