FANUC Series 30*i*–MODEL A/B FANUC Series 31*i*–MODEL A/B FANUC Series 32*i*–MODEL A/B FANUC Series 35*i*–MODEL B FANUC Power Motion *i*–MODEL A FANUC Series 0*i*–MODEL F

Fast Ethernet / Fast Data Server OPERATOR'S MANUAL
The addition of the example of setting up FTP Server on Windows 10

# 1. Type of applied technical documents

Name	FANUC Series 30 <i>i</i> –MODEL A/B FANUC Series 31 <i>i</i> –MODEL A/B FANUC Series 32 <i>i</i> –MODEL A/B FANUC Series 35 <i>i</i> –MODEL B FANUC Power Motion <i>i</i> –MODEL A FANUC Series 0 <i>i</i> –MODEL F Fast Ethernet / Fast Data Server OPERATOR'S MANUAL
Spec.No./Version	B-64014EN/07

# 2. Summary of change

Group	Name / Outline	New, Add, Correct, Delete	Applicable Date
Basic Function			
Optional Function			
Unit			
Maintenance parts			
Notice			
Correction			
Another	The example of setting up FTP Server on Windows 10 and trouble has been added.	eshooting	

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For Chapter A "TROUBLESHOOTING" in "APPENDIX" of B-64014EN/07:

- Add Section A.4 "TROUBLESHOOTING OF DATA SERVER FUNCTION" with this report.

# **A.4** TROUBLESHOOTING OF DATA SERVER FUNCTION

# A.4.1 DNC Operation or M198-Based Subprogram Calling

This section enumerates the problems and its solutions occurred when DNC operation or M198-based subprogram calling is performed.

# A.4.1.1 An alarm occurs when an NC program is performed long time

#### **Conditions**)

Host computer : Windows

FTP Server: IIS (Internet Information Service)
The condition of the Data Server mode: FTP mode

# Phenomenon)

- (1) An alarm occurs while operating if the feedrate of the NC program is slow.
- (2) An alarm occurs while operating if the size of the NC program is large.
- (3) An alarm occurs while operating if the NC program with long execution time of one block is performed.

#### NOTE

The following alarms may occur.

- SR2032 "EMBEDDED ETHERNET/DATA SERVER ERROR"
- PS1079 "NO FILE SELECTED"
- PS1014 "ILLEGAL FORMAT OF PROGRAM NO.", and so on.

Which alarm occurs depends on the mode of the CNC, the situation of FTP communication, and the other operating environment.

#### Cause)

The FTP server in the host computer disconnects the communication with the FTP client (CNC) for one of the following reasons.

- 1 Timeout occurs because the non-communication time to the FTP client is long.
- 2 Timeout occurs because the time that FTP server cannot send data to FTP client is long.

#### Solution)

Since these causes are the specifications of the host computer, the phenomenon can be prevented by changing the setting of the FTP server on the host computer.

Please change the following three settings.

- Changing the timeout value of IIS.
- Changing the timeout value of Ethernet driver.
- Disabling the check on the data traffic of IIS.

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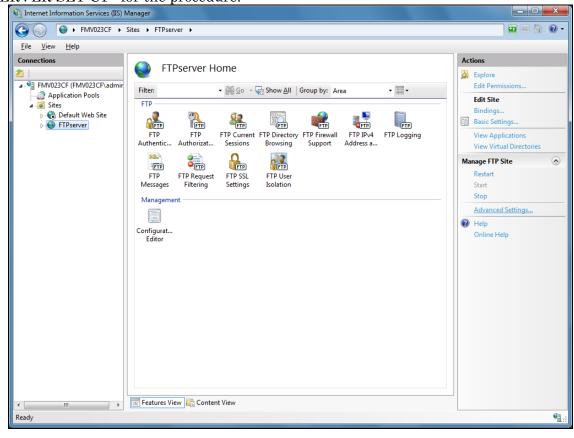
#### NOTE

The following procedure is the procedure in the case of Windows 7. The procedure is nearly the same in the case of Windows 10.

# Changing the timeout value of IIS

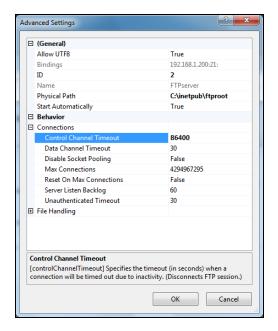
Open [Internet Information Services (IIS) Manager].

Please refer to [Setting Internet Information Service] in Chapter B "EXAMPLE OF FTP SERVER SET UP" for the procedure.



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Click [Advanced Settings...] of [Manage FTP Site] in the right pane to open the Advanced Setting screen. Then change [Control Channel Timeout] in [Connections] from 120 "sec" to 86400 "sec" (24 hours). Click [OK] button.



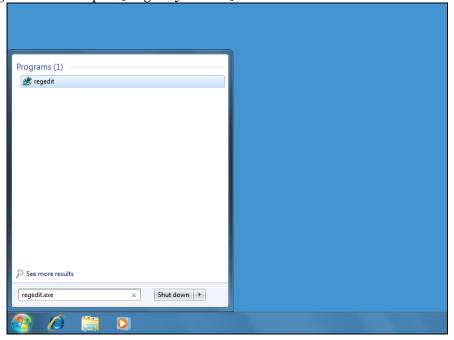
# Changing the timeout value of Ethernet driver

## **ACAUTION**

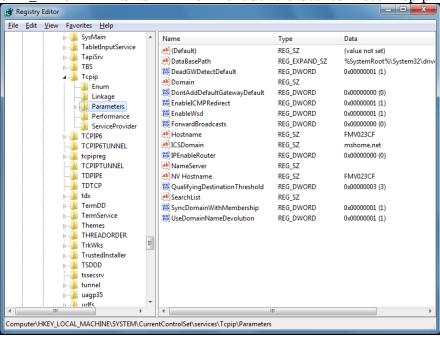
Incorrectly editing the registry may severely damage your system. Before making changes to the registry, you should back up any valued data on your computer.

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1 Click the start button to open the start menu. Search "regedit.exe" to open [Registry Editor].



2 Expand the list, and open "HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\services\Tcpip\Parameters".

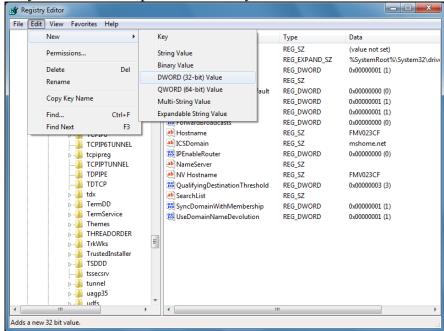


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3 Confirm whether there is [TcpFinWait2Delay] in [Parameters]. If there is [TcpFinWait2Delay], proceed to the next step 4.

If there is no [TcpFinWait2Delay], click [Edit] in the menu with [Parameters] selected, then click [DWORD (32-bit) Value] in [New] to add it.

Name the newly added item [TcpFinWait2Delay].



4 Click [Edit] in the menu with [TcpFinWait2Delay] selected, then click [Modify...] to open [Edit DWORD (32-bit) Value].

Check [Decimal] in [Base], then set [Value data] to 86400 "sec" (24 hours).

Click [OK] button.



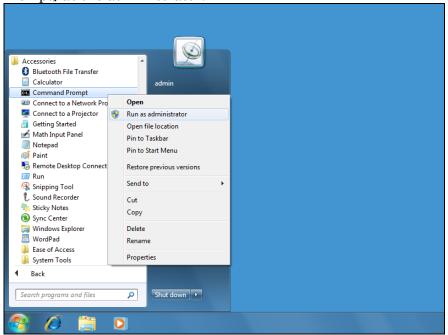
						Title	Fast Ethernet / Fast Data Server OPEF The addition of the example of FTP Server on Windows	setting u	
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# Disabling the check on the data traffic of IIS

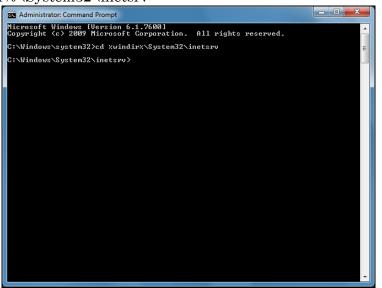
Click the start button to open the start menu. Click [All Programs], then expand [Accessories].

Right-click [Command Prompt] in [Accessories], then click [Run as administrator] to open

[Command Prompt] as the administrator.



2 Type the following command in [Command Prompt]. cd\_%windir%\System32\inetsrv



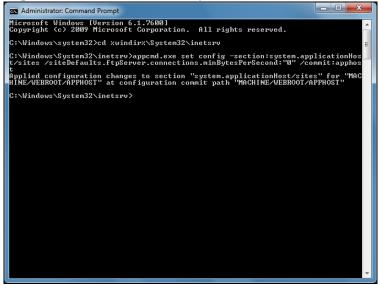
#### **NOTE**

If you are running 64-bit Windows, change the current directory to the %windir%\system32\inetsrv directory, not to the %windir%\syswow64\inetsrv directory.

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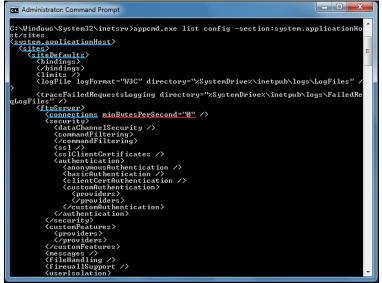
3 Type the following command in [Command Prompt] to set the value of [minBytesPerSecond] to "0".

appcmd.exe\_set\_config\_-section:system.applicationHost/sites\_ /siteDefaults.ftpServer.connections.minBytesPerSecond:"0"\_/commit:apphost



4 To confirm the value of [minBytesPerSecond], type the following command in [Command Prompt].

appcmd.exe\_list\_config\_-section:system.applicationHost/sites



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For Chapter B "EXAMPLE OF FTP SERVER SET UP" in "APPENDIX" of B-64014EN/07:

- Add Section B.6 "SETTING UP FTP SERVER OF Windows 10 Pro (FOR INTERNET INFORMATION SERVICE)" with this report.

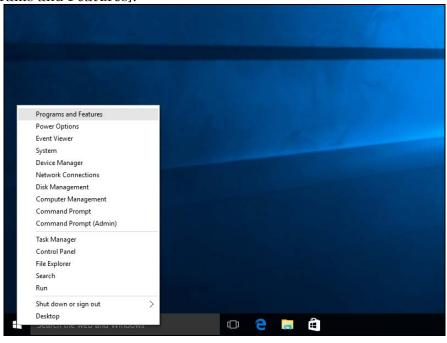
# B.6 SETTING UP FTP SERVER OF Windows 10 Pro (FOR INTERNET INFORMATION SERVICE)

#### **NOTE**

When Windows 10 is used, Windows 10 Pro is recommended by occasion of the specification of user account management.

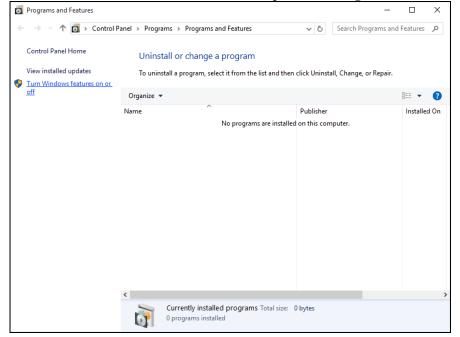
# **Installing the Internet Information Service**

Right-click the start button to open the quick access menu. Click [Programs and Features].



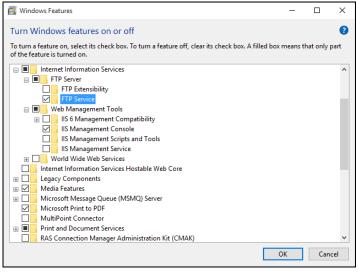
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2 Click [Turn Windows features on or off] in the left pane of [Programs and Features].



3 Expand [Internet Information Services] in the features list. Check [FTP Service] in [FTP Server] and [IIS Management Console] in [Web Management Tools].

When finished, click the [OK] button.



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4 The dialog box below is displayed, and the necessary files are installed. Windows Features Applying changes 5 When the installation is completed, the following dialog box is displayed. Click the [Close] button. ← 🛐 Windows Features Windows completed the requested changes. Close Fast Ethernet / Fast Data Server OPERATOR'S MANUAL Title The addition of the example of setting up FTP Server on Windows 10

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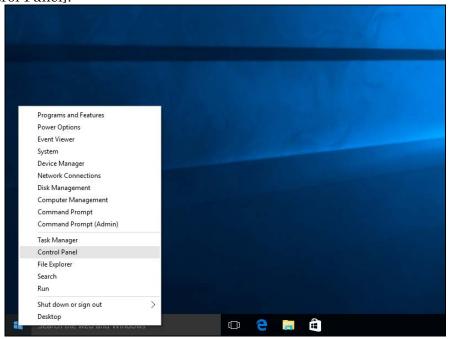
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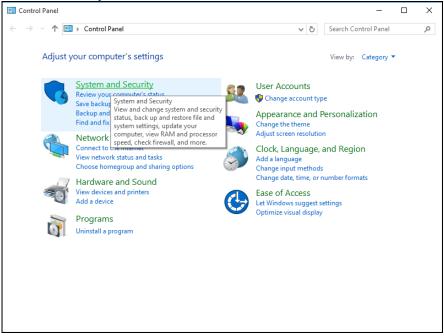
**FANUC CORPORATION** 

# **Setting the Internet Information Service**

1 Right-click the start button to open the quick access menu. Click [Control Panel].

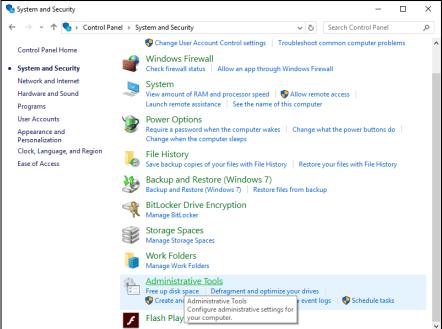


2 Click [System and Security] in [Control Panel].

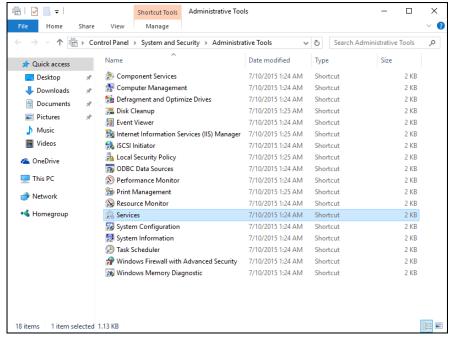


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3 Click [Administrative Tools] in [System and Security].

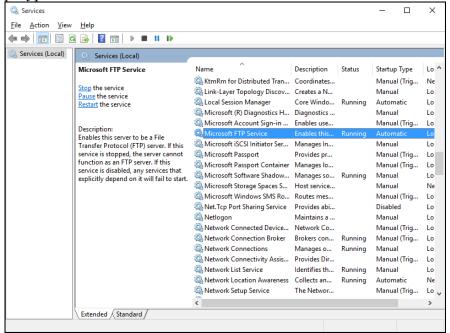


4 Double-click [Services] in [Administrative Tools] to start it.



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- 5 Confirm the following of [Microsoft FTP Service] in the service list.
  - [Status] is [Running]
  - [Startup Type] is [Automatic]



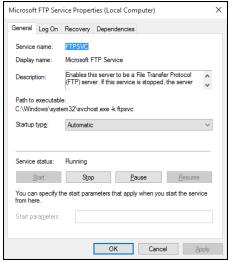
6 If the setting of Microsoft FTP Service is not the value mentioned in item 5, double-click [Microsoft FTP Service] in the service list to open the property.

Display the [General] property sheet.

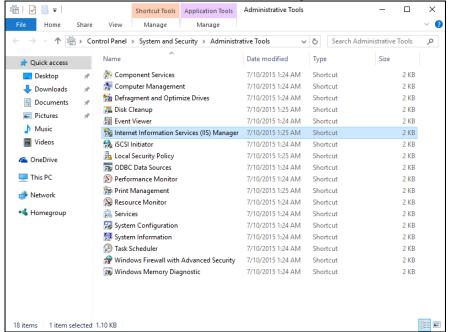
Choose [Automatic] from [Startup type] drop-down list.

Next, when [Service status] is not [Running], click the [Start] button to start FTP service.

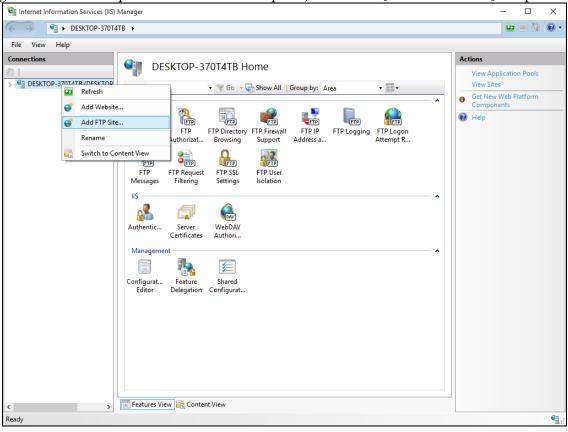
When finished, click the [OK] button.



Return to [Administrative Tools].
 Double-click [Internet Information Services (IIS) Manager] to start it.



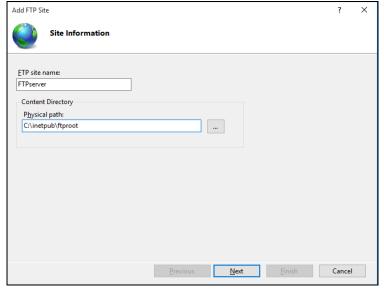
8 Right-click the Computer name in the left pane, then click [Add FTP Site...] to open it.



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9 In the displayed [Site Information] dialog box below, set the name of an FTP site to be created in [FTP site name:] and the path to the FTP server home directory in [Physical path:] in [Content Directory].

Then click the [Next] button.

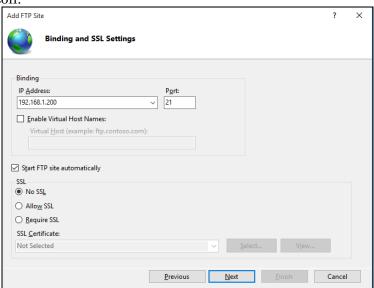


#### **NOTE**

The FTP clients can access only the directories under the home directory set in this step. To access a directory other than the directories under the home directory set, a virtual directory needs to be set.

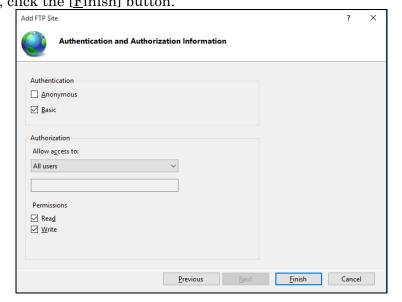
For details of a virtual directory, use information such as the online help information of Windows 10.

10 The [Binding and SSL setting] dialog box below is displayed.
Input the IP address and port number (usually 21) in [IP Address] and [Port].
Check [Start FTP site automatically] and select [No SSL] in [SSL].
Click [Next] button.

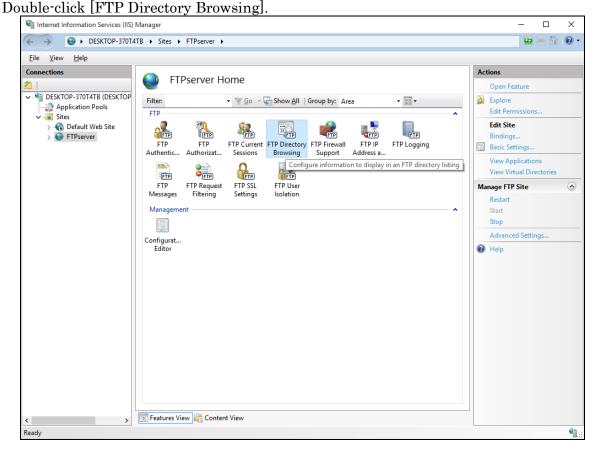


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The [Authentication and Authorization Information] dialog box below is displayed. Check [Basic] in [Authentication], choose [All users] from [Allow access to:] drop-down list in [Authorization], and check [Read] and [Write] in [Permissions]. When finished, click the [Finish] button.



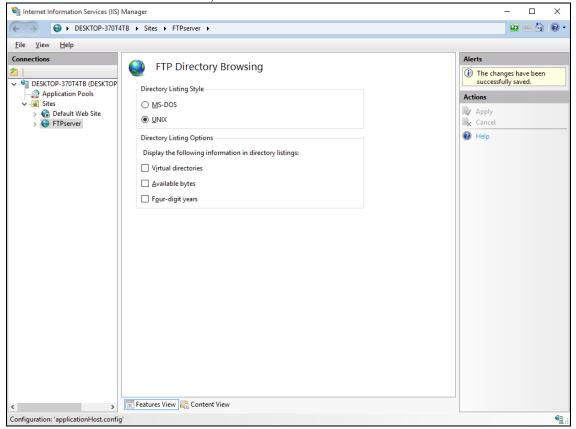
Expand tree in left pane and select FTP site name set in step 9. A feature menu of FTP site is displayed.



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13 In [Directory Listing Style], [ $\underline{M}$ S-DOS] is selected by default. However, it is recommended to select [ $\underline{U}$ NIX].

If files are listed in UNIX format, whether each file is accessible can be determined.



# **Login User Settings**

Create a login user to access the FTP server.

If you want to access the FTP server using a user account already created in the PC, you need not make this setting.

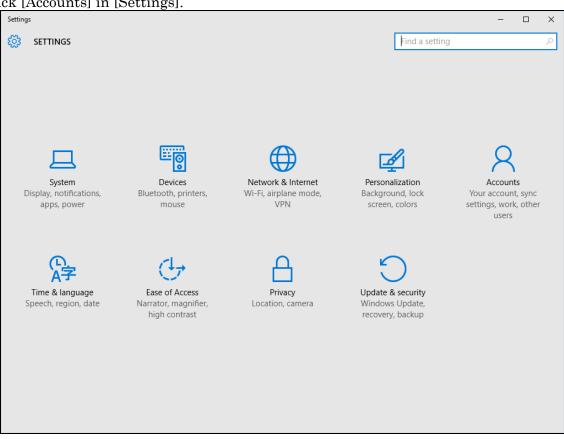
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Click the start button to open the start menu, then click [Settings] to open it.

| Click the start button | I to open the start menu, then click [Settings] to open it.

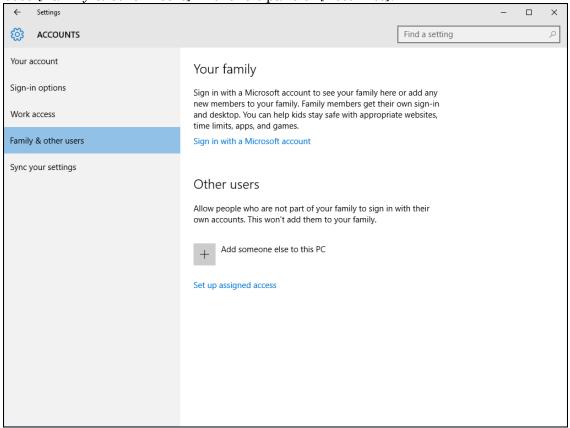


2 Click [Accounts] in [Settings].

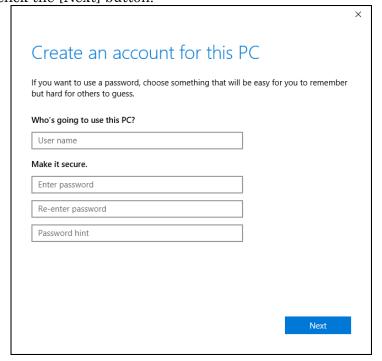


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3 Choose [Family & other users] in the left pane of [Accounts].

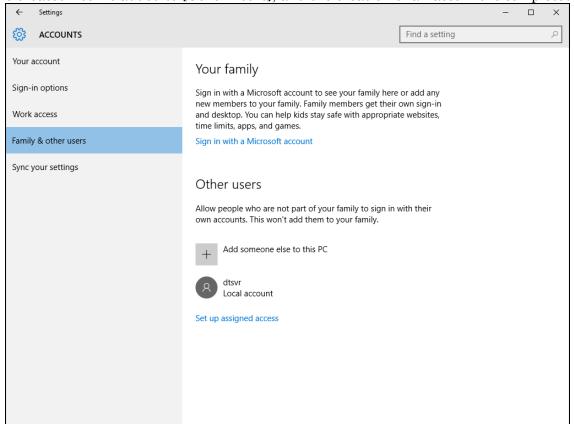


4 Click [Add someone else to this PC] in [Other users] to open [Create an account for this PC]. Set [User name], [Enter password], [Re-enter password], and [Password hint]. When finished, click the [Next] button.



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5 The created user is added to [Other users], and the creation of an account is completed.



# Changing the account type

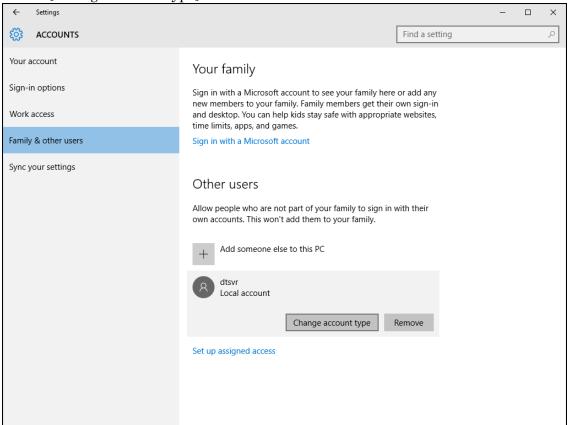
The user account created as described above is registered as a standard user. Change the account type to Administrator as required.

#### **NOTE**

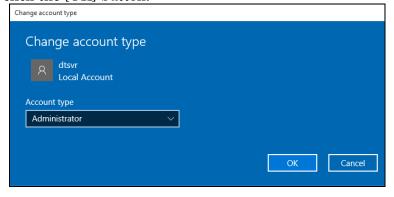
If the account type is not to be changed to Administrator, a file may not be able to be read or written with the account. In this case, grant an access right to read and write the home directory set in step 9 in "Setting the Internet Information Service" described above to the user account.

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1 Click the user to change the account type. Then the [Change account type] button appears. Click the [Change account type] button.



2 Choose [Administrator] from [Account type] drop-down list. When finished, click the [OK] button.



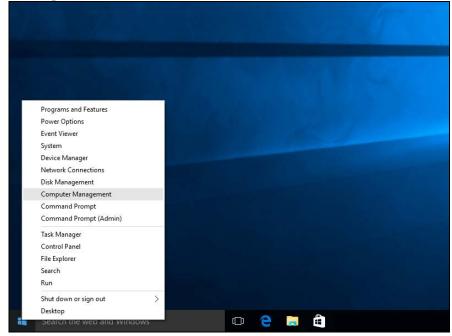
#### Stopping password expiration for a login user

If the password expiration is not stopped, the Data Server will not be able to communicate with the FTP server at the time of expiring the password. If necessary, stop the password expiration. If the password is expired, it is necessary that you re-enter the password.

The password of the user added by the procedure described before will never be expired by default.

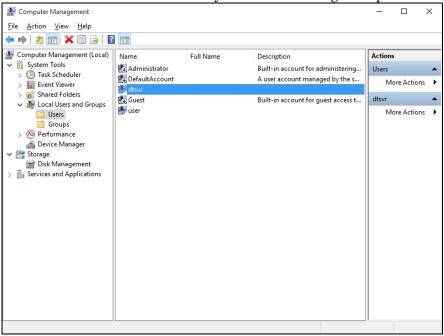
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Right-click the start button to open the quick access menu, then click [Computer Management] to open it.



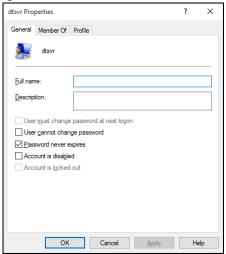
2 Choose [Users] in [Local Users and Groups] in the left pane of [Computer Management] to display the user list.

Then double-click the user name for which you want to change the password setting.



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Display the [General] property sheet.Check [Password never expires].When finished, click the [OK] button.



# **Checking the Windows 10 network**

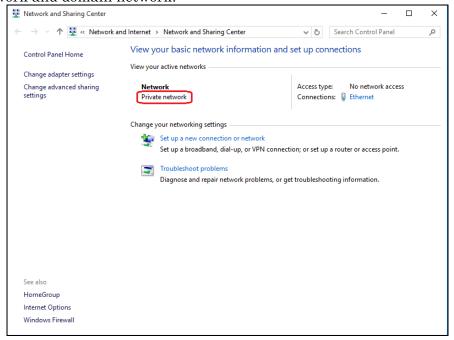
Windows 10 manages networks by network connection location. In addition, it is necessary to set the Windows 10 standard firewall function, which will be described later, by network location type. Before setting the firewall, check the type of network location you use as described below.

Right-click the network icon on the task bar.
Click [Open Network and Sharing Center] to open [Network and Sharing Center].



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2 The string (in a red circle) displayed under [View your active networks] indicates the network location type. There are three typical types of network locations: Private network, public network and domain network.



# **Confirming the Firewall function of Windows 10**

Because the Internet Connection Firewall function is included in the Windows 10, the Data Server may not communicate with the FTP server.

If the FTP connection cannot be established, confirm the following setting of the Internet Connection Firewall function.

## **NOTE**

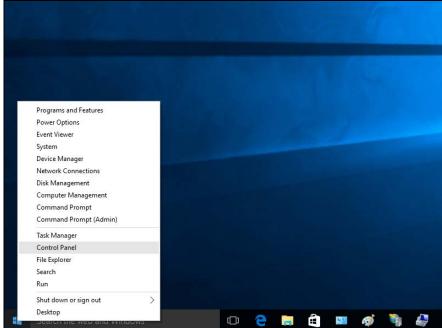
When settings are made as described below, the FTP server functions and response to PING, which have been disabled by the network security function, are enabled.

Therefore, when making the following settings, consult with your network administrator, and take special care.

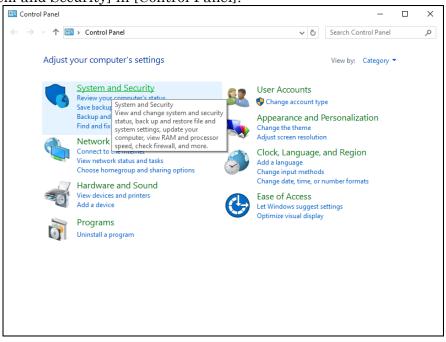
In some cases, it becomes necessary to isolate the network from the outside as required.

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						Draw No.	B-64014EN/07	-01	
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1 Right-click the start button to open the quick access menu, then click [Control Panel].

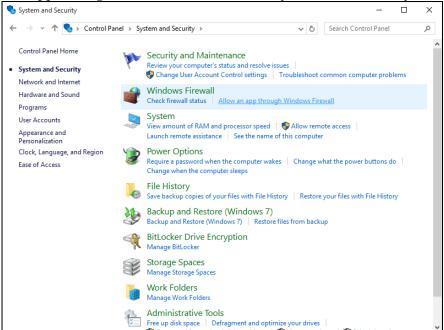


2 Click [System and Security] in [Control Panel].



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3 Click [Allow an app through Windows Firewall] in [System and Security].

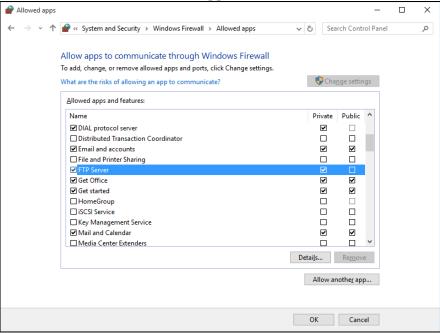


4 Click [Change settings].

Check [FTP Server] and the network location(s) according to the network setting in the [Allowed apps and features] list.

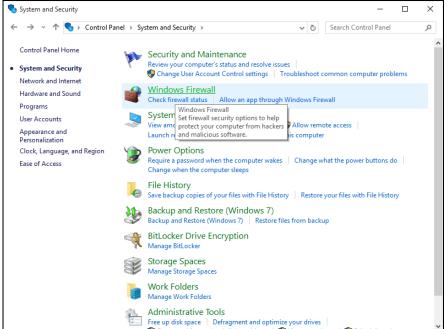
You can check the network location type according to the procedure described in "Checking the Windows 10 network" above.

Click the [OK] button and close [Allowed apps].

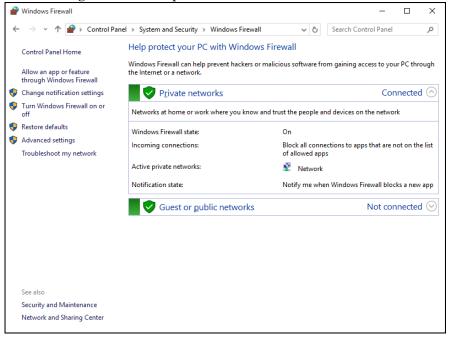


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5 Return to [System and Security], then click [Windows Firewall].



6 Click [Advanced settings] in the left pane.



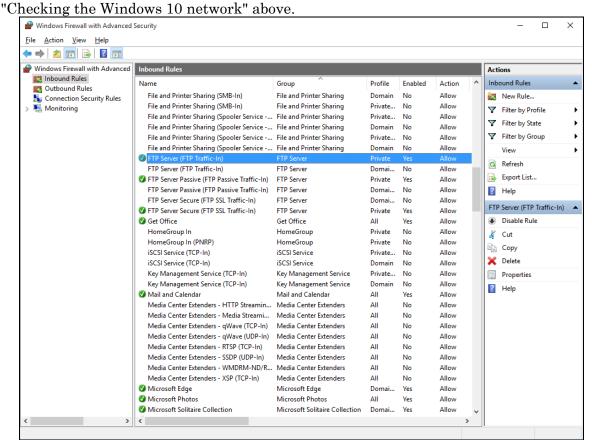
						Title	Fast Ethernet / Fast Data Server OPEF The addition of the example of s FTP Server on Windows	setting u	
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7 Choose [Inbound Rules] in the left pane.

Check if [FTP Server Passive (FTP Passive Traffic-In)], [FTP Server (FTP Traffic-In)], and [File and Printer Sharing (Echo Request - ICMPv4-In)] are enabled.

If those rules are not enable, select them and click [Enable Rule] in right pane.

There are same name rule in [Inbound Rules], but their targets are different network location. The choice of rule to change enabled depend on rule's [Profile] and network location types. You can check the network location type according to the procedure described in



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