

SX-Aurora TSUBASA Implementation Operations for VE2

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Overview

This document describes how to implement VE2 on your server where no VE are installed.

Note: See [Replacement Operations for VE2](#), when you want to add VE2 to your server where VE1 or VE2 has been already installed.

Do the following operations.

1. Check your server specification
2. Install VE2 to your server
3. Install VE software
4. Test VE2 operations

When you have some troubles, see [Trouble Shooting](#).

Note: Operations in this document include changing and updating OS and installed software. Take a note about versions of software in your server if necessary.

1. Check server specification

Check your server specification through HW and SW requirement list you'll find here:

[VE installation requirements for server](#)

There you'll find the information about:

- ◆ CPU
- ◆ Memory
- ◆ BIOS settings
- ◆ PCI slot form factor
- ◆ Power connector
- ◆ Cooling system
- ◆ Card condition
- ◆ Power consumption

1. Check server specification

Check OS in a server where you attempt to install VE is one of the supported ones in the following URL. Change it to supported one when it is not supported.

[OS versions supported by SX-Aurora TSUBASA](#)

You can confirm the RHEL/CentOS/Rocky Linux version by the following command.

```
$ cat /etc/redhat-release  
CentOS Linux release 7.9.2009 (Core)
```

You can confirm the Linux kernel version by the following command.

```
$ uname -r  
3.10.0-1160.36.2.el7.x86_64
```

2. Install VE2 to your server

Install VE2 to your server by the appropriate document for VE2 type.

- ◆ Vector Engine 2.0 Type 20B-P: [startup_guide_for_VE_R2.pdf](#)
- ◆ Vector Engine 2.0 Type 20B-A: [startup_guide_for_VE_BA.pdf](#)

3. Install VE software

Install VE software by the following chapters of [Setup Guide](#).

- ◆ Chapter4 Preparation of the SX-Aurora TSUBASA Software
- ◆ Chapter5 Installation of the SX-Aurora TSUBASA Software
- ◆ Chapter6 Configuration

Note: See [Installation Guide](#) instead of Setup Guide when you want to use InfiniBand, NQSV or ScaTeFS.

4. Test VE2 operations

Download the basic test from the following URL and run a script in it on the server where VE2 was installed.

Check that all tests success and the script displays "**All tests passed**".

<https://sxauroratsubasa.sakura.ne.jp/pub/ve-test/basic-tests.tar.gz>

```
$ tar zxvf basic-tests.tar.gz
$ cd basic-tests
$ bin/run-test.sh
```

```
Checking VE States...
```

```
VE0 State: ONLINE
```

```
VE1 State: ONLINE
```

```
VE2 State: ONLINE
```

```
VE3 State: ONLINE
```

```
Testing toporogy...
```

```
test_topo.sh passed
```

```
Testing VE Offload...
```

```
test_veo passed
```

```
Testing Accelereted I/O...
```

```
test_accio passed
```

```
Testing VH call...
```

```
test_vhcall passed
```

```
Testing MPI...
```

```
test_mpi passed
```

```
All tests passed
```


4. Test VE2 operations

If some tests have failed as followings,
run the script again with “-v” option to see verbose messages.

```
$ ./run-test.sh

Checking VE States...
VE0 State: ONLINE
VE1 State: ONLINE
VE2 State: ONLINE
VE3 State: ONLINE

Testing toporogy...
test_topo.sh failed
Testing VE Offload...
...

Error: some tests failed

Please rerun the script with -v option.

    ./run-tests.sh -v
```

Trouble Shooting and Links

Check the following links, when you have some troubles or need more information.

◆ Trouble Shooting

■ Hardware trouble:

See [Investigation guide for VE System Trouble](#).

■ Software trouble and problems in "[4. Test VE2 operations](#)":

See [FAQ \(NEC Support Portal\)](#).

◆ Links

■ [NEC Aurora Forum](#): Top page including documents, forums and FAQ.

■ Documents

• [Setup Guide](#): A document about newly setting up SX-Aurora TSUBASA.

• [Installation Guide](#): A document about various cases for install operations.

■ [Discussion board](#): Forums for SX-Aurora TSUBASA users and developers.

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