Release Notes

IBM® Software Development Toolkit for Linux on Power™ 1.7.0

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Contents

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 7.1, version 7.1-3 or greater.

- IBM Advance Toolchain for Linux on Power 8.0, version 8.0-3 or greater.

- IBM FDPR (Feedback Directed Program Restructuring), version 5.6.2-6d.

- Pthread monitoring tool for Linux on Power, version 0.5.10-1.

- IBM Eclipse SDK, version 4.4.2:

  - C/C++ Development Tools (CDT), version 8.5.0.
  - Code Analysis Tool (Codan), version 3.2.0.
  - Graphical Editor Framework (GEF), version 3.9.
  - Eclipse Parallel Tools (PTP), version 8.1.1
  - Eclipse Linux Tools, version 3.1:
    * 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 Qemu User-Mode plugin, version 1.3.0.

- IBM SDK, Java™ Technology Edition, version 7.1-2.10.

- IBM Runtime Environment, Java™ Technology Edition, 7.1-2.10.

Chapter 3

What's New on SDK 1.7.0

3.1 No longer support for big endian operating systems

SDK only supports little endian operating systems running on Power. The x86_64 will continue to be supported.

3.2 Power Performance Advisor

The POWER Performance Advisor (PPA) plugin allow users to profile C/C++ applications selecting a set of metrics based on the chosen target processor.

3.3 Launch Bar

The launch bar that provides quick access to the plugin launches. It works like a short cut for common tasks like running, debugging, and profiling an application.

3.4 Welcome Page

The SDK provides a new welcome page which provides useful information regarding the tools supported.

3.5 IBM POWER8 Functional Simulator

The IBM POWER8 Functional Simulator supports now only Little Endian operating systems.

3.6 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.

Chapter 4

Supported Linux Distributions

The IBM SDK for Linux on Power 1.7.0 has been tested with the Linux distributions listed below:

1. ppc64le

   (a) Red Hat Enterprise Linux 7.1
   (b) SUSE Linux Enterprise Server 12
   (c) Ubuntu 14.04.2 LTS

2. x86_64

   (a) Red Hat Enterprise Linux 6.5
   (b) Red Hat Enterprise Linux 7.1
   (c) SUSE Linux Enterprise Server 12
   (d) Fedora 20
   (e) Ubuntu 14.04.2 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.