HimawariCast: software manual

Kencast client Ver.9

13 September 2017

JMA's HimawariCast software enables conversion of HRIT files received via the HimawariCast service into SATAID format and allows display on a PC with other data in SATAID format. The software runs on Windows (64-bit OS) with 8 GB or more memory. This document outlines how the software is installed and configured.

1. KenCast Fazzt Professional Client

1.1. Preparation for Installation

Connect to the Internet.

1.1.1. Executing Windows Update

Run Windows Update to ensure that your OS is the latest version.

1.1.2. Installing Database Software

Install MS SQL Server 2014 Express Edition SP 1 using the Fazzt Client ver. 9.0.x CD (Kencast, Inc.). Run install64.bat (for 64-bit OS) from the 3rdParty\SQLExpress folder.
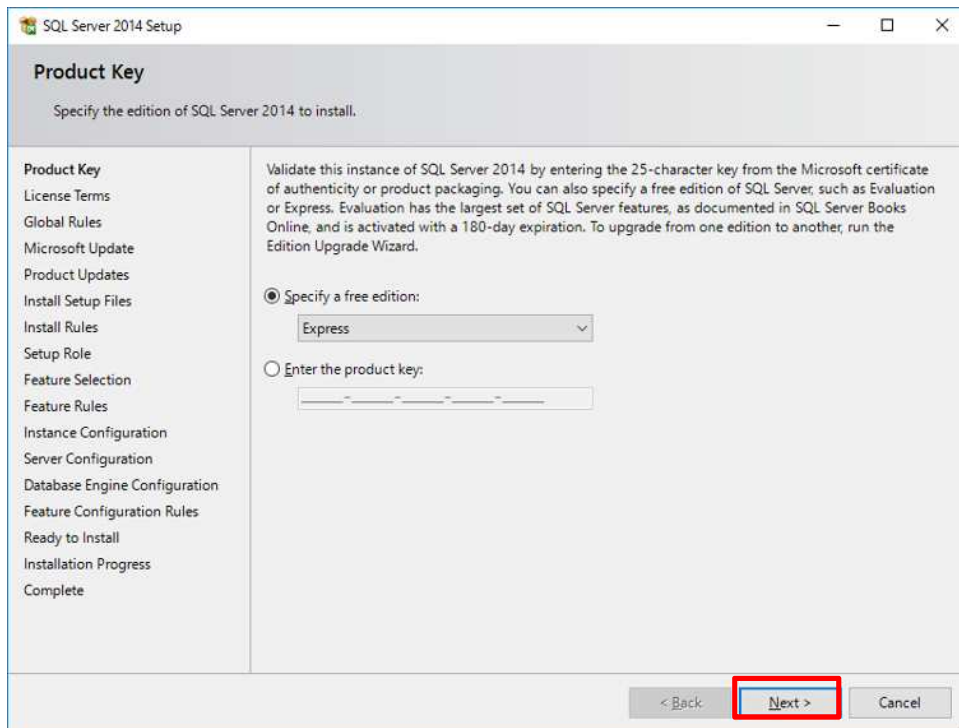
Note: Use of the Fazzt Client ver. 9.0.x CD (Kencast, Inc.) is recommended.

The installation command prompt screen will open, and a [User account control] pop-up window will be displayed. Click the [Yes] button.
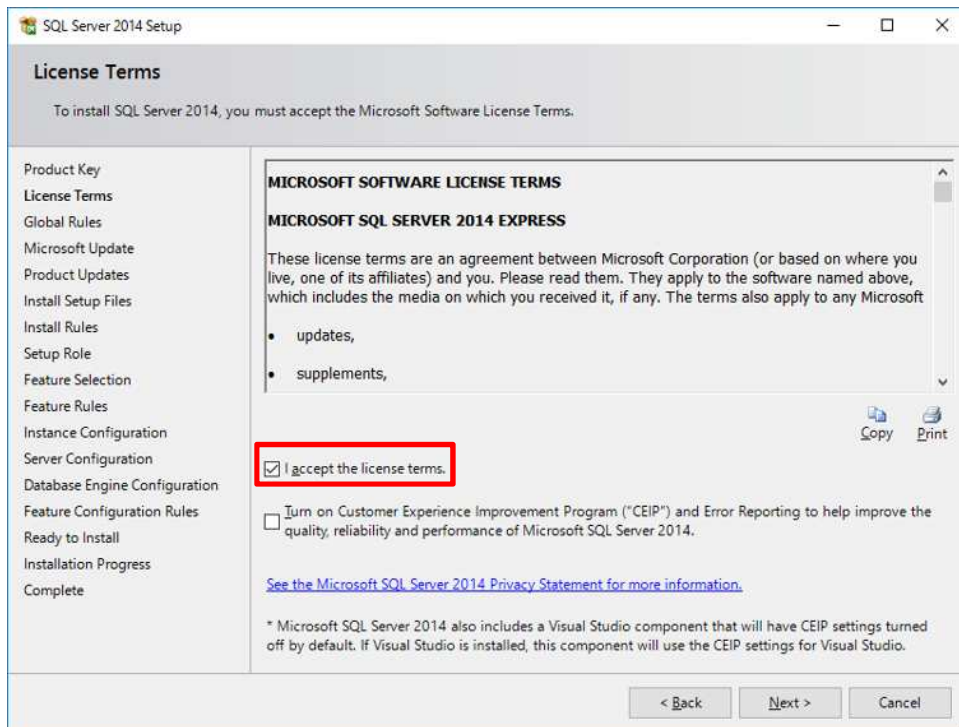
In the [Choose Directory For Extracted Files] pop-up window, click the [OK] button.
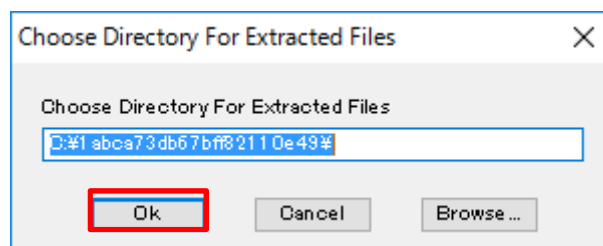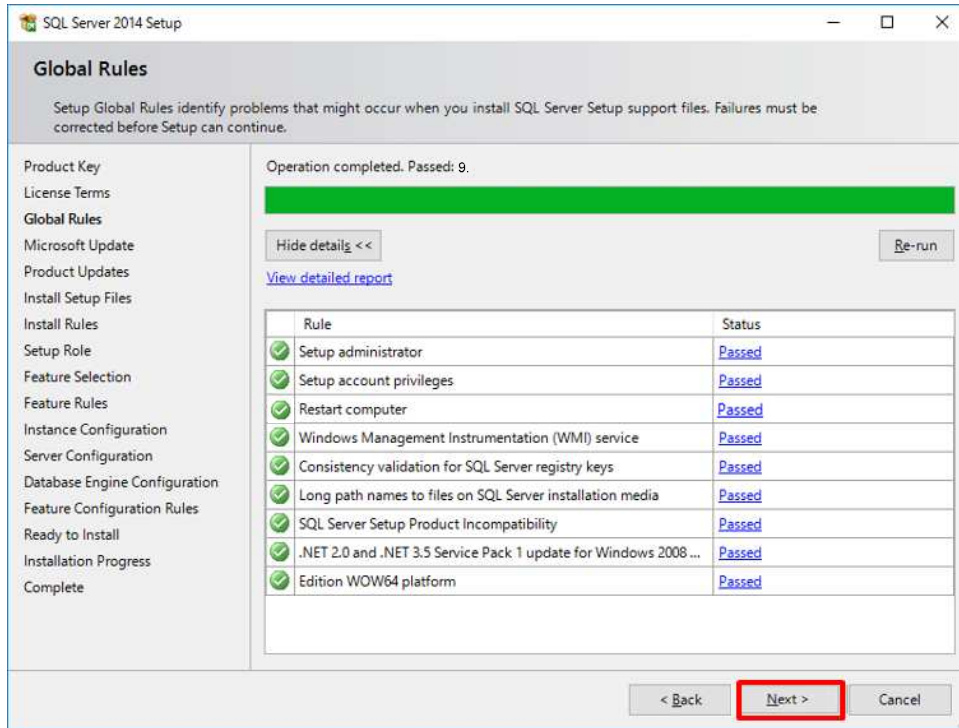
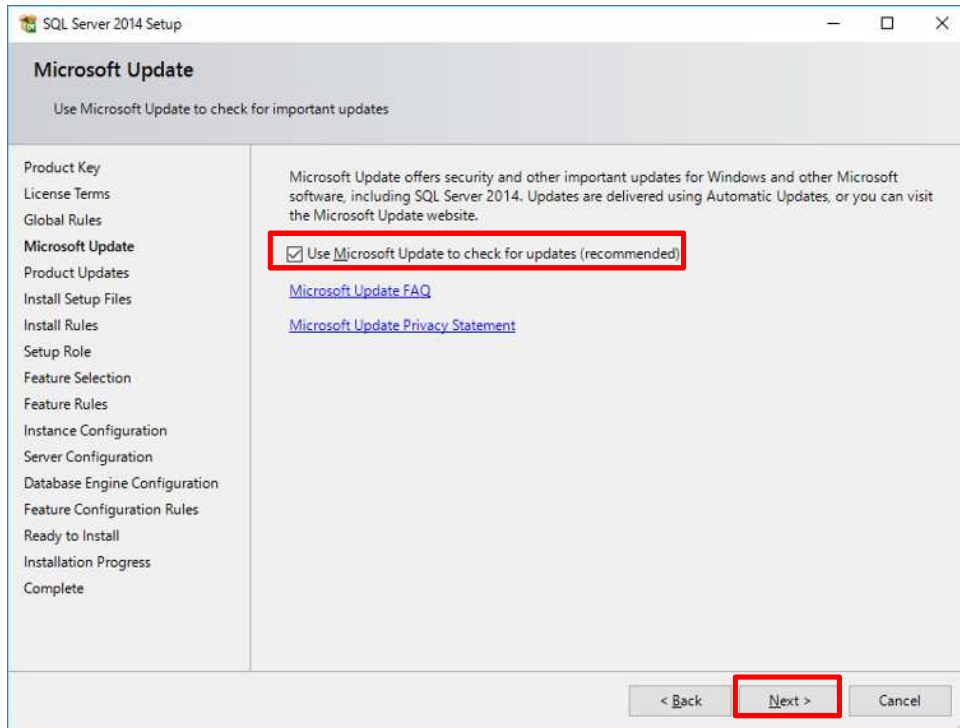On the [Product Key] screen, click the [Next >] button.

Check the [I accept the license terms.] box on the [License Term] screen and click the [Next >] button.
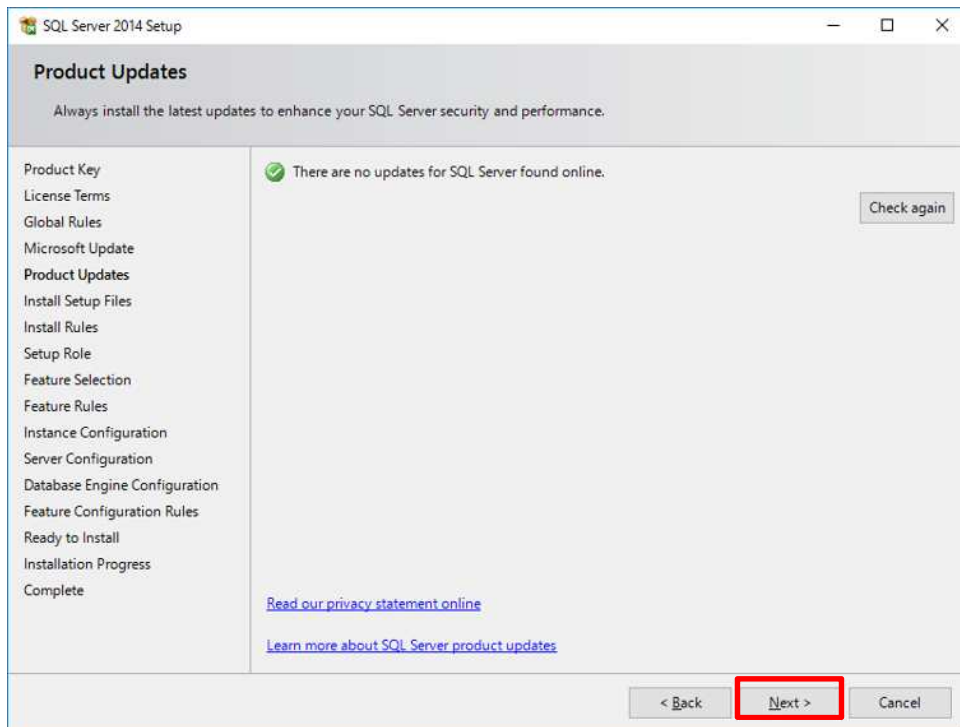
On the [Global Rules] screen, check the computer and the conditions for SQL Server installation, then click the [Next >] button
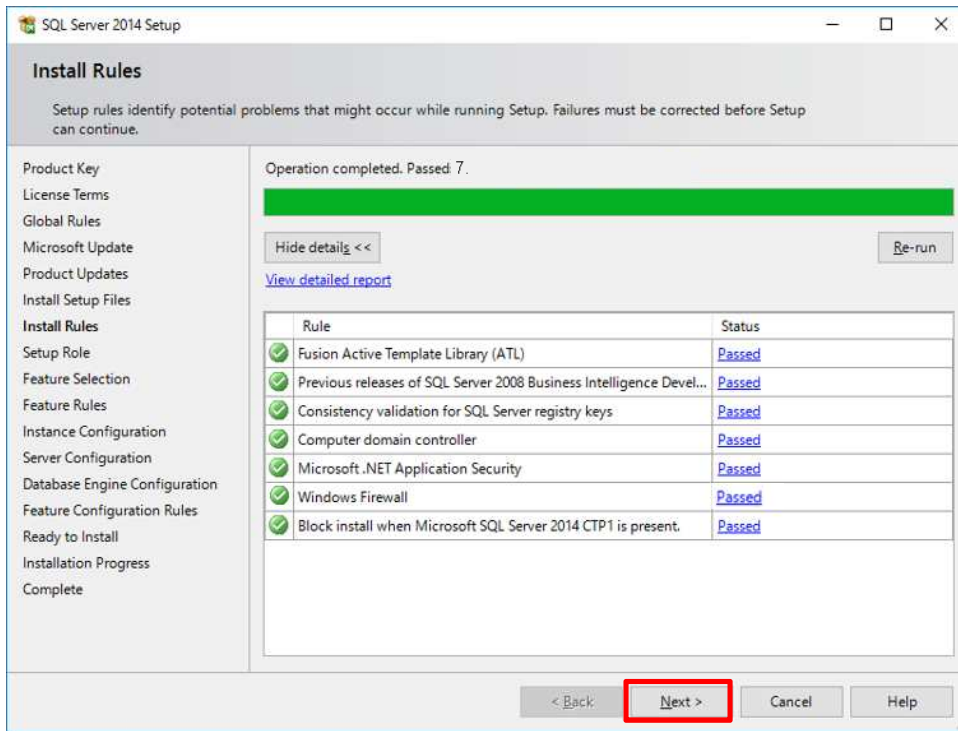
Check the [Use Microsoft Update…] box on the [Microsoft Update] screen, then click the [Next >] button.
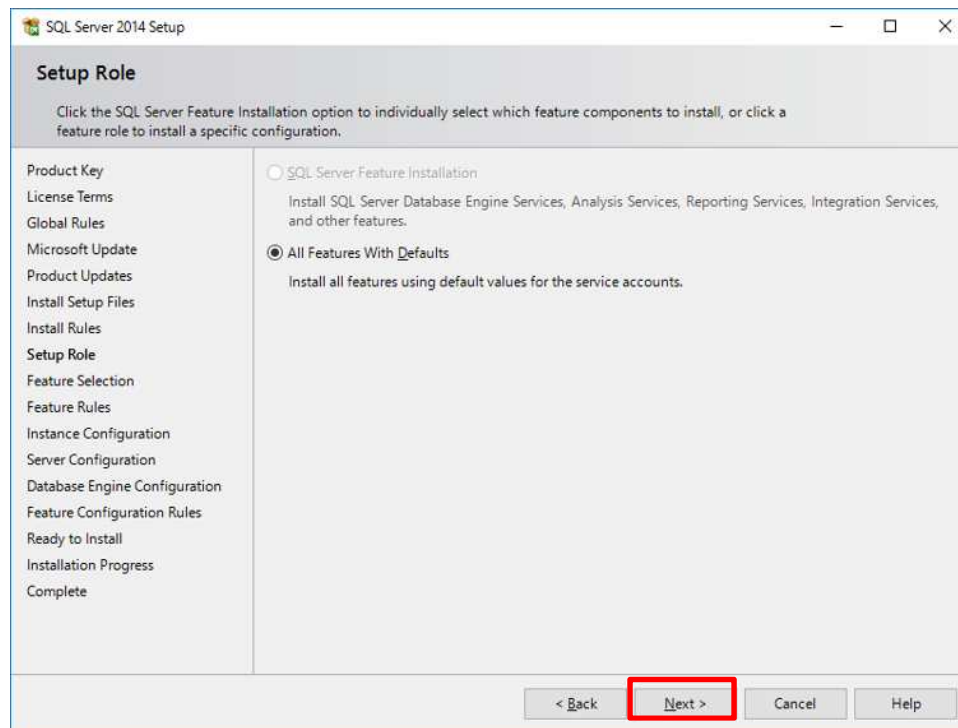

On the [Product Updates] screen, click the [Next >] button if there are no files to update.
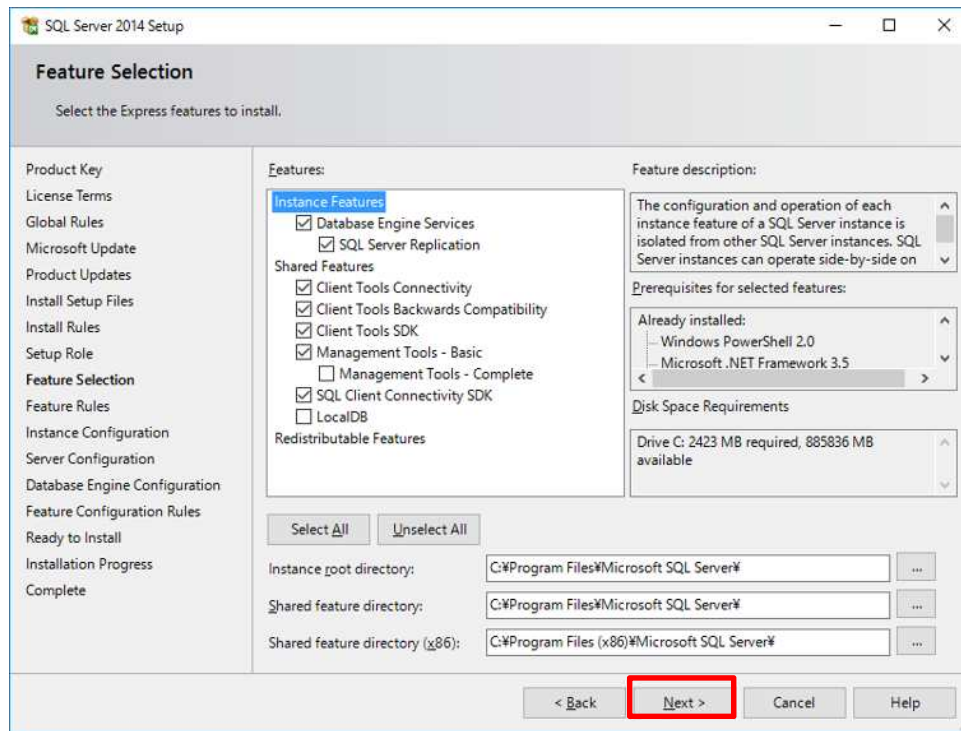
On the [Install Rules] screen, click the [Next >] button.
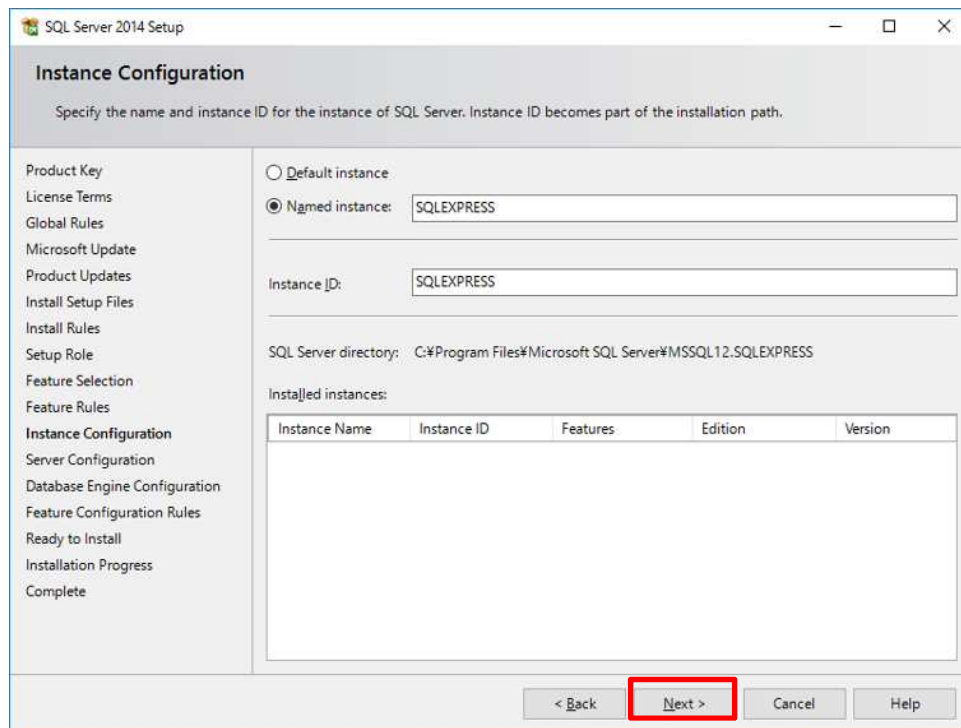

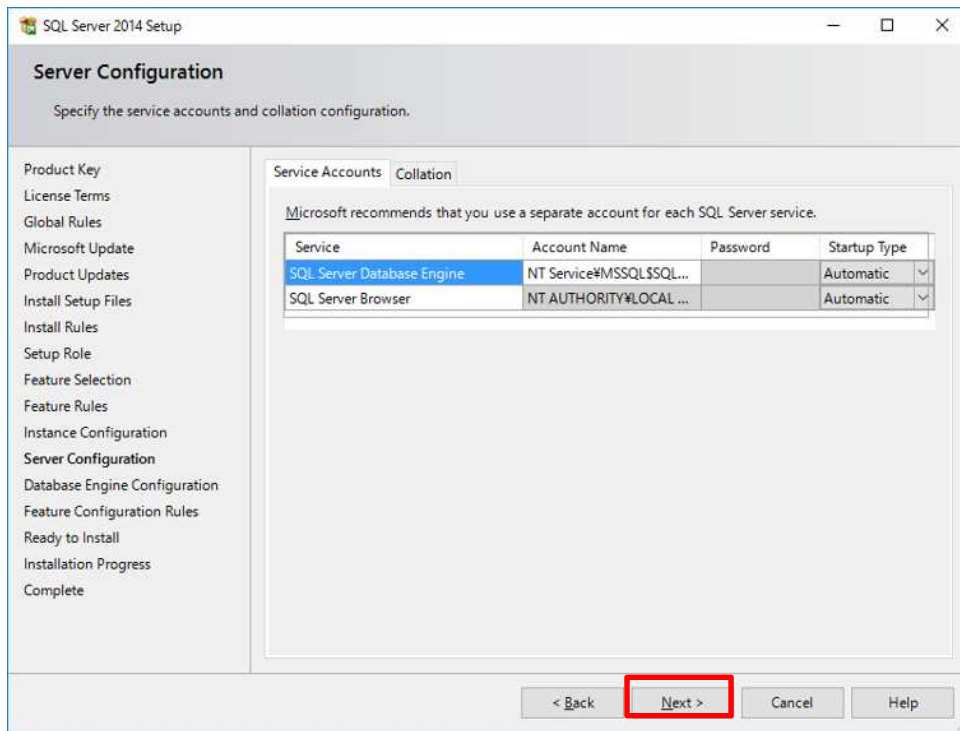On the [Setup Role] screen, click the [Next >] button.

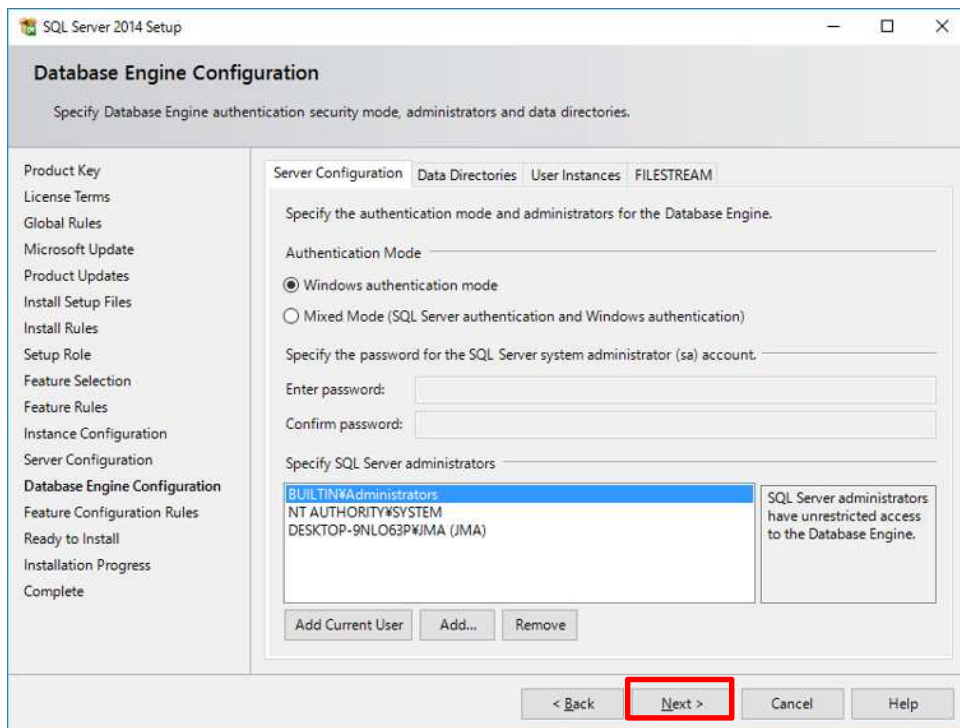On the [Feature Selection] screen, click the [Next >] button.

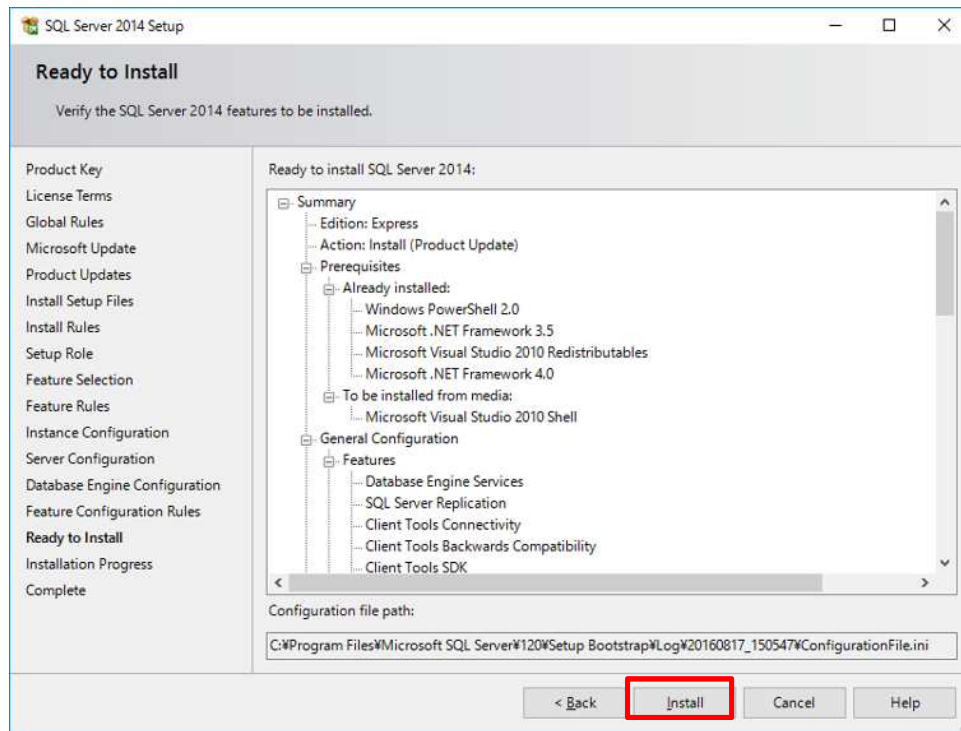On the [Instance Configuration] screen, click the [Next >] button.

On the [Server Configuration] screen, click the [Next >] button.
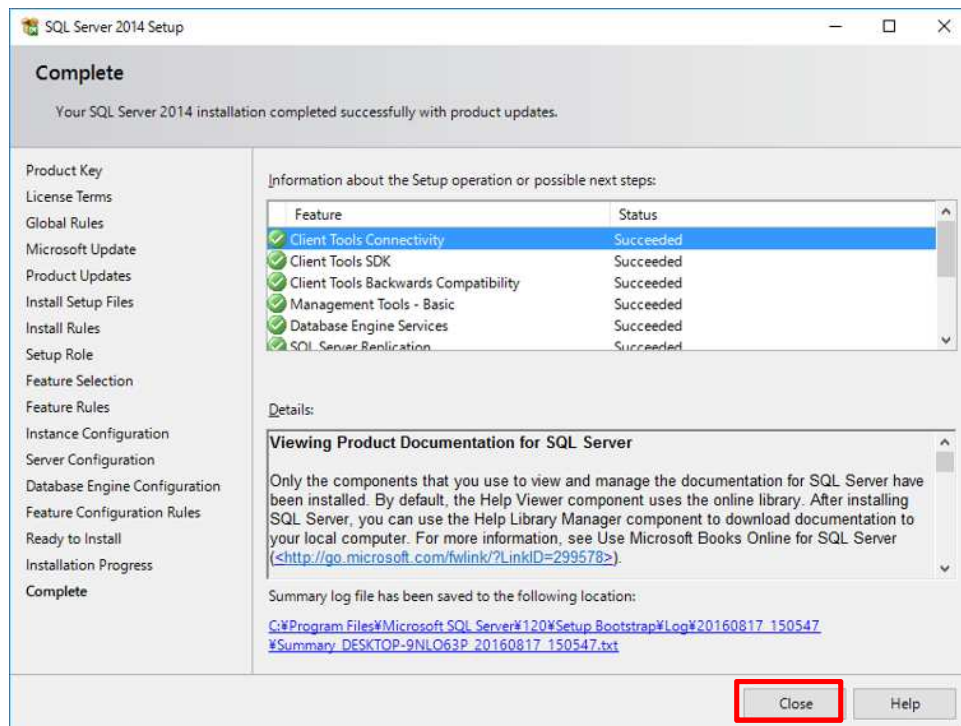

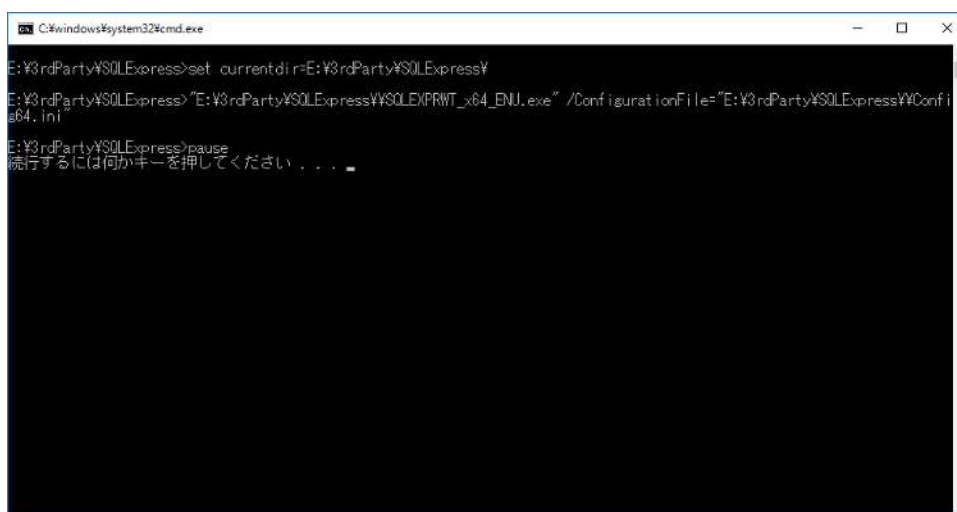On the [Database Engine Configuration] screen, click the [Next >] button.

On the [Ready to Install] screen, click the [Install] button.

On the [Complete] screen, click the [Close] button.

The database program will be installed. Press any key to close the command prompt screen.

1.1.3.　Installing 7-Zip

Go to the link below, download 7-Zip (for 64bit) and install it.

http://www.7-zip.org/download.html

Follow the wizard to install.

Note: Do not change the installation directory.

1.1.4.　Installing HimawariCast Software

Go to the link below and download JMA's HimawariCast software.

http://www.data.jma.go.jp/mscweb/en/himawari89/himawari_cast/himawari_cast.html#software

Unzip the downloaded HimawariCast_software.zip file to reveal the following two folders:

KenCast

SATAID

Move the SATAID folder to drive C:\ for a location at C:\SATAID.

Note: Script files in the KenCast folder should be moved to another folder as described in 1.2.2.

1.1.5. Creating Folders

Create the following required folders using Windows Explorer:

```
C:\HRIT
C:\HRIT_in
C:\HRIT_tmp
C:\LRIT
C:\MANAM
C:\SATAID_Image
C:\SATAID_Obs
C:\Temp
```

1.2. Installing KenCast Fazzt Professional Client
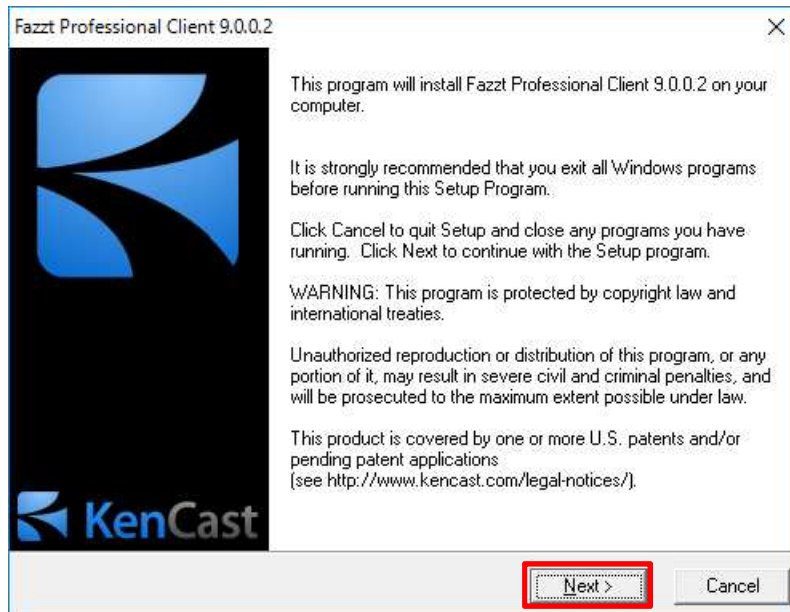
1.2.1. Installing Fazzt Client

Install Fazzt Client for Windows using the Fazzt Client CD. Execute `FazztProfessionalClient.exe` from the `Fazzt\Windows` folder.
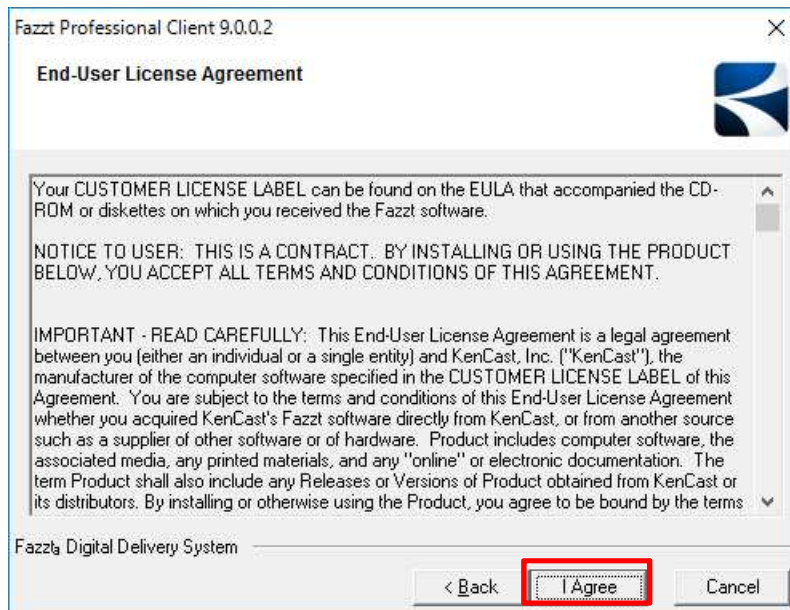
Fazzt Client will be installed under

```
C:\Program Files (x86)\KenCast\.
```

On the Wizard screen, follow the guidance and click the [Next >] button.

On the [End-User License Agreement] screen, click the [I Agree] button.

On the [License File] screen, click the [Browse] button and select the License File (file type: .kcl) provided with the Fazzt Professional Client purchase, then click the [Next >] button.

Note: The License File should be placed in advance in any folder. After installation, it will be copied to the Destination Folder specified later.
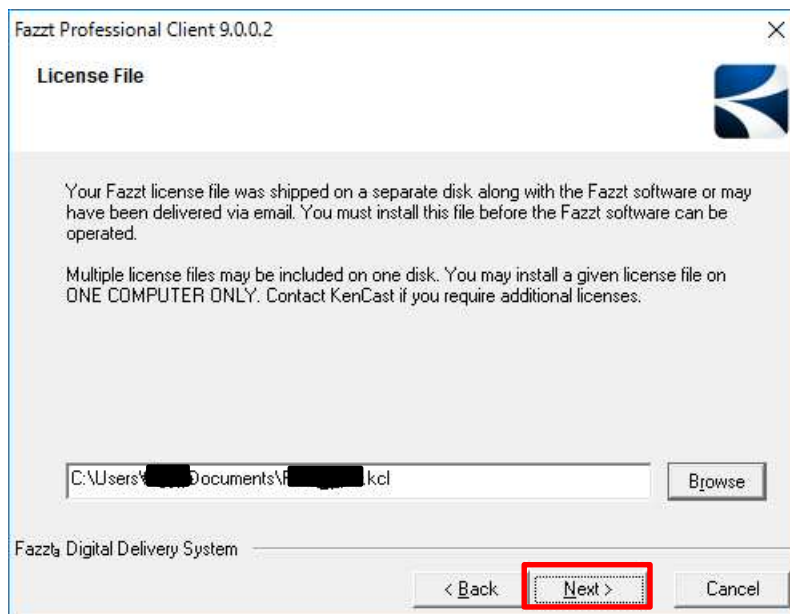
On the [Select Database Server] screen, click the [Next >] button.
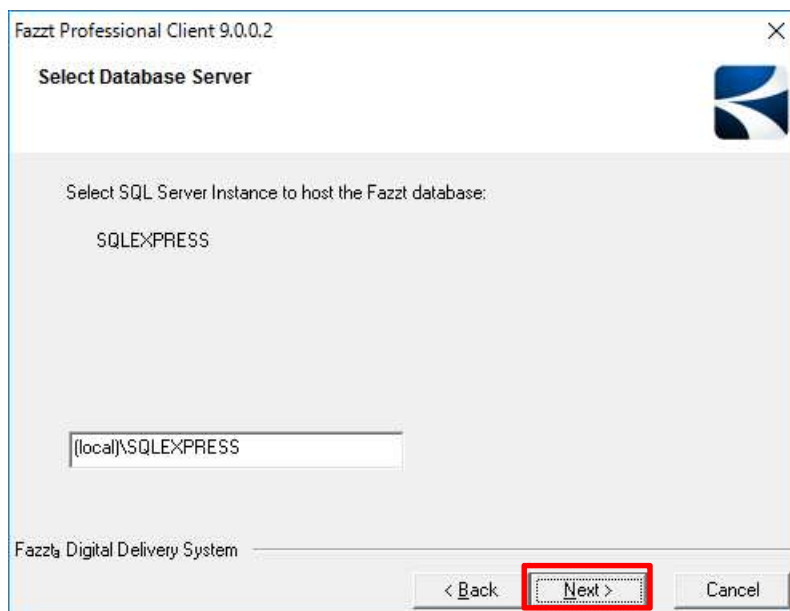
On the [Service Log On Account] screen, click the [Next >] button.

The [Username] and [Password] fields can be left empty.
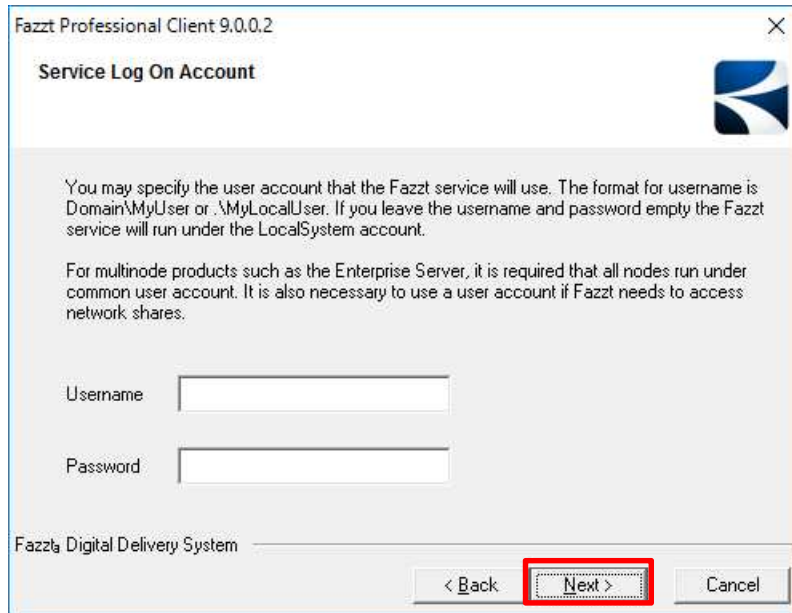
On the [Destination Location] screen, click the [Next >] button.

Click the [Next >] button on the [Start Installation] screen to begin installation.
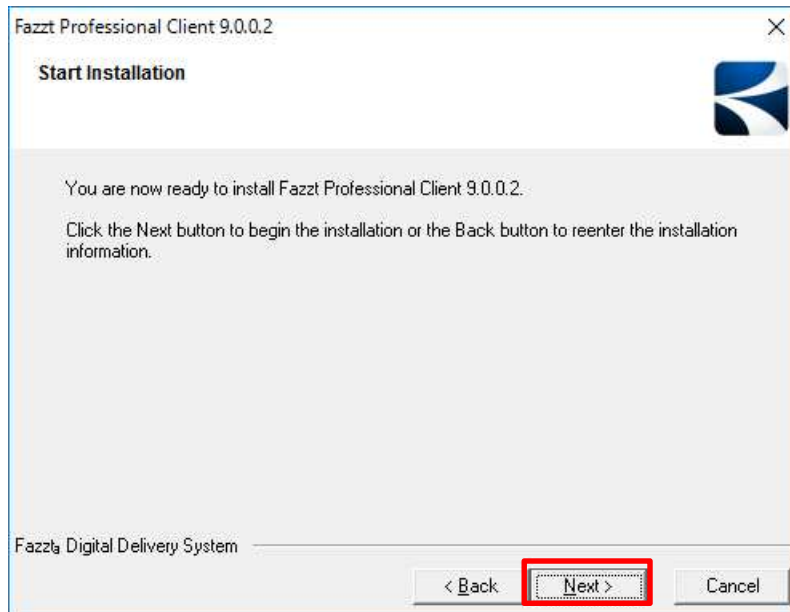
Click the [Finish] button to complete installation.
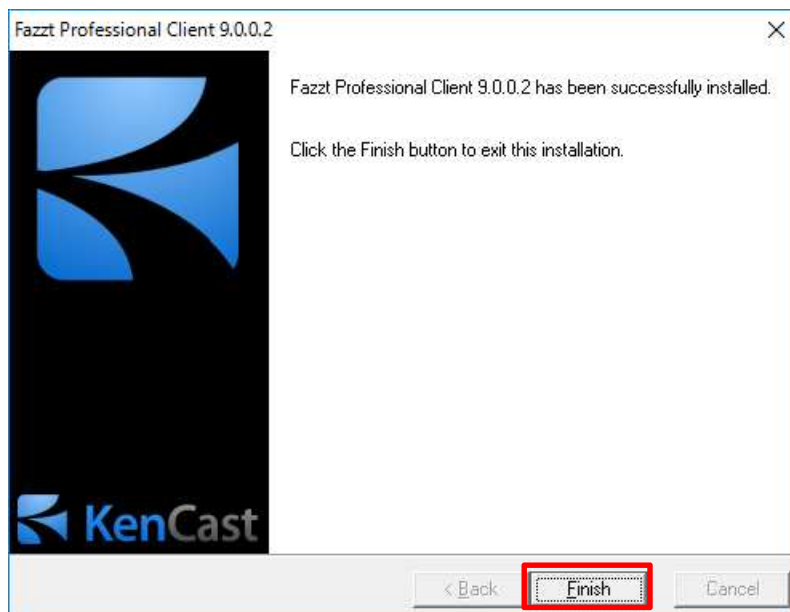
1.2.2. Installing Fazzt Script

Create the following folder under the Fazzt Client installation folder as a place to store Fazzt Script files.

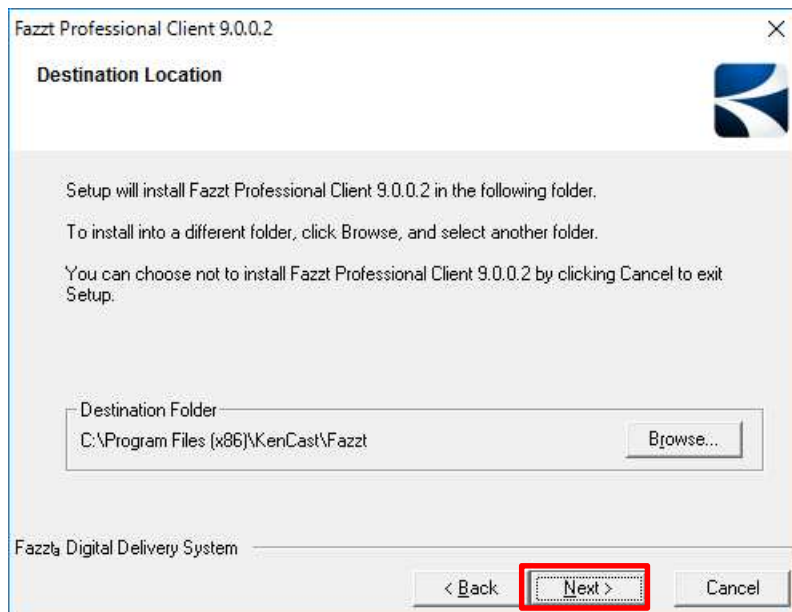`C:\Program Files (x86)\KenCast\Fazzt\Scripts\HimawariCast`

Store the following Fazzt Script files in the `KenCast` folder (as specified in 1.1.4) in the above folder:

`DeleteFilesOlderThanN.fzt`

`Match10.fzt`

`CombineAnyway.fzt`

`ConcAndConvert.fzt`

`UnzipIncomingFiles.fzt`

The `KenCast` folder can then be deleted.

1.3. Configuring KenCast Fazzt Professional Client

The Fazzt Client web-based configuration page can be accessed via a web browser. The default URL is as follows:

http://127.0.0.1:4039/

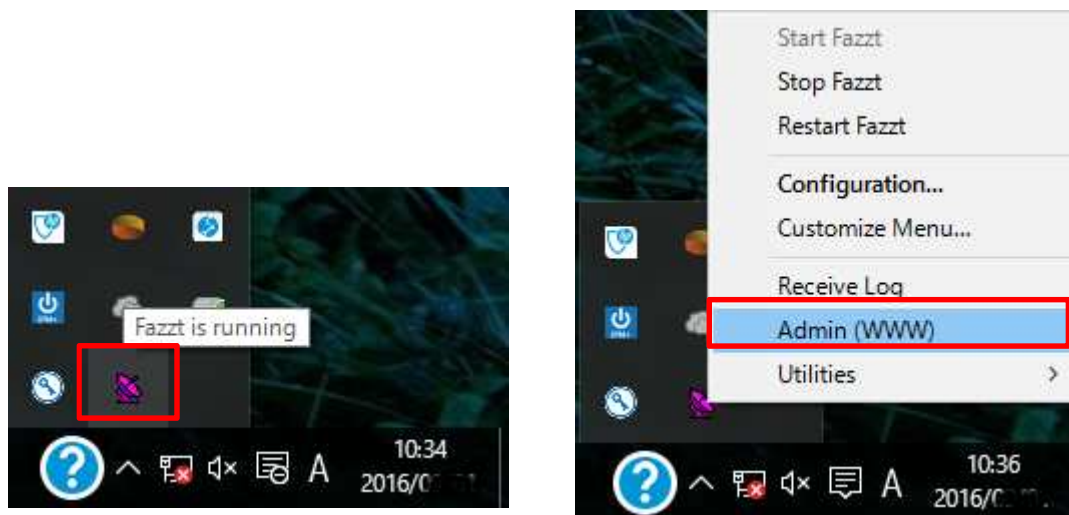Right-click the antenna icon on the right of the task bar and select [Admin (WWW)] from the pop-up menu. A browser will open.

The following screen will be displayed:
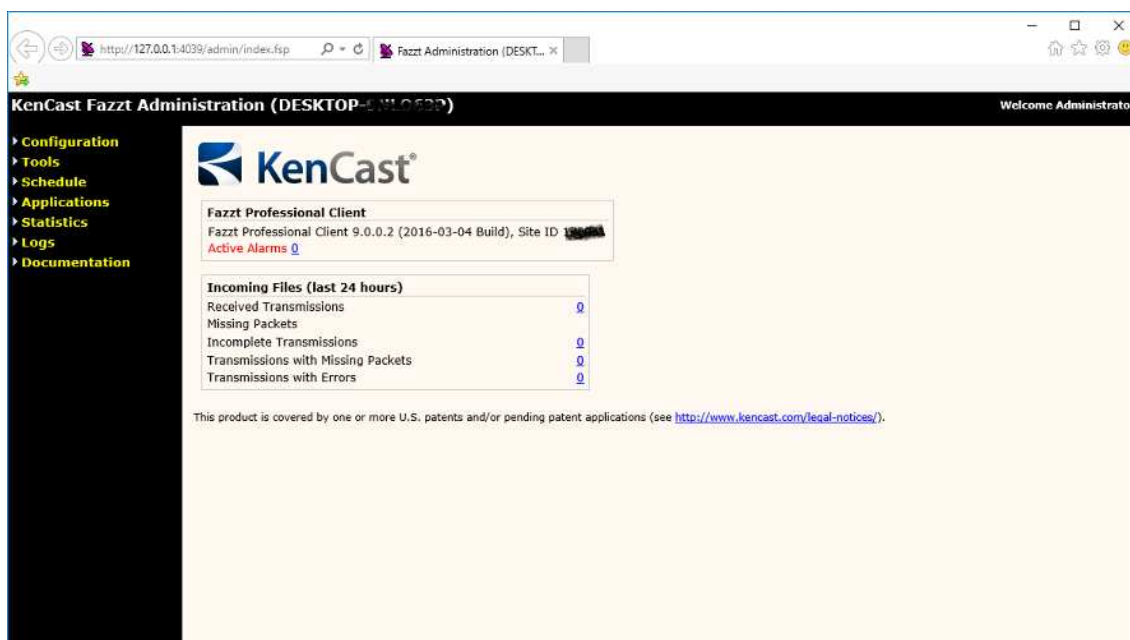
1.3.1. Adding Channels

Add a channel for data receipt.

Go to [Configuration] on the left of the screen and select [Channels]. The Channels setting screen will be displayed.
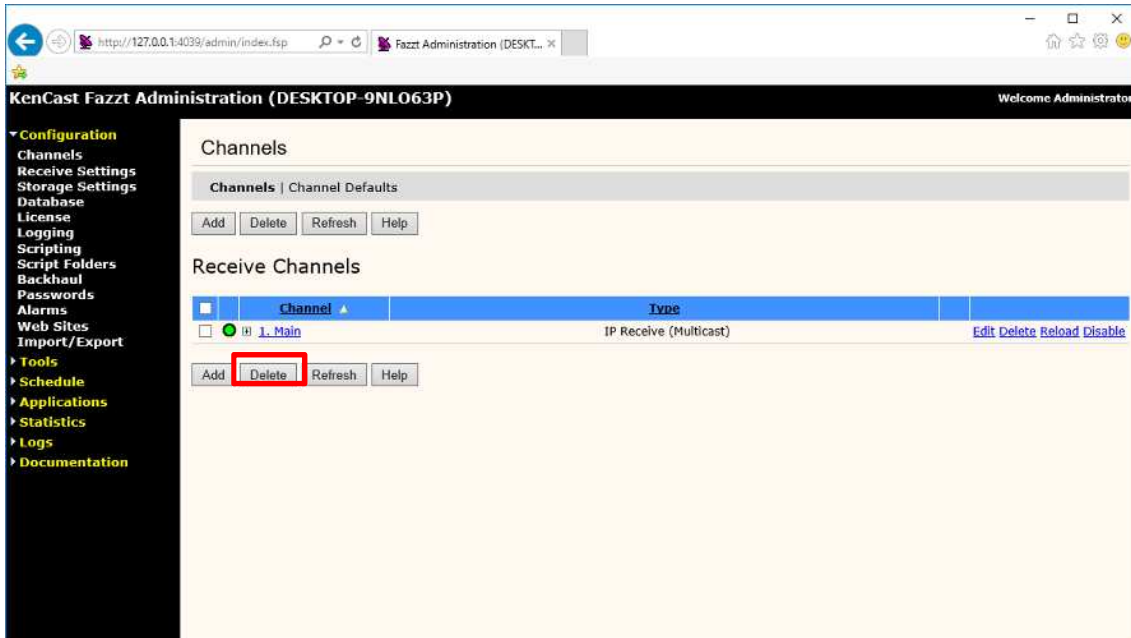
The Main channel is already present by default. Click the [Delete] button to delete it.

Click the [OK] button in the window below to confirm deletion.

Click the [Add] button.

Select [IP Receive (Multicast)] from the Receive list.
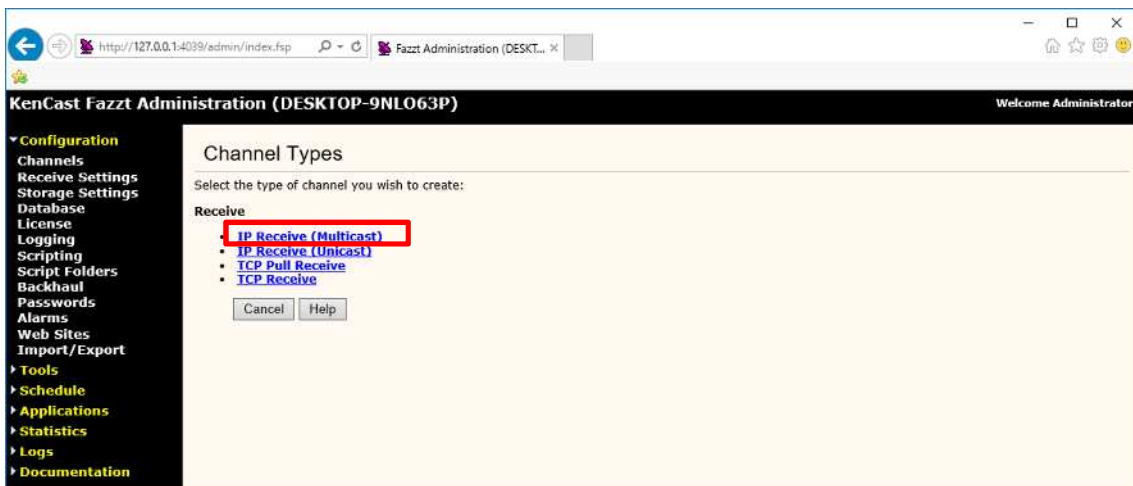
Set up the required items on the Add IP Receive (Multicast) Channel setting screen.
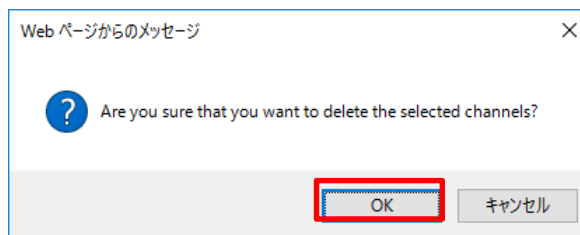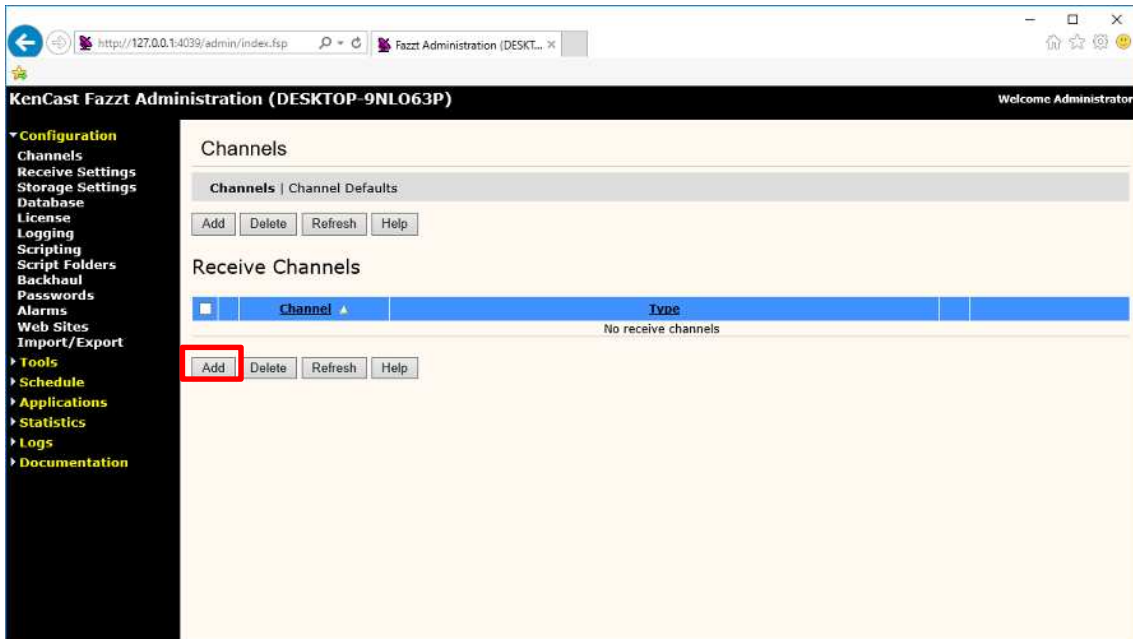

Description:	(Input the channel name, e.g., Himawari Cast.)
IP Address:	(Input the IP address of the multicast to be used. This is 239.0.0.1 for HimawariCast.)
IP Family:	(Select [IPv4].)
Port:	(Input the port number of the multicast to be used. This is 8001 for HimawariCast.)
Buffer Size:	6291456
Interface:	(Select the network interface of the channel to be used.)

Click the [Save] button.

Note: Pay attention to PC firewall settings.

   Permit settings to allow receipt via the above multicast IP address and port number.

   Refer to the relevant firewall manual for instructions.

The Channels screen will be displayed as follows:
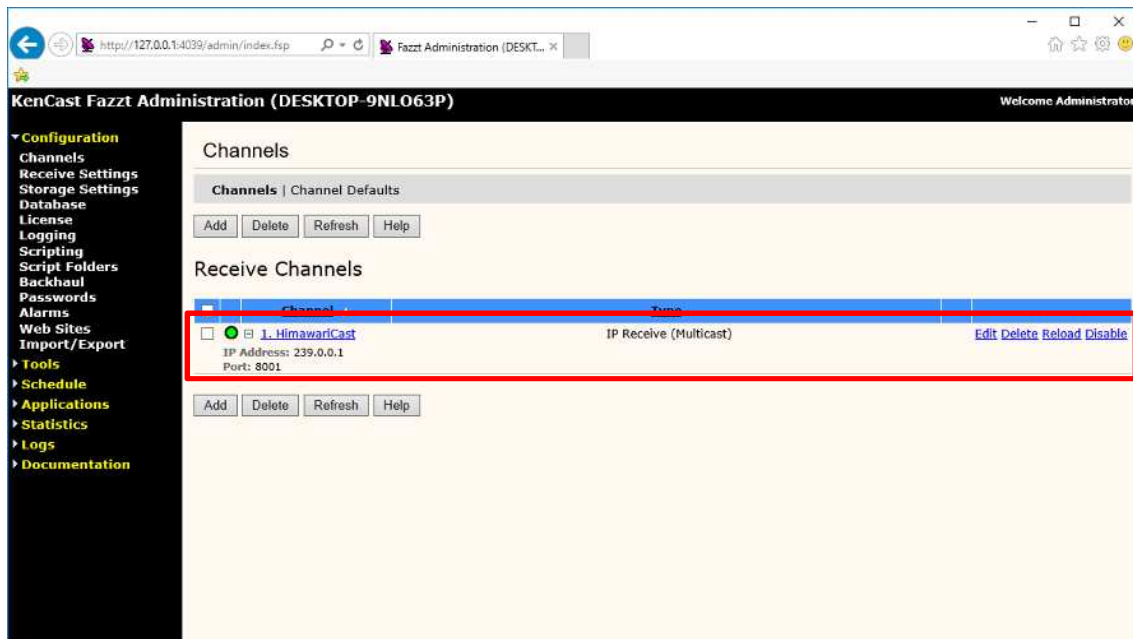
1.3.2. Receive Settings

Go to [Configuration] on the left of the screen and select [Receive Settings]. The Receive Settings screen will be displayed.
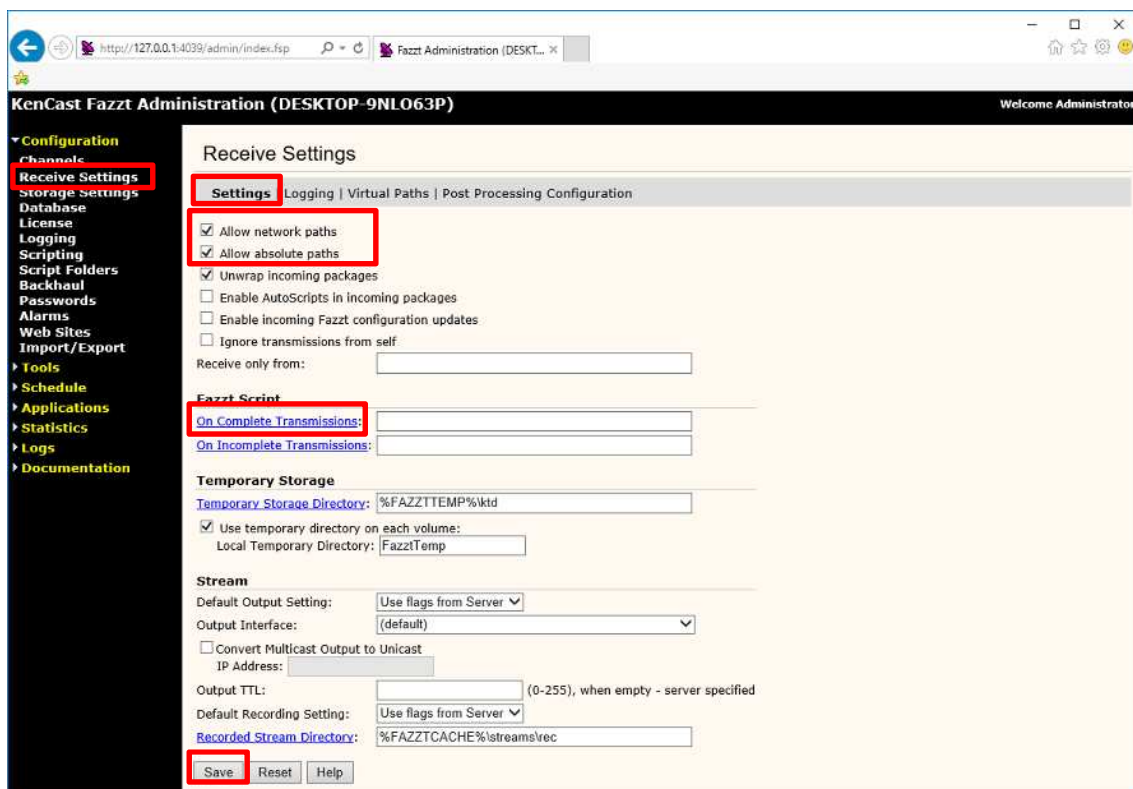
Uncheck the following:

      ☐ Allow network paths

      ☐ Allow absolute paths

Click [On Complete Transmissions] and select the following Fazzt Script:

```
C:\Program Files (x86)\KenCast\Fazzt\Scripts\HimawariCast\
        UnzipIncomingFiles.fzt
```

Click the [Save] button.

The Receive Settings screen will be displayed as follows:
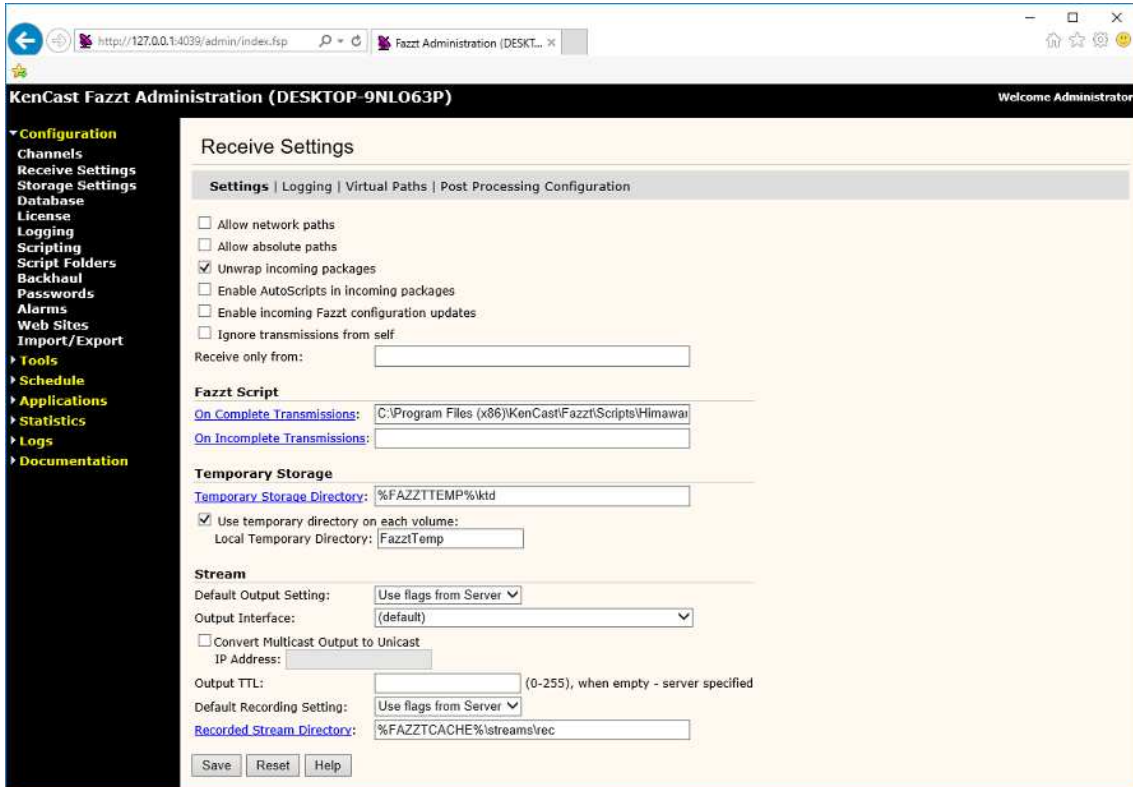
Select Virtual Paths from the menu bar on the Receive Settings screen.
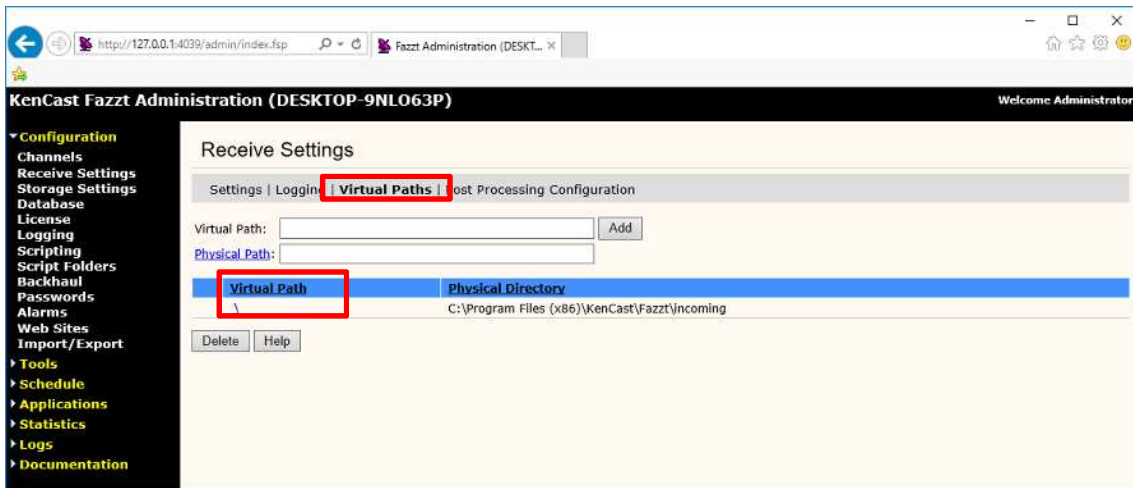
Click [\] under Virtual Paths.

The Edit Virtual Path screen will be displayed.
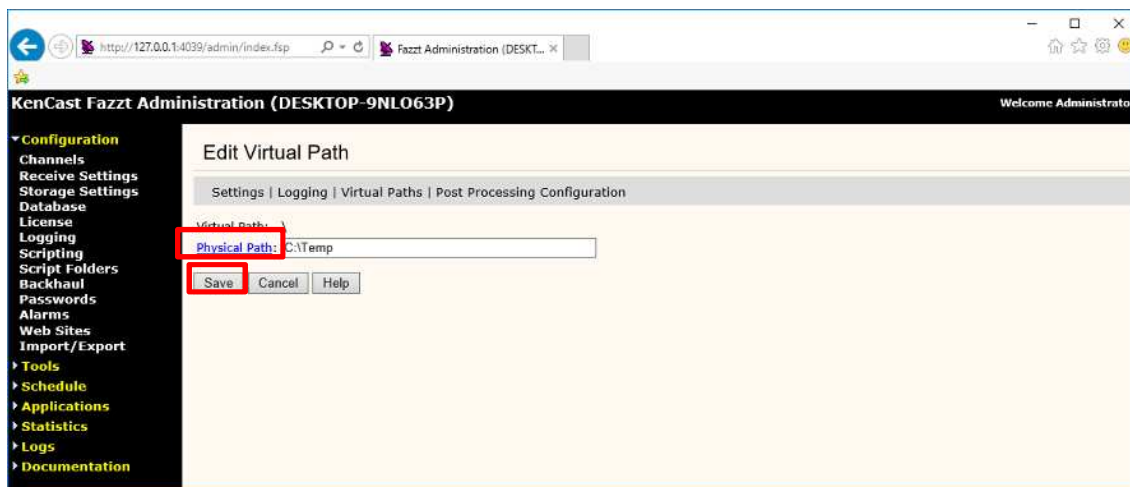
Input the following and click the [Save] button:

Physical Path:	C:\Temp

1.3.3.   Creating Script Folders

Add two script folders.

Go to [Configuration] on the left of the screen and select [Script Folders]. Script Folders screen will be displayed.
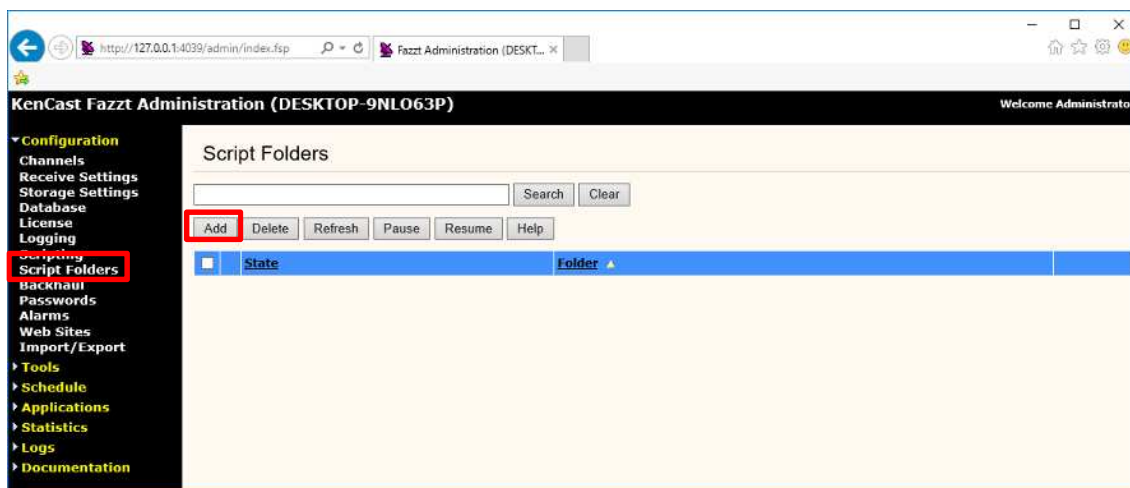
Click the [Add] button.

The Setup a Script Folder screen will be displayed.
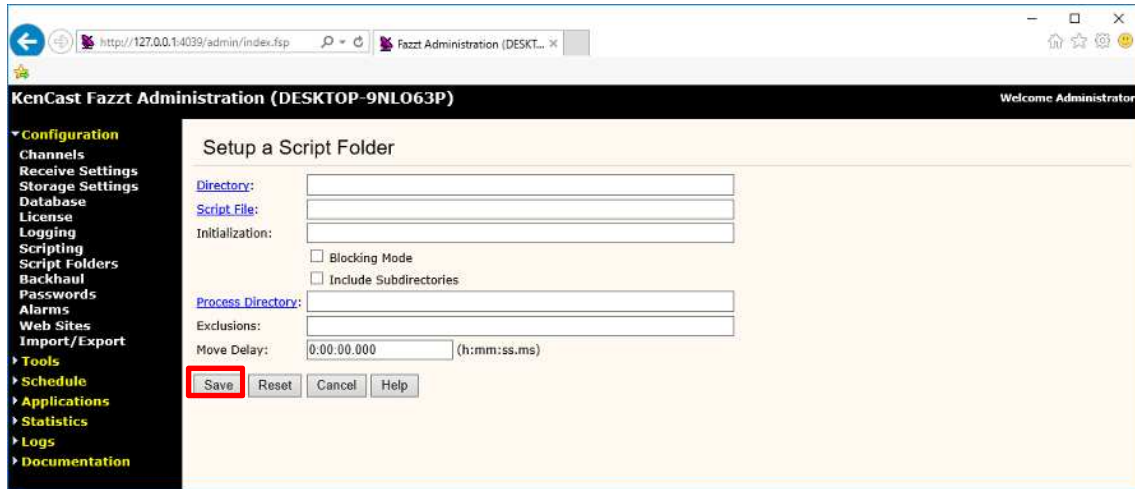
Input the following values and click the [Save] button:

Directory:	C:\HRIT_in
Script File:	C:\Program Files (x86)\KenCast\Fazzt\Scripts\HimawariCast\ Match10.fzt
Blocking Mode:	(Check mark)

Directory:	C:\HRIT_tmp
Script File:	C:\Program Files (x86)\KenCast\Fazzt\Scripts\HimawariCast\ ConcAndConvert.fzt
Blocking Mode:	(Check mark)

The Script Folders screen will be displayed as follows:
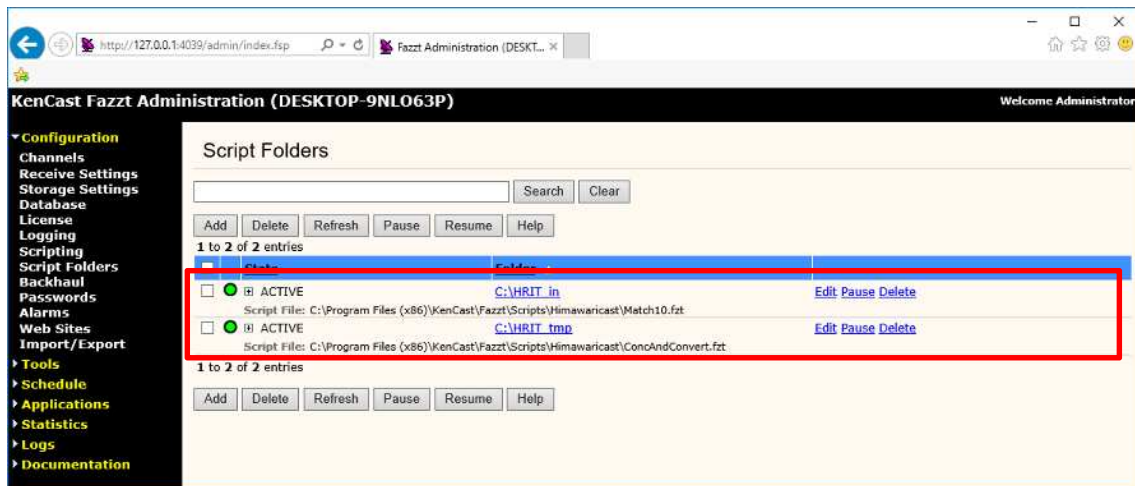
1.3.4. Creating Tasks

Add three Tasks using Fazzt script.

Go to [Schedule] on the left of the screen and select [Task]. The Tasks screen will be displayed. Select [Run Script] from the [< Select Task Type to Add >] pull-down menu.
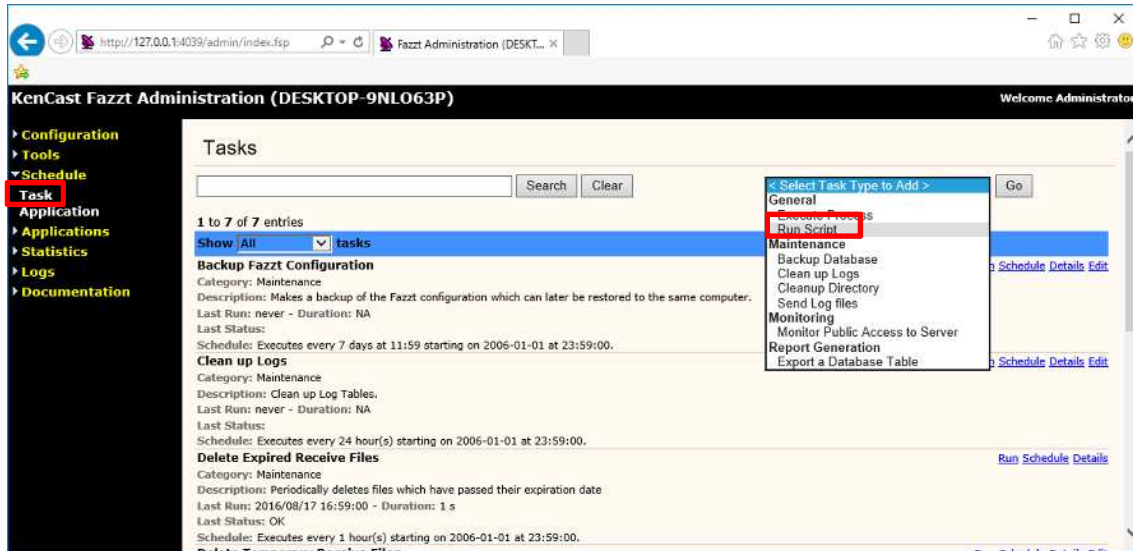
Set the required items on the Add Script Task setting screen.

Input the following values and click the [Save] button.

Name:	Combine Anyway (HRIT)
Category:	HimawariCast
Script File:	C:\Program Files (x86)\KenCast\Fazzt\Scripts\HimawariCast\ CombineAnyway.fzt
Initialization:	map $ExpTime = ["Minutes" => 25]; Note: Input the waiting time from the start of observation to HRIT file receipt. For Himawari-8/9, a setting of 25 minutes is recommended.

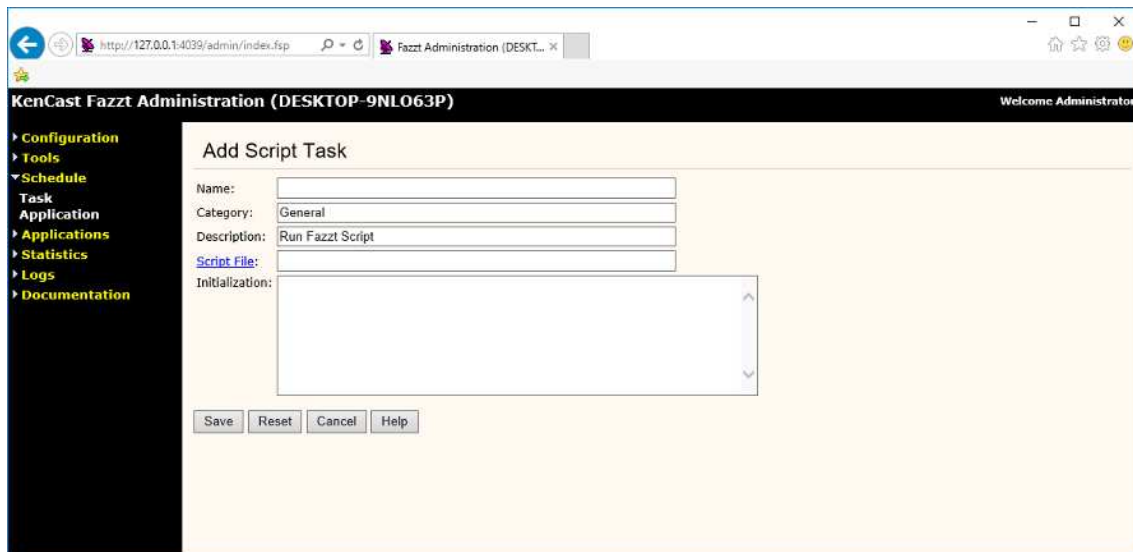| Name:	Delete Files Older Than N
Category:	HimawariCast
Script File:	C:\Program Files (x86)\KenCast\Fazzt\Scripts\HimawariCast\ DeleteFilesOlderThanN.fzt
Initialization:	$FolderName = {"C:\\HRIT", "C:\\LRIT", "C:\\MANAM", "C:\\SATAID_Image", "C:\\SATAID_Obs"}; map $ExpireTime = ["Days" => 7]; Note: Input the period for which received data should be stored in consideration of HDD capacity.

Name:	Delete Files Older Than N (Temp Folders)
Category:	HimawariCast
Script File:	C:\Program Files (x86)\KenCast\Fazzt\Scripts\HimawariCast\ DeleteFilesOlderThanN.fzt
Initialization:	$FolderName = {"C:\\Temp\\HRIT_in", "C:\\Temp\\LRIT", "C:\\Temp\\MANAM", "C:\\Temp\\SATAID_Image", "C:\\Temp\\SATAID_Obs", "C:\\HRIT_in\\Process", "C:\\HRIT_tmp\\Process"}; map $ExpireTime = ["Minutes" => 60]; Note: Input the period for which received data should be stored in the Temp folder in consideration of HDD capacity.

1.3.5. Adding Scheduled Tasks

Set schedules for the tasks created in 1.3.4.

Go to [Schedule] on the left of the screen and select [Task]. The Tasks screen will be displayed. Select [HimawariCast] from the blue-strip Show [All] tasks pull-down menu.
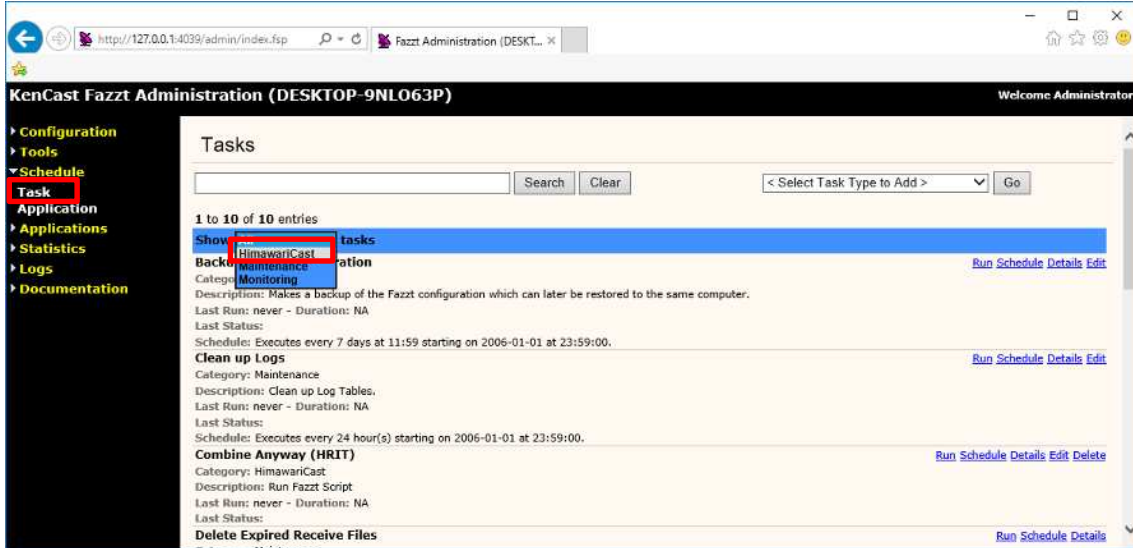
Click [Schedule] on the right of the tasks to be configured.
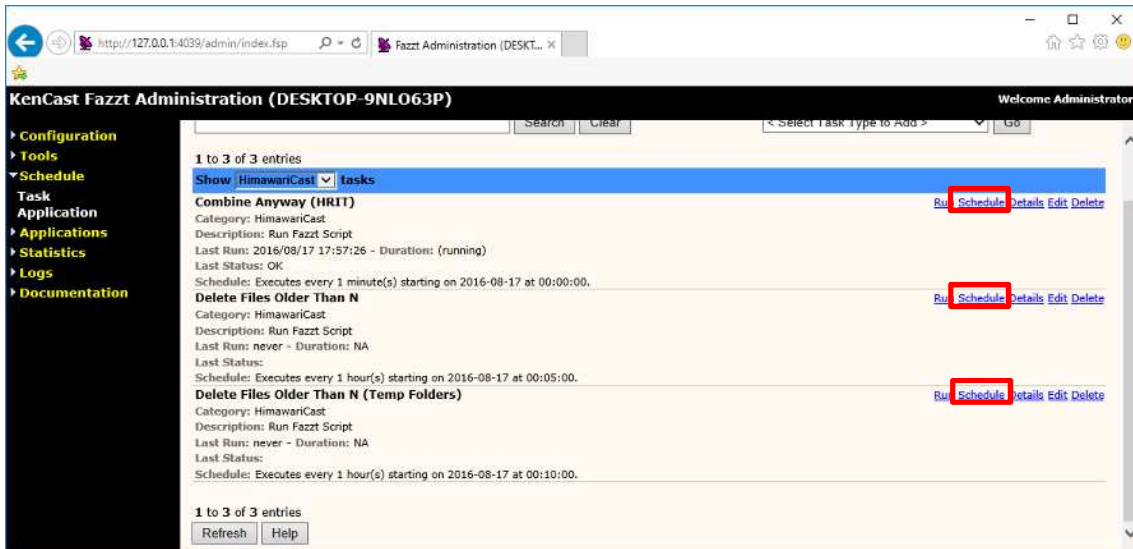
Input the following values and click the [Save] button.
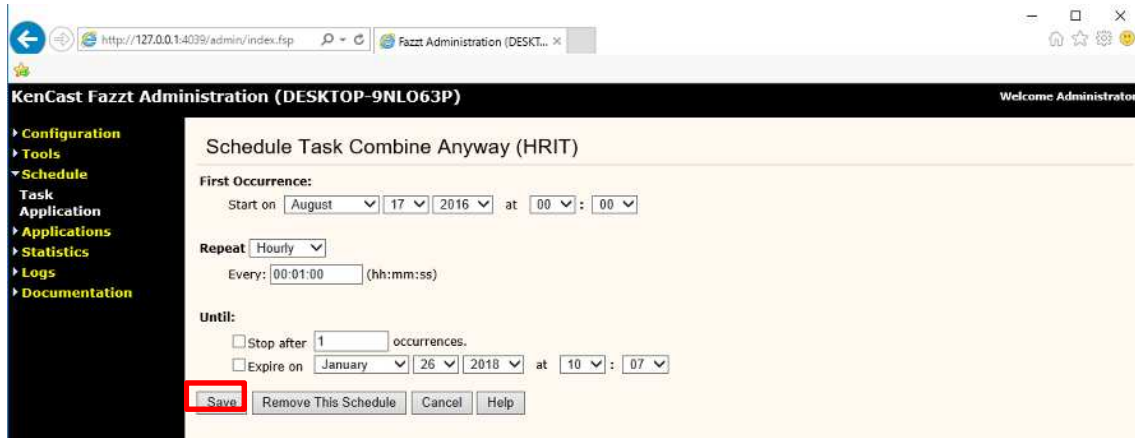
Combine Anyway (HRIT)

Repeat:	Hourly
	Every: 00:01:00

Note: for operation at one-minute intervals.

Delete Files Older Than N

Repeat:	Hourly
	Every: 00:10:00

Note: for operation at ten-minute intervals.

Delete Files Older Than N (Temp Folders)

Repeat:	Hourly
	Every: 00:10:00

Note: for operation at ten-minute intervals.

1.4.   Configuring Other Settings

1.4.1.   Changing Buffer Size by Editing Registry

Editing the registry should be done carefully.

Start the Registry Editor (method is OS-dependent).

Select the following folder in the Registry Editor.


```
HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\KenCast\Fazzt\
        ChannelTypes\{61c6de20-c78d-11d2-978d-006097295a62}\
        Defaults
```
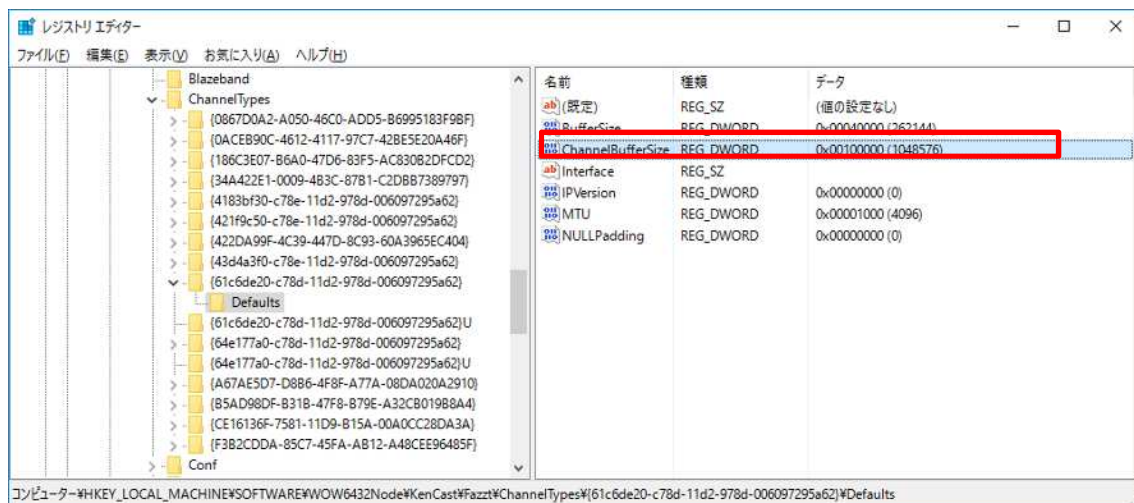

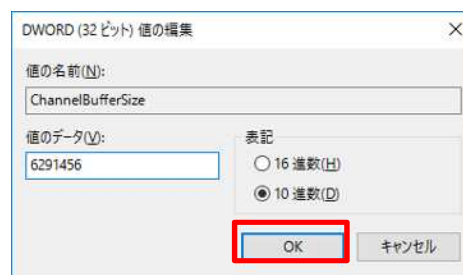Double-click `ChannelBufferSize` from the `Defaults` folder, check `Decimal` and input 6291456 and click OK button.

2. SATAID Software

2.1. Configuring SATAID Software

2.1.1. Configuring sataid.ini

Open `C:\SATAID\sataid.ini` in a text editor (e.g., Notepad).

Input the time difference between the PC's built-in clock and the UTC value on the third line (default: 0 hours).

```
'          Time-difference between local time (PC built-in clock) and UTC
Time
0
```

2.1.2. Configuring sataid.vbs

Open `C:\SATAID\sataid.vbs` in a text editor (e.g., Notepad).

Input the execution filename in line 26 as follows:

```
sGMSLP = GMSLPD\GMSLPD64.EXE
```

2.1.3. Configuring the Display Area

The following seven display areas are provided:

| Display area	Latitude	Longitude	Configuration file
Full Disk	65N – 65S	80E – 200E (160W)	`hrit2sataid_FullDisk.ini`
North Central (NC)	55N – 15S	90E – 155E	`hrit2sataid_NorthCentral.ini`
Northwest (NW)	65N – 5S	80E – 145E	`hrit2sataid_Northwest.ini`
Northeast (NE)	65N – 5S	135E – 200E (160W)	`hrit2sataid_Northeast.ini`
South Central (SC)	15N – 55S	107.5E – 172.5E	`hrit2sataid_SouthCentral.ini`
Southwest (SW)	5N – 65S	80E – 145E	`hrit2sataid_Southwest.ini`
Southeast (SE)	5N – 65S	135E – 200E (160W)	`hrit2sataid_Southeast.ini`
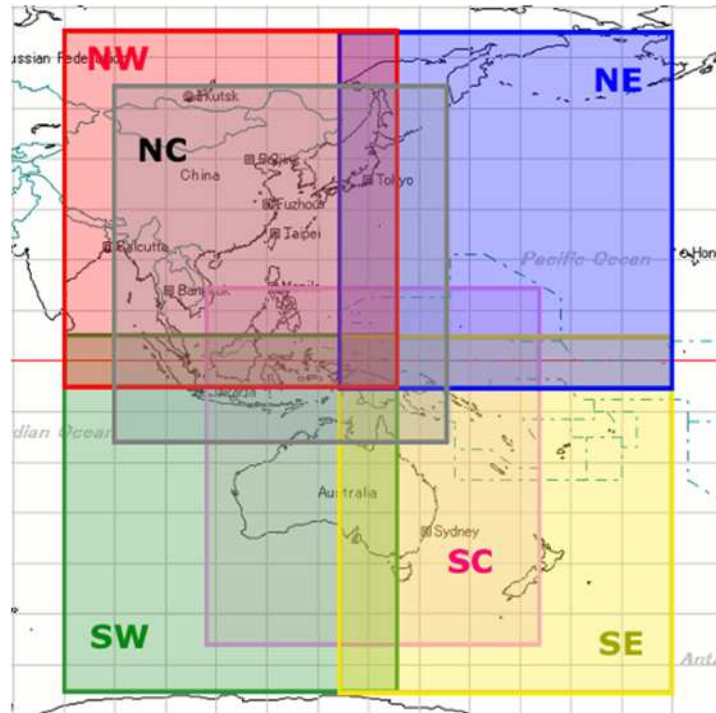
Rename the configuration file under the `C:\SATAID\Program Files` folder corresponding to the display area to `hrit2sataid.ini`. Initially, North Central (NC) is selected as the display area, and `hrit2sataid.ini` is the same as `hrit2sataid_NorthCentral.ini`.
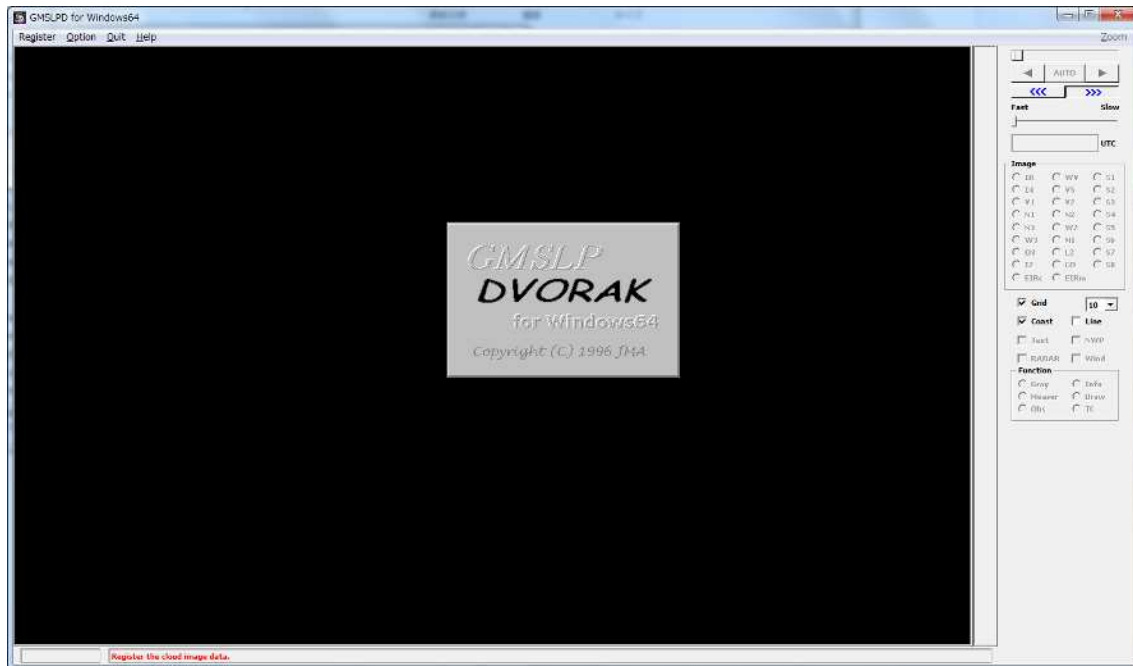
Note: SATAID software consumes large amounts of memory when the display area is set to Full Disk.

2.1.4. Starting the SATAID Automatic Update Tool

Double-click C:\SATAID\Sataid_Loop.hta to start the SATAID Automatic Update Tool.
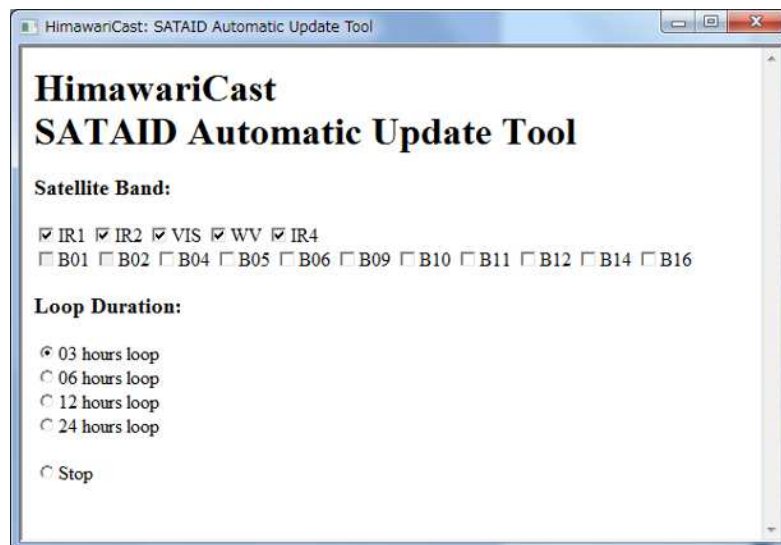
SATAID software starts automatically.

SATAID software reads satellite imagery of bands checked for [Satellite Band] in the SATAID Automatic Update Tool during the period checked for [Loop Duration] of the tool.

Note: SATAID software consumes more memory with a greater number of bands and longer read periods.

SATAID software reads the latest satellite imagery and updates the display every five minutes. Automatic updating can be suspended by checking [Stop] under [Loop Duration] in the SATAID Automatic Update Tool.

SATAID software has buttons corresponding to Himawari satellite bands. The mapping table is as follows:

Band	Name of button
1	V1
2	V2
3	VS
4	N1
5	N2
6	N3
7	I4
8	WV

9	W2
10	W3
11	MI
12	O3
13	IR
14	L2
15	I2
16	CO