

Fujitsu Software Technical Computing Suite V4.0L20



J2UL-2602-01ENZ0(04) September 2023

Preface

Purpose of This Manual

This guide describes the features and the usage of the IDE(Integrated Development Environment) function for the system that has the Fujitsu CPU A64FX installed.

Intended Readers

This document is intended for integrated development environment users who build programs and execute jobs. Readers of the document are assumed to have knowledge about program development work, the Job Operation Software, and Eclipse.

Organization of This Manual

This manual consists of the following sections.

Chapter 1 Overview of the IDE

This chapter provides an overview of the integrated development environment.

Chapter 2 Installation Procedures for the Integrated Development Environment

This chapter describes procedures for installing the integrated development environment.

Chapter 3 Basic Usage of Eclipse

This chapter describes basic usage of the integrated development environment.

Chapter 4 Using Fujitsu Extended Functions

This chapter describes procedures for using the Fujitsu extended functions included in the integrated development environment.

Glossary

This appendix describes the terms used in this manual.

Related Manuals

This book relates to the following manuals. If necessary, refer also to these manuals.

- "Fortran Language Reference"
- "Fortran User's Guide"
- "Fortran User's Guide Additional Volume COARRAY"
- "Fortran Compiler Messages"
- "C User's Guide"
- "C++ User's Guide"
- "C/C++ Compiler Optimization Messages"
- "Fortran/C/C++ Runtime Messages"
- "MPI User's Guide"

Also, refer to the manuals provided with the following related software:

- "Job Operation Software"
- "FEFS"

Export Controls

Exportation/release of this document may require necessary procedures in accordance with the regulations of your resident country and/or US export control laws.

Trademarks

- Linux(R) is the registered trademark of Linus Torvalds in the U.S. and other countries.
- Microsoft, Windows, and Windows Server are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.
- Mac is registered trademarks of Apple Inc.
- Eclipse is a registered trademark of Eclipse Foundation, Inc. or its affiliates in the United States and/or other countries.
- Java and OpenJDK are trademarks or registered trademarks of Oracle and/or its affiliates.
- All other trademarks are the property of their respective owners.
- The trademark notice symbol (TM,(R)) is not necessarily added in the system name and the product name, etc. published in this material.

Date of Publication and Version

Version	Manual code		
September 2023, Version 1.4	J2UL-2602-01ENZ0(04)		
March 2023, Version 1.3	J2UL-2602-01ENZ0(03)		
November 2020, Version 1.2	J2UL-2602-01ENZ0(02)		
September 2020, Version 1.1	J2UL-2602-01ENZ0(01)		
March 2020, 1st Version	J2UL-2602-01ENZ0(00)		

Copyright

Copyright FUJITSU LIMITED 2020-2023

Update History

Changes	Location	Version
Changed the operation environments.	2.1	Version 1.4
Removed Windows 8.1 from Basic Software.	2.1	Version 1.3
Changed procedure for applying the installation package.	2.3.4	Version 1.2
Changed figures.	2.3.4 2.3.5 3.1 4.1.5.1 4.2 4.3	
Changed "Table 3.1 Setting Details of Synchronized Project".	3.1	
Changed "Table 4.15 Settings in [Libraries] (C)".	4.1.5.2	
Changed the version of Eclipse.Added note.	1	Version 1.1
Changed "Table 2.1 Environments Where Operation Has Been Tested".	2.1	
Changed "Table 2.3 Components in the idefiles.zip".Changed "Deployment Steps".	2.3.2	
Added procedure for applying the installation package.	2.3.4	
Added procedure for uninstalling the applied installation package.	2.3.5	
Changed "Table 3.1 Setting Details of Synchronized Project".	3.1	

Changes	Location	Version
Added note.	3.4	
Changed the note in "Table 4.3 Settings in [Preprocessor] (Fortran)".	4.1.5.1	
- Changed "Table 4.27 Settings in [Resources] - [Basic Settings] tab".	4.2	
- Added note to "Table 4.28 Settings in [Resources] - [Advanced] tab".		
- Changed "Table 4.29 Settings in [Application] tab".		
- Changed "Table 4.34 Setting in [Download Rule] window".		
- Added note.		
Added note.	4.3	
Added procedure for displaying the usage of computational resources.	4.3.1	
Added procedure for operating a job in a job view.	4.3.2 4.3.2.1 4.3.2.2 4.3.2.3 4.3.2.4 4.3.2.5	
Changed the procedure.	4.4	

All rights reserved.

The information in this manual is subject to change without notice.

Contents

Chapter 1 Overview of the IDE	1
Chapter 2 Installation Procedures for the Integrated Development Environment	2
2.1 Operation Environments	
2.2 Eclipse Installation	2
2.2.1 JRE or JDK Installation.	2
2.2.2 Installation of Eclipse IDE for Scientific Computing	2
2.2.3 Starting Eclipse	
2.3 Installation of Fujitsu Extended Functions	
2.3.1 Connecting to the Login Node (Remote System)	4
2.3.2 Deploying Files for Fujitsu Extended Functions	7
2.3.3 Importing Configuration Files for Fujitsu Extended Functions	8
2.3.4 Applying the Installation Package	
2.3.5 Uninstalling the Applied Installation Package	
Chapter 3 Basic Usage of Eclipse	
3.1 Creating a Project	
3.2 Adding a Source File	
3.2.1 Creating a New Source File	
3.2.2 Importing Source Files	
3.3 Editing a Source File	40
3.4 Building a Project	
Chapter 4 Using Fujitsu Extended Functions	
4.1 Build Using Fujitsu Compiler	44
4.1.1 Setting Environment Variables on the Login Node	44
4.1.2 Creating a Project	44
4.1.3 Adding a Source File	
4.1.4 Editing a Source File	44
4.1.5 Specifying Compiler Options	
4.1.5.1 Specify Compiler Options (Fortran)	
4.1.5.2 Specify Compiler Options (C)	
4.1.5.3 Specify Compiler Options (C++)	
4.1.6 Building a Project	69
4.2 Job Submission	
4.3 Job Status Check and Operation	
4.3.1 Displaying the Usage of Computational Resources	
4.3.2 Operating a Job in a Job View	
4.3.2.1 Canceling the Execution of a Job	
4.3.2.2 Holding a Job	
4.3.2.3 Releasing a Job	
4.3.2.4 Refreshing the Job Status	
4.3.2.5 Removing a Job Entry	
4.4 CPU Performance Analysis Report Display	
Glossary	

Chapter 1 Overview of the IDE

This chapter describes the integrated development environment.

This document collectively refers to the "Eclipse IDE for Scientific Computing" package provided by Eclipse Foundation and the extended function (hereinafter referred to as the "Fujitsu extended function") as the "IDE (Integrated Development Environment)".



The explanation in this document uses an environment where "Eclipse IDE 2020-06 R Packages" are installed. The procedures or windows may vary depending on the version of Eclipse. Replace the terms used there as necessary.

Eclipse IDE for Scientific Computing

Eclipse IDE for Scientific Computing is one of the Eclipse packages provided by the Eclipse Foundation. For details, see the official site of the Eclipse Foundation (https://www.eclipse.org). "Eclipse IDE 2020-06 R Packages" are hereinafter referred to as "Eclipse".

Fujitsu extended functions

The following table lists the extended functions to Eclipse provided for Technical Computing Suite. Hereinafter, the C/C++ compiler and FORTRAN compiler of the Technical Computing Suite are collectively referred to as compiler. The Technical Computing Suite's job operation software and profiler are referred to as job operation software and profiler, respectively.

Function Name	Outline
Build using Fujitsu compiler	Can use the compilers.
Job submission	Can submit jobs that use the Job Operation Software. (*1)
Job status check and operation	Displays the status of jobs on compute nodes and the node status. The function can also control jobs. (2)
CPU Performance Analysis Report display	It enables "CPU Performance Analysis Report," which is provided by the Profiler, to make measurements and create reports. For details on CPU performance analysis reports, see the <i>Profiler Use Guide.</i>



(*1) The function for job submission supports only the submission of "normal job". For information about types of job like "normal job", see "End-user's Guide", which is a Job Operation Software manual.

(*2) You can operate only your jobs submitted from the integrated development environment.



For details on the terms used in this document, see "Glossary".

Chapter 2 Installation Procedures for the Integrated Development Environment

This chapter describes installation procedures for the integrated development environment.

2.1 Operation Environments

The integrated development environment is used via SSH connection from a client machine where Eclipse is installed to a login node. For details on the operating environment of Eclipse, see the official website of Eclipse Foundation. Operation check has been performed in the following environment.

Basic Software	Java Runtime Environment (JRE) Java Development Kit (JDK)	Eclipse IDE for Scientific Computing
Microsoft Windows 10 (64bit)	OpenJDK 8 (1.8.0.332-1)	Eclipse IDE 2020-06 R Packages
macOS Catalina		
Red Hat Enterprise Linux 8.1		

In "4.4 CPU Performance Analysis Report Display", Microsoft Excel is used to display a CPU performance analysis report. For details on the operation environment for CPU performance analysis reports, see the *Profiler Use Guide*.

G Note

For OpenJDK, please obtain (https://github.com/ojdkbuild) and use it at your own risk in accordance with the applicable terms of use (license conditions).

2.2 Eclipse Installation

This section describes how to install Eclipse.

G Note

Even if you have already installed Eclipse, additionally install Eclipse for the integrated development environment.

2.2.1 JRE or JDK Installation

JRE (Java Runtime Environment) or JDK (Java Development Kit) is required for using Eclipse. Install the JRE or JDK as described in "Table 2.1 Environments Where Operation Has Been Tested".

2.2.2 Installation of Eclipse IDE for Scientific Computing

Install Eclipse IDE for Scientific Computing from the official site of the Eclipse Foundation (https://www.eclipse.org/). For the installation method, see the official site of the Eclipse Foundation. When using Eclipse Installer, select [Eclipse IDE for Scientific Computing] on the installation package selection screen.

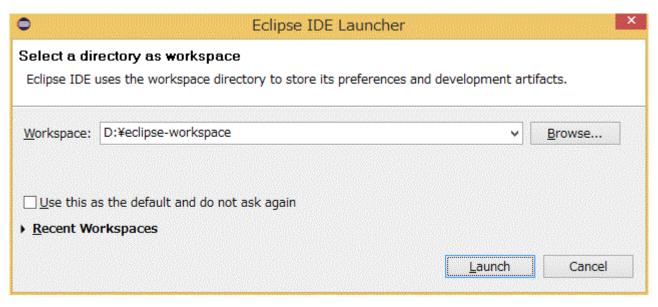
Information

Depending on the environment, installation cannot be done correctly by Eclipse Installer. In such cases, download the Eclipse IDE for Scientific Computing package from the official site of the Eclipse Foundation, and deploy it at an arbitrary location.

.

2.2.3 Starting Eclipse

1. Start Eclipse. A window appears for specifying a workspace. In [Workspace:], specify the directory where you want to create a workspace. If the specified directory does not exist, it is automatically created. After [Workspace:] is set, click [Launch] button.



2. The [Welcome] view is not used. Close the view.

٢		eclipse-workspa	ce - Eclips	e IDE	- 🗆 🗙	
File		tor Navigate Search Project Run Window Help				
8	🚱 Welcome 🛛 🔛				A C - A A E - B	
E	ecli	DSE Welcome to Eclipse IDE fo	r Scient	ific Computing	Workbench	
		Tutorial: Import an existing C/C++ project A guided walk-through how to import		Overview Get an overview of the features		
	٥	Review IDE configuration settings Review the IDE's most fiercely contested preferences	2	Tutorials Go through tutorials		
	0	Create a new C project Create a new Eclipse project for C source code	>	Samples Try out the samples		
	0	Create a new C++ project Create a new Eclipse project for C++ source code	\odot	What's New Find out what is new		
	0	Import a project with a working Makefile Open the New item wizard				
	0	Create a new Fortran project Create a new Fortran Eclipse project		E	Always show Welcome at start up	Name and a state of the state o
				1	· ·	

3. This is the initial screen.

Ite Edit Source Refector Navigate Search Project Run Window Help Project Explorer S3 Project Explorer S3 Import projects in your workspace. To add a project: Create a new Cor C++ project Import projects Import projects Import projects Problems S3 In Tasks In Console In Properties Import projects Import projects	•	eclipse-wor	kspace - Eclipse IDE			-	
Project Explorer 3 Project Schuler 40 There are no projects in your workspace. To add a project in Create a new Machile project in a directory containing existing code Create a new Synchronized Cor Create a new Synchroniz							
Project Explorer 3 There are no projects in your workspace. Create a new Makefile project in code a project: Create a new Makefile project in code a project. Create a new Cor C++ project Create a new Cor C++ project Create a new Synchronized Cor C++ project. Create a project Create a project Create a project Problems 22 Tasks © Console © Properties 0 Items Description Resource Path Location Type Location Type	🖆 🕶 🔚 🐚 🗞 🕶 🍝 🕶 🔂 🕶 🔂	• 🚳 • 💽 • 🞯 • 🔯 • 🔾 • 🤮	🔹 🥙 🗀 🛷 🔹 📴	11 📮 🖸 🕇 🗎	• 图• 图•	****	
Project Explorer S ■ • Project Explorer S ■ • There are no projects in your workspace. or add a project: Create a new Makefile project in a directory containing existing. code There is no active editor provides an outline. Create a new Cor C++ project Create a new Synchronized Cor C++ Project There is no active editor provides an outline. Create a new Synchronized Cor C++ Project Create a new Synchronized Cor C++ Project Create a new Synchronized Cor C++ Project Create a new Synchronized Cor C++ Project Create a project Project Synchronized Cor C++ Project Create a project Project Synchronized Cor C++ Project Create a project Import projects Import projects Project Synchronized Import projects Import projects Import projects						Quick Access	
There are no projects in your workspace. Create a new Makefile project in code a project. Create a new Synchronized C or C++ project Create a new Synchronized C or C++ project. Problems Si @ Tasks @ Console @ Properties O Items Description Resource Path Location Type							·]
There are no projects in your workspace. To add a project: Create a new Cor C++ project Create a new Cor C++ project Provides an outline. Problems 2 Tasks Console Properties Description Resource Path Location Type	and the second						
The term projects in your workspace. To add a project in Create a new Makefile project in Create a new Synchronized C or Create a new Synchronized C or C					ALE		0,
Wickpute: Create a new Makefile project in Create a new Cor C++ project Create a new Cor C++ project Create a new Synchronized Cor C++ Project Create a project Property projects Problems 32 Tasks Console Properties Ditems Description Resource Path Location Type Description Resource Path Location Type							
Create a new Makefile project in a directory containing existing. oxide a directory containing existing. oxide Create a new Cor C++ project Create a new Synchronized Cor Create a new Synchow Synchow Synchronized Cor Create a new Synchroni S						provides an oddin	
Import projects Problems % @ Tasks ● Console ● Properties O Items D Items							
Create a new C or C++ project Create a new Synchronized C or Create a project Import projects Import projects Problems 22 Tasks © Console © Properties O items Description Resource Path Location Type	a directory containing existing						
Create a new Synchronized C or. Create a project Import projects Problems ☆ @ Tasks © Console © Properties 0 items Description Resource Path Location Type							
Import project Import projects Problems 23 @ Tasks □ Console □ Properties Import projects Import projects Problems 23 @ Tasks □ Console □ Properties Import projects Import projects Problems 23 @ Tasks □ Console □ Properties Import projects Import projects <							
Create a project	Create a new Synchronized C or						
Import projects Import projects Problems ☆ @ Tasks Console Properties Import projects Import							
Problems ☆ Tasks Console Properties 0 items Description Resource Path Location Type Console Console Path Location Type Console Console C							
O items Resource Path Location Type Description </td <td>import projecta</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	import projecta						
O items Resource Path Location Type Description </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>							
0 items Description Resource Path Location Type Image: Second se							
0 items Description Resource Path Location Type Image: Second se							
O items Description Resource Path Location Type Image: Second se							
0 items Description Resource Path Location Type Image: Second se							
O items Resource Path Location Type Description Image: Control of the second se							
O items Resource Path Location Type Description Image: Control of the second se							
0 items Description Resource Path Location Type Image: Second se							
O items Description Resource Path Location Type Image: Second se						27 1	
Description Resource Path Location Type Image: State		 A second state of the second stat	ole 🔲 Properties			\$P \$*	~ -
Description Resource Path Location Type Image: State			*****	999	and the second second second		and the second
		Description	Resource	Path	Location	Туре	

2.3 Installation of Fujitsu Extended Functions

This section describes how to install Fujitsu extended functions. Perform this work when creating a new workspace.



—
Perform this work on each created workspace.

2.3.1 Connecting to the Login Node (Remote System)

Make settings for connecting the login node

1. Click [Window] - [Preferences] on the menu bar.

)	ecli	ipse-workspace - Eo	clipse IDE			- • ×
ile Edit Source Refactor Navigate Image: Source Refactor Navigate<	Search Project Run V	Vindow Help New Window Editor Appearance	 ✓ : № □ 	Π : □ : ℃ • : ▼	· 안 · 전 	• € • € • <td< th=""></td<>
	Problems 23 Taska 0 items Description		Resource	Path	Location	type

2. Select [Remote Development] - [Remote Connections] from the left pane in the [Preferences] window, and click [Add] button.

9		Preference	ces		- 🗆 X
type filter text	Remote C	<			
▷ General ▷ C/C++ ChangeLog	Remote Se	ervices: SSH 🗸			_
▷ Fortran	Status	Connection Name	Host	User	Add
 Help Install/Update Library Hover 					Edit
⊳ Mylyn					Remove
⊳ Oomph					Open
 Parallel Tools Remote Development Remote Connections Synchronized Projects RPM Run/Debug Team Terminal Tracing Validation XML 					Close
< >			8	Restore <u>D</u> efau	lts <u>A</u> pply
? 🏜 🖆 🔘				Apply and Close	Cancel

3. Set the necessary information in the [New Connection] window, and click [Finish] button. The following table shows setting details.

•		_ 🗆 ×
New Conne	ction	
Specify prop	perties of a new connection	
Connection r	name: Remote Host	
Host inform	ation	
Host:	hostname	
User:	username	
O Public ke	ey based authentication	Keys are set at <u>Network Connections, SSH2</u>
Passphrase		
	d based authentication	
Password:		
 Advanced 		
?		Einish Cancel

Item Name		Setting Details
Connection name		Specify an identification name for [Remote Connections]. Specify an arbitrary name.
Host information	Host	Specify the host name or IP address of the login node.
	User	Specify the login user name of the login node.
	Public key based authentication	Select an authentication method for the login node connection. Public key based authentication: Public key authentication method
	Password based authentication	Password based authentication: Password authentication method
Advanced		Extended settings. Make settings as required.

Table 2.2 [New Connection] Window Setting Details

4. In [Remote Connections], settings made in the [New Connection] window are added. Click the [Open] button while the added settings are selected, and confirm that Status becomes "open". Click the [Apply and Close] button to close the window.

•		Preference	ces		- 🗆 X
type filter text	Remote C	(-) ▼ => ▼ ▼			
▷ General ▷ C/C++ ChangeLog	Remote S	ervices: SSH 🗸			
Fortran	Status	Connection Name	Host	User	Add
 Help Install/Update 	closed	Remote Host	hostname	username	Edit
Library Hover ⊳ Mylyn					Remove
⊳ Oomph					Open
 > Compil > Parallel Tools > Remote Development Remote Connections > Synchronized Projects > RPM > Run/Debug > Team > Terminal > Tracing Validation > XML 					Close
۲ ک				Restore Defaul	ts <u>A</u> pply
? 🏜 🖆 🔘				Apply and Close	Cancel

Figure 2.1 Status "open"

Status	Connection Name
open	Remote Host

2.3.2 Deploying Files for Fujitsu Extended Functions

Place files required to use the Fujitsu extended function. This work needs to be performed on both the login node and the client machine. The files required to use the Fujitsu extended function are stored in the following location on the login node.



The "layout_default_TC_SUITE.xml" file used for this task may be distributed by your system administrator. Check with your system administrator for distribution.

File storage location for Fujitsu extended functions

/installation_path/misc/ide/idefiles.zip

For details on "installation_path", contact the system administrator.

The configuration in the idefiles.zip is as follows:

Table 2.3 Components in the idefiles.zip

Directory Name/File Name	Description	storage location
eclipsesettings	The files to be deployed in / <i>User's_home_directory</i> /.eclipsesettings on the login node are stored. (*)	Login node
fj_extention	The stored XML files are used in "2.3.3 Importing Configuration Files for Fujitsu Extended Functions".	Client machine
patches	The stored installation package is applied to Eclipse.	Client machine

(*) User's_home_directory is the home directory of user specified in "2.3.1 Connecting to the Login Node (Remote System)".

Deployment Steps

- 1. Expand the "idefiles.zip" file to any location on the login node.
- 2. Rename the "eclipsesettings" directory to the ".eclipsessettings" directory and copy it directly under the "/home/*username*" directory on the login node.
- 3. If your system administrator has distributed a "layout_default_TC_SUITE.xml" file, overwrite that file with the same name in the "/ home/username/.eclipsessettings/samples" directory. If not, this is not necessary.
- 4. Transfer the "idefiles.zip" file to the client machine and extract it to any location.

2.3.3 Importing Configuration Files for Fujitsu Extended Functions

Import the necessary configuration files for using Fujitsu extended functions into Eclipse.

1. Confirm that the [Project Explorer] view is displayed.

	eclipse-v	vorkspace - Eclipse IDE			- 🗆 🔤
e Edit Source Refactor Navigate				1.5556.07	
} • 🔚 🐚 🗞 • 🍕 • ⇔ • i 🖆	• 🚳 • 💽 • 🞯 • 🚸 • 🔘 •	• 🤮 🔹 🔗 🔹 📴 🚺	11 📮 🚺 🕶 🔌 🛛	と ・ 行	- \$\$ \$ - \$ - \$ - \$
					Quick Access
Project Explorer 👷 🗖 🗖					₩0% T *1 - I
R (5) S ▼				- 8	
here are no projects in your					There is no active editor the
vorkspace.					provides an outline.
o add a project:					
Create a new Makefile project in a directory containing existing					
code					
Create a new C or C++ project					
Create a new Synchronized C or <u>C++ Project</u>					
Create a project					
Import projects					
Inporc projects					
	📳 Problems 🕄 🙇 Tasks 📮 🕻	Console 🛄 Properties			⊉ 🔋 ⊽ 🗆
	0 items				
	Description	Resource	Path	Location	п Туре

🛐 Information

If the [Project Explorer] view is not displayed, click [Window] - [Show View] - [Project Explorer] on the menu bar.

2. Click [File] - [Import...] on the menu bar.

•			e	clipse-	e-worl	kspace	e - Eclip	ose IDE						- 🗆	×
File	Edit Source Refactor Navigate	e Search Project	Run	Windo	ow H	elp					1 States				
	New						BA	-: 🔛 🔳	1 : 🖬 :	0- 0	Q1 - 春	- *:=		-	1
	Open File												ck Access	10.1603	9 6
0	Open Projects from File System											100000		1.1	
	Recent Files	•									- 0	물이	83 ^w z		
	Close	Ctrl+W													<u>6</u> 9 ⊽
	Close All	Ctrl+Shift+W											e is no activ ides an outl		tor that
園	Save	Ctrl+S													
	Save As														
- 10	Save All	Ctrl+Shift+S													
	Revert														
	Move														
	Rename	F2													
\$	Refresh	F5													
	Convert Line Delimiters To	•													
	Print	Ctrl+P													
2	Import														
	Export														
	Properties	Alt+Enter													
	Switch Workspace	•													
	Restart														
	Exit														
		🔡 Problems 😒		2122.2			.						⊉ 🍃	∇	
		0 items		sks 🚍	2 Consi	ole 📖	Propertie	25					_¶~ €"		
		Description	0.65533	A. 1997	13/62/37/	AX824848		Resource	Path		Locatio	n	Туре	223	NESISSEE
		Cesarpeon						(Cooding)	Station of the state of the sta		Locario	14418045	119-		
0 ite	ms selected									÷					

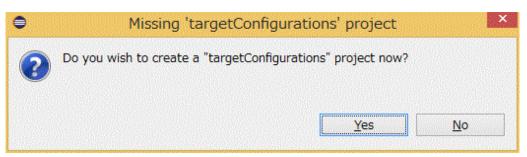
3. From [Select an import wizard] in the [Import] window, select [Target System Configurations] - [Target Configuration from Plugin], and click [Next >] button.

Select Import existing target configurations into the workspace
Select an import wizard:
type filter text
 ▷ General ▷ C/C++ ▷ Git ▷ Install ▷ Oomph ▷ RPM ▷ Run/Debug ▷ Target System Configurations ○ Target Configuration from Plug-in ▷ Tasks ▷ Team ▷ Tracing ▷ XML
Image: Mext > Einish Cancel

4. Select [Generic PBS Batch] from the pull-down menu, and click [Finish] button. The configuration created here is tentative one and is not used.

Target Conf	figuration Import Wizard 🛛 – 🗖 🗙
Import a target system configura the workspace.	ation from a plug-in into
Select a configuration to import:	Generic PBS Batch 🗸
? < Back	Next > <u>Finish</u> Cancel

5. When asked whether to create the targetConfigurations project, click [Yes] button.



6. Confirm that [targetConfigurations] has been added to the [Project Explorer] view. Select [targetConfigurations].

	eclipse-work	space - Eclipse IDE		
e Edit Source Refactor Navigate				
3 • 🗐 🐚 🗞 • 🍕 • 🗇 • ! 🗃	• 🚳 • 🖻 • 🞯 • 🔯 • 🔿 • 💡	🔹 🤔 😂 🛷 🔹 📴 📋	🖷 📮 🖸 🕶 🔌 🤮	
				Quick Access
Project Explorer 🛛 🗖 🗖			=	°□ 📴 O 🖾 🐾 🖓
				2000 - 1990 -
targetConfigurations				There is no active editor
Generic PBS Batch (1).xml				provides an outline.
	🖹 Problems 🛛 🧔 Tasks 📮 Conse	ole 📄 Properties		* * ~ □
	0 items			
	0 items	ole 🛅 Properties Resource	Path	그 Type
	0 items		Path	
	0 items		Path	
	0 items		Path I	
	0 items		Path	

7. Click [File] - [Import...] on the menu bar. The [Import] window appears.

•			eclipse-	workspace	e - Eclipse IDE				_ C	x
File	Edit Source Refactor Navigate	e Search Proiect	Run Window	/ Help			al shirt are			
	New Open File	Alt+Shift+N ►			0 🧀 📌 - 🔛 🗊	₩ 💷 🖸 + 🔌	21 - 有	▼ ∜⇒ <>> ▼ ⊂ Quick Access		3 28 FG
0	Open Projects from File System							-	;	and the second se
	Recent Files	•						₽=0 % [™] 2		
	Close	Ctrl+W						There is no ac	tive ed	ites that
	Close All	Ctrl+Shift+W						provides an ou		tor that
圖	Save	Ctrl+S								
圓	Save As									
6	Save All	Ctrl+Shift+S								
	Revert									
	Move									
	Rename	F2								
\$	Refresh	F5								
	Convert Line Delimiters To	•								
۲	Print	Ctrl+P								
	Import									
	Export									
	Properties	Alt+Enter								
	Switch Workspace Restart Exit	•								
		Problems 🔀 0 items	🖉 Tasks 📮 (Console 🔳	Properties			\$	} ⊽	
		Description	1		Resource	Path	Location	Туре		NSS 1222
0 ite	ems selected									

8. Select [General] - [File System] in the [Import] window, and click [Next >] button.

Import -	. 🗆 🗙
Select Import resources from the local file system into an existing project.	è
Select an import wizard:	
type filter text	
 General Archive File Existing Projects into Workspace File System Preferences Projects from Folder or Archive C/C++ Git Finstall Oomph RPM RPM Run/Debug Target System Configurations Target Configuration from Plug-in 	
? < Back Next > Finish	Cancel

9. Click [Browse...] button at [From directory:], and specify the fj_extention directory deployed in "2.3.2 Deploying Files for Fujitsu Extended Functions". The box below the [Browse] button displays the files in the directory. Check the check box of the FUJITSU_Technical_Computing_Suite.xml file. Also, confirm that "targetConfigurations" is specified in [Info folder:]. If it is not

specified, click [Browse...] button on the right, and select "targetConfigurations" from the [Import into Folder] window. After completing all the settings, click [Finish] button.

•	Im	port	- 🗆 ×
File system Import resources from	m the local file system.		
From directory: D:¥	fj_extention	~	Browse
■ 🥟 fj_extention	elect All	▼ FUJITSU_Technical_Comp	outing_Suite.xml
Into folder: targetCo Options Overwrite existing Create top-level for Advanced >>	resources without warning		Bro <u>w</u> se
?	< <u>B</u> ack	Next > <u>Finish</u>	Cancel

10. Confirm that "FUJITSU_Technical_Computing_Suite.xml" has been added to [targetConfigurations] in the [Project Explorer] view.

	eclipse-workspac	e - Eclipse IDE			
e Edit Source Refactor Navigate Search					
9 • 🗟 💼 🗞 • 🔨 • 🗇 • 📮 🚺 • 🐚	🛛 💼 🕶 🐨 🐨 🐨 👘 🔻	• 🔿 🔻 🚱 🕶 🌽 🔶 🛷 🔹 🗄	「日」「「」」」	*> <> <>	· - 🖻
					۹ 😫
Project Explorer 🛛 📄 😫 🍞 🖇 🖓 🖬			- 8	≣ 0 ⊠ @) в 😐
targetConfigurations					50
FUJITSU_Technical_Computing_Suite.xml				There is no a	
🗴 Generic PBS Batch (1).xml				that provide	
	📳 Problems 🔀 🧔 Tasks 📮 🤇	Console 🔲 Properties		5	78 -
	0 items				U o
	Description	Resource	Path	Location	Tuno
	Description	Resource	Full	Location	Туре
	<				
targetConfigurations			1994 - 1995 - 1995 - 1995 - 1995 - 1995 - 1995 - 1995 - 1995 - 1995 - 1995 - 1995 - 1995 - 1995 - 1995 - 1995 -		

11. [Generic PBS Batch (1).xml] was created at the beginning but will not be used later. Delete it. Right-click [Generic PBS Batch (1).xml] in the [Project Explorer] view, and click [Delete].

•			eclipse	-workspace - E	clipse IDE				- 🗆 ×
		Refactor Navigate Search Project Rur							
	۲	· ≪ • ⇔ • @ • @ • @ • =	様 ▼ 🔘	• 🖓 • 🙋 😂	🔗 🕶 📴	1 🖳 🖸 🕶 🔌 🔡	• 🖗 •	*** \$	S. Construction of the
								Quick Access	
🍋 Project Exp	lorer	×				-		≡ 0 ⊠ [≫] 2	- 8
	_	Ē\$;							89 V
⊿ 🗁 targetCo R FUIT		urations Technical_Computing_:						There is no activ provides an outl	
X Gene	· · ·	New	No. Sta	k			F		
		Open Show In Alt+Sh	ift∓W►						
		Open With							
		Show in Local Terminal	•						
		Сору С	trl+C						
	Ô	Paste C	trl+V						
	×	Delete	Delete						
	<u>8</u>	Remove from Context Ctrl+Alt+Shift+							
		Mark as Landmark Ctrl+Alt+Shi	tt+Up						
		Rename	F2						
	<u>हिन्</u> य	Import							
		Export							
	\$	Refresh	F5						
		Profiling Tools	•						
	0	Run As	•	Console 🔲 Prop	erties			\$\$ \$°	~ - 8
	*	Debug As	•		Resource	Path L	ocation	Type	
		Profile As	•		Resource	Paul	ocacion	туре	
		Team Compare With	:						
		Replace With							
<		Validate							
X targetConfi		Source	,						

12. A confirmation window appears. Confirm that the target is "Generic PBS Batch (1).xml" and click the [OK] button.

•	Delete Resources – 🗖 🗙
?	Are you sure you want to delete 'Generic PBS Batch (1).xml' from the file system?
	Preview > OK Cancel

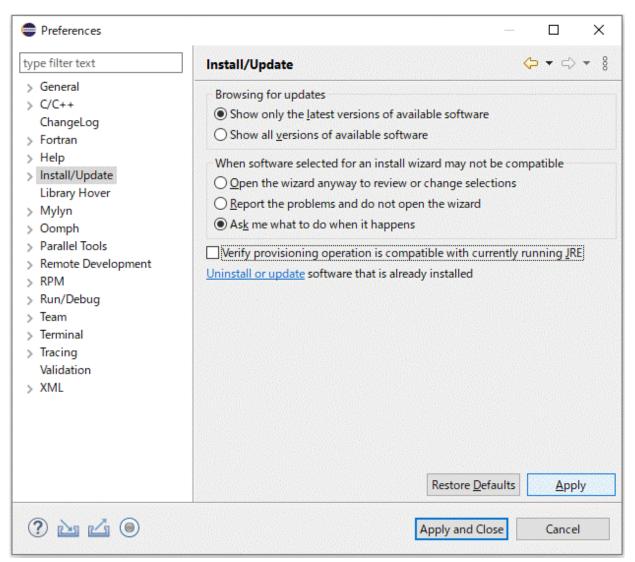
2.3.4 Applying the Installation Package

Apply the installation package to Eclipse.

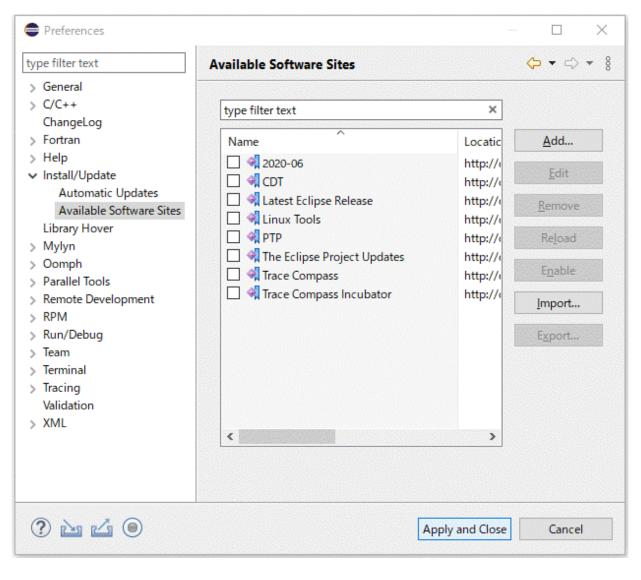
1. Click [Window] - [Preferences] on the menu bar.

	Se <u>a</u> rch <u>P</u> roject <u>R</u> un <u>V</u>		N-0-1-	• <u>4</u> : Dr =	lethe m	** * *	1
] ▼ 🛛 🕞 🕲 ▼ 🗞 ▼ ⇔ ▼ ⊑	2 : ♥ ▼ : ♥ : ₪ ▼ (<u>N</u> ew Window		≠ 💉 ▼ 📴 📃	11 : 월 7 연	**> (> + = = =	8898 N 898 D 2
		Editor	>				
Project Explorer 🛛 🗖 🗖	3	Appe <u>a</u> rance	>			🗄 Ou 🛛 🍥 Bu	[—]
🖻 🕏 🍸 🗄	3	Show <u>V</u> iew	>				69
here are no projects in your workspace.		Pe <u>r</u> spective	>			There is no active ec	ditor that
o add a project:		Navigation	>			provides an outline.	
Create a new Makefile project in a directory containing existing code		<u>P</u> references					
Create a new C or C++ project							
Create a new Synchronized C or C++ <u>Project</u>							
Create a project							
Import projects							
			Description				8 -
	R Problems 23 @ 1	āsks 📮 Console [Properties			7	80
	Problems 🛿 🏹 T 0 items		Properties			F	8
	0 items	asks 📮 Console 🚦	-	Path	Location		00
			Properties	Path	Location		8 🗆
	0 items		-	Path	Location		000
	0 items		-	Path	Location		00
	0 items		-	Path	Location		8
	0 items		-	Path	Location		00

2. Select [Install/Update] from the left pane in the [Preferences] window, uncheck [Verify provisioning operation is compatible with currently running JRE], and click the [Apply] button.



3. Expand [Install/Update] from the left pane in the [Preferences] window and select [Available Software Sites]. Uncheck all checkboxes under [Name] and click the [Apply and Close] button.

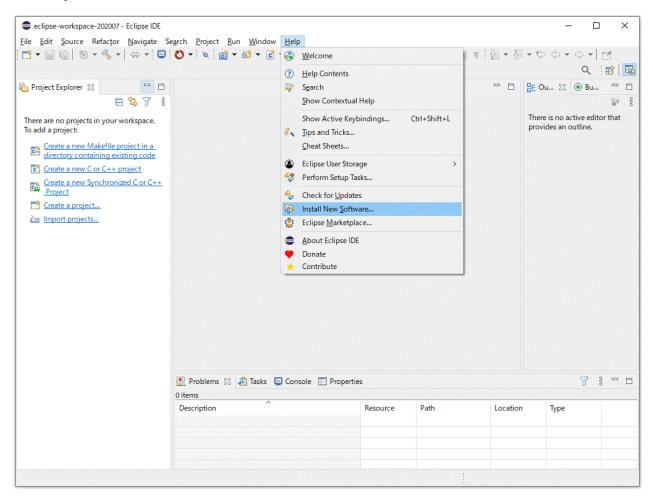


賃 Note

Do not apply updates to the software installed in Eclipse. Also, do not install new software in Eclipse except the one described in this section.

.

4. Click [Help] - [Install New Software] on the menu bar.



5. Click the [Add] button in the [Install] window.

Install		
Available Software Select a site or enter the location of a site.		
Work with: ^B type or select a site	 ✓ <u>A</u>dd 	<u>M</u> anage
type filter text		Select All
Name	Version	Deselect All
Details		â
 Show only the latest versions of available software Group items by category Show only software applicable to target environment Contact all update sites during install to find required software 	<u>H</u> ide items that are already installed What is <u>already installed</u> ?	
0	< <u>B</u> ack <u>N</u> ext > <u>F</u> inish	Cancel

6. Set the necessary information in the [Add Repository] window, and click the [Add] button.

•	Add Repository	- 🗆 X
Name:	TCS_IDE_Plugins_ZIP	Local
Location:	jar:file:/C:/TCS_IDE_Plugins_202007100836.zip!/	Archive
ок		
?	Add	Cancel

Table 2.4 [Add Repository] Window Setting Details

Item Name	Setting Details
Name:	Specify an arbitrary name.
Location:	Click the [Archive] button, and select the installation package TCS_IDE_Plugins_YYYYMMDDhhmm.zip, which is located in a local directory. The installation package is stored in the "patches" directory of files for Fujitsu extended functions.

7. The window displays a list of software that can be applied to Eclipse. Click the [Select All] button to select all, and click the [Next] button.

	Install		- 🗆 🗙
Available Software Check the items that you wish to install.			
Work with: TCS_IDE_Plugins_ZIP - jar:file:/C:/TCS_IDE_Plugins_202	007100836.zip!/	Add	Manage
type filter text			Select All
Name Image: Value of the second seco	Version 1.0.0.202007100836 1.0.0.202007100836		Deselect All
2 items selected Details			
 Show only the latest versions of available software Group items by category Show only software applicable to target environment Contact all update sites during install to find required software 	Hide items that are already installed What is <u>already installed</u> ?		
3	< Back Next >	Finish	Cancel

8. Select [Update my installation to be compatible with the items being installed], and click [Next].

	Install		- • ×
Install Remediation Page			
The installation cannot be completed as requested.			()
Choose one of the following alternate solutions:			
O Keep my installation the same and modify the items being	installed to be compatible		
Update my installation to be compatible with the items bei	ing installed		
○ Show original error and build my own solution:			
Solution Details			
Name	Version	Id	
▲ ¥ Will be uninstalled			
Rarallel Tools Platform		org.eclipse.ptp.fea	ture.group
Will be installed Parallel Tools PlatForm with TCS patches.	1.0.0.202007100836	com.fujitsu.xtcland	a tool ata a
 Parallel Tools Platform with TCS patches. R. Toolchain-feature 	1.0.0.202007100836	com.fujitsu.xtclan	
	1.0.0.20200/100000	connugresurvecturi	g.cooi.cooicii
?	< Back	Next > Finish	Cancel

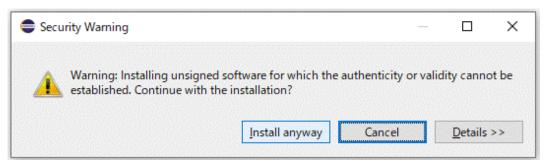
9. The window displays the software to be installed. Confirm that "Parallel Tools PlatForm with TCS patches" and "Toolchain-feature" are to be installed, and click the [Next] button.

•	Install	- 🗆 ×
Install Details Review the items to be installed.		
Name X Parallel Tools Platform Parallel Tools PlatForm with TCS patches. Toolchain-feature	Version 9.4.0.202003120023 1.0.0.202007100836 1.0.0.202007100836	Id org.eclipse.ptp.feature.group com.fujitsu.xtclang.tool.ptp_p com.fujitsu.xtclang.tool.toolch
Size: Unknown Details	< Back	Next > Finish Cancel

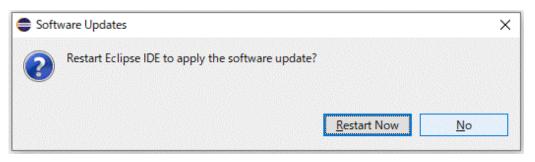
10. Select [I accept the terms of the license agreement], and click the [Finish] button.

Install	— 🗆 X
Review Licenses Licenses must be reviewed and accepted before the software of	can be installed.
Licenses:	License <u>t</u> ext:
Eclipse Public License - v 1.0	Eclipse Public License - v 1.0 THE ACCOMPANYING PROGRAM IS PROVIDED UNDER THE TERMS OF THIS ECLIPSE PUBLIC LICENSE ("AGREEMENT"). ANY USE, REPRODUCTION OR DISTRIBUTION OF THE PROGRAM CONSTITUTES RECIPIENT'S ACCEPTANCE OF THIS AGREEMENT. 1. DEFINITIONS "Contribution" means: a) in the case of the initial Contributor, the initial code and documentation distributed under this Agreement, and b) in the case of each subsequent Contributor: i) changes to the Program, and ii) additions to the Program; where such changes and/or additions to the Program originate from and are distributed by that particular Contributor. A Contributor ireginates' from a Contributor if it was added to the Program by such Contributor ireginates from 0 I go not accept the terms of the license agreement
?	< <u>B</u> ack <u>N</u> ext > <u>Finish</u> Cancel

11. The security warning screen appears. Click the [Install anyway] button.



12. You are asked whether to restart the IDE. Click the [No] button. Then click the X button in the upper right corner of Eclipse to exit Eclipse.



13. Start Eclipse by using "eclipse -clean" from the terminal or command prompt. After the start, confirm that the software is correctly installed in Eclipse. Click [Help] - [About Eclipse IDE] - [Installation Details] on the menu bar. Confirm that the list on the [Installed Software] tab includes the two specified software names.



•

Use "eclipse -clean" on the directory where "eclipse.exe" exists.

.

Eclipse IDE Installation Details

_ 🗆 🗙

ype filter text		
Name	Version	Id
C/C++ Autotools support	9.11.1.20200401	org.eclipse.cdt.autotools.feature.group
🖗 C/C++ Berkeley UPC (Unified Parallel C) Toolchain S	up 9.11.1.20200401	org.eclipse.cdt.bupc.feature.group
🖗 C/C++ CMake Build Support - Preview	9.11.1.20200401	org.eclipse.cdt.cmake.feature.group
b R C/C++ Development Tools	9.11.1.20200601	org.eclipse.cdt.feature.group
🖗 C/C++ GCC Cross Compiler Support	9.11.1.20200401	
🖗 C/C++ Memory View Enhancements	9.11.1.20200401	5 1 5 7
b R C/C++ Remote Launch	9.11.1.20200401	- 3
🖗 C/C++ Standalone Debugger	9.11.1.20200401	org.eclipse.cdt.debug.standalone.feat.
🖗 C/C++ Unit Testing Support	9.11.1.20200401	org.eclipse.cdt.testsrunner.feature.fe
b R C/C++ UPC (Unified Parallel C) Support	9.11.1.20200401	org.eclipse.cdt.core.parser.upc.featur.
Image: Provide the second s	4.16.0.20200615	epp.package.parallel
b Reclipse XML Editors and Tools	3.18.0.v2020051	org.eclipse.wst.xml_ui.feature.featur.
Git integration for Eclipse Git integration Git integration Git integration Git integration Git integration Git integration Git	5.8.0.202006091	
🖗 Java implementation of Git	5.8.0.202006091	org.eclipse.jgit.feature.group
Marketplace Client	1.8.3.v20200526	org.eclipse.epp.mpc.feature.group
Mylyn WikiText	3.0.36.20200207	org.eclipse.mylyn.wikitext_feature.fe.
🆗 Parallel Tools PlatForm with TCS patches.	1.0.0.202007100	com.fujitsu.xtclang.tool.ptp_patch_fe.
🖗 PTP Contributed Target System Configurations	9.4.0.202003120	org.eclipse.ptp.rm.jaxb.contrib.featur.
PTP Fortran Support	9.4.0.202003120	org.eclipse.ptp.fortran.feature.group
PTP Remote Project Synchronization Support	9.4.0.202003120	org.eclipse.ptp.rdt.sync.feature.group
PTP Remote Terminal Support	9.4.0.202003120	org.eclipse.ptp.remote.terminal.featu.
🖗 PTP Scalable Debug Manager (SDM)	9.4.0.202003120	org.eclipse.ptp.debug.sdm.feature.gr.
🖗 Remote Command Shell Console	3.0.1.201909031	org.eclipse.remote.console.feature.gr.
🖗 Remote Services	3.0.1.201909031	
🚯 Toolchain-feature	1.0.0.202007100	com.fujitsu.xtclang.tool.toolchain_fea.

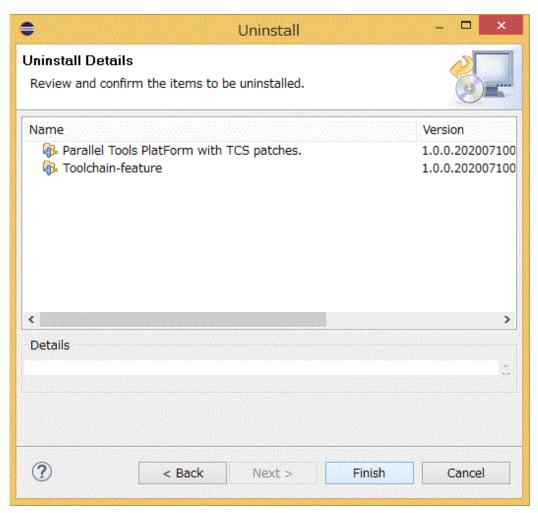
2.3.5 Uninstalling the Applied Installation Package

To uninstall the installation package applied to Eclipse, perform the following procedure.

1. Click [Help] - [About Eclipse IDE] - [Installation Details] on the menu bar. From the list on the [Installed Software] tab, select the software to delete, and click the [Uninstall] button.

type filter text		
Name	Version	Id
C/C++ Autotools support	9.11.1.20200401	
C/C++ Berkeley UPC (Unified Parallel C) Toolchain Sup C/C++ Berkeley UPC (Unified Parallel C) Toolchain Sup		
🖗 C/C++ CMake Build Support - Preview	9.11.1.20200401	5 1 5 1
▷ 🖗 C/C++ Development Tools		org.eclipse.cdt.feature.group
C/C++ GCC Cross Compiler Support		org.eclipse.cdt.build.crossgcc.feature
C/C++ Memory View Enhancements	9.11.1.20200401	J 1 J 1
		org.eclipse.cdt.launch.remote.feature
R C/C++ Standalone Debugger		org.eclipse.cdt.debug.standalone.feat
C/C++ Unit Testing Support	9.11.1.20200401	
Rev C/C++ UPC (Unified Parallel C) Support	9.11.1.20200401	2 1 1 1
Reclipse for Scientific Computing	4.16.0.20200615	
Reclipse XML Editors and Tools		org.eclipse.wst.xml_ui.feature.featur
Git integration for Eclipse		org.eclipse.egit.feature.group
🖗 Java implementation of Git		org.eclipse.jgit.feature.group
Marketplace Client	1.8.3.v20200526	
Mylyn WikiText		org.eclipse.mylyn.wikitext_feature.fe
Reparallel Tools PlatForm with TCS patches.		com.fujitsu.xtclang.tool.ptp_patch_fe
Representations	9.4.0.202003120	- 3 + - + + 3
Report	9.4.0.202003120	
Remote Project Synchronization Support	9.4.0.202003120	5 1 11 7 5 1
P PTP Remote Terminal Support		org.eclipse.ptp.remote.terminal.featu
🖗 PTP Scalable Debug Manager (SDM)		org.eclipse.ptp.debug.sdm.feature.gr
🖗 Remote Command Shell Console	3.0.1.201909031	
Remote Services	3.0.1.201909031	5
🖗 Toolchain-feature	1.0.0.20200/100	com.fujitsu.xtclang.tool.toolchain_fea
<		>
		<u>^</u>

2. The window displays the software to be uninstalled. After confirmation, click the [Finish] button. Then click the X button in the upper right corner of Eclipse to exit Eclipse. Finally, to complete the uninstallation, start Eclipse by using "eclipse -clean" from the terminal or command prompt.



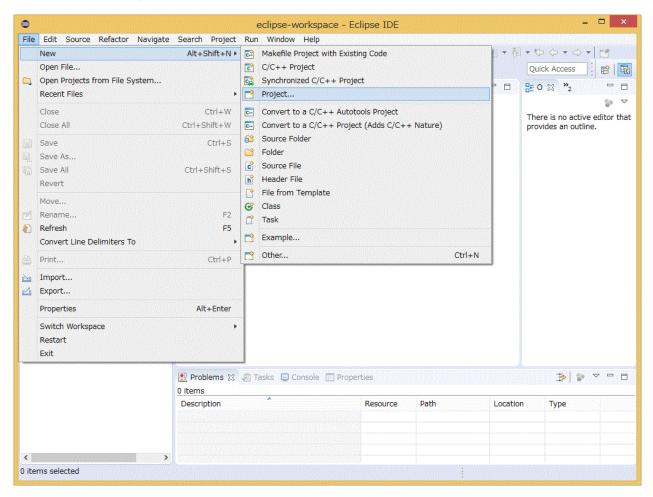
Chapter 3 Basic Usage of Eclipse

This chapter describes basic usage of Eclipse by providing procedures from creating a new project to building a program.

3.1 Creating a Project

This section describes the procedure for creating a new project.

1. Click [File] - [New] - [Project...] on the menu bar.



2. Expand [C/C++] or [Fortran] from the [New Project] window, and select the type of the project to create. Select either [Synchronized C/C++ Project] or [Synchronized Fortran Project] according to the language to use. After selection, click the [Next >] button.

New Project	_ 🗆 🗙
Select a wizard Create a new Synchronized Fortran Project	Ź
<u>W</u> izards:	
type filter text	
 ▷ ➢ General ▷ ➢ C/C++ ⓒ C Project ⓒ C/C++ Project ⓒ C++ Project ⓒ Makefile Project with Existing Code ⓒ Synchronized C/C++ Project ▷ ➢ Fortran ⓒ Fortran ⓒ Fortran Project ⓒ Synchronized Fortran Project ▷ ➢ Remote ▷ ➢ RPM 	
(?) < <u>Back</u> <u>Next ></u> <u>Finish</u>	Cancel

3. Make project-related settings in the [New Synchronized Fortran Project] window. After completing all the settings, click [Finish] button. The following table shows setting details.

Remote directory Connection name: Remote Host Remote directory: /tmp/SampleProject Brow Modify file filtering Brow Project Type Remote Toolchain (select 1 or more) © Others © FUJITSU C/C++ Compiler Executable © FUJITSU Fortran Compiler Executable © FUJITSU Fortran compiler Executable © Executable (Gnu Fortran on MacOS X) © Executable (IBM XL Fortran) © Makefile project Local Toolchain (optional - select 0 or more) FUJITSU Fortran Compiler Tool-chain FUJITSU Fortran Compiler Tool-chain © Makefile project Show project types and toolchains only if they are supported on the platform 	•	N	ew Synchronized Fortran Proje	ct	>
Project name: SampleProject Local directory ☑'Use default location Local directory: D:¥eclipse-workspace¥SampleProject Brow Remote directory Connection name: Remote Host v Remote directory: D:Yeclipse-workspace¥SampleProject Brow Modify file filtering Project Type Remote Toolchain (select 1 or more) © Others EUITSU /Crt+ Compiler Executable © Executable (Gnu Fortran on Linux/*nix) Local Toolchain (optional - select 0 or more) © Executable (Gnu Fortran on Madox) X Local Toolchain (optional - select 0 or more) © Show project types and toolchains only if they are supported on the platform FUJITSU Fortran Compiler Tool-chain	New Synchronized	Fortran Project			
Local directory Use default location Local directory: D:¥eclipse-workspace¥SampleProject Remote directory ✓ Connection name: Remote Host Remote directory: /tmp/SampleProject Modify file filtering Brow Project Type Remote Toolchain (select 1 or more) ● Others FUITSU C/C++ Compiler Executable ● FUITSU Fortran Compiler Executable EUITSU Fortran Compiler Tool-chain ● Executable (Gnu Fortran on Linux/*nix) Local Toolchain (optional - select 0 or more) ● Executable (IBM XL Fortran) FUITSU Fortran Compiler Tool-chain ● Makefile project FUITSU Fortran Compiler Tool-chain ■ Show project types and toolchains only if they are supported on the platform FUITSU Fortran Compiler Tool-chain	Create a synchronize	ed Fortran project of the selected type			Le la
Local directory Use default location Local directory: D:¥eclipse-workspace¥SampleProject Remote directory ✓ Connection name: Remote Host Remote directory: /tmp/SampleProject Modify file filtering Brow Project Type Remote Toolchain (select 1 or more) ● Others FUITSU C/C++ Compiler Executable ● FUITSU Fortran Compiler Executable EUITSU Fortran Compiler Tool-chain ● Executable (Gnu Fortran on Linux/*nix) Local Toolchain (optional - select 0 or more) ● Executable (IBM XL Fortran) FUITSU Fortran Compiler Tool-chain ● Makefile project FUITSU Fortran Compiler Tool-chain ■ Show project types and toolchains only if they are supported on the platform FUITSU Fortran Compiler Tool-chain	Project name: Sam	pleProject			
✓ Use default location Local directory: Connection name: Remote directory Connection name: Remote directory: Connection name: Remote directory: Modify file filtering Project Type					
Remote directory Connection name: Remote Host Remote directory: /tmp/SampleProject Brow Modify file filtering Project Type Remote Toolchain (select 1 or more) Others FUIITSU C/C++ Compiler Executable FUIITSU Fortran Compiler Executable FUIITSU Fortran compiler Executable Executable (Gnu Fortran on Windows) Executable (Gnu Fortran on Windows) Executable (IBM XL Fortran) Makefile project Show project types and toolchains only if they are supported on the platform Full TSU Fortran Compiler Tool-chain		ion			
Connection name: Remote Host v Ne Remote directory: /tmp/SampleProject Brow Modify file filtering Project Type Remote Toolchain (select 1 or more) Project Type PUITSU C/C++ Compiler Executable FUITSU Fortran Compiler Tool-chain Project Type FUITSU Fortran Compiler Executable FUITSU Fortran Compiler Tool-chain Project Type FUITSU Fortran Compiler Tool-chain FUITSU Fortran Compiler Tool-chain Project Type Full FSU Fortran on Windows) Local Toolchain (optional - select 0 or more) Project Type Full FSU Fortran Compiler Tool-chain Project types and toolchains only if they are supported on the platform Full TSU Fortran Compiler Tool-chain	Local directory: D:	¥eclipse-workspace¥SampleProject			Browse
Remote directory: /tmp/SampleProject Modify file filtering Project Type Project Type Remote Toolchain (select 1 or more) Project Type FUITSU Fortran Compiler Executable PUITSU Fortran Compiler Executable FUITSU Fortran Compiler Tool-chain Puitsu C/C++ Compiler Executable Local Toolchain (optional - select 0 or more) Executable (Gnu Fortran on Windows) Local Toolchain (optional - select 0 or more) Executable (IBM XL Fortran) FUITSU Fortran Compiler Tool-chain Point Makefile project FUITSU Fortran Compiler Tool-chain Show project types and toolchains only if they are supported on the platform Fuitsu Fortran Compiler Tool-chain	Remote directory				
Modify file filtering Project Type Project Type Point S FUJITSU C/C++ Compiler Executable FUJITSU Fortran Compiler Executable FUJITSU Fortran Compiler Executable Executable (Gnu Fortran on Linux/*nix) Executable (Gnu Fortran on Mindows) Executable (IBM XL Fortran) Executable IBM XL Fortran) Executable IBM XL Fortran) For Makefile project	Connection name:	Remote Host			v New
Project Type Remote Toolchain (select 1 or more) FUJITSU C/C++ Compiler Executable FUJITSU Fortran Compiler Executable Executable (Gnu Fortran on Linux/*nix) Executable (Gnu Fortran on Windows) Executable (IBM XL Fortran) Makefile project Local Toolchain (optional - select 0 or more) FUJITSU Fortran Compiler Tool-chain FUJITSU Fortran Compiler Tool-chain Executable (IBM XL Fortran) Makefile project FUJITSU Fortran Compiler Tool-chain 	Remote directory:	/tmp/SampleProject			Browse
Executable (Gnu Fortran on Windows) Executable (IBM XL Fortran) Makefile project Show project types and toolchains only if they are supported on the platform	Others FUJITSU C/C++ Compiler Executable FUJITSU Fortran Compiler Executable				
Executable (IBM XL Fortran) A Makefile project Show project types and toolchains only if they are supported on the platform			Local Toolchain (op	tional - select 0 or more)	
	Executable	(IBM XL Fortran)	FUJITSU Fortran	Compiler Tool-chain	
	Show project typ	es and toolchains only if they are supported or	n the platform		
< Back Next > Finish Car	?			< Back Next > Fir	nish Cancel

Table 3.1 Setting Details of Synchronized Project

Item Name	Setting Details
Project name:	Specify a project name. Specify an arbitrary name that is unique in the workspace. The name specified here will be the executable file name at build.
Local directory:	Specifies a directory on the client machine where the project is to be stored. If [Use default location] is checked, "workspace full path" + "directory whose name is specified in [Project name:]" is automatically specified. If you want to store the project in a different directory, specify a storage directory path in [Local directory:].
Remote directory:	Specifies a directory on the login node where the project is to be stored. In [Connection name:], set [Connection name:] created in "2.3.1 Connecting to the Login Node (Remote System)". In [Remote directory:], specify the directory path you want to save. You can specify an arbitrary directory name that does not match any directory name used in another project.
Project Type	Select a project type. To use FUJITSU compiler, expand [Others] and select [FUJITSU C/C++ Compiler Executable] or [FUJITSU Fortran Compiler Executable] according to the language to use.
Remote	Select a toolchain from the following, according to the language you want to use:
Toolchain	FUJITSU C Compiler Tool-chain
	FUJITSU C++ Compiler Tool-chain
	FUJITSU Fortran Compiler Tool-chain
Local Toolchain	Not used.

4. The created project is added to the [Project Explorer] view.

	eclipse-work	space - Eclipse IDE			
e Edit Source Refactor Navigate					
} • 🔚 🕞 🚳 • 🍕 • 🛗 👄 • [📸 + 🛍 + 🖻 + 🞯 + 🎋 + 💽 +	💡 🔹 🙋 🗀 🛷 🕶 🔛	1 📮 🖸	• 🔌 🔮	• 🕅 • 🏷 🔶 • 🔿 • 🛛 🖬
					Quick Access
Project Explorer 🛛 🗖 🗖					₽0xx >2 =
					□- º ⋈ 2
🔁 👄 👘					There is no active editor t
🔁 targetConfigurations					provides an outline.
FUJITSU_Technical_Computing_					
	📳 Problems 🕱 🔎 Tasks 📃 Conso	le 🔲 Properties			₽ ▽ □
	0 items				→ r ●
	Description	Resource	Path	Locatio	on Type
				1993 Harlanter	
>					

3.2 Adding a Source File

Add a source file to the project.

- When creating a new source file, see "3.2.1 Creating a New Source File".
- When importing existing source files, see "3.2.2 Importing Source Files".

3.2.1 Creating a New Source File

This section describes the procedure for creating a new source file for a project.

1. Select and right-click the project created in "3.1 Creating a Project". Select the [New] submenu from the displayed menu, and then select the type of file you want to add. This time, select [Fortran Source File].

٢		eclipse-	worl	kspace - Eclipse IDE	- 🗆 🗙
File Edit	Sou	rce Refactor Navigate Search Project Run Window	/ H	elp	
: 😁 🕶 🔝 🛛	1	N. C. PIANA S. R. R. C.	η.		5 (D + C) + M
		New +		Project	
		Go Into		File	Access
Project		Open in New Window		File from Template	≍ [∞] 2 □ □
🛃 Sam		Show In Alt+Shift+W >		Folder	is no active editor that
a 🗁 targe		Show in Local Terminal	G	Class	les an outline.
X FL	D	Copy Ctrl+C	F	Fortran Source File	
	Ē	Paste Ctrl+V	63	Fortran Source Folder	
	×	Delete Delete	h	Header File	
	3	Remove from Context Ctrl+Alt+Shift+Down	C	Source File	
		Source +	63	Source Folder	
		Move	C	C/C++ Project	
		Rename F2	C++	Convert to a C/C++ Project (Adds C/C++ Nature)	
	è	Import	F [®]	Fortran Project	
		Export			
				Synchronized C/C++ Project	
		Build Project		Synchronized Fortran Project	
		Clean Project	12	Synchronized Project	
	Ł	Refresh F5		Example	
		Close Project		Other Ctrl+N	
		Close Unrelated Project		Cul+N	
		Build Targets			
		Index +			
		Synchronize			
		Build Configurations	ons	ole 🔲 Properties	🍄 😨 🗢 🗖
		Profiling Tools			
	0	Run As		Resource Path Location	Туре
	*	Debug As			
	*				
		Profile As			
<		Restore from Local History			
🛃 SampleF		Show Terminal			
	*	Run C/C++ Code Analysis		•	

Ġ Note

The file types that can be selected from the [New] submenu vary depending on the project type.

2. When you have selected [Fortran Source File], the settings on the screen are as shown below. Specify the necessary information in the [New Fortran Source File] window, and click the [Finish] button. The following table shows setting details.



If you have selected another file type, interpret this content accordingly.

•	New Fortran Source File – 🗖 🗙
Source File Create a new	source file.
Source fol <u>d</u> er:	SampleProject <u>B</u> rowse
Source file:	sample.f90
Template:	Default free-form Fortran source file template v Configure
?	Einish Cancel

Table 3.2 Settings when creating a new source code

Item Name	Setting Details	
Source folder:	Specifies the location to store the source file.	
Source file:	Specify a name for the source file.	
Template:	Select a template for the source file.	

3. The file is added to the project.

□ 	Search Project Run Window Help ⓒ ▼ ⓒ ▼ ⓒ ▼ ☆ ▼ ○ ▼ ♀ ■ ▼	🥭 🖨 🧏 🖬	II π I I I I I I I I I I I I I I I I I	▼
Project Explorer Project Explorer SampleProject Sample.f90 FUITSU_Technical_Computing_:	sample.90 83 program sample implicit none ind program sample implicit none implici	. 3 4	- <u>1</u>	
			0	
		Properties	Path Local	tion Type

3.2.2 Importing Source Files

This section describes the procedure for importing source files to a project.

1. Select and right-click the project created in "3.1 Creating a Project". Select [Import...] from the displayed menu.

0		eclips	e-workspace - Eclipse IDE 🛛 🚽 🔼 🗡
File Edit	So	urce Refactor Navigate Search Project Run Wir	dow Help
			• • • • • • • • • • • • • • • • • • •
Project			
Cana San ⊿ (⊖ targ		Open in New Window Show In Alt+Shift+V Show in Local Terminal	
R F		Copy Ctrl+t	
	B	Paste Ctrl+1	
	×	Delete Delet	2
	30_	Remove from Context Ctrl+Alt+Shift+Dow	1
		Source	•
		Move	
		Rename F	2
	è	Import	
	4	Export	
	8	Build Project Clean Project Refresh F Close Project	
		Close Unrelated Project Build Targets Index Synchronize Build Configurations	onsole □ Properties
	○	Profiling Tools Run As Debug As Profile As	Resource Path Location Type
く 陸 Sample	*	Restore from Local History Show Terminal Run C/C++ Code Analysis	

2. Select [General] - [File System] under [Select an import wizard] in the [Import] window, and click [Next >] button.

● Import -	. 🗆 🗙
Select Import resources from the local file system into an existing project. Select an import wizard:	è
type filter text	
 General General Archive File Existing Projects into Workspace File System Preferences Projects from Folder or Archive C/C++ C Git G Git G Natall Oomph P RuM RPM RPM Rarget System Configurations Target Configuration from Plug-in Tarder 	
(?) < Back Next > Finish	Cancel

3. Click the [Browse...] button in [From directory:], and specify the directory that contains the files you want to import. The files in the directory appear in the box below. Check all the files you want to import. Confirm that the project created in "3.1 Creating a Project" is specified in [Into folder:]. After completing all settings, click the [Finish] button.

€	Import	- • ×
File system Import resources from the lo	cal file system.	
From directory: D:¥temp		✓ Browse
Filter Types Select All	Deselect All	
Into folder: SampleProject Options Overwrite existing resource Create top-level folder Advanced >>	ces without warning	Browse
0	< Back Next >	Finish Cancel

3.3 Editing a Source File

This section describes the procedure for editing a source file.

1. From the [Project Explorer] view, select and double-click the file you want to edit. Edit this file when it has opened. To save the edited file, click [File] - [Save] on the menu bar.

	Search Project Run Window Help	🖨 🔧 🖬 🗊 🗍		Quick Access
Project Explorer X Image: SampleProject Image: Sample.f90 Image: Sample.f90	<pre> sample.f90 % program sample implicit none end program sample 4 </pre>	<u>.</u>		E O ☆ ² 2 C D P P P P P P P P P P P P P P P P P P
	 Problems کی ای Tasks Console Prop 0 items 	erties	, 	<u>}</u> ₽ ₽ ₽ ₽ Ε

3.4 Building a Project

This section describes the procedure for building a project.

1. Select and right-click the project created in "3.1 Creating a Project". Select [Build Project] from the displayed menu.

		e Refactor Navigate Search Project R				
3 - 8 €	8	New Go Into	• • • • • • • • • • • • • • • • • • •	▼ ☆ ▼ 0 ▼ 9₌ ▼ 129 12 14	- IN II 1 1	
Project E		Show in Local Terminal Copy Paste Delete	It+Shift+W •	11 •	5 6;	E O ⊠ IT " I I Z R S • #
	4	Export				
	Ð	Build Project Clean Project Refresh Close Project Close Unrelated Project Build Targets Index	F5		*	
		Synchronize Build Configurations	, 50	le 🔲 Properties		\$20 €
SamplePr	0	Profiling Tools Run As Debug As Profile As Restore from Local History Show Terminal	* * *	Resource Path	Locati	on Type

2. Execute build. The [Console] view at the bottom right outputs a build log, and the generated files are added to the [Project Explorer] view.

•	eclipse-workspace - SampleProject/hello.f90 - Eclipse	IDE	_ 🗆 ×
File Edit Source Refactor Navigate	Search Project Run Window Help		
	💷 🐧 • 🔌 • 🗳 • 🗳 • 🧭 • 🔗 • 🗛 • 🔾 • 😤 • 🕭 🔗	-:Ru 🗐 👖 : 🖓 -	周·**> @ + @ + r*
			Quick Access
Project Explorer 🔀 📃 🗖	🖻 hello.f90 🔀		₽0 X T »1 - □
Ē\$\$ ▼	$\hline \cdots \cdots$	5 6; .	🗏 🕂 😿 🖋 🔹 🗰 💱
⊿ 🧮 SampleProject	1 program hello		
▶ → FUJITSU_Fortran_Compiler_Rele	<pre>2 print *, 'Hello World!'</pre>		<free form=""></free>
hello.f90	3 end program 4		A hello
targetConfigurations	-		•
FUJITSU_Technical_Computing_			
		4	
	<	,	
	📳 Problems 🧔 Tasks 📃 Console 😥 🔲 Properties 🔍		
	CDT Build Console [SampleProject]		
	> Shell Completed (exit code = 0)		^
	13:24:58 Build Finished. 0 errors, 0 warnings. (took 4	s.895ms)	
< >			×

🌀 Note

When running [Build Project], build may occur before a file or directory is created in the login node, resulting in a build error. When this occurs, an error message "No such file or directory" is printed. If you receive an error message "No such file or directory", select [Build Project] again.

.

.

If you change compiler options before the build, the build results may not reflect the changed options. Check the [Console] view. If the changed options are not reflected, clean the project before executing the build again.

Even though an error occurs, command issues are not terminated. Therefore, multiple errors can occur.

Information

To clean a project, select and right-click the project created in "3.1 Creating a Project", and select [Clean Project] from the displayed menu.

Chapter 4 Using Fujitsu Extended Functions

This chapter describes procedures for using Fujitsu extended functions.



To use Fujitsu extended functions, use the workspace created in "2.3.1 Connecting to the Login Node (Remote System)".

4.1 Build Using Fujitsu Compiler

The following describes the build procedure that uses the Fujitsu compiler. For details on the compiler, see "Fortran User's Guide", "C User's Guide", or "C++ User's Guide".

4.1.1 Setting Environment Variables on the Login Node

The integrated development environment uses compilers that reference environment variables at login to the login node. Therefore, add the environment variables used by the compilers to the login shell of the login node. The following example shows what to add to use bash.

```
export LANG_HOME=installation_path
export PATH="${LANG_HOME}/bin:${PATH}"
export LD_LIBRARY_PATH="${LANG_HOME}/lib64:${LD_LIBRARY_PATH}"
```

For details on "installation_path", contact the system administrator.

4.1.2 Creating a Project

For the procedure for creating a project, see "3.1 Creating a Project".

4.1.3 Adding a Source File

For the procedure for creating source code, see "3.2 Adding a Source File".

4.1.4 Editing a Source File

For the procedure for editing source code, see "3.3 Editing a Source File".

4.1.5 Specifying Compiler Options

Specify compiler options. For details on the compiler, see "Fortran User's Guide", "C User's Guide", or "C++ User's Guide".

1. Select the project for which you want to specify compiler options, and click [Properties] in the right-click menu.

		ce Refactor Navigate Searc 🛞 🕶 🔦 🕶 🔜 ⇔ 💌 🔜 🕻 🕻		Help ♂ • : ☆ • ① • ♀ • : ❷ ▷ ৵ • : ₪ 圓 m : 월 • 전 • ♡ 수 • ▷ • Quick Access : 월 韓 國
Project E	cplor	rer 🛛 🗖 🗖		□ 🗄 0 🛛 🔭 🛛
		🖻 🔄 🗊 🗸		
🛃 Samp	oDec	New	•	There is no active editor
😸 targel		Go Into		provides an outline.
		Open in New Window		
		Show In	Alt+Shift+W ▸	
		Show in Local Terminal		
		Сору	Ctrl+C	
	Ē	Paste	Ctrl+V	
		Delete	Delete	
	3	Remove from Context	Ctrl+Alt+Shift+Down	
		Source	•	
		Move		
		Rename	F2	
	<u>i</u>	Import		
		Export		
		Build Project		
		Clean Project		
	E	Refresh	F5	
		Close Project		
		Close Unrelated Project		
		Build Targets	•	
		Index	•	
		Synchronize	•	
		Build Configurations	•	
		Profiling Tools	•	
	0.00	Run As	•	
	Ŧ	Debug As Profile As		e 🕱 🗔 Properties 📑 🖶 🗝 🖻
		Restore from Local History		
		Show Terminal		
	*	Run C/C++ Code Analysis		
		Team	•	
		Compare With	•	
		Validate		
		Configure	•	
		Source	•	

2. Specify compiler options by referencing "4.1.5.1 Specify Compiler Options (Fortran)", "4.1.5.2 Specify Compiler Options (C)", or "4.1.5.3 Specify Compiler Options (C++)".

4.1.5.1 Specify Compiler Options (Fortran)

Select [Fortran Build] - [Settings]. Make settings for the items in the [Tool Settings] tab. Click the [Apply and Close] button.

Figure 4.1 [Tool Settings] tab - [FUJITSU Fortran Compiler]

•	Properties for SampleProject – 🗖 🗙
type filter text	Settings $\diamondsuit \star \checkmark \star$
 ▷ Resource Builders ▷ C/C++ Build ▷ C/C++ General ▲ Fortran Build 	Configuration: FUJITSU_Fortran_Compiler_Release_Module [Active] > Manage Configurations
Build Variables Environment	🛞 Tool Settings 🎤 Build Steps 🙅 Build Artifact 🗟 Binary Parsers 🧕 Error Parsers
Settings	FUJITSU Fortran Compiler Command: mpifrtpx -c
Tool Chain Editor	Dialect All options: KfastKopenmp All options: KfastKopenmp Optimization We FUJITSU Compiler Fortran Linker
Project References Run/Debug Settings Synchronize ▷ Task Repository Task Tags ▷ Validation WikiText	^(a) Libraries ^(b) Libraries ^(b) Additional options Expert settings: ^(c) Command ^(c) COMMAND ^(c) Interview ^(c) State of the settings: ^(c) Command ^(c) State of the settings:
(?)	Apply and Close Cancel
۵ ۲	

Table 4.1 Settings in [FUJITSU Fortran Compiler]

Item Name	Description
Command:	Adds the command name to be used at the time of compilation. Rewrite if necessary.
All options:	Filled with compiler options to be specified at the time of compilation. The settings made in [Dialect], [Preprocessor], [Includes], and [Optimization] are automatically reflected in this order.
Command line pattern:	Filled with the command line output format.

_ 🗆 0 Properties for SampleProject type filter text Settings $\langle \neg \bullet \ominus \rangle \bullet \bullet$ Resource ~ Builders Configuration: FUJITSU_Fortran_Compiler_Release_Module [Active] > Manage Configurations... C/C++ Build b C/C++ General ▲ Fortran Build 🛞 Tool Settings 🎤 Build Steps 🚇 Build Artifact 🗟 Binary Parsers 🔞 Error Parsers **Build Variables** Environment FUJITSU Fortran Compiler Language standard Default ¥ Settings 🖄 Dialect Tool Chain Editor Other dialect flags Preprocessor Fortran General Includes Linux Tools Path Optimization Project Natures FUJITSU Compiler Fortran Linker Project References 🖄 Libraries Run/Debug Settings Additional options Synchronize Task Repository Task Tags Validation WikiText Y ? Apply and Close Cancel

Figure 4.2 [Tool Settings] tab - [FUJITSU Fortran Compiler] - [Dialect]

Table 4.2 Settings in [Dialect] (Fortran)

Item Name	Description
Language standard	Selects compiler options for the interpretation of language specifications. If "Default" is selected, no compiler options will be added.
Other dialect flags	Adds an arbitrary compiler option.

Figure 4.3 [Tool Settings] tab - [FUJITSU Fortran Compiler] - [Preprocessor]

e	Properties for SampleProject – 🗖 🗙
type filter text	Settings 🗢 • 🔿 • •
 ▷ Resource Builders ▷ C/C++ Build ▷ C/C++ General ▲ Fortran Build Build Variables 	Configuration: FUJITSU_Fortran_Compiler_Release_Module [Active] v Manage Configurations Tool Settings Pauld Steps Build Artifact Binary Parsers Error Parsers
Environment Settings Tool Chain Editor Fortran General Linux Tools Path Project Natures Project References Run/Debug Settings Synchronize Task Repository Task Tags Validation WikiText	Image: Section 2 Use Preprocessor (-Cpp) Image: Preprocessor Preprocessor Image: Preprocessor Preprocessor kind Image: Preprocessor Image: Preprocessor kind Image: Preprocessor Image: Preprocessor Image: Preprocessor Image: Preprocessor <
?	Apply and Close Cancel

Table 4.3 Settings in [Preprocessor] (Fortran)

Item Name	Description
Use Preprocessor (- Cpp)	Specifies whether to call a preprocessor. If this box is checked, the compiler option -Cpp will be added.
Preprocessor kind	Selects the type of the preprocessor to use.
	None
	Does not add compiler options.
	C language (-Ccpp)
	Adds the compiler option -Ccpp.
	Fortran (-Cfpp)
	Adds the compiler option -Cfpp.
Preprocess only (-E)	If this box is checked, the compiler option -E will be added.
	Solution The preprocessor results are output to the [Console] view.
Defined symbols (-D)	Like the preprocessing directive #define, associates <i>name</i> with <i>tokens. name=tokens</i> is added as an argument for the compiler option -D. <i>name</i> and <i>tokens</i> are arbitrary values.
	Click the + icon on the right to open the input window. Add <i>name=tokens</i> and click the [OK] button. Repeat this step if you want to specify more than one.

_ 🗆 0 Properties for SampleProject type filter text Settings $\langle \neg \bullet \ominus \rangle \bullet \bullet$ Resource ~ Builders Configuration: FUJITSU_Fortran_Compiler_Release_Module [Active] > Manage Configurations... C/C++ Build b C/C++ General ▲ Fortran Build 🛞 Tool Settings 🎤 Build Steps 🚇 Build Artifact 🗟 Binary Parsers 🔞 Error Parsers **Build Variables** Environment FUJITSU Fortran Compiler Include paths (-I) Settings 🛃 🔊 🗟 취 🌆 🖄 Dialect Tool Chain Editor Preprocessor Fortran General Includes Linux Tools Path Optimization Project Natures FUJITSU Compiler Fortran Linker Project References 🖄 Libraries Run/Debug Settings Additional options Synchronize Task Repository Task Tags Validation WikiText ¥ ? Apply and Close Cancel

Figure 4.4 [Tool Settings] tab - [FUJITSU Fortran Compiler] - [Includes]

Table 4.4 Settings in [Includes] (Fortran)

Item Name	Description
Include paths (-I)	Specify the path to the header to add to the reference destination at the time of compilation. Add it as an argument for the compiler option -I.
	Click the + icon on the right to open the input window. Add the path to the header and click the [OK] button. Repeat this step if you want to specify more than one.

_ 🗆 0 Properties for SampleProject type filter text Settings $\langle \neg \bullet \ominus \rangle \bullet \bullet$ Resource ~ Builders Configuration: FUJITSU_Fortran_Compiler_Release_Module [Active] > Manage Configurations... C/C++ Build b C/C++ General ▲ Fortran Build 🛞 Tool Settings 🎤 Build Steps 🚇 Build Artifact 🗟 Binary Parsers 🔞 Error Parsers **Build Variables** Environment FUJITSU Fortran Compiler Optimization level -Kfast ¥ Settings 🖄 Dialect Tool Chain Editor Optimization flags -Kopenmp Preprocessor Fortran General Mincludes Linux Tools Path 🖉 Optimization Project Natures FUJITSU Compiler Fortran Linker Project References 🖄 Libraries Run/Debug Settings Additional options Synchronize Task Repository Task Tags Validation WikiText ¥ ? Apply and Close Cancel

Figure 4.5 [Tool Settings] tab - [FUJITSU Fortran Compiler] - [Optimization]

Item Name	Description
Optimization level	Selects compiler options related to the optimization level.
Optimization flags	Adds an arbitrary compiler option.

Figure 4.6 [Tool Settings] tab - [FUJITSU Compiler Fortran Linker]

e	Properties for SampleProject – 🗖 🗙
type filter text	Settings 🗘 🔹 🐳
 ▷ Resource Builders ▷ C/C++ Build ▷ C/C++ General ▲ Fortran Build Build Variables 	Configuration: FUJITSU_Fortran_Compiler_Release_Module [Active] v Manage Configurations Tool Settings Build Steps Build Artifact Binary Parsers Full Parsers
Environment	
Settings	We provide the second sec
Tool Chain Editor ▷ Fortran General Linux Tools Path Project Natures	Dialect All options: -Kfast -Kopenmp All options: Optimization
Project References	S FUJITSU Compiler Fortran Linker B Libraries
Run/Debug Settings Synchronize	Additional options Expert settings:
 ▶ Task Repository Task Tags ▶ Validation WikiText 	Command line pattern: \${COMMAND} \${FLAGS} \${OUTPUT_FL
	·
0	Apply and Close Cancel

Table 4.6 Settings in [FUJITSU Compiler Fortran Linker]

Item Name	Description
Command:	Adds the command name to be used at the time of linking. Rewrite if necessary.
All options:	Filled with the compiler options to be used at the time of linking. Settings made in [Libraries] and [Additional options] are automatically reflected in this order.
Command line pattern:	Filled with the command line output format.

•	Properties for SampleF	Project	- 🗆 🗙
type filter text	Settings		
 ▷ Resource Builders ▷ C/C++ Build ▷ C/C++ General J Fortran Build Build Veriables 	Configuration: FUJITSU_Fortran_Compiler_F		Manage Configurations
Build Variables Environment Settings Tool Chain Editor ▷ Fortran General Linux Tools Path Project Natures Project References Run/Debug Settings Synchronize Task Repository Task Tags ▷ Validation WikiText	 Tool Settings Build Steps Build / FUJITSU Fortran Compiler Dialect Preprocessor Optimization Second Stress Optimize Fortran Linker Libraries Additional options 	Artifact Image: Binary Parsers Library paths (-L)	 ● Error Parsers ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ●
?		Apply a	nd Close Cancel

Figure 4.7 [Tool Settings] tab - [FUJITSU Compiler Fortran Linker] - [Libraries]

Table 4.7 Settings in [Libraries] (Fortran)

Item Name	Description
Library paths (- L)	Specifies a list of directories to search for a library. The list is specified as an argument for the compiler option -L. Click the + icon on the right to open the input window. Add directory path and click the [OK] button. Repeat this step if you want to specify more than one.
Library names (- l)	Adds the specified library name as a search target. The name is specified as an argument for the compiler option - l. Click the + icon on the right to open the input window. Add library name and click the [OK] button. Repeat this step if you want to specify more than one.

Figure 4.8 [Tool Settings] tab - [FUJITSU Fortran Linker] - [Additional options]

0	Properties for SampleProject – 🗖 🗙
type filter text	Settings 🗢 🔹 👻
 kesource Builders C/C++ Build C/C++ General Fortran Build Build Variables Environment Settings Tool Chain Editor Fortran General Linux Tools Path Project Natures Project References Run/Debug Settings Synchronize Task Repository Task Tags Validation WikiText 	Seturings Configuration: FUJITSU_Fortran_Compiler_Release_Module [Active] Manage Configurations
	~
0	Apply and Close Cancel

Table 4.8 Settings in [Additional options] (Fortran)

Item Name	Description
Optimization option (-Kfast)	Specifies whether to add the compiler option -Kfast at the time of linking. If this box is checked, the compiler option -Kfast will be added at the time of linking.
Additional options	Adds an arbitrary compiler option.

4.1.5.2 Specify Compiler Options (C)

Select [C/C++ Build] - [Settings]. Make settings for the items in the [Tool Settings] tab. Click the [Apply and Close] button.

Figure 4.9 [Tool Settings] tab - [FUJITSU C Compiler]

e	Properties	s for C		-	
type filter text	Settings			¢ •	• => • •
 ▷ Resource Builders ▲ C/C++ Build Build Variables Environment Logging 	Configuration: FUJITSU_C_Compiler	_Release_Modu		Manage Configurat	tions
Settings Tool Chain Editor	FUJITSU C Compiler	Command:	mpifccpx -c		
 C/C++ General Fortran Build Linux Tools Path Paths and Symbols Project Natures 	Dialect Preprocessor Includes Optimization FUJITSU Compiler C Linker	All options:	-Kfast -Kopenmp		~
Project Natures Project References Run/Debug Settings Synchronize ▷ Task Repository Task Tags ▷ Validation WikiText	Libraries	Expert setting Command line pattern:	js: \${COMMAND} \${FL	AGS} \${OUTPUT_F	LAG.
0			Apply	and Close C	ancel

Table 4.9 Settings in [FUJITSU C Compiler]

Item Name	Description
Command	Adds the command name to be used at the time of compilation. Rewrite if necessary.
All options	Filled with compiler options to be specified at the time of compilation. The settings made in [Dialect], [Preprocessor], [Includes], and [Optimization] are automatically reflected in this order.
Command line pattern	Filled with the command line output format.

Figure 4.10 [Tool Settings] tab - [FUJITSU C Compiler] - [Dialect]

0	Properties for C – 🗖 🗙
type filter text	Settings 🔶 🔹 🗢
 Resource Builders C/C++ Build Build Variables Environment Logging Settings Tool Chain Editor C/C++ General Fortran Build Linux Tools Path Paths and Symbols Project Natures Project References Run/Debug Settings Synchronize Task Repository Task Tags Validation WikiText 	Configuration: FUJITSU_C_Compiler_Release_Module [Active] Manage Configurations Tool Settings Build Steps Build Artifact Binary Parsers FUJITSU C Compiler Language standard Default Preprocessor FUITSU Compiler C Linker Cher dialect flags Additional options
?	Apply and Close Cancel

Table 4.10 Settings in [Dialect] (C)

Item Name	Description
Language standard	Selects compiler options for the interpretation of language specifications. If "Default" is selected, no compiler options will be added.
Other dialect flags	Adds an arbitrary compiler option.

Figure 4.11 [Tool Settings] tab - [FUJITSU C Compiler] - [Preprocessor]

0	Properties for C – 🗖 🗙
type filter text	Settings 🔅 • 🖒 • •
 Resource Builders C/C++ Build C/C++ General Fortran Build Build Variables Environment Settings Tool Chain Editor Linux Tools Path Paths and Symbols Project Natures Project References Run/Debug Settings Synchronize Task Repository Task Tags Validation WikiText 	Configuration: FUJITSU_C_Compiler_Release_Module [Active] Manage Configurations Tool Settings Build Steps Build Artifact Binary Parsers Error Parsers FUJITSU C Compiler Do not search system directories (-nostdinc) Preprocessor Doftmization FUJITSU Compiler C Linker Additional options Additional options Additional options Additional
0	Apply and Close Cancel

Table 4.11 Settings in [Preprocessor] (C)

Item Name	Description	
Do not search system directories (-nostdinc)	Specifies that no standard directories are searched when searching a header. If this box is checked, the compiler option -nostdinc will be added.	
Preprocess only (-E)	If this box is checked, the compiler option -E will be added.	
	The results of the preprocessor will be output to .o file. You will see compile and link errors, but ignore them.	
Defined symbols (-D)	Like the preprocessing directive #define, associates <i>name</i> with <i>tokens. name=tokens</i> is added as an argument for the compiler option -D. <i>name</i> and <i>tokens</i> are arbitrary values.	
	Click the + icon on the right to open the input window. Add <i>name=tokens</i> and click the [OK] button. Repeat this step if you want to specify more than one.	

Figure 4.12 [Tool Settings] tab - [FUJITSU C Compiler] - [Includes]

0	Properties for C – 🗖 🗙
type filter text	Settings 🔶 🔹 🗢
 Resource Builders C/C++ Build Build Variables Environment Logging Settings Tool Chain Editor C/C++ General Fortran Build Linux Tools Path Paths and Symbols Project Natures Project References Run/Debug Settings Synchronize Task Repository Task Tags Validation WikiText 	Configuration: FUJITSU_C_Compiler_Release_Module [Active] Tool Settings Build Steps Build Artifact Binary Parsers Include paths (-I) Includes Preprocessor Includes Optimization S FUJITSU Compiler C Linker Libraries Additional options
?	Apply and Close Cancel

Table 4.12 Settings in [Includes] (C)

Item Name	Description
Include paths (-I)	Specify the path to the header to add to the reference destination at the time of compilation. Add it as an argument for the compiler option -I.
	Click the + icon on the right to open the input window. Add the path to the header and click the [OK] button. Repeat this step if you want to specify more than one.

Figure 4.13 [Tool Settings] tab - [FUJITSU C Compiler] - [Optimization]

0	Properties for C – 🗖 🗙
type filter text	Settings 🔶 👻 🗢
 Resource Builders C/C++ Build Build Variables Environment Logging Settings Tool Chain Editor 	Configuration: FUJITSU_C_Compiler_Release_Module [Active] Manage Configurations Tool Settings Build Steps Build Artifact Binary Parsers Error Parsers FUJITSU C Compiler Optimization level -Kfast V
A DATE DATE AND A	 Dialect Preprocessor Includes Optimization FUJITSU Compiler C Linker Libraries Additional options
?	Apply and Close Cancel

Item Name	Description
Optimization level	Selects compiler options related to the optimization level.
Optimization flags	Adds an arbitrary compiler option.

Figure 4.14 [Tool Settings] tab - [FUJITSU Compiler C Linker]

•	Properties for C – 🗆 🗙
type filter text	Settings 🔶 🔹 🗢
 Resource Builders C/C++ Build Build Variables Environment Logging Settings 	Configuration: FUJITSU_C_Compiler_Release_Module [Active] ✓ Manage Configurations State Tool Settings Pauld Steps Build Artifact Binary Parsers Serror Parsers
Tool Chain Editor	FUJITSU C Compiler Command: mpifccpx
 C/C++ General Fortran Build Linux Tools Path Paths and Symbols Project Natures Project References Run/Debug Settings 	Dialect Preprocessor Includes Optimization FUJITSU Compiler C Linker Libraries Additional options Expert settings: Command
Synchronize ▷ Task Repository Task Tags ▷ Validation WikiText	Command line pattern: \${COMMAND} \${FLAGS} \${OUTPUT_FLAG} *
?	Apply and Close Cancel

Table 4.14 Settings in [FUJITSU Compiler C Linker]

Item Name	Description
Command:	Adds the command name to be used at the time of linking. Rewrite if necessary.
All options:	Filled with the compiler options to be used at the time of linking. Settings made in [Libraries] and [Additional options] are automatically reflected in this order.
Command line pattern:	Filled with the command line output format.

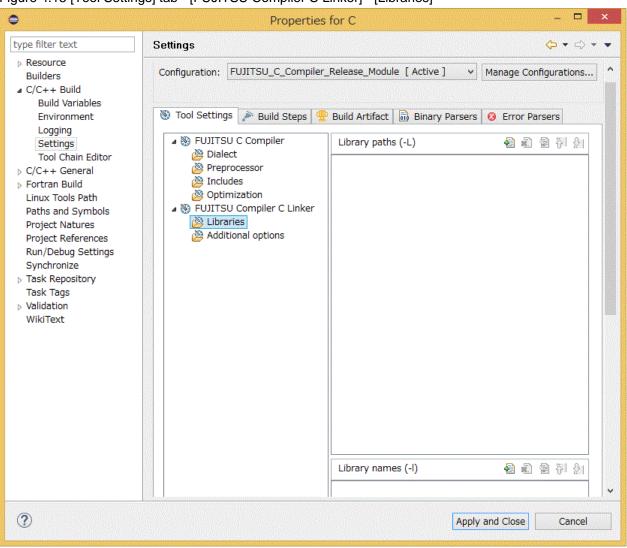


Figure 4.15 [Tool Settings] tab - [FUJITSU Compiler C Linker] - [Libraries]

Table 4.15 Settings in [Libraries] (C)

Item Name	Description
Library paths (- L)	Specifies a list of directories to search for a library. The list is specified as an argument for the compiler option -L. Click the + icon on the right to open the input window. Add directory path and click the [OK] button. Repeat this step if you want to specify more than one.
Library names (- l)	Adds the specified library name as a search target. The name is specified as an argument for the compiler option - 1. Click the + icon on the right to open the input window. Add library name and click the [OK] button. Repeat this step if you want to specify more than one.

Figure 4.16 [Tool Settings] tab - [FUJITSU Compiler C Linker] - [Additional options]

0	Properties for C – 🗖 🗙
type filter text	Settings 🗘 🔹 😅
 Resource Builders C/C++ Build Build Variables Environment Logging Settings Tool Chain Editor C/C++ General Fortran Build Linux Tools Path Paths and Symbols Project Natures Project References Run/Debug Settings Synchronize Task Repository Task Tags Validation WikiText 	Configuration: FUJITSU_C_Compiler_Release_Module [Active] Manage Configurations Tool Settings Build Steps Build Artifact Binary Parsers Error Parsers Optimization option (-Kfast) Additional options -Kopenmp Additional options Additional options Additional options
?	Apply and Close Cancel

Table 4.16 Settings in [Additional options] (C)

Item Name	Description
Optimization option (-Kfast)	Specifies whether to add the compiler option -Kfast at the time of linking. If this box is checked, the compiler option -Kfast will be added at the time of linking.
Additional options	Adds an arbitrary compiler option.

4.1.5.3 Specify Compiler Options (C++)

Select [C/C++ Build] - [Settings]. Make settings for the items in the [Tool Settings] tab. Click the [Apply and Close] button.

Figure 4.17 [Tool Settings] tab - [FUJITSU C++ Compiler]

0	Properties for CPP – 🗖 🗙
type filter text	Settings $(r \cdot \Rightarrow \cdot \bullet)$
 Resource Builders C/C++ Build Build Variables Environment Logging 	Configuration: FUJITSU_C++_Compiler_Release_Module [Active] ∨ Manage Configurations
Tool Chain Editor	FUJITSU C++ Compiler Command: mpiFCCpx -c
Settings	 Dialect Preprocessor Includes Optimization FUJITSU Compiler C++ Linker Libraries Additional options Expert settings: Command line pattern: \${COMMAND} \${FLAGS} \${OUTPUT_
0	Apply and Close Cancel

Table 4.17 Settings in [FUJITSU C++ Compiler]

Item Name	Description
Command:	Adds the command name to be used at the time of compilation. Rewrite if necessary.
All options:	Filled with compiler options to be specified at the time of compilation. The settings made in [Dialect], [Preprocessor], [Includes], and [Optimization] are automatically reflected in this order.
Command line pattern:	Filled with the command line output format.

Figure 4.18 [Tool Settings] tab - [FUJITSU C++ Compiler] - [Dialect]

e	Properties for CPP – 🗖 🗙
type filter text	Settings 🗘 🗸 🗸 🗸
 Resource Builders C/C++ Build Build Variables Environment Logging Settings 	Configuration: FUJITSU_C++_Compiler_Release_Module [Active] v Manage Configurations Tool Settings Build Steps Build Artifact Binary Parsers Error Parsers
Tool Chain Editor C/C++ General Fortran Build Linux Tools Path Paths and Symbols Project Natures Project References Run/Debug Settings Synchronize Task Repository Task Tags Validation WikiText	Image: Second system Language standard Default Dialect Other dialect flags Includes Includes Includes
?	Apply and Close Cancel

Table 4.18 Settings in [Dialect] (C++)

Item Name	Description
Language standard	Selects compiler options for the interpretation of language specifications. If "Default" is selected, no compiler options will be added.
Other dialect flags	Adds an arbitrary compiler option.

Figure 4.19 [Tool Settings] tab - [FUJITSU C++ Compiler] - [Preprocessor]

e	Properties for CPP
type filter text	Settings 🗘 🗸 🗸 🗸
 kesource Builders C/C++ Build Build Variables Environment Logging Settings Tool Chain Editor C/C++ General Fortran Build Linux Tools Path Paths and Symbols Project Natures Project References Run/Debug Settings Synchronize Task Repository Task Tags Validation WikiText 	Configuration: FUJITSU_C++_Compiler_Release_Module [Active] V Manage Configurations Tool Settings Build Steps Build Artifact Binary Parsers Error Parsers FUJITSU C++ Compiler Do not search system directories (-nostdinc) Preprocess only (-E) Defined symbols (-D) FUJITSU Compiler C++ Linker Characters Additional options FUSITSU Compiler C++ Linker FUSITSU COMPILE C++ Linker FUSITSU COMPILE C++ Linker FUSITSU C++ C++ Linker FUSITSU C++ C++ C++ C++ C++ C++ C++ C++ C++ C+
0	Apply and Close Cancel
U	

Table 4.19 Settings in [Preprocessor] (C++)

Item Name	Description
Do not search system directories (-nostdinc)	Specifies that no standard directories are searched when searching a header. If this box is checked, the compiler option -nostdinc will be added.
Preprocess only (-E)	If this box is checked, the compiler option -E will be added.
	The results of the preprocessor will be output to .o file. You will see compile and link errors, but ignore them.
Defined symbols (-D)	Like the preprocessing directive #define, associates <i>name</i> with <i>tokens</i> . <i>name=tokens</i> is added as an argument for the compiler option -D. <i>name</i> and <i>tokens</i> are arbitrary values.
	Click the + icon on the right to open the input window. Add <i>name=tokens</i> and click the [OK] button. Repeat this step if you want to specify more than one.

Figure 4.20 [Tool Settings] tab - [FUJITSU C++ Compiler] - [Includes]

•	Properties for CPP – 🗖 🗙
type filter text	Settings 🗘 🔹 🕁 🔹 👻
 Resource Builders C/C++ Build Build Variables Environment Logging Settings 	Configuration: FUJITSU_C++_Compiler_Release_Module [Active] Tool Settings Build Steps Build Artifact Binary Parsers FUJITSU C++ Compiler Include paths (-I)
	▲ S FUJITSU C++ Compiler Dialect Dialect
?	Apply and Close Cancel

Table 4.20 Settings in [Includes] (C++)

Item Name	Description
Include paths (-I)	Specify the path to the header to add to the reference destination at the time of compilation. Add it as an argument for the compiler option -I.
	Click the + icon on the right to open the input window. Add the path to the header and click the [OK] button. Repeat this step if you want to specify more than one.

Figure 4.21 [Tool Settings] tab - [FUJITSU C++ Compiler] - [Optimization]

e	Properties for CPP – 🗖 🗙
type filter text	Settings $(\neg \bullet \bullet$
 Resource Builders C/C++ Build Build Variables Environment Logging Settings Tool Chain Editor 	Configuration: FUJITSU_C++_Compiler_Release_Module [Active] Manage Configurations Image: Tool Settings Build Steps Build Artifact Binary Parsers Error Parsers Image: FUJITSU C++ Compiler Optimization level -Kfast
The second	 Dialect Preprocessor Includes Optimization FUIITSU Compiler C++ Linker Libraries Additional options
0	Apply and Close Cancel

Table 4.21 Settings in [Optimization] (C++)

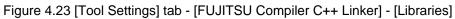
Item Name	Description
Optimization level	Selects compiler options related to the optimization level.
Optimization flags	Adds an arbitrary compiler option.

Figure 4.22 [Tool Settings] tab - [FUJITSU Compiler C++ Linker]

e	Properties for CPP – 🗖 🗙
type filter text	Settings $(r, v) \star \star$
type filter text	Settings Configuration: FUJITSU_C++_Compiler_Release_Module [Active] Manage Configurations Tool Settings Build Steps Build Artifact Build Steps Build Artifact Build Steps Build Artifact FUJITSU C++ Compiler Dialect Preprocessor Includes Optimization FUJITSU Compiler C++ Linker Libraries Additional options Expert settings: Command Ine pattern: \${COMMAND} \${FLAGS} \${OUTPUT_
WikiText	Apply and Close Cancel

Table 4.22 Settings in [FUJITSU Compiler C++ Linker]

Item Name	Description
Command:	Adds the command name to be used at the time of linking. Rewrite if necessary.
All options:	Filled with the compiler options to be used at the time of linking. Settings made in [Libraries] and [Additional options] are automatically reflected in this order.
Command line pattern:	Filled with the command line output format.



0	Properties for CPP - 🗆 🗙
type filter text	Settings 🗢 🔹 👻
type filter text Resource Builders C/C++ Build Build Variables Environment Logging Settings Tool Chain Editor C/C++ General Fortran Build Linux Tools Path Paths and Symbols Project Natures Project References Run/Debug Settings Synchronize Task Repository Task Tags Validation WikiText	Settings
0	Apply and Close Cancel

Table 4.23 Settings in [Libraries] (C++)

Item Name	Description
Library paths (- L)	Specifies a list of directories to search for a library. The list is specified as an argument for the compiler option -L. Click the + icon on the right to open the input window. Add directory path and click the [OK] button. Repeat this step if you want to specify more than one.
Library names (- l)	Adds the specified library name as a search target. The name is specified as an argument for the compiler option - l. Click the + icon on the right to open the input window. Add library name and click the [OK] button. Repeat this step if you want to specify more than one.

Figure 4.24 [Tool Settings] tab - [FUJITSU Compiler C++ Linker] - [Additional options]

e	Properties for CPP				
type filter text	Settings 🔅 🔹 😅 👻				
type hiter text Resource Builders C/C++ Build Build Variables Environment Logging Settings Tool Chain Editor C/C++ General Fortran Build Linux Tools Path Paths and Symbols Project Natures Project References Run/Debug Settings Synchronize Task Repository Task Tags Validation WikiText	Settings Configuration: FUJITSU_C++_Compiler_Release_Module [Active] Manage Configurations Tool Settings Build Steps Build Artifact Binary Parsers Error Parsers FUJITSU C++ Compiler Dialect Preprocessor Includes Optimization FUJITSU Compiler C++ Linker Libraries Additional options				
	↓				
0	Apply and Close Cancel				

Table 4.24 Settings in [Additional options] (C++)

Item Name	Description		
Optimization option (-Kfast)	Specifies whether to add the compiler option -Kfast at the time of linking. If this box is checked, the compiler option -Kfast will be added at the time of linking.		
Additional options	Adds an arbitrary compiler option.		

4.1.6 Building a Project

For the procedure for building a project, see "3.4 Building a Project".

4.2 Job Submission

This section describes the procedure for submitting a job.

1. Click [Run] - [Run Configurations...] on the menu bar.

Θ	eclipse-workspace -	Eclipse IDE	- 🗆 ×
File Edit Source Refactor Navigate Search Proj Project Explorer S SampleProject FullTSU_Fortran_Compiler_Rels FullTSU_Technical_Computing_	Run Window Help	Ctrl+F11 F11 * * * * * * * * * * * * * * * *	 Image: Control of the second seco
CDT Build Co > Shell Co	asks Console C	operties 3 3 3 3 3 3 3 3 3 3	

2. Select [Parallel Application] in the left pane of the [Run Configurations] window, and click the [New launch configuration] icon.

€	Run Configurations – 🗖 🗙		
Create, manage, and run configurations Create a configuration to launch a parallel application			
type filter text C/C++ Application C/C++ Remote Applic Cij C/C++ Unit Launch Group Launch Group Parallel Application	 Configure launch settings from this dialog: Press the 'New Configuration' button to create a configuration of the selected type. Press the 'New Prototype' button to create a lch configuration prototype of the selected type. Press the 'Export' button to export the selected configurations. Press the 'Duplicate' button to copy the selected configuration. Press the 'Delete' button to remove the selected configuration. Press the 'Delete' button to configure filtering options. Edit or view an existing configuration by selecting it. Select launch configuration(s) and then selectlink Prototype' menu item to link a prototype. Select launch configuration(s) and then seleclues' menu item to reset with prototype values. 		
Filter matched 6 of 6 items			
?	Run Close		

3. A new item (Hereafter referred to as [New Configuration]) is added to [Parallel Application]. Select [New Configuration] to set the contents of the job to be submitted. You can save the set contents. Also, you can register multiple items. The setting items of [New Configuration] are divided across multiple tabs. Set the necessary information, and click the [Run] button. A table below shows details of the necessary settings when submitting a job.

Information

By clicking the [View Script] button, you can check the contents of the job script to be submitted.

Figure 4.25 [New Configuration], [Resources] tab, and [Resources] - [Basic Settings] tab

•		Run Configuration	ns	- 🗆 🗙
Create, manage, and run configura () [Application]: Application program no				
type filter text C/C++ Application C/C++ Remote Application Cif C/C++ Unit Launch Group Launch Group (Deprecated) Harabel Application New_configuration	Name: New_configuration Resources Application Target System Configuration: Connection Type Local Rescunit: rescunit_ft01 Rescunit: rescunit_ft01 Rescgrp: def_grp Name Job Name: Nodes: Wallclock Time: MPI Launch Command: FUJITSU Compiler Path: CPU Performance Analysis:	FUJITSU Technical Com FUJITSU Technical Com Host Value job 1 00:01:00 mpiexec	/ironment) Synchronize Common putting Suite Description Specify the name of the job to submit. The number of nodes and node shape allocated to jol Maximum executable time for a job Which MPI command to use FUJITSU Technical Computing Suite install path. v Get CPU performance analysis of running job.	✓ New
Filter matched 7 of 7 items	View Script View	Configuration Restor	re Defaults Revert	Apply
0			Run	Close

Table 4.25 Settings in [New Configuration]

Item Name	Description
Name:	Specify a name for [New configuration]. Specify an arbitrary name since the name is used for identification by the
	user.

Table 4.26 Settings in [Resources] tab

Item Name	Description		
Target System Configuration:	ion: Select "FUJITSU Technical Computing Suite"		
Connection Type	Select [Remote], and then select a name from the pull-down menu. Select the one created for [Connection name] in "2.3.1 Connecting to the Login Node (Remote System)".		

Table 4.27 Settings in [Resources] - [Basic Settings] tab

Item Name	Description		
Rscunit:	Specify the name of the resource unit to be used.		
Rscgrp:	Select the resource group to be used.		
Job Name:	Specify the name of the job to be submitted. The name specified here is the file name used in PJM output results.		

Item Name	Description
	Do not include the yen sign (\), slashes, single quotation marks, or double quotation marks in the specified job name.
Nodes:	Specify the configuration of nodes to be used.
Wallclock time:	Specify the limit on executable time per job in <i>hh:mm:ss</i> format.
MPI Launch Command:	Specify "mpiexec". If you do not want to use the mpiexec command, change it to blank.
	To specify the number of parallel processes during MPI program execution, you need to write that after "mpiexec." For example, write the following to specify 2 processes:
	mpiexec -n 2
FUJITSU Compiler Path:	Specify <i>installation-path</i> . Use <i>FUJITSU Compiler Path</i> to add the following environment variables.
	LANG_HOME : FUJITSU Compiler Path PATH : \$[LANG_HOME}/bin:\${PATH} LD_LIBRARY_PATH : \$[LANG_HOME}/lib64:\${LD_LIBRARY_PATH}
	For details on " <i>installation_path</i> ", contact the system administrator.
CPU Performance Analysis:	Specify the creation of a CPU Performance Analysis Report. For details on CPU Performance Analysis Report, see the "Profiler User's Guide".
	None
	Does not specify the creation of a CPU Performance Analysis Report.
	Single
	Specifies the creation of a CPU Performance Analysis Report (Single report).
	Brief
	Specifies the creation of a CPU Performance Analysis Report (Single report).
	Standard
	Specifies the creation of a CPU Performance Analysis Report (Single report).
	Detail
	Specifies the creation of a CPU Performance Analysis Report (Single report).

If you want to set items that do not exist in the [Resources] - [Basic Settings] tab, use the [Resources] - [Advanced] tab. The contents specified in the [Resources] - [Advanced] tab are directly reflected in the shell script. If you want to see the shell script, press the [View Script] button.

Figure 4.26 [Resources] - [Advanced] tab

•	Run Configurations	- 🗆 ×
Create, manage, and run configure (Application]: Application program r		
C 2 🕫 🗎 🗶 🖻 7 -	Name: New_configuration	
type filter text	Resources P Application ↔ Arguments ■ Environment Synchronize □ Common	
C C/C++ Application C C/C++ Remote Application	Target System Configuration: FUJITSU Technical Computing Suite Connection Type	~
Launch Group Launch Group Launch Group (Deprecated) Harallel Application Harallel Application	Local Remote Host Basic Settings Advanced	✓ New
	Arbitrary lines to add to job script:	
Filter matched 7 of 7 items	Revert	Apply
0	Run	Close

Table 4.28 Settings in [Resources] - [Advanced] tab

Item Name	Description	
Arbitrary lines to add to job script:	Write the processing you want added to the job script.	
5	G Note	
	To execute multiple processes within a node during MPI program execution, you need to write in this item. For example, write the following to specify 4 as the number of processes executed within a node:	
	#PJMmpi "proc=4"	

Figure 4.27 [Application] tab

Run Configurations		
Create, manage, and run config Create a configuration to launch a	-	
[] 2 0 0 1 × 0 3 1	Name: New_configuration	
type filter text	Exercise Application (#= Arguments) Environment Synchronize Common	
C/C++ Application	Project:	
C/C++ Remote Application	SampleProject	
Launch Group	Application program:	
► Launch Group (Deprecated)	/tmp/SampleProject/FUJITSU_Fortran_Compiler_Release_Module/SampleProject	Browse
▲ ➡ Parallel Application ➡ New_configuration	Copy executable from local filesystem Path to local executable:	
		Browse
< > Filter matched 7 of 7 items	Reyert	Apply
(I)	Run	Close

Table 4.29 Settings in [Application] tab

Item Name	Description	
Project:	Specify the project to be executed.	
Application program:	Specify the program to be executed.	
Copy executable from local filesystem	Specify whether to specify a local file as an executable file.	
Path to local executable:	Specify the path to local executable files.	
Display output from all processes in a console view	Specify whether the [Console] view displays output from all processes.	

Figure 4.28 [Arguments] tab

Run Configurations		
Create, manage, and run config Create a configuration to launch a	-	
	Name: New_configuration	
type filter text	Environment Synchronize Common	
C C/C++ Application C C/C++ Remote Application Cij C/C++ Unit	Program arguments	Ĵ
 Launch Group (Deprecated) Parallel Application New_configuration 	Working directory ✓ Use default working directory	
	Directory	Browse
Filter matched 7 of 7 items	Revert	Apply
	Run	Close

Table 4.30 Settings in [Arguments] tab

Item Name	Description	
Program arguments	Specify the arguments to hand over to the program.	
Use default working directory	Specifies a working directory. If this box is checked, the directory where the executable file to run exists is used as the working directory.	
Directory	Specifies a working directory. The specified path is used as the working directory. If [Use default working directory] is enabled, the setting specified in [Directory] is ignored.	

Figure 4.29 [Environment] tab

0		Run Configurations	- 🗆 🗙
Create, manage, and run config Create a configuration to launch a p	•		
▮ 🖻 🍋 🗎 🗙 🖃 井 🔻	New_configur	ation	
type filter text	Resources App	plication 😡= Arguments 📧 Environment Synchronize] 🔲 <u>C</u> ommon
C C/C++ Application	Environment variable	es to <u>s</u> et:	
C/C++ Remote Application Cij C/C++ Unit	Variable	Value	<u>A</u> dd
 Launch Group Launch Group (Deprecated) 			Select
▲ ➡ Parallel Application			E <u>d</u> it
目書 New_configuration			Rem <u>o</u> ve
			Сору
			Paste
		ent to native environment vironment with specified environment	
Filter matched 7 of 7 items			Re <u>v</u> ert Apply
?	<u> </u>		Run Close

Table 4.31 Settings in	[Environment] tab
------------------------	-------------------

Item Name	Description
Environment variables to set:	Specify the environment variables to set for the job script.

Figure 4.30 [Synchronize] tab

Run Configurations		
Create, manage, and run config Add synchronization rules to upload	gurations d files before the launch or to download files after the application terminates.	
📑 🖗 🗿 🗶 📄 🛟 ▾	Name: New_configuration	
type filter text	😫 Resources 🖹 Application 🛛 Arguments 🔚 Environment Synchronize 🔲 Common	
 C/C++ Application C/C++ Remote Application Cit C/C++ Unit Launch Group Launch Group (Deprecated) ⇒ Parallel Application ⇒ New_configuration 	Synchronize rules: Upload rules are executed before application starts. Download rules are executed after application fir	
< > Filter matched 7 of 7 items	Revert	Apply
0	Run	Close

Make settings related to file sharing between the client machine and the login node. If you use "4.4 CPU Performance Analysis Report Display", you must enable [Download rules enabled]. Another use is that in the client machine, you use the file output on the login node.

G Note

Do not repeatedly submit the same job that uses "4.4 CPU Performance Analysis Report Display." Doing so may cause an error due to a file sharing conflict between the client machine and login node. In that case, rerun the job alone.

.

. . . .

Item Name	Description	
Synchronize rules:	Displays a list of rules created in [New upload rule] or [New download rule], which is described below.	
Upload rules enabled	Enables the rules created in [New upload rule] out of the rules displayed in [Synchronize rules].	
Download rules enabled	Enables the rules created in [New download rule] out of the rules displayed in [Synchronize rules].	
New upload rule	ad rule Opens the [Upload Rule] window, where you create rules related to upload from the client machine to the login node.	
New download rule	Opens the [Download Rule] window, where you create rules related to download from the login node to the client machine.	

Table 4.32 Settings in [Synchronize] tab

Figure 4.31 [Upload Rule] window

•	×
Upload Rule Please specify the remote directory and a list of files that shal	ll be uploaded.
Remote directory: Use directory from launch configuration Remote directory:	
Selected file(s):	Add files:
	File(s)
	Directory
	Workspace
	Remove files:
	Remove selected
Options for all selected file(s): Readonly Executable Download back if changed Preserve time attributes If file already exists: Overwrite	
?	OK Cancel

Table 4.33 Settings in [Upload Rule] window

Item Name	Description	
Use directory from launch configuration	Specifies the upload destination directory. If this box is checked, the same directory as for the program specified in [Application program:] in the [Application] tab is specified.	
Remote directory:	Specifies the upload destination directory. Specify an arbitrary directory. If [Use directory from launch configuration] is enabled, the setting specified in [Remote Directory] is ignored.	
Selected file(s):	Selects a file, directory, or workspace to be uploaded.	

Figure 4.32 [Download Rule] window

Selected file(s):		Add new
		Change selected
		Remove selected
Local destination direct	tory:	
Local destination direct	tory:	
Local destination direct	tory:	File system Workspace
		File system Workspace
Local destination direct		File system Workspace

Table 4.34 Setting in [Download Rule] window

Item Name	Description
Selected file(s):	Selects a file, directory, or workspace to be downloaded. The following settings are required when using "4.4 CPU Performance Analysis Report Display".
	/project_storing_directory_on_the_login_node/ FUJITSU_XXX_Compiler_Release_Module/csv (Directory)
	Directory that contains Profiler results (CSV files) for use with CPU Performance Analysis reports. The <i>FUJITSU_XXX_Compiler_Release_Module</i> varies depending on the "4.1.5 Specifying Compiler Options".
	/installation_path/misc/cpupa/cpu_pa_report.xlsm (File)
	CPU performance analysis report file. For details on "installation_path", contact the system administrator.
Local destination directory:	Specifies the download destination. When using "4.4 CPU Performance Analysis Report Display", press the [Workspace] button to specify the project as the download destination.

4. A confirmation window appears and asks whether to open the [System Monitoring] perspective. Clicking [Yes] button will automatically start the [System Monitoring] perspective after the job is submitted. For details on the [System Monitoring] perspective, see "4.3 Job Status Check and Operation".

0	Confirm Actions
?	This launch type allows monitoring of system and job information. Do you want to configure and start monitoring (will switch to System Monitoring perspective if necessary)?
<u>R</u> en	nember my decision Yes No

5. The job is submitted.

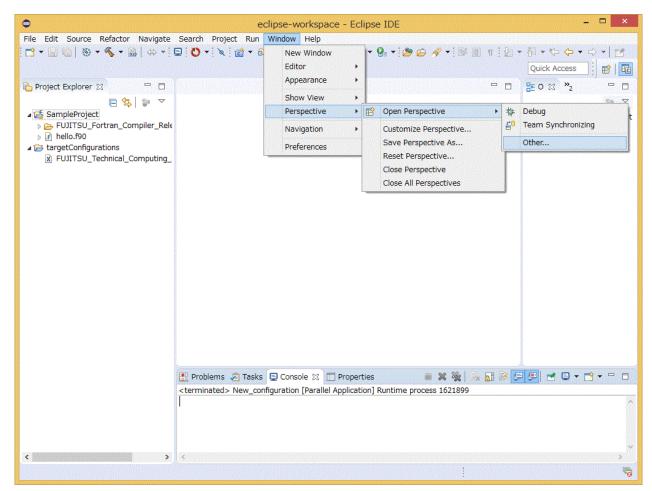


The settings on the [Common] tab are unavailable even when they have set values.

4.3 Job Status Check and Operation

Use the [System Monitoring] perspective to display the status of a job on a compute node and the node status.

1. Click [Window] - [Perspective] - [Open Perspective] - [Other...] on the menu bar.



2. Select [System Monitoring] from the [Open Perspective] window, and click [Open] button.

•	Open	Perspective	- 0	×
	Debug			
		<u>O</u> pen	Canc	cel

3. The workbench view switches to the [System Monitoring] perspective. Click the green plus-icon button (Add Monitor).

	ec	clipse-workspace - Eclipse IDE	×
ile Edit Navigate Search Project Ru			
" • 🗐 🐚 🖬 📮 ! 🚸 • O • 🗣 •			오 🛛 😰 🛛 🖬 🖥
S Monitors 🔀 🕨 🔳	🗞 🔺 📑 🗮 🗖 🗖	System Monitoring 🛛	□ [
	guration [Add Monitor		
	8		
Active Jobs 🛛 🎬 Inactive Jobs	8 🗖 🗖		
] Messages 🕱 📮 Console	§ = =		
		1	

4. Select "FUJITSU Technical Computing Suite" from the [Target System Type] pull-down menu in the [Add Target] window. Select [Remote], and then select a name from the pull-down menu. Select the one created for [Connection name] in "2.3.1 Connecting to the Login Node (Remote System)". After completing all the settings, click [OK] button.

e	Add Target	×
-	t system type to add tem type, then select the connection t	o use for the monitor.
Target System Type: Connection Type O Local Remote	FUJITSU Technical Computing Suite Remote Host	✓✓New
?		OK Cancel

5. The setting is added to the [Monitors] view. While the setting you want enabled is selected, click the green play button (Start Monitor). The "Status" column displays a bidirectional arrow icon when a connection has been correctly established.

•	eclipse-workspace - Eclipse IDE	- 🗆 🗙
File Edit Navigate Search Project Run Window Help		
📑 • 🔄 👘 📄 🕸 • 🔿 • 🚱 • 🏷 • 🖓 • 🖗 •		Q 🛛 😰 🛛 🖬 🔛
🔄 Monitors 💥 📄 🕨 👘 👘 👘	System Monitoring 🔀	- 8
Status Connection Name Start Monitor n Name		
Remote Host FUJITSU Technical Comp		
Active Jobs 🛛 🔛 Inactive Jobs 🖇 🖶		
🗖 Messages 💥 📮 Console 🛛 🖇 🖻		

6. The [system] view displays monitoring results. Also, when a job is selected in the [Active Jobs] view, the [Messages] view and [Console] view display information on the selected job.



The layout of the [System Monitoring] perspective depends on the contents of "layout _ default _ TC _ SUITE.xml".

-9-			-	· 0	<u>a</u>	0 - 1 5	为 🗸 🕅	* *5	6.	0	+1=	9										0	1	品	
	nitors 🔀	9. -											,									~	. യ 1		
								sy				-in 23													
ers a regions	s Connecti			Config				syste 0x01	m: sy	stem		0x02				0x03				0x04			0x05		
4	Remote	Host		FUIT	SU Tec	nnicai (Lomp					Ħ							Ⅲ			▦І▦			▦
Act	ive Jobs 🛛	III Inact	ive Jobs			8				▦						▦			▦						
	status	owner	step	tot	qu	wall	commei	Ħ				Ħ	Ħ	▦			雦			Ħ	井	▦І▦		Ħ	
	Running		345				3452485	Ħ			Ħ	Ħ	Ħ		Ħ	Ħ			₩	Ħ	Ħ	▦		Ħ	Ħ
8	Running		345				3452899	Ē		▦	冊	罪			冊	₩			噩		罪			噩	Ŧ
	Running		345				3452923	<u>الظا</u>	Ħ			▦	囲	Ħ	ШШ	囲	Ħ		±	囲	±⊞∎			曲	▦
			345				3452955				₩	Ħ	Ħ			Ħ	▦							▦	▦
	Running Running		345 345				3452994 3453002	li iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii		卌	講	IIII	Ħ	罪	Ħ	Ī	罪	Ħ	Ŧ	F	諎		卌岸	詽	Ħ
			345				345303£	Ē			<u>⊞</u>	▦					Ħ		Ħ		Ξ			田	
	Running	langtool	345				3453042					Ħ		Ħ					▦		井			H	Ħ
16	Running		345				3453061				Ħ	覀	Ħ			Ħ			Ħ					Ħ	Ħ
	Running		345	1	11/	000	3453063		出	₩	出	▦	罪	壨	罪	₩	壨		#	₩	豐	₩₩	出	罪	Ë
								Ħ				Ħ	▦	▦	Ħ	Ħ	Ħ		▦		Ħ	▦		Ħ	▦
<				lean in			>	Ħ			Ħ	Ħ	Ħ	₩	Ħ	田	₩		Ħ	Ħ	Ħ			Ħ	₩
Me	ssages 🛛					8		IIII	H	₩	₩	畾	畕	壨	冊	冊	畕		〓	H	罪			冊	₩
	bodgeb (A		-			0						Ħ	Ħ		Ħ	Ħ	Ħ		Ξ	Ħ				Ħ	Ⅲ
												Ħ		▦	HH I						井	▦		H	▦
											ⅲI	雦	Ħ	詽	Ħ	詽	Ē		Π	Ē				围	ΞĦ
								₩₩	Щ	壨	₩I	▦	畕	▦		Щ	Щ		##	H	壨			畕	
								Ħ			Ħ	Ħ									田			Ħ	
								I		Ħ	III	冊	Ħ	Ħ	Ħ	Ħ	Ħ		Ħ	Ħ	Ŧ			Ħ	Ħ
								IIIII IIIII				冊	Ŧ	畕		₩			##		罪			冊	
										##	▦	Ħ	Ħ	Ħ	ΗĦ	Ш	Ħ		Ħ	Ш	Ш			曲	▦
										Ħ	Ħ			Ħ			Ħ				田			Ħ	Ħ
								Ē	İ	Ħ	₩	Ī	Ħ	薑	Ħ	Ī	Ħ		i		Ħ			Ī	Ħ
								H	H			H	Ħ	H	H	H	Ħ							EE	H

🔓 Note

The perspective displays information obtained from the Job Operation Software. However, depending on the timing, "?" may be displayed for information that cannot be obtained. To solve this problem, refresh the [System Monitoring] perspective.

From the viewpoint of privacy protection, "---" is displayed for the owner, group, and name of other users' jobs.

4.3.1 Displaying the Usage of Computational Resources

The [System Monitor] view virtually displays nodes or cores within nodes in color based on the usage of computational resources. You can drill down on the screen at four levels to visually check the usage of computational resources.

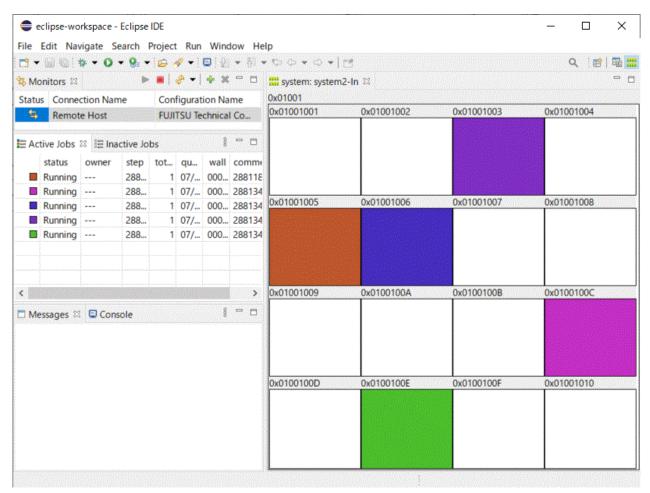
1. In the [System Monitor] view displaying the first level, you can check the usage of nodes throughout the system. Click a title bar displaying a number to switch to the second level of display for the selected number. Click the title bar at the top of the [System Monitor] view to switch to the initial screen of the first level.

		vigate S		ADVIENCES OF				000000000		1. Sec. 1.										2000		
		₽ - 0	• 📲 •	9.77 (s)		59159702														۹ او	alı	40
5 Mor	nitors 🖾		P		8° • I	+ =		iii sy	stem	: system	2-In ⊠											
		ction Nar			figurat				0.01-0.010-0	stem2-li					60.000	<u> (1997)</u>						
\$	Remot	e Host		FUJI	TSU Te	chnical	I Co	0x01			0x02			0x03			0x04	m		0x05		
						0			曲					Щ		Щ	Ш			▦	Щ	Ħ
🗄 Acti	ve Jobs	🖾 🔠 Ina	ictive Jol	os		8	- 0									Ħ					▦	
	status	owner					comme	Ħ												Ħ	▦	
	Running		288				288118	Ħ		Ⅲ Ⅲ				Ħ	##						Ħ	Ħ
	Running		288				288134	Ħ						Ħ	####	Ħ				Ħ	Ħ	Ħ
	Running		288				288134 288134	Ŧ						Ħ		雦					Ħ	Ē
	Running Running		288 288				288134	Ħ	##					₩		卌					₩	H
	winning		200		017	000	200134	₩	=					#		#	#			- #	▦	E
								Ⅲ			■	Шİ		Ш		Щ	Ш				曲	Ħ
								Ħ							₩₩	Ħ					Ħ	
<							>	#												Ħ	#	
Mes	canec 53	Con:	ole			8	- 0	Ħ						Ħ							₩	Ħ
- Mics	loages in	- con	JOIC					Ħ	Ħ					Ħ	#	III				Ħ	Ħ	Ħ
								Ħ	Ħ					朣	###	雦	Ē	ΠĒ		Ī	Ħ	Ħ
								H						H		Ħ						
								#	#				###	₩		卌	出	井井井		· IIII	井	븎
								H														E
								Щ							₩₩	Ш						
								Ħ													Ħ	Ē
								Ħ													Ħ	
								HTT	HH	#		HEH	HE HHE	HH		HH	H	HEH	н	Ħ	HH	H

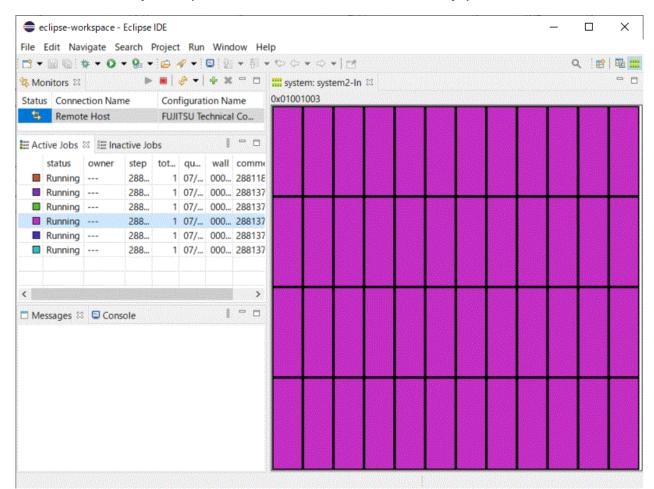
2. In the [System Monitor] view displaying the second level, you can check the usage of nodes in multiple node clusters (16 nodes combined into one). Click a title bar displaying a number to switch to the third level of display for the selected number. Click the title bar at the top of the [System Monitor] view to switch to the first level of display.

1000	Edit Nav	100000000000000000000000000000000000000		NH SSY OK				100000000000000000000000000000000000000			
•			0-		The second second second second second second second second second second second second second second second s			§] • ♥ ♥ •	and the second second second second second second second second second second second second second second second		Q 🔡 🖽
1000	onitors 🖾			qade			- 0	system: system:	em2-In 🖾		-
	s Conne		ne		figurat			0x01 0x01001	0x01002	0x01003	0x01004
\$	Remot	e Host		FUJI	TSU Te	chnica	I Co	0x01001	0x01002		001004
E Ac	tive Jobs	🕮 🔝 Ina	ictive Jo	bs		8	- 0	0x01005	0x01006	0x01007	0x01008
	status	owner	step	tot	qu	wall	comme				
	Running		288					0x01009	0x0100A	0x0100B	0x0100C
	Running		288				288157				
	Running Running		288 288				288157 288157	UND TOOD	0x0100E	0x0100F	0x01010
	Running		288		second and		288157		0x01012	0x01013	0x01014
								0x01015	0x01016	0x01017	0x01018
C Me	essages 🛙		sole			8	>	0x01019	0x0101A	0x0101B	0x0101C
							^	0x0101D	0x0101E	0x0101F	0x01020
								0x01021	0x01022	0x01023	0x01024
								0x01025	0x01026	0x01027	0x01028
								0x01029	0x0102A	0x0102B	0x0102C

3. In the [System Monitor] view displaying the third level, you can check the usage of the 16 nodes in the node cluster selected in the second level. Click a title bar displaying a number to switch to the fourth level of display for the selected number. Click the title bar at the top of the [System Monitor] view to switch to the second level of display.



4. In the [System Monitor] view displaying the fourth level, you can check the usage of the 48 cores in the node selected in the third level. Click the title bar at the top of the [System Monitor] view to switch to the third level of display.



G Note

In the [System Monitor] view displaying the fourth level, the node is colored based on how many of the 48 cores in the node are in use. Therefore, when multiple jobs are running on the same node, the number of cores actually assigned to each job may differ from the number of cores displayed as colored.

.

4.3.2 Operating a Job in a Job View

You can operate jobs displayed in the [Active Jobs] or [Inactive Jobs] view.



The job views display your jobs preferentially. For this reason, other users' jobs may be omitted from the display.

The [Active Jobs] view displays jobs whose job status is "Running." Right-click a job displayed in the [Active Jobs] view to enable operations possible for the job. The job operations cover only the jobs executed from the same Eclipse client.



.

.

The job operations that are not enabled when you right-click a job are unavailable. The job operation of the [Rerun Job] button, even when clicked, does nothing. Depending on the timing, the enabled job operations other than [Rerun Job] may also do nothing, even when the job operations are selected. In such cases, wait a moment, and operate the job again.

🛑 e	clipse-wo	rkspace - I	Eclipse	IDE											-]	\times
ile	Edit Nav	igate Se	arch I	Project	Run	Wind	ow He	lp										
• •	G G I	1 to -	0 -	9 = - 1	6	•	121 -	御 • 1	⇒ ¢ •	0-10						٩	e	Te :::
The Mo	onitors 🖾				ج چ	+ ×	- 0	iii sys	tem: syste	em2-In 🖾								- 0
Statu	s Conne	tion Nam	e	Con	figura	tion Nar	ne	system	: system	2-In								^
\$	Remot	e Host		FUJI	TSU Te	chnical	Co	0x01	mana	0x02	molerenter	0x03	0x		TITTIC	0x0	100000000000000000000000000000000000000	
														ŧΗ				畫
E Ac	tive Jobs	🛛 🏢 Inac	tive Jo	bs		8								İİİİ		▦▦	₿Щ	
	status	owner	step	tot			comme							∎⊞				
			288		07/		28815E							III		▦▦		Ⅲ
			288 288		07/	000	288160	I						III		₩	III	
	Running Running		288			000								ŧĦ			I III	
	Running				170	000	200161							ŧĦ		Ī		講
					10275556	Cancel .												讄
					1000	Hold Jo Resume						∎≣				豊臣		
						Suspen						≝₩	###	┋		≝₩		
						Release												
] Me	essages 🖾	Conse	ole		8	Rerun Jo	ob							雦				#
					B	Get Job	Output							ΞĦ				讍
					副	Get Job	Error							İIII		▦▦		
					8	Refresh	Job Sta	tus						₿Ħ		▦▦		
					×	Remove	e Job En	try						∎⊞	▋▦▋▋	# #		圕
					-									III		▦▦	∎	
														II				
														Ī			Ī	朣
								Î				ゴ岸	莆莆	誧莆	Ī	載購	ΪĦ	糒、
							V.	<										>

The [Inactive Jobs] view displays jobs that are owned by you and have a job status other than "Running" and also jobs that are owned by other users and have the job status of "Idle." Right-click a job displayed in the [Inactive Jobs] view to enable operations possible for the job. The job operations cover only the jobs executed from the same Eclipse client.

File	Edit Na	vigate Se	arch	Projec	t Ru	n Win		nesame												20402
- 1		🗟 💠 🕶	0 -	9 : •	6	१ -] ⊑	3 ∃∰ ▼	€I •	\$\$ \$P\$	• 🗢	•	1					C	X [6	3 1	1
🗟 Mo	onitors 🖾		►	•	• مي	+ ×		:::: s	ystem: sy	stem2	ln :	3								
Statu	s Conne	ction Nam	e	Con	figura	tion Na	ame	syste	em: syster	m2-In				NGGA N						
\$	Remot	e Host		FUJ	TSU 1	echnica	I Co	0x0			0x02		0x03			0x04		0x05	1000000000	
= Ac	tive lobs	III Inactiv	e lobs	23		8	- 0				₩				₩	#				
	status	owner	step	tot	qu		comme	#			₩		#		#	#				諎
	Idle	toolide4					200154	The second secon			#		#		₩	#				冊
		toolide4				Get Job Refresh	b Job Job Job Job Output	/												

4.3.2.1 Canceling the Execution of a Job

Cancel the execution of a job. Right-click the job on the [Active Jobs] or [Inactive Jobs] tab, and select [Cancel Job].

4.3.2.2 Holding a Job

Hold a job. Right-click the job on the [Active Jobs] or [Inactive Jobs] tab, and select [Hold Job].

4.3.2.3 Releasing a Job

Release a job. Right-click the job on the [Inactive Jobs] tab, and select [Release Job].

4.3.2.4 Refreshing the Job Status

Update the internal status of a job. Right-click the job on the [Active Jobs] or [Inactive Jobs] tab, and select [Refresh Job Status].

G Note

The operation of refreshing the job status is usually unnecessary. Only when the operation that can be normally selected cannot be selected, refresh the job status.

4.3.2.5 Removing a Job Entry

Hide a completed job. Right-click the job on the [Inactive Jobs] tab, and select [Remove Job Entry].

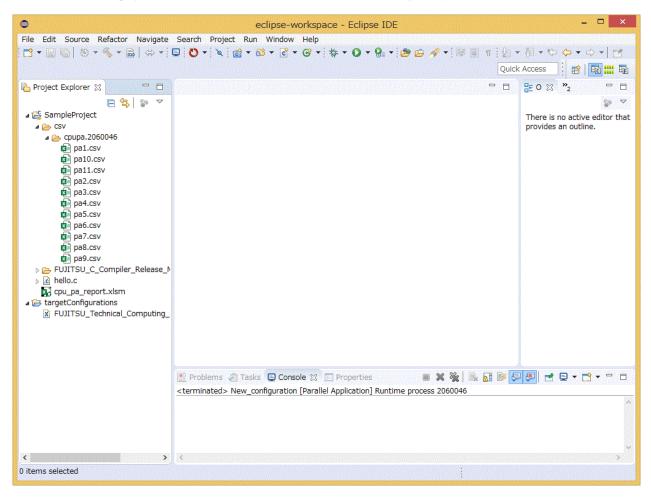
4.4 CPU Performance Analysis Report Display

The following describes the procedure for displaying a CPU Performance Analysis Report from Eclipse. For details on CPU Performance Analysis Report, see the "Profiler User's Guide".

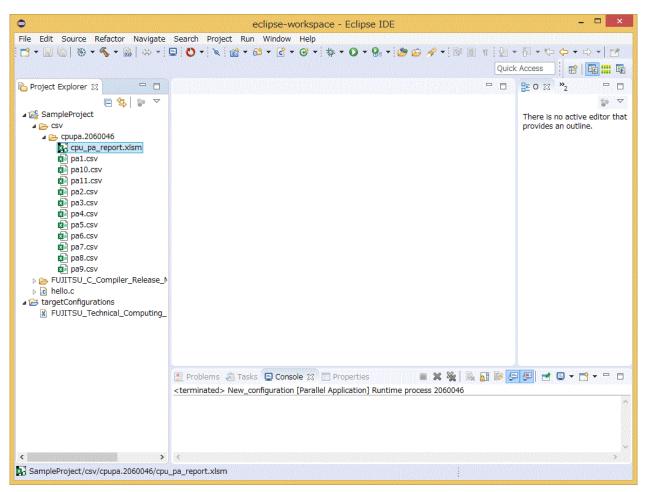


To display a CPU Performance Analysis Report, Microsoft Excel must be installed on the client machine where Eclipse is running. For other cautions when using CPU Performance Analysis report, see "Profiler User's Guide".

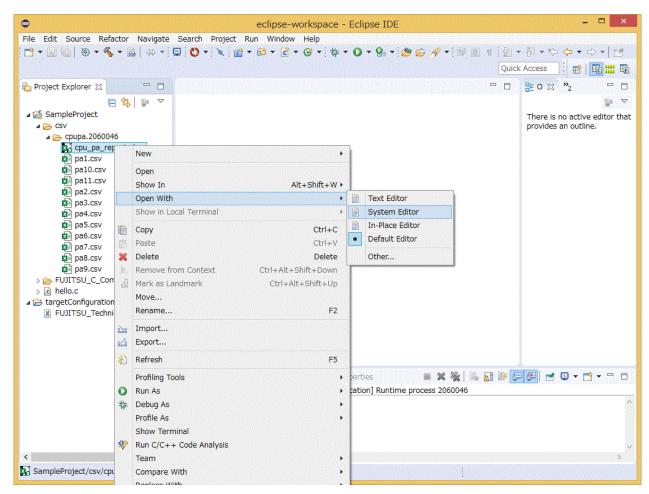
- 1. From "4.2 Job Submission," execute the program for which you want to create a CPU Performance Analysis Report. Make settings for [CPU Performance Analysis] in "Table 4.27 Settings in [Resources] [Basic Settings] tab" according to the type of the CPU Performance Analysis Report you want to create. In order to transfer the execution results onto the client machine, be sure to make settings in "Table 4.32 Settings in [Synchronize] tab".
- 2. Check the [step] value of the submitted job from the [Active Jobs] tab of the [System Monitoring] Perspective. (The CSV file used for CPU performance analysis reports is output to a directory named "cpupa.[*step value*]".)
- 3. Display [Project Explorer] when the job is finished. The directories and files set in "Table 4.32 Settings in [Synchronize] tab" are added. Refresh the display to add the directories and files set in "Table 4.32 Settings in [Synchronize] tab".



4. Drag and drop the CPU Performance Analysis Report file (cpu_pa_report.xlsm) into the directory where the CSV file of the measurement results is stored. The directory name shall be csv/cpupa.[*step value*].



5. Select and right-click the CPU performance analysis report file (cpu_pa_report.xlsm) in [Project Explorer]. Select [Open With] - [System Editor] from the displayed menu.



6. The CPU Performance Analysis Report is displayed. For information about using the CPU Performance Analysis report, see "Profiler User's Guide".

Glossary

This section provides explanations of the Eclipse terms used in this manual. For details on terms and descriptions not covered in the section, see Help for Eclipse, the official site of the Eclipse Foundation, commercially available instruction manuals, and other sources.

Workbench

Workbench refers to the entire main screen of Eclipse.

View

View refers to a subwindow displayed on the workbench. Some views have toolbars or menus specific to them. An operation performed by using a view-specific toolbar or menu affects only items of the relevant view.

Perspective

Perspectives are definitions of sets and layouts of views displayed on the workbench.

Workspace

A workspace is a storage location for development assets and the user's work status. It retains the status of work performed by the user, workbench setting information, etc. You can create multiple workspaces but can open only one workspace on the workbench at a time. Development assets are managed within a workspace in units called projects. You can create multiple projects in a workspace.

Toolchain

A collection of tools that generates binaries from a source code. This collection consists of an editor, a compiler, an assembler, a linker, etc. In this document, Toolchain is also used to refer to the configuration information of tools used for a project.

Synchronized project

A synchronized project consists of files mirrored in the local system and one or more remote systems. The files are edited on the local system and synchronized with active remote systems at the timing when each file is changed, created, or deleted. Since a remote system corresponds to a login node in this document, it is hereinafter referred to as a login node. The terminal that corresponds to the local system is referred to as the client machine.