

Release Notes

IBM® Software Development Toolkit for Linux on Power™ 1.8.0

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Chapter 1

Introduction

The IBM SDK for Linux on Power is a free, Eclipse-based Integrated Development Environment (IDE). It integrates C/C++ source development with the IBM Advance Toolchain for Linux on Power and classic Linux debugging and performance analysis tools.

This release includes materials licensed to IBM under ILAN (International License Agreement for Non-Warranted Programs). The full licensing text can be found in the licenses folder under the installation directory.

Further documentation may be found at [IBM SDK for Linux on Power website](#).

Chapter 2

Features

- IBM Advance Toolchain for Linux on Power 8.0, version 8.0-4 or greater.
- IBM Advance Toolchain for Linux on Power 9.0, version 9.0-0 or greater.
- IBM FDPR (Feedback Directed Program Restructuring), version 5.6.2-6f.
- Pthread monitoring tool for Linux on Power, version 0.5.10-1.
- IBM Eclipse SDK, version 4.5.0:
 - C/C++ Development Tools (CDT), version 8.7.0.
 - Code Analysis Tool (Codan), version 3.2.0.
 - Graphical Editor Framework (GEF), version 3.9.
 - Eclipse Parallel Tools (PTP), version 9.1.0
 - Eclipse Linux Tools, version 4.0:
 - * Autotools plugin.
 - * Libhover plugin.
 - * ChangeLog plugin.
 - * Man Page plugin.
 - * Specfile Editor and RPM plugin.
 - * Valgrind plugin.
 - * OProfile plugin.
 - * SystemTap plugin.
 - * Perf plugin.
 - * Gprof plugin.

- * Gcov plugin.
- IBM Source Code Advisor plugin, version 2.1.17.
- IBM Trace Analyzer plugin, version 0.8.2.
- IBM Advance Toolchain for Linux on Power plugin, version 1.5.0.
- IBM Advance Toolchain for Linux on Power Remote plugin, version 1.2.0.
- IBM Migration Advisor plugin, version 0.9.0.
- IBM Integrated Bug Report plugin, version 1.2.0.
- IBM CPI Breakdown plugin, version 1.2.0.
- IBM Coding Assistant plugin, version 1.0.0.
- IBM Power Performance Advisor plugin, version 1.0.0.
- IBM Power Build Advisor plugin, version 1.0.0.
- IBM Qemu User-Mode plugin, version 1.4.0.
- IBM SDK, Java™ Technology Edition, version 7.1-3.10.
- IBM Runtime Environment, Java™ Technology Edition, 7.1-3.10.

Chapter 3

What's New on SDK 1.8.0

3.1 Built on Eclipse Mars

The SDK now is built on Eclipse Mars, the latest available version.

3.2 Community Tools

The SDK bundles the latest version of Eclipse CDT, Eclipse PTP and Eclipse LinuxTools.

3.3 Dependencies for Remote Development

The SDK provides a new package called `ibm-sdk-lop-remote-dependencies` that installs all necessary dependencies for remote development. This package is only available for `ppc64` and `ppc64le`.

3.4 Support for Big Endian Operating Systems

Support for POWER big endian was reintroduced. Now the SDK runs on `ppc64`, `ppc64le` and `x86_64`.

3.5 Build Advisor

The Build Advisor plug-in allows users to receive advice on the set of flags that can be tuned for Power during the build process in order to improve the

application performance.

3.6 IBM POWER8 Functional Simulator

There is a new integration layer with the IBM POWER8 Functional Simulator . It continue supporting only Little Endian operating systems.

3.7 New resources on Cheat Sheets

The Cheat sheets provide a quick help inside the Eclipse IDE (*Help > Cheat Sheets*). Each cheat sheet is designed to help completing a specific task, listing the sequence of steps required to achieve that goal. The cheat sheets now provide links to the User Guide, pointing directly to the section of interest.

3.8 Bug Fixes

This version of the SDK provides several fixes that increases its usability and stability.

Chapter 4

Supported Linux Distributions

The IBM SDK for Linux on Power 1.8.0 has been tested with the Linux distributions listed below:

1. ppc64
 - (a) Red Hat Enterprise Linux 7.2
2. ppc64le
 - (a) Red Hat Enterprise Linux 7.2
 - (b) SUSE Linux Enterprise Server 12
 - (c) Ubuntu 14.04.3 LTS
3. x86_64
 - (a) Red Hat Enterprise Linux 7.2
 - (b) SUSE Linux Enterprise Server 12
 - (c) Fedora 21
 - (d) Ubuntu 14.04.3 LTS

Chapter 5

Documentation

The most recent release notes, a complete user guide and further documentation may be found at [IBM SDK for Linux on Power](#) website.

Documentation for each component of the IBM SDK for Linux on Power can be found at:

- Advance Toolchain for:
 1. [How to use IBM Advance Toolchain for Linux on Power](#)
 2. [Performance improvements leveraging the IBM Advance Toolchain for Linux on Power](#)
- QEMU user-mode emulation
 1. [Developing C/C++ cross-compiled applications for Linux on Power systems](#)
- FDPR:
 1. [Feedback Directed Program Restructuring](#)
 2. SCA (Source Code Advisor) plugin documentation: launch the IDE and then open the Help menu. Select Help Contents, then FDPR Optimization Tools Documentation.
- Trace Analyzer:
 1. Trace Analyzer plugin documentation: launch the IDE and then open the Help menu. Select Help Contents, then Trace Analyzer User Guide.

- IBM System Grokking Technology:
 1. [IBM System Grokking Technology Project](#) site.
- Eclipse Linux Tools Project:
 1. [Project Site](#).
 2. [User Guides](#).
- Other plugins of the IDE:
 1. Launch the IDE and thus open the Help menu. Select Help Contents, and browse through plugins documentation.