Workshop: Introduction to LibreOffice Development

Building LibreOffice from source code

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Topics

- Building LibreOffice from source code
- Prerequisites for Setting up development environment
  - Windows / Linux / macOS
- Getting sources
- Configuring
- Compiling
- Running LibreOffice
- Running SDK examples
- Generating documentation
Setting up development environment
Build instructions

- Follow the instructions on the Wiki
- Platform specific build instructions
- Make sure you use the correct build instructions
  - Installing prerequisites
  - Getting sources
  - Configuring
  - Compiling
- Running LibreOffice
Installing dependencies

- **Manual or using distro tools?**
  - You have to install several libraries and tools
  - Some of them are installed using make
  - Others have to be installed manually or using distro tools
    - Cygwin on Windows
    - apt on Ubuntu
    - dnf or yum on RHEL / CentOS
    - pacman on Arch
    - zypper on openSUSE
Linux prerequisites

▶ Building LibreOffice on Linux and *BSD systems
▶ Dependent on the distribution
   ▶ DEB based: Debian, Ubuntu, mint, etc.
   ▶ RPM based: Red Hat (RHEL), Fedora, openSUSE
   ▶ Other distros: Arch Linux, Slackware, etc.
▶ BSD
▶ Distro specific instructions are in the Wiki
   https://wiki.documentfoundation.org/Development/BuildingOnLinux
Using LODE

- **LODE: LibreOffice Development Environment**
  - Downloads, builds and installs the prerequisites

- **When it is needed?**
  - Suggested for Windows and macOS
  - Suggested for some older versions of Linux

- **Notes**
  - You can use distro tools for newer versions of Ubuntu and RHEL
  - You have to install MSVC, SDK and JDK yourself (Windows)
  - You have to install compiler and JDK yourself (Older Linux distros)
Windows Prerequisites

- **C++ Compiler**
  - Visual Studio 2019 / 2022 with C++ and specific packages

- **Java**
  - JDK >= 17 from Oracle / Microsoft / Red Hat / etc.

- **Cygwin**
  - cygwin.com

- **Several other dependencies, if building manually**
Linux Prerequisites

- g++

- Java development kit (JDK)
  - JDK >= 17

- Dependencies
  - Ubuntu: ./install_deps.sh
    - apt-get build-dep libreoffice may not work with older versions
  - RHEL/CentOS: dnf builddep libreoffice

- Recommended way to install dependencies
  - Use distro tools for most of them
MacOS **Prerequisites**

- **XCode** from App Store
- **Java development kit** (JDK)
  - JDK $\geq$ 17
- Recommended way to install dependencies
  - Use **LODE**
- **Use current XCode on the current macOS version**
Building on Different Operating Systems
General Compile Instructions

- **General instructions (please follow the Wiki for more details)**
  - Install the prerequisites
  - Get the source: `git clone https://git.libreoffice.org/core`
  - You need an `autogen.input` file for the configuration
    - Suggestion: `--enable-dbgutil --enable-odk --without-doxygen --enable-python=fully-internal`
  - Configure with `./autogen.sh`
  - Build by invoking `make`
    - Then, wait for a few hours :-)
  - Run the program
    - `instdir/program/soffice` (Windows/Linux)
    - `open instdir/LibreOfficeDev.app` (macOS)
Integrated Development Environment (IDE)

**Usable IDEs**
- Visual Studio Code (VSCode)
- Microsoft Visual Studio: make vs-ide-integration
- Microsoft Visual Studio Code: make vscode-ide-integration
- Qt Creator: make qtcreator-ide-integration
- KDevelop: make kdevelop-ide-integration
- Vim: make vim-ide-integration
- Xcode: make xcode-ide-integration

**Open the project after it was created!**
You are good to go!

- Open your IDE
- Open the project
- Auto-complete should work and help the development
- Debug is another important useful feature needed for the real development
- Build from IDE works for some IDE/platforms
Thank you ...

Thank you for your patience!