

Brother

**Managing Your Brother Printers
with SOTI Connect**

**User's Guide (Agent connection)
Version 1.2**

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1. Introduction

This Software User's Guide is intended for IT administrators who want to install and configure the software for connecting Brother printers to SOTI Connect.

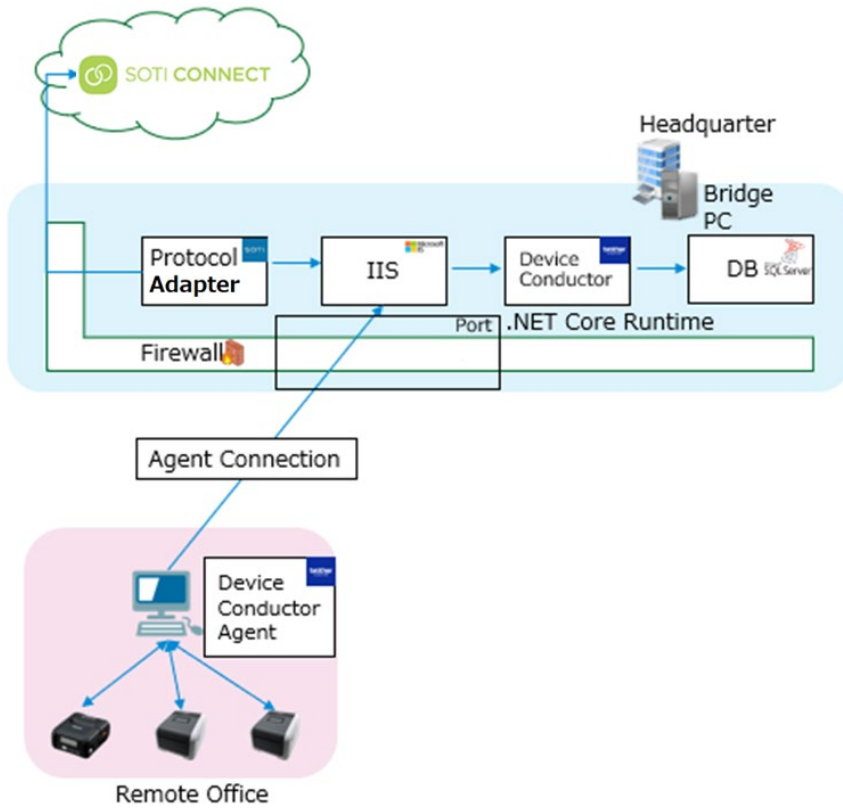
IT administrators are expected to understand how to use Microsoft Internet Information Services (IIS).

2. Introduction

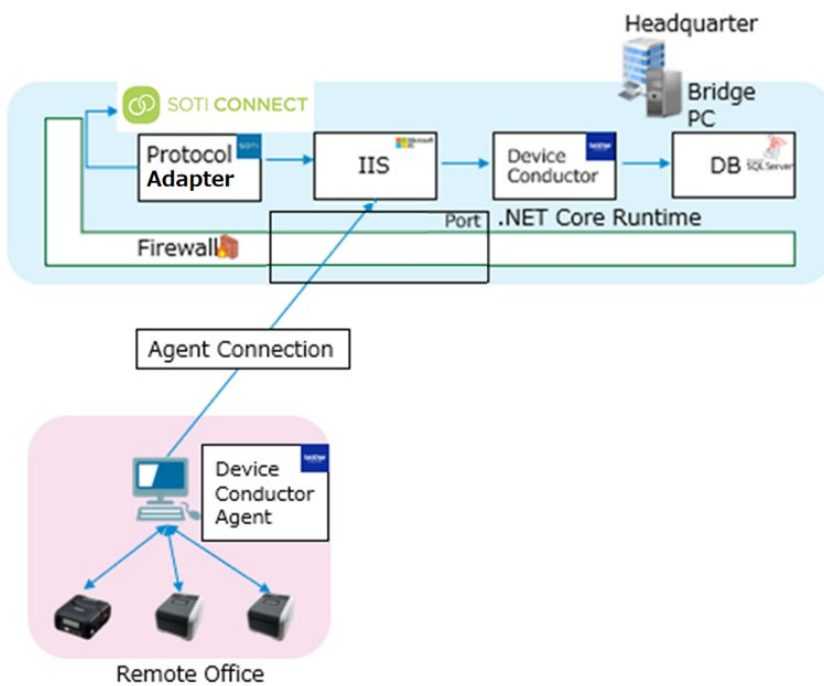
2.1 System Configuration

There are two types of SOTI Connect system configurations: cloud-based and on premise-based

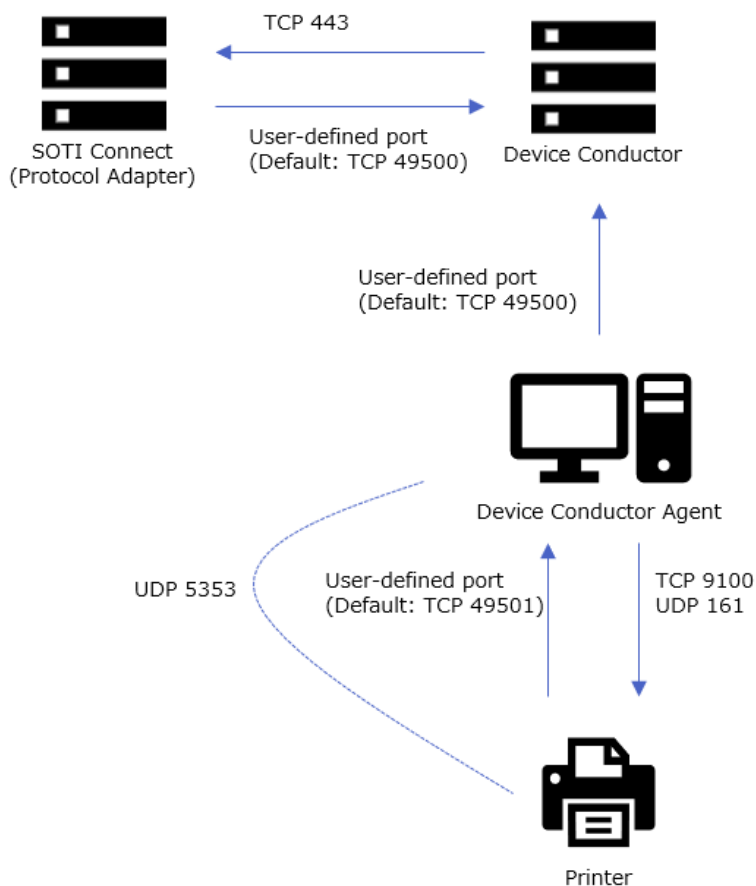
Cloud-based



On premise-based



2.2 Network port Configuration



2.3 Definition of Terms

| Terms | Description |
|--------------------------|---|
| MDM | Abbreviation for Mobile Device Management Refers to a management system for mobile devices (e.g. smartphones and peripheral equipment) |
| SOTI Connect | SOTI Connect is an IoT solution built for business that provides complete lifecycle management of IoT devices within an organization |
| SOTI Protocol Adapter | Software provided by SOTI to connect between SOTI Connect and the printer via Brother Device Conductor |
| IIS | Abbreviation for Microsoft Internet Information Services (IIS) A standard Web server (application server) service on Windows |
| .NET Core Runtime | An execution environment provided by Microsoft Brother Device Conductor starts up on this execution environment |
| DB | Abbreviation for DataBase This software uses SQL Server. Brother Device Conductor uses this DataBase for the data management |
| Brother Device Conductor | Brother Device Conductor is a Web app. Tools for performing various settings required for the operation of Brother Device Conductor are included. |

| | |
|--------------------------------|---|
| | Brother Device Conductor connects between SOTI Protocol Adapter and the printer. |
| Brother Device Conductor Agent | <p>Software to connect between Brother Device Conductor and the printer.</p> <p>*Brother Device Conductor Agent doesn't have UI. It works as the Windows Service.</p> <p>*This software regularly makes HTTPS communications with Brother Device Conductor (Web app) to confirm Action.</p> |

2.4 Supported Printers

| Model | Firmware version | Supported Interface |
|----------|------------------|-------------------------|
| RJ-2050 | | |
| RJ-2140 | 0.50 or later | Wireless LAN |
| RJ-2150 | | |
| TD-2120N | 0.50 or later | Wired LAN, Wireless LAN |
| TD-2130N | | |

2.5 Specifications

| Software | |
|--------------------------------|---|
| Brother Device Conductor | <p><u>Supported OS</u></p> <ul style="list-style-type: none"> Windows 10 (64bit) / Server 2016 <p>*Pursuant to the supported OS of coexisting SOTI software (Protocol Adapter)</p> <p><u>System requirements</u></p> <ul style="list-style-type: none"> .Net Core Version 3.1 (Long Term Support) Microsoft SQL Server 2017 or Microsoft SQL Server 2016 <p>*1: Support Express edition too.</p> <p>*2: Operation of SQL Server installed externally is not supported.</p> <ul style="list-style-type: none"> IIS <p><u>Supported language</u></p> <p>English</p> <p>French (Canada)</p> |
| Brother Device Conductor Agent | <p><u>Supported OS</u></p> <ul style="list-style-type: none"> Windows 7 SP1(32/64bit) / 8.1(32/64bit)/ 10(32/64bit) / Server 2016 <p><u>System requirements</u></p> <ul style="list-style-type: none"> .NET Framework Ver. 4.7.2 or later <p><u>Supported language</u></p> <p>English</p> <p>French</p> <p>German</p> <p>Spanish</p> <p>Portuguese</p> <p>Italian</p> <p>Polish</p> |

2.6 What Brother Provides

Brother provides the following:

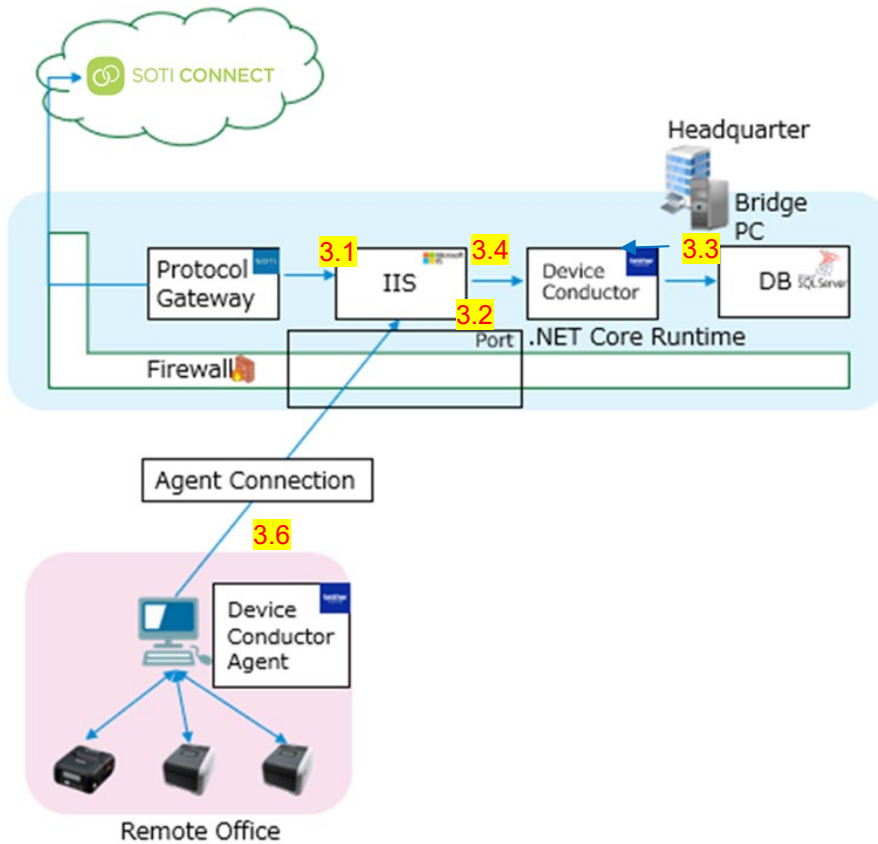
| No. | Item | Description |
|-----|--|--|
| 1 | Software User's Guide | This document |
| 2 | DeviceConductorInstaller.msi | Installer for Brother Device Conductor |
| 3 | DeviceConductor.mdf DeviceConductor_log.ldf | For preparing a table for maintaining various types of data communicated with this IoT Framework system on the SQL Server. * These files are specified in the installer for Brother Device Conductor. * <u>Place these files it in the same hierarchy as</u> <u>DeviceConductorInstaller.msi.</u> <u>This installer refers them.</u> |
| 4 | DeviceConductorAgent.msi | Installer for Brother Device Conductor Agent |
| 5 | labelcc.exe brosnmp.dll *These must be in the same directory with labelcc.exe. | Transfer tool for transferring various files to the printer. |

*Please obtain software for SOTI Connect and SOTI Protocol Adapter from sales agencies of SOTI Connect.

3. Installation

[Procedures for installation]

Cloud-based



*On premise-based is the same procedures for installation as Cloud-based

This User's Guide describes procedures for installation of software except SOTI Connect and SOTI Protocol Adapter. In either cloud-based case or on premise-based case, the procedures for installation/configuration are the same.

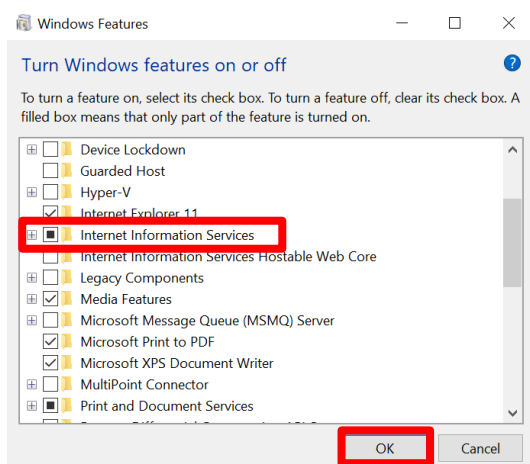
*For procedures for installation and configuration of SOTI Connect and SOTI Protocol Adapter, consult your sales agency of SOTI Connect.

***Log in to Windows OS as a user with Administrator privileges, and perform various installations and settings.**

3.1 Configuration for Internet Information Services (IIS)

(1) Click [Windows Settings]-[Apps]-[Programs and Features].

(2) Click "Turn Windows features on or off" and place the check box of "Internet Information Services" ON.



3.2 Installation of .NET Core Runtime

(1) Download .NET Core Runtime 3.1.x Hosting Bundle from the website.

Microsoft | .NET About Learn Architecture Docs Downloads Community Get Started All Microsoft

.NET > Download > .NET Core > 3.1

Have you tried ML.NET? It's a new machine learning framework made specifically for .NET developers. [Learn about ML.NET >](#)

.NET Preview Want to try out the latest preview? .NET 5.0.0-preview.1 is available. [Get .NET Preview >](#)

Download .NET Core 3.1

Not sure what to download? [See recommended downloads for the latest version of .NET.](#)

| Release information | Build apps - SDK | Run apps - Runtime | | | | | | | | | | | | |
|---|---|---|----|------------|----------|-------|--|---|-------|--|---------------------|---------|--|---|
| v3.1.3 Release notes Released 2020-03-24 | <p>This release contains multiple SDKs. If you're using Visual Studio, look for the SDK that supports the version you're using. If you're not using Visual Studio, install the first SDK listed.</p> <p>SDK 3.1.201</p> <p>Visual Studio support Visual Studio 2019 (v16.5)</p> <p>Included runtimes .NET Core Runtime 3.1.3 ASP.NET Core Runtime 3.1.3 Desktop Runtime 3.1.3</p> <p>Language support C# 8.0 F# 4.7</p> | <p>ASP.NET Core Runtime 3.1.3</p> <p>The ASP.NET Core Runtime enables you to run existing web/server applications. On Windows, we recommended installing the Hosting Bundle, which includes the .NET Core Runtime and IIS support.</p> <p>IIS runtime support (ASP.NET Core Module v2) 13.1.20074.3</p> <table border="1"><thead><tr><th>OS</th><th>Installers</th><th>Binaries</th></tr></thead><tbody><tr><td>Linux</td><td>Package manager instructions</td><td>ARM32 ARM64 ARM64 Alpine x64 Alpine x64</td></tr><tr><td>macOS</td><td></td><td>x64</td></tr><tr><td>Windows</td><td>x64 x86 Hosting Bundle</td><td>ARM32 x64 x86</td></tr></tbody></table> | OS | Installers | Binaries | Linux | Package manager instructions | ARM32 ARM64 ARM64 Alpine x64 Alpine x64 | macOS | | x64 | Windows | x64 x86 Hosting Bundle | ARM32 x64 x86 |
| OS | Installers | Binaries | | | | | | | | | | | | |
| Linux | Package manager instructions | ARM32 ARM64 ARM64 Alpine x64 Alpine x64 | | | | | | | | | | | | |
| macOS | | x64 | | | | | | | | | | | | |
| Windows | x64 x86 Hosting Bundle | ARM32 x64 x86 | | | | | | | | | | | | |

(2) Install the latest version of .NET Core Runtime 3.1.x

*If you have done this before "3.1 Configuration for Internet Information Services (IIS)", please refer to FAQ No.2.

3.3 Installation of Microsoft SQL Server

(1) Download Microsoft SQL Server from the website, and click on the execution file to start the installer.

*Please refer to the following for supported Microsoft SQL Server version.

2.4 Supported OS/System Environment/Database/Language

Click "Basic."

SQL Server 2017 Express Edition

Select an installation type:

Basic
Select Basic installation type to install the SQL Server Database Engine feature with default configuration.

Custom
Select Custom installation type to step through the SQL Server installation wizard and choose what you want to install. This installation type is detailed and takes longer than running the Basic install.

Download Media
Download SQL Server setup files now and install them later on a machine of your choice.

SQL Server transmits information about your installation experience, as well as other usage and performance data, to Microsoft to help improve the product. To learn more about data processing and privacy controls, and to turn off the collection of this information after installation, see the [documentation](#).

14.1005.4072.1

Complete the installation.

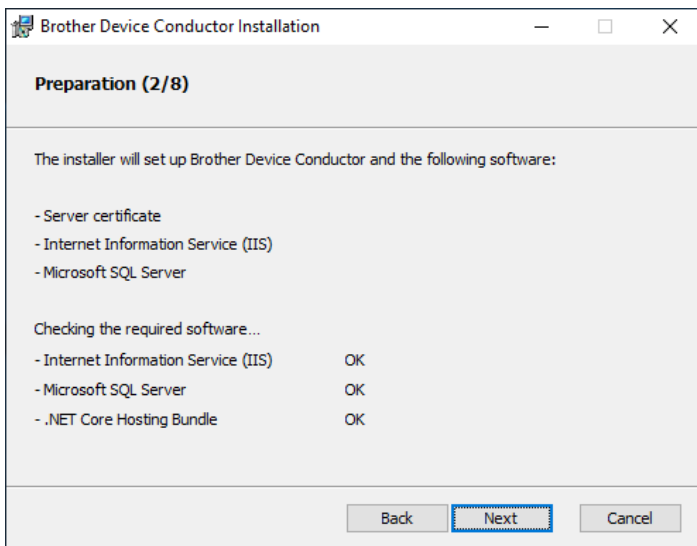
3.4 Installation of Device Conductor

(1) Start "DeviceConductorInstaller.msi" and install Device Conductor.

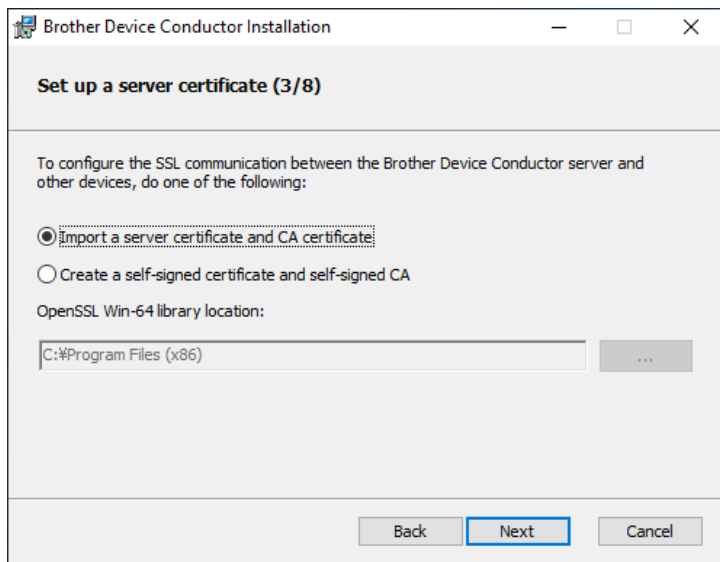
Confirm End-User License Agreement.



(2) Confirm preparation of installation.



(3) Setup Server Certificate.



Please select one from followings:

•Import server certificate & CA

Please prepare a server certificate &CA certificate issued from a third-party organization.

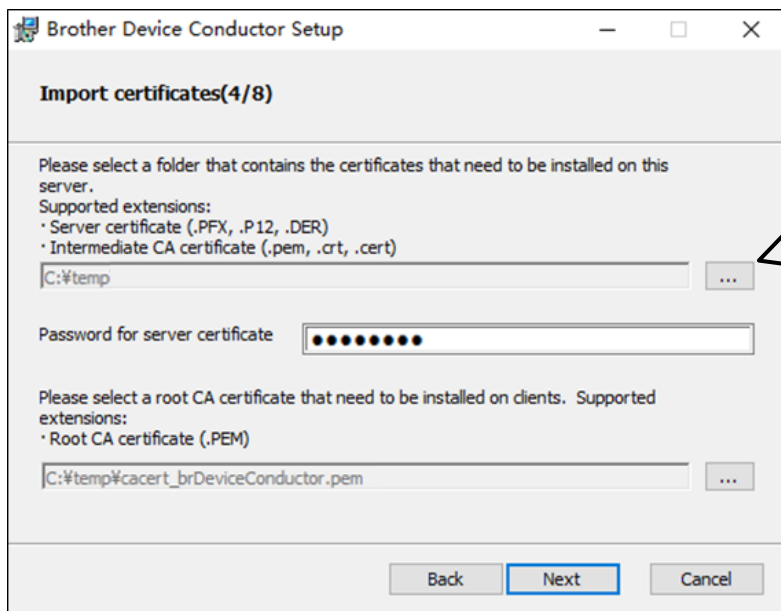
->Go To (4)

•Create self-signed certificate & self-signed CA

*If you select this item, please install "OpenSSL-Win64".

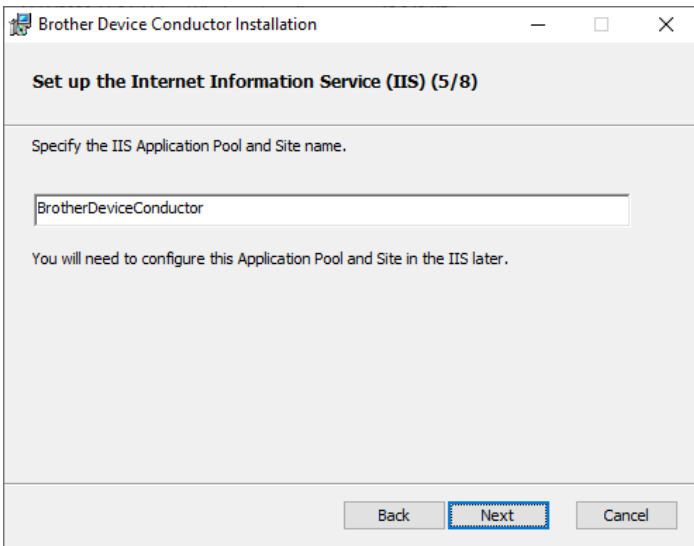
->Go To (6. FAQ & Tips)

(4) Import Server Certificate.

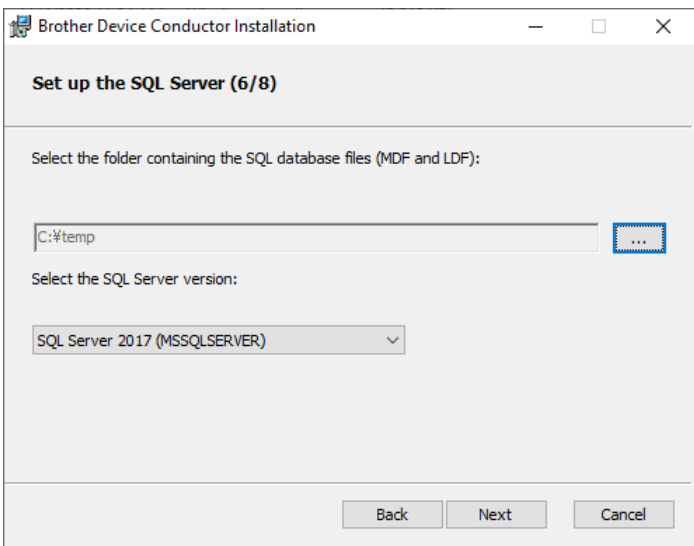


Don't include any file except certificate in folder.
The chain structure must be established between the certificate and the Root certificate in the same folder.
If these are not supported, the error will be displayed when you click the Next button.

(5) Setup Internet Information Service (IIS).



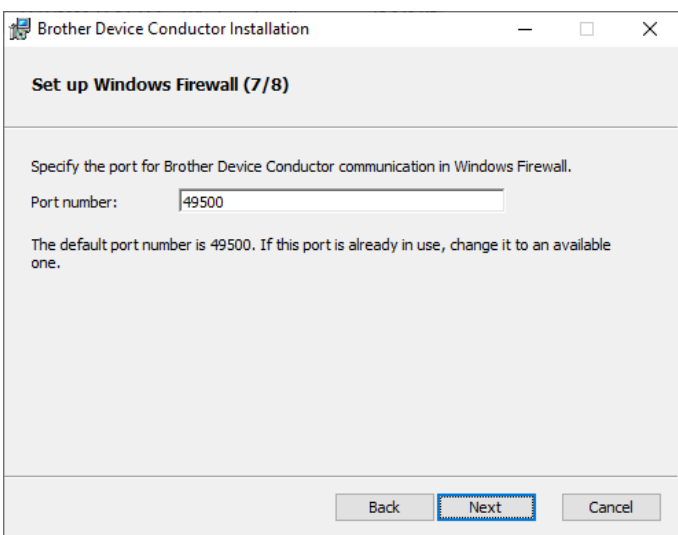
(6) Configure SQL Server.



*Please select folder where DeviceConductor.mdf and DeviceConductor_log.ldf are stored.

*Place these files in the same hierarchy as DeviceConductorInstaller.msi. This installer refers them.

(7) Add a rule in Windows Firewall.

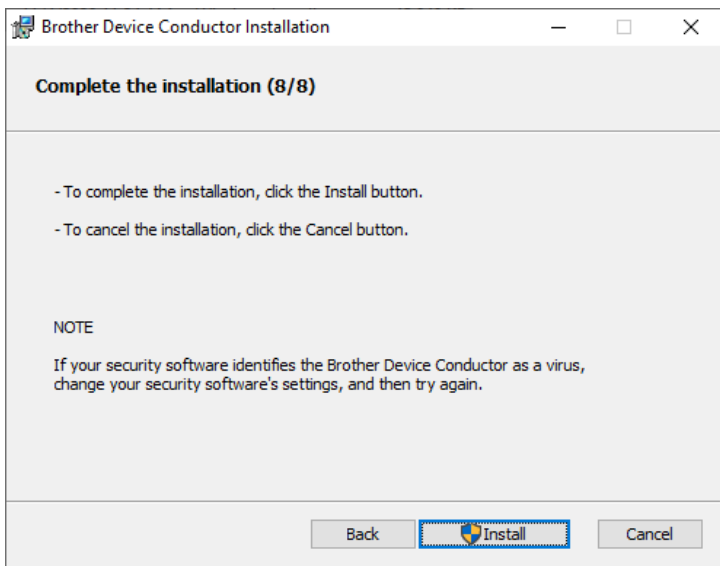


*Default port number is "49500". If necessary, please change it.

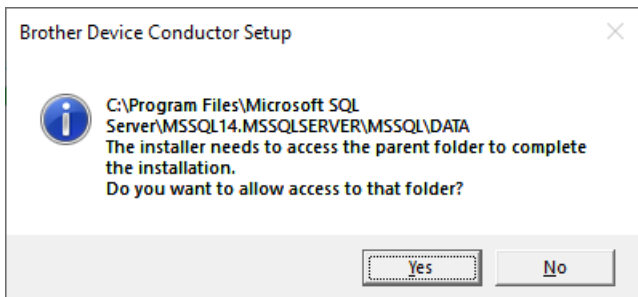
* Make sure that there is no site already started with the same port in IIS.

If it exists, Device Conductor will not start after installation.

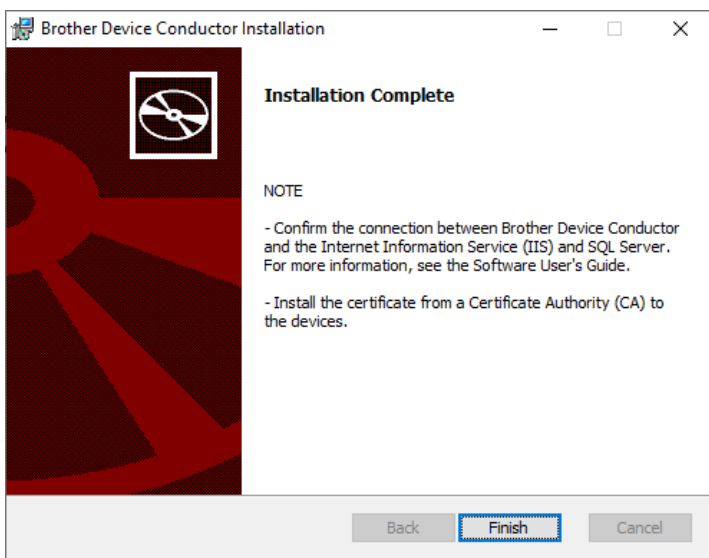
(8) Confirm install Device Conductor.



*If click "Install" button and the following dialog is displayed, please check No.3 in "6 FAQ & Tips".



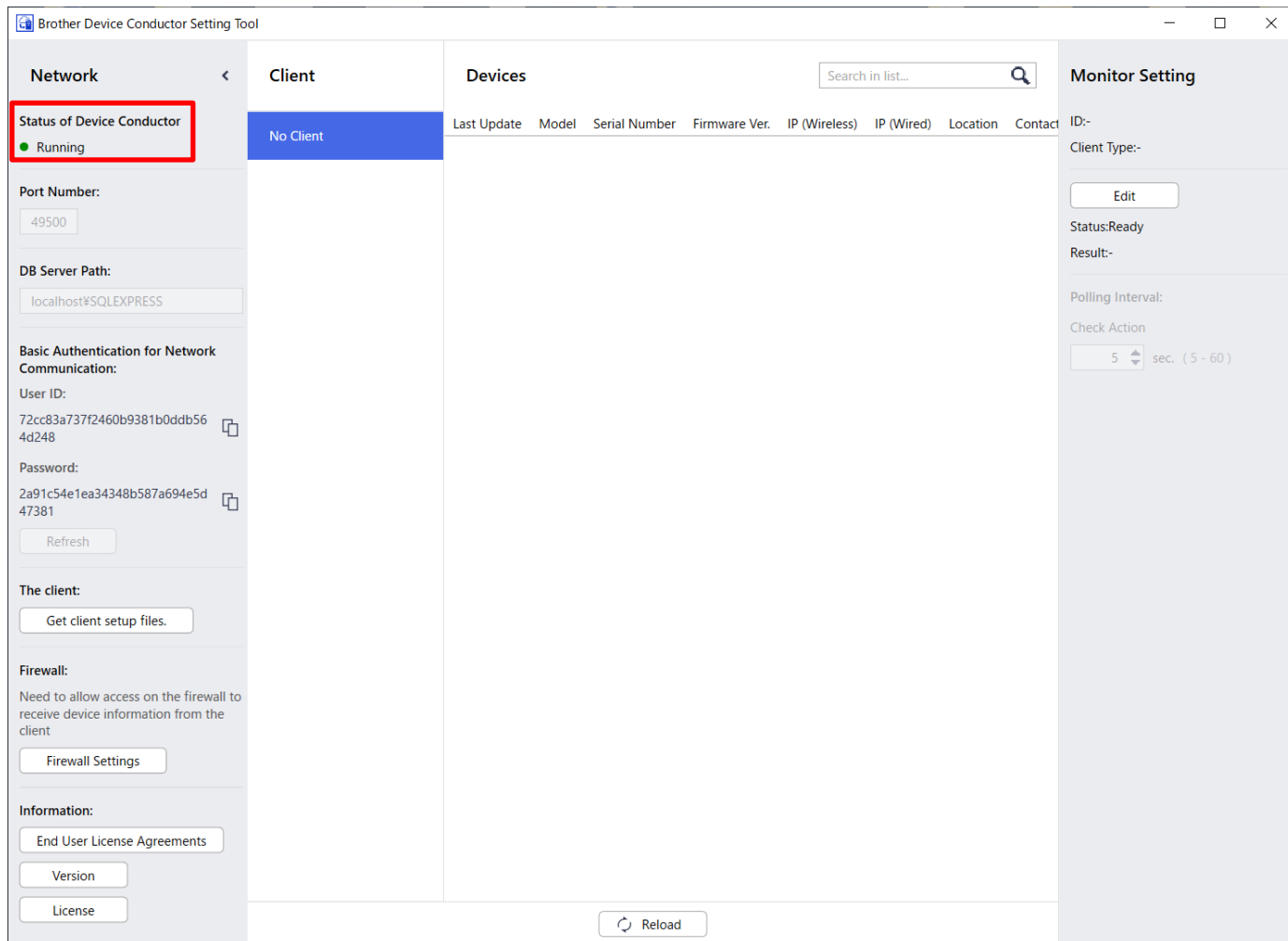
(9) Device Conductor Setup Complete.



3.5 Confirm Connection of Device Conductor with IIS and SQL Server

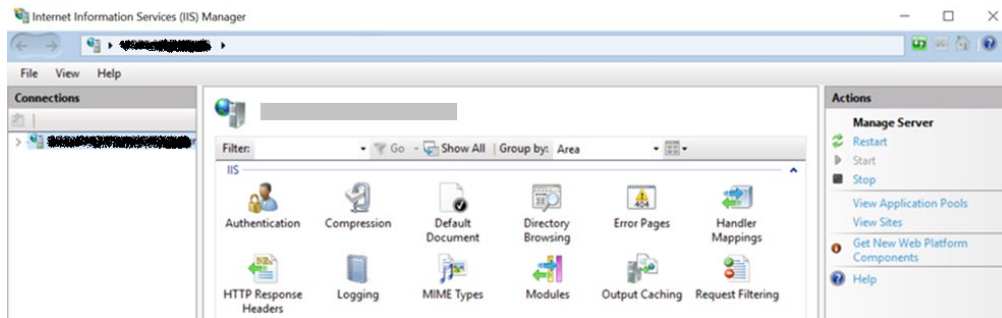
Select [Brother] - [Device Conductor Setting Tool] from the Start Menu to start the tool.

Please check that "Status of Device Conductor" is Running.

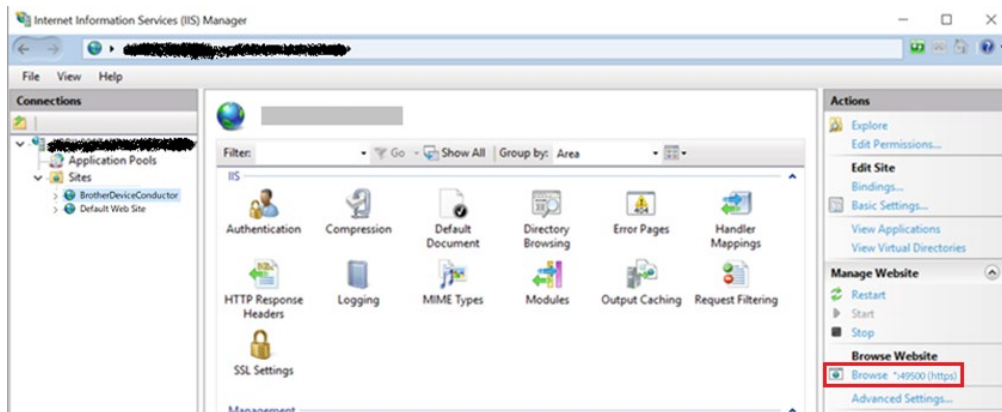


<How to confirm this validation>

- Start IIS Manager.



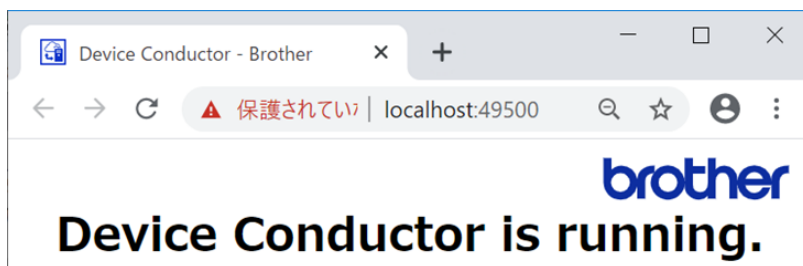
- Check if clicking “Browse” will execute Brother Device Conductor.



*If necessary according to your operating environment, please customize the setting of the Brother Device Conductor site on IIS Manager after install or repair by installer of Device Conductor.

e.g. HTTP response header etc.

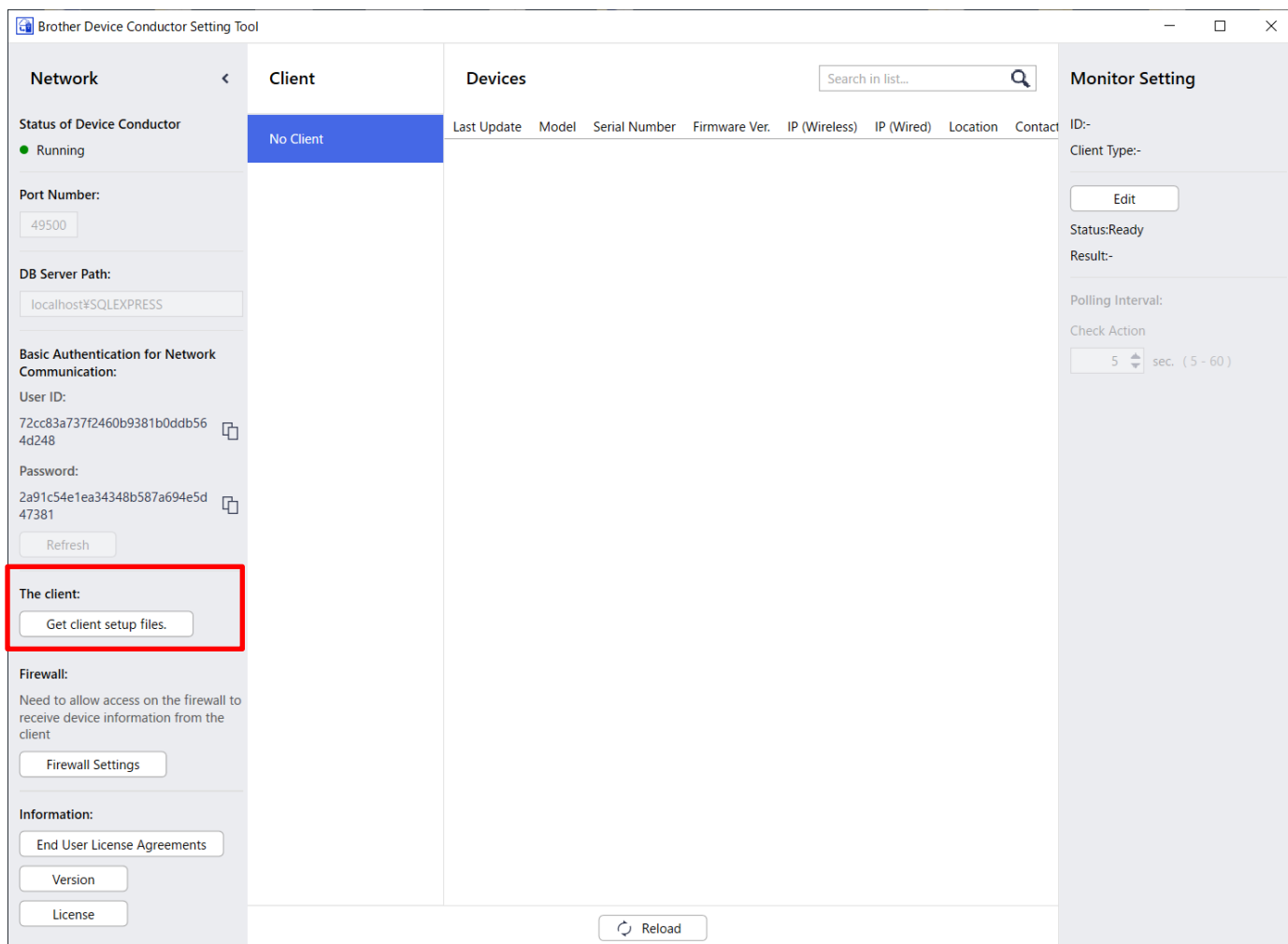
If it's succeeded, the following message is displayed on browser.



3.6 Setup printer to connect via Device Conductor Agent.

3.6.1 Operate Brother Device Conductor

(1) Select [Brother] - [Device Conductor Setting Tool] from the Start Menu to start the tool.



(2) Click “Get client setup files”.

Save a zip file which contains the following files:

| | |
|---|---|
| DeviceConductorAgentSetting.json | Used when installing Device Conductor Agent |
| cacert.pem or your imported CA certificate | Need to connect from Device Conductor Agent to Device Conductor. |

[Notice]

If you select “Create self-signed certificate & self-signed CA” in the chapter as “[3.4 Installation of Device Conductor]-[(3) Setup Server Certificate]”, cacert.pem is stored in this zip file.

If you select “Import server certificate & CA” in this chapter, your imported CA certificate is stored in this zip file.

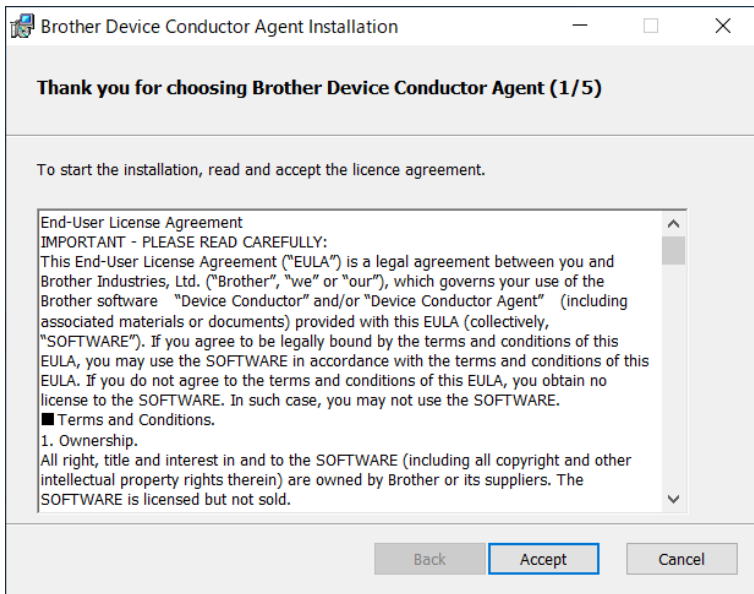
*If you use public certificate, please add the root certificate file to the same folder and use to setup Brother Device Conductor Agent.

- ActivateMDMConnection.bin
- InactivateMDMConnection.bin

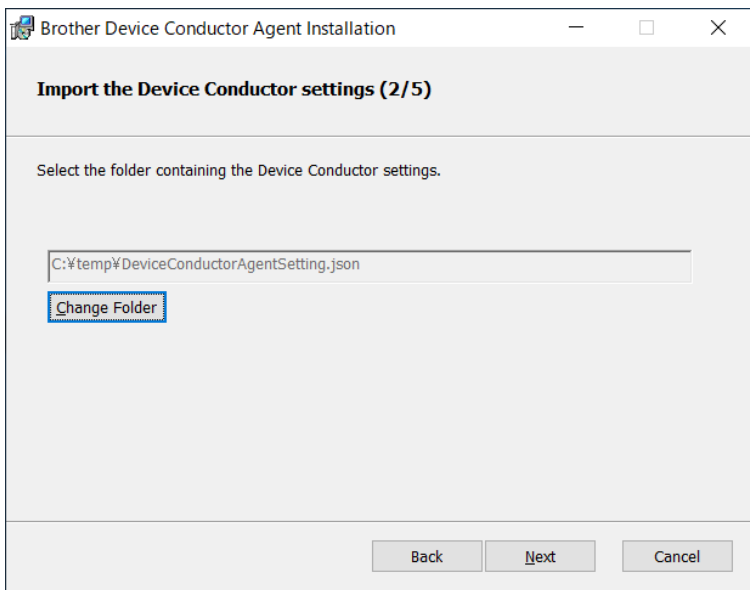
→ These files are not necessary to do the agent connection in this User’s Guide.

3.6.2 Operate Brother Device Conductor Agent

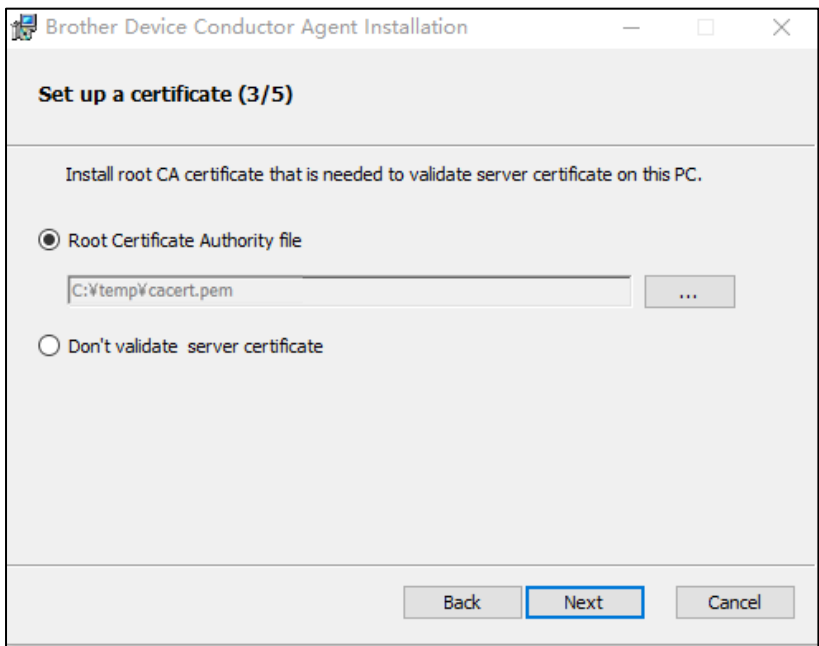
(1) Start DeviceConductorAgent.msi (Device Conductor Agent Installer).



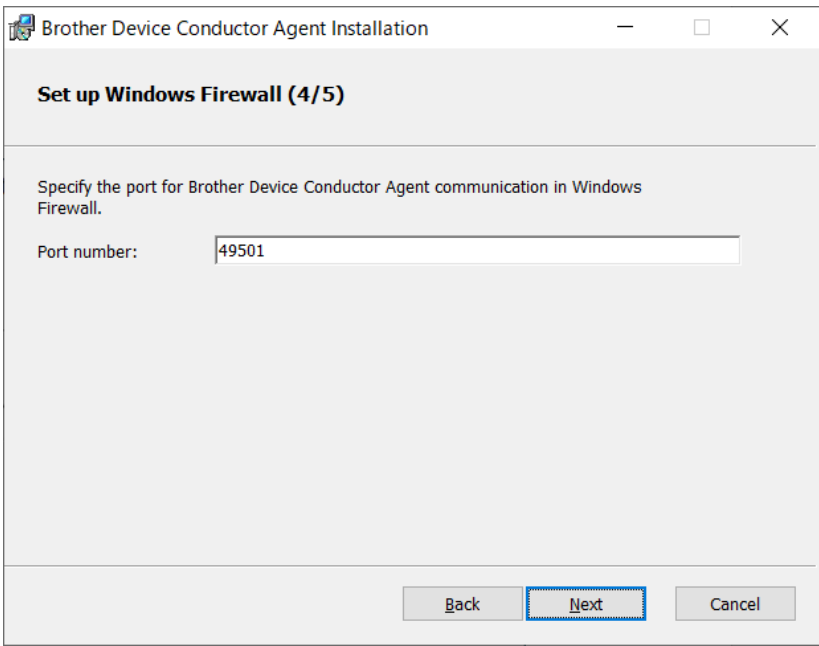
(2) Click "Change Folder" and select "DeviceConductorAgentSetting.json".



(3) Click “...” and select “cacert.pem” or “your imported CA certificate”.



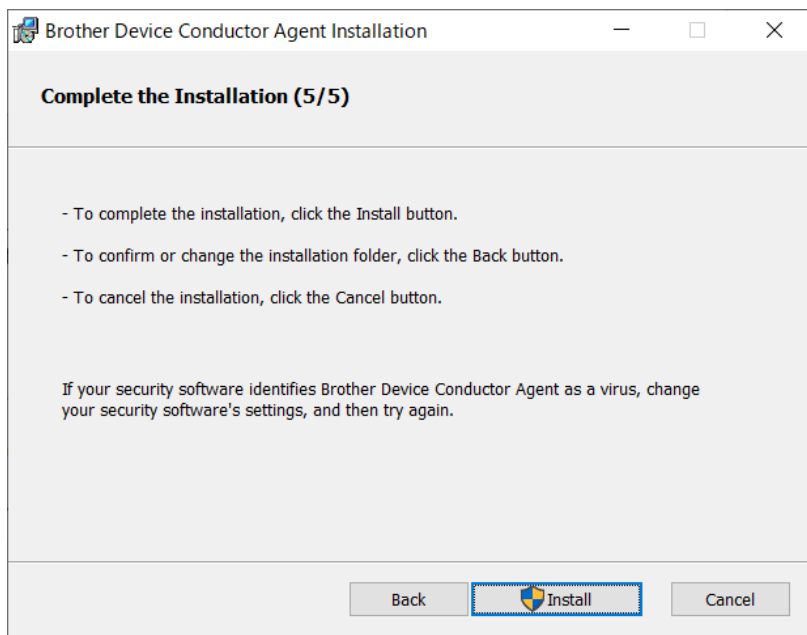
(4) Add a rule in Windows Firewall.



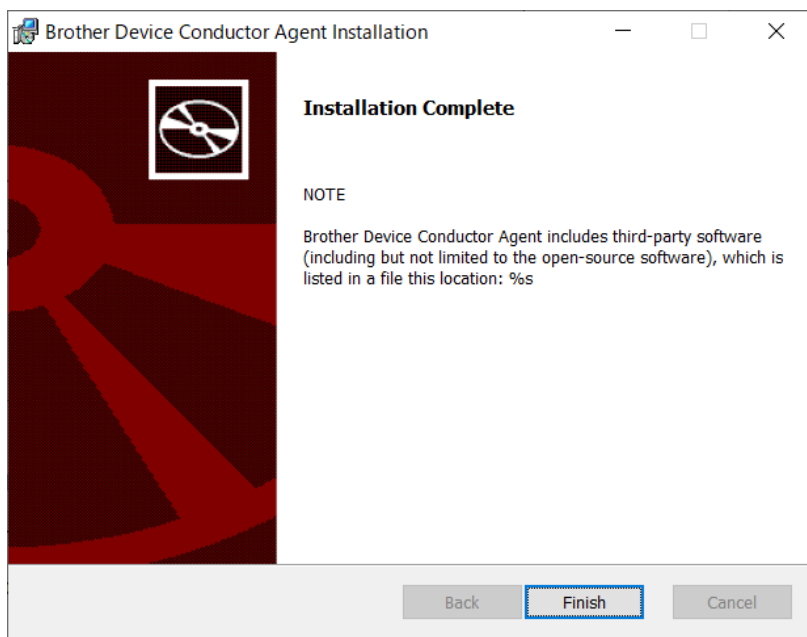
*Default port number is “49501”. If necessary, please change it.

*If you use the public certificate, please add the root certificate as well.

(5) Click "Install".



(6) Install Complete



3.6.3 Configure the device and network settings for printer

Configure the network settings for printer using "Printer Setting Tool".

Please download "Printer Setting Tool".

<https://support.brother.com/g/b/index.aspx?noautojudge=true>

The printer must be connected to the same network as the Device Conductor via access point by Infrastructure.

<Note>

Recommend to set "Auto Sleep Delay(Minutes)" by "0".

Because when the printer moves to "Auto Sleep mode", it doesn't support SOTI Connect.

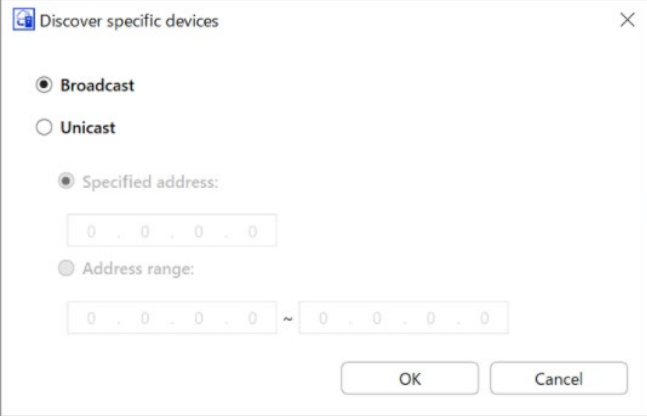
4. Brother Device Conductor Functions

The screenshot shows the 'Brother Device Conductor Setting Tool' interface. It is divided into several sections:

- General:** Contains 'Device Conductor Status' (Running), 'Port Number' (49500), 'Database Server Path' (localhost\SQLEXPRESS), 'Basic Authentication for Network Communication' (User ID and Password fields), 'Client' (checkbox for 'Create a package for this computer'), and 'Information' (links for 'End User License Agreements', 'Version', and 'License').
- Client:** Shows a list of agents, with one agent '2015752' selected.
- Devices:** A table listing devices with columns for 'Last Updated', 'Model', 'Serial Number', 'Firmware Ver.', and 'IP (Wireless)'. One device is listed: '2020/10/21 18:03:19', 'Brother RJ-3150', 'XXXXXXXX292937668', 'V0030', '192.168.8.100'.
- Monitor Settings:** Includes 'ID', 'Client Type', 'Service', 'Display Name' (2015752), 'Status' (Ready), 'Result', 'Polling Interval' (10 sec), 'Check Action', 'Search' (60 min), 'Check Status' (5 min), 'Method' (Broadcast + Unicast), 'Timeout' (5 sec), and 'Loop' (3 times).

Numbered callouts (1-10) point to these specific elements: 1 (Device Conductor Status), 2 (Port Number), 3 (Database Server Path), 4 (Basic Authentication for Network Communication), 5 (Client), 6 (Information), 7 (General tab), 8 (Client/Devices area), 9 (Monitor Settings), and 10 (Reload button).

| No. | Item | Description |
|-----|---|---|
| ① | Device Conductor Status | Displays the operation status of Device Conductor. |
| ② | Port Number: | This port is used by Device Conductor. |
| ③ | Database Server Path: | The connection information to access the SQL Server. |
| ④ | Basic Authentication for Network Communication: | This is authentication information. User ID and Password are used to connect between Brother Device Conductor and SOTI connect. *Please refer manual of SOTI connect to set User ID and Password on SOTI Connect. |
| ⑤ | Client: | Generate files to install Device Conductor Agent and the related set of files are created in zip form. The contents of these files are as follows. (1) DeviceConductorInfo.json → Used when installing Device Conductor Agent (2) cacert.pem or your imported CA certificate. →CA certificate for connecting to Device Conductor. |

| | | |
|---|------------------|--|
| | | <p>Need to connect from Device Conductor Agent to Device Conductor.</p> <p>[Notice]</p> <p>If you select "Create self-signed certificate & self-signed CA" in the chapter as "[3.4Installation of Device Conductor]-[(3)Setup Server Certificate]", cacert.pem is stored in this zip file.</p> <p>If you select "Import server certificate & CA" in this chapter, your imported CA certificate is stored in this zip file.</p> <p>=====</p> <p>(3) ActivateMDMConnection.bin (4) InactivateMDMConnection.bin</p> <p>→ These files are not used for agent connection in this User's Guide.</p> |
| ⑥ | Information: | <p>By pressing the information display button, a dialog showing the following information is displayed:</p> <ul style="list-style-type: none"> •End User License Agreements•••EULA •Version•••Software Version •License•••Various OSS licenses |
| ⑦ | Client | This displays a list of agents that are accessed. |
| ⑧ | Devices | By selecting an item of the Client List, a list of devices linked to the client is displayed. |
| ⑨ | Monitor Settings | <p>Monitor the settings of agent displayed on ⑦"Client".</p> <p>[Search Device]</p> <p>Search for target Printers by Broadcast or Unicast, and add to manage them.</p>  <p>[Edit / Apply]</p> <p>Change the setting for periodic processing performed by Device Conductor Agent and execution interval.</p> <p>Click to change from [Edit]button to [Apply] button.</p> <p>When change the following items and click [Apply] button, the changes will be reflected.</p> <p>[Display Name]</p> <p>This is the name of Agent displayed on ⑦"Client". The default is the name of PC on which the Agent is installed.</p> <p>[Check Action] Interval to perform confirmation to printer</p> <p>[Search] Interval to execute periodic search process to add target printers</p> <p>[Check Status] Interval for periodically acquiring and updating each status of managed</p> |

| | | |
|---|--------|--|
| | | <p>Printers</p> <p>[Method] Search method for periodic search processing that adds target printers</p> <p>[Timeout] Time-out setting to inquire about periodic search processing</p> <p>[Loop] Number of executions of the above periodic search process (Broadcast search only)</p> |
| ⑩ | Reload | This button updates the Display view |

5. Managing Brother Printer with SOTI Connect

5.1 Printer Settings

| Group | Item | RJ-2050 RJ-2140 RJ-2150 Unit / <u>Settable item</u> | TD-2120N TD-2130N Unit / <u>Settable item</u> |
|-----------------|--------------------------|--|---|
| General | Manufacture | - | |
| | Model | - | |
| | Firmware Version | - | |
| | Serial Number | - | |
| | Font Version | - | |
| | Memory Size | Byte | |
| | Printing Method | - | |
| | Printing Resolution | dpi | |
| | Contact | <u>free</u> (upper limit 255 characters) | |
| | Location | <u>free</u> (upper limit 255 characters) | |
| | Paper Size Name | - | |
| | Total Templates Count | - | |
| | Total Databases Count | - | |
| Device Status | Device Status | - | |
| | Total Print Length | m | |
| | Total Print Count | - | |
| System Settings | Command Mode | <u>•ESC/P</u> <u>•Raster</u> <u>•P-touch Template</u> <u>•CPCL Emulation</u> <u>•CPCL LinePrint Emulation</u> | |
| | Auto Power OFF (minutes) | RJ-2000 Series: <u>0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 20, 30, 40, 50, 60</u> | <u>0, 10, 20, 30, 40, 50, 60</u> |
| | Print Speed (inch/sec) | RJ-2000 Series: <u>3, 4, 5, 6</u> | n/a |
| | Print Density (%) | n/a | |
| General Network | IPv6 Usage | <u>true / false</u> | n/a |
| Wired LAN | Status(Wired LAN) | n/a | - |
| | Node Type | n/a | - |
| | Node Name | n/a | - |
| | MAC Address | n/a | - |

| | | | |
|---------------|---------------------------------------|--|---|
| | IPv4: Boot Method | n/a | <ul style="list-style-type: none"> <u>•AUTO</u> <u>•BOOTP</u> <u>•DHCP</u> <u>•RARP</u> <u>•STATIC</u> |
| | IPv4: IP Address | n/a | <u>free (***.***.***.***)</u> |
| | IPv4: Subnet Mask | n/a | <u>free (***.***.***.***)</u> |
| | IPv4: Gateway | n/a | <u>free (***.***.***.***)</u> |
| | IPv4: DNS Server Method | n/a | <ul style="list-style-type: none"> <u>•AUTO</u> <u>•STATIC</u> |
| | IPv4: Primary DNS Server IP Address | n/a | <u>free (***.***.***.***)</u> |
| | IPv4: Secondary DNS Server IP Address | n/a | <u>free (***.***.***.***)</u> |
| Wireless LAN* | Status (Wireless LAN) | | - |
| | Signal Strength | | - |
| | Node Type | | - |
| | Node Name | | - |
| | MAC Address | | - |
| | Communication Mode | | <ul style="list-style-type: none"> <u>•Infrastructure</u> <u>•Ad-Hoc-WiFi</u> |
| | SSID | | <u>free (upper limit 32 characters)</u> |
| | Channel | | <u>Min: 1, Max: 14</u> |
| | Authentication Method | | [Infrastructure]: <ul style="list-style-type: none"> <u>•Open System</u> <u>•Shared Key</u> <u>•WPA/WPA2-PSK</u> [Ad-Hoc-WiFi] <ul style="list-style-type: none"> <u>•Open System</u> |
| | Encryption Mode | <u>[Open System] None or WEP</u> <u>[Shared Key] WEP</u> <u>[WPA/WPA2-PSK] TKIP+AES</u> or <u>AES</u> | <u>[Open System] None or WEP</u> <u>[Shared Key] WEP</u> <u>[WPA2-PSK] AES</u> <u>[Other Authentication Method]</u> <u>TKIP or AES</u> |
| | WEP Key | | <u>free (upper limit 13 characters)</u> |
| | Network Key | | <u>free (upper limit 63 characters)</u> |
| | IPv4: Boot Method | | <ul style="list-style-type: none"> <u>•AUTO</u> <u>•BOOTP</u> <u>•DHCP</u> <u>•RARP</u> <u>•STATIC</u> |

| | | | |
|-------|---------------------------------------|--|-----|
| | IPv4: IP Address | <u>free (***.***.***.***)</u> | |
| | IPv4: Subnet Mask | <u>free (***.***.***.***)</u> | |
| | IPv4: Gateway | <u>free (***.***.***.***)</u> | |
| | IPv4: DNS Server Method | - <u>AUTO</u> - <u>STATIC</u> | |
| | IPv4: Primary DNS Server IP Address | <u>free (***.***.***.***)</u> | |
| | IPv4: Secondary DNS Server IP Address | <u>free (***.***.***.***)</u> | |
| | IPv6: Static Address | <u>free (****.****.****.****.****.****.****.****.****.****.****)</u> | n/a |
| | IPv6: Enable Static Address | <u>true / false</u> | n/a |
| | IPv6: Primary DNS Server IP Address | <u>free (****.****.****.****.****.****.****.****.****.****.****)</u> | n/a |
| | IPv6: Secondary DNS Server IP Address | <u>free (****.****.****.****.****.****.****.****.****.****.****)</u> | n/a |
| | IPv6: Address List | - | n/a |
| Media | Paper Type | - <u>None</u> - <u>Gap</u> - <u>Mark</u> | |
| | Width | n/a | |
| | Length | n/a | |

Printer functions

| Action name | Description |
|-----------------|--|
| Print Test Page | |
| Factory Reset | <ul style="list-style-type: none"> •ALL Reset Resets all printer settings to factory settings. •Memory Reset The templates, databases and print log stored in the printer are reset. •Printer Setting Reset (RJ-2000 series only supported) Resets the settings that can be changed in the Device Settings tool to factory settings. The templates, databases and print log stored in the printer are not reset. •Network Reset Resets the settings that can be changed in the Networking Settings tool to factory settings. The templates, databases and print log stored in the printer are not reset. |
| Reboot | |
| Shutdown | |

5.2 Printer Status Notifications / Error Log

| Name | Description | Type |
|--------------------------------|--|----------|
| Printer System Error | Internal error | Critical |
| Buffer Full Error | Data transfer error | Error |
| Communication Error | Data transfer error | |
| "File Install" Failed | File installation error | |
| Apply Client Settings Failed | Client setting error | |
| "Print Test Page" Failed | Test Page error | |
| "Factory Reset" Failed | Factory Reset error | |
| "Reboot" Failed | Reboot error | |
| "Shutdown" Failed | Shutdown error | |
| "Search Device" Failed | Search Device error | |
| "Check Status" Failed | Check Status error | |
| End of Media | Install new media | |
| New Device | New printer found | |
| Status Update | Printer Status updated | |
| Cover Open | Media Cover open | |
| "File Install" Accepted | Printer files updated | |
| Apply Client Settings Accepted | Client settings applied | |
| Apply Device Settings Accepted | Printer settings applied | |
| "Print Test Page" Accepted | Test page printed | |
| "Factory Reset" Accepted | Printer settings reset to the factory settings | |
| "Reboot" Accepted | Printer rebooted | |
| "Shutdown" Accepted | Printer shut down | |
| "Search" Accepted | Search has started | |
| "Check Status" Accepted | Check Status has started | |

5.3 Configuration using blf files

We recommend using the software provided with the printer to create BLF files.

For more information about the software provided with your printer, see its User's Guide on the Brother Support website at support.brother.com.

| Setting item | File format | Tool used for blf file creation |
|-----------------------------|-------------|---|
| Firmware*1 | blf | Contact your Brother sales office |
| P-touch Template | blf | After creating a template (lbr file) in P-touch Editor, save as a file in blf format using P-touch Transfer Manager. |
| P-touch Template + Database | blf | |
| Communication settings | blf | Save the command file (bin format) with the communication settings tool. Start up P-touch Transfer Manager. After dragging |

| | | |
|---------------------|-----|---|
| | | and dropping the bin file on the layout, save the file in blf format. |
| Device settings | blf | Save the command file (bin format) with the Device Setting Tool. Start up P-touch Transfer Manager. After dragging and dropping the bin file on the layout, save the file in blf format. |
| Custom paper size*2 | blf | Save the command file (bin format) with the paper size setup tool. Start up P-touch Transfer Manager. After dragging and dropping the bin file on the layout, save the file in blf format. |
| Font | blf | Save the command file (bin format) with Font Manager tool. Start up P-touch Transfer Manager. After dragging and dropping the bin file on the layout, save the file in blf format. |

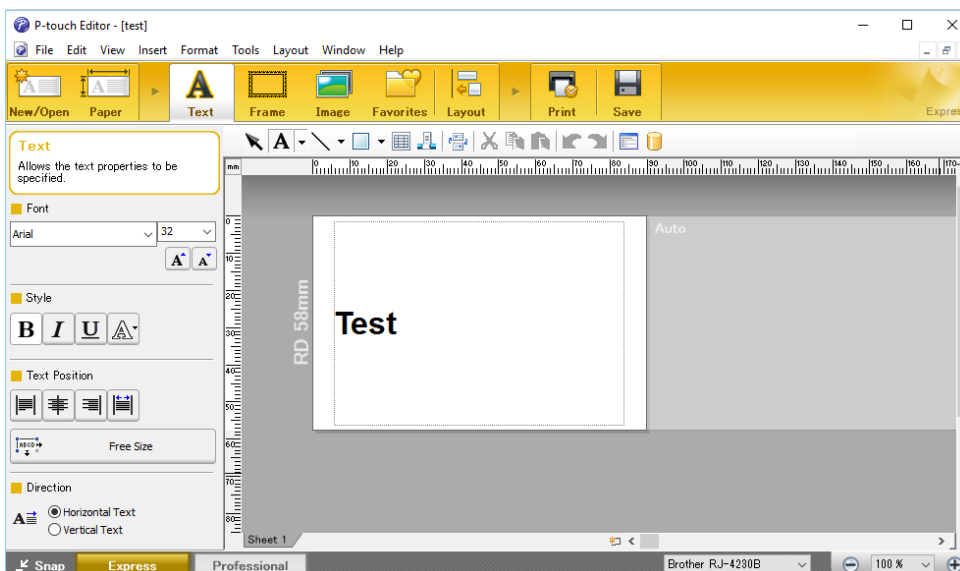
*Create a BLF file for each model, even if the models belong to the same product series/type.

*1 TD-2120N and TD-2130N aren't supported.

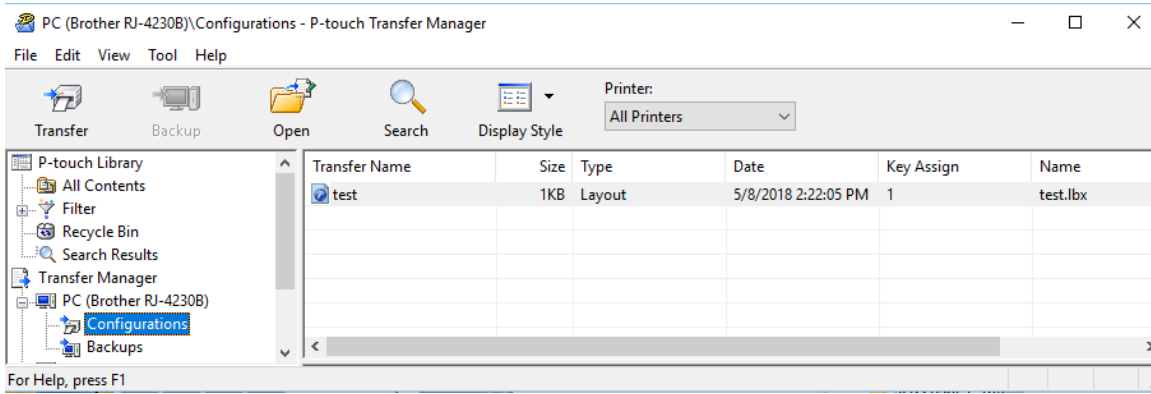
*2 TD series and RJ series are applicable.

<Example 1> How to create blf file for P-touch Template

a. Start P-touch Editor, and create a layout.



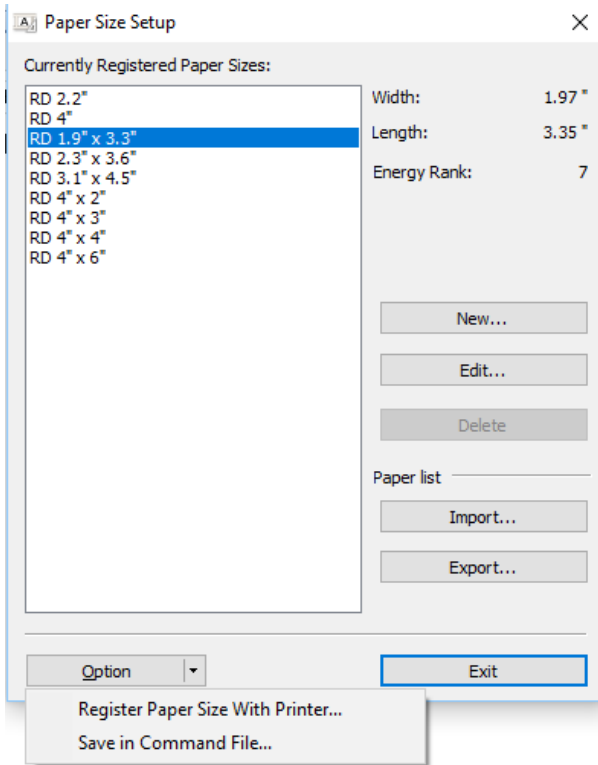
b. From P-touch Editor menu [File] - [Template transfer] - [Transfer...], start P-touch Transfer Manager. Click the [Save transfer file] button, and save the file in blf form.



<Example 2> how to create blf file for custom paper size

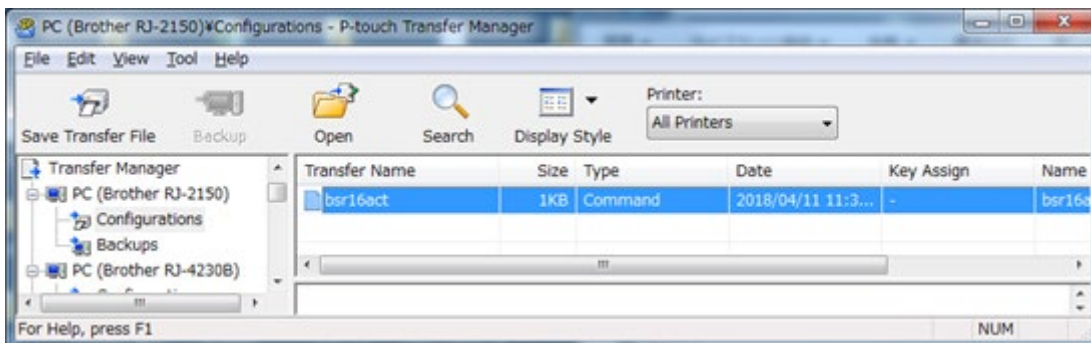
a. Launch the custom paper setting tool.

After creating a custom paper size, click the [Options] button, select “Save in Command File...,” and save the command file (bin form).



b. Start P-touch Transfer Manager. Drag and drop the bin file onto the layout.

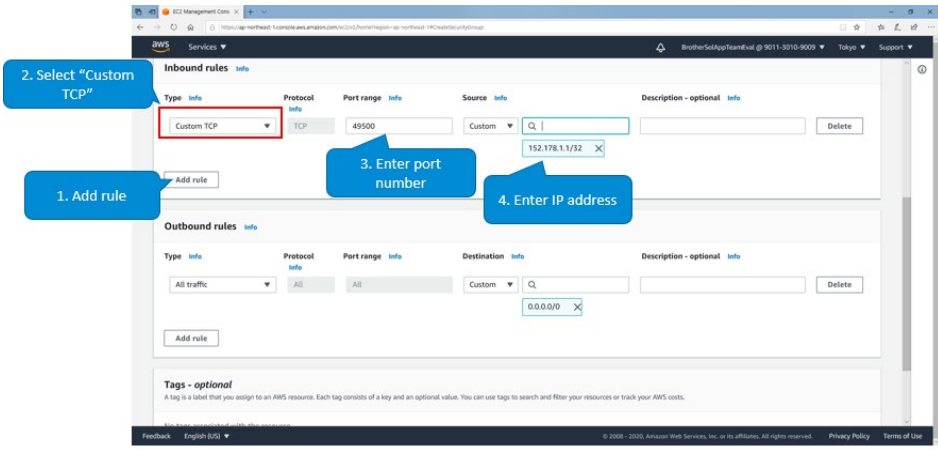
Click the [Save Transfer File] button, and save the file in blf form.

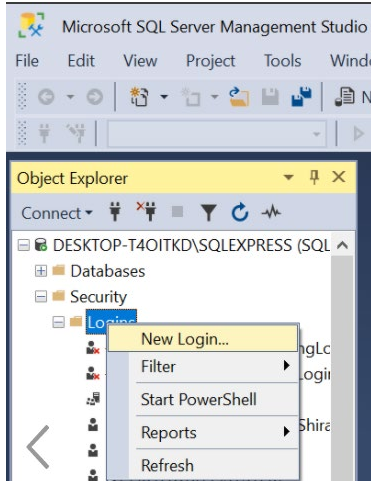


6 FAQ & Tips

FAQ

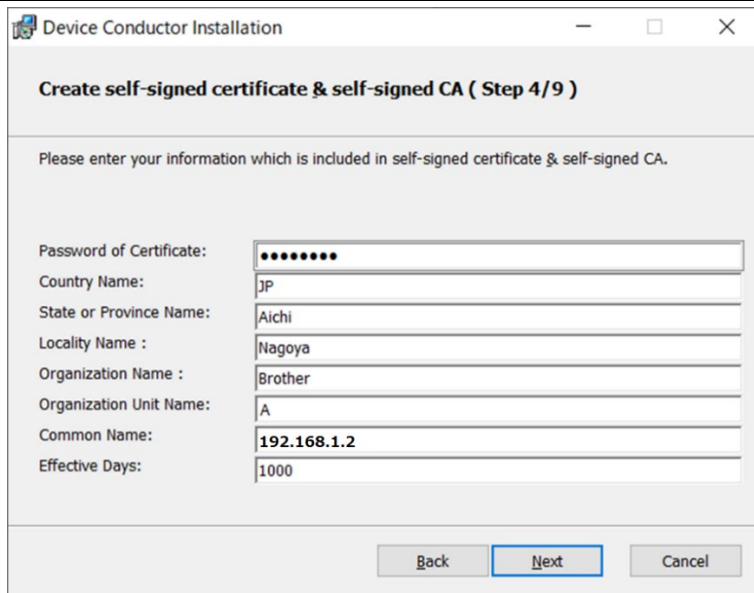
| No. | Chapter | FAQ |
|-----|---|---|
| 1 | | <p><Trouble>"SOTI Protocol Adapter" stops.</p> <p><Solution>Recommendation:</p> <p>Don't set sleep time and turn on power always on PC that "Brother Device Conductor" and "SOTI Protocol Adapter" are installed on.</p> <p>*If set sleep time on Windows OS and Windows OS goes to sleep, "SOTI Protocol Adapter" will stop. When Windows OS returns from sleep to normal, "SOTI Protocol Adapter" will restart automatically.</p> |
| 2 | 3.4 Installation of Device Conductor | <p><Trouble>The following error is displayed.</p> <p>"Cannot edit the Site settings of the Internet Information Service (IIS). Check your IIS settings.#3"</p> <p><Cause></p> <p>This error is displayed when doing in the following order.</p> <p>(1) Install .Net core hosting & bundle</p> <p>(2) Set IIS.</p> <p>(3) Install Device Conductor.</p> <p><Solution></p> <p>Please select A or B.</p> <p>A.</p> <p>(1) Uninstall and re-install .Net core hosting & bundle.</p> <p>(2) Install Device Conductor.</p> <p>B.</p> <p>(1) Repair .Net core hosting & bundle.</p> <p>(2) Install Device Conductor.</p> |
| 3 | | <p><Trouble> Brother Device Conductor installer displays the message as "The installer cannot attach Device Conductor database file in SQL server. In detail, please look FAQ regarding as SQL server in the setup guide."</p> <p>And it stopped.</p> <p><Solution> If you install SSMS (SQL Server Management Studio) and it is running, please stop it during installation.</p> |
| 4 | | <p><Trouble> When execute repair install and renew CA certificate, can't access between Device Conductor and Device Conductor Agent.</p> <p><Solution> The following steps are required because CA certificate is renewed.</p> <p>[1] Click [client setup files.] button on "The Client:" from Device Conductor Setting Tool.</p> <p>[2] And get "cacert.pem" and set it to printer.</p> <p>Please refer the following chapters as the detail procedure.</p> <p>- 3.6 Setup printer to connect via Device Conductor Agent.</p> |
| 5 | | <Trouble> |

| | | |
|---|---|---|
| | | <p>If you change the certificate from IIS Manager, it will not be consistent with the CA certificate (for Agent and Printer Direct) output by the Device Conductor Setting Tool, and the Agent and Printer Direct will not be able to communicate.</p> <p><Solution></p> <p>If you want to renew the certificate, be sure to use the repair function of Installation of Device Conductor.</p> |
| 6 | | <p><Trouble> When you set up Device Conductor on cloud service such as AWS, Device Conductor can't communicate with Device Conductor Agent.</p> <p><Cause> Port for accessing Device Conductor on cloud service such as AWS from Device Conductor Agent as Client is restricted by Firewall etc.</p> <p><Solution> Set port used by Device Conductor on cloud service such as AWS so that it can be accessed from the outside.</p> <p>[Cloud Service]</p> <p>Amazon Web Services (AWS): security group Microsoft Azure: network security group Google Cloud Platform (GCP): firewall</p> <p>[Example] Amazon Web Services (AWS): security group</p>  |
| 7 | 3.5 Confirm the Connection of Brother Device Conductor with IIS and SQL Server | <p><Trouble> Can't start Device Conductor from IIS Manager.</p> <p><Solution> If there is another site that has already started using the same Port, it cannot be started from IIS Manager.</p> <p>Please stop another site, or change either Port so that they do not overlap.</p> |
| 8 | | <p><Trouble> Can't start Device Conductor from IIS Manager.</p> <p>HTTP Error500.19 - Internal Server Error is displayed.</p> <p><Cause> If you install .NET Core Runtime before installing IIS, it occurs.</p> <p>It's necessary to install by following order.</p> <ol style="list-style-type: none"> 1 Configuration for Internet Information Services (IIS) 2 Installation of .NET Core Runtime <p><Solution> Uninstall .NET core Runtime and install it again.</p> |
| 9 | 3.6 Setup printer to connect via Device Conductor Agent. | <p><Trouble> Client PC can't connect server PC with Wi-Fi normally.</p> <p><Situation> Access points are difference between clients and servers. Please set same access point.</p> |

| | | |
|----|--|--|
| | | <p><Solution> Please select AP you want to connect at your side operation.</p> <p><Recommendation></p> <p>Wired LAN is recommended to connect client PC and server PC.</p> <p>Join printer on the same subnet network as client PC.</p> |
| 10 | | <p><Trouble> If you try to install Device Conductor with different User than the one who installed SQL Server, the following error message is displayed.</p> <p>"Cannot attach the Brother Device Conductor database file in the SQL Server error."</p> <p><Solution> The following procedure completes granting SQL Server the required permissions to the User who wants to install the Device Conductor.</p> <p>(1) Log in to Windows as a User who installed SQL Server.</p> <p>(2) Start SQL Server Management Studio.</p> <p>(3) Right-click Login and select "New Login...".</p>  <p>(4) Click the "Search" button.</p> <p>(5) Enter the name of the user who wants to install the Device Conductor and click the "Confirm Name" button to confirm the user name. Press OK when confirmed.</p> <p>(6) Select a server role.</p> <p>(7) Check "sysadmin" and press OK.</p> |
| 11 | | <p><Trouble>Can't find the printer in Broadcast</p> <p><Solutions>Broadcast is prohibited in the customer's network environment.</p> <p>1. When the printer is connected to the network, the Agent is notified from the printer side by mDNS.</p> <p>Based on this, Device Conductor Agent detects the printer.</p> <p>2. It is possible to instruct Device Conductor Agent to search for the printer by specifying the IP from DC Setting Tool.</p> |

Tips

| No. | Chapter | Tips | | | | | | | | | |
|--|---|--|------|------|-------------|--|---------------|--|--|----------------|---|
| 1 | 5.2 Printer Status | <p>The SSID for Wireless Direct needs to have "DIRECT-" at its front.</p> <p>The setting UI for SOTI Connect has "DIRECT-" by default.</p> <p>Be careful not to manually delete "DIRECT-" when setting.</p> | | | | | | | | | |
| 2 | Notifications / Error log | <p>When making settings through SOTI Connect, set a value within the parameter range defined for each item.</p> <p>If an erroneous value outside the parameter range is set, the item will not be set on the printer.</p> <p>(When setting multiple items together, if there is even a single erroneous value included with the normal values, the entire item is not set.)</p> | | | | | | | | | |
| 3 | 5.3 Configuration using blf files | <p>The printer is rebooted if any of the following items is set on the printer.</p> <p>When multiple items are set on the printer in file form, it is recommended that these items, which cause the printer to reboot, be set first.</p> <ul style="list-style-type: none"> •Firmware •Communication settings | | | | | | | | | |
| 4 | 3.4 Installation of Device Conductor | <p>Self-signed certificate & self-signed CA created by using OpenSSL can also be used.</p> <p>*Please use at your own risk.</p> <p>[How to install "OpenSSL-Win64"]</p> <p>Open the website of OpenSSL to download MSI for Win64 OpenSSL v1.1.1a or later.</p> <p>* Brother checks OpenSSL Ver.1.1.1.a. If you use later version and it doesn't work, please contact your Brother sales office.</p> <p>Example: https://slproweb.com/products/Win32OpenSSL.html</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p style="text-align: center; background-color: #d4af37; color: white; margin: 0;">Download Win32/Win64 OpenSSL</p> <p style="margin: 0;">Download Win32/Win64 OpenSSL today using the links below!</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">File</th> <th style="text-align: left;">Type</th> <th style="text-align: left;">Description</th> </tr> </thead> <tbody> <tr> <td style="vertical-align: top;">Win64 OpenSSL v1.1.1h Light EXE MSI</td> <td style="vertical-align: top;">3MB Installer</td> <td style="vertical-align: top;">Installs the most commonly used essentials of Win64 OpenSSL v1.1.1h (Recommended for users by the creators of OpenSSL). Only installs on 64-bit versions of Windows. Note that this is a default build of OpenSSL and is subject to local and state laws. More information can be found in the legal agreement of the installation.</td> </tr> <tr style="border: 2px solid red;"> <td style="vertical-align: top;">Win64 OpenSSL v1.1.1h EXE MSI</td> <td style="vertical-align: top;">63MB Installer</td> <td style="vertical-align: top;">Installs Win64 OpenSSL v1.1.1h (Recommended for software developers by the creators of OpenSSL). Only installs on 64-bit versions of Windows. Note that this is a default build of OpenSSL and is subject to local and state laws. More information can be found in the legal agreement of the installation.</td> </tr> </tbody> </table> </div> <p>Click the downloaded MSI for Win64 OpenSSL and install it (with the Default setting).</p> <p>Please enter the path where OpenSSL is installed.</p> <p>In many cases, OpenSSL is installed to the following path:</p> <p>C:\Program Files\OpenSSL-Win64</p> <p>[How to Create self-signed certificate & self signed CA]</p> | File | Type | Description | Win64 OpenSSL v1.1.1h Light EXE MSI | 3MB Installer | Installs the most commonly used essentials of Win64 OpenSSL v1.1.1h (Recommended for users by the creators of OpenSSL). Only installs on 64-bit versions of Windows. Note that this is a default build of OpenSSL and is subject to local and state laws. More information can be found in the legal agreement of the installation. | Win64 OpenSSL v1.1.1h EXE MSI | 63MB Installer | Installs Win64 OpenSSL v1.1.1h (Recommended for software developers by the creators of OpenSSL). Only installs on 64-bit versions of Windows. Note that this is a default build of OpenSSL and is subject to local and state laws. More information can be found in the legal agreement of the installation. |
| File | Type | Description | | | | | | | | | |
| Win64 OpenSSL v1.1.1h Light EXE MSI | 3MB Installer | Installs the most commonly used essentials of Win64 OpenSSL v1.1.1h (Recommended for users by the creators of OpenSSL). Only installs on 64-bit versions of Windows. Note that this is a default build of OpenSSL and is subject to local and state laws. More information can be found in the legal agreement of the installation. | | | | | | | | | |
| Win64 OpenSSL v1.1.1h EXE MSI | 63MB Installer | Installs Win64 OpenSSL v1.1.1h (Recommended for software developers by the creators of OpenSSL). Only installs on 64-bit versions of Windows. Note that this is a default build of OpenSSL and is subject to local and state laws. More information can be found in the legal agreement of the installation. | | | | | | | | | |



*About "Common Name", please check IP Address that this PC uses or server FQDN.

\$ Common Name (e.g. YOUR name or server FQDN)

[How to check IP Address] Start "C:\Windows\System32\cmd.exe", and execute "ipconfig" and check your IP Address.

*Please be careful about input restrictions

[Password] Minimum is 3, maximum is 255

[Country Name] two-letter country code

Please refer the following URL.

<https://www.ssl.com/country-codes/>

Example:

Japan -> JA

United Kingdom(UK) -> GB

[Effective Days] Maximum is 2000

[Other characters] Up to 255

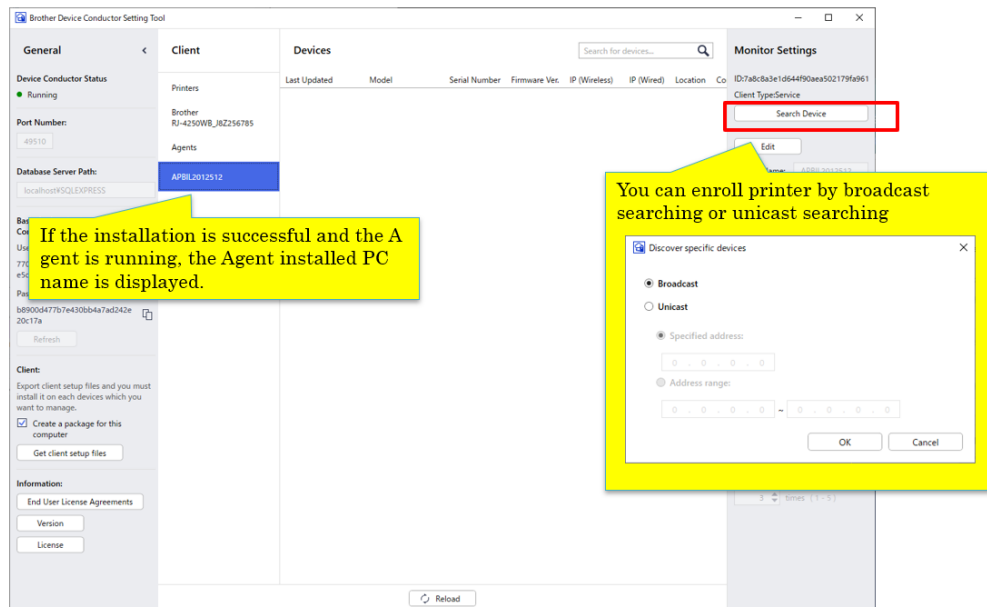
5

Device Conductor Agent uses mDNS to detect printer normally.

To immediately perform the first Printer detection in the network environment:

<Solution1>

If you want to achieve Printer detection immediately in an environment where mDNS cannot be used, please start "Device Conductor Setting Tool" and select applicable agent and click "Search Device".



<Solution2>

Immediate addition of Printer in Network environment where Broadcast and Multicast are prohibited. This file activates the function for Http post in Printer.

[How to setup]

C:\Windows\ServiceProfiles\LocalService\AppData\Local\Brother\DeviceCondcutorAgent\AppConfig\ForPrinter

ActivateAgentConnection.bin

You can set it up by sending this bin file to the target Printer with labelcc.exe.

labelcc.exe /ip:"<your printer address> /send_file:"<full path for your ActivateAgentConnection.bin>"

[Notice]

If PC is not connected to the network at the time of installation, can't get IP address of PC, so this file doesn't contain IP address of PC. As a result, even if this file is transferred to the Printer, it will not be activated.

It is recommended that the network settings of the PC have been completed when installing the Agent.

*As soon as the Printer is found by the Search Device function and mDNS Polling function of the Agent, it will be applied by the Agent so that Http post can be performed.