MontaVista DevRocket

Eclipse-Based IDE for Platform and Application Development

MontaVista DevRocket is the integrated development environment (IDE) that supports MontaVista Linux Platform and Application development. DevRocket delivers a set of tools designed to streamline and automate common embedded Linux development and analysis tasks, helping you deliver products to market faster. Based on standard Eclipse plug-ins, DevRocket significantly increases developer productivity by simplifying complex development tasks.

PLATFORM DEVELOPMENT TOOLS
GUI-BASED ANALYSIS TOOLS
CPU ARCHITECTURE CROSS TOOLCHAIN
STREAMLINED TARGET CREATION
SOURCE CODE

APPLICATION DEVELOPMENT TOOLS
ONE CLICK EDIT/COMPILE/DEBUG
CPU ARCHITECTURE CROSS TOOLCHAIN
GUI-BASED ANALYSIS TOOLS

Edition Management

DevRocket is available for all active MontaVista subscribers and supports toolchains (i.e. compiler, debuggers, etc.) from previous MontaVista Linux versions and editions. Edition Management provides the capability to browse for existing MontaVista Linux installations and discovers which edition/version is installed and which toolchains and LSPs are available. This service also supports the unique feature to dynamically select a toolchain within a single project.

Fully Automated Compile/Edit/Debug

DevRocket delivers a streamlined and fully automated edit/compile/debug cycle, eliminating the many manual steps involved in building binaries, copying them to a target, launching the debug sever, and connecting back to the host. Developers can easily support multiple MontaVista Linux editions and versions with completely automated target delivery setup and debug capabilities. One can dynamically switch between discovered tool-chains and targets to ease porting and support for multiple CPU architectures.

Target Management

DevRocket utilizes the open source Eclipse target management project called Remote Systems Explorer (RSE). MontaVista created and contributed back to the community an SSH implementation for RSE. It allows target management on any MontaVista Linux target using the industry standard SSH protocol to support a wide range of target services, including file and process management, remote terminal/shell, and fully automated debugging and analysis.

Analysis

DevRocket delivers intuitive, interactive, and accessible interfaces to configure, manage, execute, and present results from best-of-breed FOSS Linux analysis tools such as memtraq, OProfile, LTTng, and /proc filesystem. Massive productivity gains can be realized when solving common analysis questions such as:

- How is my system using available memory and how much?
- Where are system and app performance bottlenecks?
- What is the source of my memory leak?
- Which events lead to undesirable system states?

BENEFITS

- ECLIPSE-BASED IDE PROVIDES INTUITIVE, INTEGRATED, DEVELOPMENT ENVIRONMENT
- FAMILIAR, STANDARDS-BASED GUI SHORTENS LEARNING CURVE
- SINGLE DEVELOPMENT ENVIRONMENT, NO SWITCHING BETWEEN APPLICATIONS
- PLATFORM DEVELOPMENT PROVIDES COMPLETE CONTROL AND CUSTOMIZABILITY
- APPLICATION DEVELOPMENT ENABLES RAPID APPLICATIONS DEPLOYMENT

- SUPPORTS BROAD SET OF TARGET PROCESSORS
- COMPLETE CROSS-TOOL CHAIN INCLUDING COMPILERS, DEBUGGERS, AND RUN-TIME LIBRARIES
- GRAPHICAL ANALYSIS TOOLS FOR MEMORY AND PERFORMANCE ANALYSIS
- 'ONE-CLICK' AUTOMATION STREAMLINES THE EDIT/COMPILE/DEBUG CYCLE
- LIBRARY OF OVER 200 APPLICATON AND UTILITY SOFTWARE PACKAGES SUPPORT A BROAD RANGE OF APPLICATION AND DEVELOPMENT TASKS

DevRocket Platform Development

MontaVista DevRocket provides all the functionality platform developers need to create and deliver MontaVista Linux®-based development platforms. Tightly integrated with the MontaVista Integration Platform (MVIP), DevRocket offers broad CPU and board support, advanced analysis tools, target application packages, and complete source code access via the MVIP and MontaVista Zone Content Server. DevRocket for platform development includes:

ANALYSIS TOOLS

Including System Trace and System Profile, Memory Leak Detection, and Memory Usage Analysis delivered through an intuitive, interactive, and accessible Eclipse-based interface.

CPU ARCHITECTURE CROSS TOOL CHAIN

Complete set of Linux cross tools, including compilers, debuggers, and run-time libraries required to build platforms and application binaries for common embedded CPU architectures.

BROAD TARGET AND HOST SUPPORT

DevRocket supports all the hardware platforms MontaVista supports. By providing a common look and feel across Linux development hosts, DevRocket provides a cross-development platform for development teams working across diverse environments. This broad platform and host support gives development teams the flexibly, continuity and interoperability to tailor their development platforms to their technical needs and team logistics.

TARGET APPLICATION PACKAGES

Preconfigured, tested library of over 200 application and utility software packages such as Apache, FTP, and SSH, to support virtually any development need.

Streamlined Target File System Creation

Platform developers need to find, integrate, and install dozens, sometimes hundreds of separate software components, but creating a target file system by hand is time-consuming, difficult, and complex. DevRocket radically simplifies this task by downloading the source code for your hardware from the MontaVista Zone Content Server, and performing the initial build. DevRocket delivers an easy-to-use graphical interface for customizing the build, dynamically determining file system size, and automatically resolving dependencies and conflicts. Once you have an image created, the target management features in DevRocket make it easy to move your image to the target board and boot it.

Broad Target & Host Support Protect Investment

DevRocket supports all the hardware platforms and SoC architectures (i.e. ARM, x86, MIPS, and PowerPC) that MontaVista supports. By providing a common look and feel across Linux development hosts, DevRocket provides a cross-development platform for development teams working across diverse environments. This broad platform and host support gives development teams the flexibly, continuity, and interoperability to tailor their development platforms to their technical needs and team logistics.

Intuitive System Characterization

Traditional Linux command line interface (CLI) tools can make it difficult to characterize a target system over time. DevRocket meets this challenge by integrating the best-of-breed CLI-based Linux Trace Toolkit (LTTng) into an intuitive and accessible graphical user interface, enabling developers to measure and characterize target systems more quickly and easily.

Best-of-Breed Analysis Tools

Linux platform analysis tools require specialized expertise and persistent maintenance to keep current with the Linux kernel and other open source technologies. Generic open source versions or tools originally meant for RTOS analysis come up short in real-world Linux development. DevRocket features analysis tools targeted specifically for the Platform Developer working with embedded Linux, delivering must-have capabilities like KGDB for kernel debugging, Memtraq for memory analysis and leak detection, and Oprofile for statistical profiling.

SPECIFICATIONS

MV LINUX VERSION SUPPORT*	ANALYSIS & OPTIMIZATION TOOLS	ECLIPSE SUPPORT	LSP & TOOLCHAINS
CARRIER GRADE EDITION 7 CARRIER GRADE EXPRESS (CGX) 2.0	APPLICATION PRELINKING LIBRARY OPTIMIZATION MEMORY LEAK DETECTION MEMORY USAGE ANALYSIS APPLICATION PROFILING	ECLIPSE MARS (NEON*) C/C++ DEVELOPER TOOLKIT (CDT) 8.5* QEMU LAUNCHER	ARCHITECTURE CROSS TOOLS GCC 4.X & 5.X COMPILER & DEBUGGER UCLIBC AND GLIBC
			DEVELOPMENT HOSTS
*ANALYSIS TOOLS AVAILABLE AS SUPPORTED BY SPECIFIC EDITIONS/VERSIONS.		*ANALYSIS TOOLS AVAILABLE AS SUPPORTED BY SPECIFIC EDITIONS/VERSIONS.	LINUX (CENTOS 6, UBUNTU 12/14)

DevRocket Application Development

Teams developing intelligent devices must build feature-rich application to differentiate their products and get them to market quickly. With tight product development cycles, tools that enable speedy application deployment can make the difference between success and failure in the marketplace. DevRocket provides the application developer the tools and functionality needed to rapidly develop embedded applications for MontaVista Linux®. DevRocket supports integration with other third-party Eclipse-based components and other tools providing a seamless, integrated development environment. DevRocket for application development includes:

ANALYSIS TOOLS

Advanced analysis tools for memory leak detection, performance profiling, and memory usage analysis.

CPU ARCHITECTURE CROSS TOOL CHAIN

A complete set of Linux cross tools - including compilers, debuggers, and run-time libraries - required to build application binaries for specific CPU types. Covers all the leading embedded architectures.

Eclipse-Based Graphical Development Environment and Tools

Many Linux development and analysis tools rely on command-line interfaces (CLIs), and parsing reams of text-based output can be difficult and time-consuming. To boost productivity, DevRocket provides an intuitive, interactive, and accessible Eclipse-based graphical user interface for performance and analysis tools and can plug into any Eclipse-based development environment. Because DevRocket takes full advantage of the Eclipse platform and the Eclipse ecosystem, developers can work in an integrated development environment, and do not have to run separate IDEs to target the MontaVista Linux environment.

'One-Click' Automated Edit/Compile/Debug Cycle

'One-click' streamlines the edit/compile/debug cycle, eliminating the multiple manual steps involved in building binaries, copying them to a target, launching the debug server, and connecting back to the host. It easily supports multiple MontaVista Linux editions and versions with completely automated target delivery setup and debug capabilities, and dynamically switches between tool-chains and targets to ease porting and support for multiple CPU architectures.
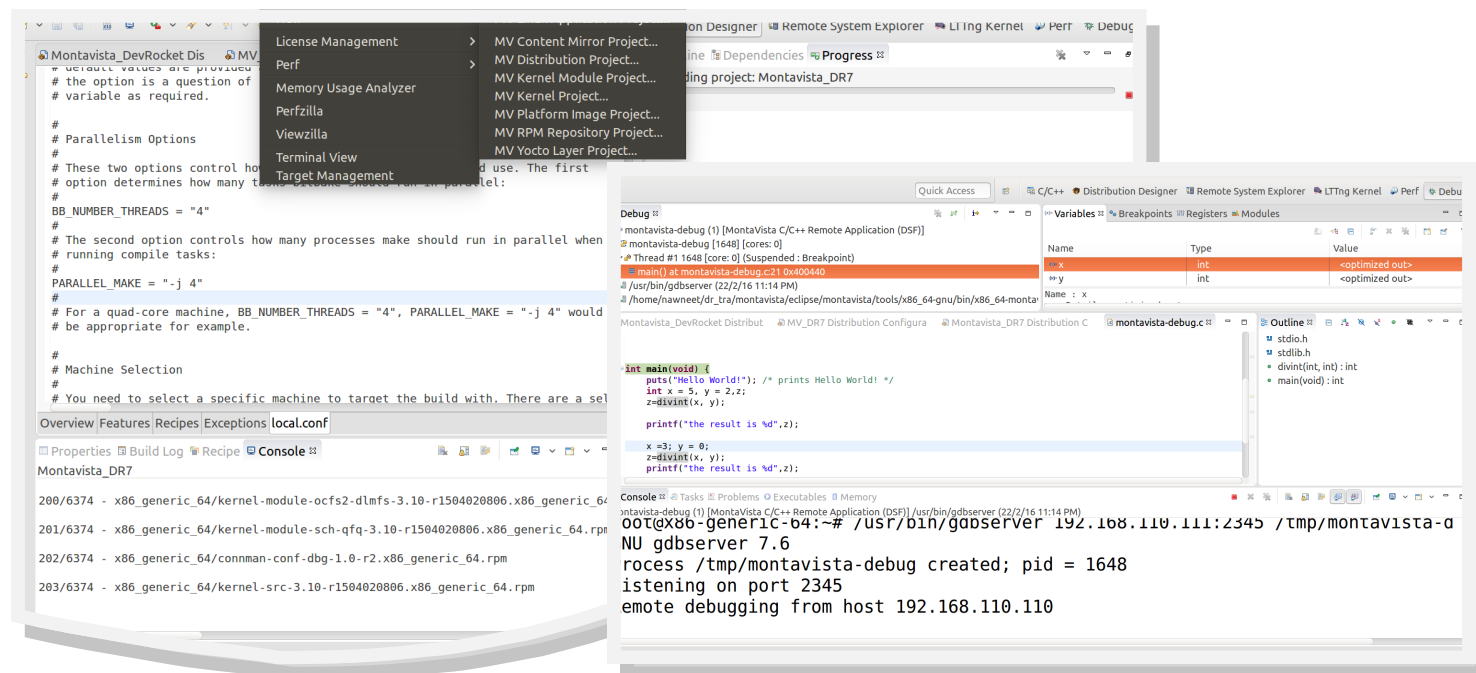
Catch Bugs and Bottlenecks with Advanced Analysis

When developing applications, identifying performance bottlenecks and memory leaks can be difficult and time consuming. Left unresolved, these issues can cripple a development effort. DevRocket integrates several best-of-breed Linux tools and delivers them in an intuitive and interactive graphical interface. These include:

- Memtraq to identify memory leaks.
- OProfile to find the greatest contributors of CPU utilization.
- Tools that deliver a graphical view of memory usage and available system memory across the Linux kernel and applications.

DevRocket Benefits

MontaVista DevRocket helps both the platform developer and application developer streamline the complex embedded Linux development process. By using the Eclipse-based DevRocket IDE developers can:

- Work in a familiar, standards based IDE alongside other Eclipse-based development tools.
- Easily incorporate internally developed or open source code in their projects.
- Perform detailed analysis of performance, memory usage, memory leaks at the platform and application level.
- Platform developers can easily download the source and build their target distribution.
- New images can be quickly and easily moved to the target board using the target management capabilities.
- Application developers can use the one click edit/compile/debug to quickly build and deploy target images.

About MontaVista Software

MontaVista Software, LLC, a wholly owned subsidiary of Cavium Networks (NASDAQ:CAVM) is a leader in embedded Linux commercialization. For over 15 years, MontaVista has been helping embedded developers get the most out of open source by adding commercial quality, integration, hardware en-ablement, expert support, and the resources of the MontaVista development community.
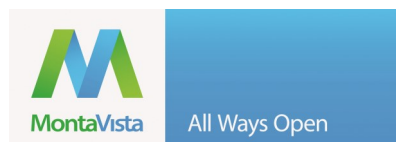
MontaVista Software
2315 North First St, 4th FL
San Jose, CA 95131
Email: sales@mvista.com
Tel: +1-408-943-7451

www.mvista.com