FUJITSU

A64FX®
Identification Method

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1. Introduction

This document describes how to identify that the processor of the system is the A64FX processor in the operating system.

You can identify it by viewing '/proc/cpuinfo'. If the OS is RHEL 8.4 or later, you can also identify it by running 'lscpu' command.

1.1. Trademark

- Company names and product names are the trademarks or registered trademarks of their respective owners.
- Trademark indications (TM, (R)) are omitted for some system and product names in this document.

2. Identification Method

2.1. Identifying by viewing '/proc/cpuinfo'

Regardless of the RHEL version of the OS, you can identify it as the A64FX processor by viewing '/proc/cpuinfo' and checking the bold text in Table 1.

Table 1. Viewing '/proc/cpuinfo'

Check Points	Example of command execution
・CPU implementer=0x46 *0x46 is the number assigned to FUJITSU ・CPU part=0x001	$ cat /proc/cpuinfo | egrep "^CPU implementer|^CPU part" | head -2 **CPU implementer : 0x46** **CPU part : 0x001** $

2.2. Identifying by running ‘lscpu’ command

If the OS is RHEL 8.4 or later, it can be identified as FUJITSU A64FX by running ‘lscpu’ command and checking the bold text in Table 2.

If the OS is RHEL 8.3 or earlier, it cannot be identified as FUJITSU A64FX by running ‘lscpu’ command because the Model name is not displayed.

Table 2. Running ‘lscpu’ command (for RHEL 8.4 and later)

Check Points	Example of command execution
・Vendor ID: FUJITSU ・Model name: A64FX	$ lscpu | egrep "^Vendor ID:|^Model name:" **Vendor ID: FUJITSU** **Model name: A64FX** $

2.3. Identifying the A64FX instruction set on RHEL 8.4 or later

The ‘lscpu’ command can also be used to display some of the basic characteristics of a processor. When used on a system with the A64FX processor installed, you can identify the instruction set supported by the processor.

Note: Some A64FX processor versions may vary in the instruction set they support. Please verify the instruction set on your system by running the 'lscpu' command.

The following example shows what the output looks like. The last line of the output (‘Flags’) shows the instruction set.

Table 3. Example of ‘lscpu’ command execution display

```
# lscpu
Architecture:            aarch64
Byte Order:              Little Endian
CPU(s):                  48
On-line CPU(s) list: 0-47
Thread(s) per core:   1
Core(s) per socket:   12
Socket(s):               4
NUMA node(s):            4
Vendor ID:               0x46
Model:                   0
Stepping:                0x1
BogoMIPS:                200.00
NUMA node0 CPU(s):    0-11
NUMA node1 CPU(s):    12-23
NUMA node2 CPU(s):    24-35
NUMA node3 CPU(s):    36-47
Flags:                   fp asimd evtstrm sha1 sha2 crc32 atomics fphp asimdhp cpuid asimdrdm fcma dcpop sve
```