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# Fugaku Commercial Software

## Poynting

### User's Guide

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# 1 . Preface

## Purpose of this document

This document describes how to use Poynting, which is maintained by the RIKEN Center for Computational Science (R-CCS) on the supercomputer "Fugaku".

- For general information on how to use Fugaku, please refer to the manuals in the Fugaku Portal
- Please refer to the Poynting manual for general Poynting usage

## Prerequisite

The user shall have executed procedures such as the conclusion of a license agreement for Poynting in accordance with the "Flow to Start Using" and shall have received a notice of completion for the software usage environment.

When using commercial software installed on Fugaku, R-CCS and cooperating organizations cooperate with software vendors to manage software licenses (operation checks) and conduct investigations when inquiring about software operation. Therefore, license information and inquiries may be shared among R-CCS, cooperating organizations, and software vendors. Please understand this in advance.

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## 2. How to Start License Daemon

When using Poynting on Fugaku, a specific user must start the license daemon on the login node.

**Important:** The login node to start Poynting's license daemon is defined for each user. Please be sure to perform the work on the login node provided by the Fugaku support at the time this instruction manual is provided.

If you do not use Poynting, please stop the license daemon based on the procedure described below.

### 2.1. Deployment of License File

In any directory on the login node, extract the license file (tgz file) provided by the licensee.

```
loginN$ cd $HOME/Poynting  
loginN$ tar zxvfp PynMPI_MW_FL_*****.tgz
```

The "license" directory containing the license file is created.

**[directory structure]**

\$HOME/Poynting/	# Any directory
└ license/	# Directory created by extracting the tgz file
└ license.*****	
└ PynMPI_MW_FL_*****.tgz	# Provided license file (tgz file)

### 2.2. Starting License Daemon

Create and execute the following script file on the same level as the "license" directory created in 2.1 to start the license daemon. Refer to the description below for **the red parts**.

**[directory structure]**

\$HOME/Poynting/	# Any directory
└ license/	# Directory created by extracting the tgz file
└ license.*****	
└ PoyntingLicense_Start.sh	# Script file to create
└ PynMPI_MW_FL_*****.tgz	# Provided license file (tgz file)

**[Example: script file]**

```
#!/bin/sh -f
module use /vol0004/apps/isv/Poynting/modulefiles
module load Poynting_license
export POYNTING_HOME=$HOME/Poynting/
pynd -start
```

### 2.2.1. Settings for License Daemon

- module command  
Used to set environment variables.
- module use  
Specifies where modulefile is stored. Do not change.
- module load *modulefile*  
Sets environment variables defined in *modulefile*.

```
module load Poynting_license
```

is specified, the latest version installed on Fugaku is used.

To use a specific version, change the *modulefile*.

Example: Using V3L10R124 version

```
module load Poynting_license/V3L10R124
```

Displays a list of available *modulefiles*.

```
module use /vol0004/apps/isv/Poynting/modulefiles
module avail Poynting_license
```

Important: Poynting uses two types of module settings.

Configuration of the license daemon: Poynting\_license

Execution of Poynting: Poynting

When using a specific version, please unify the versions used.

Also, older versions may become obsolete in the future.

Displays what is set by the module command.

```
module use /vol0004/apps/isv/Poynting/modulefiles
module show modulefile
```

- POYNTING\_HOME

Specify the path where the "license" directory containing the license file exists.

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## 2.3. Stopping License Daemon

Create and execute the following script file at any location to stop the license daemon. Refer to the explanation in "2.2.1 Settings for License Daemon" for **the red parts**. Also, specify the same value for module load when starting and stopping the license daemon.

```
#!/bin/sh -f
module use /vol0004/apps/isv/Poynting/modulefiles
module load Poynting_license
pynd -stop
```

Run the following command, and if the keyword "Pynlicd" is not found, the license daemon is stopped.

```
ps -ef | grep Pyn
```

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## 3. Executing Poynting

The following is an example of a job script for executing Poynting. Please modify it as appropriate for your work environment. Refer to the description below for **the red parts**. This job is submitted to the computation node.

```
#!/bin/bash
#PJM -L "node=1"
#PJM -L "rscgrp=small"
#PJM -L "elapse=10:00"
#PJM --mpi "proc=48"
#PJM -S
#PJM -x PJM_LLIO_GFSCACHE=/vol0004

module use /vol0004/apps/isv/Poynting/modulefiles
module load Poynting
export POYNTING_SERVER=[IP address of license server]

/home/system/tool/dir_transfer $POYNTING_HOME/bin
pynsol_mw_v3 [Directory name where input files are stored] -n 48
/home/system/tool/dir_transfer -p $POYNTING_HOME/bin
```

This job script assumes that the job is submitted from the same level as the directory where the input files are stored.

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### 3.1. Settings for Poynting

- #PJM -x PJM\_LLIO\_GFSCACHE=/vol0004  
When submitting jobs, be sure to specify /vol0004 in the environment variable PJM\_LLIO\_GFSCACHE.
- module command  
Used to set environment variables.
- module use  
Specifies where modulefile is stored. Do not change.
- module load *modulefile*  
Sets environment variables defined in *modulefile*.

```
module load Poynting  
is specified, the latest version installed on Fugaku is used.
```

**Important:** Environment variables set by the module load command may include runtime parameters. When specifying runtime parameters, be sure to specify them after the module load command.

To use a specific version, change the *modulefile*.

```
Example: Using V3L10R124 version  
module load Poynting/V3L10R124
```

Displays a list of available *modulefiles*.

```
module use /vol0004/apps/isv/Poynting/modulefiles  
module avail Poynting
```

**Important:** Poynting uses two types of module settings.

Configuration of the license daemon: Poynting\_license

Execution of Poynting: Poynting

When using a specific version, please unify the versions used.

Also, older versions may become obsolete in the future.

Displays what is set by the module command.

```
module use /vol0004/apps/isv/Poynting/modulefiles  
module show modulefile
```

- POYNTING\_SERVER

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Specify the IP address of the license server. Set the IP address you received from the Fugaku Support.

- `/home/system/tool/dir_transfer $POYNTING_HOME/bin`
- `/home/system/tool/dir_transfer -p $POYNTING_HOME/bin`  
Specifies the directory to be used for Poynting. Do not change the argument.  
For more information on dir\_transfer, refer to the User's Guide ([https://www.fugaku.r-ccs.riken.jp/doc\\_root/ja/user\\_guides/use\\_latest/](https://www.fugaku.r-ccs.riken.jp/doc_root/ja/user_guides/use_latest/)).

## 4. Changing the environment of Poynting

When environmental changes are made to Poynting, the details and date of the changes will be posted on the Fugaku Portal. Please check the details of the changes and take action if necessary. The following is a list of expected changes, their impact on users, and how to deal with them.

- **Poynting Version Upgrade**

If you use the latest version specified with Poynting or Poynting\_license in module load, the software version executed after the change date will be changed to the newly latest version. If you want to continue using the currently used version, add product version to the module load specification.

- **Poynting specific version removal**

If the version to be deleted is specified in module load, the software and its license daemon will not be available after the change date. Please change the module load setting and use another version.

## 5. Support

Please contact the Fugaku support (<https://fugaku.zendesk.com/hc/en-us/requests/new>) for Fugaku-specific content. For general information about Poynting, please contact your licensee.