Application Note

FESTO

YJKP – Logging Functionalities

How to use the different logging functionalities on the YJKP: YJKP
-          USB
-          SD card
-          FTP Server on Windows 7
-          FTP Server on Windows 10
-          FTP Server using "FileZilla Server (Win7)"
-          SMB-share

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Table of contents

1   Components/Software used

Type/Name	Version Soft-ware/Firmware
Servo press kit YJKP	General
Application software YJKP (GSAY-A4-F0-Z4-2.1.12)	V2.1.12
Firmware controller (CECC-X)	V3.8.14
Firmware motor controller (CMMT-AS)	V34.0.13.18
FileZilla Server	3.67.0

Table 1.1: 1   Components/Software used

2   Application description

This application note shows different possibilities to save the logging files.
There are two different ways:
- Save the files locally on a flash drive (USB) or SD-card
- Save the files on a server via FTP or SMB

3   Flash drive USB

1. Only flash drive are compatible with the YJKP, which fulfil the following requirements:
    - USB 3.0 or 2.0
    - Cable length <= 3m
    - Current consumption <= 0.9A
    - Capacity: <= 32GB
    - File system: FAT32

2. Insert the flash drive either in X7 or in X9:
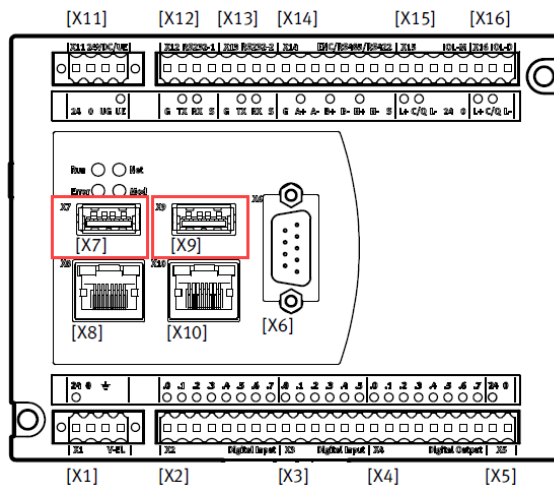
3. Open the **WebVisu** of the YJKP, go to the **Commissioning tab** and select the **logging configuration**.

4. **Enable** the logging on **USB.** USB should now have a green spot.

5. **Save** the settings
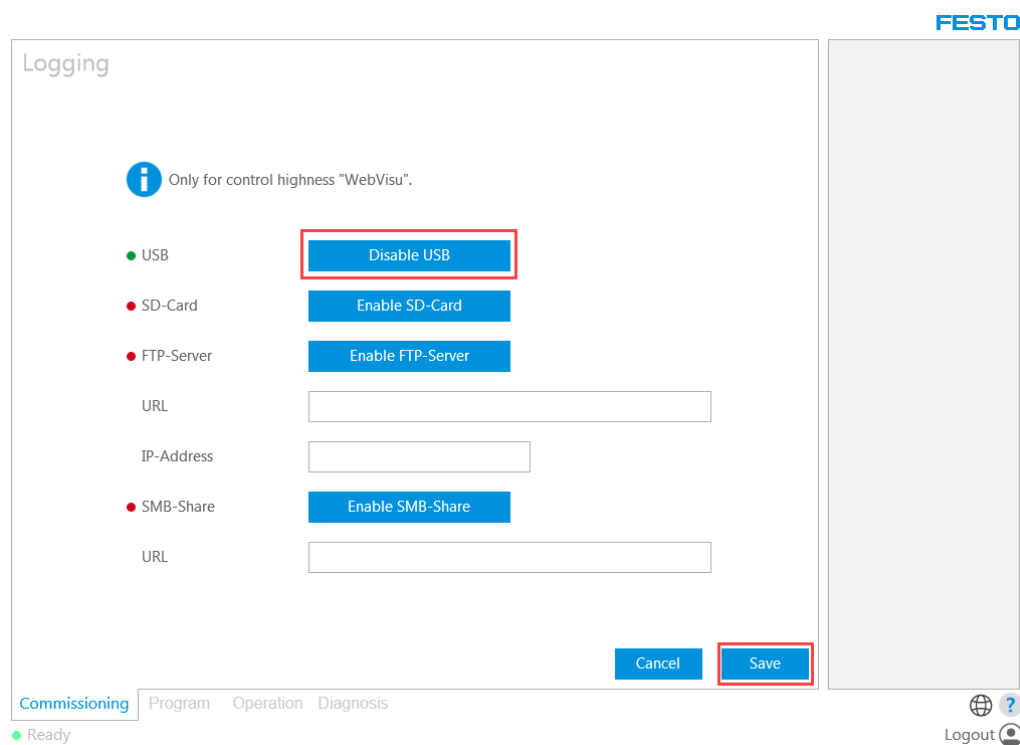
6. If you're using any kind of host connectivity to operate the YJKP, you'll have to **activate** the USB logging **over your PLC.**

- Using Festo provided function blocks, you can find the needed input in FB_ControlChannel:

- Using just the interface of the YJKP, you can find the needed input in the control word on bit 15:

dwControlWord	DWORD	Control word Bit 0 = Manual mode Bit 1 = Automatic mode Bit 2 = Start homing Bit 3 = Start press process Bit 4 = Abort press process (low active) Bit 5 = Load program Bit 6 = Quit error Bit 7 = Enable press Bit 8 = Tare Bit 9 = Move Bit 10 = Stop move Bit 11 = Jog pos Bit 12 = Jog neg Bit 13 = Load hardware configuration Bit 14 = Logging USB Bit 15 = Logging SD-Card Bit 16 = System reset Bit 17 = Reset statistic Bit 18 = Step mode Bit 19 = Logging FTP-Server Bit 20-31 = Reserved

7. After each press the logging files are saved on the flash drive.
   You can check them on any device by plugging in the flash drive to it.

4   SD-card

1. Logging data can be saved to the inserted SD-card. Since this SD-card is essential to operate the YJKP, this option is already on-board.
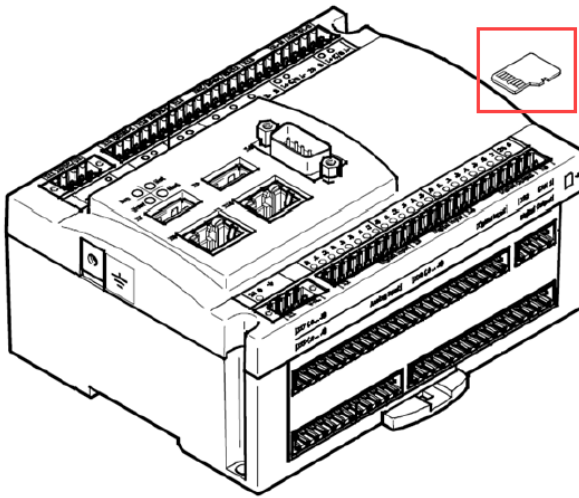
2. The following requirements need to be fulfilled to use a SD-card:
   - Supported types: microSD, microSDHC, microSDXC
   - Capacity: <= 32GB
   - File system: FAT32

3. Open the **WebVisu** of the YJKP, go to the **Commissioning tab** and select the **logging configuration**.

4. **Enable** the logging on **SD-Card.** USB should now have a green spot.

5. **Save** the settings

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6. If you're using any kind of host connectivity to operate the YJKP, you'll have to **activate** the SD-Card logging **over your PLC**.

- Using Festo provided function blocks, you can find the needed input in FB_ControlChannel:


- Using just the interface of the YJKP, you can find the needed input in the control word on bit 15:

dwControlWord	DWORD	Control word Bit 0 = Manual mode Bit 1 = Automatic mode Bit 2 = Start homing Bit 3 = Start press process Bit 4 = Abort press process (low active) Bit 5 = Load program Bit 6 = Quit error Bit 7 = Enable press Bit 8 = Tare Bit 9 = Move Bit 10 = Stop move Bit 11 = Jog pos Bit 12 = Jog neg Bit 13 = Load hardware configuration Bit 14 = Logging USB Bit 15 = Logging SD-Card Bit 16 = System reset Bit 17 = Reset statistic Bit 18 = Step mode Bit 19 = Logging FTP-Server Bit 20-31 = Reserved

7. After each press the logging files are saved on the flash drive.

5   FTP server on Windows 7
5.1   Configure a FTP site
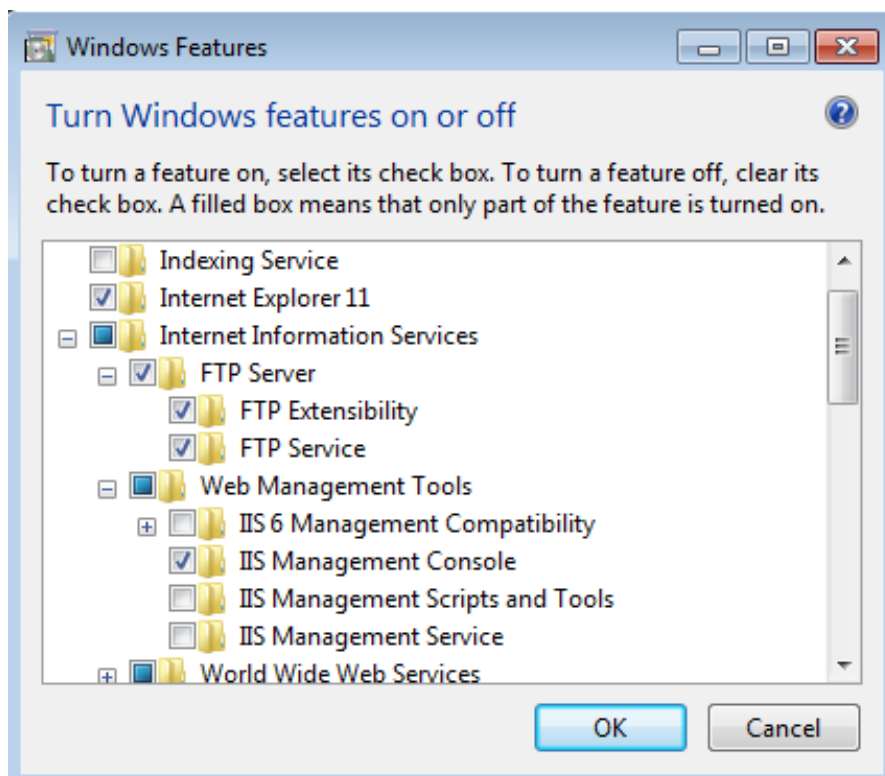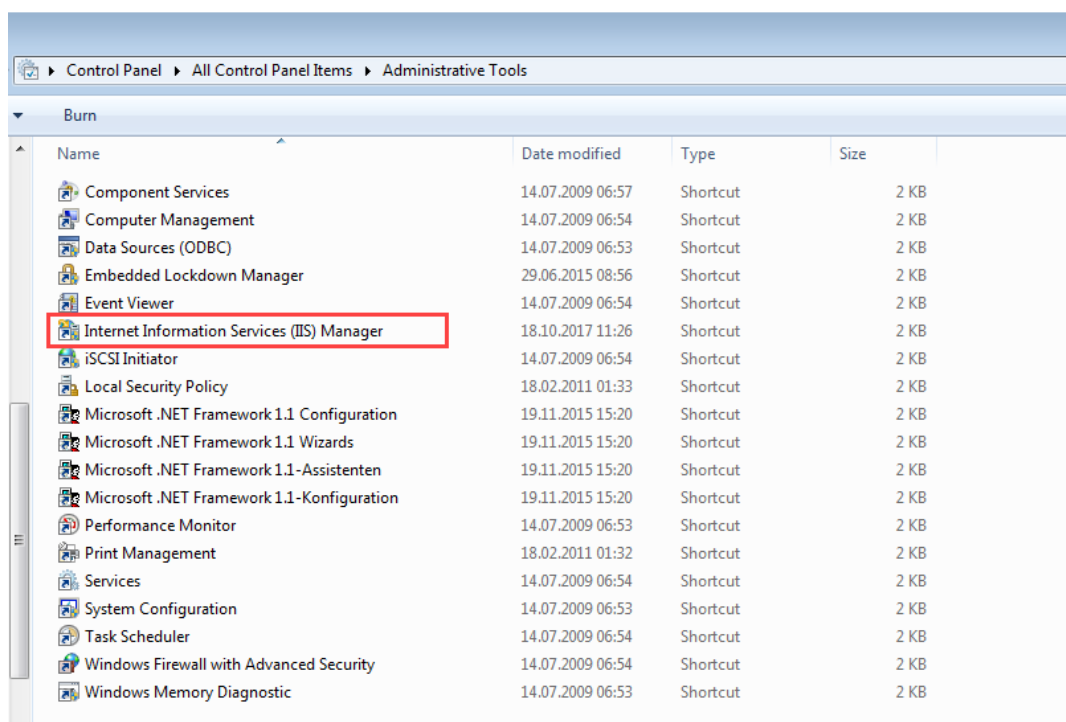
1. Go to **START -> Control panel** and select **Programs and Features**
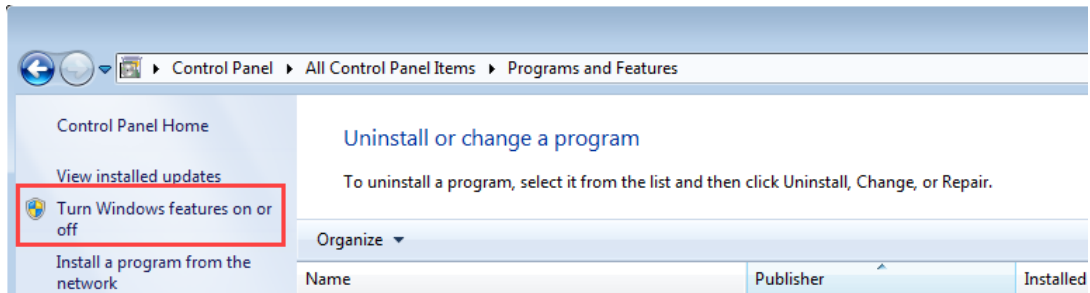
2. Click the **Turn Windows features on or off** link.

3. Expand Internet Information Services.

4. Expand **FTP Server** and check the **FTP Extensibility** and **FTP Service** options.

5. Expand **Web Management Tools** and check **IIS Management Console**.

6. Click **OK** to start the installation.

7. Go to **START -> Control panel** and select **Administrative Tools.**

8. Double-click **Internet Information Services (IIS) Manager**.

9. Expand and right-click **Sites** on the Connections panel**.**

10. Select **Add FTP Site...**

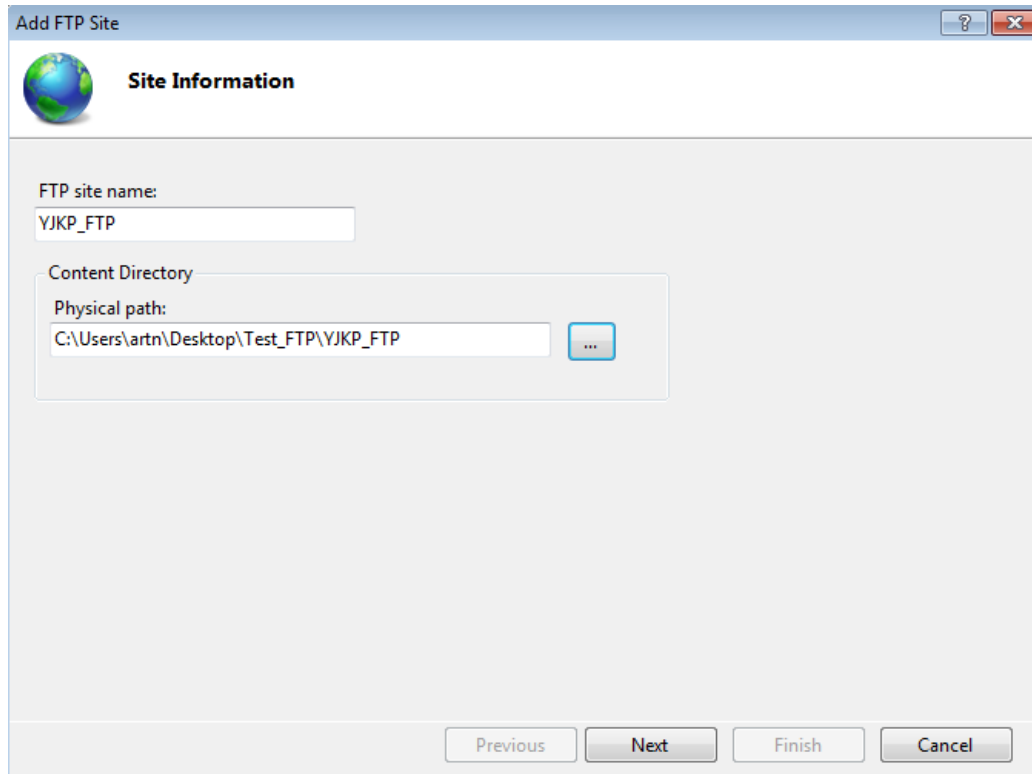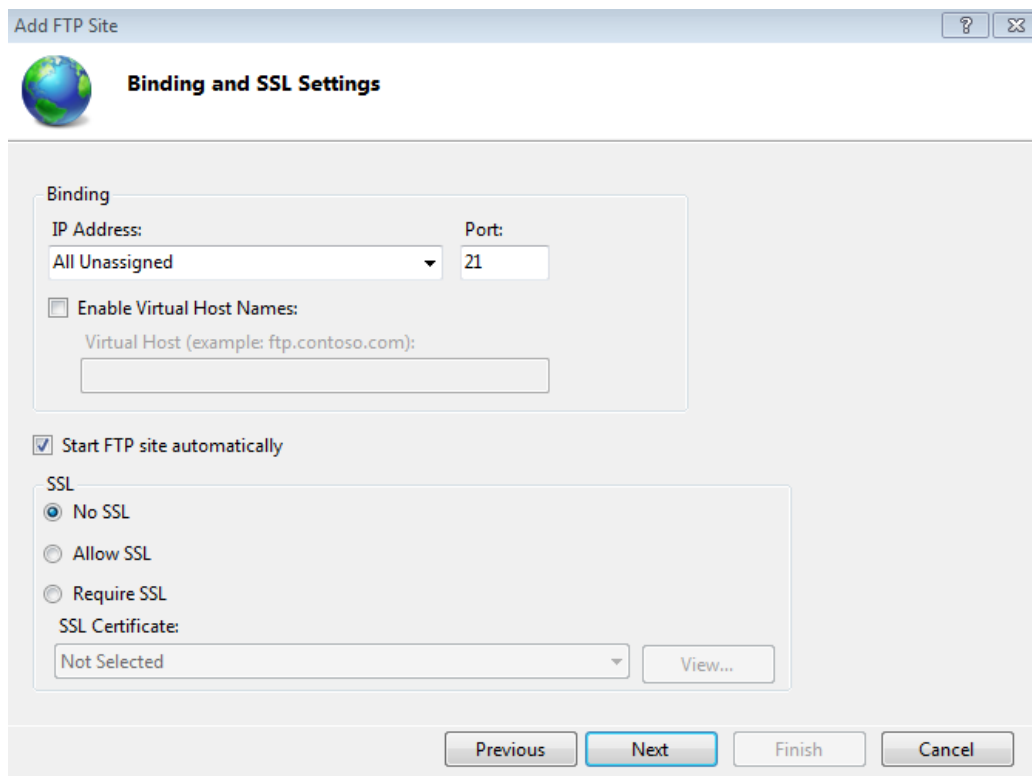11. Name your new FTP site and enter the path to the FTP folder you want to use to send and receive files.
    Note: You can also use the **Make New Folder** button to create a specific folder to store your FTP files

12. Click **Next.**

13. On Binding and SSL Settings leave all the default settings, but change the SSL option to **No SSL.**
    Note: It's worth pointing out that in a business environment or on an FTP server that will host sensitive data, it's best practice to configure the site to require SSL.

14. Click **Next.**

15. On Authentication, check the **Basic** option.

16. On Authorization, select **ALL users** from the drop-down menu or any other selection.
    Note: If „All users" are selected, every user with an account on this PC can read and write via FTP. This setting can be changed later on.

17. Check the options **Read** and **Write**.

18. Click **Finish.**

5.2   Firewall settings

1. Go to **START -> Control panel** and select **Windows Firewall.**

2. Click the **Allow an app or feature through Windows Firewall** link.

3. Click the **Changes settings** button.

4. Select **FTP Server** and make sure to allow it on a **Private** and **Public** network.

5. Click **OK.**

6. Go back to the **Windows Firewall.**

7. Select the **Advanced settings**.

8. Check the **Inbound Rules** for the FTP Server**.**

9. If necessary **guarantee access** for this program.
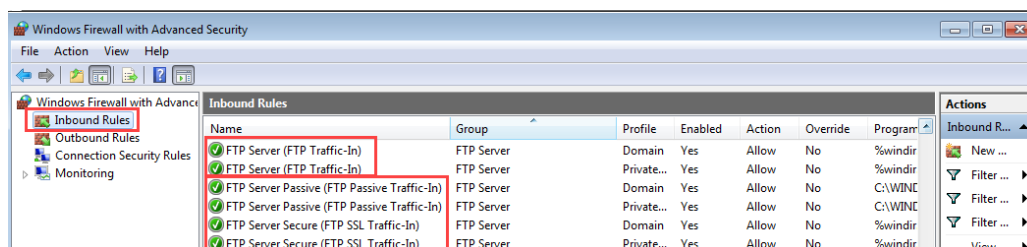
5.3   User access to the FTP folder

1. Right-click the FTP folder of your choice and select **Properties**.

2. Click to the **Security** tab.

3. Check, if your desired user is available and has all needed permissions.
    Otherwise you can add a new user over **Edit.**

5.4 Configure user account to access the FTP server
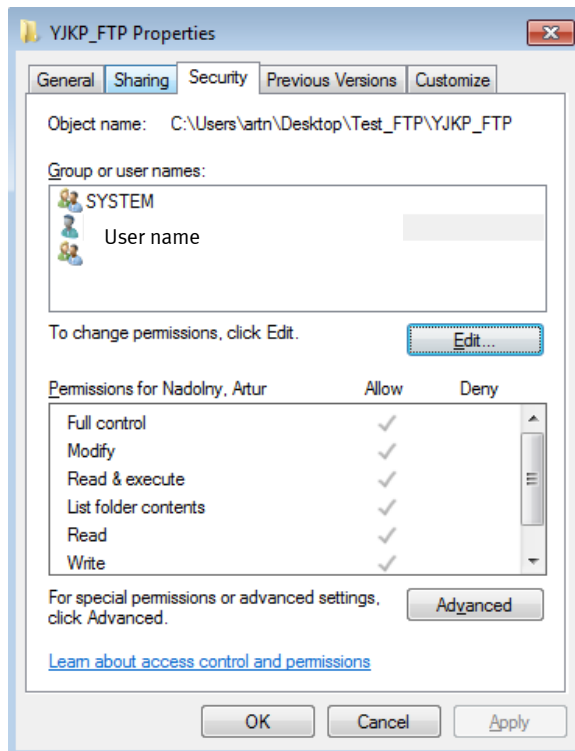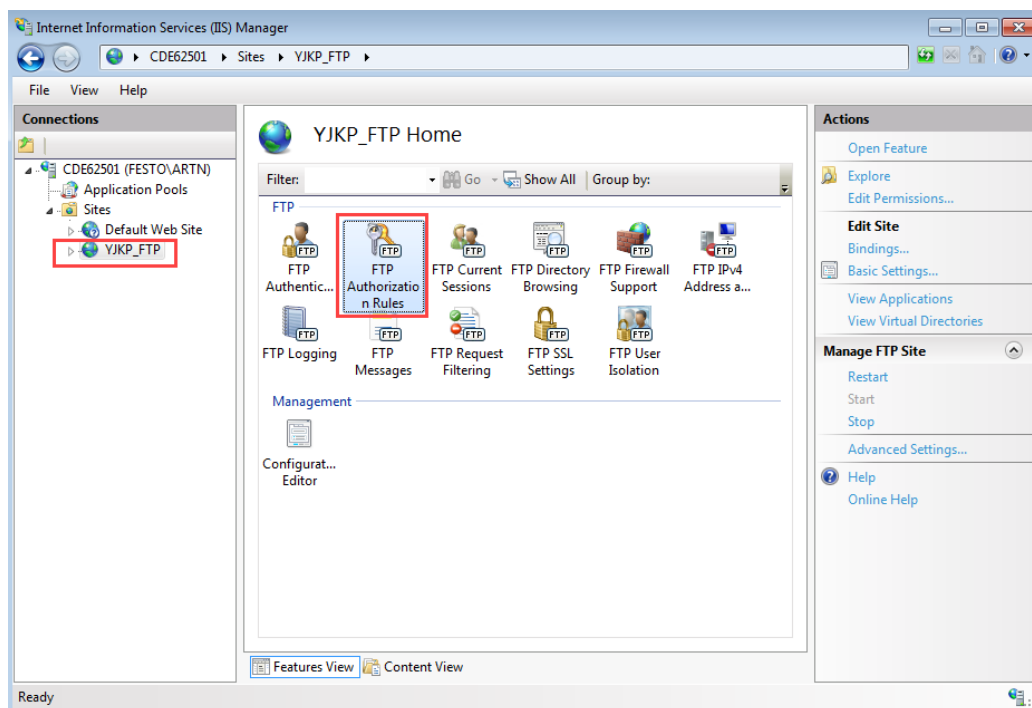
1. Go to **START -> Control panel** and select **Administrative Tools.**

2. Double-click **Internet Information Services (IIS) Manager**.

3. Expand **Sites**.

4. Select your FTP site and double-click on **FTP Authorization Rules**.

5. At the moment all Users have access to this FTP site. You can change this by adding a new allow rule.

6. Right-click on and select **Add Allow Rules** from the context menu.
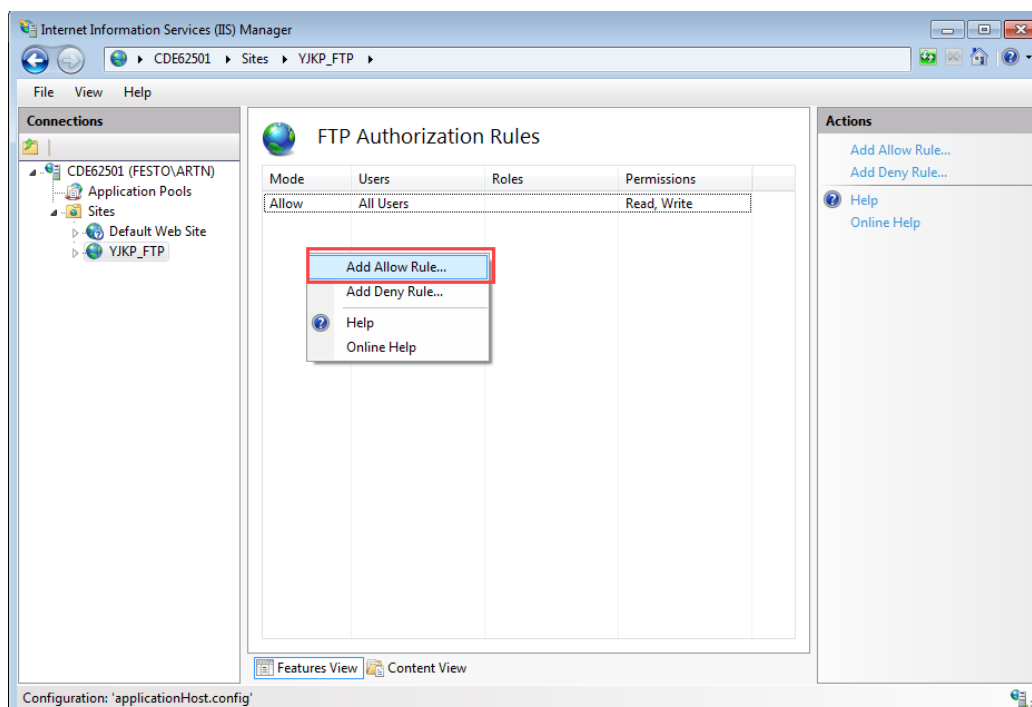
7. Select **Specified user** and enter the name of the user account.

8. Set the **Read** and **Write** permissions you want the user to have.

9. Click **OK**.

10. Reboot your system.

5.5   YJKP WebVisu FTP-Server settings

1.   Open the **WebVisu** of the YJKP, go to the **Commissioning tab** and select the **logging configuration**.

2.   **Enable** the logging on the **FTP-Server.** FTP-Server should now have a green spot.

3.   URL: ftp://User name:password@IP of server
     IP-Address: IP of server

     Example:
     URL: ftp://artn:NicePassword123@192.168.0.99
     IP-Address: 192.168.0.99

4.   **Save** the settings

5.   If you're using any kind of host connectivity to operate the YJKP, you'll have to **activate** the FTP logging **over your PLC**.

1. Using Festo provided function blocks, you can find the needed input in FB_ControlChannel:

2. Using just the interface of the YJKP, you can find the needed input in the control word on bit 15:

dwControlWord	DWORD	Control word Bit 0 = Manual mode Bit 1 = Automatic mode Bit 2 = Start homing Bit 3 = Start press process Bit 4 = Abort press process (low active) Bit 5 = Load program Bit 6 = Quit error Bit 7 = Enable press Bit 8 = Tare Bit 9 = Move Bit 10 = Stop move Bit 11 = Jog pos Bit 12 = Jog neg Bit 13 = Load hardware configuration Bit 14 = Logging USB Bit 15 = Logging SD-Card Bit 16 = System reset Bit 17 = Reset statistic Bit 18 = Stop mode Bit 19 = Logging FTP-Server Bit 20-31 = Reserved

6   FTP server on Windows 10
6.1   Configure a FTP site

1. Use the **Windows key + X** keyboard shortcut to open the Power User menu and select **Programs and Features**.
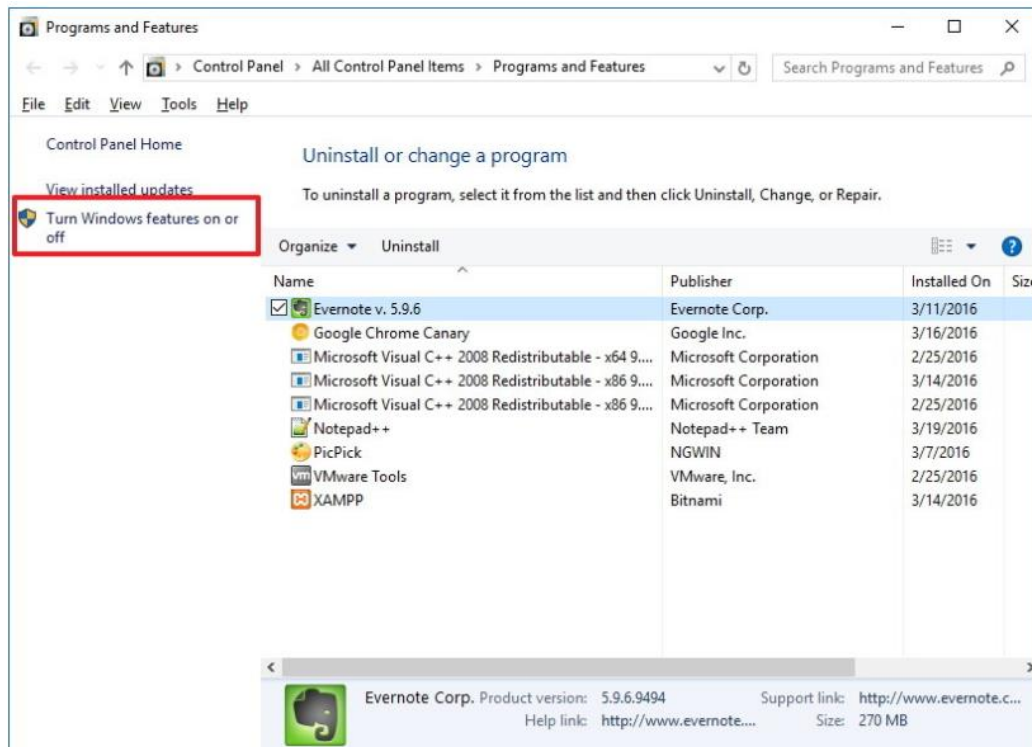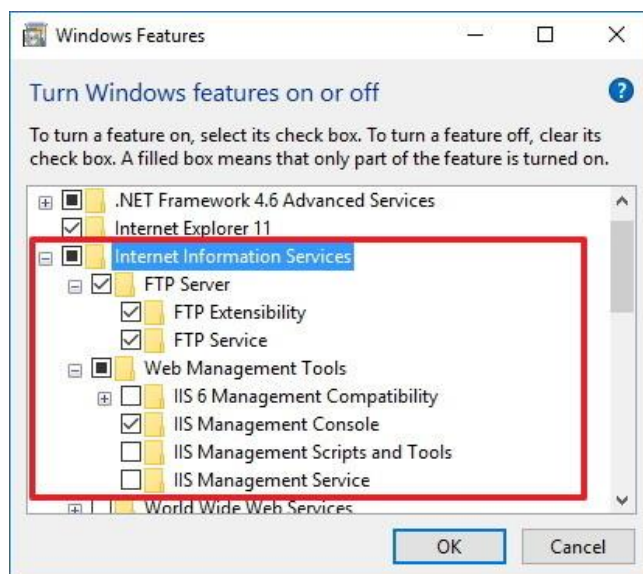
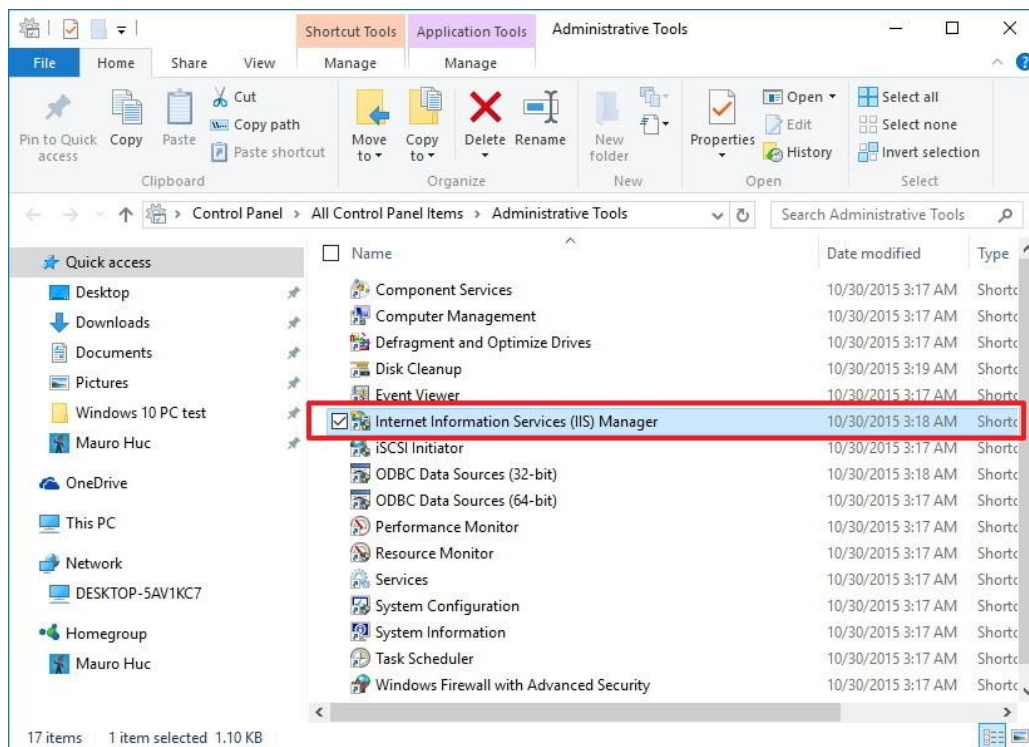2. Click the **Turn Windows features on or off** link.

3. Expand Internet Information Services.

4. Expand **FTP Server** and check the **FTP Extensibility** and **FTP Service** options.

5. Expand **Web Management Tools** and check **IIS Management Console**.

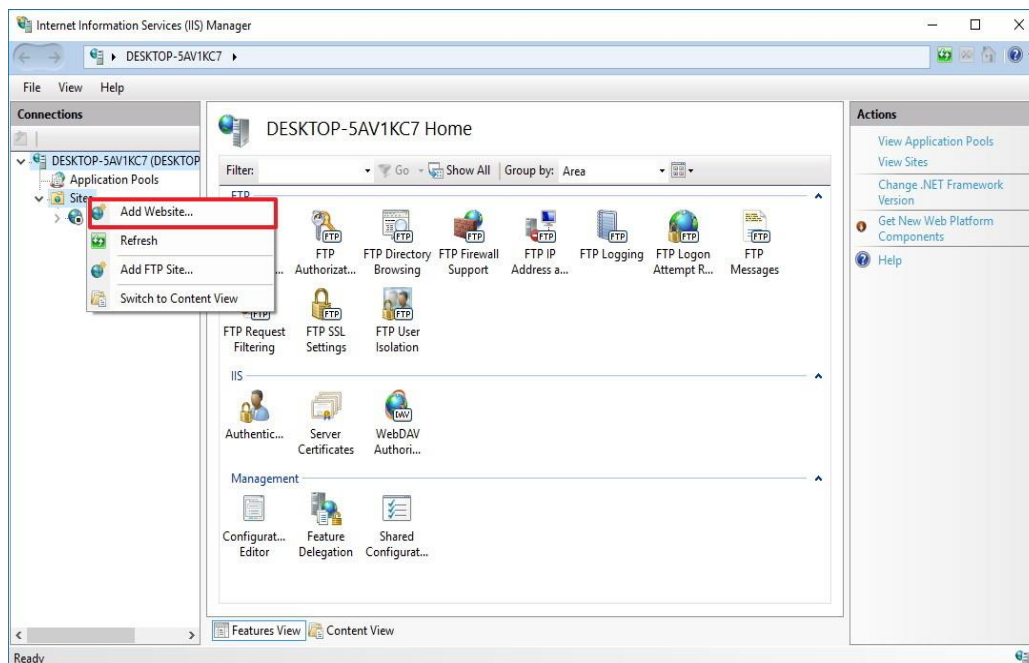6. Click **OK** to start the installation.

7. Use the **Windows key + X** keyboard shortcut to open the Power User menu and select **Control Panel**.

8. Open **Administrative Tools.**
    Double-click **Internet Information Services (IIS) Manager**.
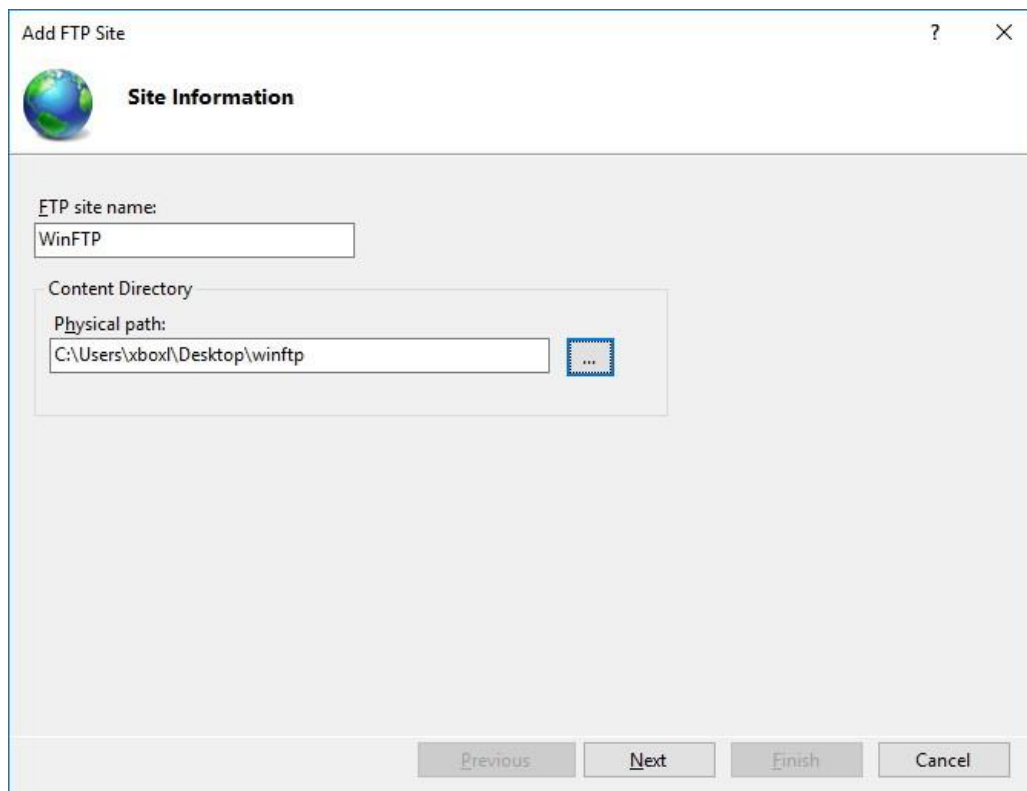

9. Expand and right-click **Sites** on the Connections panel.
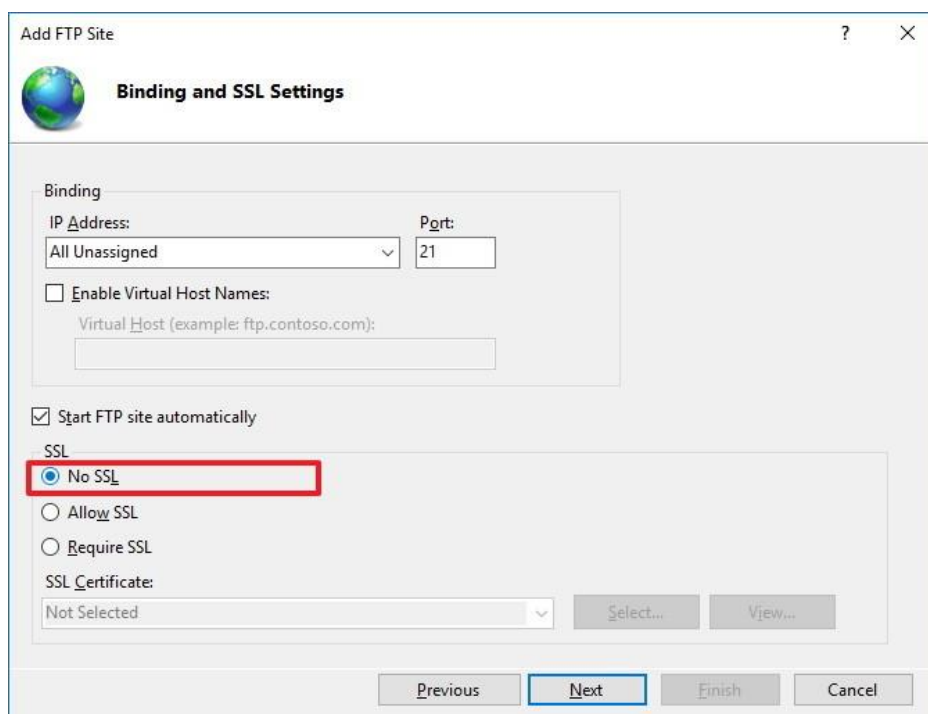
10. Select **Add FTP Site...**

11. Name your new FTP site and enter the path to the FTP folder you want to use to send and receive files.
Note: You can also use the **Make New Folder** button to create a specific folder to store your FTP files

12. Click **Next.**

13. On Binding and SSL Settings leave all the default settings, but change the SSL option to **No SSL**.
Note: It's worth pointing out that in a business environment or on an FTP server that will host sensitive data, it's best practice to configure the site to require SSL.

14. Click **Next.**

15. On Authentication, check the **Basic** option.

16. On Authorization, select **ALL users** from the drop-down menu or any other selection.
    Note: If „All users" are selected, every user with an account on this PC can read and write via FTP.
    This setting can be changed later on.

17. Check the options **Read** and **Write**.

18. Click **Finish.**

6.2   Firewall settings

1.   Go to **START -> Control panel** and select **Windows Firewall.**

2.   Click the **Allow an app or feature through Windows Firewall** link.

3.   Click the **Changes settings** button.

4.   Select **FTP Server** and make sure to allow it on a **Private** and **Public** network.

5.   Click **OK.**

6. Go back to the **Windows Firewall**.

7. Select the **Advanced settings**.

8. Check the **Inbound Rules** for the FileZilla Server.

9. If necessary **guarantee access** for this program (especially first two).

-

6.3   User access to the FTP folder

1. Right-click the FTP folder of your choice and select **Properties**.

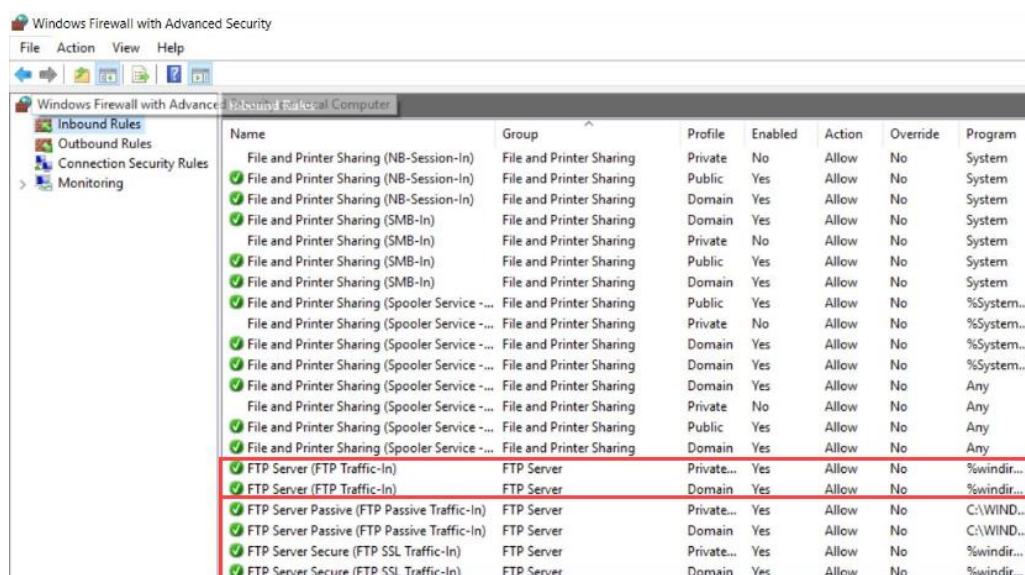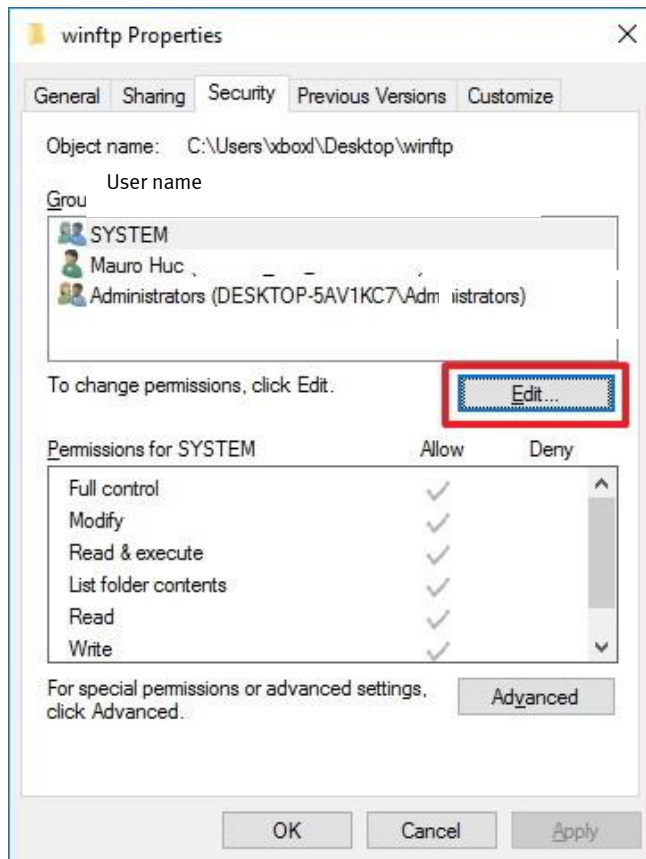2. Click to the **Security** tab.

3. Check, if your desired user is available and has all needed permissions.
   Otherwise you can add a new user over **Edit.**

6.4   Configure user account to access the FTP server
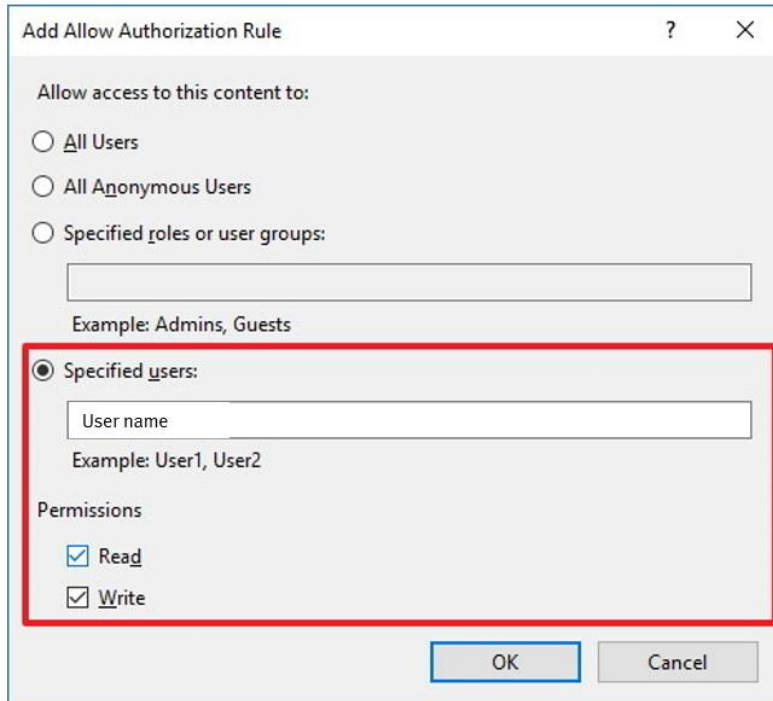
1. Use the **Windows key + X** keyboard shortcut to open the Power User menu and select **Control Panel**.

2. Open **Administrative Tools**.

3. Double-click **Internet Information Services (IIS) Manager**.

4. Expand **Sites**.

5. Select your FTP site and double-click on **FTP Authorization Rules**.
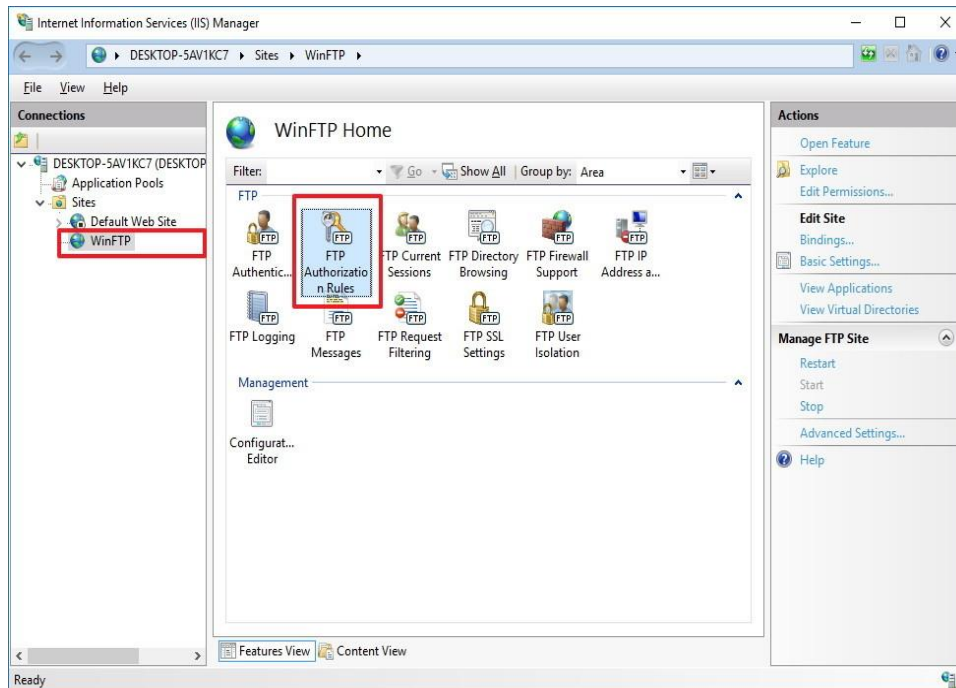
6. At the moment all Users have access to this FTP site. You can change this by adding a new allow rule.

7. Right-click on and select **Add Allow Rules** from the context menu.
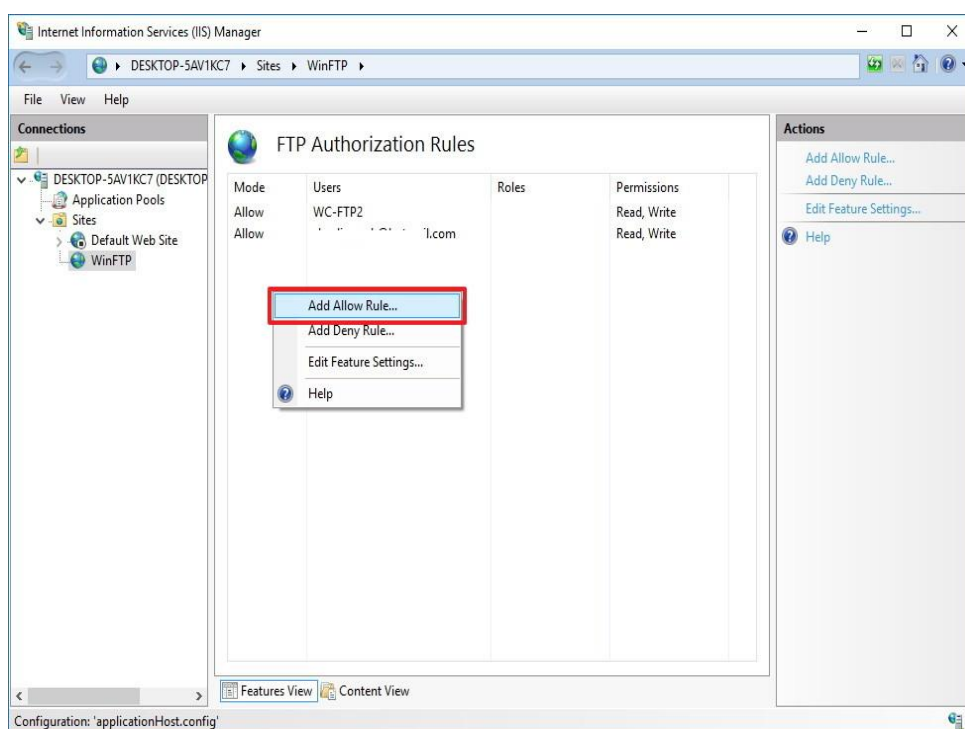
8. Select **Specified user** and enter the name of the user account.

9. Set the **Read** and **Write** permissions you want the user to have.

10. Click **OK**.

11. Reboot your system.

6.5 YJKP WebVisu FTP-Server settings

1. Open the **WebVisu** of the YJKP, go to the **Commissioning tab** and select the **logging configuration**.

2. **Enable** the logging on the **FTP-Server.** FTP-Server should now have a green spot.

3. URL: ftp://User name:password@IP of server
   IP-Address: IP of server

   <u>Example:</u>
   URL: ftp://artn:NicePassword123@192.168.0.99
   IP-Address: 192.168.0.99

4. **Save** the settings

5. If you're using any kind of host connectivity to operate the YJKP, you'll have to **activate** the FTP logging **over your PLC**.

1. Using Festo provided function blocks, you can find the needed input in FB_ControlChannel:


2. Using just the interface of the YJKP, you can find the needed input in the control word on bit 15:

dwControlWord	DWORD	Control word Bit 0 = Manual mode Bit 1 = Automatic mode Bit 2 = Start homing Bit 3 = Start press process Bit 4 = Abort press process (low active) Bit 5 = Load program Bit 6 = Quit error Bit 7 = Enable press Bit 8 = Tare Bit 9 = Move Bit 10 = Stop move Bit 11 = Jog pos Bit 12 = Jog neg Bit 13 = Load hardware configuration Bit 14 = Logging USB Bit 15 = Logging SD-Card Bit 16 = System reset Bit 17 = Reset statistic Bit 18 = Stop mode Bit 19 = Logging FTP-Server Bit 20-31 = Reserved

Application Note – YJKP - Logging functionalities – 1.30

7   FTP Server using "FileZilla Server (Win7)"

1. **Download** and **install** the FileZilla Server with default settings.

2. Start the **FileZilla Server Interface** and **connect** to the server.
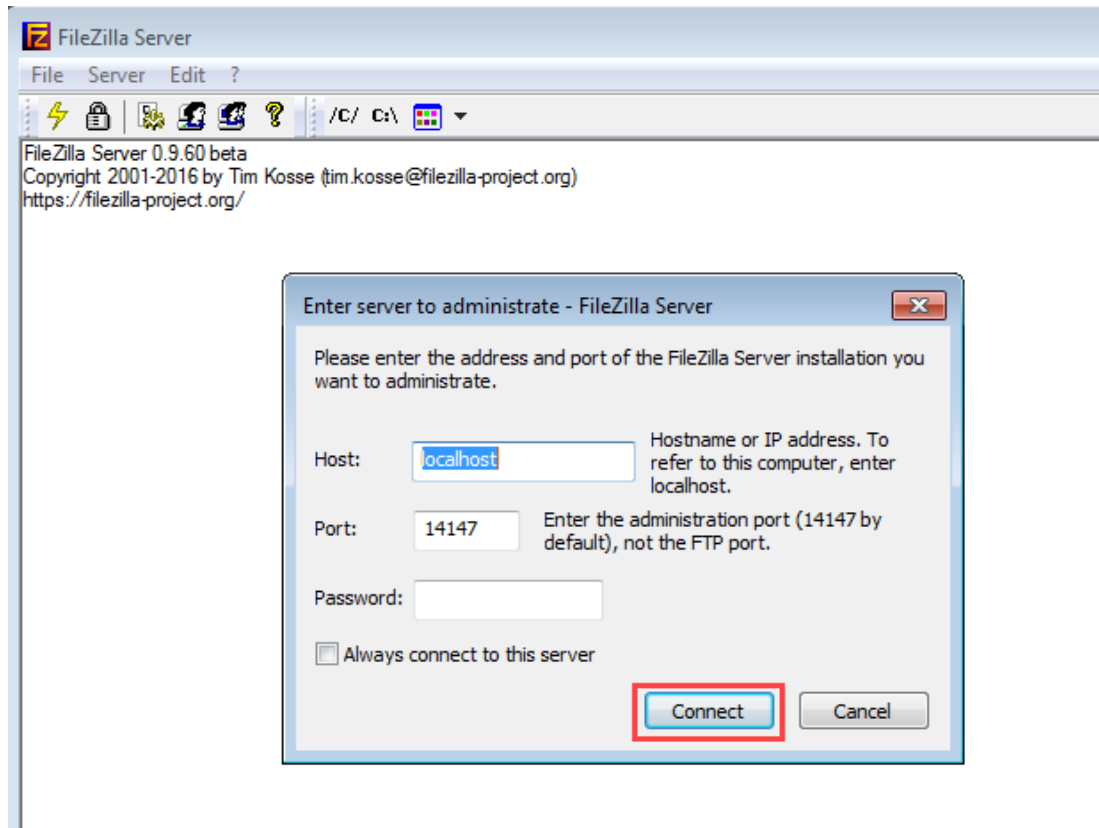
3. Open the user settings over **Edit -> Users**.

-
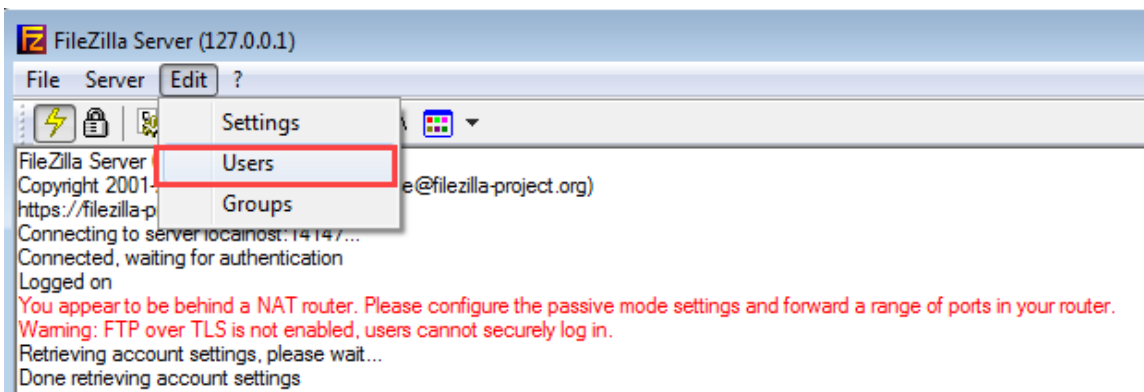
4. Add a **new user** with a **password**.
   Example: user: artn; password:NicePassword123
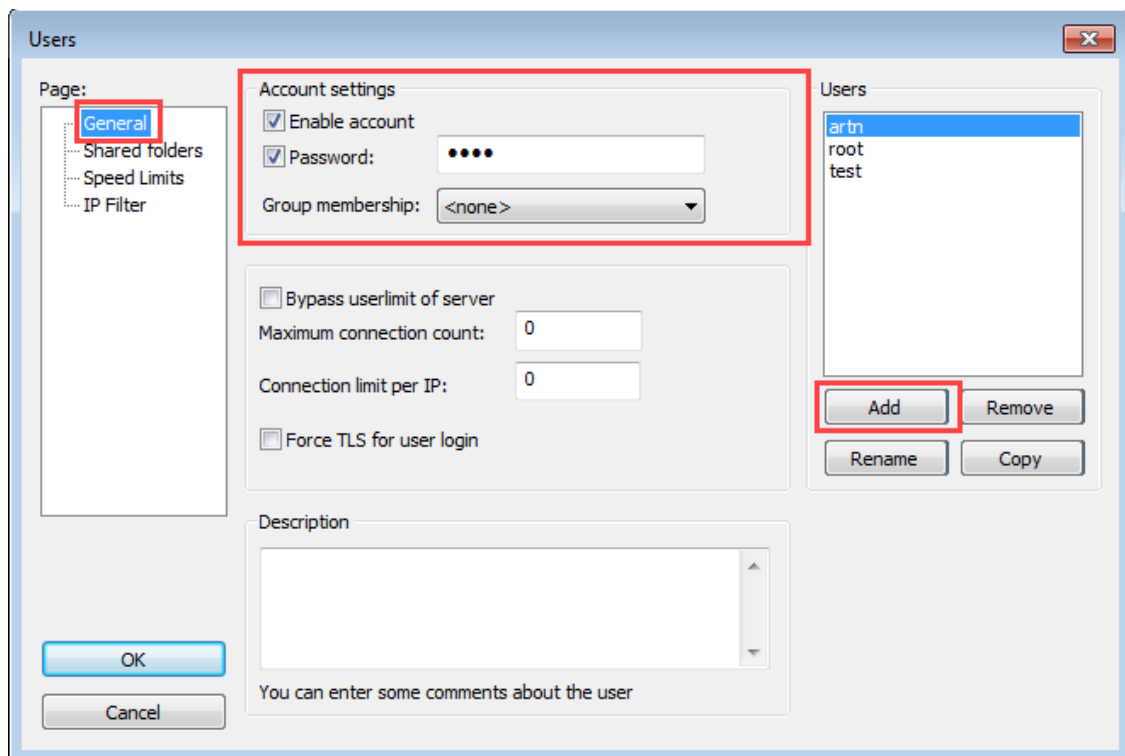
5. **Add a folder** to this user, in which the logging files will be saved.
   Assign all needed **rights**.
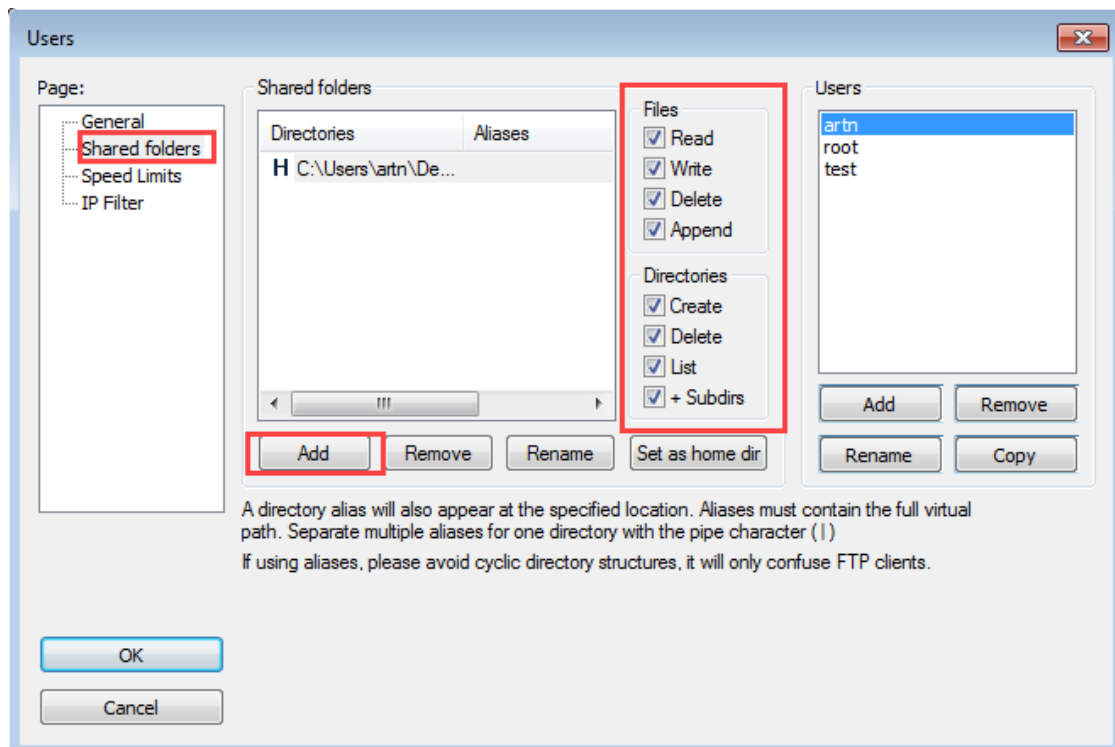
7.1   Firewall settings

10. Go to **START -> Control panel** and select **Windows Firewall.**

11. Click the **Allow an app or feature through Windows Firewall** link.

12. Click the **Changes settings** button.

13. Select **FileZilla Server** and make sure to allow it on a **Private** and **Public** network.

14. Click **OK.**
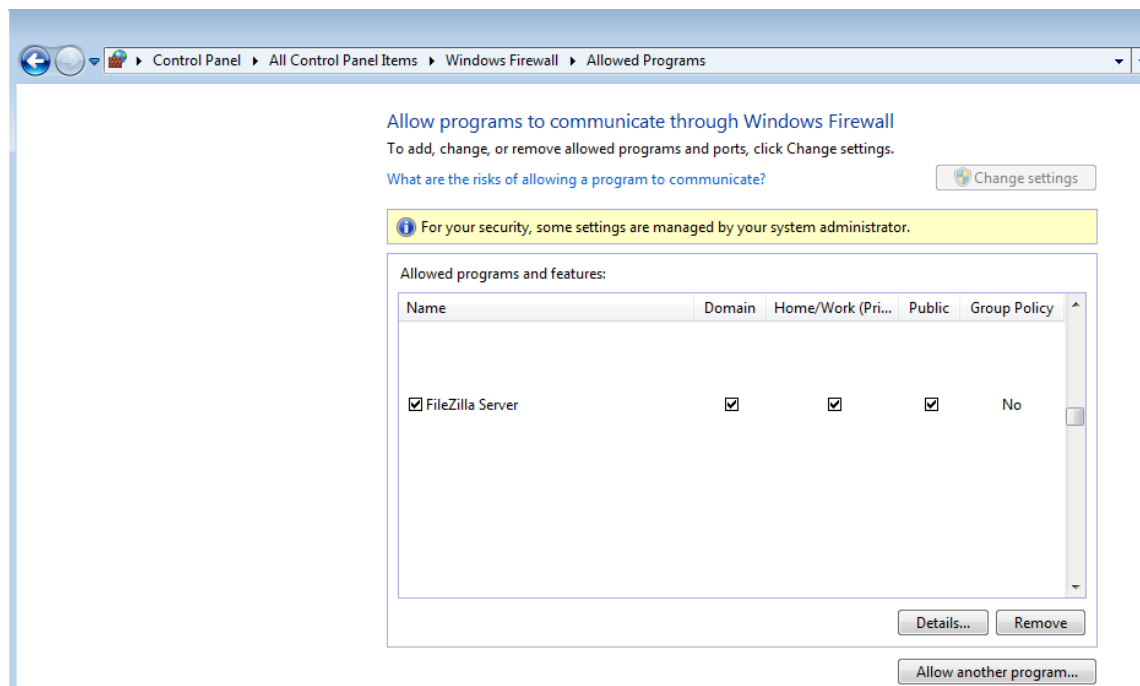
15. Go back to the **Windows Firewall**.

16. Select the **Advanced settings**.
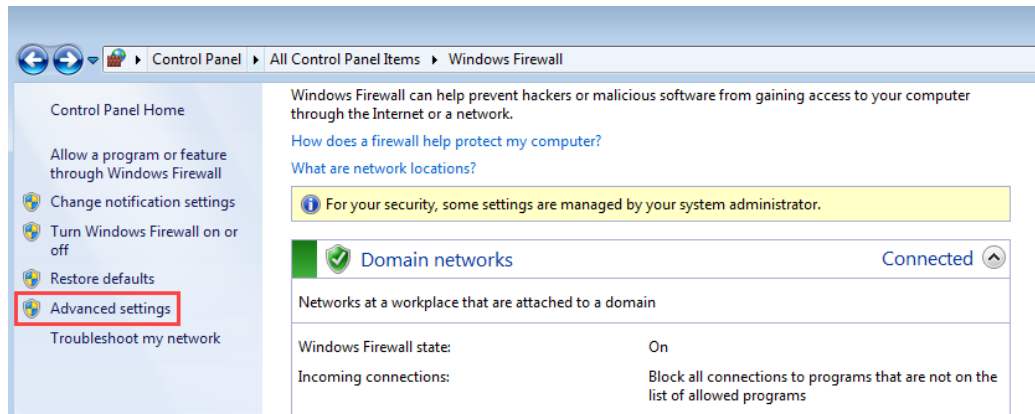
17. Check the **Inbound Rules** for the FileZilla Server.

18. If necessary **guarantee access** for this program (You may need to create a rule for this program).
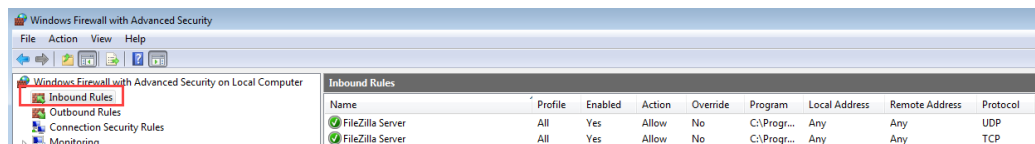
7.2   User access to the FTP folder

4. Right-click the FTP folder of your choice and select **Properties**.

5. Click to the **Security** tab.

6. Check**,** if your desired user is available and has all needed permissions.
    Otherwise you can add a new user over **Edit.**

7.3   YJKP WebVisu FTP-Server settings

1. Open the **WebVisu** of the YJKP, go to the **Commissioning tab** and select the **logging configuration**.

2. **Enable** the logging on the **FTP-Server.** FTP-Server should now have a green spot.

3. URL: ftp://User name:password@IP of server
    IP-Address: IP of server

    <u>Example:</u>
    URL: ftp://artn:NicePassword123@192.168.0.99
    IP-Address: 192.168.0.99

4. **Save** the settings

6. If you're using any kind of host connectivity to operate the YJKP, you'll have to **activate** the FTP logging **over your PLC**.

1. Using Festo provided function blocks, you can find the needed input in FB_ControlChannel:

2. Using just the interface of the YJKP, you can find the needed input in the control word on bit 15:

dwControlWord	DWORD	Control word Bit 0 = Manual mode Bit 1 = Automatic mode Bit 2 = Start homing Bit 3 = Start press process Bit 4 = Abort press process (low active) Bit 5 = Load program Bit 6 = Quit error Bit 7 = Enable press Bit 8 = Tare Bit 9 = Move Bit 10 = Stop move Bit 11 = Jog pos Bit 12 = Jog neg Bit 13 = Load hardware configuration Bit 14 = Logging USB Bit 15 = Logging SD-Card Bit 16 = System reset Bit 17 = Reset statistic Bit 18 = Stop mode Bit 19 = Logging FTP-Server Bit 20-31 = Reserved

8 SMB share on Windows 7

8.1 Configure a shared folder

1. **Create a new folder** somewhere on your Windows 7 system.
   Here on the desktop:
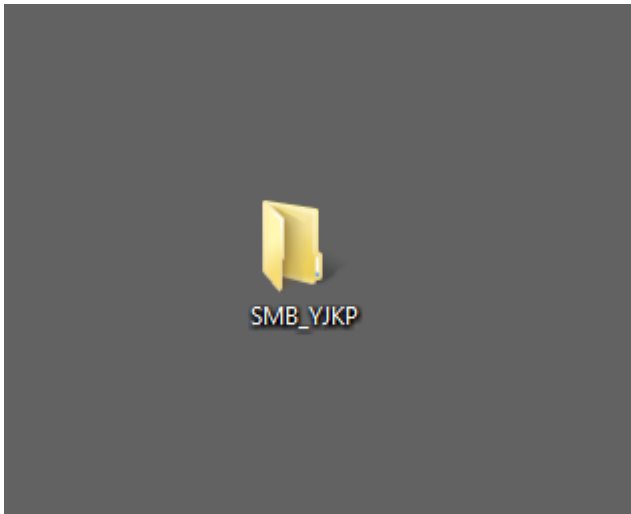
2. In this example we will open this folder to everyone with full excess. Other settings are up to the user.
   Open the **properties** of this directory.
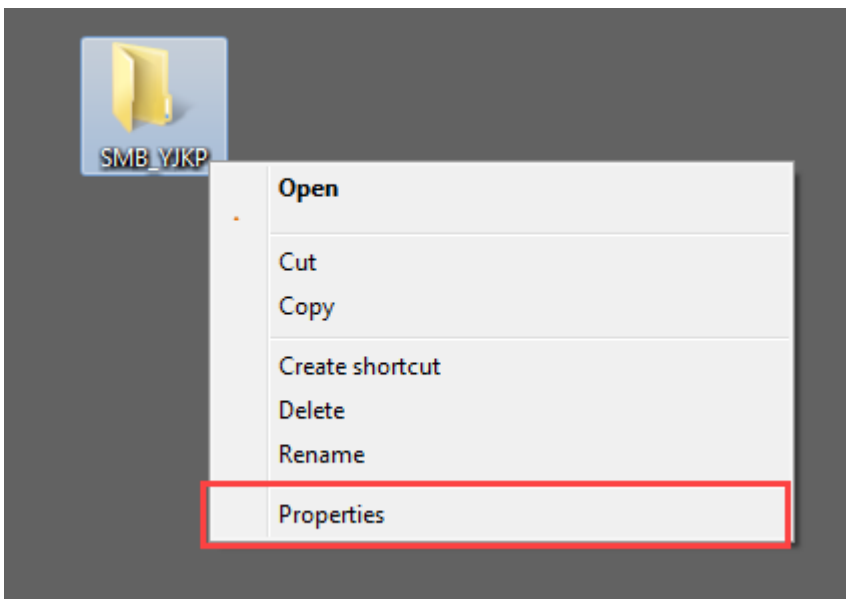
3. Go to the **Sharing tab** and open the **Advanced Sharing** option:
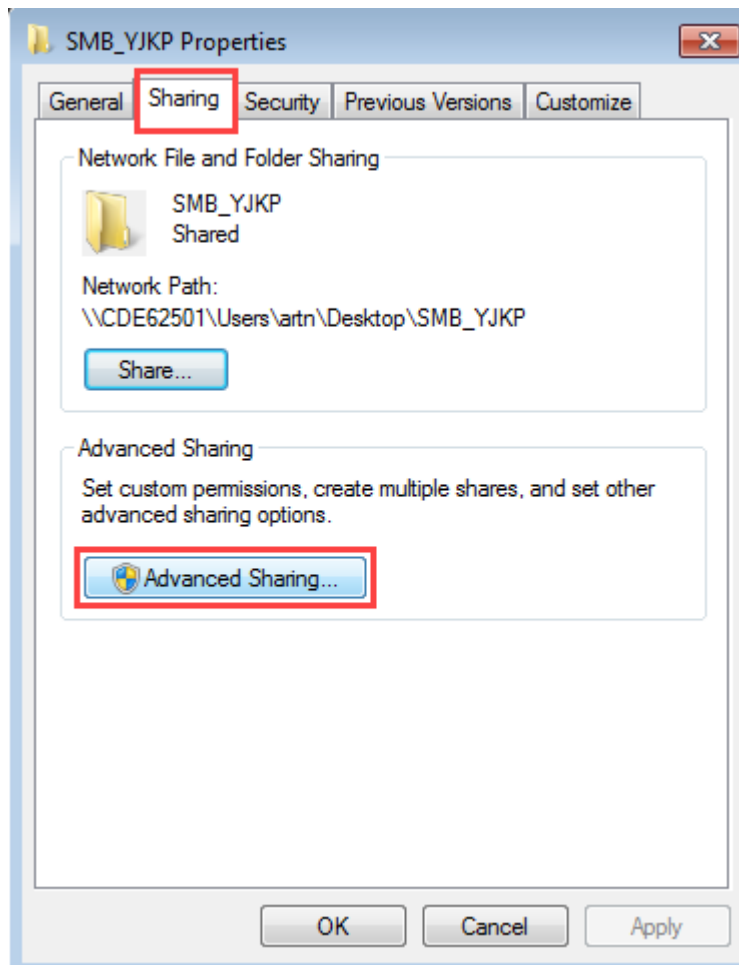
4. **Check** the option **"Share this folder"** and go to **Permissions**.
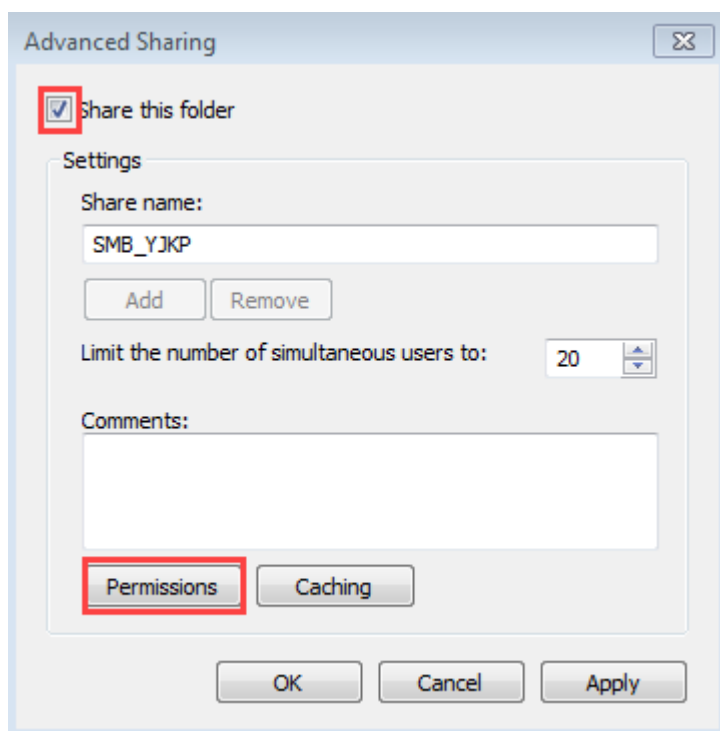
5. Use the group **"Everyone"** and check the permissions to **Full Control**.
   Apply the changes and close this window with **OK**.
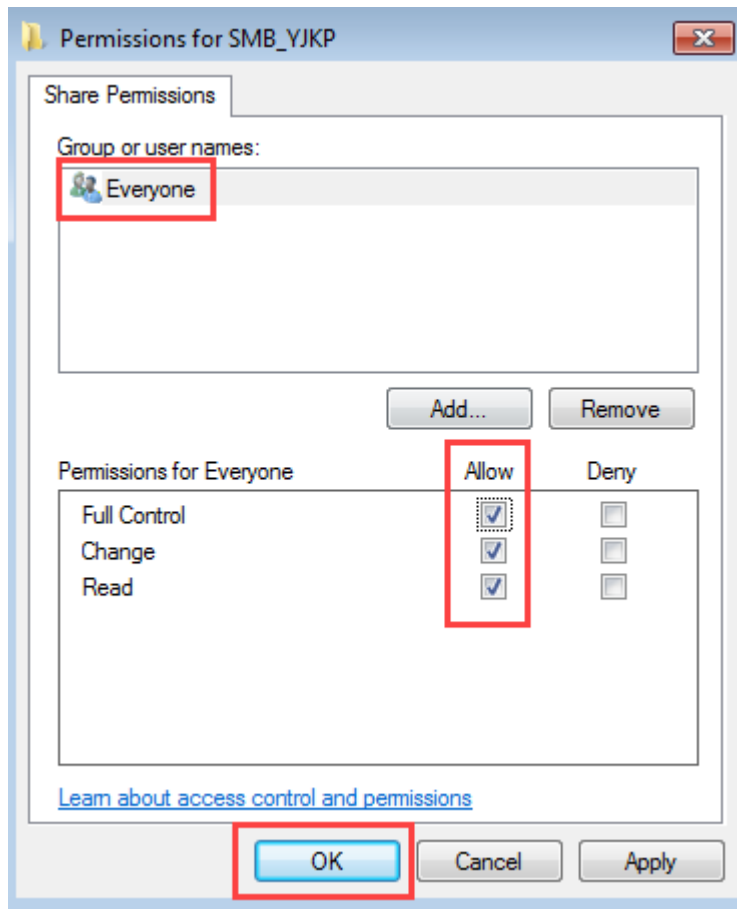
6. Close the Advanced Sharing window with **OK**:
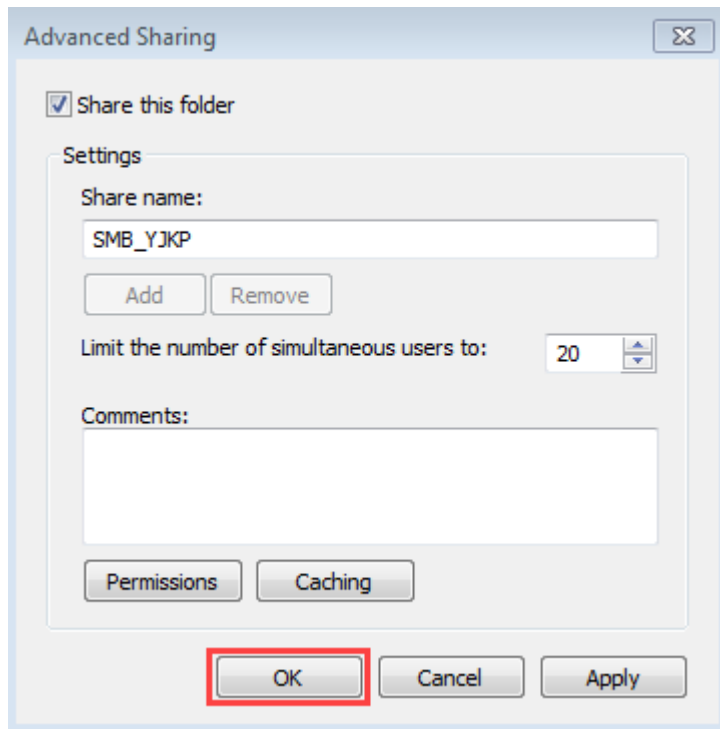
7. Go to the **tab "Security"** and click on **"Edit"** to open the permission settings:
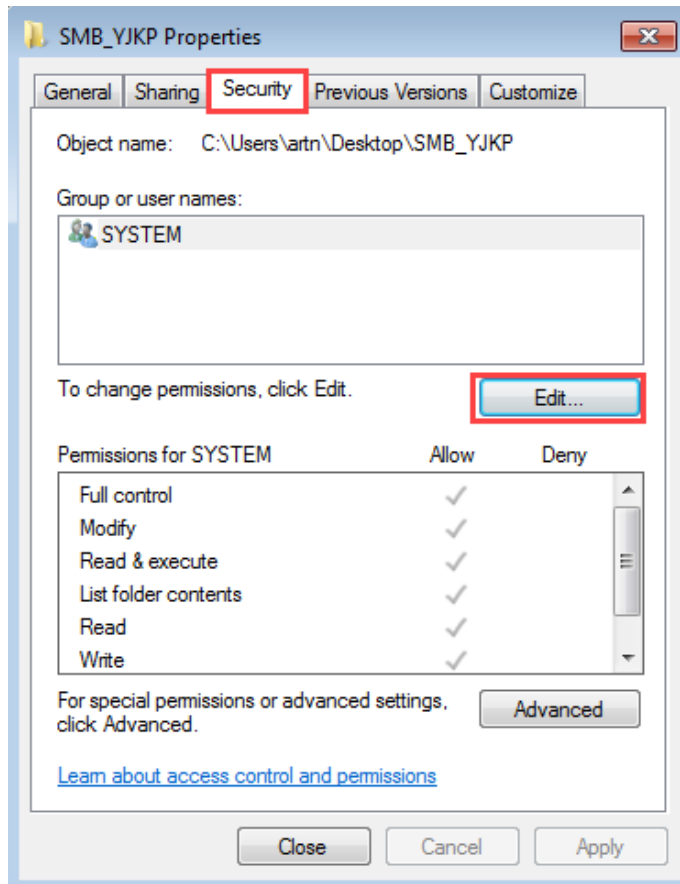
8. Click on **"Add"** to add a new user:
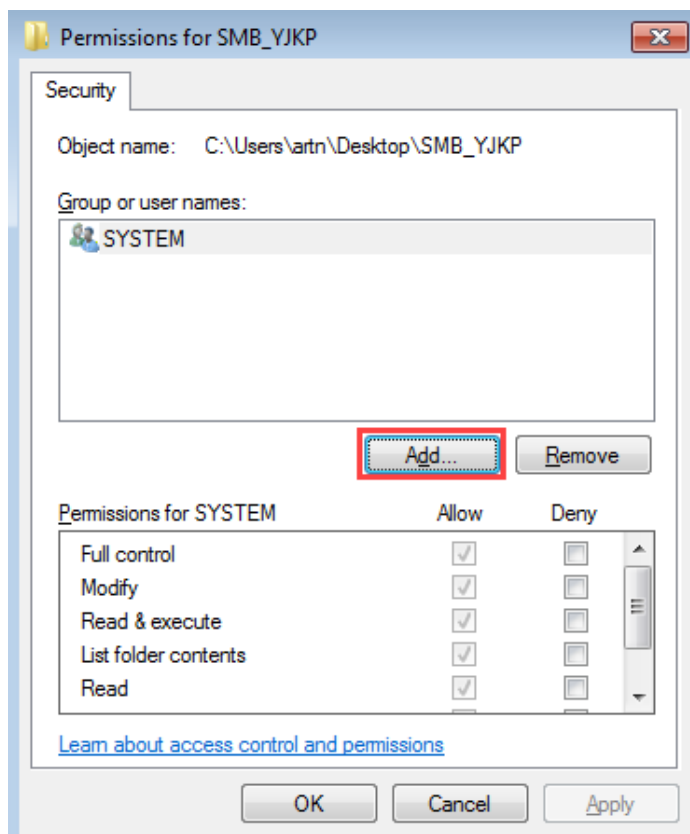
9. **Enter** the user **"Everyone",** click on **"Check Names"** and confirm it with **"OK".**
    The window will close.
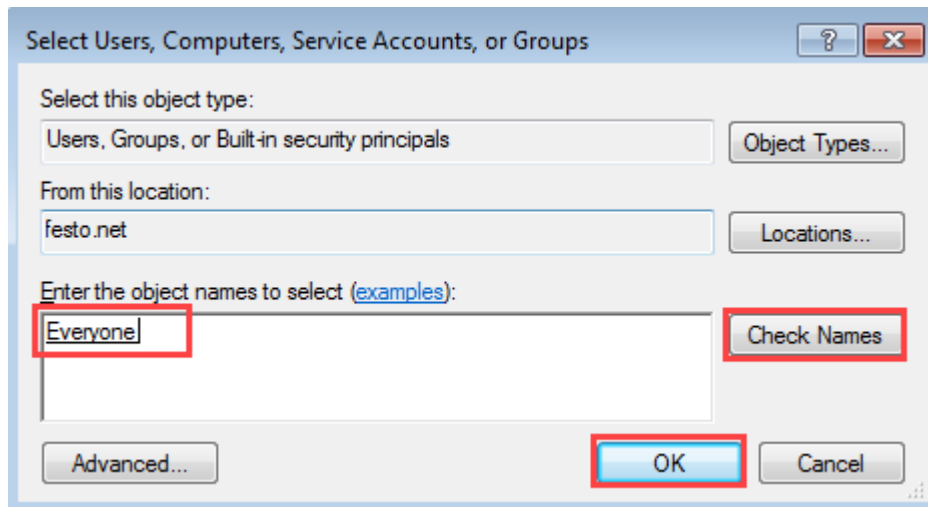
10. **Select** the user **"Everyone"** and assign **full control** to him.
    Apply the changes and close this window with **OK.**
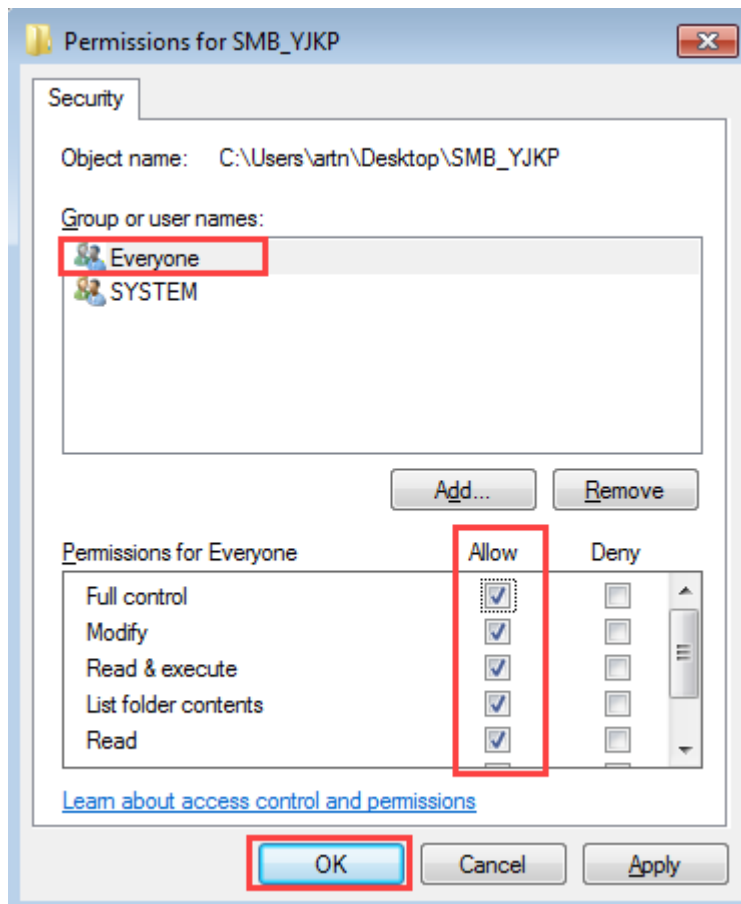
11. **Close** the properties of your shared folder:
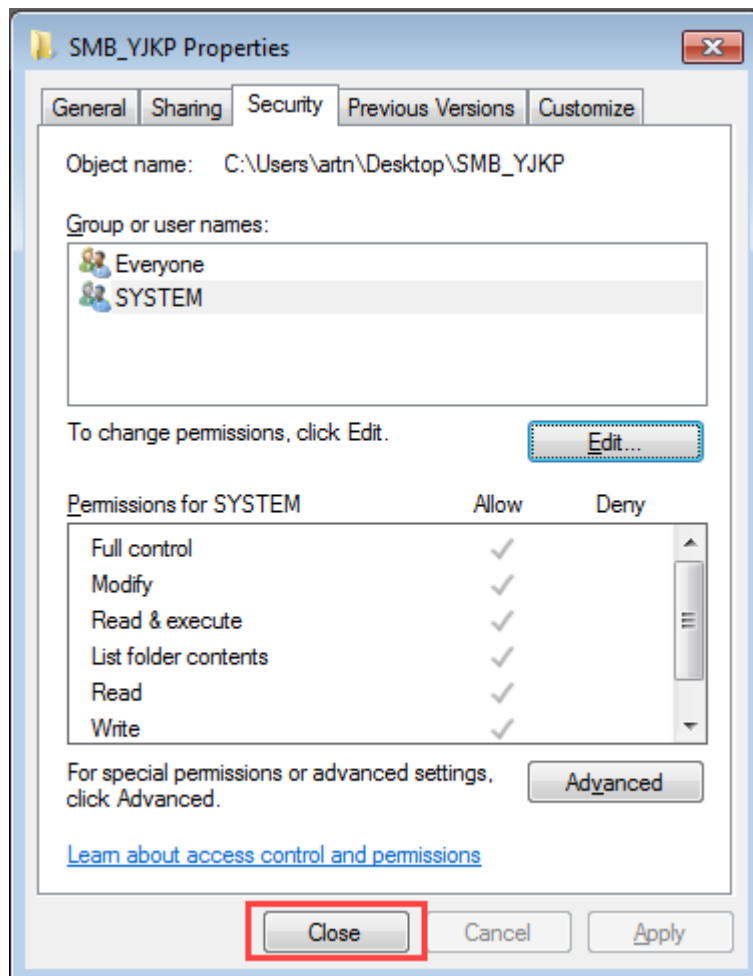
8.2   YJKP WebVisu SMB-Share settings

1. Open the **WebVisu** of the YJKP, go to the **Commissioning tab** and select the **logging configuration**.

2. **Enable** the logging on the **SMB-share.** SMB-share should now have a green spot.

3. URL: user=pressuser,password=presspass //IP-Address/directory
   IP-Address: IP of server
   user: username, who is sign in on the system
   Password: user password

   Example:
   The YJKP is connected to a Windows-PC. Here we have a shared folder. User is the currently signed in user with his Win-password.

   user=abc,password=Windows-password //192.168.0.99/SMB_YJKP

4. **Save** the settings

5. **Restart the servo press controller** so that the address will be associated during initialization of the system.
   Since the controller needs a restart after activating or deactivating the SMB-Share functionality, it is not possible to set this option using a fieldbus.

9   Customized Serial Number in Log-File Name

It is possible to set a user defined serial number in log-file via host using host parameter channel.
It is then shown in the log-file title and in the log file entry "Serial number".
Below is example – with serial number "ABCDEFGHIJKLMNOPQRST".


```
Log Text
[Part no.];[Program name];[Part ID];[Timestamp];[Result];[Max. position];[Max. force];[NOK source]
2;Log_SerialNumber;2;2024-10-08-15:06:47;TRUE;9.994;-0.4928589;0
[MAC Address];[Serial number]
00:0E:F0:4A:93:43;ABCDEFGHIJKLMNOPQRST
[Curves]
No:;1
```

9.1   Object Directory

Serial number can contain maximum 20 ASCII characters. Following table shows its parameters in object directory.

Identifier	Index	Sub index	Default Value	Value	Data Type	Data Size	Access	Comment
Serial number Byte 1	0x2102	0x01	--	--	BYTE	1	RW	ASCII

Serial number Byte 20	0x2102	0x14	--	--	BYTE	1	RW	ASCII

9.2   Write Serial Number with Host Parameter Channel

Serial number can only be written from host parameter channel. It should be written before starting a press process. Once written, the serial number will remain until system reboot or overwritten by a new value.

Steps to write serial number:
1. Set following inputs:
   a. "Access Type" to 0x01 (Write).
   b. "Access Option" to 0x00 or 0x01 (Single character or multiple characters).
   c. "Object Index" to 0x2102.
   d. "Object Subindex" to 0x00.
   e. "Object Data Type" to 0x08 (Unsigned short integer).
2. If serial number contains multiple characters, set input "Data Length To Be Written" to the length of serial number.
3. Set data to be written to input in array "Data To Be Written", each character in a position. First four bytes of the array, abyDataToBeWritten[1:4], should be left empty, means first character should go to abyDataToBeWritten[5].
4. Set input "Execute" to true.
5. Output condition of write variable done.
   a. "Done" = true
   b. "Busy" = false
   c. "Acknowledge" = 0x00
   d. "Error" = false