

FTP provider

FTP client

Version 1.0.1

User's guide

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[Remarks]

[Revision History]

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1.0.0.0	2006-02-23	First edition
1.0.0.1	2010-02-11	Added error codes
1.0.0	2012-07-17	Changed the version control rule of document.
1.0.1	2016-12-23	Speed up the AddFile function.

[Supported models]

Model	Version	Remarks

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1. Introduction

This is a user's guide of FTP provider that accesses files by using FTP.

This provider assigns an CaoFile object to an actual file so that CaoFile objects can demonstrate the actual file's tree structure.

This document describes the functions and methods implemented in FTP provider

2. Overview of FTP provider

2.1. Overview

FTP provider provides users with CAO interface to access files by FTP. With this provider, users can operate files on FTP server as if these files are on the local server.

Table 2-1 FTP provider

File name	CaoProvFTP. dll
ProgID	CaoProv. FTP
Registry registration ¹	regsvr32 CaoProvFTP. dll
Delete registry registration	regsvr32 /u CaoProvFTP. dll

¹ You do not need to register/delete the registry manually when it has been installed by ORiN SDK.

2.2. Method and Property

2.2.1. CaoWorkspace: : AddController method

This method starts FTP provider and establishes connection to FTP server by specifying a controller name and the connection parameters for FTP server in arguments. The following shows the argument specification of this method.

```
AddController
(
    "<Controller name>",           // Controller name
    "GaoProv. FTP ",              // Provider name. Fixed.
    "<Option>"                      // Option character string
)
```

The following table shows the list of option strings.

Table 2-2 Option character string of CaoWorkspace: : AddController

Option	Description
Server[=<Server name>]	FTP server name (default: "localhost")
User[=<User name>]	Login user name for FTP server. (default: empty string)
Password[=<Password>]	Password for user name (default: empty string)
Port[=<Port number>]	FTP port number (default: 21)
Passive[=<True/False>]	Passive/Active mode setting True: Passive mode False: Active mode (default)

2.2.2. CaoController: : AddFile method

This method creates a file object. For <File name>, specify a file you want to allocate to the object. A file specified here will be the root directory of a tree structure which consists of file objects; therefore, you need to specify a path that indicates the location of the file in <Option>. The following shows the argument specification of AddFile.

```
AddFile
(
    "<File name>",                // file name
    "<Option>"                      // option character string
)
```

For option, use the following option strings.

Table 2-3 Option character string of CaoController: : AddFile

Option	Description
Path[=<Path name>]	Enter a path name of directory where the file specified as a file name exists. (Default: FTP root directory) To specify a path, use an absolute path. AddFile method fails if a relative path is used. For delimiter of the path name, both “¥” and “/” are available.
@Create[=<0 to 2>]	When the specified file does not exist, a new file will be created according to this option value. 0: Not create a file. (default) 1: Create a file. 2: Create a directory This option is ignored if a specified file exists.
Mode[=<0 to 2>]	Specify the transfer mode of get_Value or put_Value properties. 0: Set automatically (For details, refer to 2.2.14, 2.2.15)(default) 1: ASCII mode 2: BINARY mode

2.2.3. CaoFile: : AddFile method

Same as 2.2.2, create a CaoFile object. Note that you can only specify a file name that the parent CaoFile object of this method has. Therefore, Path option mentioned in 2.2.2 is ignored. This method fails if a CaoFile object to be executed does not match the directory.

2.2.4. CaoFile: : Copy method

When this method is executed, a file is copied to the specified directory. Note that the behavior of this method differs depending on the file type that corresponds to an object as the following table shows.

Table 2-4 Behavior of Copy method on respective file type

Type of file	Behavior of Copy method
File	Copy a file
Directory	Copy a directory and the subordinate files and subdirectories.
FTP root directory	Not copy anything. An error is returned.

The following shows argument specifications of Copy.

```
Copy
(
```

```

"<Copy destination>". // Copy destination of a file
"<Option>" // Option string
)

```

Table 2-5 Option character string of CaoFile: : Copy

Option	Description
Overwrite[=<True/False>]	Specify whether to overwrite if the same file name exists in the copy destination. True: Overwrite. False: Not overwrite (default).

To specify the copy destination directly, refer to the following table.

Table 2-6 How to specify the copy destination of CaoFile: : Copy

Specify the copy destination with:	Result of copy	Example of copy destination specification*	File is copied to:
absolute path	A file is copied to the directory that is specified as a copy destination.	/TestDir2/Test2.txt	/TestDir2/Test2.txt
relative path	A file is copied to the directory that is viewed from the copy source file's directory.	./TestDir2/Test.txt	/TestDir/TestDir2/Test.txt
file name only	A file is copied to the same directory as the copy source file.	Test2.txt	/TestDir/Test2.txt
placing a delimiter at the end of the path	A file that has the same file name as the copy source is created to the copy destination's directory.	/TestDir2/	/TestDir2/Test.txt

*The path of the copy source is "/TestDir/Test.txt"..

An error is returned if one of the following condition is satisfied.

- Copy source and copy destination are the same.
- Copy destination is a subdirectory of the copy source.

2.2.5. CaoFile: : Delete method

Delete a file that corresponds to an object. Since an object remains even if the file is deleted, you need to delete the object from the client side if the object is not necessary anymore.

If a file that corresponds to an object is FTP root directory, files and subdirectories stored in the file are deleted only.

If any files that cannot be deleted exist, such as read-only files, the process will fail before completion. In this case, deleted files will not be retrieved.

2.2.6. CaoFile: : Move method

Move method executes 2.2.5 Delete method after the execution of 2.2.4 Copy method.

The way of how to specify the path and option strings of the destination are the same as Copy method.

2.2.7. CaoFile: : Execute method

Update the attribute, size, and last modification date of a file.

If an actual file does not exist at the update, an error is returned.

You must enter "Refresh" for a command name.

```
Execute
(
    "Refresh",          // Command name
    ""                 // Parameter (unused)
)
```

2.2.8. CaoFile: : get_FileNames property

Obtain the list of file names that exist in the directory corresponding to CaoFile object. This operation fails if CaoFile object corresponds to a file.

Table 2-7 Option character string of CaoFile: : get_FileName

Option	Description
Filter[=<filter string>]	Filter setting for the list to be obtained. (default: "*. *")

2.2.9. CaoFile: : get_Attribute property

GetAttribute method distinguishes whether the target object corresponds to a file or a directory.

Table 2-8 Attributes obtained by GetAttribute and the values

Attribute name	Value
File	0x080

Directory	0x010
-----------	-------

2.2.10. CaoFile: : get_Path property

Obtain path of a file that corresponds to an object. The obtained path does not include the file name.

2.2.11. CaoFile: : get_Size property

Obtain the size of a file that corresponds to an object. This operation fails if a directory is specified.

2.2.12. CaoFile: : get_Type property

Obtain file extension of a file that corresponds to an object. This operation fails if a directory is specified.

2.2.13. CaoFile: : get_DateLastModified property

Obtain the time and date of the last modification. If the specified object corresponds to a virtual directory, VT_EMPTY will be returned.

2.2.14. CaoFile: : get_Value property

Obtain contents of file that corresponds to an object. File content is retrieved as character string if the file extension is "txt", and by binary array if the file extension is other than txt. This operation fails if a directory is specified as a destination.

Transfer mode for FTP server is determined by the Mode option value that is an option character string of AddFile method. The following table shows the relationship between Mode option value and Transfer mode.

Table 2-9 Relationship between Mode option value and Transfer mode on GetValue

"Mode" option value	Transfer mode
0	Transfer mode will be automatically set depending on the file type. Text file : ASCII mode Other than above : BINARY mode
1	ASCII mode
2	BINARY mode

2.2.15. CaoFile: : put_Value property

Set contents of a file that corresponds to an object. To set file contents, client is able to send either a character string or binary array. This operation fails if a directory is specified as a destination.

Transfer mode for FTP server is determined by the Mode option value that is an option character string of AddFile method. The following table shows the relationship between Mode option value and Transfer mode.

Table 2-10 Relationship between Mode option value and Transfer mode on PutValue

"Mode" option value	Transfer mode
0	Transfer mode will be automatically set depending on the data type transferred from the client. Character string type : ASCII mode Binary type array: BINARY mode
1	ASCII mode
2	BINARY mode

2.3. Variable list

FTP provider has no original variable.

2.4. Error code

FTP provider defines the following original error codes. For ORiN2 common errors, refer to “Error Code” of [ORiN2 programming guide](#).

Table 2-11 Original error code list

Error name	Error number	Description
E_CAOP_FILENOTFOUND	0x80100800	File is not found.

3. Sample program

The following example shows how to retrieve and set the file contents from an FTP server.

Server name : "FTPServer"
File path : "/SampleDir/Sample.txt"
User name : "User"
Password : "Password"

List 3-1**Sample. frm**

```
Private eng As CaoEngine
Private ctrl As CaoController
Private file As CaoFile

Private Sub Form_Load()

    Dim ws As CaoWorkspace

    Set eng = New CaoEngine
    Set ws = eng.Workspaces(0)

    ' Connect with the FTP server
    Set ctrl = ws.AddController("sample", _
        "CaoProv. FTP", _
        "", _
        "Server=FTPServer, User=FTPUser, Password=Passwd")

    ' Retrieve a file
    Set file = ctrl.AddFile("Sample.txt", "Path=/SampleDir")
End Sub

' Set the file contents
Private Sub Command1_Click()
    file = Text1.Text
End Sub

' Retrieve file contents
Private Sub Command2_Click()
    Text2.Text = file
End Sub
```