EPSON
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Network Guide

NPD5771-00 EN

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About this Manual

Marks and Symbols

⚠ ***Caution:***
Instructions that must be followed carefully to avoid bodily injury.

❗ ***Important:***
Instructions that must be observed to avoid damage to your equipment.

Note:
Instructions containing useful tips and restrictions on printer operation.

Related Information
➡ Clicking this icon takes you to related information.

Descriptions Used in this Manual

Illustrations of the printer used in this manual are examples only. Although there may be slight differences depending on the model, the method of operation is the same.

Operating System References

Windows

In this manual, terms such as "Windows 10", "Windows 8.1", "Windows 8", "Windows 7", "Windows Vista", "Windows XP", "Windows Server 2012 R2", "Windows Server 2012", "Windows Server 2008 R2", "Windows Server 2008", "Windows Server 2003 R2", and "Windows Server 2003" refer to the following operating systems. Additionally, "Windows" is used to refer to all versions.

❏ Microsoft® Windows® 10 operating system

❏ Microsoft® Windows® 8.1 operating system

❏ Microsoft® Windows® 8 operating system

❏ Microsoft® Windows® 7 operating system

❏ Microsoft® Windows Vista® operating system

❏ Microsoft® Windows® XP operating system

❏ Microsoft® Windows® XP Professional x64 Edition operating system

❏ Microsoft® Windows Server® 2012 R2 operating system

❏ Microsoft® Windows Server® 2012 operating system

❏ Microsoft® Windows Server® 2008 R2 operating system

❏ Microsoft® Windows Server® 2008 operating system

❏ Microsoft® Windows Server® 2003 R2 operating system

❏ Microsoft® Windows Server® 2003 operating system

Introduction

Manual Component

This manual explains how to connect the printer to the network and it contains information on how to make settings to use the functions.

See the *User's Guide* for function usage information.

Preparation
Explains how to set devices, and the software used for managing.

Connection
Explains how to connect a printer to the network.

Function Settings
Explains the settings for printing.

Security Settings
Explains the security settings, such as administrator password settings and protocol control.

Solving Problems
Explains settings initialization and troubleshooting of the network.

Definitions of Terms Used in this Guide

The following terms are used in this guide.

Administrator
The person in charge of installing and setting the device or the network at an office or organization. For small organizations, this person may be in charge of both device and network administration. For large organizations, administrators have authority over the network or devices on the group unit of a department or division, and network administrators are in charge of the communication settings for beyond the organization, such as the Internet.

Network administrator
The person in charge of controlling network communication. The person who set up the router, proxy server, DNS server and mail server to control communication through the Internet or network.

User
The person who uses devices such as printers.

Server / client connection (printer sharing using the Windows server)
The connection that indicates the printer is connected to the Windows server through the network or by USB cable, and the print queue set on the server can be shared. Communication between the printer and the computer goes through the server, and the printer is controlled on the server.

Peer to peer connection (direct printing)
The connection that indicates the printer and the computer are connected to the network through the hub or access point, and the print job can be executed directly from the computer.

Web Config (device's web page)
The web server that is built into the device. It is called Web Config. You can check and change the device's status on it using the browser.

Print queue
For Windows, the icon for each port displayed on **Device and Printer** such as a printer. Two or more icons are created even for a single device if the device is connected to the network by two or more ports, such as standard TCP/IP.

Tool
A generic term for software to setup or manage a device, such as Epson Device Admin, EpsonNet Config, EpsonNet SetupManager, etc.

ASCII (American Standard Code for Information Interchange)
One of the standard character codes. 128 characters are defined, including such characters as the alphabet (a-z, A- Z), Arabic numbers (0-9), symbols, blank characters, and control characters. When "ASCII" is described in this guide, it indicates the 0x20 - 0x7E (hex number) listed below, and does not involve control characters.

SP*	!	"	#	$	%	&	′	(	)	*	+	,	-	.	/
0	1	2	3	4	5	6	7	8	9	:	;	<	=	>	?
@	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
P	Q	R	S	T	U	V	W	X	Y	Z	[	¥	]	^	_
‘	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
p	q	r	s	t	u	v	w	x	y	z	{	|	}	~	

* Space character.

Unicode (UTF-8)
An international standard code, covering the major global languages. When "UTF-8" is described in this guide, it indicates coding characters in UTF-8 format.

Preparation

This chapter explains what you need to prepare before making settings.

Flow of the Printer Settings

You make network connection settings and perform initial setup so that the printer is available to users.

1. Preparing

   ❏ Collecting the connection setting information

   ❏ Decision on the connection method

2. Connecting

   ❏ Make a network connection using EpsonNet Config

3. Setting up printing

   ❏ Printer driver settings

4. Security settings

   ❏ Administrator settings

   ❏ SSL/TLS

   ❏ Protocol control

   ❏ IPsec/IP firtering

Related Information
➡ "Connection" on page 14
➡ "Function Settings" on page 20
➡ "Security Settings" on page 28

Introduction of Printer Connection

The following two methods are available for the printer's network directly by both methods.

❏ Server / client connection (printer sharing using the Windows server)

❏ Peer to peer connection (direct printing)

Related Information
➡ "Server / Client Connection Settings" on page 11
➡ "Peer to Peer Connection Settings" on page 11

Server / Client Connection Settings

Connection method:

Connect the printer to the network via hub (L2 switch). You can also connect the printer to the server directly by USB cable.

Printer driver:

Install the printer driver on the Windows server depending on the OS of the client computers. By accessing the Windows server and linking the printer, the printer driver is installed on the client computer and can be used.

Features:

❏ Manage the printer and the printer driver in batch.

❏ Depending on the server spec, it may take time to start the print job because all print jobs go through the print server.

❏ You cannot print when the Windows server is turned off.

Related Information

➡ "Definitions of Terms Used in this Guide" on page 8

Peer to Peer Connection Settings

Connection method:

Connect the printer to the network via hub (L2 switch).

Printer driver:

Install the printer driver on each client computer. It can be delivered as a package by using EpsonNet SetupManager or automatically by using the Group Policy of the Windows server.

Features:

❏ The print job starts immediately because the print job is sent to the printer directly.

❏ You can print as long as the printer runs.

Related Information

➡ "Definitions of Terms Used in this Guide" on page 8

Preparing Connection to a Network

Gathering Information on the Connection Setting

You need to have an IP address, gateway address, etc. for network connection. Check the following in advance.

Divisions	Items	Note
Device connection method	❏ Ethernet	Use a category 5e or higher STP (Shielded Twisted Pair) cable.
LAN connection information	❏ IP address ❏ Subnet mask ❏ Default gateway	If you automatically set the IP address using the DHCP function of the router, it is not required.
DNS server information	❏ IP address for primary DNS ❏ IP address for secondary DNS	If you use a static IP address as the IP address, configure the DNS server. Configure when assigning IP addresses automatically using the DHCP function and when the DNS server cannot be assigned automatically.

Printer Specifications

The specification that the printer supports standard or connection mode, see the *User's Guide*.

Type of IP Address Assignment

There are two types for assigning an IP address to the printer.

Static IP address:

Assign the predetermined unique IP address to the printer.

The IP address is not changed even when turning on the printer or turning off the router, so you can manage the device by IP address.

This type is suitable for a network where many printers are managed, such as a large office or school.

Automatic assignment by DHCP function:

The correct IP address is automatically assigned when the communication between the printer and router that supports the DHCP function succeeds.

If it is inconvenient to change the IP address for a particular device, reserve the IP address in advance and then assign it.

Note:
For the port for the print queue, select the protocol that can automatically detect the IP address, such as EpsonNet Print Port.

Method for Setting Network Connection

For connection settings for the printer’s IP address, subnet mask, and default gateway, proceed as follows.

Using EpsonNet Config:

Use EpsonNet Config from the administrator's computer. You can set many printers, but they need to be connected physically by the Ethernet cable before setting. If you can build an Ethernet for the setting, and you set network settings for the printer, and then connect printer to regular network, you can keep security risk low.

Using the Installer:

If the installer is used, the printer's network and client computer are set automatically. The setting is available by following the installer's instructions, even if you do not have deep knowledge of the network. This is recommended when setting the printer and a few client computers by using the server/client connection (sharing the printer using the Windows server).

Related Information

➡ "Assigning an IP Address Using EpsonNet Config" on page 14
➡ "Connecting to the Network Using the Installer" on page 18

Installing EpsonNet Config

Download EpsonNet Config from Epson support website, and then install it by following the on-screen instructions.

Running EpsonNet Config

Select **All Programs** > **EpsonNet** > **EpsonNet Config SE** > **EpsonNet Config**.

> ***Note:***
> *If the firewall alert appears, allow access for EpsonNet Config.*

Connection

This chapter explains the environment or procedure to connect the printer to the network.

Connecting to the Network

Connecting to LAN

Connect the printer to the network by Ethernet.

Related Information

➡ “Connecting to the Network Using the Installer” on page 18

Assigning an IP Address Using EpsonNet Config

Assign an IP address to the printer using EpsonNet Config.

1. Turn on the printer.

2. Connect the printer to the network using an Ethernet cable.

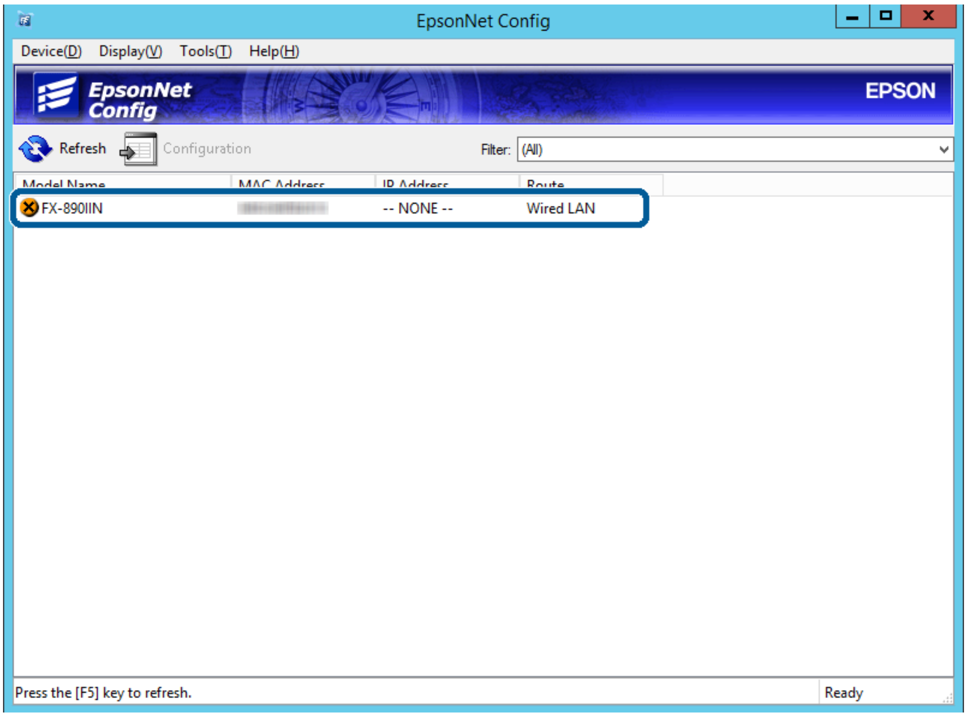
3. Start EpsonNet Config.

   A list of the printers on the network is displayed. It may take a while before they are displayed.

4. Double-click the ⊗ printer that you want to assign to.

   If you connect the printer to a network with an available DHCP function, the IP address is assigned using the DHCP function, and then ◉ is displayed.

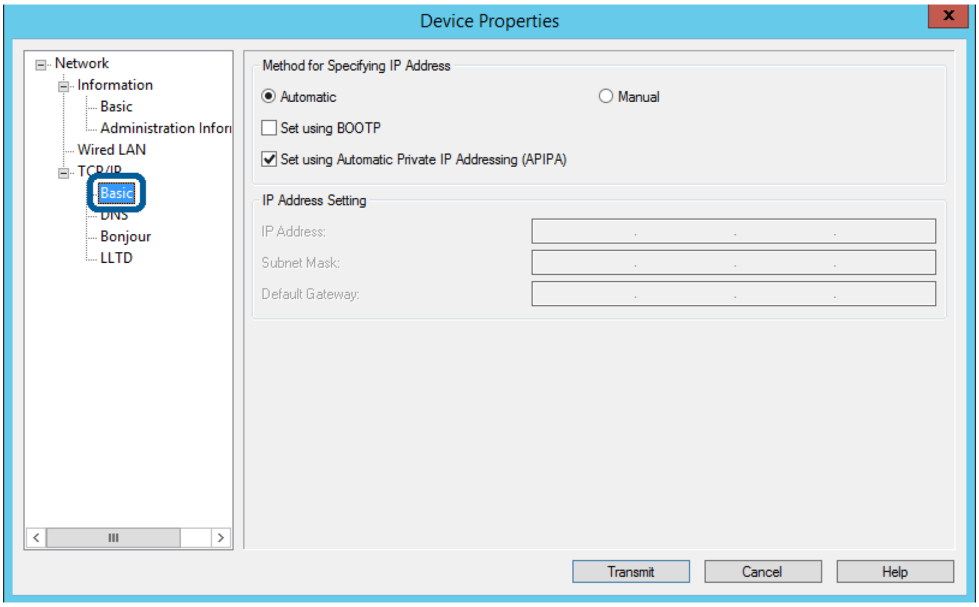
> **Note:**
> - ❏ *If you have connected multiple printers of the same model, you can identify the printer using the MAC address.*
> - ❏ *After the printer is connected to the network, you can change the IP address assignment method.*



Model Name	MAC Address	IP Address	Route
FX-890IIN	[redacted]	-- NONE --	Wired LAN

Press the [F5] key to refresh. Ready

5 Select **Network** > **TCP/IP** > **Basic**.



Method for Specifying IP Address

● Automatic ○ Manual

□ Set using BOOTP

☑ Set using Automatic Private IP Addressing (APIPA)

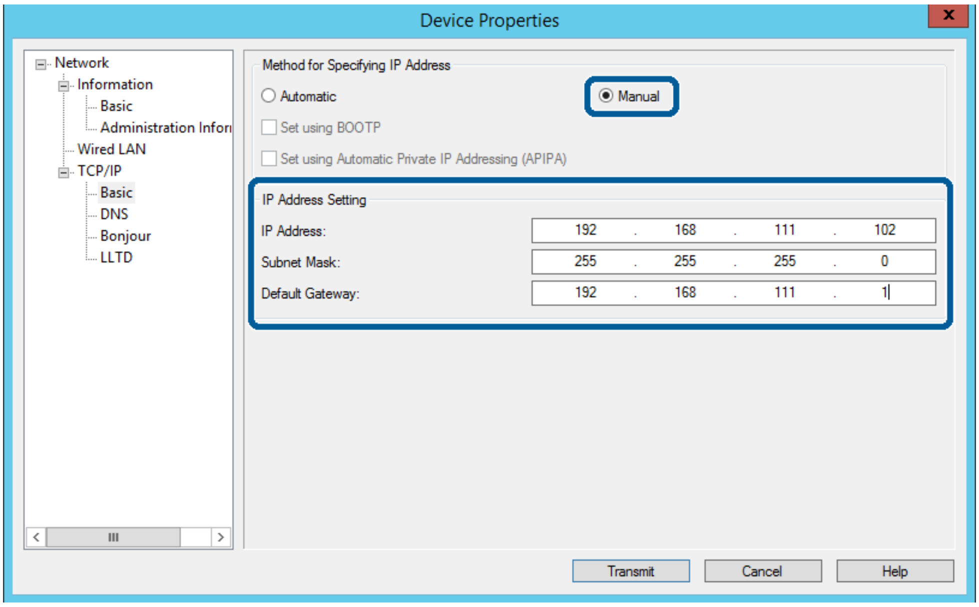
IP Address Setting

IP Address: . . .

Subnet Mask: . . .

Default Gateway: . . .

6 Enter the addresses for **IP Address**, **Subnet Mask**, and **Default Gateway**.



Method for Specifying IP Address

○ Automatic ● Manual

□ Set using BOOTP

□ Set using Automatic Private IP Addressing (APIPA)

IP Address Setting

IP Address: 192 . 168 . 111 . 102

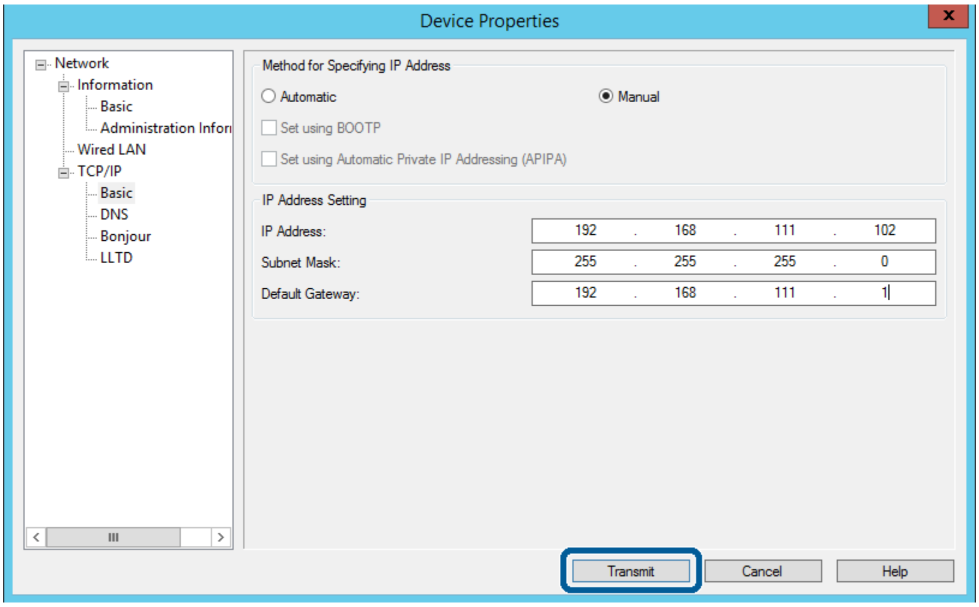
Subnet Mask: 255 . 255 . 255 . 0

Default Gateway: 192 . 168 . 111 . 1

Note:

- ❏ *Enter a static address when you connect the printer to a secure network.*
- ❏ *In the **TCP/IP** menu, you can make settings for the DNS on the **DNS** screen.*

7 Click **Transmit**.



Method for Specifying IP Address

○ Automatic ● Manual

□ Set using BOOTP

□ Set using Automatic Private IP Addressing (APIPA)

IP Address Setting

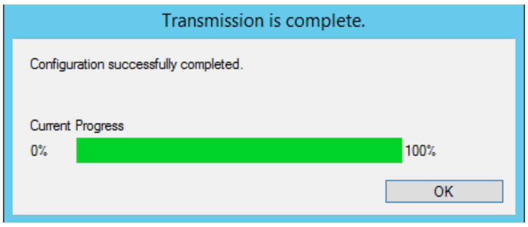
IP Address: 192 . 168 . 111 . 102

Subnet Mask: 255 . 255 . 255 . 0

Default Gateway: 192 . 168 . 111 . 1

8 Click **OK** on the confirmation screen.

9 Click **OK**.



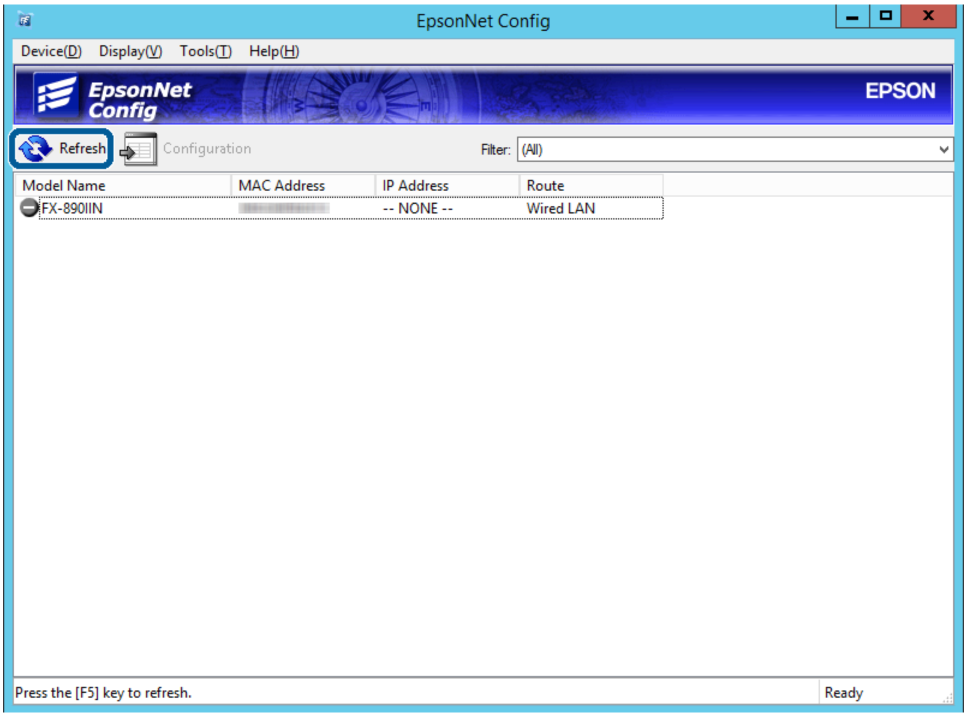
Transmission is complete.

Configuration successfully completed.

Current Progress

0% 100%

10 Click **Refresh**.



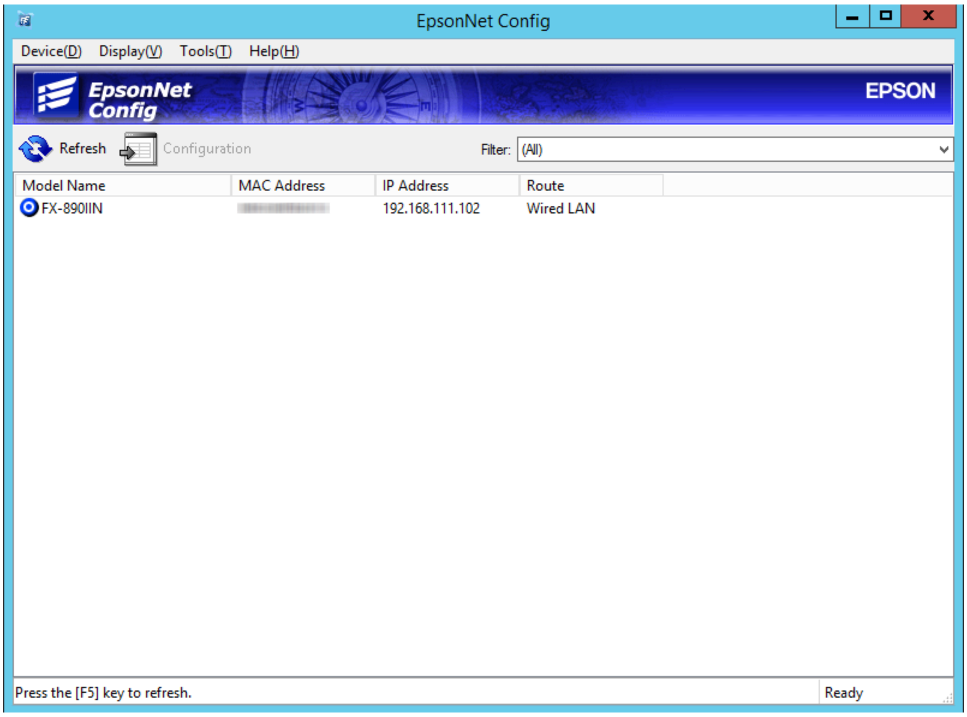
Filter: (All)

Model Name	MAC Address	IP Address	Route
FX-890IIN		-- NONE --	Wired LAN

Press the [F5] key to refresh.

Ready

Check that an IP address has been assigned.



Model Name	MAC Address	IP Address	Route
FX-890IIN	[redacted]	192.168.111.102	Wired LAN

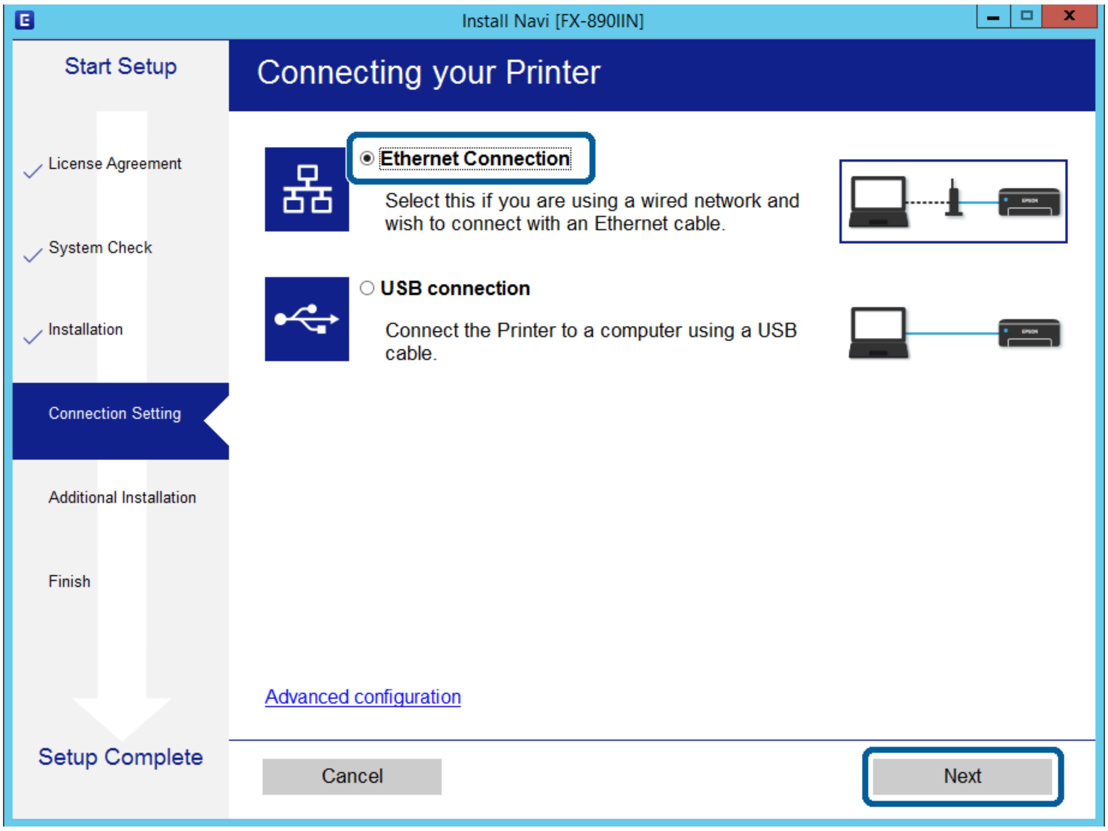
Press the [F5] key to refresh.

Connecting to the Network Using the Installer

We recommend using the installer to connect the printer to a computer.

1. Insert the software disc into the computer, and then follow the on-screen instructions.

2 Follow the on-screen instructions until the following screen is displayed, select **Ethernet Connection**, and then click **Next**.



Connecting your Printer

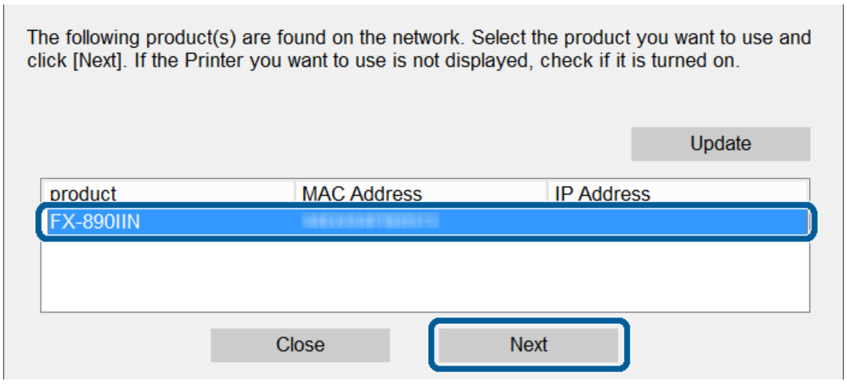
● Ethernet Connection

Select this if you are using a wired network and wish to connect with an Ethernet cable.

○ USB connection

Connect the Printer to a computer using a USB cable.

If you connect the printer to the network using an Ethernet cable, the following screen is displayed. Select the printer, and then click **Next**.



The following product(s) are found on the network. Select the product you want to use and click [Next]. If the Printer you want to use is not displayed, check if it is turned on.

product	MAC Address	IP Address
FX-890IIN	[redacted]	

3 Follow the on-screen instructions.

Function Settings

This chapter explains the first settings to make in order to use each function of the device.

In this topic, the procedure for making settings from the administrator’s computer using Web Config is explained.

Web Config (Web Page for Device)

About Web Config

Web Config is a browser-based application for configuring the printer's settings.

To access Web Config, you need to have first assigned an IP address to the printer.

> ***Note:***
> *You can lock the settings by configuring the administrator password to the printer.*

Accessing Web Config

There are two methods to access Web Config. JavaScript must be enabled in the browser.

Entering IP address

Start EpsonNet Config, and then double-click the printer in the list.

Enter the printer's IP address into a web browser. When accessing Web Config via HTTPS, a warning message will appear in the browser since a self-signed certificate, stored in the printer, is used.

❏ Accessing via HTTPS
IPv4: https://<printer IP address> (without the < >)
IPv6: https://[printer IP address]/ (with the [ ])

❏ Accessing via HTTP
IPv4: http://<printer IP address> (without the < >)
IPv6: http://[printer IP address]/ (with the [ ])

> ***Note:***
>
> - *Examples*
>   *IPv4:*
>   *https://192.0.2.111/*
>   *http://192.0.2.111/*
>   *IPv6:*
>   *https://[2001:db8::1000:1]/*
>   *http://[2001:db8::1000:1]/*
> - *If the printer name is registered with the DNS server, you can use the printer name instead of the printer's IP address.*
> - *Not all menus are displayed when accessing Web Config via HTTP. To see all the menus, access Web Config via HTTPS.*

Related Information

➡ "SSL/TLS Communication with the Printer" on page 34

➡ "About Digital Certification" on page 34

Using the Print Functions

Enable to use the printer's print function.

Requirement for Printing over a Network

The following is required to print over a network. You can configure these settings using the printer driver and functions of the operating system.

- Installing the printer driver
- Making the print queue to a computer
- Setting the port to a network

Setting of the Printer Driver Using Server / Client Connection

Set the printer to enable printing from a computer that was previously set as the print server, and share the printer. Install the printer driver for both the server and the client on the print server. If the installer is used, setting of the printer's network or computer, installation of the driver, and making the print queue are performed automatically.

Setting Up Standard TCP/IP Ports - Windows

Set up the Standard TCP/IP port on the print server, and create the print queue for network printing.

1. Open the devices and printers screen.

   - Windows 10/Windows Server 2016
     Right-click the start button or press and hold it, and then select **Control Panel** > **Hardware and Sound** > **Devices and Printers**.

❏ Windows 8.1/Windows 8/Windows Server 2012 R2/Windows Server 2012
Desktop > **Settings** > **Control Panel** > **Hardware and Sound** or **Hardware** > **Devices and Printers**.

❏ Windows 7/Windows Server 2008 R2
Click start > **Control Panel** > **Hardware and Sound** (or **Hardware**) > **Devices and Printers**.

❏ Windows Vista/Windows Server 2008
Click start > **Control Panel** > **Hardware and Sound** > **Printers**.

❏ Windows XP/Windows Server 2003 R2/Windows Server 2003
Click start > **Control Panel** > **Printers and Other Hardware** > **Printers and Faxes**.

2 Add a printer.

❏ Windows 10/Windows 8.1/Windows 8/Windows Server 2016/Windows Server 2012 R2/Windows Server 2012
Click **Add printer**, and then select **The printer that I want isn't listed**.

❏ Windows 7/Windows Server 2008 R2
Click **Add printer**.

❏ Windows Vista/Windows Server 2008
Click **Install Printer**.

❏ Windows XP/Windows Server 2003 R2/Windows Server 2003
Click **Install Printer**, and then click **Next**.

3 Add a local printer.

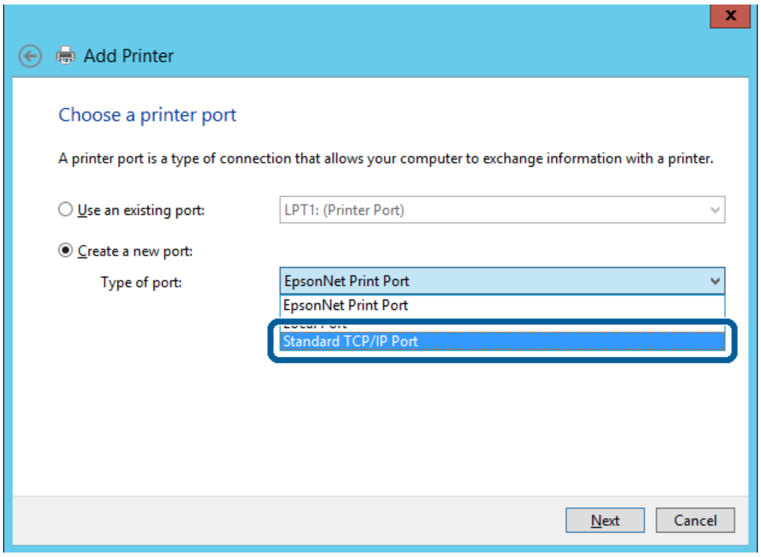
❏ Windows 10/Windows 8.1/Windows 8/Windows Server 2012 R2/Windows Server 2012
Select **Add a local printer or network printer with manual settings**, and then click **Next**.

❏ Windows 7/Windows Server 2008 R2/Windows Vista/Windows Server 2008
Click **Add a local printer**.

❏ Windows XP/Windows Server 2003 R2/Windows Server 2003
Select **Local printer attached to this computer**, and then click **Next**.

4 Select **Create a new port**, select **Standard TCP/IP Port** as the Port Type, and then click **Next**.

For Windows XP/Windows Server 2003 R2/Windows Server 2003, click **Next** on the **Add Standard TCP/IP Printer Port Wizard** screen.



Choose a printer port

A printer port is a type of connection that allows your computer to exchange information with a printer.

○ Use an existing port: LPT1: (Printer Port)

● Create a new port:

Type of port: EpsonNet Print Port

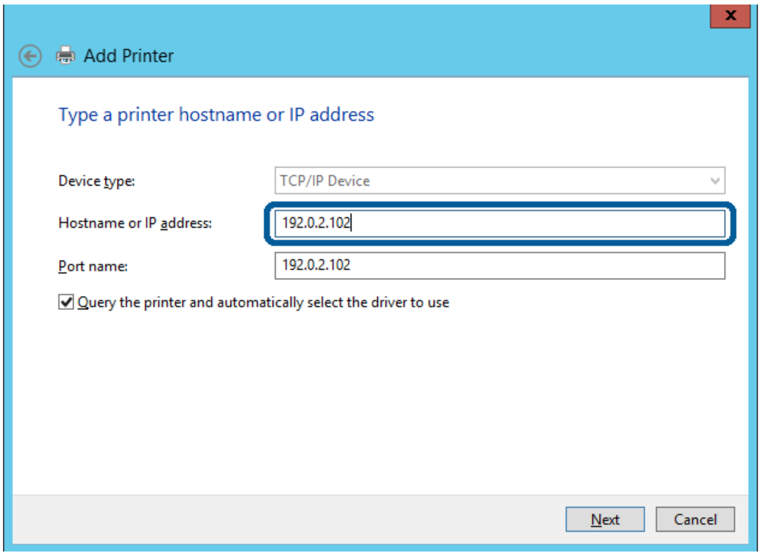
EpsonNet Print Port
Local Port
Standard TCP/IP Port

5 Enter the printer's IP address or printer name in **Host Name or IP Address** or **Printer Name or IP Address**, and then click **Next**.

Do not change **Port name**.

Click **Continue** when the **User Account Control** screen is displayed.

For Windows XP/Windows Server 2003 R2/Windows Server 2003, click **Done** on the **Standard TCP/IP Printer Port** screen.



Type a printer hostname or IP address

Device type: TCP/IP Device

Hostname or IP address: 192.0.2.102

Port name: 192.0.2.102

☑ Query the printer and automatically select the driver to use

Note:
If you specify the printer name on the network where the name resolution is available, the IP address is tracked even if printer's IP address has been changed by DHCP. You can confirm the printer name from the network status screen on the printer's control panel or network status sheet.

6 Set the printer driver.

- ❏ If the printer driver is already installed:
  Select **Manufacturer** and **Printers**. Click **Next**.
- ❏ If the printer driver is not installed:
  Click **Have Disc** and then insert the software disc supplied with the printer. Click **Browse**, and then select the folder on the disc containing the printer driver. Make sure you select the correct folder. The location of the folder may change depending on your operating system.
  32 bit version of Windows: WINX86
  64 bit version of Windows: WINX64

7 Follow the on-screen instructions.

For Windows XP/Windows Server 2003 R2/Windows Server 2003, setup is complete. For Windows Vista/ Windows Server 2008 and later, check the port configuration.

When using the printer under the server / client connection (printer sharing using the Windows server), make the sharing settings hereafter.

Related Information

➡ "Sharing the Printer" on page 25

Checking the Port Configuration - Windows

Check if the correct port is set for the print queue.

1 Open the devices and printers screen.

- ❏ Windows 10/Windows Server 2016
  Right-click the start button or press and hold it, and then select **Control Panel** > **Hardware and Sound** > **Devices and Printers**.
- ❏ Windows 8.1/Windows 8/Windows Server 2012 R2/Windows Server 2012
  Desktop > **Settings** > **Control Panel** > **Hardware and Sound** or **Hardware** > **Devices and Printers**.
- ❏ Windows 7/Windows Server 2008 R2
  Click start > **Control Panel** > **Hardware and Sound** (or **Hardware**) > **Devices and Printers**.
- ❏ Windows Vista/Windows Server 2008
  Click start > **Control Panel** > **Hardware and Sound** > **Printers**.

2 Open the printer properties screen.

- ❏ Windows 10/Windows 8.1/Windows 8/Windows 7/Windows Server 2016/Windows Server 2012 R2/ Windows Server 2012/ Windows Server 2008 R2
  Right-click the printer icon, and then click **Printer properties**.
- ❏ Windows Vista
  Right-click the printer icon, and then select **Run as administrator** > **Properties**.
- ❏ Windows Server 2008
  Right-click the printer icon, and then click **Properties**.

3 Click the **Ports** tab, select **Standard TCP/IP Port**, and then click **Configure Port**.

4 Check the port configuration.

- ❏ For RAW
  Check that **Raw** is selected in **Protocol**, and then click **OK**.

- ❏ For LPR
  Check that **LPR** is selected in **Protocol**. Enter "PASSTHRU" in **Queue name** from **LPR Settings**. Select **LPR Byte Counting Enabled**, and then click **OK**.

Sharing the Printer

When using the printer under the server / client connection (printer sharing using the Windows server), set up the printer sharing from the print server.

1 Select **Control Panel** > **View devices and printers** on the print server.

2 Right-click the printer icon (print queue) that you want to share with, and then select **Printer Properties** > **Sharing** tab.

3 Select **Share this printer** and then enter to **Share name**.

For Windows Server 2012, click **Change Sharing Options** and then configure the settings.

Installing Additional Drivers

If the Windows versions for a server and clients are different, it is recommended to install additional drivers to the print server.

1 Select **Control Panel** > **View devices and printers** on the print server.

2 Right-click the printer icon that you want to share with the clients, and then click **Printer Properties** > **Sharing** tab.

3 Click **Additional Drivers**.

For Windows Server 2012, click **Change Sharing Options** and then configure the settings.

4 Select versions of Windows for clients, and then click **OK**.

5 Select the information file for the printer driver (*.inf) and then install the driver.

Related Information

➡ "Using the Shared Printer" on page 26

Using the Shared Printer

The administrator needs to inform the clients of the computer name assigned to the print server and how to add it to their computers. If the additional driver(s) have not been configured yet, inform the clients how to use **Devices and Printers** to add the shared printer.

If additional driver(s) have already been configured on the print server, follow these steps:

1. Select the name assigned to the print server in **Windows Explorer**.

2. Double-click the printer that you want to use.

Related Information

➡ "Sharing the Printer" on page 25

➡ "Installing Additional Drivers" on page 25

Printer Driver Settings for Peer to Peer Connection

For peer to peer connection (direct printing), the printer driver must be installed on each client computer.

Related Information

➡ "Setting the Printer Driver" on page 26

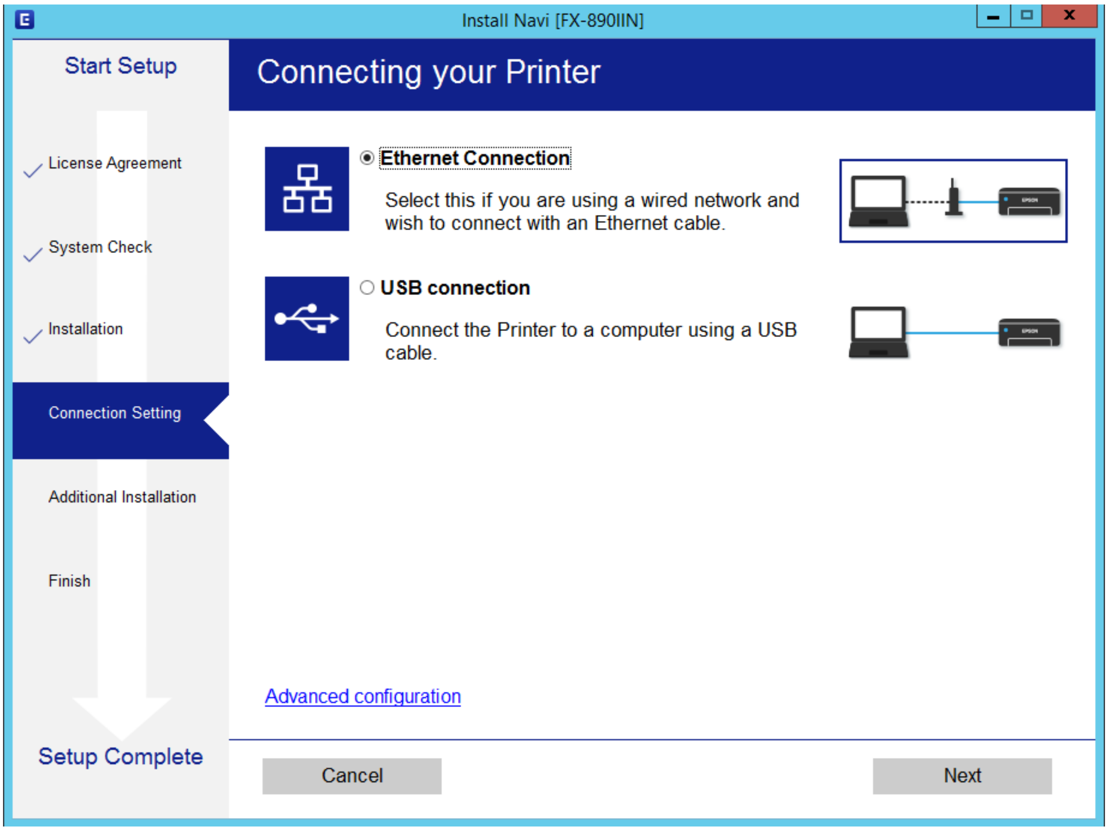
Setting the Printer Driver

For small organizations, we recommend installing the printer driver on each client computer.

> ***Note:***
> *When the printer is used from many client computers, by using EpsonNet SetupManager and delivering the driver as a package, install operation time can be reduced dramatically.*

1. Run the installer.

2 Select the connection method for the printer, and then click **Next**.



Install Navi [FX-890IIN]

Connecting your Printer

● Ethernet Connection

Select this if you are using a wired network and wish to connect with an Ethernet cable.

○ USB connection

Connect the Printer to a computer using a USB cable.

> ***Note:***
> *If **Select Software Installation** is displayed, select **Change or re-set the connection method** and then click **Next**.*

3 Follow the on-screen instructions.

Related Information

➡ "EpsonNet SetupManager" on page 60

Security Settings

This chapter explains the security settings.

Security Settings and Prevention of Danger

When a device is connected to a network, you can access it from a remote location. In addition, many people can share the device, which is helpful in improving operational efficiency and convenience. However, risks such as illegal access, illegal use, and tampering with data are increased.

In order to avoid this risk, Epson printers have a variety of security technologies. Set the device as necessary according to the environmental conditions that have been built with the customer's environment information.

Feature name	Feature type	What to set	What to prevent
Setup for the administrator password	Locks the system settings, such as connection setup for network or USB.	An administrator sets a password to the device. Configuration or update are available anywhere from Web Config and Epson Device Admin.	Prevent from illegally reading and changing the formation stored in the device such as ID, password, network settings, and contacts. Also, reduce a wide range of security risks such as leakage of information for the network environment or security policy.
Protocol and control of service	Controls the protocols and services to be used for communication between devices and computers, and it enables and disables feature such as print.	A protocol or service that is applied to features allowed or prohibited separately.	Reducing security risks that may occur through unintended use by preventing users from using unnecessary functions.
SSL/TLC communications	The communication path of a computer and a printer is encrypted using SSL/TLS communication. The content of the communication is protected by printer settings and by IPPS protocol printings via a browser.	Obtain a CA-signed certificate, and then import it to the printer.	Clearing an identification of the device by the CA-signed certification prevents impersonation and unauthorized access. In addition, communication contents of SSL/TLS are protected, and it prevents the leakage of contents for printing data and setup information.
IPsec/IP filtering	You can set to allow severing and cutting off of data that is from a certain client or is a particular type. Since IPsec protects the data by IP packet unit (encryption and authentication), you can safely communicate unsecured printing protocol and scanning protocol.	Create a basic policy and individual policy to set the client or type of data that can access the device.	Protect unauthorized access, and tampering and interception of communication data to the device.

Feature name	Feature type	What to set	What to prevent
SNMPv3	Features are added, such as monitoring of connected devices in the network, integrity of the data to the SNMP protocol to control, encryption, user authentication, etc.	Enable SNMPv3, then set the authentication and encryption method.	Ensure change settings via the network, confidentiality in state monitoring.

Related Information

➡ "Configuring the Administrator Password" on page 29

➡ "Controlling Protocols and Services" on page 30

➡ "SSL/TLS Communication with the Printer" on page 34

Security Feature Settings

When setting IPsec/IP filtering, it is recommended that you access Web Config using SSL/TLS to communicate settings information in order to reduce security risks such as tampering or interception.

Configuring the Administrator Password

When you set the administrator password, users other than the administrators will not be able to change the settings for the system administration. You can set and change the administrator password using Web Config.

Related Information

➡ "Configuring the Administrator Password Using Web Config" on page 29

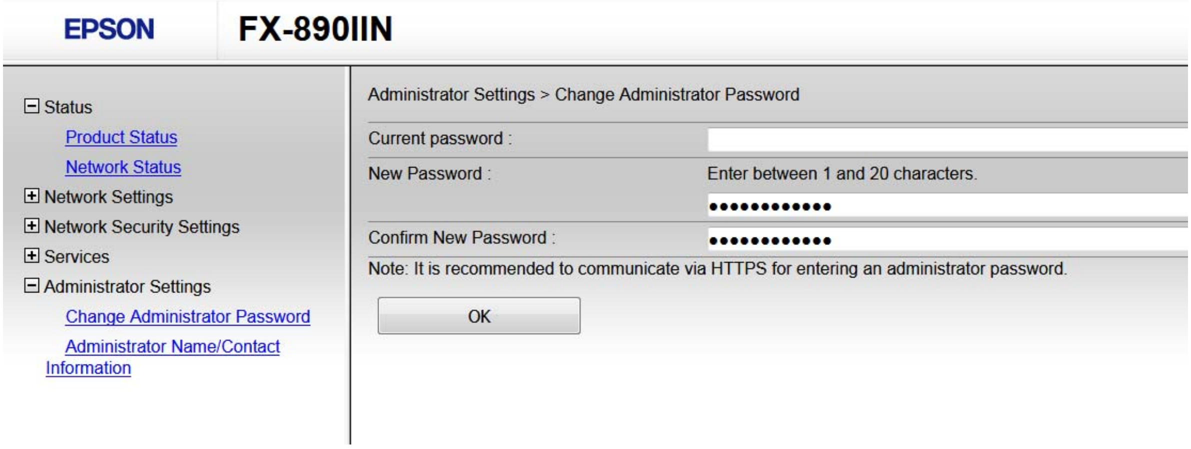
Configuring the Administrator Password Using Web Config

You can set the administrator password using Web Config.

1. Access Web Config and select **Administrator Settings** > **Change Administrator Password**.

2 Enter a password to **New Password** and **Confirm New Password**.

If you want to change the password to new one, enter a current password.



Administrator Settings > Change Administrator Password

Current password :

New Password : Enter between 1 and 20 characters.

●●●●●●●●●●●●

Confirm New Password : ●●●●●●●●●●●●

Note: It is recommended to communicate via HTTPS for entering an administrator password.

3 Select **OK**.

> ***Note:***
> - *To set or change the locked menu items, click **Administrator Login**, and then enter the administrator password.*
> - *To delete the administrator password, click **Administrator Settings** > **Delete Administrator Authentication Information**, and then enter the administrator password.*

Related Information

➡ "Accessing Web Config" on page 20

Controlling Protocols and Services

You can print using a variety of pathways and protocols. You can lower unintended security risks by restricting printing from specific pathways or by controlling the available functions.

Controlling Protocols

Configure the protocol settings.

1 Access Web Config and select **Services** > **Protocol**.

2 Configure each item.

3 Click **Next**.

4 Click **OK**.

The settings are applied to the printer.

Related Information

➡ “Accessing Web Config” on page 20

➡ “Protocols you can Enable or Disable” on page 31

➡ “Protocol Setting Items” on page 32

Protocols you can Enable or Disable

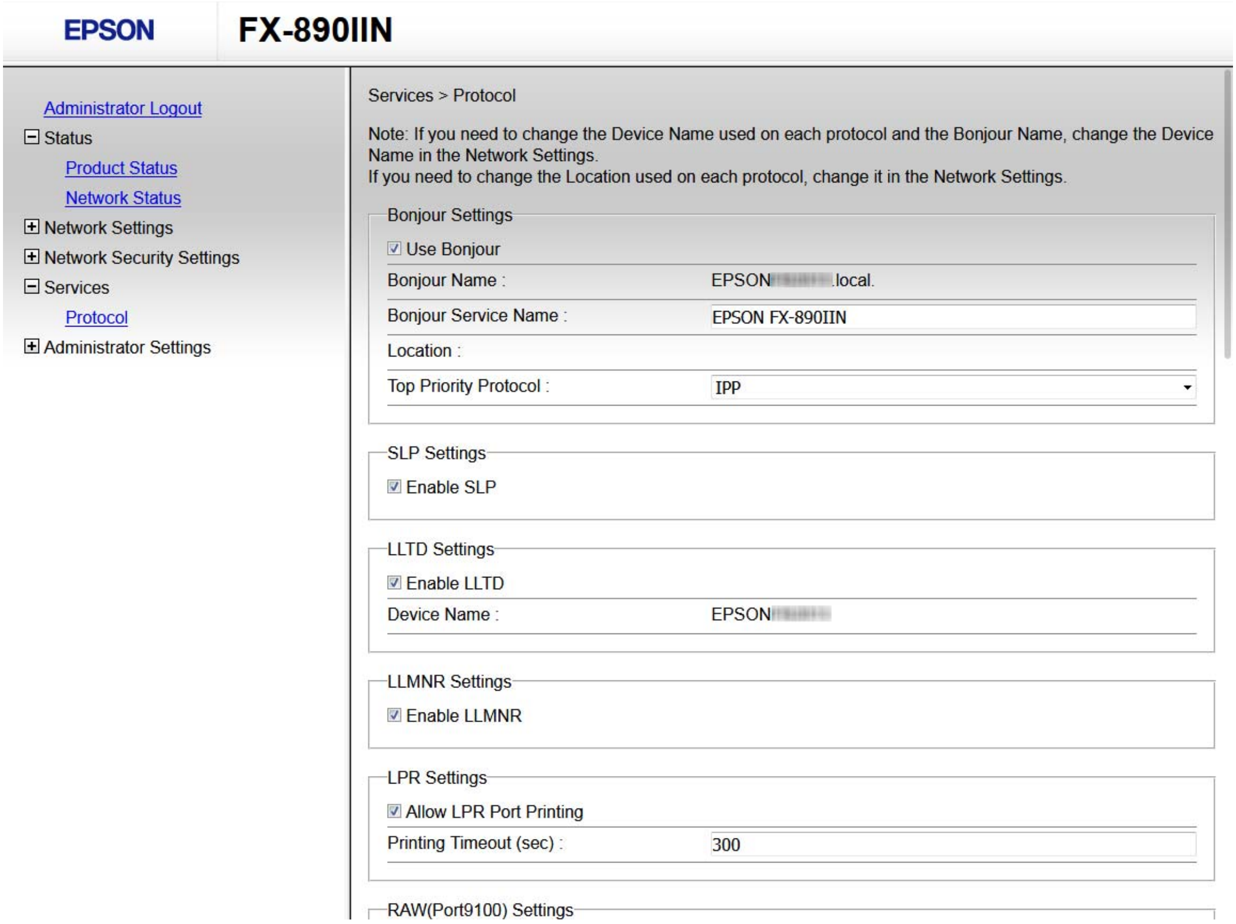
Protocol	Description
Bonjour Settings	You can specify whether to use Bonjour. Bonjour is used to search for devices, print (AirPrint), and so on.
SLP Settings	You can enable or disable the SLP function. SLP is used for network searching in EpsonNet Config.
LLTD Settings	You can enable or disable the LLTD function. When this is enabled, it is displayed on the Windows network map.
LLMNR Settings	You can enable or disable the LLMNR function. When this is enabled, you can use name resolution without NetBIOS even if you cannot use DNS.
LPR Settings	You can specify whether or not to allow LPR printing. When this is enabled, you can print from the LPR port.
RAW(Port9100) Settings	You can specify whether or not to allow printing from the RAW port (Port 9100). When this is enabled, you can print from the RAW port (Port 9100).
RAW(Custom Port) Settings	You can specify whether or not to allow printing from the RAW port (Custom Port). When this is enabled, you can print from the RAW port (Custom Port).
IPP Settings	You can specify whether or not to allow printing from IPP. When this is enabled, you can print over the Internet (including AirPrint).
FTP Settings	You can specify whether or not to allow FTP printing. When this is enabled, you can print over an FTP server.
SNMPv1/v2c Settings	You can specify whether or not to enable SNMPv1/v2c. This is used to set up devices, monitoring, and so on.
SNMPv3 Settings	You can specify whether or not to enable SNMPv3. This is used to set up encrypted devices, monitoring, etc.

Related Information

➡ “Controlling Protocols” on page 30

➡ “Protocol Setting Items” on page 32

Protocol Setting Items



EPSON FX-890IIN

Administrator Logout
⊟ Status
Product Status
Network Status
⊞ Network Settings
⊞ Network Security Settings
⊟ Services
Protocol
⊞ Administrator Settings

Services > Protocol

Note: If you need to change the Device Name used on each protocol and the Bonjour Name, change the Device Name in the Network Settings.
If you need to change the Location used on each protocol, change it in the Network Settings.

Bonjour Settings

☑ Use Bonjour

Bonjour Name : EPSON[redacted].local.

Bonjour Service Name : EPSON FX-890IIN

Location :

Top Priority Protocol : IPP

SLP Settings

☑ Enable SLP

LLTD Settings

☑ Enable LLTD

Device Name : EPSON[redacted]

LLMNR Settings

☑ Enable LLMNR

LPR Settings

☑ Allow LPR Port Printing

Printing Timeout (sec) : 300

RAW(Port9100) Settings

Items	Setting value and Description
Bonjour Settings	
Use Bonjour	Select this to search for or use devices through Bonjour. You cannot use AirPrint if this is cleared.
Bonjour Name	Displays the Bonjour name.
Bonjour Service Name	Displays the Bonjour service name.
Location	Displays the Bonjour location name.
Top Priority Protocol	Select the top priority protocol for Bonjour print.
SLP Settings	
Enable SLP	Select this to enable the SLP function. This is used with the network searching in EpsonNet Config.
LLTD Settings	
Enable LLTD	Select this to enable LLTD. The printer is displayed in the Windows network map.
Device Name	Displays the LLTD device name.
LLMNR Settings	

Items	Setting value and Description
Enable LLMNR	Select this to enable LLMNR. You can use name resolution without NetBIOS even if you cannot use DNS.
LPR Settings	
Allow LPR Port Printing	Select to allow printing from the LPR port.
Printing Timeout (sec)	Enter the timeout value for LPR printing between 0 to 3,600 seconds. If you do not want to timeout, enter 0.
RAW(Port9100) Settings	
Allow RAW(Port9100) Printing	Select to allow printing from the RAW port (Port 9100).
Printing Timeout (sec)	Enter the timeout value for RAW (Port 9100) printing between 0 to 3,600 seconds. If you do not want to timeout, enter 0.
RAW(Custom Port) Settings	
Allow RAW(Custom Port) Printing	Select to allow printing from the RAW port (Custom Port).
Port Number	Enter the port number for RAW (Custom Port) printing between 1024 to 65535 except 9100, 1865, and 2968.
Printing Timeout (sec)	Enter the timeout value for RAW (Custom Port) printing between 0 to 3,600 seconds. If you do not want to timeout, enter 0.
IPP Settings	
Enable IPP	Select to enable IPP communication. Only printers that support IPP are displayed. You cannot use AirPrint if this is disabled.
Allow Non-secure Communication	Select to allow the printer to communicate without any security measures (IPP).
Communication Timeout (sec)	Enter the timeout value for IPP printing between 0 to 3,600 seconds.
URL(Network)	Displays IPP URLs (http and https) when the printer is connected by wired LAN. The URL is a combined value of the printer's IP address, Port number, and IPP printer name.
Printer Name	Displays the IPP printer name.
Location	Displays the IPP location.
FTP Settings	
Enable FTP Server	Select to enable FTP printing. Only printers that support FTP printing are displayed.
Communication Timeout (sec)	Enter the timeout value for FTP communication between 0 to 3,600 seconds. If you do not want to timeout, enter 0.
SNMPv1/v2c Settings	
Enable SNMPv1/v2c	Select to enable SNMPv1/v2c. Only printers that support SNMPv3 are displayed.
Access Authority	Set the access authority when SNMPv1/v2c is enabled. Select **Read Only** or **Read/Write**.
Community Name (Read Only)	Enter 0 to 32 ASCII (0x20 to 0x7E) characters.
Community Name (Read/Write)	Enter 0 to 32 ASCII (0x20 to 0x7E) characters.

Items	Setting value and Description
SNMPv3 Settings	
Enable SNMPv3	SNMPv3 is enabled when the box is checked.
User Name	Enter between 1 and 32 characters using 1 byte characters.
Authentication Settings	
Algorithm	Select an algorithm for an authentication for SNMPv3.
Password	Enter the password for an authentication for SNMPv3. Enter between 8 and 32 characters in ASCII (0x20-0x7E). If you do not specify this, leave it blank.
Confirm Password	Enter the password you configured for confirmation.
Encryption Settings	
Algorithm	Select an algorithm for an encryption for SNMPv3.
Password	Enter the password for an encryption for SNMPv3. Enter between 8 and 32 characters in ASCII (0x20-0x7E). If you do not specify this, leave it blank.
Confirm Password	Enter the password you configured for confirmation.
Context Name	Enter within 32 characters or less in Unicode (UTF-8). If you do not specify this, leave it blank. The number of characters that can be entered varies depending on the language.

Related Information

➡ "Controlling Protocols" on page 30

➡ "Protocols you can Enable or Disable" on page 31

SSL/TLS Communication with the Printer

When the server certificate is set using SSL/TLS (Secure Sockets Layer/Transport Layer Security) communication to the printer, you can encrypt the communication path between computers. Do this if you want to prevent remote and unauthorized access.

About Digital Certification

❏ Certificate signed by a CA
A certificate signed by a CA (Certificate Authority) must be obtained from a certificate authority. You can ensure secure communications by using a CA-signed certificate. You can use a CA-signed certificate for each security feature.

❏ CA certificate
A CA certificate indicates that a third party has verified the identity of a server. This is a key component in a web-of-trust style of security. You need to obtain a CA certificate for server authentication from a CA that issues it.

❏ Self-signed certificate
Self-signed certificate is a certificate that the printer issues and signs itself. This certificate is unreliable and cannot avoid spoofing. If you use this certificate for an SSL/TLS certificate, a security alert may be displayed on a browser. You can use this certificate only for an SSL/TLS communication.

Related Information

➡ "Obtaining and Importing a CA-signed Certificate" on page 35
➡ "Deleting a CA-signed Certificate" on page 38
➡ "Updating a Self-signed Certificate" on page 38

Obtaining and Importing a CA-signed Certificate

Obtaining a CA-signed Certificate

To obtain a CA-signed certificate, create a CSR (Certificate Signing Request) and apply it to certificate authority. You can create a CSR using Web Config and a computer.

Follow the steps to create a CSR and obtain a CA-signed certificate using Web Config. When creating a CSR using Web Config, a certificate is the PEM/DER format.

1 Access Web Config, and then select **Network Security Settings**. Next, select **SSL/TLS** > **Certificate**.

2 Click **Generate** of **CSR**.

A CSR creating page is opened.

3 Enter a value for each item.

> ***Note:***
> *Available key length and abbreviations vary by a certificate authority. Create a request according to rules of each certificate authority.*

4 Click **OK**.

A completion message is displayed.

5 Select **Network Security Settings**. Next, select **SSL/TLS** > **Certificate**.

6 Click one of the download buttons of **CSR** according to a specified format by each certificate authority to download a CSR to a computer.

> ***Important:***
> *Do not generate a CSR again. If you do so, you may not be able to import an issued CA-signed Certificate.*

7 Send the CSR to a certificate authority and obtain a CA-signed Certificate.

Follow the rules of each certificate authority on sending method and form.

8 Save the issued CA-signed Certificate to a computer connected to the printer.

Obtaining a CA-signed Certificate is complete when you save a certificate to a destination.

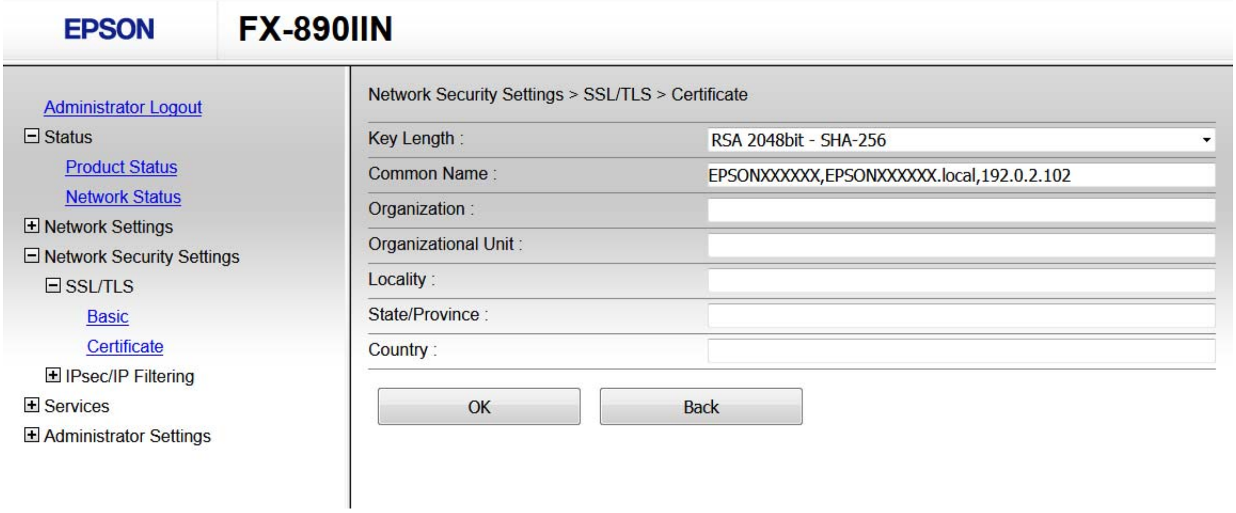
Related Information

➡ “Accessing Web Config” on page 20

➡ “CSR Setting Items” on page 36

➡ “Importing a CA-signed Certificate” on page 36

CSR Setting Items



Network Security Settings > SSL/TLS > Certificate

Key Length :	RSA 2048bit - SHA-256
Common Name :	EPSONXXXXXX,EPSONXXXXXX.local,192.0.2.102
Organization :	
Organizational Unit :	
Locality :	
State/Province :	
Country :	

Items	Settings and Explanation
Key Length	Select a key length for a CSR.
Common Name	You can enter between 1 and 128 characters. If this is an IP address, it should be a static IP address. Example: URL for accessing Web Config: https://10.152.12.225 Common name: 10.152.12.225
Organization/ Organizational Unit/ Locality/ State/Province	You can enter between 0 and 64 characters in ASCII (0x20-0x7E). You can divide distinguished names with commas.
Country	Enter a country code in two-digit number specified by ISO-3166.

Related Information

➡ “Obtaining a CA-signed Certificate” on page 35

Importing a CA-signed Certificate

> ***Important:***
>
> ❏ *Make sure that the printer’s date and time is set correctly.*
>
> ❏ *If you obtain a certificate using a CSR created from Web Config, you can import a certificate one time.*

1 Access Web Config and then select **Network Security Settings**. Next, select **SSL/TLS** > **Certificate**.

2 Click **Import**.

A certificate importing page is opened.

3 Enter a value for each item.

Depending on where you create a CSR and the file format of the certificate, required settings may vary. Enter values to required items according to the following.

□ A certificate of the PEM/DER format obtained from Web Config
- **Private Key**: Do not configure because the printer contains a private key.
- **Password**: Do not configure.
- **CA Certificate 1**/**CA Certificate 2**: Optional

□ A certificate of the PEM/DER format obtained from a computer
- **Private Key**: You need to set.
- **Password**: Do not configure.
- **CA Certificate 1**/**CA Certificate 2**: Optional

□ A certificate of the PKCS#12 format obtained from a computer
- **Private Key**: Do not configure.
- **Password**: Optional
- **CA Certificate 1**/**CA Certificate 2**: Do not configure.

4 Click **OK**.

A completion message is displayed.

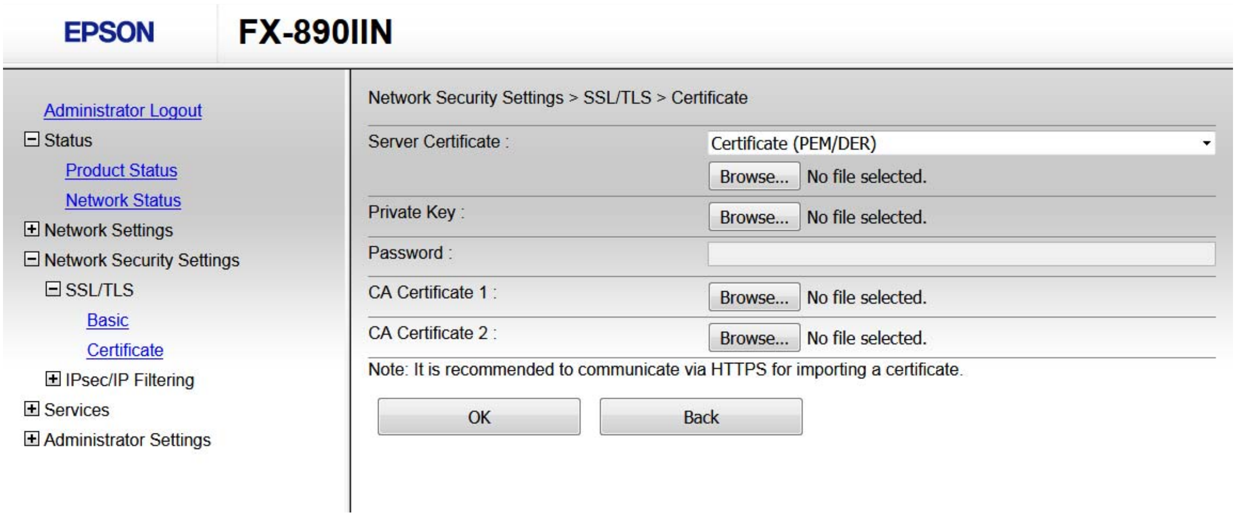
> ***Note:***
> *Click **Confirm** to verify the certificate information.*

Related Information

➡ "Accessing Web Config" on page 20

➡ "CA-signed Certificate Importing Setting Items" on page 37

CA-signed Certificate Importing Setting Items



Network Security Settings > SSL/TLS > Certificate

Server Certificate : Certificate (PEM/DER)
No file selected.

Private Key : No file selected.

Password :

CA Certificate 1 : No file selected.

CA Certificate 2 : No file selected.

Note: It is recommended to communicate via HTTPS for importing a certificate.

Items	Settings and Explanation
Server Certificate or Client Certificate	Select a certificate's format.
Private Key	If you obtain a certificate of the PEM/DER format by using a CSR created from a computer, specify a private key file that is match a certificate.
Password	Enter a password to encrypt a private key.
CA Certificate 1	If your certificate's format is **Certificate (PEM/DER)**, import a certificate of a certificate authority that issues a server certificate. Specify a file if you need.
CA Certificate 2	If your certificate's format is **Certificate (PEM/DER)**, import a certificate of a certificate authority that issues **CA Certificate 1**. Specify a file if you need.

Related Information

➡ "Importing a CA-signed Certificate" on page 36

Deleting a CA-signed Certificate

You can delete an imported certificate when the certificate has expired or when an encrypted connection is no longer necessary.

> ***Important:***
> *If you obtain a certificate using a CSR created from Web Config, you cannot import a deleted certificate again. In this case, create a CSR and obtain a certificate again.*

1. Access Web Config, and then select **Network Security Settings**. Next, select **SSL/TLS** > **Certificate**.

2. Click **Delete**.

3. Confirm that you want to delete the certificate in the message displayed.

Related Information

➡ "Accessing Web Config" on page 20

Updating a Self-signed Certificate

If the printer supports the HTTPS server feature, you can update a self-signed certificate. When accessing Web Config using a self-signed certificate, a warning message appears.

Use a self-signed certificate temporarily until you obtain and import a CA-signed certificate.

1. Access Web Config and select **Network Security Settings** > **SSL/TLS** > **Certificate**.

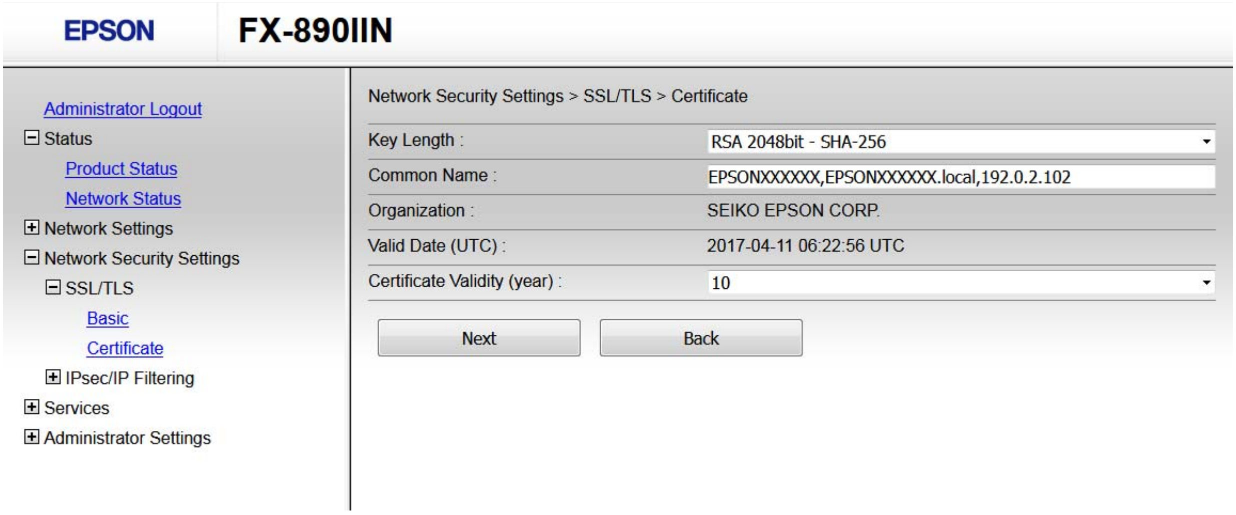
2. Click **Update**.

3. Enter **Common Name**.

   Enter an IP address, or an identifier such as an FQDN name for the printer. You can enter between 1 and 128 characters.

   > ***Note:***
   > *You can separate distinguished name (CN) with commas.*

4. Specify a validity period for the certificate.



Network Security Settings > SSL/TLS > Certificate

Key Length :	RSA 2048bit - SHA-256
Common Name :	EPSONXXXXXX,EPSONXXXXXX.local,192.0.2.102
Organization :	SEIKO EPSON CORP.
Valid Date (UTC) :	2017-04-11 06:22:56 UTC
Certificate Validity (year) :	10

5. Click **Next**.

   A confirmation message is displayed.

6. Click **OK**.

   The printer is updated.

> ***Note:***
> *Click Confirm to verify the certificate information.*

Related Information

➡ “Accessing Web Config” on page 20

Encrypted Communication Using IPsec/IP Filtering

About IPsec/IP Filtering

If the printer supports IPsec/IP Filtering, you can filter traffic based on IP addresses, services, and port. By combining of the filtering, you can configure the printer to accept or block specified clients and specified data. Additionally, you can improve security level by using an IPsec.

To filter traffic, configure the default policy. The default policy applies to every user or group connecting to the printer. For more fine-grained control over users and groups of users, configure group policies. A group policy is one or more rules applied to a user or user group. The printer controls IP packets that match with configured policies. IP packets are authenticated in the order of a group policy 1 to 10 then a default policy.

> ***Note:***
> *Computers that run Windows Vista or later or Windows Server 2008 or later support IPsec.*

Configuring Default Policy

1. Access Web Config and select **Network Security Settings** > **IPsec/IP Filtering** > **Basic**.

2. Enter a value for each item.

3. Click **Next**.

   A confirmation message is displayed.

4. Click **OK**.

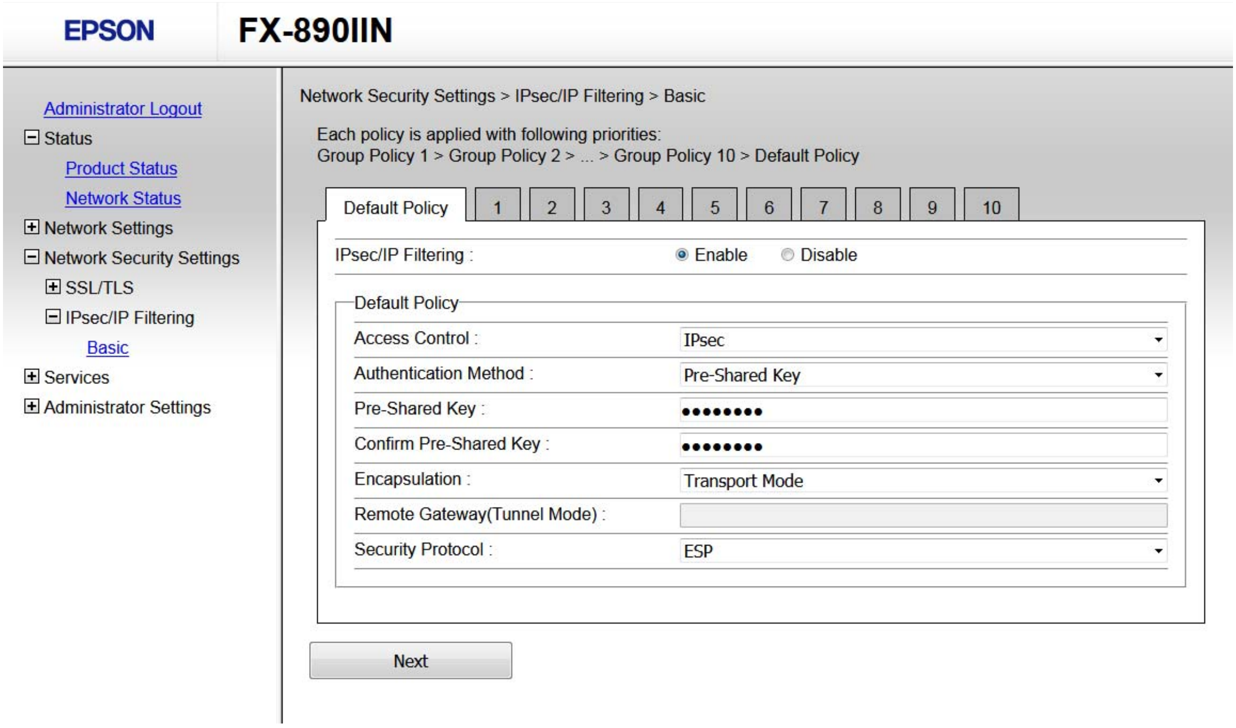
   The printer is updated.

Related Information

➡ "Accessing Web Config" on page 20

➡ "Default Policy Setting Items" on page 40

Default Policy Setting Items



Each policy is applied with following priorities:
Group Policy 1 > Group Policy 2 > ... > Group Policy 10 > Default Policy

IPsec/IP Filtering : ● Enable ○ Disable

Default Policy

Access Control :	IPsec
Authentication Method :	Pre-Shared Key
Pre-Shared Key :	••••••••
Confirm Pre-Shared Key :	••••••••
Encapsulation :	Transport Mode
Remote Gateway(Tunnel Mode) :	
Security Protocol :	ESP

Items	Settings and Explanation	
IPsec/IP Filtering	You can enable or disable an IPsec/IP Filtering feature.	
Access Control	Configure a control method for traffic of IP packets.	
	Permit Access	Select this to permit configured IP packets to pass through.
	Refuse Access	Select this to refuse configured IP packets to pass through.
	IPsec	Select this to permit configured IPsec packets to pass through.
Authentication Method	Displays compatible authentication methods.	
Pre-Shared Key	Enter a pre-shared key between 1 and 127 characters.	
Confirm Pre-Shared Key	Enter the key you configured for confirmation.	
Encapsulation	If you select **IPsec** for **Access Control**, you need to configure an encapsulation mode.	
	Transport Mode	If you only use the printer on the same LAN, select this. IP packets of layer 4 or later are encrypted.
	Tunnel Mode	If you use the printer on the Internet-capable network such as IPsec-VPN, select this option. The header and data of the IP packets are encrypted.
Remote Gateway(Tunnel Mode)	If you select **Tunnel Mode** for **Encapsulation**, enter a gateway address between 1 and 39 characters.	
Security Protocol	If you select **IPsec** for **Access Control**, select an option.	
	ESP	Select this to ensure the integrity of an authentication and data, and encrypt data.
	AH	Select this to ensure the integrity of an authentication and data. Even if encrypting data is prohibited, you can use IPsec.

Related Information

➡ “Configuring Default Policy” on page 40

Configuring Group Policy

1 Access the printer's Web Config and select **Network Security Settings** > **IPsec/IP Filtering** > **Basic**.

2 Click a numbered tab you want to configure.

3 Enter a value for each item.

4. Click **Next**.

   A confirmation message is displayed.

5. Click **OK**.

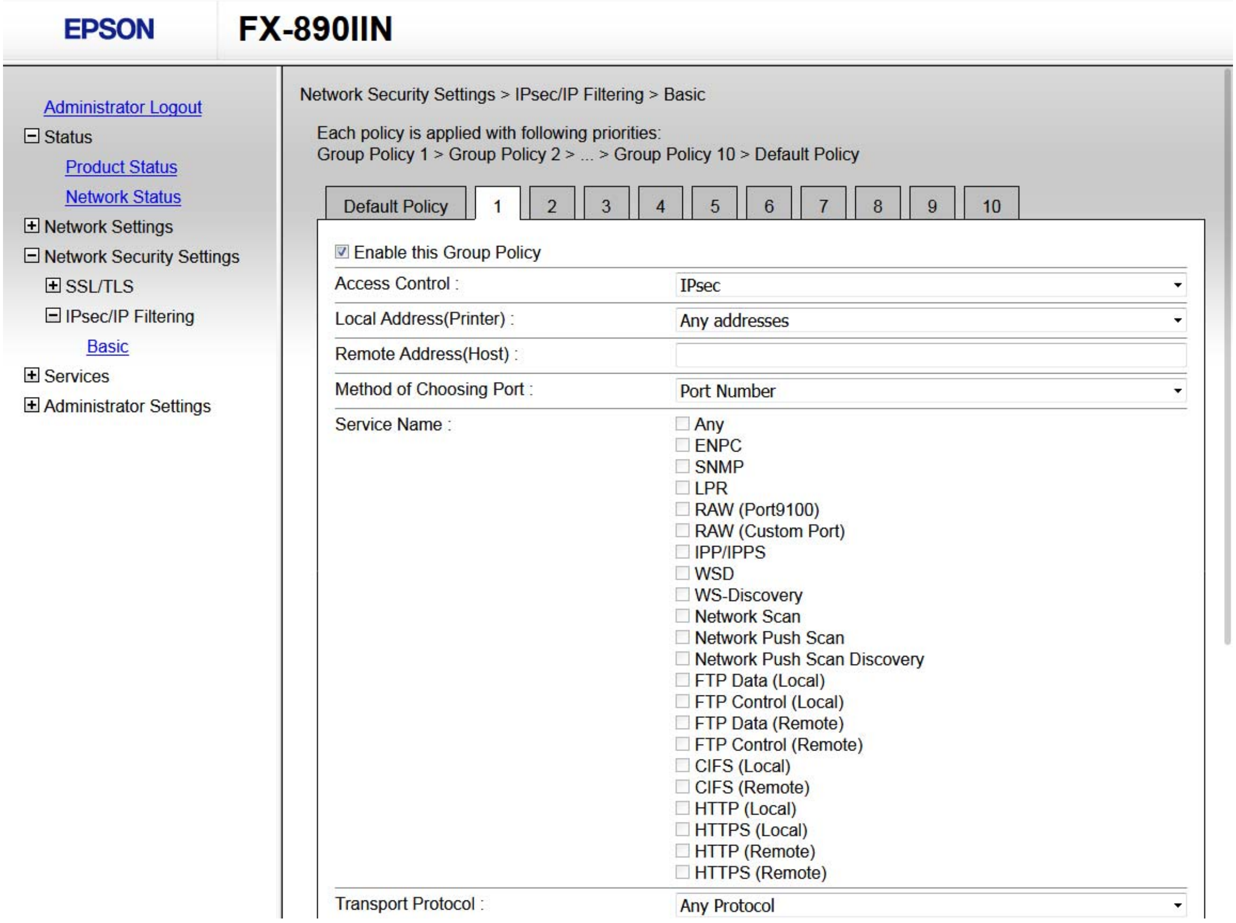
   The printer is updated.

Related Information

➡ “Accessing Web Config” on page 20

➡ “Group Policy Setting Items” on page 42

Group Policy Setting Items



Network Security Settings > IPsec/IP Filtering > Basic

Each policy is applied with following priorities:
Group Policy 1 > Group Policy 2 > ... > Group Policy 10 > Default Policy

☑ Enable this Group Policy

Access Control : IPsec

Local Address(Printer) : Any addresses

Remote Address(Host) :

Method of Choosing Port : Port Number

Service Name :
□ Any
□ ENPC
□ SNMP
□ LPR
□ RAW (Port9100)
□ RAW (Custom Port)
□ IPP/IPPS
□ WSD
□ WS-Discovery
□ Network Scan
□ Network Push Scan
□ Network Push Scan Discovery
□ FTP Data (Local)
□ FTP Control (Local)
□ FTP Data (Remote)
□ FTP Control (Remote)
□ CIFS (Local)
□ CIFS (Remote)
□ HTTP (Local)
□ HTTPS (Local)
□ HTTP (Remote)
□ HTTPS (Remote)

Transport Protocol : Any Protocol

Items	Settings and Explanation
Enable this Group Policy	You can enable or disable a group policy.

Items	Settings and Explanation	
Access Control	Configure a control method for traffic of IP packets.	
	Permit Access	Select this to permit configured IP packets to pass through.
	Refuse Access	Select this to refuse configured IP packets to pass through.
	IPsec	Select this to permit configured IPsec packets to pass through.
Local Address(Printer)	Select an IPv4 address or IPv6 address that matches your network environment. If an IP address is assigned automatically, you can select **Use auto-obtained IPv4 address**.	
Remote Address(Host)	Enter a device's IP address to control access. The IP address must be between 0 and 43 characters. If you do not enter an IP address, all addresses are controlled. Note: If an IP address is assigned automatically (e.g. assigned by DHCP), the connection may be unavailable. Configure a static IP address.	
Method of Choosing Port	Select a method to specify ports.	
Service Name	If you select **Service Name** for **Method of Choosing Port**, select an option.	
Transport Protocol	If you select **Port Number** for **Method of Choosing Port**, you need to configure an encapsulation mode.	
	Any Protocol	Select this to control all protocol types.
	TCP	Select this to control data for unicast.
	UDP	Select this to control data for broadcast and multicast.
	ICMPv4	Select this to control ping command.
Local Port	If you select **Port Number** for **Method of Choosing Port** and if you select **TCP** or **UDP** for **Transport Protocol**, enter port numbers to control receiving packets, separating them with commas. You can enter 10 port numbers at the maximum. Example: 20,80,119,5220 If you do not enter a port number, all ports are controlled.	
Remote Port	If you select **Port Number** for **Method of Choosing Port** and if you select **TCP** or **UDP** for **Transport Protocol**, enter port numbers to control sending packets, separating them with commas. You can enter 10 port numbers at the maximum. Example: 25,80,143,5220 If you do not enter a port number, all ports are controlled.	
Authentication Method	If you select **IPsec** for **Access Control**, select an option.	
Pre-Shared Key	Enter a pre-shared key between 1 and 127 characters.	
Confirm Pre-Shared Key	Enter the key you configured for confirmation.	

Items	Settings and Explanation	
Encapsulation	If you select **IPsec** for **Access Control**, you need to configure an encapsulation mode.	
	Transport Mode	If you only use the printer on the same LAN, select this. IP packets of layer 4 or later are encrypted.
	Tunnel Mode	If you use the printer on the Internet-capable network such as IPsec-VPN, select this option. The header and data of the IP packets are encrypted.
Remote Gateway(Tunnel Mode)	If you select **Tunnel Mode** for **Encapsulation**, enter a gateway address between 1 and 39 characters.	
Security Protocol	If you select **IPsec** for **Access Control**, select an option.	
	ESP	Select this to ensure the integrity of an authentication and data, and encrypt data.
	AH	Select this to ensure the integrity of an authentication and data. Even if encrypting data is prohibited, you can use IPsec.

Related Information

- ➡ “Configuring Group Policy” on page 41
- ➡ “Combination of Local Address(Printer) and Remote Address(Host) on Group Policy” on page 44
- ➡ “References of Service Name on Group Policy” on page 44

Combination of Local Address(Printer) and Remote Address(Host) on Group Policy

		Setting of Local Address(Printer)		
		IPv4	**IPv6*2**	**Any addresses*3**
Setting of Remote Address(Host)	IPv4*1	✓	-	✓
	IPv6*1*2	-	✓	✓
	Blank	✓	✓	✓

*1: If **IPsec** is selected for **Access Control**, you cannot specify in a prefix length.

*2: If **IPsec** is selected for **Access Control**, you can select a link-local address (fe80::) but group policy will be disabled.

*3: Except IPv6 link local addresses.

References of Service Name on Group Policy

> ***Note:***
> *Unavailable services are displayed but cannot be selected.*

Service Name	Protocol type	Local port number	Remote port number	Features controlled
Any	-	-	-	All services

Service Name	Protocol type	Local port number	Remote port number	Features controlled
ENPC	UDP	3289	Any port	Searching for a printer from applications such as EpsonNet Config, a printer driver and the a scanner driver
SNMP	UDP	161	Any port	Acquiring and configuring of MIB from applications such as EpsonNet Config, the Epson printer driver and the Epson scanner driver
LPR	TCP	515	Any port	Forwarding LPR data
RAW (Port9100)	TCP	9100	Any port	Forwarding RAW data
RAW (Custom Port)	TCP	2501(default)	Any port	Forwarding RAW data
IPP/IPPS	TCP	631	Any port	Forwarding AirPrint data (IPP/IPPS printing)
WSD	TCP	Any port	5357	Controlling WSD
WS-Discovery	UDP	3702	Any port	Searching for a printer from WSD
Network Scan	TCP	1865	Any port	Forwarding scan data from Document Capture Pro
Network Push Scan	TCP	Any port	2968	Acquiring job information of push scanning from Document Capture Pro
Network Push Scan Discovery	UDP	2968	Any port	Searching for a computer when push scanning from Document Capture Pro is executed
FTP Data (Local)	TCP	20	Any port	FTP server (forwarding data of FTP printing)
FTP Control (Local)	TCP	21	Any port	FTP server (controlling FTP printing)

Service Name	Protocol type	Local port number	Remote port number	Features controlled
FTP Data (Remote)	TCP	Any port	20	FTP client (forwarding scan data and received fax data) However this can control only an FTP server that uses remote port number 20.
FTP Control (Remote)	TCP	Any port	21	FTP client (controlling to forward scan data and received fax data)
CIFS (Local)	TCP	445	Any port	CIFS server (Sharing a network folder)
CIFS (Remote)	TCP	Any port	445	CIFS client (forwarding scan data and received fax data to a folder)
HTTP (Local)	TCP	80	Any port	HTTP(S) server (forwarding data of Web Config and WSD)
HTTPS (Local)	TCP	443	Any port	
HTTP (Remote)	TCP	Any port	80	HTTP(S) client (communicating between Epson Connect or Google Cloud Print, firmware updating and root certificate updating)
HTTPS (Remote)	TCP	Any port	443	

Configuration Examples of IPsec/IP Filtering

Receiving IPsec packets only
This example is to configure a default policy only.

Default Policy:

❏ **IPsec/IP Filtering**: **Enable**

❏ **Access Control**: **IPsec**

❏ **Authentication Method**: **Pre-Shared Key**

❏ **Pre-Shared Key**: Enter up to 127 characters.

Group Policy:
Do not configure.

Receiving printing data and printer settings
This example allows communications of printing data and printer configuration from specified services.

Default Policy:

- **IPsec/IP Filtering**: **Enable**

- **Access Control**: **Refuse Access**

Group Policy:

- **Enable this Group Policy**: Check the box.

- **Access Control**: **Permit Access**

- **Remote Address(Host)**: IP address of a client

- **Method of Choosing Port**: **Service Name**

- **Service Name**: Check the box of **ENPC**, **SNMP**, **HTTP (Local)**, **HTTPS (Local)** and **RAW (Port9100)**.

Receiving access from a specified IP address only
This example allows a specified IP address to access the printer.

Default Policy:

- **IPsec/IP Filtering**: **Enable**

- **Access Control**: **Refuse Access**

Group Policy:

- **Enable this Group Policy**: Check the box.

- **Access Control**: **Permit Access**

- **Remote Address(Host)**: IP address of an administrator's client

> ***Note:***
> *Regardless of policy configuration, the client will be able to access and configure the printer.*

Using SNMPv3 Protocol

About SNMPv3

SNMP is a protocol that carries out monitoring and control to collect the information of the devices that are connected to the network. SNMPv3 is the management security feature version that has been enhanced.

When using SNMPv3, state monitoring and setting changes of the SNMP communication (packet) can be authenticated and encrypted in order to protect the SNMP communication (packet) from network risks, such as wiretapping, impersonation, and tampering.

Configuring SNMPv3

If the printer supports the SNMPv3 protocol, you can monitor and control accesses to the printer.

1. Access Web Config and select **Services** > **Protocol**.

2. Enter a value for each item of **SNMPv3 Settings**.

3. Click **Next**.

   A confirmation message is displayed.

4. Click **OK**.

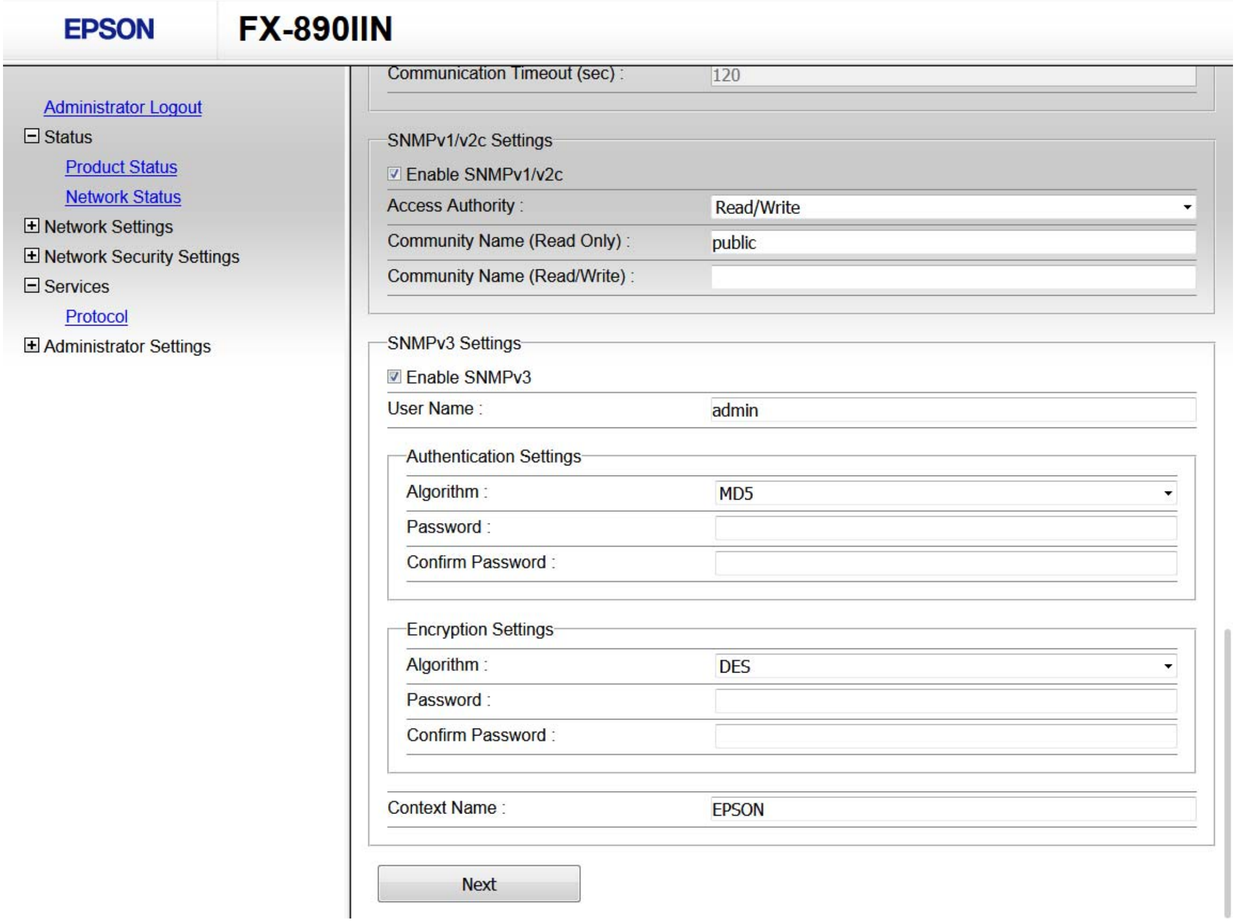
   The printer is updated.

Related Information

➡ “Accessing Web Config” on page 20

➡ “SNMPv3 Setting Items” on page 48

SNMPv3 Setting Items



Communication Timeout (sec) : 120

SNMPv1/v2c Settings

☑ Enable SNMPv1/v2c

Access Authority : Read/Write

Community Name (Read Only) : public

Community Name (Read/Write) :

SNMPv3 Settings

☑ Enable SNMPv3

User Name : admin

Authentication Settings

Algorithm : MD5

Password :

Confirm Password :

Encryption Settings

Algorithm : DES

Password :

Confirm Password :

Context Name : EPSON

Items	Settings and Explanation
Enable SNMPv3	SNMPv3 is enabled when the box is checked.
User Name	Enter between 1 and 32 characters using 1 byte characters.
Authentication Settings	
Algorithm	Select an algorithm for an authentication.
Password	Enter between 8 and 32 characters in ASCII (0x20-0x7E).
Confirm Password	Enter the password you configured for confirmation.
Encryption Settings	
Algorithm	Select an algorithm for an encryption.
Password	Enter between 8 and 32 characters in ASCII (0x20-0x7E).
Confirm Password	Enter the password you configured for confirmation.
Context Name	Enter between 1 and 32 characters using 1 byte characters.

Related Information

➡ "Configuring SNMPv3" on page 48

Solving Problems

Checking the Log for Server and Network Device

If trouble occurred in the network connection, you may be able to identify the cause by checking the log for the mail server or the LDAP server or the status by using the system log for the network device, such as a router, or commands.

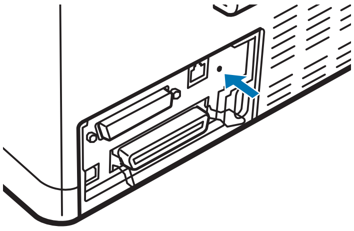
Printing a Network Status Sheet

You can print out and check detailed network information.

1. Load paper.

2. Hold down the Status sheet button for about three seconds.

   The network status sheets are printed.



Initializing the Network Settings

Restoring the Network Settings from the Printer

You can restore network settings to their defaults.

1. Turn off the printer.

2. Hold down the Status sheet button while turning on the printer.

Restoring the Network Settings using EpsonNet Config

You can restore network settings to their defaults by using EpsonNet Config.

1. Start EpsonNet Config.

2. Select the printer for which you want to restore the network settings.

3. Right-click the printer name, and then select **Default Settings** > **Network Interface**.

4. Click **OK** on the confirmation screen.

5. Click **OK**.

Checking the Communication between Devices and Computers

Checking the Connection Using a Ping Command

You can use a Ping command to make sure the computer is connected to the printer. Follow the steps below to check the connection using a Ping command.

1. Check the printer's IP address for the connection that you want to check.

   You can check this from the **IP Address** column of a network status sheet.

2. Display the computer's command prompt screen.

   ❏ Windows 10
   Right-click the start button or press and hold it, and then select **Command Prompt**.

   ❏ Windows 8.1/Windows 8/Windows Server 2012 R2/Windows Server 2012
   Display the application screen, and then select **Command Prompt**.

   ❏ Windows 7/Windows Server 2008 R2/Windows Vista/Windows Server 2008 or earlier
   Click the start button, select **All Programs** or **Programs** > **Accessories** > **Command Prompt**.

3. Enter the following in the command line, and then press Enter.

   ping 192.0.2.111 (If the IP address of the computer you want to check is 192.0.2.111)

4. If the following is displayed, confirmation is complete. Close the **Command Prompt**.

```
Ping statistics for 192.0.2.111:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Round-trip time: (ms):
Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

Problems Using Network Software

Cannot Access Web Config

Is the IP address of the printer properly configured?

Configure the IP address using EpsonNet Config or the printer's control panel. You can confirm the current setting information with a network status sheet or from the printer's control panel.

Does your browser support the bulk encryptions for the Encryption Strength for SSL/TLS?

The bulk encryptions for the Encryption Strength for SSL/TLS are as follows. Web Config can only be accessed in a browser supporting the following bulk encryptions. Check your browser's encryption support.

- 80bit: AES256/AES128/3DES
- 112bit: AES256/AES128/3DES
- 128bit: AES256/AES128
- 192bit: AES256
- 256bit: AES256

The message "Out of date" appears when accessing Web Config using SSL communication (https).

If the certificate is out of date, obtain the certificate again. If the message appears before its expiration date, make sure that the printer's date is configured correctly.

The message "The name of the security certificate does not match···" appears when accessing Web Config using SSL communication (https).

The printer's IP address entered for Common Name for creating a self-signed certificate or CSR does not match with the address entered into the browser. Obtain and import a certificate again or change the printer name.

The printer is being accessed via a proxy server.

If you are using a proxy server with your printer, you need to configure your browser's proxy settings.

Select **Control Panel** > **Network and Internet** > **Internet Options** > **Connections** > **LAN settings** > **Proxy server**, and then configure not to use the proxy server for local addresses.

Example:
192.168.1.*: Local address 192.168.1.XXX, subnet mask 255.255.255.0
192.168.*.*: Local address 192.168.XXX.XXX, subnet mask 255.255.0.0

Related Information

➡ "Accessing Web Config" on page 20
➡ "Assigning an IP Address Using EpsonNet Config" on page 14

Model name and/or IP address are not displayed on EpsonNet Config

Did you select Block, Cancel, or Shut down when a Windows security screen or a firewall screen was displayed?

If you select **Block**, **Cancel**, or **Shut down**, the IP address and model name will not display on EpsonNet Config or EpsonNet Setup.

To correct this, register EpsonNet Config as an exception using Windows firewall and commercial security software. If you use an antivirus or security program, close it and then try to use EpsonNet Config.

Is the communication error timeout setting too short?

Run EpsonNet Config and select **Tools** > **Options** > **Timeout**, and then increase the length of time for the **Communication Error** setting. Note that doing so can cause EpsonNet Config to run more slowly.

Solving Problems for Advanced Security

Restoring the Security Settings

When you establish a highly secure environment such as IPsec/IP Filtering, you may not be able to communicate with devices because of incorrect settings or trouble with the device or server. In this case, restore the security settings in order to make settings for the device again or to allow you temporary use.

Disabling the Security Function from the Printer

You can disable IPsec/IP Filtering from the printer.

1. Make sure paper is loaded.

2. Press the **Menu** (**Pitch** and **Tear Off/Bin**) buttons until the printer beep once and the **Menu** lights (both the **Tear Off/Bin** lights) turn on.

   The printer enters the default-setting mode and prints a message prompting you to select the language for the default-setting menu. The language which is underlined indicates the current setting.

3. If the language you want is not selected, press the **Item⬇** (Font) button until the printout indicates the language you want.

4. Press the **Set** (**Tear Off/Bin**) button to select the desired language.

5. If you want to print the current settings, press the **Set** button. If you want to bypass printing of the current settings, press the **Item⬇** button or the **Item⬆** button.

   The printer prints the first menu and the current value of the menu.

6. Press the **Item⬇** button or the **Item⬆** button to select the menu parameters of **IPsec/IP Filtering**. Press the **Set** button to scroll through the values within the selected parameter until you find **Off**.

7 After you finish settings, press the **Menu** (**Pitch** and **Tear Off/Bin**) buttons.

The **Menu** lights (both of the **Tear Off/Bin** lights) turn off and the printer exits the default-setting mode. The settings you made is saved as new value.

> ***Note:***
> *If you turn off the printer prior to exiting default-setting mode, any changes you may have made are canceled and not saved.*

Restoring the Security Function Using Web Config

You can disable the function if you can access the device from the computer.

Disabling IPsec/IP Filtering Using Web Config

1 Access Web Config and select **Network Security Settings** > **IPsec/IP Filtering** > **Basic**.

2 Select **Disable** for **IPsec/IP Filtering** in **Default Policy**.

3 Click **Next**, and then clear **Enable this Group Policy** for all group policies.

4 Click **OK**.

Related Information

➡ “Accessing Web Config” on page 20

Problems Using Network Security Features

Forgot a Pre–shared Key

Configure the key again using Web Config.

To change the key, access Web Config and select **Network Security Settings** > **IPsec/IP Filtering** > **Basic** > **Default Policy** or **Group Policy**.

Related Information

➡ “Accessing Web Config” on page 20

Cannot Communicate with IPsec Communication

Are you using an unsupported algorithm for the computer settings?

The printer supports the following algorithms.

Security Methods	Algorithms
Encryption Algorithm	AES-CBC 128,AES-CBC 192,AES-CBC 256,3DES-CBC,DES-CBC
Hash Algorithm	SHA-1,SHA2-256,SHA2-384,SHA2-512,MD5
Key exchange Algorithm	Diffi e-Hellman Group2,Diffi e-Hellman Group1*,Diffi e-Hellman Group14* Elliptic Curve Diffi e- Hellman P-256*,Elliptic Curve Diffi e-Hellman P-384*

*Available method may vary by models.

Related Information

➡ "Encrypted Communication Using IPsec/IP Filtering" on page 39

Cannot Communicate Suddenly

Is the printer's IP address invalid or has it changed?

Disable IPsec using the printer's control panel.

If the DHCP is out of date, rebooting or the IPv6 address is out of date or has not been obtained, then the IP address registered for the printer's Web Config (**Network Security Settings** > **IPsec/IP Filtering** > **Basic** > **Group Policy** > **Local Address(Printer)**) may not be found. Use a static IP address.

Is the computer's IP address invalid or has it changed?

Disable IPsec using the printer's control panel.

If the DHCP is out of date, rebooting or the IPv6 address is out of date or has not been obtained, then the IP address registered for the printer's Web Config (**Network Security Settings** > **IPsec/IP Filtering** > **Basic** > **Group Policy** > **Remote Address(Host)**) may not be found. Use a static IP address.

Related Information

➡ "Accessing Web Config" on page 20

➡ "Encrypted Communication Using IPsec/IP Filtering" on page 39

Cannot Create the Secure IPP Printing Port

Is the correct certificate specified as the server certificate for SSL/TLS communication?

If the specified certificate is not correct, creating a port may fail. Make sure you are using the correct certificate.

Is a CA certificate imported to the computer accessing the printer?

If a CA certificate is not imported to the computer, creating a port may fail. Make sure a CA certificate is imported.

Related Information

➡ "Accessing Web Config" on page 20

Cannot Connect After Configuring IPsec/IP Filtering

The set value may be incorrect.

Disable IPsec/IP filtering from the printer's control panel. Connect the printer and computer and make the IPsec/IP Filtering settings again.

Related Information

➡ "Encrypted Communication Using IPsec/IP Filtering" on page 39

Problems on Using a Digital Certificate

Cannot Import a CA-signed Certificate

Does the CA-signed certificate and the information on the CSR match?

If the CA-signed certificate and CSR do not have the same information, the CSR cannot be imported. Check the following:

❏ Are you trying to import the certificate to a device that does not have the same information?

  Check the information of the CSR and then import the certificate to a device that has the same information.

❏ Did you overwrite the CSR saved into the printer after sending the CSR to a certificate authority?

  Obtain the CA-signed certificate again with the CSR.

Is the CA-signed certificate more than 5KB?

You cannot import a CA-signed certificate that is more than 5KB.

Is the password for importing the certificate correct?

If you forget the password, you cannot import the certificate.

Related Information

➡ "Importing a CA-signed Certificate" on page 36

Cannot Update a Self-Signed Certificate

Has the Common Name been entered?

Common Name must be entered.

Have unsupported characters been entered to Common Name? For example, Japanese is not supported.

Enter between 1 and 128 characters of either IPv4, IPv6, host name, or FQDN format in ASCII (0x20-0x7E).

Is a comma or space included in the Common Name?

If a comma is entered, the **Common Name** is divided at that point. If only a space is entered before or after a comma, an error occurs.

Related Information

➡ "Updating a Self-signed Certificate" on page 38

Cannot Create a CSR

Has the Common Name been entered?

The **Common Name** must be entered.

Have unsupported characters been entered to Common Name, Organization, Organizational Unit, Locality, State/Province? For example, Japanese is not supported.

Enter characters of either IPv4, IPv6, host name, or FQDN format in ASCII (0x20-0x7E).

Is a comma or space included in the Common Name?

If a comma is entered, the **Common Name** is divided at that point. If only a space is entered before or after a comma, an error occurs.

Related Information

➡ "Obtaining a CA-signed Certificate" on page 35

Warning Relating to a Digital Certificate Appears

Messages	Cause/What to do
Enter a Server Certificate.	**Cause:** You have not selected a file to import. **What to do:** Select a file and click Import.
CA Certificate 1 is not entered.	**Cause:** CA certificate 1 is not entered and only CA certificate 2 is entered. **What to do:** Import CA certificate 1 first.
Invalid value below.	**Cause:** Unsupported characters are contained in the file path and/or password. **What to do:** Make sure that the characters are entered correctly for the item.
Invalid date and time.	**Cause:** Date and time for the printer have not been set. **What to do:** Set date and time using Web Config, or Epson Device Admin.
Invalid password.	**Cause:** The password set for CA certificate and entered password do not match. **What to do:** Enter the correct password.

Messages	Cause/What to do
Invalid file.	**Cause:** You are not importing a certificate file in X509 format. **What to do:** For more information on the certificate, see the website of the certificate authority.
	Cause: The file you have imported is too large. The maximum file size is 5KB. **What to do:** If you select the correct file, the certificate might be corrupted or fabricated.
	Cause: The chain contained in the certificate is invalid. **What to do:** For more information on the certificate, see the website of the certificate authority.
Cannot use the Server Certificates that include more than three CA certificates.	**Cause:** The certificate file in PKCS#12 format contains more than 3 CA certificates. **What to do:** Import each certificate as converting from PKCS#12 format to PEM format, or import the certificate file in PKCS#12 format that contains up to 2 CA certificates.
The certificate has expired. Check if the certificate is valid, or check the date and time on your printer.	**Cause:** The certificate is out of date. **What to do:** ❏ If the certificate is out of date, obtain and import the new certificate. ❏ If the certificate is not out of date, make sure the printer's date and time are set correctly.
Private key is required.	**Cause:** There is no paired private key with the certificate. **What to do:** ❏ If the certificate is the PEM/DER format and it is obtained from a CSR using a computer, specify the private key file. ❏ If the certificate is the PKCS#12 format and it is obtained from a CSR using a computer, create a file that contains the private key.
	Cause: You have re-imported the PEM/DER certificate obtained from a CSR using Web Config. **What to do:** If the certificate is the PEM/DER format and it is obtained from a CSR using Web Config, you can only import it once.
Setup failed.	**Cause:** Cannot finish the configuration because the communication between the printer and computer failed or the file cannot be read by some errors. **What to do:** After checking the specified file and communication, import the file again.

Related Information

➡ “About Digital Certification” on page 34

Delete a CA-signed Certificate by Mistake

Is there a backup file for the certificate?

If you have the backup file, import the certificate again.

If you obtain a certificate using a CSR created from Web Config, you cannot import a deleted certificate again.Create a CSR and obtain a new certificate.

Related Information

➡ “Deleting a CA-signed Certificate” on page 38

➡ “Importing a CA-signed Certificate” on page 36

Appendix

Introduction of Network Software

The following describes the software that configures and manages devices.

Epson Device Admin

Epson Device Admin is an application that allows you to install devices on the network, and then configure and manage the devices. You can acquire detailed information for devices such as status and consumables, send notifications of alerts, and create reports for device usage. You can also make a template containing setting items and apply it to other devices as shared settings. You can download Epson Device Admin from Epson support website. For more information, see the documentation or help of Epson Device Admin.

Running Epson Device Admin (Windows only)

Select **All Programs** > **EPSON** > **Epson Device Admin** > **Epson Device Admin**.

> ***Note:***
> *If the firewall alert appears, allow access for Epson Device Admin.*

EpsonNet Print

EpsonNet Print is a software to print on the TCP/IP network. There are features and restrictions listed below.

❏ The printer's status is displayed on the spooler screen

❏ If the printer’s IP address is changed by DHCP, the printer is still detected.

❏ You can use a printer located on a different network segment.

❏ You can print using one of the various protocols.

❏ IPv6 address is not supported.

EpsonNet SetupManager

EpsonNet SetupManager is a software to create a package for a simple printer installation, such as installing the printer driver, installing EPSON Status Monitor and creating a printer port. This software allows the administrator to create unique software packages and distribute them among groups.

For more information, visit your regional Epson website.