OBSOLETE

Xilinx Runtime (XRT) Release Notes

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AMD

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Chapter 1

Obsolete Document Notice

This content has been moved to *Vitis Software Platform Release Notes* (UG1742).

Chapter 2

About Xilinx Runtime (XRT)

The Xilinx® Runtime (XRT) library facilitates communication between your application code (running on an embedded Arm® or x86 host) and the accelerators deployed on the reconfigurable portion of the following devices:

- AMD accelerator cards based on PCIe® technology
- AMD Zynq™ UltraScale+™ MPSoC embedded platforms
- AMD Versal™ adaptive SoCs

XRT is an open source project. To learn more, view the source code and documentation.

Using XRT with the AMD Vitis™ unified software platform is documented in *Data Center Acceleration using Vitis* (UG1700).

XRT Operating System Support

Table 1: **Supported Operating Systems**

Operating System[1]	Architecture	OS Version	Kernel Version
RHEL/CentOS 7	x86_64	7.9	3.10.0-1160
RHEL 8	x86_64	8.8	4.18.0-477.10.1
		8.9	4.18.0-513.5.1
		8.10	4.18.0-553
RHEL 9	x86_64	9.2	5.14.0-284.11.1
		9.3	5.14.0-362.8.1
		9.4	5.14.0-427.13.1
AlmaLinux	x86_64	8.7	4.18.0-425.3.1
		8.10	4.18.0-553
		9.1	5.14.0-162.6.1
		9.4	5.14.0-427.13.1
Ubuntu 20.04 LTS	x86_64	20.04.5 LTS	5.4.0-148-generic
		20.04.6 LTS	5.4.0-162-generic

Table 1: **Supported Operating Systems** *(cont'd)*

Operating System[1]	Architecture	OS Version	Kernel Version
Ubuntu 22.04 LTS	x86_64	22.04.1 LTS	5.15.0-50-generic
		22.04.2 LTS	5.15.0-67-generic
		22.04.3 LTS	5.15.0-79-generic
		22.04.4 LTS	5.15.0-119-generic
Ubuntu 24.04 LTS	x86_64	24.04 LTS	6.8.0-48-generic
PetaLinux	aarch64	2024.2	6.6.40

Notes:

1. All supported operating systems are tested with general access versions (GA). Ubuntu Hardware Enablement (HWE) is not supported. By default, HWE is disabled by Ubuntu Server versions and enabled by Desktop versions.

***Note*:** Ubuntu Live Patch Service might apply kernel patches automatically. XRT is not tested against live patches. To prevent compatibility issues, turn off kernel auto-upgrade.

***Note*:** During installation, the kernel-headers package is required. CentOS only provides the kernel-headers package for some releases. XRT only supports CentOS OS versions that provide kernel-headers packages.

Operating System Support List

- **Added Support:**
  - RHEL 8.10
  - RHEL 9.4
  - AlmaLinux 8.10
  - AlmaLinux 9.4
  - Ubuntu 22.04.4 LTS
  - Ubuntu 24.04 LTS

Virtualization Support

XRT can be used in the KVM virtualization environment as the guest with all the operating systems listed in the previous table.

Operating System End-of-Life Support Notification

The 2024.2 version of XRT is the last release to support the following operating systems.

Table 2: **Operating Systems with Support Ending after 2024.2**

Operating System	Version
RHEL[1]	7.9, 8.8, 8.9
AlmaLinux	8.7, 9.1
Ubuntu	20.04.5 LTS, 20.04.6 LTS, 22.04.1 LTS

Notes:

1. The 2024.2 version of XRT is the last release to support RHEL/CentOS 7.9. In future releases, XRT will not support any version of RHEL/CentOS 7.

Software Component Versions

Table 3: **Software Component Versions**

Component	Version
Release Name	2024.2
XRT Build Version	2.18.179
XRT Git Hash	3ade2e671e5ab463400813fc2846c57edf82bb10
XRT GitHub Tag for Alveo	202420.2.18.179
XRT Git Hash for PetaLinux/Yocto	d05b18dc38cc6804ecb4b3dbe6de23f158319567
XRT GitHub Tag for PetaLinux/Yocto	202410.2.18.0_PetaLinux

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Chapter 3

XRT Release Notes

New Features and Changes

This version of Xilinx® Runtime includes the following new features and changed behavior.

- **AI Engine Support:** Added support for multiple individual AI Engine graph run time controls. The host application can now manage multiple `xrt::hw_context` instances, enabling loading and reloading of the XCLBIN for AI Engine graphs.
- **Infrastructure:** `xrt::hw_context` has been moved from experimental folder to the main API area. Existing paths in the experimental area remain functional for backward compatibility.XRT header include paths have been reorganized.
  - `include/*.*` → `include/xrt/detail`
  - `include/deprecated` → `include/xrt/deprecated`
  - `include/experimental` → `include/xrt/experimental`

  XRT now depends on `opencl-icd-loader` instead of `ocl-icd`. No action is required from users.
- **Deprecation Plan:** `xbutil` has been renamed to `xrt-smi`. You can still use `xbutil` in version 2025.1 of XRT. Starting from 2025.2,`xbutil` will be removed. Users must transition to use `xrt-smi` or create appropriate symbolic links.

***Note*:** For detailed information about XRT API changes and experimental features, refer to the changelog.

Known Issues

For up-to-date information about known issues, refer to the Vitis and XRT 2025.1 Known Issues.

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Appendix A

Additional Resources and Legal Notices

Support Resources

For support resources such as Answers, Documentation, Downloads, and Forums, see Support.

References

The following documents provide useful, supplemental material.

- XRT Portal
- XRT source code on GitHub
- XRT Documentation
- *Vitis Unified Software Platform Documentation*
- *Data Center Acceleration using Vitis* (UG1700)
- Comprehensive Release Notes and Known Issues Answer Record 71628

Revision History

The following table shows the revision history for this document.

Section	Revision Summary
05/29/2025 Version 2025.1	
Chapter 1: Obsolete Document Notice	Added for the 2025.1 release.

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