opc spider

1.4 Install Guide

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TAKEBISHI

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1. Before Use

This document describes how to install and setup the new version of OPC Spider 1.3.

Refer “OPC Spider Upgrade Guide” for the upgrade from the existing version.

1.1. Precautions

1.1.1. Copyright Notice

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1.2. About the mark of this document

The rules of the notations in this document are as follows.

- Menu name, tab name, property item name, value, and button name displayed on screen are enclosed with [] and in bold letters. Moreover, the one without title of screens and other function names are enclosed with "" and distinguished from the former.
- “$OPCSPIDER_HOME” shows the directory where OPC Spider is installed. In default, it is "C:/Program Files/TAKEBISHI/OPCSpider" for Windows version and "<HOME>/TAKEBISHI/OPCSpider" for UNIX/Linux version.
- “x86 version” means 32bit OS.
  “x64 version” means 64bit OS of 64bit CPU (Intel 64/AMD64).
- Name enclosed with < > is variable value.

  Example: $OPCSPIDER_HOME/server/logs/<Date directory>
- URLs of the Web sites shown in this document are as of September, 2018, and are subject to change without notice due to reasons of the Web site.
- “Studio" means "OPC Spider Studio", and "Studio for Web" means "OPC Spider Studio for Web".
- The descriptions of the Windows and UNIX/Linux versions of OPC Spider Server have been standardized.
  Please replace descriptions of operating system dependent items (such as path delimiter characters) as necessary.
- The numbers beginning with "DSS -" or “OPCSP-” are unique IDs for controlling each corresponding problem.

1.3. About the Icons Used in This Guide

This Guide uses the following icons in its explanation.

Icon	Description
	Indicates that there are hints about operations or configurations.
	Indicates that there are warnings about operations or configurations.
	Indicates that there are detailed descriptions in other resources.

2. About end of sales and support

As on 2025/7/31, the sales and support for the following Operating systems, databases for Repository DB, and Adapters have ended. Note it during OPC Spider installation.

2.1. Supported OS

OS	End of support
Windows Server 2012	2023/10/31
Windows Server 2012 R2	2023/10/31
Windows 8.1	2023/1/31
Red Hat Enterprise Linux 6	2024/6/30
CentOS 7	2024/6/30
Oracle Linux 7	2024/7/31

2.2. Repository DB

Repository DB	Version	End of Support
MySQL	5.6	2021/2/28
	5.7	2023/10/31
Oracle	18c	2021/6/30
	21c	2024/4/30
PostgreSQL	11	2023/11/30
	12	2024/11/30
Microsoft SQL Server	2012	2022/7/31
	2014	2024/7/31

2.3. Adapter

Adapter	Version	End of Support
MySQL	5.6	2021/2/28
	5.7	2023/10/31
Oracle	18c	2021/6/30
	21c	2024/4/30
PostgreSQL	11	2023/11/30
	12	2024/11/30
Microsoft SQL Server	2012	2022/7/31
	2014	2024/7/31
Excel	2013	2023/4/30
IBM Domino	8.5	2018/9/30
	9.0	2024/6/30
SAP	3.1H～4.7	2016/12/31

3. About OPC Spider

OPC Spider is a data linkage middleware that allows you to easily create a GUI-based data transfer process between production equipment and applications. This is usually done by program development or manual data entry or transfer.

This middleware expresses the linkages with various data sources as batches of transactions, and describes the entire operation graphically by tying these batches with flows. You can publish a flow of a series of processes as a service and run it from tools such as Trigger.

OPC Spider provides not only data linkage functions but also development assisting functions for users or groups, and management functions such as log output and various triggers.

3.1. Composition of OPC Spider

OPC Spider consists of the following application.

Name	Description
OPC Spider Studio	GUI based IDE for designing, developing and operating the services.
OPC Spider Server	Service execution environment.
ScriptRunner	Application interface for the external invocation of service.
CLI Console	Application for operating and managing services, which is used by command line.

The following applications can be used on web browser after OPC Spider Server is installed.

Name	Description
OPC Spider Studio for Web	GUI based IDE for designing, developing and operating the services.
Browser Help	Referable help by using browser.

4. OS supporting OPC Spider

4.1. Server and Client for Execution

Following OS of both Japanese and English version are supported. For more details, refer to "Language in Support Platform".

- Windows
  - Microsoft Windows Server 2016 Essentials/Standard/Datacenter (x64 version) (*1)
  - Microsoft Windows Server 2019 Essentials/Standard/Datacenter (x64 version) (*1)
  - Microsoft Windows Server 2022 Essentials/Standard/Datacenter (x64 version) (*1)

  (*1) Supports Server Core and Server with Desktop Experience.
- UNIX/Linux
  - Red Hat Enterprise Linux Server 7.x (x64 version)
  - Red Hat Enterprise Linux Server 8.x (x64 version)
  - Red Hat Enterprise Linux Server 9.x (x64 version)
  - Oracle Linux 8.x (x64 version) (*2)
  - Oracle Linux 9.x (x64 version) (*2)
  - Amazon Linux 2
  - Amazon Linux 2023 (x64 version)

  (*2) For kernel, "Unbreakable Enterprise Kernel" is supported

4.2. Client for Development

Following OS of both Japanese and English version are supported. For more details, refer to "Language in Support Platform".

- Windows
  - Microsoft Windows Server 2016 Essentials/Standard/Datacenter (x64 version) (*1)
  - Microsoft Windows Server 2019 Essentials/Standard/Datacenter (x64 version) (*1)
  - Microsoft Windows Server 2022 Essentials/Standard/Datacenter (x64 version) (*1)
  - Microsoft Windows 10 Pro/Enterprise (x86 version, x64 version)
  - Microsoft Windows 11 Pro/Enterprise (x64 version)

  (*1) Supports Server Core and Server with Desktop Experience.

  Refer to "OPC Spider Studio for Web" page of help for the supported OS of OPC Spider Studio for Web.

4.3. Language in Support Platform

The language in support platform varies by existence of language setting of OPC Spider. Set the language with platform which is subject to support.

		platform which is subject to support		
		OS of Japanese version	OS of English version	The state is ”possible to show Japanese” in OS of English version
Language in OPC Spider	Japanese	○	×	○
	English	○	○	○

“○” means “supported” and “×” means ”not supported” in above table.

”possible to show Japanese” means environment to which language packs (Multilingual User Interface Pack) is applied and user interface is changed into Japanese for Windows. For Linux, it means environment in which OS can show Japanese and language setting of OPC Spider User is Japanese.

When "English" is set for OPC Spider language, to use Japanese at configurable / inputtable fields on OPC Spider, the OPC Spider operating OS should be "OS of Japanese version" or "The state is” possible to show Japanese” in OS of English version".

4.3.1. About Windows language packs (Multilingual User Interface Pack)

Environment with Japanese user interface is supported to use OPC Spider in Japanese in an environment for which Windows language pack (Multilingual User Interface Pack) is applied.

" Environment with Japanese user interface " indicates the environment with the following settings. (In the case of Windows Server 2022)

- In "Control Panel" – "Clock and Region" – "Change date, time, or number formats" of Windows
  - Select "Japanese(Japan)" in “Format” of "Formats" tab
  - Select "Japanese (Japan) " in "Administrative" – "Current language for non-Unicode

programs"

- In "Settings" – "Time & Language" of Windows
  - Select "Japan" in "Region" – "Country or region"
  - Select "Japanese (Japan) " in "Language" – "Windows display language"

 To register OPC Spider Server in Windows services, the user setting that starts the service should be in Japanese.

4.4. Specification Limits / Precautions

4.4.1. Specification Limits / Precautions for language settings

In OPC Spider 1.2, language can be set in server and client respectively. In that case, following specification limits and precautions exist when “English” is set for server language and when different languages are selected between the server and the client.

- When “English” is set for server language
  - Following help pages do not exist. (DSS-23067)
    - Reverse lookup reference, SAP adapter tutorial
- When different languages are set between server and client
  - When the language is “English” in server and “Japanese” in client
    - Part of XML log is output in Japanese. (DSS-22573)
    - Part of error message might be output in English. (DSS-22811、DSS-22515)
    - The specification of Studio for Web is output in English. (DSS-22930)
  - When the language is “Japanese” in server and “English” in client
    - Part of XML log is output in English. (DSS-22573)
    - Part of error message might be output in Japanese. (DSS-22811、DSS-22515)
    - The specification of Studio for Web is output in Japanese. (DSS-22930)

4.4.2. Restriction for timezone in platform

Timezone in server and client are different, the timezone in client is required to be synchronized with the timezone in server.

(Usually, timezone is gotten from operating OS, but if user.timezone of system.properties is set, the setting is prior.)

The server timezone can be checked by the following procedure.

1. Select **[OPC Spider Server Settings]** in Control Panel of OPC Spider Studio.

2. Select **[General]** tab and click [System properties] button.
3. Confirm the value of "user.timezone".

Setting way of timezone for client is as follows.

1. Stop each application in OPC Spider.
2. Open system.properties in text editor under $OPCSPIDER_HOME/client/conf.
3. Delete "#" in "#user.timezone=Asia/Tokyo" and specify timezone of OPC Spider Server operating OS after "=" and save it.
4. Start OPC Spider Server and OPC Spider Studio.

 For more details of user.timezone properties, refer to page “Property reference” in help of OPC Spider.

 In the case of Studio for Web, timezone setting of Studio for Web operating OS is required to be set to the same setting as the timezone of OPC Spider Server operating OS.

4.4.3. Precautions for environment variable settings

To use an adapter that requires an environment variable setting, the setting needs to be configured to the appropriate location prior to launching OPC SpiderServer. You can check the environment variables that are reflected in OPC SpiderServer by using the following procedure.

1. Select **[OPC SpiderServer Settings]** in Control Panel of OPC Spider Studio.
2. Select the **[General]** tab and click the **[System properties]** button.

Confirm that the required environment variable has been set.

4.5. Supported virtualization system

If you use OPC Spider in a virtual environment, all of the following conditions must be satisfied.

- OS where OPC Spider is running is included in "Supported Platforms" in this document.
- OS where OPC Spider is running supports virtual environment.
- The virtual environment is host-based type or hypervisor-based type.

If all of the above conditions are satisfied, it is supported.

 However, if the problem that depends on the specific virtual environment occurs, not only OPC Spider but also the virtual environment may need to be changed.

5. System requirements

System requirements is the minimum configuration which allows OPC Spider to operate. The optimal configuration varies depending on number and contents of operations, number of concurrent processings, size of data to be handled, and so on. Determine your configuration in accordance with requirements and operations of the service to be developed.

5.1. Server

 The values shown below are the system requirements for installing only this application.

- Windows x64 version/Linux x64 version
  - Processor: Processor that meets 64bit(x64) system requirement that OS recommends
  - Memory: Free space of 2GB or more
  - Storage: Free space of 2GB or more

5.2. Client for development

 The values shown below are the system requirements for installing only this application.

- Windows x64 version/ Windows x86 version
  - Processor
    - x64 version: Processor that meets 64bit(x64) system requirement that OS recommends
    - x86 version: Processor that meets system requirement that OS recommends
  - Memory: Free space of 512MB or more
  - Storage: Free space of 1GB or more
  - Display: 1280x960 pixels or more

5.3. Client for Execution


The values shown below are the system requirements for installing only this application.

- Windows x64 version/Linux x64 version
  - Processor: Processor that meets 64bit(x64) system requirement that OS recommends
  - Memory: Free space of 256MB or more
  - Storage: Free space of 500MB or more

6. About Java Runtime Environment

Since Java Runtime Environment (JRE) is bundled in each installer of OPC Spider 1.3, no need to install JRE.

And, JRE version bundled in each installer is as given below.

- Windows version, Linux version
  - 1.8.0_382

To operate JRE on each platform, the patch to the operating system might be necessary. Refer to operating system for details.

7. Repository DB settings

7.1. What is a Repository DB?

A Repository DB is a system which manages services, user information, and various setting data in the repository area configured in a RDB (relational data base). Until a Repository DB is set up, you cannot use the user management system or the file access control functions.

However, OPC Spider can be installed even if a Repository DB has not been set up. Depending on your development requirements, determine whether you should set up a Repository DB or not.

7.1.1. Repository DB settings

Repository DB is set up during installation. You can modify the settings through the Control Panel.

 Refer to this document for the settings during installation, and refer to the [Repository DB Management] page of Help for the settings after installation.

Repository DB specification restrictions and precautions

 **Set up one Repository DB per OPC Spider Server. More than one OPC Spider Server cannot be connected to the same Repository DB.**

 **The database instances should be used only for Repository DB and not for any other system.**

 **The database instances specified for Repository DB should have an encoding system allowing multibyte characters. For example, a database instance encoded with US-ASCII cannot be used as a Repository DB.**

7.1.2. Creating a Repository DB

Repository DB create a dedicated table in which the repository area is configured, and save data into it. This table is created during startup of OPC Spider Server. If a dedicated table already exists, a new table is not created and the existing table is used.

7.1.3. Operation with / without a Repository DB

Operation with or without a Repository DB is as follows.

- If using a Repository DB (If a repository exists)
  - You can create multiple user groups and control their access privileges.
  - You can hold Meta information of various files in the repository.
  - You can save various settings in the repository.
- If not using a Repository DB (If a Repository DB does not exist)
  - You can use only one type of user group.
  - The Meta information of various files and various settings are held in the file system of the OS.

7.2. Databases supported as Repository DB

OPC Spider supports the following databases as Repository DB.

- MySQL
  - Supported versions: 8.0
- Oracle Database
  - Supported versions: 19c
- Oracle Base Database Service
  - Supported versions: Oracle Database 23ai / 19c
- PostgreSQL
  - Supported versions: 16 / 15 / 14 / 13 / 12
- Microsoft SQL Server
  - Supported versions: 2022 / 2019 / 2017 / 2016
- Azure SQL Database

When you use a Repository DB, ensure that one of the above databases is running before installing OPC Spider.

7.3. Setting up each database

7.3.1. When using MySQL

To use MySQL as a Repository DB, the following information is needed

- Host name or IP address of MySQL
- Port number used for providing services (Default port is "3306")
- Name of the database
- Path of the supported JDBC drive

Supported JDBC driver

- 8.0
  - Required library: mysql-connector-java-8.0.<Version>.jar
  - Version of the driver: MySQL Connector/J 8.0.<Version>
- 5.7
  - Required library: mysql-connector-java-5.1.<version>-bin.jar
  - Version of the driver: MySQL Connector/J 5.1.<version>

<version> indicates the latest version.

User settings

You should add a new user in the database and set up a DBA role for the user. Settings of the user name and the password defined here are used when setting up the Repository DB. Before installing OPC Spider, ensure that you can access it externally using these setting values.

Specification restrictions / Precautions

- **When you use MySQL, configure by the following procedure without setting during installation.**
  - Setting procedure
    - ✧ Select "Do not use repository" in the installer and perform the installation.
    - ✧ Launch OPC Spider Studio.
    - ✧ Set from [Connection Wizard] in [Repository DB Management]-[Connection Settings] tab in the Control Panel.
      For details, refer to "Repository DB Management" in OPC Spider Help.
- **"1" should be configured as default [lower_case_table_names] of the database.**
- **"utf8" should be configured as the [default-character-server] for the database.**
- **You must set the transaction isolation level of database as "READ-COMMITTED".**
- **When OPC Spider communicates large data with the repository database (*),**

you must set a large number to "max_allowed_packed" of the database.

* The following shows examples.

- Creation of a project with many icons
- Uploading large files

7.3.2. When using Oracle Database

To use Oracle Database as a Repository DB, the following information is needed.

- Host name or IP address of Oracle Database
- Port number used for providing services (Default port is "1521")
- System identifier (SID)
- Path of the supported JDBC driver

Supported JDBC drivers

- 19c
  - Required library: ojdbc8.jar
  - Version of the driver: Oracle JDBC Driver 19

User settings

You should add a new user in the database and set up a DBA role for the user. Settings of the user name and the password defined here are used when setting up the Repository DB. Before installing OPC Spider, ensure that you can access it externally using these setting values.

Specification restrictions / Precautions

 When the version is 19c, "AL32UTF8" should be configured as the [Database character set] for the database.

7.3.3. When using Oracle Base Database Service

To use Oracle Base Database Service as a Repository DB, the following information is needed.

- Host name or IP address of Oracle Base Database Service

- Port number used for providing services (Default port is "1521")
- Service name
- Path of the supported JDBC driver

Supported JDBC drivers

- Oracle Base Database Service (Oracle Database 23ai)
  - Required library: ojdbc8.jar
  - Version of the driver: Oracle JDBC Driver 23
- Oracle Base Database Service (Oracle Database 19c)
  - Required library: ojdbc8.jar
  - Version of the driver: Oracle JDBC Driver 19

User settings

You should add a new user in the database and set up a DBA role for the user. Settings of the user name and the password defined here are used when setting up the Repository DB. Before installing OPC Spider, ensure that you can access it externally using these setting values.

Setting procedure

1. Select "Do not use repository" in the installer and perform the installation.
2. Start OPC Spider Studio.
3. Directly specify the URL in [Repository DB Management] in the Control Panel.

   Example: "jdbc:oracle:thin:@<Host name>:<Port number>/<Service name>"

 "AL32UTF8" should be configured as the [Database character set] for the database.

7.3.4. When using PostgreSQL

To use PostgreSQL as a Repository DB, the following information is needed.

- Host name or IP address of PostgreSQL

- Port number used for providing services (Default port is "5432")
- Name of the database
- Path of the supported JDBC driver

Supported JDBC drivers

- 16
  - Required library: postgresql-42.<version>.jar
  - Version of the driver: PostgreSQL JDBC 4.2 (<version>)
- 15
  - Required library: postgresql-42.<version>.jar
  - Version of the driver: PostgreSQL JDBC 4.2 (<version>)
- 14
  - Required library: postgresql-42.<version>.jar
  - Version of the driver: PostgreSQL JDBC 4.2 (<version>)
- 13
  - Required library: postgresql-42.<version>.jar
  - Version of the driver: PostgreSQL JDBC 4.2 (<version>)
- 12
  - Required library: postgresql-42.<version>.jar
  - Version of the driver: PostgreSQL JDBC 4.2 (<version>)

 <version> indicates the latest version.

User settings

You should add a new user in the database and set up a DBA role for the user. Settings of the user name and the password defined here are used when setting up the Repository DB. Before installing OPC Spider, ensure that you can access it externally using these setting values.

7.3.5. When using Microsoft SQL Server

To use Microsoft SQL Server as a Repository DB, the following information is needed.

- Host name or IP address of SQL Server
- Port number used for providing services (Default port is "1433")
- Name of the database
- Path of the supported JDBC driver

Supported JDBC drivers

- 2022
  - Required library: mssql-jdbc-12.4.<version>.jre8.jar
  - Version of the driver: Microsoft JDBC Driver 12.4 for SQL Server
- 2019
  - Required library: mssql-jdbc-12.4.<version>.jre8.jar
  - Version of the driver: Microsoft JDBC Driver 12.4 for SQL Server
- 2017
  - Required library: mssql-jdbc-12.4.<version>.jre8.jar
  - Version of the driver: Microsoft JDBC Driver 12.4 for SQL Server
- 2016
  - Required library: mssql-jdbc-12.4.<version>.jre8.jar
  - Version of the driver: Microsoft JDBC Driver 12.4 for SQL Server

User settings

You should add a new user in the database and set the db_owner role for the user. Settings of the user name and the password defined here are used during setting up the Repository DB. Before installing OPC Spider, ensure that you can access it externally using these setting values.

Specification restrictions/Precautions

-  **The collating sequence in the database should be configured to be not**

casesensitive.

-  **Connecting using Windows Integrated Authentication is impossible.**

7.3.6. When using Azure SQL Database

To use Azure SQL Database as a Repository DB, the following information is needed.

- Host name of Azure SQL Database
- Port number used for providing services (Default port is "1433")
- Name of the database
- Path of the supported JDBC driver

Supported JDBC driver

- Azure SQL Database
  - Required library: mssql-jdbc-12.4.<version>.jre8.jar
  - Version of the driver: Microsoft JDBC Driver 12.4 for SQL Server

User settings

You should add a new user in the database and set up a db_owner role for the user. Settings of the user name and the password defined here are used when setting up the Repository DB. Before installing OPC Spider, ensure that you can access it externally using these setting values.

Specification restrictions / Precautions

-  **The collating sequence in the database should be configured to be not casesensitive.**

8. Specifications and Limitations at Installation

8.1. General

- You cannot install multiple OPC Spider of different versions on the same platform.
- You cannot install multiple OPC Spider of the same version on the same platform. However, exclude the following cases.
  - It is possible to install a server and a client of the same version independently (select [Client only] or [Server only] on the [Select Component] screen). However, the limitations are given below.
    - The uninstaller should be run by selecting $OPCSPIDER_HOME/Uninstall/Uninstall.exe.
    - When you uninstall them, be sure to uninstall all servers and clients installed on the same platform
  - It is possible to install multiple clients for same version of OPC Spider development in the same platform. However, the limitations are given below.
    - Run the exe file under $OPCSPIDER_HOME/client/bin for each client application.
    - The uninstaller should be run by selecting $OPCSPIDER_HOME/Uninstall/Uninstall.exe
    - When you uninstall them, be sure to uninstall all servers and clients installed on the same platform.
- Language of OPC Spider Server is set when installing. It is not able to change after installation. (DSS-22577)

- For Windows version, install them as an administrator user.
  - When installed as the user without administrator rights, it is not registered as the application in Windows [Add or Remove Programs]. (DSS-6271)
  - After installing, when the general user starts the OPC Spider, assign the general user rights for all the directories under the installation directory. (DSS-7217)

8.2. Installer

- For all installer screens, input field cannot be scrolled sideways. (DSS-896)

8.3. Select Component

- When you select [Client only] or [Server only] on the [Select Component] screen and install them, the value may not be reflected in the URL of [OPC Spider Studio for Web], [Help] menu of Windows start menu. (DSS-11359)

  Configure the proper URL through the properties on the [OPC Spider Studio for Web], [Help] menu of Windows start menu.

8.4. Select Repository DB

- On "Select JDBC driver" screen of installer, if you press [Choose] button and Specify long path, [Restore Default] button and [Choose] button might disappear. (DSS-1539)
- On "Select JDBC driver" screen of installer, if JDBC driver path contains “#” or “%”, OPC Spider Server is unable to load the driver at starting. (DSS-4635)

  Don’t use “#” and “%” for JDBC driver path.

8.5. Register Windows Service

- If OPC Spider Server is registered as Windows service by the user account of following conditions, the service of OPC Spider Server is not displayed in Windows service list. (DSS-1356)
  - The user is not belonging to Administrators group.
  - The user doesn't have full control permission of C: drive.
- When registering OPC Spider Server in Windows Service name, multi byte characters are not allowed in the Windows Service name of the OPC Spider Server. (DSS-11335)

8.6. Installation Directory Settings

- Following characters are not available for install directory. (DSS-22963、DSS-12834、DSS-9044, DSS-8718)
  - multi byte
  - equals sign
  - percent sign
  - single byte space (only for UNIX/Linux version)
- In UNIX/Linux version, after installing as root user, the user and group belonging to $OPCSPIDER_HOME/jre directory are displayed as "500". (DSS-7952)

8.7. Installation Complete

- Folder name (OPC Spider installation directory) cannot be changed after installation.(DSS-7463)

9. Notes concerning Windows

If you install OPC Spider on Windows OS, read the following notes.

9.1. Notes when Installing OPC Spider

- If you install OPC Spider in C drive (installation drive of Windows OS), the following issues may occur.
  - OPC Spider Server: When starting as unauthorized user, if you don't start OPC Spider Server by "Run as administrator", OPC Spider Server might not be restarted from OPC Spider Studio and command prompt.
  - OPC Spider Studio: When starting as unauthorized user, if you don't start OPC Spider Studio by "Run as administrator", it might be unable to connect with OPC Spider Server.
- If you install OPC Spider in D drive in which Windows OS is not installed, the following issues may occur.
  - OPC Spider Server: When starting as unauthorized user, if you don't start OPC Spider Server by "Run as administrator", OPC Spider Server might not be restarted from OPC Spider Studio and command prompt.

 Above-mentioned "Unauthorized user" refers to users other than built-in Administrator account when UAC is valid and when UAC is invalid, it refers to the general user.

10. Installation of OPC Spider

This chapter explains the installation procedure of OPC Spider. The installer file that supports each platform is used for installation.

10.1. Installation

Run the installer file that supports each platform, and start the installer.

The following table shows the file name of each installer and the supported Platforms.

- Windows

File name	Supported Platforms
OPC Spider¥Windows_x64¥OPCSP140.exe	Windows x64
OPC Spider¥Windows_x32¥OPCSP140.exe	Windows x86

- UNIX/Linux

File name	Supported Platforms	Installation method
OPC Spider¥Linux_x64¥OPCSP140.bin	UNIX/Linux x64 version	GUI method
OPC Spider¥Linux_x86¥OPCSP140.bin	UNIX/Linux x86 version	GUI method

 To install OPC Spider by using GUI method, start X Windows System in advance.

 The installer contains both the server and the client. The installation target is selected during the installation process.

10.1.1. Select Language

Select a language by which operate the product.

 OPC Spider Server and Server CLI Console will start by the language you select here. You cannot change the language after completing the installation.

 Client (OPC Spider Studio, OPC Spider Studio for Web, Client CLI Console) execute first boot in selected language. The language can be changed after.

10.1.2. Introduction

In the introduction screen, read through the displayed content, and proceed to the next step.

10.1.3. Select Package

Select the package you purchased and proceed to the next step. Available packages are as follows.

- **[OPC Spider Package]**

 **The product configurations between above packages and the terms and conditions of their contracts are different. Be sure to select the correct one you purchased.**

10.1.4. Select Component

Select component to install. Select component and proceed to the next step.

- **[Server and Client]**: Both server and client are installed.
- **[Server only]**: Only server is installed.
- **[Client only]**: Only client is installed.

The following table shows the installation target components for server and client.

Installed application	Server	Client (*)	
		Clients for development	Clients for execution
OPC Spider Studio for Web	Yes	Yes	Yes
Help Document	Yes	Yes	Yes
OPC Spider Server	Yes	No	No
ScriptRunner	Yes	No	No
Server CLI Console	Yes	No	No
OPC Spider Studio	No	Yes	No
Client ScriptRunner	No	Yes	Yes
Client CLI Console	No	Yes	Yes

Yes: It is installed.

No: It is not installed.

*: It depends on the settings on the [Select Client Environment] screen.

The server and the client are supported by different platforms.

For more details, refer to "OS supporting OPC Spider".

To install a server and a client on the same platform, select [Server and Client]. On the same platform, when you independently install a server and a client of the same version, and if you uninstall one of them, all Windows menus will be deleted.

10.1.5. Select Client Environment

Select the client environment to install. Select component and proceed to the next step.

- **Client for development**
- **Client for execution**

It is displayed when you select **[Server and Client]** or **[Client only]** on the [Select Component] screen.

For details on the applications to be installed, refer to the section "Select Component".

Notes on the clients for development

- Cannot be installed on UNIX/Linux environment.
- For Windows environment, use the installer with "exe" extension to install.

10.1.6. Administrator Password Settings

Enter the password of administrator (root user), and proceed to the next step.

[Administrator Password Settings] screen is not available when you select **[Client only]** on the [Select Component] screen.

After installation, you can change administrator password from [User Accounts] of Control Panel of OPC Spider Studio.

10.1.7. Select Repository Database

[Select Repository Database] screen is not available when you select **[Client only]** on the [Select Component] screen.

Select whether to use Repository DB or not. Select component and proceed to the next step.

- **[Use repository]**: It builds a OPC Spider file system on the database.
- **[Do not use repository]**: It builds a OPC Spider file system on the file system of the OS where OPC Spider Server is running.

If you select **[Do not use repository]**, it is not necessary to make the settings described in the next "Select Database Product" and after the section. Refer to "Register Windows Service" for details.

If you use one of the following database as a repository DB, you cannot configure by using the installer. Select [Do not use repository] and configure the settings after installation.

- **MySQL**
- **Oracle Base Database Service**
  For more details, refer to the following.
- "When using MySQL"

- "When using Oracle Base Database Service "

10.1.8. Select Database Product


[Select Database Product] screen is not available when you select **[Do not use repository]** at [Select Repository Database] screen.

Select database products to use as repository DB. Select component and proceed to the next step.
Available database products are as follows.

- **[MySQL]**: When you use MySQL, do not select [MySQL], but select [Do not use repository] after getting back to [Select Repository Database] screen.
  
  For more details, refer to "Specification restrictions / Precautions" in "When using MySQL".
- **[Oracle]**: Selects when Oracle Database is used in repository DB.
- **[PostgreSQL]**: Selects when PostgreSQL is used in repository DB.
- **[SQL Server]**: Selects when Microsoft SQL Server or Azure SQL Database is used in repository DB.

After selecting database product, by the following procedure, select a JDBC driver and set database connection information.

1. Specify file path of JDBC driver and proceed to the next step.
2. Enter connection information of database and proceed to the next step.

For more details about the supported versions of each database and JDBC driver, refer to the following table.

Database, JDBC driver		Referred to
MySQL	Database	"Supported versions of MySQL"
	JDBC driver	"Supported JDBC driver of MySQL"
Oracle	Database	"Supported versions of Oracle Database"
	JDBC driver	"Supported JDBC driver of Oracle Database" "Supported JDBC driver of Oracle Base Database Service "
PostgreSQL	Database	"Supported versions of PostgreSQL"
	JDBC driver	"Supported JDBC driver of PostgreSQL"
SQL Server	Database	"Supported versions of Microsoft SQL Server" "Supported versions of Azure SQL Database"
	JDBC driver	"Supported JDBC driver of Microsoft SQL Server" "Supported JDBC driver of Azure SQL Database"

10.1.9. Register Windows Service

For Windows version, select whether to register OPC Spider as the Windows service, and proceed to the next step.

In the installer for UNIX/Linux version, this screen is not displayed.

It is displayed when you select **[Server and Client]** or **[Server only]** on the [Select Component] screen.

After checking **[Register the server as Windows Service]**, if you omit the service name, it is not registered as the Windows Service.

Precautions when you register a OPC Spider Server with a repository DB on a Windows service

If both the OPC Spider Server with a repository DB and the repository DB are started from a Windows service, repository DB may not yet be started when OPC Spider Server is started.

In such case, you should set the appropriate times and cycles of Test connect count in [Repository DB Management] - [Reconnection settings] tab in control panel of OPC Spider Studio.

10.1.10. Connection Information Settings

Enter the host name and the IP address of the OS where OPC Spider Server is running and the port number of OPC Spider Server, and then proceed to the next step.

 If **[Host name/IP address]** is omitted, "localhost" will be set.

 If **[Port number]** is omitted, "7700" will be set.

 In the UNIX/Linux version, administrative rights are necessary for the numerical value "1023" or less. Specify the number other than "0" to "1023" for starting OPC Spider Server as a general user.

10.1.11. Installation Directory Settings

Set the installation directory of OPC Spider and proceed to the next step.

 If OPC Spider already exists in the destination directory specified in destination folder, a warning dialog appears. **Do not overwrite the existing OPC Spider.**

10.1.12. Select License File

Specify file path of OPC Spider license (**license.lic**), and proceed to the next step.


This screen is displayed when you select **[Server and Client]** or **[Server only]** on the [Select Component] screen.

The license file specified is copied under the directory $OPCSPIDER_HOME/server/lic.


You can also apply license file even after installation.


Please copy the optional function license file (.lic file other than "license.lic" such as "oracle_adapter.lic") to $OPCSPIDER_HOME/server/lic after installation. If OPC Spider Server is running as a service, you need to restart the service.

10.1.13. Heap Size Settings

Specify a heap size of OPC Spider Server and proceed to the next step.


This screen is displayed when you select **[Server and Client]** or **[Server only]** on the [Select Component] screen.

The unit of megabytes is specified as "m" or "M", and gigabytes is specified as "g" or "G".


If you omit this setting, the following value is set.

Install target platform	**[Initial(bytes)]**	**[Maximum(bytes)]**
Windows x64/ Linux x64 version	1G	2G

10.1.14. Summary of Installation

Summary of installation is displayed. Confirm a displayed content of settings. Press **[Install]** button for GUI method, or press **[Enter]** button for CUI method, and then installation begins.

10.1.15. Installation Complete

When installation executed successfully, "Installation Complete" screen is displayed. Press **[Done]** button for GUI method, or press **[Enter]** button for CUI method to end installer.

Setting data for OPC Spider Server and the Repository DB are written into the below location.

- $OPCSPIDER_HOME/server/conf/dsserver.xml

When there are mistakes in the settings of the repository DB or you want to change the connected repository DB, you can modify the settings through [Repository DB Management] in the OPC Spider Studio's Control Panel.

10.2. Work after Installation

This chapter explains the procedure necessary to perform after installation.

10.2.1. License file settings

If you did not set the license file ("license.lic") with the installer, or if you have an optional license file, copy the license file to the $OPCSPIDER_HOME/server/lic directory manually.

Notes on the license file

- License file name should be "license.lic" or "LICENSE.LIC".
- The option license file name will be "<option name> .lic".
  (Example) oracle_adapter.lic etc.

10.2.2. Setting the font file for UNIX/Linux version

In UNIX/Linux version, if the font file used to operate the product by the language in use is not installed in the OS, store the font file of the language in use in $OPCSPIDER_HOME/jre/lib/fonts/fallback directory.

10.2.3. Application Log Output Settings

To add the application log to the NT event log system, store the following library file to the directory where it is included in the environment variable "PATH" of Windows system.

- Library file

  $OPCSPIDER_HOME/server/lib/NTEventLogAppender.dll

For more details, refer to the page "Application Log Output Settings" of OPC Spider help.

10.2.4. About Windows start menu

In Windows version, start menus created at installation differ according to the settings in the [Select Component] screen and the [Select Client Environment] screen during installation.

The settings of the screen during installation and created start menus are as follows.

[Select Component] screen	**[Server and Client]**		**[Server only]**	**[Client only]**	
[Select client environment] screen	**[Clients for development]**	**[Clients for execution]**	**(*)**	**[Clients for development]**	**[Clients for execution]**
Client CLI Console	Yes	Yes	No	Yes	Yes
OPC Spider Studio	Yes	No	No	Yes	No
OPC Spider Studio for Web	Yes	Yes	Yes	Yes	Yes
OPC Spider Server	Yes	Yes	Yes	No	No
Help Document	Yes	Yes	Yes	Yes	Yes
Server CLI Console	Yes	Yes	Yes	No	No
Shutdown	Yes	Yes	Yes	No	No
Uninstall	Yes	Yes	Yes	Yes	Yes

Yes: Start menu item is created

No: Start menu item is not created

*: If **[Server only]** is selected on the [Select Component] screen, the [Select Client Environment] screen is not displayed.

10.2.5. Settings for enabling TLS 1.0 or TLS 1.1

To improve security, starting from OPC Spider 1.3, encrypted communication using TLS 1.0 or TLS 1.1 becomes disabled by default.

If you need to use TLS 1.0 or TLS 1.1 for a communication destination, enable the required TLS version by removing its entry from the properties in the following target file.

- Target file
  - $OPCSPIDER_HOME/jre/lib/security/java.security
- Property key
  - jdk.tls.disabledAlgorithms
- Value description
  - TLSv1: If this value exists, TLS 1.0 is disabled. To enable TLS 1.0, remove the value.
  - TLSv1.1: If this value exists, TLS 1.1 is disabled. To enable TLS 1.1, remove the value.

11. Pre-setting of Adapters

For using each adapter, pre-setting might be necessary such as installation of the library etc.

 For more details, refer to the following descriptions or OPC Spider Help.

11.1. MySQL Adapter

 <version> shows the latest version.

11.1.1. MySQL 8.0 adapter

- Required library
  - mysql-connector-java-8.0.<Version>.jar
- Supported Version of the driver
  - MySQL Connector/J 8.0.<Version>
- How to get library
  - Download JDBC driver from MySQL Connector/J 8.0 Downloads site.
- Installation procedure
  1. Stop OPC Spider and various client applications.
  2. Copy the required libraries under $OPCSPIDER_HOME/server/plugin/data_processing/modules/mysql80_adapter directory.
  3. Launch OPC Spider Server and OPC Spider Studio.

11.2. Oracle Adapter

11.2.1. Oracle 23ai Adapter

- Required library
  - ojdbc8.jar

- orai18n.jar

- Supported Version of the driver
  - Oracle JDBC Driver 23
- How to get library
  - Download JDBC driver for version 23ai from Oracle Software Downloads site.
- Installation procedure
  1. Stop OPC Spider and various client applications.
  2. Copy the required libraries under $OPCSPIDER_HOME/server/plugin/data_processing/modules/oracle23c_adapter directory and $OPCSPIDER_HOME/server/plugin/data_processing/modules/xa_oracle23c_adapter directory.
  3. Launch OPC Spider Server and OPC Spider Studio.

11.2.2. Oracle 19c Adapter

- Required library
  - ojdbc8.jar
  - orai18n.jar
- Supported Version of the driver
  - Oracle JDBC Driver 19
- How to get library
  - Download JDBC driver for version 18c from Oracle Software Downloads site.
- Installation procedure
  4. Stop OPC Spider and various client applications.
  5. Copy the required libraries under $OPCSPIDER_HOME/server/plugin/data_processing/modules/oracle19c_adapter

directory and
$OPCSPIDER_HOME/server/plugin/data_processing/modules/xa_oracle19c_adapter
directory.

6. Launch OPC Spider Server and OPC Spider Studio.

11.3. PostgreSQL Adapter

In PostgreSQL adapter, it is not necessary to install library.

11.4. SQL Server Adapter

11.4.1. SQL Server 2022 Adapter

- Required library
  - mssql-jdbc-12.4.<version>.jre8.jar
  - mssql-jdbc_auth-12.4.<version>.x64.dll (when using Windows authentication)
- Supported driver version
  - Microsoft JDBC Driver 12.4 for SQL Server
- How to get library
  - Download Microsoft JDBC Driver 12.4 for SQL Server fromMicrosoft SQL Docs.
- Installation procedure

1. Stop OPC Spider and various client applications.
2. Copy mssql-jdbc-12.4.<version>.jre8.jar directly under the directory
   $OPCSPIDER_HOME/server/plugin/data_processing/modules/sqlserver2022_adapter
3. When you use Windows authentication, copy mssql-jdbc_auth-12.4.<version>.x64.dll to a directory included in Windows system paths of the computer where the JDBC driver is installed.
4. Start OPC Spider Server and OPC Spider Studio.

11.4.2. SQL Server 2019 Adapter

- Required library
  - mssql-jdbc-12.4.<version>.jre8.jar
  - mssql-jdbc_auth-12.4.<version>.x64.dll (when using Windows authentication)
- Supported driver version
  - Microsoft JDBC Driver 12.4 for SQL Server
- How to get library
  - Download Microsoft JDBC Driver 12.4 for SQL Server fromMicrosoft SQL Docs.
- Installation procedure

5. Stop OPC Spider and various client applications.
6. Copy mssql-jdbc-12.4.<version>.jre8.jar directly under the directory $OPCSPIDER_HOME/server/plugin/data_processing/modules/sqlserver2019_adapter
7. When you use Windows authentication, copy mssql-jdbc_auth-12.4.<version>.x64.dll to a directory included in Windows system paths of the computer where the JDBC driver is installed.
8. Start OPC Spider Server and OPC Spider Studio.

11.4.3. SQL Server 2017 Adapter

- Required library
  - mssql-jdbc-12.4.<version>.jre8.jar
  - mssql-jdbc_auth-12.4.<version>.x64.dll (when using Windows authentication)
- Supported driver version
  - Microsoft JDBC Driver 12.4 for SQL Server
- How to get library

- Download Microsoft JDBC Driver 12.4 for SQL Server fromMicrosoft SQL Docs.

- Installation procedure

1. Stop OPC Spider and various client applications.
2. Copy mssql-jdbc-12.4.<version>.jre8.jar directly under the directory $OPCSPIDER_HOME/server/plugin/data_processing/modules/sqlserver2017_adapter
3. When you use Windows authentication, copy mssql-jdbc_auth-12.4.<version>.x64.dll to a directory included in Windows system paths of the computer where the JDBC driver is installed.
4. Start OPC Spider Server and OPC Spider Studio.

11.4.4. SQL Server 2016 Adapter

- Required library
  - mssql-jdbc-12.4.<version>.jre8.jar
  - mssql-jdbc_auth-12.4.<version>.x64.dll (when using Windows authentication)
- Supported driver version
  - Microsoft JDBC Driver 12.4 for SQL Server
- How to get library
  - Download Microsoft JDBC Driver 12.4 for SQL Server fromMicrosoft SQL Docs.
- Installation procedure

1. Stop OPC Spider and various client applications.
2. Copy mssql-jdbc-12.4.<version>.jre8.jar directly under the directory $OPCSPIDER_HOME/server/plugin/data_processing/modules/sqlserver2016_adapter
3. When you use Windows authentication, copy mssql-jdbc_auth-12.4.<version>.x64.dll to a directory included in Windows system paths of the computer where the JDBC driver is installed.
4. Start OPC Spider Server and OPC Spider Studio.

11.5. JDBC Adapter

- Required library
  - Inquire DBMS vendor connected with JDBC adapter.
- How to get library
  - Inquire DBMS vendor connected with JDBC adapter.
- Installation procedure
  1. Stop OPC Spider and various client applications.
  2. Copy required library group under the directory $OPCSPIDER_HOME/server/plugin/data_processing/modules/jdbc_adapter
  3. Start OPC Spider Server and OPC Spider Studio.

11.6. HCL Domino Adapter

 You cannot use multiple versions of Lotus Domino adapter at the same time.

11.6.1. HCL Domino 12.0 Adapter

- Required libraries
  - NCSO.jar
  - Notes.jar
- To get a library
  - If HCL Domino 12.0 is installed with default settings in Windows environment, the corresponding library is located under the directories below.
    - <Installation directory of Domino>/data/domino/java/NCSO.jar
    - <Installation directory of Domino>/jvm/lib/ext/Notes.jar
- Installation procedure
  1. Stop OPC Spider and various client applications.

2. Copy the required library group under the directory $OPCSPIDER_HOME/server/plugin/data_processing/share/lib.
3. Start OPC Spider Server and OPC Spider Studio.

11.6.2. HCL Domino 11.0 Adapter

- Required libraries
  - NCSO.jar
  - Notes.jar
- To get a library
  - If HCL Domino 11.0 is installed with default settings in Windows environment, the corresponding library is located under the directories below.
    - <Installation directory of Domino>/data/domino/java/NCSO.jar
    - <Installation directory of Domino>/jvm/lib/ext/Notes.jar
- Installation procedure

4. Stop OPC Spider and various client applications.
5. Copy the required library group under the directory $OPCSPIDER_HOME/server/plugin/data_processing/share/lib.
6. Start OPC Spider Server and OPC Spider Studio.

11.7. SAP Adapter

To use SAP adapter, you need to install SAP EICS.

11.8. FTP Adapter

In FTP adapter, it is not necessary to install library.

11.9. Rest Adapter

In REST adapter, it is not necessary to install library.

11.10. Mail adapter

In Mail adapter, it is not necessary to install library.

11.11. Microsoft Azure Adapter

11.11.1. Azure SQL Database Adapter

- Required library
  - mssql-jdbc-12.4.<version>.jre8.jar
- Supported driver version
  - Microsoft SQL Server JDBC Driver 12.4
- How to get library
  - Download Microsoft SQL Server JDBC Driver 12.4 for SQL Server from Microsoft SQL Docs.
- Installation procedure
  1. Stop OPC Spider Server and various client applications.
  2. Copy mssql-jdbc-12.4.<version>.jre8.jar to $OPCSPIDER_HOME/server/plugin/data_processing/modules/sqlazure_adapter directory.
  3. Start OPC Spider Server and OPC Spider Studio.

11.11.2. Azure BLOB Storage Adapter

In Azure BLOB Storage adapter, it is not necessary to install library.

11.12. HULFT Adapter

In HULFT adapter, it is not necessary to install library.

12. About the port used by OPC Spider

OPC Spider uses a port for RMI communication (RMI port) as well as a port for HTTP communication (HTTP port) configured during installation.

These ports are used for communication between the OPC Spider Server and the OPC Spider Studio.

Usually, a RMI port uses multiple ports randomly, but when a firewall or port filtering functions is configured, the RMI port should be static.

 See also: ”OPC Spider Studio cannot be connected to OPC Spider Server (3)” “My project takes too long to start up in OPC Spider Studio(2)”

A RMI port is specified as follows.

- Config file
  - Server side
    - $OPCSPIDER_HOME/server/conf/system.properties
  - Client side
    - $OPCSPIDER_HOME/client/conf/system.properties
- Property key
  - ds.rmi.port
- Description of the values
  - Specify the TCP port number used by each server/client
- Setting example
  - ds.rmi.port=7001

 The firewall and/or the filtering functions corresponding to the specified port number should be configured so that the port can operate in the used environmental conditions.

 **Be sure to specify an unused port number.**

13. Start and Shutdown of OPC Spider Server

13.1. Start OPC Spider Server

After installation of OPC Spider Server, you can start OPC Spider Server by following procedure.

1. Confirm Repository DB service is operating. (When Repository DB is enabled).
2. In UNIX/Linux version, when the environment variable CLASSPATH is set, delete it.
3. Start OPC Spider Server.
   - Windows Version
     - In “OPC Spider <Version> Select “OPC Spider Server” from "Windows start menu".
     - (If OPC Spider Server is installed as Windows service) Start Windows service.
     - Run $OPCSPIDER_HOME/server/bin/OPCSpider Server.exe.
   - UNIX/Linux Version
     - Run $OPCSPIDER_HOME/server/bin/OPCSpider Server

 **It may take a few minutes to start the OPC Spider Server for the first time because the Server makes the index of the help.**

4. When OPC Spider Server starts successfully, following messages are output to server.log and OPC Spider Server console.

```
--- |INFO|
--- |INFO|************************************************************
--- |INFO|************************************************************
--- |INFO|********************** OPC Spider Server **********************
--- |INFO|************************************************************
--- |INFO|************************************************************
--- |INFO|Starting OPC Spider Server...
--- |INFO|Loading system. System name: [OPC Spider Server]
--- |INFO|System was successfully loaded.
--- |INFO|Loading modules...   :
(...)
--- |INFO|Service of module [DataProcessingComponent Manager] was successfully started.
--- |INFO|Service of module [ScriptRunner Container] was successfully started.
--- |INFO|System service was successfully started.
--- |NOTICE|OPC Spider Server was successfully started.
--- |INFO|************************************************************
```

13.2. Restart OPC Spider Server

To restart OPC Spider Server, execute either of following procedures.

- Common to Windows Version & UNIX/Linux Version
  - Press **[Reboot]** button in **[Others]** tab of [OPC Spider Server Settings], Control Panel, OPC Spider Studio.
- Windows Version
  - In command prompt, move to $OPCSPIDER_HOME/server/bin and run "shutdown -r".
  - (When registered as Windows service) Restart Windows service.
- UNIX/Linux Version
  - In console, move to "$OPCSPIDER_HOME/server/bin" and run the command "shutdown -r".

13.3. Stop OPC Spider Server

To stop OPC Spider Server, execute either of following procedures.

- Windows Version
  - In “OPC Spider <Version>” Select “Shutdown” from the start menu.
  - Press **[Shutdown]** button in **[Others]** tab of [OPC Spider Server Settings], Control Panel, OPC Spider Studio.
  - (When registered as Windows service) Stop Windows service.
- UNIX/Linux Version
  - Run $OPCSPIDER_HOME/server/bin/Shutdown

14. Launch and Exit OPC Spider Studio

This chapter explains how to launch and exit OPC Spider Studio. For details on launching and exiting OPC Spider Studio for Web, refer to "Launch and Exit OPC Spider Studio for Web".

14.1. Launch OPC Spider Studio

Launch OPC Spider Studio by either of the following ways.

- Select "OPC Spider <version>" - "OPC Spider Studio" from Windows Start menu.
- Run $OPCSPIDER_HOME/client/bin/OPCSpiderStudio.exe directly.

When OPC Spider Studio launches first time, it synchronizes modules with OPC Spider Server. After synchronization, you need to restart OPC Spider Studio.

Depending on network conditions, synchronization of modules may take much time when OPC Spider Studio is launched for the first time. Do not restart OPC Spider Studio until "100%" is shown in the synchronization progress display dialog.

14.1.1. Login

Login dialog is displayed if succeeded in launching OPC Spider Studio.
Enter user name and password, then press **[Login]** button. If succeeded to log in, desktop screen of OPC Spider Studio is displayed.

Language which is used in Studio is selected from **[Language]**.

When the user with administrator rights tries to log in while users cannot log in because the maximum number of licenses is exceeded, "Exceeds the maximum number of clients connected" dialog displays. Make the user logging in to the clients for development log out, or close the session from the displayed session list, after that, log in again.

14.1.2. Edit Server List

If you want to change connection destination, select **[Edit server list]** from **[Server list]** of login dialog and open "Edit server list" screen.

Select connection destination to be edited in server list area, edit setting and press **[Apply]**

button. Return to login dialog with applying edited contents.

In login dialog, select server to be connected from **[Server list]** and log in. When server that will try to log in is different from server connected when Studio launches, you need to restart OPC Spider Studio so that module may synchronize. After pressing **[Login]** button, exit OPC Spider Studio and launch again.

Moreover, multiple connection destinations can be saved. If you add new connection destination, press **[Add]** button and configure according to displayed screen.


Connection destination "Last setting" cannot be saved. When "Last setting" is in [Server list] as the name of connection destination, change the name of connection destination so that **[Apply]** button will be enabled.

14.1.3. When Failed to Connect to Server

If Studio fails to connect to OPC Spider Server, "Failed to connect to server" dialog is displayed. Press **[OK]** and following "Edit connection destination information" screens are displayed.

If host name or IP address is wrong, change the setting and press **[Save]** button. If you save setting, you need to restart OPC Spider Studio.
Exit OPC Spider Studio according to screen and launch again.

If you press **[Cancel]** button, OPC Spider Studio tries to reconnect to OPC Spider Server by using the settings before modification.


If you switch display to other applications before the dialog is displayed, the dialog might be hidden behind other applications. Minimize all other displayed applications or switch application by Alt + Tab key.


Settings set on "Edit connection destination information" screen are not added to **[Server list]**. If the setting set on "Edit connection destination information" screen already exists, display the setting on top of **[Server list]**.

If the setting doesn't exist in **[Server list]**, it is added to **[Server list]** by a set name "Last setting" when being started next time. However, because the setting "Last setting" cannot be saved in **[Server list]**, next, when you change Server list, you need to change connection destination name "Last setting".

14.2. Exit OPC Spider Studio

After selecting **[Exit/logoff Studio]** of Studio menu, press **[Exit]** button or close login dialog by pressing [x] button and press **[Exit]** button by displayed exit confirmation dialog, you can exit Studio.

15. Launch and Exit OPC Spider Studio for Web

This chapter explains how to launch and exit OPC Spider Studio for Web. For details on launching and exiting OPC Spider Studio, refer to "Launch and Exit OPC Spider Studio".

15.1. Execution environment of OPC Spider Studio for Web

To use OPC Spider Studio for Web, the following execution environments are needed. Before launching OPC Spider Studio for Web for the first time, install the following.

- Microsoft .NET Framework later than 4.7

  Download .NET Framework 4.7 from Microsoft Download Center.

- StudioLauncher

  StudioLauncher can be downloaded from the following URL.
  http://<the host name of the machine on which OPC Spider Server is running or IP address>:<the port number of OPC Spider Server>/WebStudio/StudioLauncherSetup.exe

15.2. Launch OPC Spider Studio for Web

Launch OPC Spider Studio for Web by either of the following ways.

- Access the website of OPC Spider Studio for Web from the browser.

  1. Access the following URL.
     http://<the host name of the machine on which OPC Spider Server is running or IP address>:<the port number of OPC Spider Server>/WebStudio/
  2. Press **[Start Studio for Web]** button.

- Launch from Windows Start menu

  1. Select "OPC Spider Studio for Web" from Windows Start menu.
  2. Press [Start Studio for Web] button.

15.2.1. Login

When launching OPC Spider Studio for Web succeeds, displays login dialog.

Enter user name and password, then press **[Login]** button. When you succeed to log in, then displays start screen of OPC Spider Studio for Web.


Language which is used in OPC Spider Studio for Web is selected from **[Language]**.


When the user with administrator rights tries to log in while users cannot log in because the maximum number of licenses is exceeded, "Exceeds the maximum number of clients connected" dialog displays. Make the user logging in to the clients for development log out, or close the session from the displayed session list, after that, log in again.

15.3. Exit OPC Spider Studio for Web

Exit OPC Spider Studio for Web by either of the following ways.

1. Press **[x]** button in OPC Spider Studio for Web.
2. In confirmation dialog, press **[OK]** button.

16. Start OPC Spider Help

You can refer help by a web browser.

Method of starting OPC Spider help is as follows.

1. Launch OPC Spider Server.
2. Start the browser Help with one of the following methods.
   - Common to Windows Version & UNIX/Linux Version
     - In Web Browser
       Access to "http://<The host name or the IP address of the OS where OPC Spider Server is running>:<The port number of OPC Spider Server>/opcspider/doc/help/index.html".
   - Windows Version
     - Select "OPC Spider <version>" - "Help Document" from Windows Start menu.

17. Service Development

The basic knowledge related to the concept are function, script creating procedures, development and application necessary for developing the services in OPC Spider is described in the below document.

- Concepts, functions, terms and simple scripting procedure.
  - In the page "Basic knowledge of the service" of OPC Spider Help.
- Practical concepts and functions of service development.
  - In the page "Development of Service" of OPC Spider Help.
- Various concepts and tools of service operation.
  - In the page "Service Operations" of OPC Spider Help.

18. Specifications and Limitations at Uninstallation

18.1. General

- In Windows version, short cut menu might remain in Windows start menu after uninstall. (DSS-2691)

  Delete manually.

- If you have uninstalled it using the x86 version uninstaller, $OPCSPIDER_HOME/server/samples directory is not deleted. (DSS-14899).

- Uninstall might not be successfully executed, and file might remain.

  Delete manually. (DSS-14791)

19. Uninstall OPC Spider

Use uninstaller when you uninstall OPC Spider. For details, refer to "Uninstallation procedure of OPC Spider".

When you uninstall OPC Spider Studio for Web, you must uninstall OPC Spider Studio Launcher. For details, refer to "Uninstallation procedure of OPC Spider Studio Launcher".

Before uninstallation, ensure that the various applications of OPC Spider have been stopped.

19.1. Uninstallation procedure of OPC Spider

1. Start uninstaller in following way.
   - In Windows version, start uninstaller by either of the following ways.
     - In "OPC Spider <version>" Select "Uninstall" from Windows Start menu.
     - Run $OPCSPIDER_HOME/Uninstall/Uninstall.exe.
   - In UNIX/Linux version, start uninstaller by the following way.
     - Run $OPCSPIDER_HOME/Uninstall/Uninstall
2. On "Introduction" screen, press **[Uninstall]** button for GUI method or press **[Enter]** button for CUI method.
3. If some directories could not be deleted, they are displayed on the screen. After completing uninstallation, confirm the directories and files under $OPCSPIDER_HOME and delete them manually.
   In Gui method, press **[Done]** button on "Uninstall Complete" screen to end uninstaller.

In the environment Repository DB, if you do not use the Repository DB after uninstalling, also delete the database instance for the Repository DB.

19.2. Uninstallation procedure of OPC Spider Studio Launcher

1. From "Programs and Features" of Windows, select [OPC Spider Studio Launcher].
2. Press [Uninstall].
3. Uninstall according to the displayed dialog.
4. Confirm the contents of the following directories and deletes them manually.
   - %LocalAppData%/TAKEBISHI/OPCSpider
     %LocalAppData/% is the environment variable of Windows system.

20. Troubleshooting

20.1. Junk character in installer

- Phenomenon

Junk characters are displayed when the installer is started in the Japanese environment of Red Hat Enterprise Linux. (It is displayed as "□")

- Possible causes

The installer may not correctly refer to the font file of the OS.

- Counter-measure

Start the installer after creating the symbolic link for the font file of the OS.

  - /usr/share/fonts/ja/TrueType/kochi-gothic-subst.ttf
  - /usr/share/fonts/ja/TrueType/kochi-mincho-subst.ttf

- Creation procedure

1. Create a symbolic link as /usr/share/fonts/ja/TrueType/kochi-gothic-subst.ttf. Execute the command in console as follows.

```
# ln -s /usr/share/fonts/ja/TrueType/kochi-gothic-subst.ttf
/usr/share/fonts/ja/TrueType/kochi-gothic.ttf
```

2. Create a symbolic link as /usr/share/fonts/ja/TrueType/kochi-mincho-subst.ttf. Execute the command in console as follows.

```
# ln -s /usr/share/fonts/ja/TrueType/kochi-mincho-subst.ttf
/usr/share/fonts/ja/TrueType/kochi-mincho.ttf
```

20.2. Installing or uninstalling OPC Spider by using CUI installer fails

- Event

When you try to install or uninstall OPC Spider by using CUI installer, after selecting the language, displays the following error and the operation fails.

  - "Installer User Interface Mode Not Supported"

- Possible causes

The possible cause of this error is existing both of the following packages, by the operation such as installing JDK1.7.0.

  - xorg-x11-fonts-Type1
  - stix-fonts

- Counter-measure

Delete one of, or both of the following packages, after that, install or uninstall OPC Spider again.

  - xorg-x11-fonts-Type1
  - stix-fonts

20.3. OPC Spider Server cannot be started

20.3.1. The "License file could not be found" error occurs and OPC Spider Server cannot be started

- Event

At startup of OPC Spider Server, "com.appresso.ds.common.license.LicenseException: License file cannot be found" error is output in server.log and OPC Spider Server fails to start.

- Possible causes

Following causes are possible.

  - The license file is not in $OPCSPIDER_HOME/server/lic.
  - The license file in $OPCSPIDER_HOME/server/lic is not correct.
  - The name of the file in $OPCSPIDER_HOME/server/lic is not "license.lic".

- Counter-measure

Place the correct license file in $OPCSPIDER_HOME/server/lic and start OPC Spider Server.

20.3.2. When restarting OPC Spider Server, "LifecycleException: Protocol handler initialization failed" error occurs and it fails to restart

- Event

At reboot of OPC Spider Server, "LifecycleException: Protocol handler initialization failed: java.net.BindException: Address already in use: JVM_Bind:<port number of OPC Spider Server>" error occurs and OPC Spider Server fails to reboot.

- Possible causes

OPC Spider Server process may not have stopped correctly.

- Counter-measure

  - Windows version

    - Run $OPCSPIDER_HOME/server/bin/Shutdown.exe first, and then start OPC

Spider Server.

- UNIX/Linux version
  - Run $OPCSPIDER_HOME/server/bin/Shutdown first, and then start OPC Spider Server.

20.4. OPC Spider Studio cannot be connected

20.4.1. OPC Spider Studio cannot be connected to OPC Spider Server (1)

- Event

OPC Spider Studio fails to connect to OPC Spider Server that is installed in Red Hat Enterprise Linux.

- Possible causes

IP address bound with host name might be loopback address (127.0.0.1). If loopback address is specified, RMI that is used by communication of OPC Spider Server and OPC Spider Studio does not work normally.

If you installed Red Hat Enterprise Linux by default setting, contents of /etc/hosts file is as follows.

```
# Do not remove the following line、 or various programs
# that require network functionality will fail.
127.0.0.1            myserver localhost.localdomain localhost
```

"myserver" is specified value as host name by installer. By above-mentioned setting, host name is bound with local loopback address.

- Counter-measure

To the following, specify pair of IP address that can be communicated from OS that operates OPC Spider Studio and host name.

```
# Do not remove the following line、 or various programs
# that require network functionality will fail.
127.0.0.1            localhost.localdomain localhost
192.168.0.1       myserver
```

In the above example, “myserver” is bounded to the IP address “192.168.0.1”.

20.4.2. OPC Spider Studio cannot be connected to OPC Spider Server (2)

- Event

OPC Spider Studio fails to connect to OPC Spider Server.

- Possible causes

If multiple network cards are installed in the machine that OPCSpiderStudio operates or IP address of the machine is allocated by DHCP, the machine in which OPC Spider Server operates might not refer to OPCSpiderStudio properly.

- Counter-measure

Specify available IP address of client host machine by "**java.rmi.server.hostname**" key in system.properties file of OPC Spider Studio and reboot Studio.

If multiple network cards are installed in the machine that OPC Spider Server operates, specify available IP address of server host machine by "**java.rmi.server.hostname**" key in system.properties file of OPC Spider Server and reboot OPC Spider Server.

 For details about setting method, etc., refer to "Property Reference" page of OPC Spider Help.

20.4.3. OPC Spider Studio cannot be connected to OPC Spider Server (3)

- Phenomenon

OPC Spider Studio fails to connect to OPC Spider Server.

- Possible causes

The RMI port used for communications between the server and the client may be restricted by a firewall or the port filtering functions of the OS where OPC Spider Server is running.

- Counter-measure

Fix the RMI port in [System property] for the server side system.

 Refer to "About the port used by OPC Spider" for details about configurations.

20.5. It takes long time to open My Project

20.5.1. My project takes too long to start up in OPC Spider Studio (1)

- Event

If multiple network cards are installed in operating system that OPC Spider Studio operates, if you start opening My Projects of OPC Spider Studio, it takes long time.

- Possible causes

If multiple network cards are installed in operating system that OPC Spider Studio operates or if IP address of the machine is allocated by DHCP, OPC Spider Studio might not be able to connect to OPC Spider Server.

- Remedies

Specify available IP address of client host machine by "**java.rmi.server.hostname**" key in system.properties file of OPC Spider Studio and restart Studio.

If multiple network cards are installed in operating system that OPC Spider Studio operates, specify available IP address of server host machine by "**java.rmi.server.hostname**" key in system.properties file of OPC Spider Server and restart OPC Spider Server.

 Refer to "Property Reference" of OPC Spider help for details such as setting method etc.

20.5.2. My project takes too long to start up in OPC Spider Studio (2)

- Event

The following events occur in an environment where a firewall and/or port filtering functions are configured.

  - After startup of Studio, Studio is not operable when opening My Project.
  - No response is returned after debugging in Designer.

- Possible causes

The RMI port functions used for communication between the server and the client may be

restricted by a firewall and/or port filtering functions of the OS where OPC Spider Server or OPC Spider Studio is running.

- Remedies

Fix the RMI port in [System property] for the server side and the client side.

 Refer to, “About the port used by OPC Spider”, for details about configurations.

OPC Spider 1.4 Install Guide

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TAKEBISHI CORPORATION