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Introduction

Introduction

This document describes the openEuler hardware compatibility policies and the process of creating a hardware test plan.

Program Overview

The openEuler compatibility program provides a formal channel for hardware vendors to test and ensure compatibility with openEuler. Hardware that passes the compatibility test suite will achieve better compatibility.

The compatibility program covers servers and cards (peripherals). Hardware models that have passed the compatibility test will be published in the openEuler compatibility list.

Prerequisites for the Compatibility Program

Hardware vendors need to sign the "openEuler and Hardware Vendor Compatibility Agreement".

Compatibility Technical Support

The compatibility SIG of the openEuler community has set up the [oec-hardware](#) project to provide related support. Technical support is provided through issues in this project.

Compatibility Test Process Overview

1. The hardware vendor creates an issue in the [oec-hardware](#) project and signs related agreements.
2. The hardware vendor prepares the hardware environment with openEuler installed.
3. The hardware vendor installs the oec-hardware tool.
4. The hardware vendor performs the test and obtains the test result.
5. The hardware vendor sends the test result to oecompatibility@openeuler.org and uploads the test result to the issue.
6. The compatibility SIG analyzes the results and requests retesting for doubtful parts.
7. After the test is passed, the compatibility SIG publishes the hardware information (including detailed server configurations) and openEuler version information in the openEuler compatibility list.

For a complete description of the hardware compatibility test process, see the oec-hardware user guide.

Server Compatibility Policy

Hardware compatibility with openEuler is affected by the CPU architecture (x86/Arm), CPU generation, mainboard (USB/topology), peripherals, BIOS, and BMC. Therefore, this document outlines the basic compatibility and changes brought about by the preceding aspects.

Servers

After a server model passes the compatibility test, other servers using the same mainboard model can inherit the compatibility conclusion. However, changes in the mainboard topology (for example, a PCIe switch or USB device is added) require new compatibility tests.

CPUs

Changes in the CPU architecture (such as x86 and Arm) require new compatibility tests. Changes in the CPU generation within the same architecture require new compatibility tests. Changes in the CPU frequency or core count within the same generation do not require new compatibility tests.

Memory

You are advised to test with the maximum memory capacity configuration. Changes in memory capacity do not require new compatibility tests.

Cards

1. Common peripheral cards include RAID controller cards, NICs, FC cards, SSD cards, and IB cards. Use at least the typical card configuration (a RAID controller card and NIC) for server compatibility testing.
2. If a card that is not in the typical configuration is added, a new compatibility test is required.

NOTE:

1. If a compatible card does not use a built-in driver of openEuler, submit an issue to the community for discussion.
2. The firmware version of a card must be available on your official website, except for the default version shipped with the card.

Media

- Media include HDDs, SSDs, and NVMe devices.
- Test either of the supported interfaces (SAS and SATA) for an HDD or SSD. You are advised to test with the maximum drive capacity configuration.
- All NVMe devices must pass the compatibility test.

BIOS Compatibility Policy

BIOS Versions

1. The BIOS and firmware versions must be available on your official website, except for the default versions shipped with the hardware.
2. The BIOS version must meet the release requirements (complete features without major issues). The tested version or a later version must be provided to users before the release date of compatibility information.

BIOS Version Changes

Changes in BIOS or firmware features require new compatibility tests for BIOS-related compatibility items. For bug fixes, test the changes internally to ensure that they do not negatively impact the system. Submission of these test results to openEuler for review is not required.

Configurations

You must publish the default BIOS configurations on your official website.

BMC Compatibility Policy

BMC compatibility is primarily affected by the IPMI standard interface. Changes in the standard version require new compatibility tests.

Retesting

Based on the review of test results, some items may need to be retested to confirm compatibility after issues are resolved. The compatibility SIG will provide assistance with the retesting process.

You need to provide the logs and test results of the new tests.

Hardware Configuration Policy

Hardware Selection Policy

You must describe all integrated and optional hardware in hardware specifications. Integrated hardware exists in all configurations of the model. Optional hardware exists in some configurations of the model.

Integrated Hardware

All integrated hardware of the server, including CPUs, memory, integrated graphics cards, integrated displays, USB devices, and other non-removable hardware, must be tested.

Optional Hardware

All optional hardware of the server, including the RAID controller cards, NICs, FC cards, SSDs, IB cards, and other non-removable hardware, must be tested. You can test the optional hardware separately on a mainboard that has been tested as compatible.