LJ4000D/LJ4000DN
LJ5000DN

Laser Printer

激光打印机

在线阅读用户手册
Online User's Guide

! 注意 使用本产品时，请您先仔细阅读使用说明书，再正确操作。
请妥善保管好本手册，以便日后查阅。

!CAUTION Before using this product, read carefully these instructions for correct operation.
Keep the User's Guide in a secure place for future reference.

lenovo

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Statement

Welcome to Lenovo products.

Please read carefully all the materials accompanying the machine before installing and using this product for the first time. It will help you make better use of the product. If you fail to operate the product in accordance with the instructions and requirements provided in this manual or mishandle the product due to misunderstanding or other causes, Lenovo (Beiijng) Limited shall not be responsible for any losses arising out thereof, except for the loss resulting from improper installation or caused during the process of operation by professional maintenance personnel from Lenovo.

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The manual is intended to help you use Lenovo products in a correct way, which does not represent any description of software or hardware configuration for the product. In relation to product configuration, please refer to relevant contract (if any) and packing list or consult with the distributor who delivered the product to you. Pictures contained in the manual are for reference only. In case of inconsistency between particular pictures and actual display of the product, please follow the actual display of the product.

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Before You Use Your Lenovo Machine

- Applicable Models
- Definitions of Notes
- Trademarks
- Important Note

Applicable Models

This User's Guide applies to the following models:
LJ4000D/LJ4000DN/LJ5000DN

Related Information

- Before You Use Your Lenovo Machine

Definitions of Notes

We use the following symbols and conventions throughout this User's Guide:

⚠ WARNING	WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injuries.
⚠ CAUTION	CAUTION indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injuries.
IMPORTANT	IMPORTANT indicates a potentially hazardous situation which, if not avoided, may result in damage to property or loss of product functionality.
NOTE	NOTE specifies the operating environment, conditions for installation, or special conditions of use.
	Tips icons indicate helpful hints and supplementary information.
	Electrical Hazard icons alert you to possible electrical shock.
	Fire Hazard icons alert you to the possibility of a fire.
	Hot Surface icons warn you not to touch hot machine parts.
	Prohibition icons indicate actions you must not perform.
Bold	Bold style identifies buttons on the machine's control panel or computer screen.
Italics	Italicised style emphasises an important point or refers you to a related topic.
`Courier New`	Courier New font identifies messages shown on the machine's LCD.

Related Information

- Before You Use Your Lenovo Machine

Trademarks

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Related Information

- Before You Use Your Lenovo Machine

Important Note

- Do not use this product outside the country of purchase as it may violate the power regulations of that country.
- For Windows® 10 Users:

  This machine supports Microsoft® Windows® 10. Follow the Quick Setup Guide included with your machine for setup and software installation instructions. All features available in Windows® 7 or Windows® 8 are also available, and work in a similar way in the Windows® 10 environment.
- For OS X 10.11.x Users:

  This machine supports OS X 10.11.x. Follow the Quick Setup Guide included with your machine for setup and software installation instructions. All features available in OS X 10.8.5, OS X 10.9.x or OS X 10.10.x are also available, and work in a similar way in the OS X 10.11.x environment.
- Windows® XP in this document represents Windows® XP Professional, Windows® XP Professional x64 Edition and Windows® XP Home Edition.
- Windows Server® 2008 in this document represents Windows Server® 2008 and Windows Server® 2008 R2.
- Unless otherwise specified, the screens in this manual are from Windows® 7 and OS X v10.9.x. Screens on your computer may vary depending on your operating system.

Related Information

- Before You Use Your Lenovo Machine

Introduction to Your Lenovo Machine

- Before Using Your Machine
- Front View and Back View
- Control Panel Overview
- Access Lenovo Utilities (Windows®)

Before Using Your Machine

Before attempting any printing operation, confirm the following:

- Make sure you have installed the printer driver.
- For USB or network cable users: Make sure the interface cable is physically secure.

Firewall (Windows®)

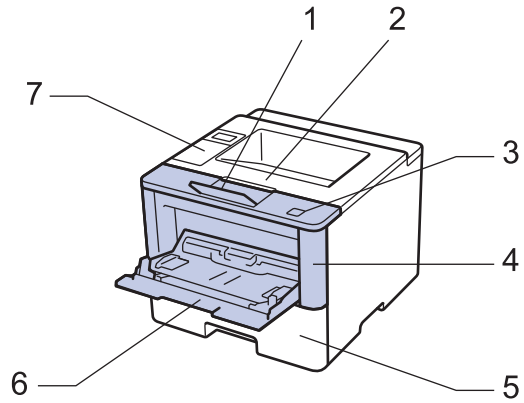
If your computer is protected by a firewall and you are unable to network print, you may need to configure the firewall settings. If you are using the Windows® Firewall and you installed the printer driver from the CD-ROM, the necessary firewall settings have already been set. If you are using any other personal firewall software, see the User's Guide for your software or contact the software manufacturer.

Related Information

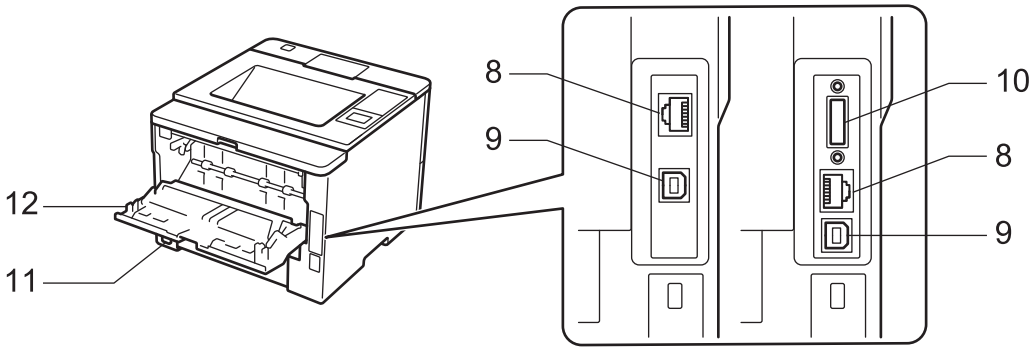
- Introduction to Your Lenovo Machine

Front View and Back View

Front View



Back View



1. Face down output tray support flap (support flap)
2. Face down output tray
3. Front cover release button
4. Front cover
5. Paper tray
6. Multi-purpose tray (MP tray)
7. Control panel with a Liquid Crystal Display (LCD)
8. (For wired network models)
   10BASE-T / 100BASE-TX / 1000BASE-T(LJ5000DN) port
9. USB port
10. Parallel port (LJ4000D)
11. AC power connector / cord
12. Back cover (Face up output tray)

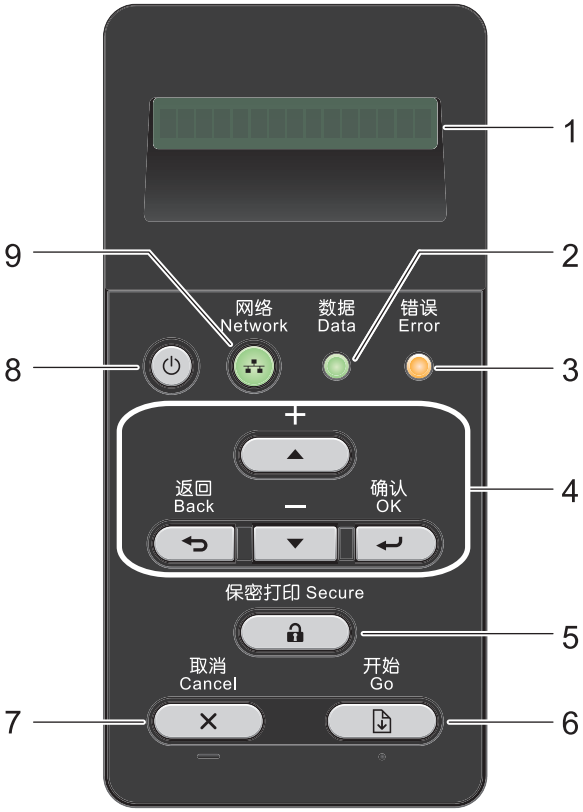
The machine is equipped with a non-detachable AC power cord depending on the model.

Related Information

- Introduction to Your Lenovo Machine

Control Panel Overview

The control panel may vary depending on your model.



1. **Liquid Crystal Display (LCD)**

   Displays messages to help you set up and use the machine.

2. **Data LED**

   The **Data** LED blinks depending on the machine's status.

   When the **Data** LED is on, data is in the machine's memory. When the **Data** LED blinks, the machine is receiving or processing data.

3. **Error LED**

   The **Error** LED blinks when the LCD displays an error or an important status message.

4. **Menu Buttons**

   OK

   Press to store your machine's settings. After you change a setting, the machine returns to the previous menu level.

   Back

   - Press to go back one level in the menu.
   - Press to select the previous digit when entering numbers.

   ▲ or ▼ (+ or -)

   - Press to scroll through menus and options.
   - Press to enter a number or to increase or decrease the number. Hold down ▲ or ▼ to scroll faster. When you see the number you want, press **OK**.

5. **Secure**

   Press to print jobs saved in the memory when you enter your four-digit password.

6. **Go**

   - Press to clear certain error messages. To clear all other errors, follow the LCD instructions.

- Press to print any data remaining in the machine's memory.
- Press to select the displayed option. After you change a setting, the machine returns to Ready Mode.

7. **Cancel**
   - Press to cancel the current setting.
   - Press to cancel a programmed print job and clear it from the machine's memory. To cancel multiple print jobs, hold down **Cancel** until the LCD displays `[Cancel All Jobs]`.
8. **Power On/Off**
   - Turn the machine on by pressing .
   - Turn the machine off by pressing and holding down . The LCD displays `[Shutting Down]` for a few seconds before going off.
9. **Network or Toner Save buttons**
   - Non-Network Models:

     Toner Save

     Press the **Toner Save** button to turn on or off Toner Save mode.
   - Wired Network Models:

     Network

     Press the **Network** button to set up wired network settings.

Related Information

- Introduction to Your Lenovo Machine

Access Lenovo Utilities (Windows®)

Lenovo Utilities is an application launcher that offers convenient access to all Lenovo applications installed on your computer.

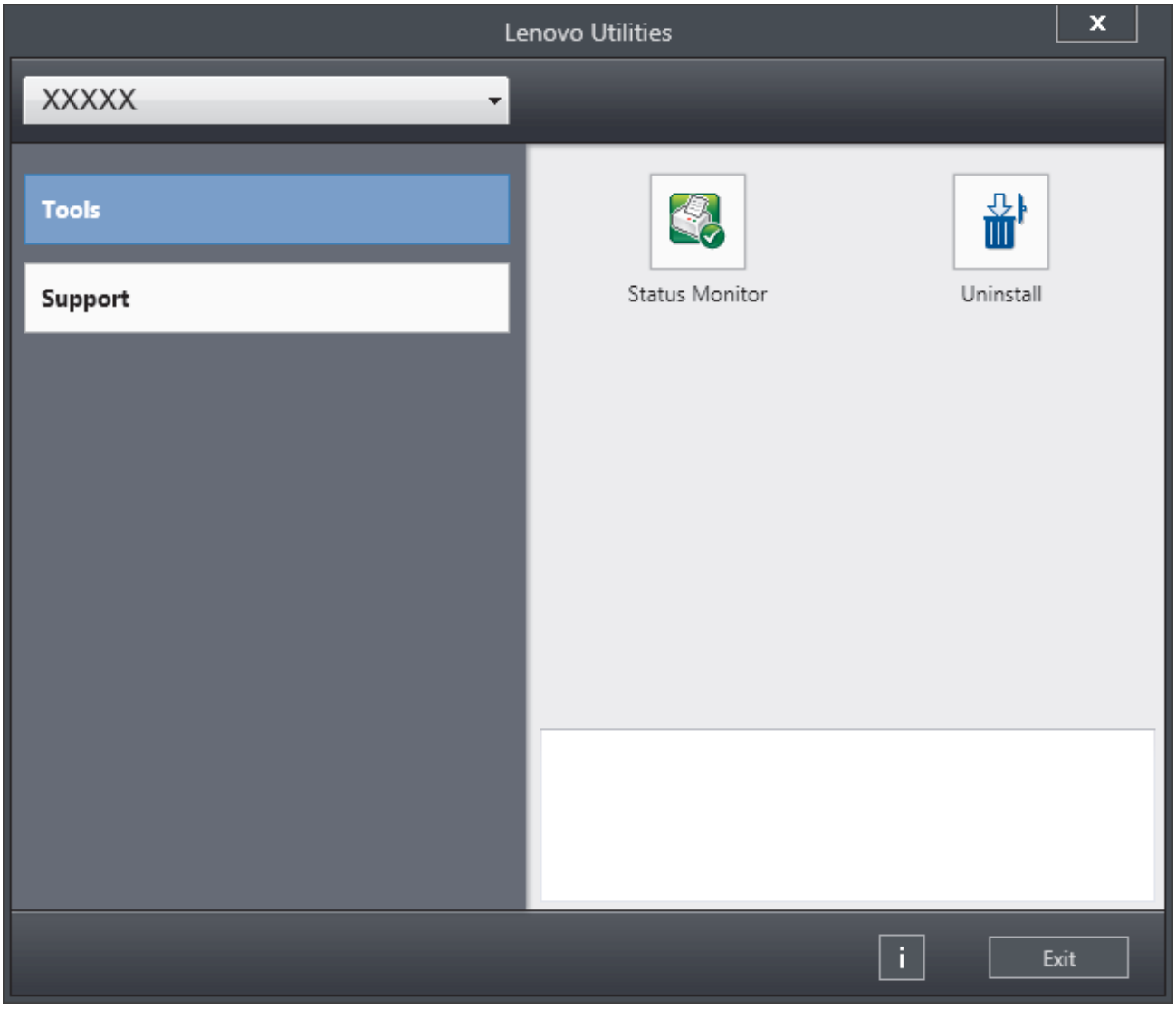
1. Do one of the following:
   - (Windows® XP, Windows Vista®, Windows® 7, Windows Server® 2008 and Windows Server® 2008 R2)

     Click **(Start)** > **All Programs** > **Lenovo** > **Lenovo Utilities**.
   - (Windows® 8 and Windows Server® 2012)

     Tap or click (**Lenovo Utilities**) either on the **Start** screen or the desktop.
   - (Windows® 8.1 and Windows Server® 2012 R2)

     Move your mouse to the lower left corner of the **Start** screen and click (if you are using a touch-based device, swipe up from the bottom of the **Start** screen to bring up the **Apps** screen).

     When the **Apps** screen appears, tap or click (**Lenovo Utilities**).
2. Select your machine (where XXXX is the name of your model).



3. Choose the operation you want to use.

Related Information

- Introduction to Your Lenovo Machine
- Uninstall the Lenovo Software and Drivers (Windows®)

Uninstall the Lenovo Software and Drivers (Windows®)

1. Do one of the following:
   - (Windows® XP, Windows Vista®, Windows® 7, Windows Server® 2008 and Windows Server® 2008 R2)

     Click **(Start)** > **All Programs** > **Lenovo** > **Lenovo Utilities**.
   - (Windows® 8 and Windows Server® 2012)

     Tap or click (**Lenovo Utilities**) either on the **Start** screen or the desktop.
   - (Windows® 8.1 and Windows Server® 2012 R2)

     Move your mouse to the lower left corner of the **Start** screen and click (if you are using a touch-based device, swipe up from the bottom of the **Start** screen to bring up the **Apps** screen).

     When the **Apps** screen appears, tap or click (**Lenovo Utilities**).
2. Click the drop-down list, and then select your model name (if not already selected). Click **Tools** in the left navigation bar, and then click **Uninstall**.

   Follow the instructions in the dialog box to uninstall the software and drivers.

Related Information

- Access Lenovo Utilities (Windows®)

Paper Handling

- Load Paper
- Paper Settings
- Unprintable Area
- Recommended Print Media
- Using Special Paper

Load Paper

- Load and Print Using the Paper Tray
- Load and Print Using the Multi-purpose Tray (MP Tray)

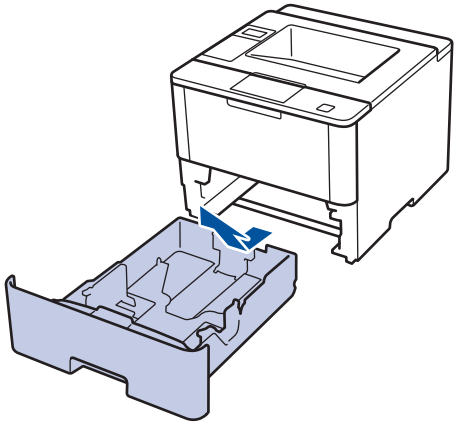
Load and Print Using the Paper Tray

- Load and Print Plain Paper, Letterhead, Coloured Paper, Thin Paper and Recycled Paper Using the Paper Tray
- Load and Print Thick Paper Using the Paper Tray
- Printing Problems
- Error and Maintenance Messages

Load and Print Plain Paper, Letterhead, Coloured Paper, Thin Paper and Recycled Paper Using the Paper Tray

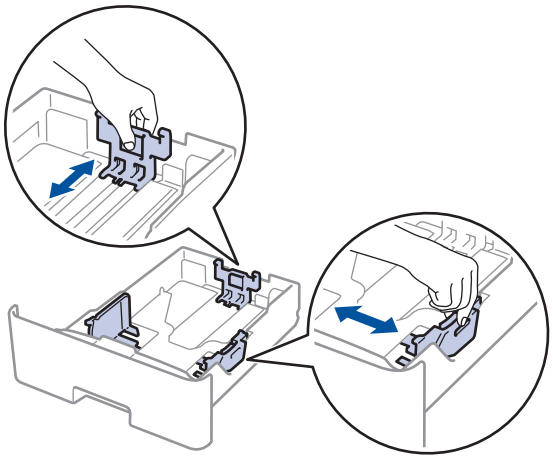
- If the Check Size setting is set to On and you pull the paper tray out of the machine, a message appears on the LCD asking if you want to change the paper size and paper type. Change the paper size and paper type settings if needed, following the LCD instructions.
- When you load a different size and type of paper in the tray, you must change the Paper Size and Paper Type settings in the machine or on your computer, also.

1. Pull the paper tray completely out of the machine.



2. Press and slide the paper guides to fit the paper.

   Press the green release levers to slide the paper guides.

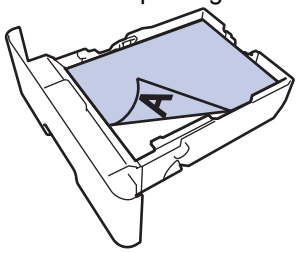


3. Fan the stack of paper well.
4. Load paper in the paper tray with the printing surface *face down*.

   When you use Letterhead or Preprinted paper, load the paper in the correct orientation as shown in the illustrations.

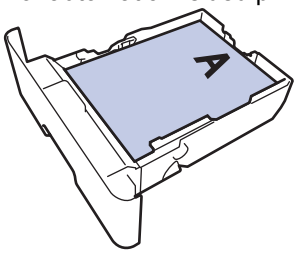
Paper Orientation for Letterhead and Preprinted Paper

For 1-sided printing



- face down
- top edge toward the front of the paper tray

For automatic 2-sided printing (long edge binding)

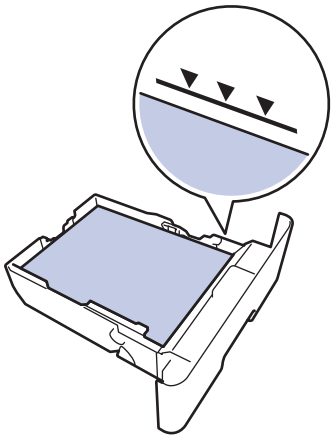


- face up
- bottom edge toward the front of the paper tray

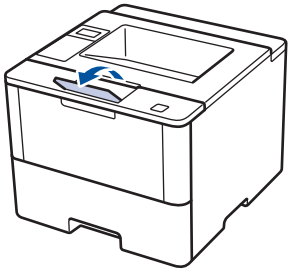
- DO NOT load different sizes and types of paper in the paper tray at the same time. Doing this may cause the paper to jam or misfeed.
- When you use Letterhead or Preprinted paper for 2-sided printing, change the machine's setting by completing the following step:
  - Press `[Paper Tray]` > `[2-sided]` > `[Single Image]` > `[2-sided Feed]`.

5. Make sure the paper is below the maximum paper mark (▼▼▼).

   Overfilling the paper tray will cause paper jams.



6. Slowly push the paper tray completely into the machine.
7. Lift the support flap to prevent paper from sliding off the output tray.



8. Send your print job to the machine.

Change your print preferences in the Print dialog box before sending the print job from your computer.

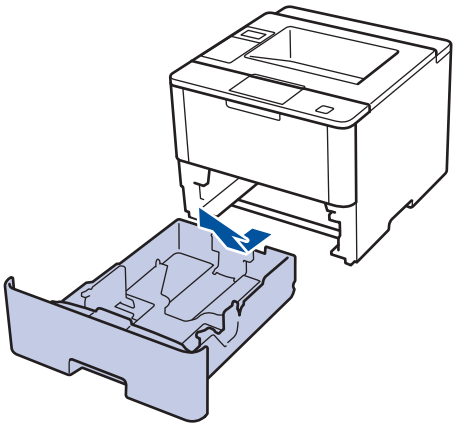
Related Information

- Load and Print Using the Paper Tray

Load and Print Thick Paper Using the Paper Tray

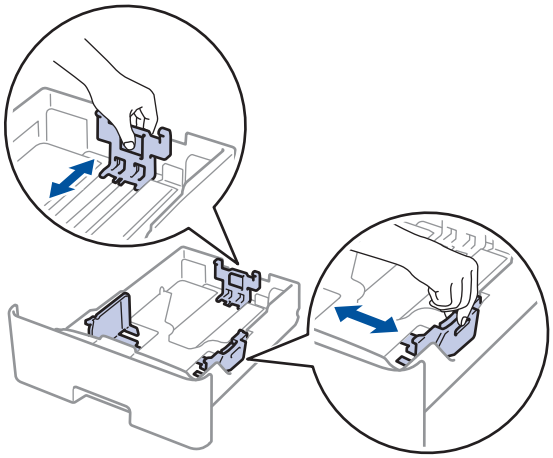
- If the Check Size setting is set to On and you pull the paper tray out of the machine, a message appears on the LCD asking if you want to change the paper size and paper type. Change the paper size and paper type settings if needed, following the LCD instructions.
- When you load a different size and type of paper in the tray, you must change the Paper Size and Paper Type settings in the machine or on your computer, also.

1. Pull the paper tray completely out of the machine.



2. Press and slide the paper guides to fit the paper.

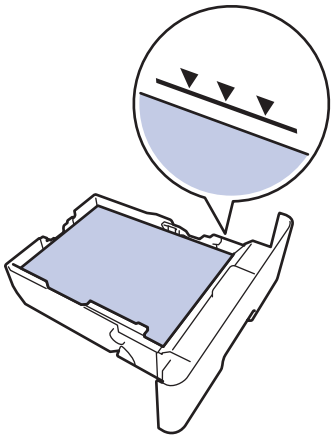
   Press the green release levers to slide the paper guides.



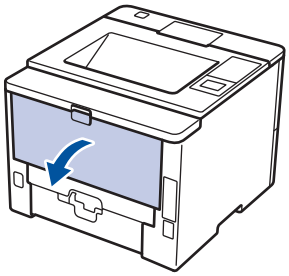
3. Fan the stack of paper well.
4. Load paper in the paper tray with the printing surface *face down*.

DO NOT load different sizes and types of paper in the paper tray at the same time. Doing this may cause the paper to jam or misfeed.

5. Make sure the paper is below the maximum paper mark (▼▼▼).
   Overfilling the paper tray will cause paper jams.



6. Slowly push the paper tray completely into the machine.
7. Open the machine's back cover (the face up output tray).



8. Send your print job to the machine.

Change your print preferences in the Print dialog box before sending the print job from your computer.

9. Close the back cover (the face up output tray) until it locks in the closed position.

Related Information

- Load and Print Using the Paper Tray

Load and Print Using the Multi-purpose Tray (MP Tray)

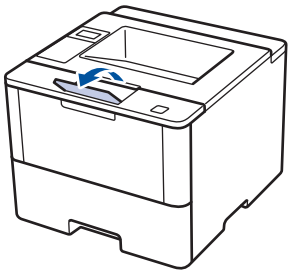
You can load up to ten envelopes, letterhead, coloured paper, thin or thick paper, recycled paper, Bond paper, labels, or up to 50 sheets of plain paper in the MP tray.

- Load and Print Plain Paper, Letterhead, Coloured Paper, Thin Paper, Recycled Paper and Bond Paper in the MP Tray
- Load and Print Thick Paper and Labels Using the MP Tray
- Load and Print on Envelopes Using the MP Tray
- Printing Problems
- Error and Maintenance Messages

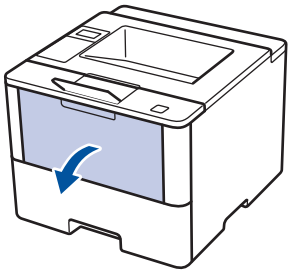
Load and Print Plain Paper, Letterhead, Coloured Paper, Thin Paper, Recycled Paper and Bond Paper in the MP Tray

When you load a different size and type of paper in the tray, you must change the Paper Size and Paper Type settings in the machine or on your computer, also.

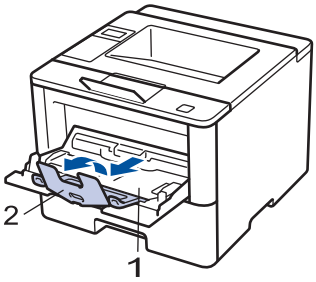
1. Lift the support flap to prevent paper from sliding off the face down output tray.



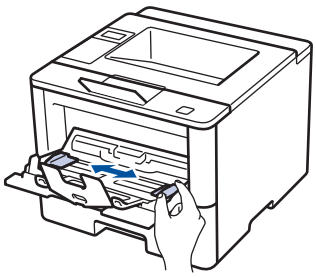
2. Open the MP tray and lower it gently.



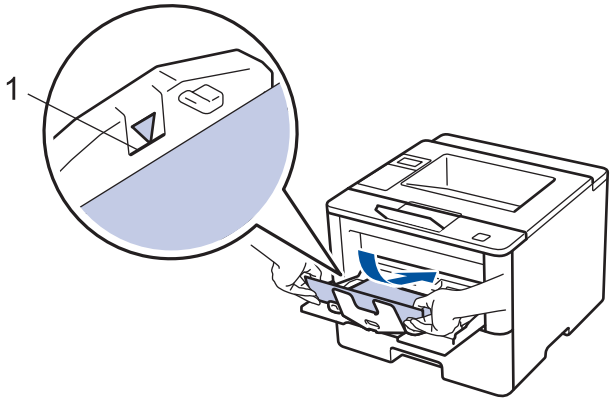
3. Pull out the MP tray support (1) and unfold the flap (2).



4. Slide the MP tray paper guides to fit the width of the paper you are using. If the paper guide on the right side has a lever, press it and slide the paper guide.



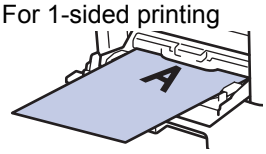
5. Load paper with the printing surface *face up* in the MP tray. When you use Letterhead or Preprinted paper, load the paper in the correct orientation as shown in the illustrations.



Make sure the paper is below the maximum paper mark (1).

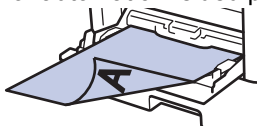
Paper Orientation for Letterhead and Preprinted Paper

For 1-sided printing



- face up
- top edge first

For automatic 2-sided printing (long edge binding)



- face down
- bottom edge first

When you use Letterhead or Preprinted paper for 2-sided printing, change the machine's setting by completing the following step:

- Press [Paper Tray] > [2-sided] > [Single Image] > [2-sided Feed].

6. Send your print job to the machine.

Change your print preferences in the Print dialog box before sending the print job from your computer.

Related Information

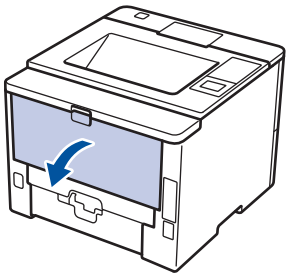
- Load and Print Using the Multi-purpose Tray (MP Tray)

Load and Print Thick Paper and Labels Using the MP Tray

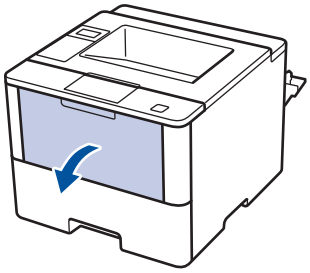
When the back cover (face up output tray) is pulled down, the machine has a straight paper path from the MP tray through to the back of the machine. Use this paper feed and output method when you print on thick paper or labels.

When you load a different size and type of paper in the tray, you must change the Paper Size and Paper Type settings in the machine or on your computer, also.

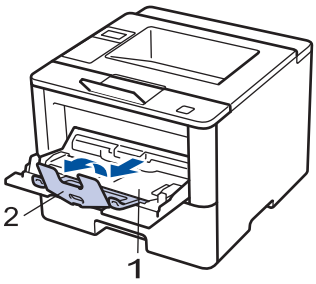
1. Open the machine's back cover (the face up output tray).



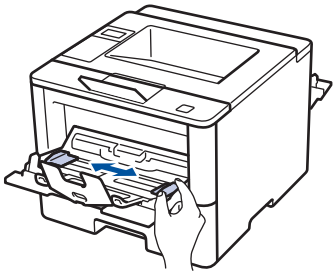
2. On the front of the machine, open the MP tray and lower it gently.



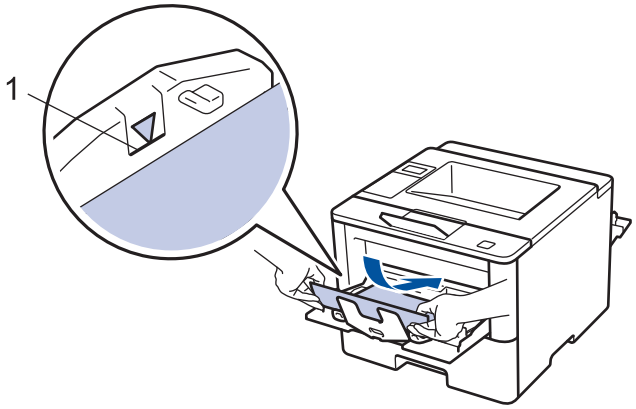
3. Pull out the MP tray support (1) and unfold the flap (2).



4. Slide the MP tray paper guides to fit the width of the paper that you are using. If the paper guide on the right side has a lever, press it and slide the paper guide.



5. Load paper or labels in the MP tray.



- Make sure the paper is below the maximum paper mark (1).
- Load paper into the MP tray with the printing surface face up.

6. Send your print job to the machine.

Change your print preferences in the Print screen before sending the print job from your computer.

7. Close the back cover (the face up output tray) until it locks in the closed position.

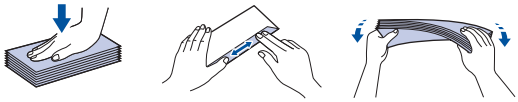
Related Information

- Load and Print Using the Multi-purpose Tray (MP Tray)

Load and Print on Envelopes Using the MP Tray

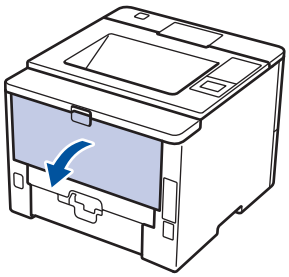
You can load up to ten envelopes in the MP tray.

Before loading, press the corners and sides of the envelopes to make them as flat as possible.

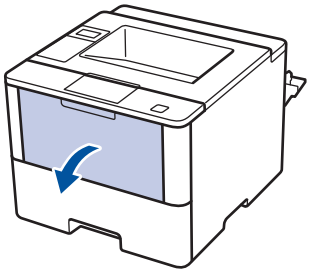


When you load a different size and type of paper in the tray, you must change the Paper Size and Paper Type settings in the machine or on your computer, also.

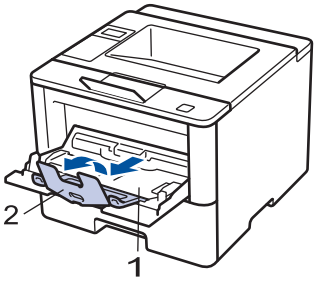
1. Open the machine's back cover (the face up output tray).



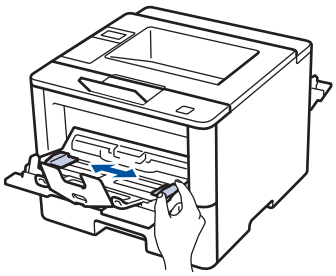
2. On the front of the machine, open the MP tray and lower it gently.



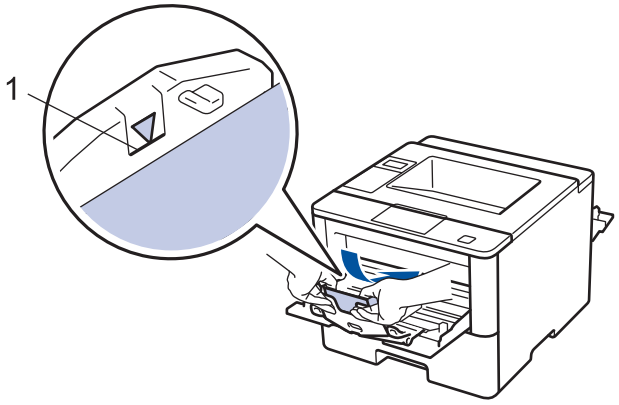
3. Pull out the MP tray support (1) and unfold the flap (2).



4. Slide the MP tray paper guides to fit the width of the paper that you are using. If the paper guide on the right side has a lever, press it and slide the paper guide.



5. Load envelopes in the MP tray.



Load up to 10 envelopes in the MP tray with the printing surface face up. Make sure the envelopes are below the maximum paper mark (1). Loading more than 10 envelopes may cause paper jams.

6. Send your print job to the machine.

Change your print preferences in the Print dialog box before sending the print job from your computer.

Settings	Options for Envelopes
Paper Size	**Com-10**
	DL
	C5
	Monarch
Media Type	**Envelopes**
	Env. Thick
	Env. Thin

7. Close the back cover (the face up output tray) until it locks in the closed position.

Related Information

- Load and Print Using the Multi-purpose Tray (MP Tray)

Paper Settings

- Change the Paper Size and Paper Type
- Change the Check Paper Size Setting

Change the Paper Size and Paper Type

When you change the size and type of the paper you load in the tray, you must change the Paper Size and Paper Type settings on the LCD at the same time.

1. Press ▲ or ▼ to select the [Paper Tray] option, and then press **OK**.
2. Press ▲ or ▼ to select the [Paper Type] option, and then press **OK**.
3. Press ▲ or ▼ to select the paper tray that you want to change, and then press **OK**.
4. Press ▲ or ▼ to select the paper type you want, and then press **OK**.
5. Press **Back**.
6. Press ▲ or ▼ to select the [Paper Size] option, and then press **OK**.
7. Press ▲ or ▼ to select the paper tray that you want to change, and then press **OK**.
8. Press ▲ or ▼ to select the paper size you want, and then press **Go**.

Related Information

- Paper Settings

Change the Check Paper Size Setting

When you turn on your machine's Check Size setting, the machine displays a message when you remove a paper tray or load paper using the MP tray, asking if you changed the paper size and paper type.

The default setting is On.

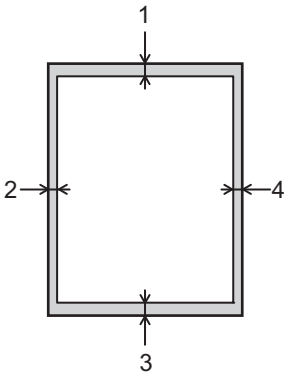
1. Press ▲ or ▼ to select the `[Paper Tray]` option, and then press **OK**.
2. Press ▲ or ▼ to select the `[Check Size]` option, and then press **OK**.
3. Press ▲ or ▼ to select the `[On]` or `[Off]` option, and then press **Go**.

Related Information

- Paper Settings

Unprintable Area

The figures below show maximum unprintable areas from the edges of the most commonly-used paper sizes. The measurements may vary depending on the paper size or settings in the application you are using.



Do not attempt to print into these areas; your output will not reflect anything in these areas.

Usage	Document Size	Top (1) Bottom (3)	Left (2) Right (4)
Print	Letter	4.23 mm	4.23 mm
	A4	4.23 mm	4.23 mm
	Legal	4.23 mm	4.23 mm

Related Information

- Paper Handling

Recommended Print Media

To get the best print quality, we recommend using the paper listed in the table.

Paper Type	Item
Plain Paper	APP Blue Flag Ship 70 g/m^2 APP Gold Flag Ship 80 g/m^2 Advanced Agro Double A 80 g/m^2

Related Information

- Paper Handling

Using Special Paper

Always test paper samples before purchasing them to ensure desirable performance.

- DO NOT use inkjet paper; it may cause a paper jam or damage your machine.
- If you use bond paper, paper with a rough surface, or paper that is wrinkled or creased, the paper may exhibit degraded performance.

Store paper in its original packaging and keep it sealed. Keep the paper flat and away from moisture, direct sunlight and heat.

IMPORTANT

Some types of paper may not perform well or may cause damage to your machine.

DO NOT use paper:

- that is highly textured
- that is extremely smooth or shiny
- that is curled or warped
- that is coated or has a chemical finish
- that is damaged, creased or folded
- that exceeds the recommended weight specification in this guide
- with tabs and staples
- with letterheads using low temperature dyes or thermography
- that is multipart or carbonless
- that is designed for inkjet printing

If you use any of the types of paper listed above, they may damage your machine. This damage is not covered under any Lenovo warranty or service agreement.

Related Information

- Paper Handling

Print

- Print from Your Computer (Windows®)
- Print from Your Computer (Macintosh)
- Print One Page Duplicates on Different Types of Paper
- Cancel a Print Job
- Test Print

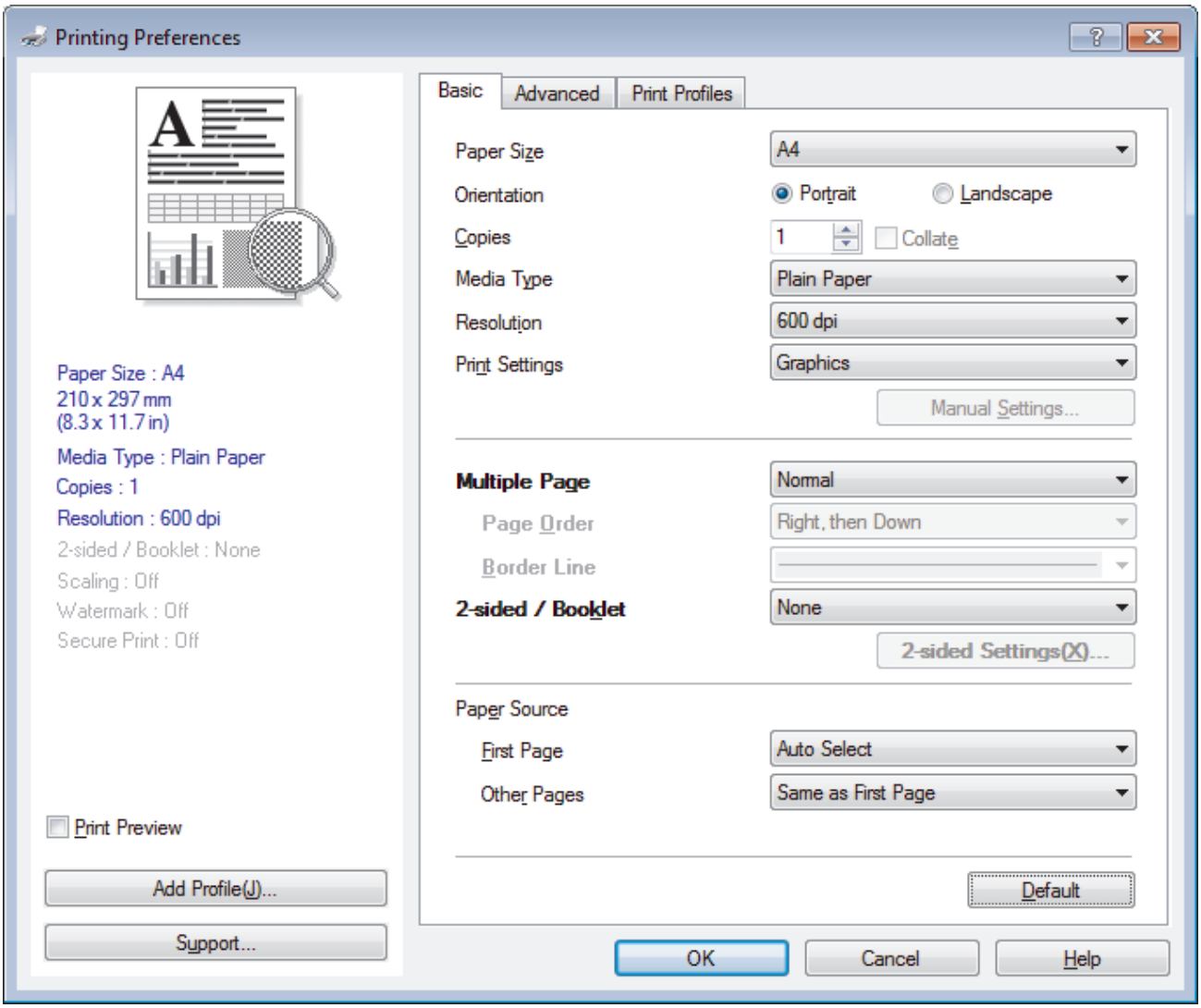
Print from Your Computer (Windows®)

- Print a Document (Windows®)
- Print More Than One Page on a Single Sheet of Paper (N in 1) (Windows®)
- Print as a Poster (Windows®)
- Print on Both Sides of the Paper (Windows®)
- Print as a Booklet (Windows®)
- Secure Print (Windows®)
- Use a Preset Print Profile (Windows®)
- Change the Default Print Settings (Windows®)
- Print a Document Using the BR-Script3 Printer Driver (PostScript® 3™ Language Emulation) (Windows®)
- Monitor the Status of the Machine from Your Computer (Windows®)
- Print Settings (Windows®)

Print a Document (Windows®)

1. Select the print command in your application.
2. Select **Lenovo XXXX** (where XXXX is the name of your model), and then click the printing properties or preferences button.

   The printer driver window appears.
3. Click the **Basic** tab.



4. Make sure you have loaded the correct size paper in the paper tray.
5. Click the **Paper Size** drop-down list, and then select your paper size.
6. In the **Orientation** field, select the **Portrait** or **Landscape** option to set the orientation of your printout.

> If your application contains a similar setting, we recommend that you set the orientation using the application.

7. Type the number of copies (1-999) you want in the **Copies** field.
8. Click the **Media Type** drop-down list, and then select the type of paper you are using.
9. To print multiple pages on a single sheet of paper or print one page of your document on multiple sheets, click the **Multiple Page** drop-down list, and then select your options.
10. Change other printer settings if needed.
11. Click **OK**.
12. Complete your print operation.

Related Information

- Print from Your Computer (Windows®)
- Print Settings (Windows®)

Print More Than One Page on a Single Sheet of Paper (N in 1) (Windows®)

1. Select the print command in your application.
2. Select **Lenovo XXXX** (where XXXX is the name of your model), and then click the printing properties or preferences button.

   The printer driver window appears.
3. Click the **Basic** tab.
4. In the **Orientation** field, select the **Portrait** or **Landscape** option to set the orientation of your printout.

If your application contains a similar setting, we recommend that you set the orientation using the application.

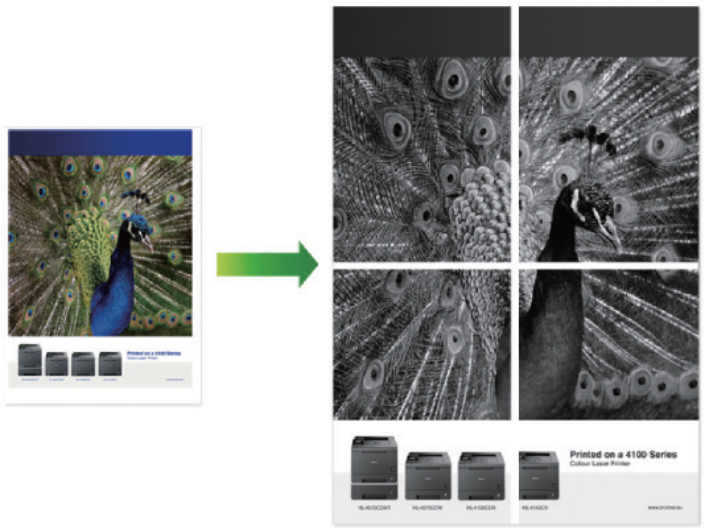
5. Click the **Multiple Page** drop-down list, and then select the **2 in 1**, **4 in 1**, **9 in 1**, **16 in 1**, or **25 in 1** option.
6. Click the **Page Order** drop-down list, and then select your page order.
7. Click the **Border Line** drop-down list, and then select your border line type.
8. Change other printer settings if needed.
9. Click **OK**.
10. Complete your print operation.

Related Information

- Print from Your Computer (Windows®)
- Print Settings (Windows®)

Print as a Poster (Windows®)

Enlarge your print size and print the document in poster mode.



1. Select the print command in your application.
2. Select **Lenovo XXXX** (where XXXX is the name of your model), and then click the printing properties or preferences button.

   The printer driver window appears.
3. Click the **Basic** tab.
4. Click the **Multiple Page** drop-down list, and then select the **1 in 2x2 Pages**, **1 in 3x3 Pages**, **1 in 4x4 Pages**, or **1 in 5x5 Pages** option.
5. Select the **Print cut-out line** check box, if needed.

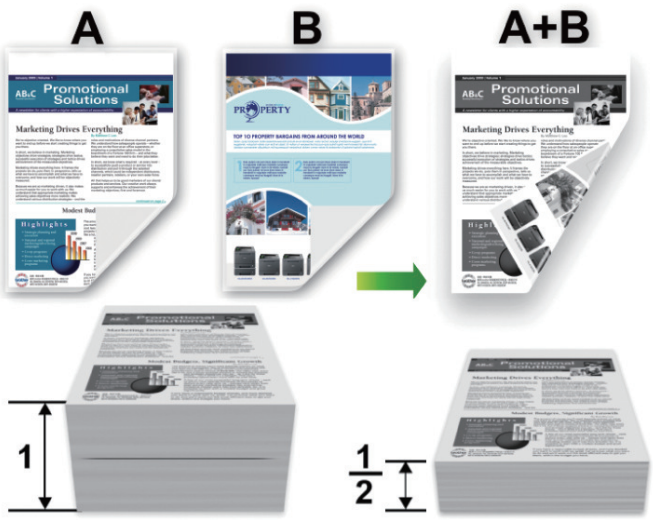
   Print cut-out line

   Prints a faint cut-out line around the printable area so that you can easily cut it out.
6. Change other printer settings if needed.
7. Click **OK**.
8. Complete your print operation.

Related Information

- Print from Your Computer (Windows®)
- Print Settings (Windows®)

Print on Both Sides of the Paper (Windows®)



- Select A4 sized paper when using the automatic 2-sided printing function.
- Make sure the back cover is closed.
- If paper is curled, straighten it and put it back in the paper tray.
- Use regular paper or thin paper. DO NOT use bond paper.
- If the paper is too thin, it may wrinkle.
- When you use the manual 2-sided printing function, it is possible there may be paper jams or poor print quality.

1. Select the print command in your application.
2. Select **Lenovo XXXX** (where XXXX is the name of your model), and then click the printing properties or preferences button.

   The printer driver window appears.
3. Click the **Basic** tab.
4. In the **Orientation** field, select the **Portrait** or **Landscape** option to set the orientation of your printout.

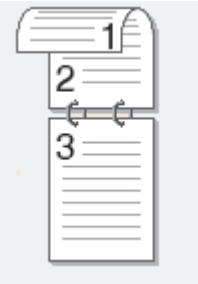
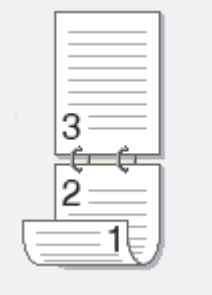
If your application contains a similar setting, we recommend that you set the orientation using the application.

5. Click the **2-sided / Booklet** drop-down list, and then select the **2-sided** or **2-sided (Manual)** option.

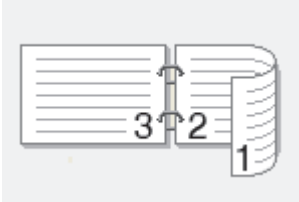
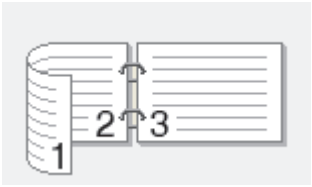
Option	Description
2-sided	Automatically prints on both sides of the paper.
2-sided (Manual)	The machine prints all the even-numbered pages on one side of the paper first. Then, the printer driver instructs you (with a pop-up message) to reinsert the paper.

6. Click the **2-sided Settings** button.
7. Select one of the options from the **2-sided Type** menu.

   When 2-sided is selected, four types of 2-sided binding are available for each orientation:

Option for Portrait	Description
Long Edge (Left)	
Long Edge (Right)	
Short Edge (Top)	
Short Edge (Bottom)	

Option for Landscape	Description
Long Edge (Top)	
Long Edge (Bottom)	

Option for Landscape	Description
Short Edge (Right)	
Short Edge (Left)	

8. Select the **Binding Offset** check box if you want to specify the offset for binding in inches or millimetres.
9. Click **OK**.
10. Change other printer settings if needed.
11. Do one of the following:
    - For automatic 2-sided printing, click **OK** again, and then complete your print operation.
    - For manual 2-sided printing, click **OK** again and follow the on-screen instructions.

If the paper is not feeding correctly, it may be curled. Remove the paper, straighten it, and put it back in the paper tray.

Related Information

- Print from Your Computer (Windows®)
- Print Settings (Windows®)

Print as a Booklet (Windows®)

Use this option to print a document in booklet format using 2-sided printing. The document's pages will be arranged according to the correct page number and will allow you to fold the print output at the centre, without having to change the order of the printed pages.

- Select A4 sized paper when using the automatic 2-sided printing function.
- Make sure the back cover is closed.
- If paper is curled, straighten it and put it back in the paper tray.
- Use regular paper or thin paper. DO NOT use bond paper.
- If the paper is too thin, it may wrinkle.
- When you use the manual 2-sided printing function, it is possible there may be paper jams or poor print quality.

1. Select the print command in your application.
2. Select **Lenovo XXXX** (where XXXX is the name of your model), and then click the printing properties or preferences button.

   The printer driver window appears.
3. Click the **Basic** tab.
4. In the **Orientation** field, select the **Portrait** or **Landscape** option to set the orientation of your printout.

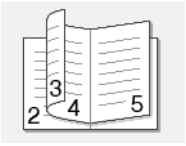
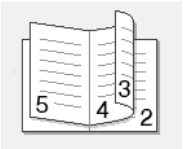
If your application contains a similar setting, we recommend that you set the orientation using the application.

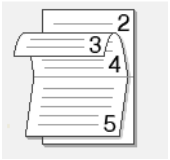
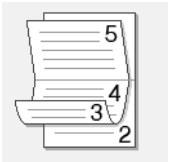
5. Click the **2-sided / Booklet** drop-down list, and then select the **Booklet** or **Booklet (Manual)** option.

Option	Description
Booklet	Automatically prints as a booklet.
Booklet (Manual)	Manually prints as a booklet.

6. Click the **2-sided Settings** button.
7. Select one of the options from the **2-sided Type** menu.

   There are two types of 2-sided binding directions available for each orientation:

Option for Portrait	Description
Left Binding	
Right Binding	

Option for Landscape	Description
Top Binding	
Bottom Binding	

8. Select one of the options from the **Booklet Printing Method** menu.

Option	Description
All Pages at Once	Every page will be printed in booklet format (four pages to every piece of paper, two pages per side). Fold your printout in the centre to create the booklet.
Divide into Sets	This option prints the whole booklet in smaller individual booklet sets, allowing you to fold at the centre of the smaller individual booklet sets without having to change the order of the printed pages. You can specify the number of sheets in each smaller booklet set (from 1-15). This option can be helpful when folding a printed booklet that has a large number of pages.

9. Select the **Binding Offset** check box if you want to specify the offset for binding in inches or millimetres.
10. Click **OK**.
11. Change other printer settings if needed.
12. Do one of the following:
    - For automatic booklet printing, click **OK** again, and then complete your print operation.
    - For manual booklet printing, click **OK** again and follow the on-screen instructions.

Related Information

- Print from Your Computer (Windows®)
- Print Settings (Windows®)

Secure Print (Windows®)

Use Secure Print to ensure that confidential or sensitive documents do not print until you enter a password on the machine's control panel.

- The secure data is deleted from the machine when you turn off the machine.

1. Select the print command in your application.
2. Select **Lenovo XXXX** (where XXXX is the name of your model), and then click the printing properties or preferences button.

   The printer driver window appears.
3. Click the **Advanced** tab.
4. Click the **Settings** button in the **Secure Print** field.
5. Select the **Secure Print** check box.
6. Type your four-digit password in the **Password** field.

   You must set a separate password for each document.
7. Type the **User Name** and **Job Name** to the text field, and then press **OK**.
8. Click **OK**.
9. Complete your print operation.
10. On the machine's control panel, press **Secure**.
11. Press ▲ or ▼ to display your user name, and then press **OK**.

    The LCD displays the list of secured jobs for that name.
12. Press ▲ or ▼ to display the job, and then press **OK**.
13. Enter your four-digit password.

    To enter each digit, press ▲ or ▼ to select a number, and then press **OK**.
14. Press ▲ or ▼ to select the `[Print]` option, and then press **OK**.
15. Press ▲ or ▼ to enter the number of copies you want.
16. Press **OK**.

    The machine prints the data.

After you print the secured data, it will be cleared from the machine's memory.

Related Information

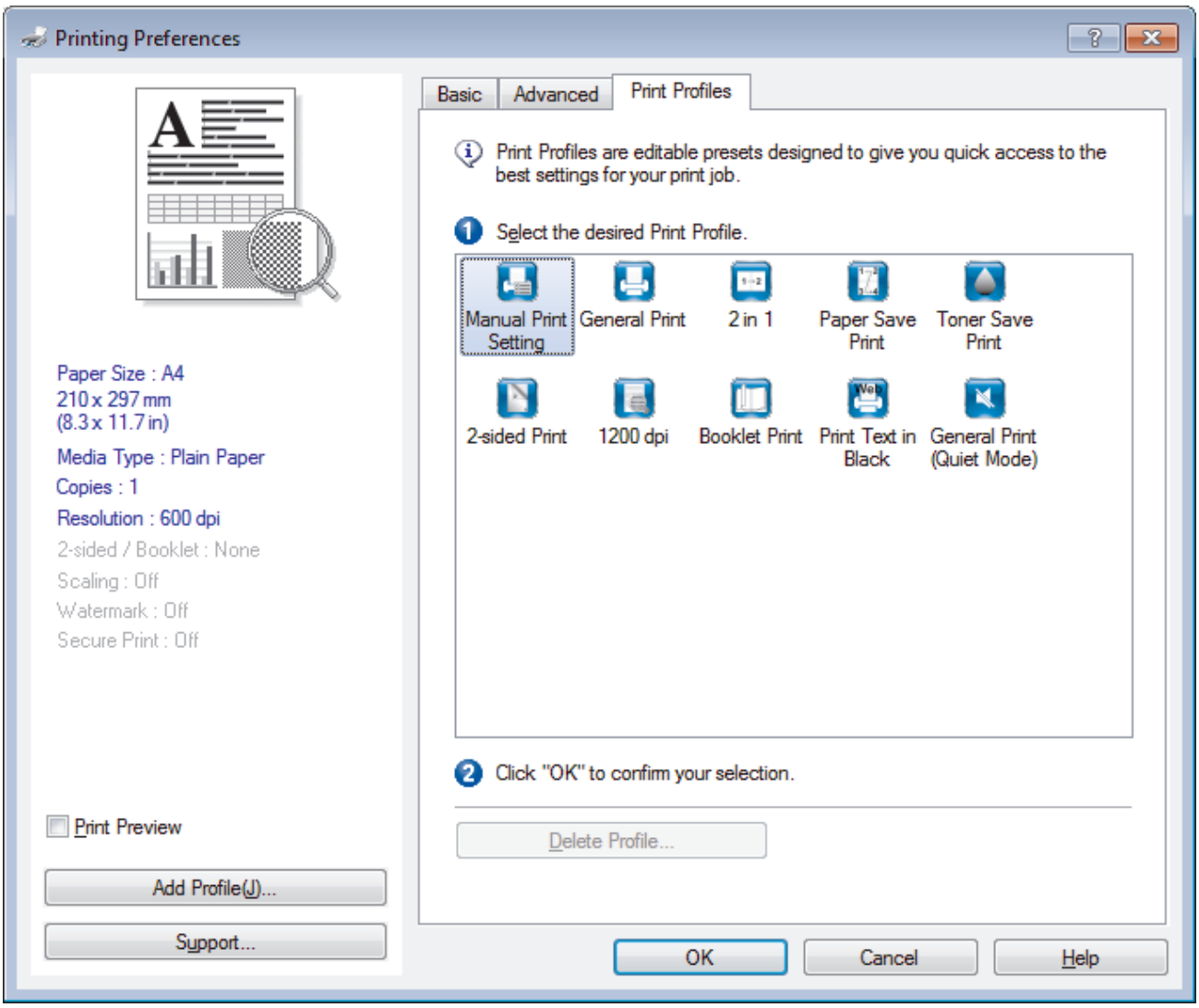
- Print from Your Computer (Windows®)

Use a Preset Print Profile (Windows®)

Print Profiles are presets designed to give you quick access to frequently-used printing configurations.

1. Select the print command in your application.
2. Select **Lenovo XXXX** (where XXXX is the name of your model), and then click the printing properties or preferences button.

   The printer driver window appears.
3. Click the **Print Profiles** tab.



4. Select your profile from the print profile list.

   The profile settings are shown on the left side of the printer driver window.
5. Do one of the following:
   - If the settings are correct for your print job, click **OK**.
   - To change the settings, go back to the **Basic** or **Advanced** tab, change settings, and then click **OK**.

Related Information

- Print from Your Computer (Windows®)
- Create or Delete Your Print Profile (Windows®)
- Print Settings (Windows®)

Create or Delete Your Print Profile (Windows®)

Add up to 20 new print profiles with customised settings.

1. Select the print command in your application.
2. Select **Lenovo XXXX** (where XXXX is the name of your model), and then click the printing properties or preferences button.

   The printer driver window appears.
3. Click the **Basic** tab and the **Advanced** tab, and configure the print settings you want for the new Print Profile.
4. Click the **Print Profiles** tab.
5. Do one of the following:

   To create a new print profile:

   a. Click **Add Profile**.

      The **Add Profile** dialog box appears.

   b. Type the new profile name in the **Name** field.

   c. Click the icon you want to use to represent this profile from the icon list.

   d. Click **OK**.

      The new Print Profile name is added to the list in the **Print Profiles** tab.

   To delete a print profile that you created:

   a. Click **Delete Profile**.

      The **Delete Profile** dialog box appears.

   b. Select the profile you want to delete.

   c. Click **Delete**.

   d. Click **Yes**.

   e. Click **Close**.

Related Information

- Use a Preset Print Profile (Windows®)

Change the Default Print Settings (Windows®)

When you change print settings from within a program, the changes apply only to the items you are printing in that program, at that time. To select print settings to use for all of your Windows® programs, all the time, use these steps to change the default print settings.

1. Do one of the following:
   - (For Windows® XP)

     Click **Start** > **Printers and Faxes**.
   - (For Windows Vista® and Windows Server® 2008)

     Click **(Start)** > **Control Panel** > **Hardware and Sound** > **Printers**.
   - (For Windows® 7 and Windows Server® 2008 R2)

     Click **(Start)** > **Devices and Printers**.
   - (For Windows® 8)

     Move your mouse to the lower right corner of your desktop. When the menu bar appears, click **Settings**, and then click **Control Panel**. In the **Hardware and Sound** group, click **View devices and printers**.
   - (For Windows Server® 2012)

     Move your mouse to the lower right corner of your desktop. When the menu bar appears, click **Settings**, and then click **Control Panel**. In the **Hardware** group, click **View devices and printers**.
   - (For Windows Server® 2012 R2)

     Click **Control Panel** on the **Start** screen. In the **Hardware** group, click **View devices and printers**.
2. Right-click the **Lenovo XXXX** icon (where XXXX is your model name), and then select **Printer properties**. If printer driver options appear, select your printer driver.
3. Click the **General** tab, and then click the **Printing Preferences...** or **Preferences...** button.

   The printer driver dialog box appears.

   - To configure the tray settings, click the **Device Settings** tab.
   - To change the printer port, click the **Ports** tab.
4. Select the print settings you want to use as defaults for all of your Windows® programs.
5. Click **OK**.
6. Close the printer properties dialog box.

Related Information

- Print from Your Computer (Windows®)
- Configure the Optional Tray Settings (Windows®)
- Print Settings (Windows®)

Configure the Optional Tray Settings (Windows®)

Access your machine's Properties to auto-detect your machine's Optional Tray and serial number.

The printer driver automatically detects the Optional Tray during the driver installation. If you added the Optional Tray after the driver installation, follow these steps.

1. Do one of the following:
   - (For Windows® XP)

     Click **Start** > **Printers and Faxes**.
   - (For Windows Vista® and Windows Server® 2008)

     Click **(Start)** > **Control Panel** > **Hardware and Sound** > **Printers**.
   - (For Windows® 7 and Windows Server® 2008 R2)

     Click **(Start)** > **Devices and Printers**.
   - (For Windows® 8)

     Move your mouse to the lower right corner of your desktop. When the menu bar appears, click **Settings**, and then click **Control Panel**. In the **Hardware and Sound** group, click **View devices and printers**.
   - (For Windows Server® 2012)

     Move your mouse to the lower right corner of your desktop. When the menu bar appears, click **Settings**, and then click **Control Panel**. In the **Hardware** group, click **View devices and printers**.
   - (For Windows Server® 2012 R2)

     Click **Control Panel** on the **Start** screen. In the **Hardware** group, click **View devices and printers**.
2. Right-click the **Lenovo XXXX** icon (where XXXX is your model name), and then select **Printer properties**. If printer driver options appear, select your printer driver.
3. Select the **Device Settings** tab.
4. Click the **Auto Detect** button.

   The Optional Tray and the machine's serial number are automatically detected.
5. Click the **Apply** button.

The **Auto Detect** function is not available under the following machine conditions:

- The machine power switch is off.
- The machine is in an error state.
- The machine is in a network shared environment.
- The cable is not connected to the machine correctly.

Related Information

- Change the Default Print Settings (Windows®)

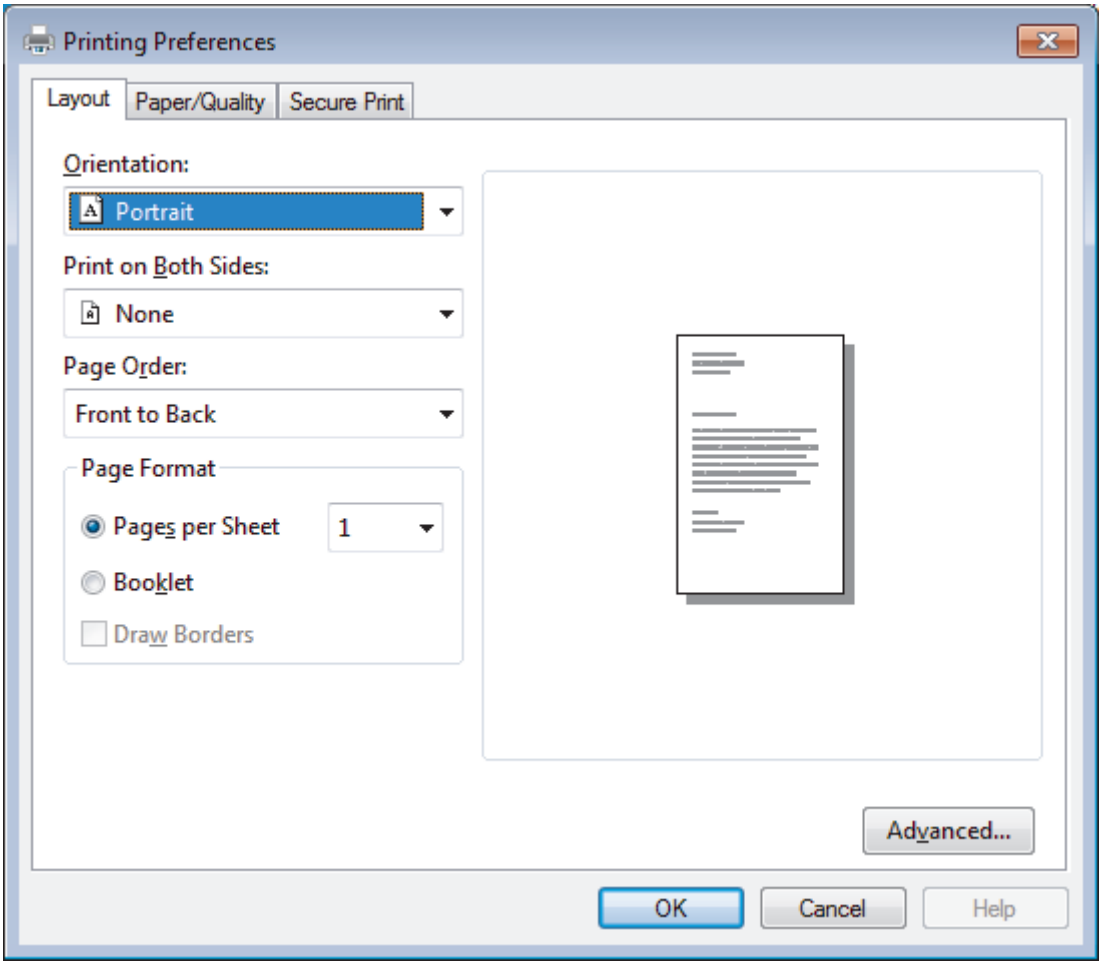
Print a Document Using the BR-Script3 Printer Driver (PostScript® 3™ Language Emulation) (Windows®)

The BR-Script3 printer driver lets you print PostScript® data more clearly.

To install the PS driver (BR-Script3 printer driver), launch Lenovo's installation CD-ROM, select **Custom** in Select Machine section, and then check **PS Driver** check box.

1. Select the print command in your application.
2. Select **Lenovo XXXX BR-Script3** (where XXXX is the name of your model), and then click the printing properties or preferences button.

   The printer driver window appears.



3. Click the **Layout**, **Paper/Quality**, or **Secure Print** tab to change basic print settings.

   Click the **Layout** or **Paper/Quality** tab, and then click the **Advanced...** button to change advanced print settings.
4. Click **OK**.
5. Complete your print operation.

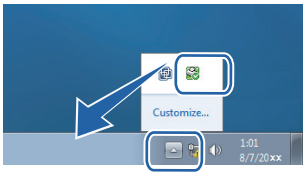
Related Information

- Print from Your Computer (Windows®)

Monitor the Status of the Machine from Your Computer (Windows®)

The Status Monitor utility is a configurable software tool for monitoring the status of one or more devices, allowing you to get immediate notification of errors.

- To display the **Status Monitor** icon on your task tray, click the button. The (**Status Monitor**) icon will appear in the small window. Drag the icon to the task tray.



- Do one of the following:
  - Double-click the icon in the task tray.
  - (Windows® XP, Windows Vista®, Windows® 7, Windows Server® 2008 and Windows Server® 2008 R2)
    Click **(Start)** > **All Programs** > **Lenovo** > **Lenovo Utilities**.

    Click the drop-down list and select your model name (if not already selected). Click **Tools** in the left navigation bar, and then click **Status Monitor**.
  - (Windows® 8 and Windows Server® 2012)
    Click (**Lenovo Utilities**), and then click the drop-down list and select your model name (if not already selected). Click **Tools** in the left navigation bar, and then click **Status Monitor**.
  - (Windows® 8.1 and Windows Server® 2012 R2)

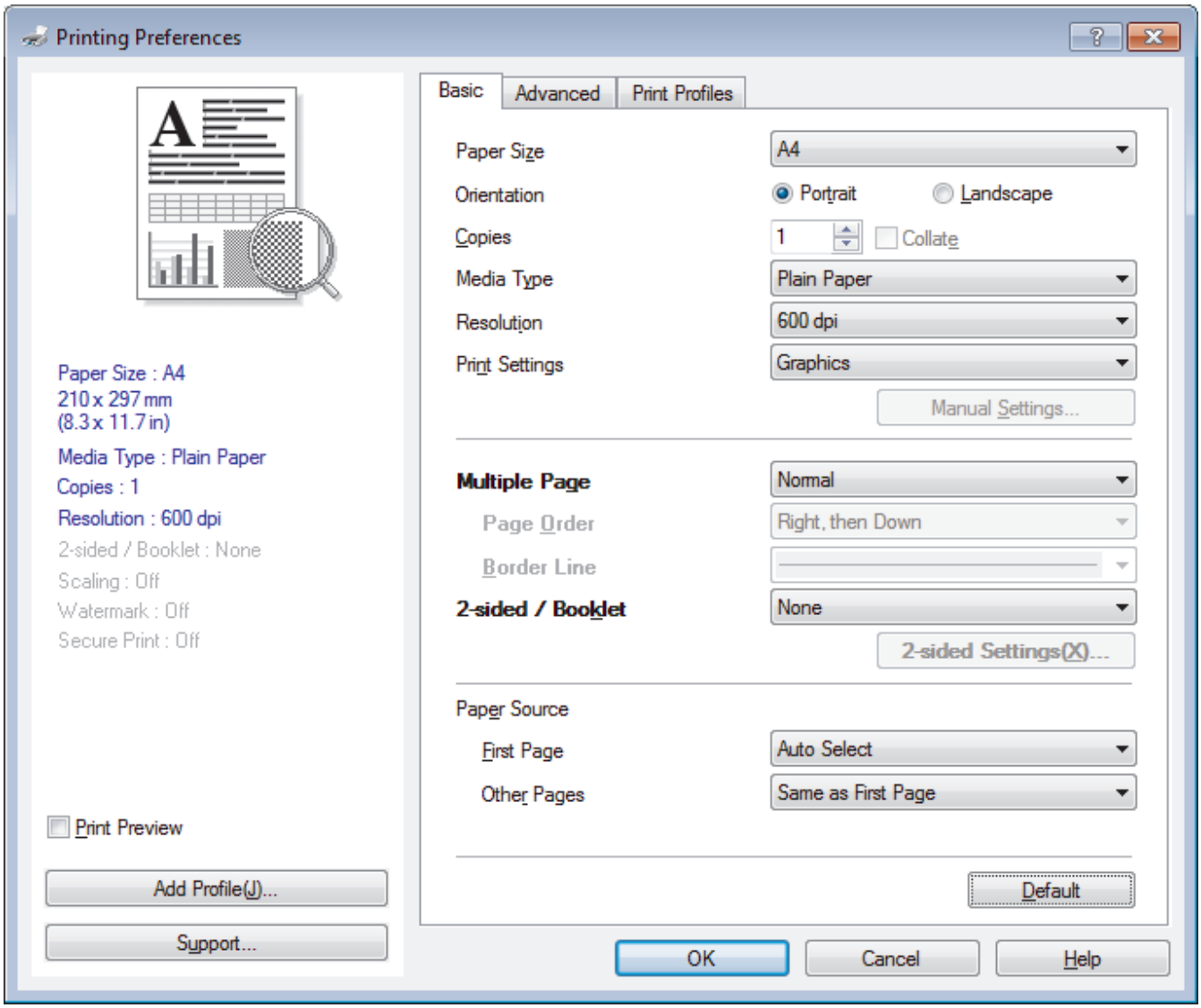
    Move your mouse to the lower left corner of the **Start** screen and click (if you are using a touch-based device, swipe up from bottom of the **Start** screen to bring up the **Apps** screen). When the **Apps** screen appears, tap or click (**Lenovo Utilities**), and then click the drop-down list and select your model name (if not already selected). Click **Tools** in the left navigation bar, and then click **Status Monitor**.

Related Information

- Print from Your Computer (Windows®)
- Printing Problems

Print Settings (Windows®)

Basic Tab



1. **Paper Size**

   Select the size of the paper you want to use. You can either choose from standard paper sizes or create a custom paper size.

2. **Orientation**

   Select the orientation (portrait or landscape) of your printout.

   If your application contains a similar setting, we recommend that you set the orientation using the application.

3. **Copies**

   Type the number of copies (1-999) that you want to print in this field.

   Collate

   Select this option to print sets of multi-page documents in the original page order. When this option is selected, one complete copy of your document will print, and then reprint according to the number of copies you choose. If this option is not selected, then each page will print according to the number of copies chosen before the next page of the document is printed.

4. **Media Type**

   Select the type of media you want to use. To achieve the best print results, the machine automatically adjusts its print settings according to the selected media type.

5. **Resolution**

   Select the print resolution. As print resolution and speed are related, the higher the resolution, the longer it will take to print the document.

6. **Print Settings**

   Select the type of document you want to print.

   Manual Settings...

   Specify advanced settings such as brightness, contrast, and other settings.

   Graphics

   Use Printer Halftone

   Select this option to use the printer driver to express halftones.

   Brightness

   Specify the brightness.

   Contrast

   Specify the contrast.

   Graphics Quality

   Select either Graphics or Text for the best print quality, based on the type of document you are printing.

   Improve Gray Printing

   Select this option to improve the image quality of shaded areas.

   Improve Pattern Printing

   Select this option to improve the pattern printing if printed fills and patterns are different from the fills and patterns you see on your computer screen.

   Improve Thin Line

   Select this option to improve the image quality of thin lines.

   Use System Halftone

   Select this option to use Windows® to express halftones.

   TrueType Mode

   Mode

   Select how the fonts are processed for printing.

7. **Multiple Page**

   Select this option to print multiple pages on a single sheet of paper or print one page of your document on multiple sheets.

   Page Order

   Select the page order when printing multiple pages on a single sheet of paper.

   Border Line

   Select the type of border to use when printing multiple pages on a single sheet of paper.

8. **2-sided / Booklet**

   Select this option to print on both sides of the paper or print a document in booklet format using 2-sided printing.

   2-sided Settings button

   Click this button to select the type of 2-sided binding. Four types of 2-sided bindings are available for each orientation.

9. **Paper Source**

   Select the paper source setting according to your print conditions or purpose.

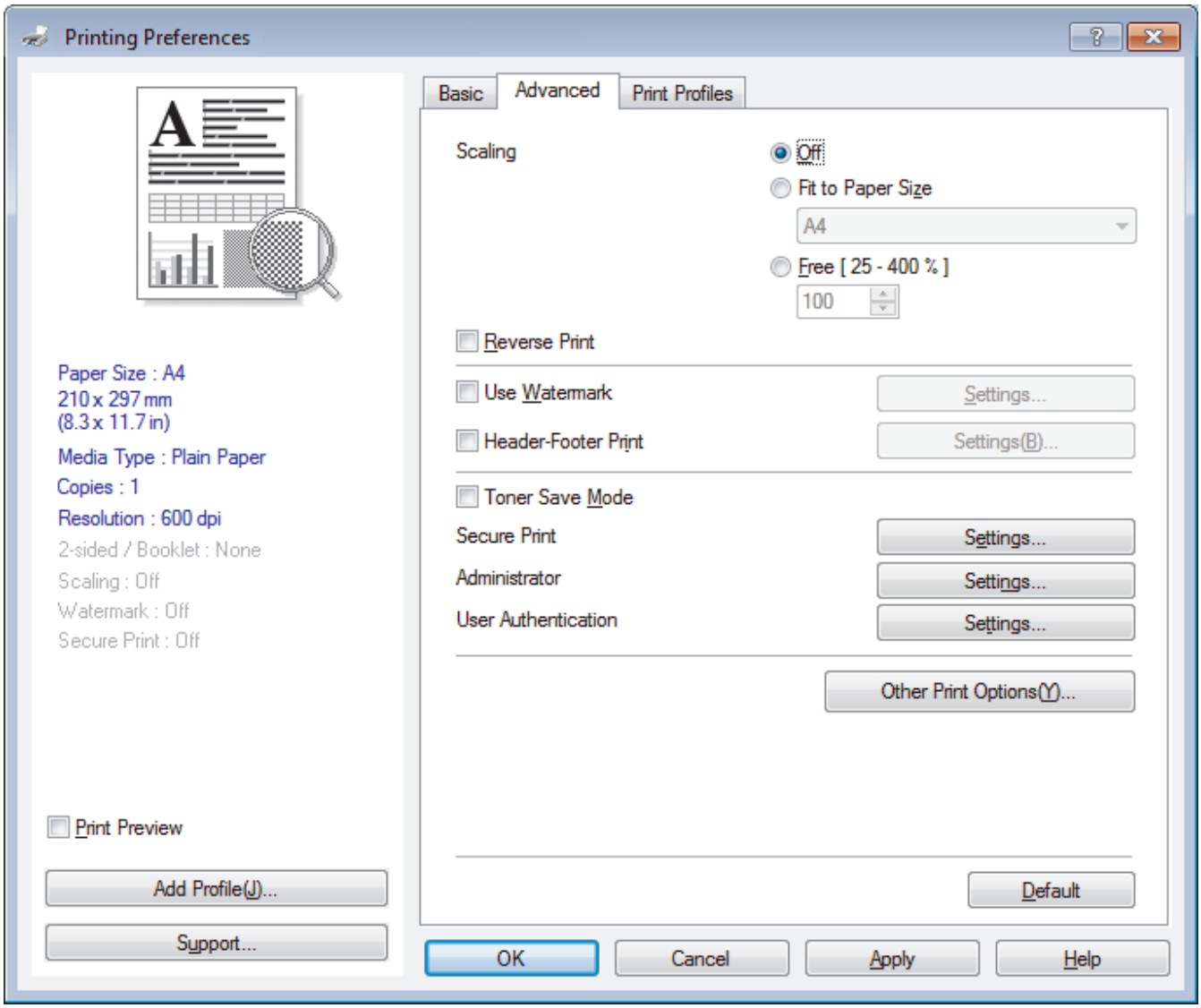
First Page

Select the paper source to use for printing the first page.

Other Pages

Select the paper source to use for printing the second and subsequent pages.

Advanced Tab



1. **Scaling**

   Select these options to enlarge or reduce the size of the pages in your document.

   Fit to Paper Size

   Select this option to enlarge or reduce the document pages to fit a specified paper size. When you select this option, select the paper size you want from the drop-down list.

   Free

   Select this option to enlarge or reduce the document pages manually. When you select this option, type a value into the field.

2. **Reverse Print**

   Select this option to rotate the printed image 180 degrees.

3. **Use Watermark**

   Select this option to print a logo or text on your document as a watermark. Select one of the preset watermarks, add a new watermark, or use an image file you have created.

4. **Header-Footer Print**

   Select this option to print the date, time and PC login user name on the document.

5. **Toner Save Mode**

   Select this feature to conserve toner by using less toner to print documents; printouts appear lighter, but are still legible.

6. **Secure Print**

   This feature ensures that confidential or sensitive documents do not print until you enter a password on the machine's control panel.

7. **Administrator**

   This feature allows you to change the administrator password and restrict various printing functions.

8. **User Authentication**

   This feature allows you to confirm the restrictions for each user.

9. **Other Print Options button**

   Sleep Time

   Specify the amount of time that passes before the machine enters Sleep Mode.

   Density Adjustment

   Specify the print density.

   Improve Print Output

   Select this option to reduce the amount of paper curling and improve the toner fixing.

   Skip Blank Page

   Select this option to allow the printer driver to automatically detect blank pages and exclude them from printing.

   Print Text in Black

   Select this option when you want to print colour text in black.

   Print Archive

   Select this option to save the print data as a PDF file to your computer.

   Eco settings

   Select this option to reduce printing noise.

Related Information

- Print from Your Computer (Windows®)
- Print a Document (Windows®)
- Print More Than One Page on a Single Sheet of Paper (N in 1) (Windows®)
- Print as a Poster (Windows®)
- Print on Both Sides of the Paper (Windows®)
- Print as a Booklet (Windows®)
- Use a Preset Print Profile (Windows®)
- Change the Default Print Settings (Windows®)

Print from Your Computer (Macintosh)

- Print a Document (Macintosh)
- Print on Both Sides of the Paper (Macintosh)
- Print More Than One Page on a Single Sheet of Paper (N in 1) (Macintosh)
- Secure Print (Macintosh)
- Print a Document Using the BR-Script3 Printer Driver (PostScript® 3™ language emulation) (Macintosh)
- Monitor the Status of the Machine from Your Computer (Macintosh)
- Print Options (Macintosh)

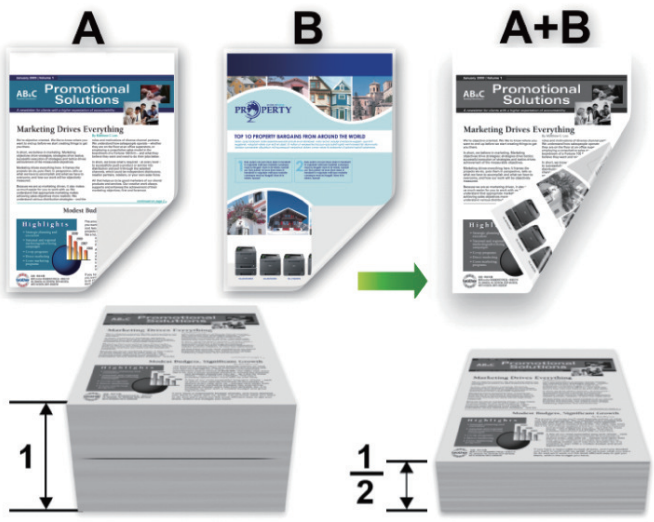
Print a Document (Macintosh)

1. Make sure you have loaded the correct size paper in the paper tray.
2. From an application, such as Apple TextEdit, click the **File** menu, and then select **Print**.
3. Select **Lenovo XXXX** (where XXXX is your model name).
4. Type the number of copies you want in the **Copies** field.
5. Click the **Paper Size** pop-up menu, and then select your paper size.
6. Select the **Orientation** option that matches the way you want the document to print.
7. Click the application pop-up menu, and then select **Print Settings**.
   The **Print Settings** options appear.
8. Click the **Media Type** pop-up menu, and then select the type of paper you are using.
9. Change other printer settings, if needed.
10. Click **Print**.

Related Information

- Print from Your Computer (Macintosh)
- Print Options (Macintosh)

Print on Both Sides of the Paper (Macintosh)



- Select A4 sized paper when using the automatic 2-sided printing function.
- Make sure the back cover is closed.
- If paper is curled, straighten it and put it back in the paper tray.
- Use regular paper or thin paper. DO NOT use bond paper.
- If the paper is too thin, it may wrinkle.
- When you use the manual 2-sided printing function, it is possible there may be paper jams or poor print quality.

1. From an application, such as Apple TextEdit, click the **File** menu, and then select **Print**.
2. Select **Lenovo XXXX** (where XXXX is your model name).
3. Select the **Orientation** option that matches the way you want the document to print.
4. For automatic 2-sided printing, do the following:
   a. Click the application pop-up menu, and then select **Layout**.
      The **Layout** setting options appear.
   b. In the **Two-Sided** section, select the **Short-Edge binding** or **Long-Edge binding** option.
   c. Change other printer settings, if needed.
   d. Click **Print**.
5. For manual 2-sided printing, do the following:
   a. Click the application pop-up menu, and then select **Paper Handling**.
      The **Paper Handling** options appear.
   b. In the **Pages to Print** pop-up menu, select **Even Only**.
   c. Change other print settings, if needed.
   d. Click the **Print** button.
   e. After the machine prints the even-numbered pages, remove the printed pages from the output paper tray.
   f. Make sure the pages are completely flat, and put the paper back in the tray, blank side facing down.
   g. Repeat steps 1-3, selecting the same printer and settings you used to print the even-numbered pages.
   h. Click the application pop-up menu, and then select **Paper Handling**. The **Paper Handling** options appear.
   i. In the **Pages to Print** pop-up menu, select **Odd Only**.
   j. Click **Print**.

Related Information

- Print from Your Computer (Macintosh)
- Print Options (Macintosh)

Print More Than One Page on a Single Sheet of Paper (N in 1) (Macintosh)

1. From an application, such as Apple TextEdit, click the **File** menu, and then select **Print**.
2. Select **Lenovo XXXX** (where XXXX is your model name).
3. Click the application pop-up menu, and then select **Layout**.
   The **Layout** setting options appear.
4. Click the **Pages per Sheet** pop-up menu, and then select the number of pages to print on each sheet.
5. Select the **Layout Direction** option.
6. Click the **Border** pop-up menu, and then select your border line type.
7. Change other printer settings if needed.
8. Click **Print**.

Related Information

- Print from Your Computer (Macintosh)
- Print Options (Macintosh)

Secure Print (Macintosh)

Use Secure Print to ensure that confidential or sensitive documents do not print until you enter a password on the machine's control panel.

- The secure data is deleted from the machine when you turn off the machine.

1. From an application, such as Apple TextEdit, click the **File** menu, and then select **Print**.
2. Select **Lenovo XXXX** (where XXXX is your model name).
3. Click the application pop-up menu, and then select the **Secure Print** option. The **Secure Print** options appear.
4. Select the **Secure Print** check box.
5. Type your user name, job name and a four-digit password.
6. Click **Print**.
7. On the machine's control panel, press **Secure**.
8. Press ▲ or ▼ to display your user name, and then press **OK**.

   The LCD displays the list of secured jobs for that name.
9. Press ▲ or ▼ to display the job, and then press **OK**.
10. Enter your four-digit password.

    To enter each digit, press ▲ or ▼ to select a number, and then press **OK**.
11. Press ▲ or ▼ to select the `[Print]` option, and then press **OK**.
12. Press ▲ or ▼ to enter the number of copies you want.
13. Press **OK**.

    The machine prints the data.

After you print the secured data, it will be cleared from the machine's memory.

Related Information

- Print from Your Computer (Macintosh)

Print a Document Using the BR-Script3 Printer Driver (PostScript® 3™ language emulation) (Macintosh)

The BR-Script3 printer driver lets you print PostScript® data more clearly.

- You can download Lenovo's latest PS driver (BR-Script3 printer driver) from http://www.lenovo.com.
- Make sure you have added the BR-Script3 printer driver from **Print & Scan** or **Printers & Scanners** in the **System Preferences** list on your Macintosh.

1. Make sure you have loaded the correct size paper in the paper tray.
2. From an application, such as Apple TextEdit, click the **File** menu, and then select **Print**.
3. Select **Lenovo XXXX** (where XXXX is your model name).
4. Type the number of copies you want in the **Copies** field.
5. Click the **Paper Size** pop-up menu, and then select your paper size.
6. Select the **Orientation** option that matches the way you want the document to print.
7. Click the print options pop-up menu, and then click **Printer Features**.
   The **Printer Features** options appear.
8. Click the **Media Type** pop-up menu, and then select the type of paper you are using.
9. Click the **Print Quality** pop-up menu, and then select the resolution.
10. Change other printer settings, if needed.
11. Click **Print**.

Related Information

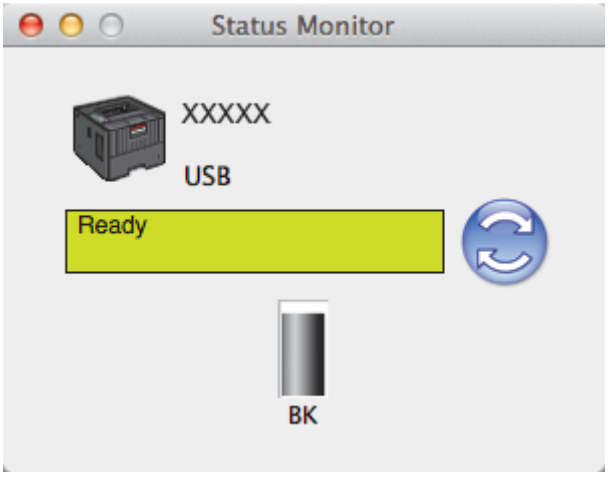
- Print from Your Computer (Macintosh)

Monitor the Status of the Machine from Your Computer (Macintosh)

The Status Monitor utility is a configurable software tool for monitoring the status of a device, allowing you to get immediate notification of error messages, such as paper empty or paper jam, at preset update intervals. You can also access Web Based Management.

1. Click the **System Preferences** menu, select **Print & Scan** or **Printers & Scanners**, and then select your machine.
2. Click the **Options & Supplies** button.
3. Click the **Utility** tab, and then click the **Open Printer Utility** button.

   Status Monitor starts.



Updating the machine's status

To view the latest machine status while the **Status Monitor** window is open, click the icon. You can set the interval at which the software updates machine status information. Click **Lenovo Status Monitor** in the menu bar, and then select **Preferences**.

Web Based Management (Network Connection Only)

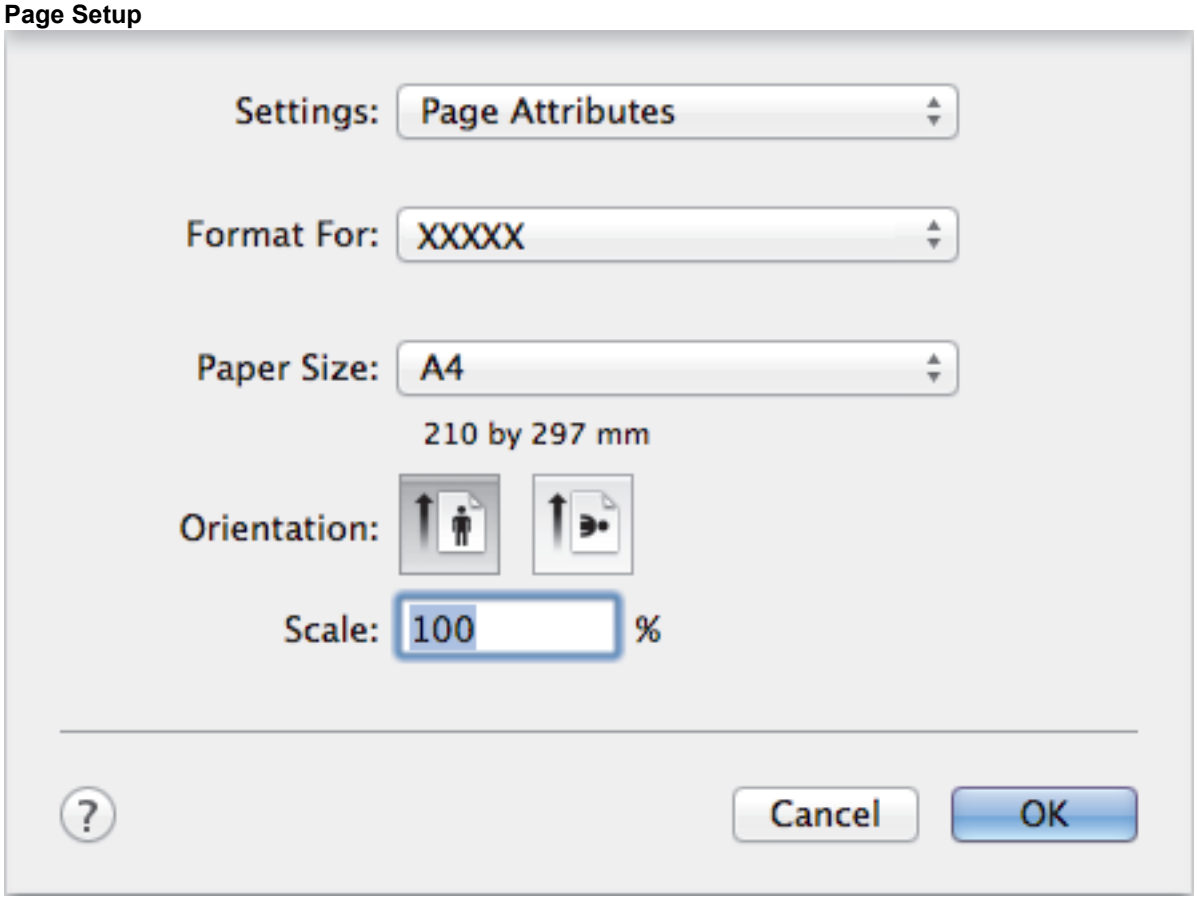
Access the Web Based Management System by clicking the machine icon on the **Status Monitor** screen. You can use a standard Web Browser to manage your machine using HTTP (Hyper Text Transfer Protocol).

Related Information

- Print from Your Computer (Macintosh)
- Printing Problems

Print Options (Macintosh)

Page Setup



1. **Paper Size**

   Select the size of the paper you want to use. You can either choose from standard paper sizes or create a custom paper size.

2. **Orientation**

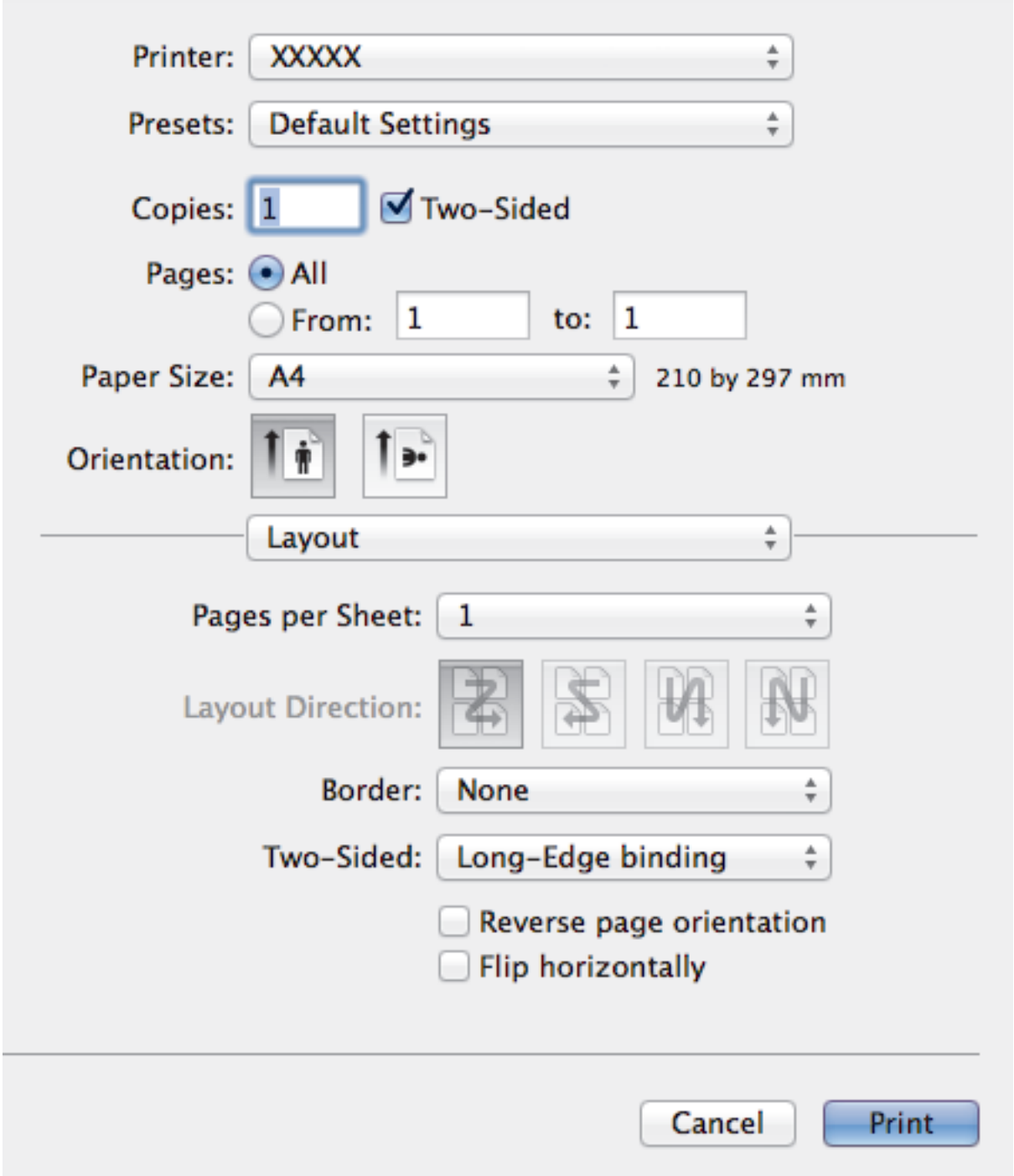
   Select the orientation (portrait or landscape) of your printout.

   If your application contains a similar setting, we recommend that you set the orientation using the application.

3. **Scale**

   Type a value into the field to enlarge or reduce the pages in your document to fit the selected paper size.

Layout



1. **Pages per Sheet**

   Select the number of pages to print on a single sheet of paper.
2. **Layout Direction**

   Select the page order when printing multiple pages on a single sheet of paper.
3. **Border**

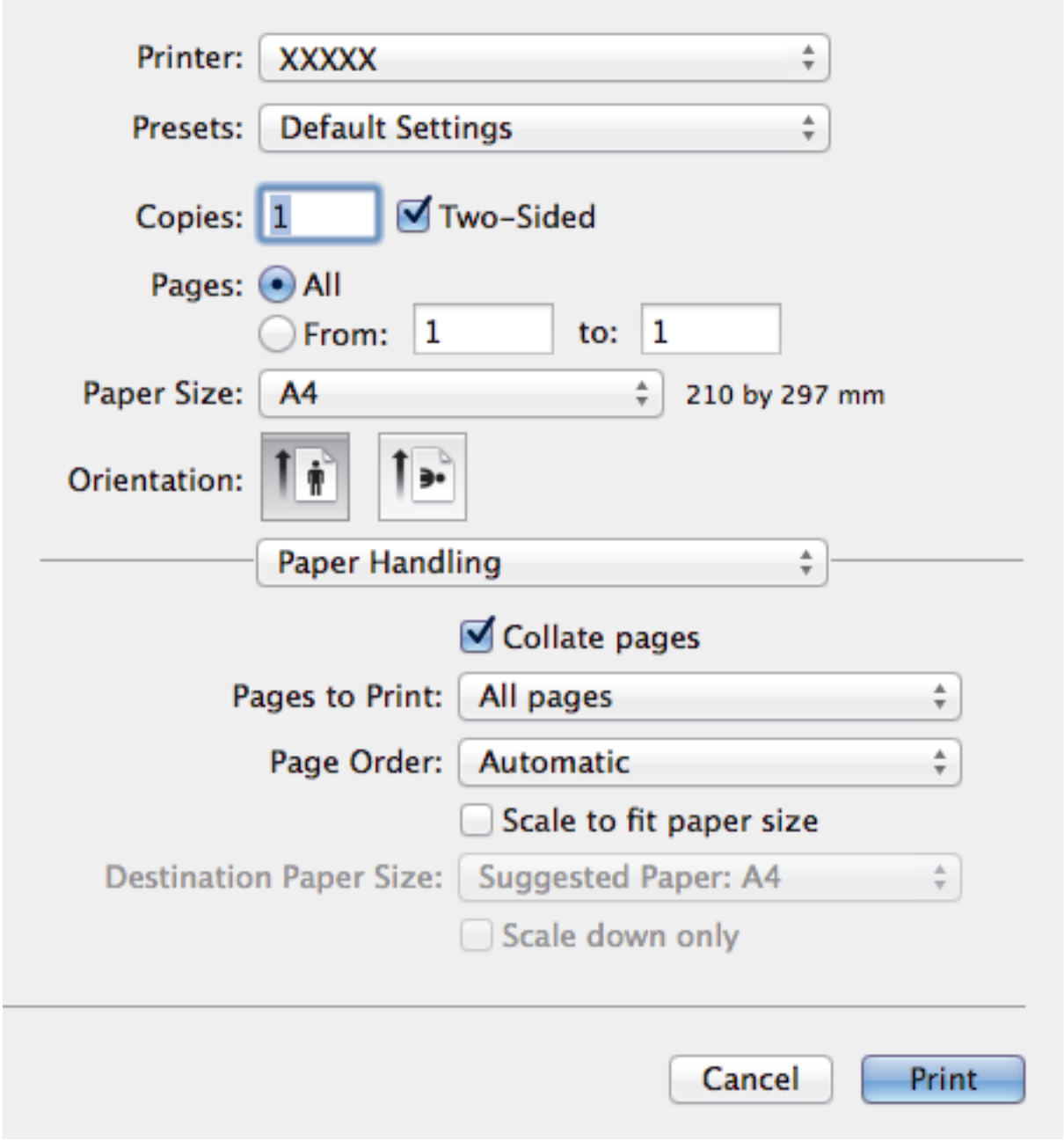
   Select the type of border to use when printing multiple pages on a single sheet of paper.
4. **Two-Sided**

   Select whether to print on both sides of the paper.
5. **Reverse page orientation**

   Select this option to rotate the printed image 180 degrees.
6. **Flip horizontally**

   Select this option to reverse the printed image on the page horizontally from left to right.

Paper Handling



1. **Collate pages**

   Select this option to print sets of multi-page documents in the original page order. When this option is selected, one complete copy of your document will print, and then reprint according to the number of copies you choose. If this option is not selected, then each page will print according to the number of copies chosen before the next page of the document is printed.

2. **Pages to Print**

   Select which pages you want to print (even pages or odd pages).

3. **Page Order**

   Select the page order.

4. **Scale to fit paper size**

   Select this option to enlarge or reduce the pages in your document to fit the selected paper size.

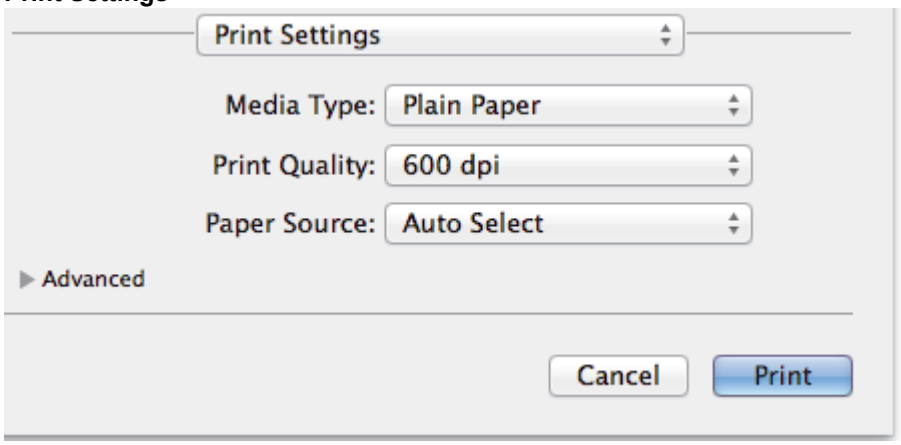
5. **Destination Paper Size**

   Select the paper size to print on.

6. **Scale down only**

   Select this option if you want to reduce the pages in your document when they are too large for the selected paper size. If this option is selected and the document is formatted for a paper size that is smaller than the paper size you are using, the document will be printed at its original size.

Print Settings



1. **Media Type**

   Select the type of media you want to use. To achieve the best print results, the machine automatically adjusts its print settings according to the selected media type.

2. **Print Quality**

   Select the print resolution you want. Because print quality and speed are related, the higher the quality, the longer it will take to print the document.

3. **Paper Source**

   Select the paper source setting according to your print conditions or purpose.

4. **Advanced**

   Toner Save Mode

   Select this feature to conserve toner by using less toner to print documents; printouts appear lighter, but are still legible.

   Graphics Quality

   Select either Graphics or Text for the best print quality, based on the type of document you are printing.

   Improve Print Output

   Select this option to reduce the amount of paper curling and improve the toner fixing.

   Density Adjustment

   Specify the print density.

   Sleep Time

   Specify the amount of time that passes before the machine enters Sleep Mode.

   Quiet Mode

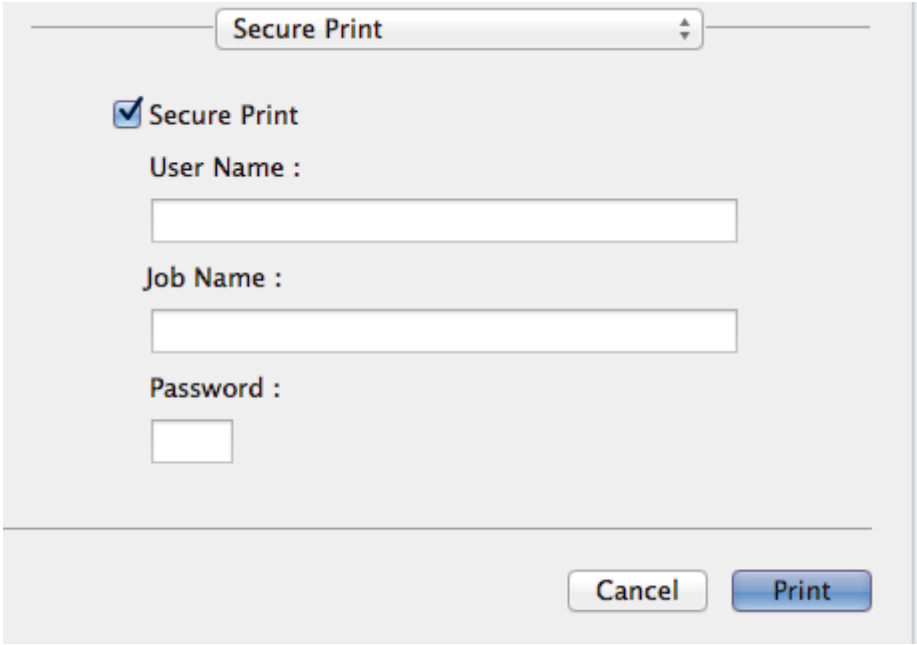
   Select this option to reduce printing noise.

   Other Print Options

   Skip Blank Page

   Select this option to allow the printer driver to automatically detect blank pages and exclude them from printing.

Secure Print



1. **Secure Print**

   This feature ensures that confidential or sensitive documents do not print until you enter a password on the machine's control panel.

Related Information

- Print from Your Computer (Macintosh)
- Print a Document (Macintosh)
- Print on Both Sides of the Paper (Macintosh)
- Print More Than One Page on a Single Sheet of Paper (N in 1) (Macintosh)

Print One Page Duplicates on Different Types of Paper

Use the Carbon Copy function to make multiple copies of the same print data, as if printing on carbon paper. Send the data to individual paper trays that you pre-loaded with different paper types or colours.

For example, you may want to set the machine to send your print data to Tray1, which you have pre-loaded with blue coloured paper, and then reprint the data in a certain location on the page from the MP Tray, which you have pre-loaded with yellow coloured paper that already contains text.

If you load blue paper in Tray 1 and yellow paper in the MP tray, the printer will automatically feed paper for Sheet 1 from Tray 1 and Sheet 2 from the MP Tray.

If you enable the Carbon Copy function, the machine will always make copies automatically.

1. Press ▲ or ▼ to display the `[Print Menu]` option, and then press **OK**.
2. Press ▲ or ▼ to display the `[Carbon Menu]` option, and then press **OK**.
3. Press ▲ or ▼ to display the `[Carbon Copy]` option, and then press **OK**.
4. Press ▲ or ▼ to display the `[On]` option, and then press **OK**.
5. Press ▲ or ▼ to display the `[Copies]` option, and then press **OK**.
6. Press ▲ or ▼ to enter the number of copies you want, and then press **OK**.
7. Press ▲ or ▼ to display the `[Copy1 Tray]` option, and then press **OK**.
8. Press ▲ or ▼ to display the paper tray you want to configure as `[Copy1 Tray]`, and then press **OK**.
9. Repeat these steps until you have selected all the tray settings for each copy.
10. Send your print job to the machine.

Related Information

- Print

Cancel a Print Job

1. Press **Cancel**.

To cancel multiple print jobs, press and hold **Cancel** for four seconds.

Related Information

- Print
- Printing Problems

Test Print

If there are problems with print quality, follow these instructions to do a test print.

1. Press ▲ or ▼ to display the [Machine Info.] option, and then press **OK**.
2. Press ▲ or ▼ to display the [Test Print] option, and then press **OK**.

The machine prints the test page.

Related Information

- Print
- Improve the Print Quality

Network

- Get Started
- Network Management Software and Utilities
- Advanced Network Features
- Technical Information for Advanced Users

Get Started

We recommend setting up and connecting to your network using the Lenovo installation CD-ROM. This section provides more information about network connection types, introduces various methods to manage your network and explains some useful network features of your Lenovo machine.

- Supported Basic Network Features

Supported Basic Network Features

Related Models: LJ4000DN/LJ5000DN

The print server supports various features depending on the operating system. Use this table to see which network features and connections are supported by each operating system.

Operating Systems	**Windows® XP** **Windows Vista®** **Windows® 7** **Windows® 8**	**Windows Server® 2008/2012/2012 R2**	**OS X v10.8.5** **OS X v10.9.x** **OS X v10.10.x**
Printing	Yes	Yes	Yes
BRAdmin Light	Yes	Yes	
Web Based Management	Yes	Yes	Yes
Status Monitor	Yes		Yes

You can download Lenovo's latest BRAdmin Light utility from http://www.lenovo.com.

Related Information

- Get Started

Network Management Software and Utilities

Configure and change your Lenovo machine's network settings using a management utility.

- Learn about Network Management Software and Utilities
- Change Machine Settings from Your Computer
- Change Machine Settings Using Web Based Management

Learn about Network Management Software and Utilities

Related Models: LJ4000DN/LJ5000DN

Web Based Management

Web Based Management is a utility that uses a standard web browser to manage your machine using the Hyper Text Transfer Protocol (HTTP) or Hyper Text Transfer Protocol over Secure Socket Layer (HTTPS). Type your machine's IP address into your web browser to access and change your print server settings.

BRAdmin Light (Windows®)

BRAdmin Light is a utility for the initial setup of Lenovo network-connected devices. This utility can search for Lenovo products on your network, view the status and configure the basic network settings, such as IP address.

You can download Lenovo's latest BRAdmin Light utility from http://www.lenovo.com.

- If you are using Windows® Firewall, or the firewall function of an anti-spyware or antivirus application, temporarily disable them. When you are sure you can print, configure the software settings following the instructions.

Related Information

- Network Management Software and Utilities

Advanced Network Features

- Print the Network Configuration Report
- Configure the SNTP Protocol Using Web Based Management

Print the Network Configuration Report

Related Models: LJ4000DN/LJ5000DN

The Network Configuration Report lists the network configuration, including the network print server settings.

- Node Name: The Node Name appears on the current Network Configuration Report. The default Node Name is "BRNxxxxxxxxxxx" for a wired network (where "xxxxxxxxxxx" is your machine's MAC Address / Ethernet Address.)
- If the `[IP Address]` on the Network Configuration Report shows 0.0.0.0, wait for one minute and try printing it again.
- You can find your machine's settings, such as the IP address, subnet mask, node name, and MAC Address on the report, for example:
  - IP address: 192.168.0.5
  - Subnet mask: 255.255.255.0
  - Node name: BRN000ca0000499
  - MAC Address: 00-0c-a0-00-04-99

1. Press ▲ or ▼ to select the `[Machine Info.]` option, and then press **OK**.
2. Press ▲ or ▼ to select `[Print NetSetting]`.
3. Press **OK**.

Related Information

- Advanced Network Features
- Where Can I Find My Lenovo Machine's Network Settings?
- I Want to Check that My Network Devices are Working Correctly
- Access Web Based Management
- Configure the Gigabit Ethernet Settings Using Web Based Management

Configure the SNTP Protocol Using Web Based Management

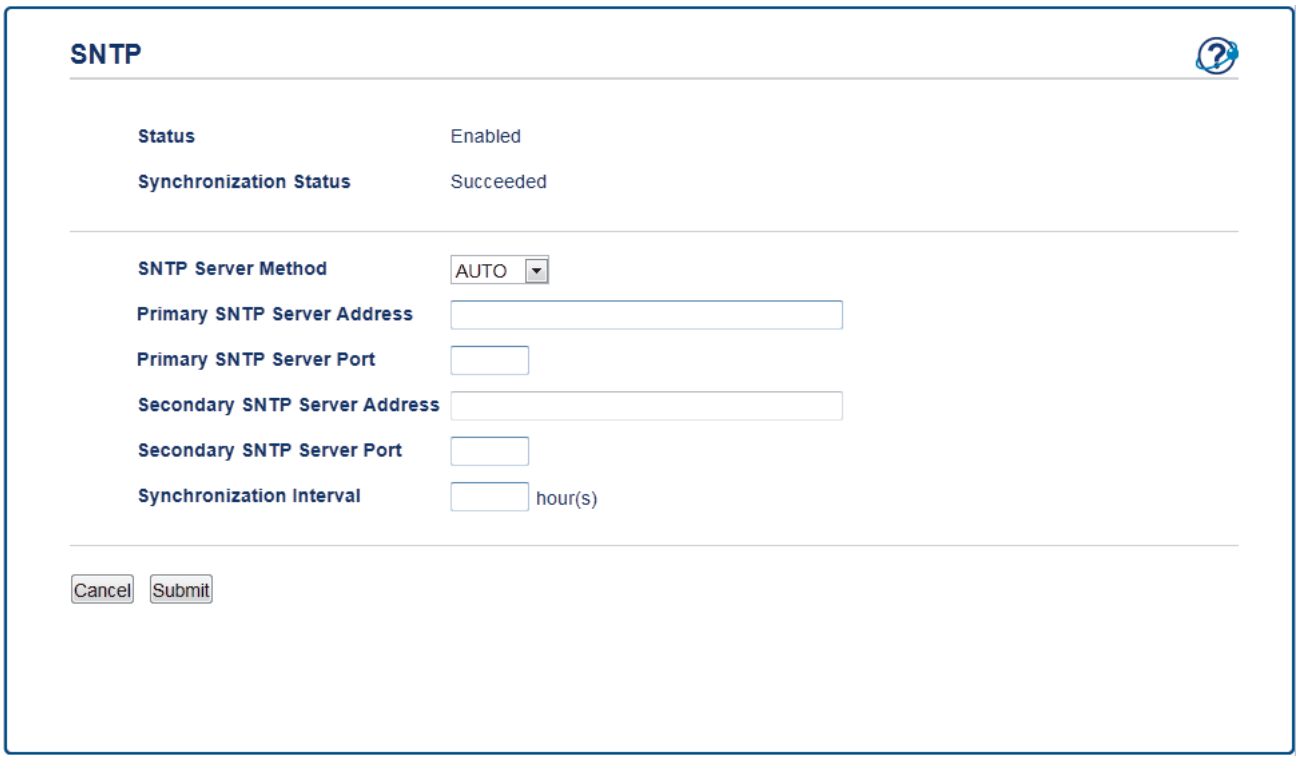
Related Models: LJ4000DN/LJ5000DN

Configure the SNTP protocol to synchronize the time the machine uses for authentication with the time kept by the SNTP time server.

1. Start your web browser.
2. Type "http://machine's IP address" in your browser's address bar (where "machine's IP address" is the machine's IP address).

   For example:

   http://192.168.1.2
3. No password is required by default. Type a password if you have set one, and then click .
4. Click the **Network** tab.
5. Click **Protocol** in the left navigation bar.
6. Select the **SNTP** check box to activate the settings.
7. Next to the SNTP check box, click **Advanced Settings** and follow the instructions below:



Option	Description
Status	Displays whether the SNTP protocol is enabled or disabled.
Synchronization Status	Confirm the latest synchronization status.
SNTP Server Method	Select **AUTO** or **STATIC**. • **AUTO** If you have a DHCP server in your network, the SNTP server will obtain the address from that server automatically. • **STATIC** Type the address you want to use.

Option	Description
Primary SNTP Server Address **Secondary SNTP Server Address**	Type the server address (up to 64 characters). The secondary SNTP server address is used as a backup to the primary SNTP server address. If the primary server is unavailable, the machine will contact the secondary SNTP server.
Primary SNTP Server Port **Secondary SNTP Server Port**	Type the port number (1-65535). The secondary SNTP server port is used as a backup to the primary SNTP server port. If the primary port is unavailable, the machine will contact the secondary SNTP port.
Synchronization Interval	Type the number of hours between server synchronization attempts (1-168 hours).

8. Click **Submit**.

Related Information

- Advanced Network Features

Technical Information for Advanced Users

- Gigabit Ethernet (Wired Network Only)
- Reset the Network Settings to the Factory Settings

Gigabit Ethernet (Wired Network Only)

Related Models: LJ5000DN

Your machine supports 1000BASE-T Gigabit Ethernet. To connect to a 1000BASE-T Gigabit Ethernet Network, you must set the machine's Ethernet link mode to Auto from the machine's control panel or Auto from Web Based Management (web browser).

- Use a straight-through Category 5 (or greater) twisted-pair cable for 10BASE-T, 100BASE-TX Fast Ethernet Network, or 1000BASE-T Gigabit Ethernet Network. When you connect the machine to a Gigabit Ethernet Network, use the network devices complying with 1000BASE-T.

Related Information

- Technical Information for Advanced Users
- Configure the Gigabit Ethernet Settings Using Web Based Management

Configure the Gigabit Ethernet Settings Using Web Based Management

Related Models: LJ5000DN

1. Start your web browser.
2. Type "http://machine's IP address" in your browser's address bar (where "machine's IP address" is the machine's IP address).

   For example:

   http://192.168.1.2
3. No password is required by default. Type a password if you have set one, and then click .
4. Click the **Network** tab.
5. Click **Wired**.
6. Click **Ethernet** in the left navigation bar.
7. Select **Auto** from the **Ethernet Mode** drop-down list.
8. Click **Submit**.
9. To enable the settings, restart your machine.

You can confirm your settings by printing the Network Configuration Report.

Related Information

- Gigabit Ethernet (Wired Network Only)
- Print the Network Configuration Report

Reset the Network Settings to the Factory Settings

Related Models: LJ4000DN/LJ5000DN

You can use your machine's control panel to reset the print server to its default factory settings. This resets all information, such as the password and IP address.

- You can also reset the print server to its factory settings using BRAdmin Light or Web Based Management.

1. Press ▲ or ▼ to select the `[Network]` option, and then press **OK**.
2. Press ▲ or ▼ to select the `[Network Reset]` option, and then press **OK**.
3. Press ▲ for `[Yes]`.

   The machine will restart.

Related Information

- Technical Information for Advanced Users

Security

- Lock the Machine Settings
- Network Security Features

Lock the Machine Settings

Before turning on the machine's Access Lock, make a careful note of your password. If you forget the password, you must reset all passwords stored in the machine by contacting your administrator or Lenovo customer service.

- About Using Setting Lock

About Using Setting Lock

Use the Setting Lock feature to block unauthorised access to machine settings.
When Setting Lock is set to `[On]`, you cannot access the machine settings without entering the password.

- Set the Setting Lock Password
- Change the Setting Lock Password
- Turn Setting Lock On

Set the Setting Lock Password

1. Press ▲ or ▼ to display the [General Setup] option, and then press **OK**.
2. Press ▲ or ▼ to display the [Setting Lock] option, and then press **OK**.
3. Enter a four-digit number for the password.
   To enter each digit, press ▲ or ▼ to select a number, and then press **OK**.
4. When the LCD displays [Verify], re-enter the new password.
5. Press **Go**.

Related Information

- About Using Setting Lock

Change the Setting Lock Password

1. Press ▲ or ▼ to display the [General Setup] option, and then press **OK**.
2. Press ▲ or ▼ to display the [Setting Lock] option, and then press **OK**.
3. Press ▲ or ▼ to select the [Set Password] option, and then press **OK**.
4. Enter the current four-digit password.

   To enter each digit, press ▲ or ▼ to select a number, and then press **OK**.
5. Enter a new four-digit password.

   To enter each digit, press ▲ or ▼ to select a number, and then press **OK**.
6. When the LCD displays [Verify], re-enter the new password.
7. Press **Go**.

Related Information

- About Using Setting Lock

Turn Setting Lock On

1. Press ▲ or ▼ to display the [General Setup] option, and then press **OK**.
2. Press ▲ or ▼ to display the [Setting Lock] option, and then press **OK**.
3. Press **OK** when the LCD displays [On].
4. Enter the current four-digit password.

   To enter each digit, press ▲ or ▼ to select a number, and then press **OK**.

To turn Setting Lock off, press **OK**. Press ▲ to select [Yes] when the LCD displays [Unlock?], enter the current four-digit password, and then press **OK**.

Related Information

- About Using Setting Lock

Network Security Features

- Before Using Network Security Features
- Secure Function Lock 3.0
- Manage Your Network Machine Securely Using SSL/TLS
- Manage Your Network Machine Securely Using IPsec
- Send an Email Securely
- Use IEEE 802.1x Authentication
- Store Print Log to Network

Before Using Network Security Features

Related Models: LJ4000DN/LJ5000DN

Your Lenovo machine employs some of the latest network security and encryption protocols available today. These network features can be integrated into your overall network security plan to help protect your data and prevent unauthorised access to the machine.

We recommend disabling the Telnet, FTP server and TFTP protocols. Accessing the machine using these protocols is not secure.

Related Information

- Network Security Features

Secure Function Lock 3.0

Lenovo's Secure Function Lock 3.0 increases security by restricting the functions available on your Lenovo machine.

- Before Using Secure Function Lock 3.0
- Configure Secure Function Lock 3.0 Using Web Based Management
- Configure Public Mode for Secure Function Lock 3.0
- Additional Secure Function Lock 3.0 Features

Before Using Secure Function Lock 3.0

Related Models: LJ4000DN/LJ5000DN

Use Secure Function Lock to configure passwords, set specific user page limits, and grant access to some or all of the functions listed here.

You can configure and change the following Secure Function Lock 3.0 settings using Web Based Management:

- **Print**

  Print includes print jobs sent via AirPrint.

  If you register users' login names in advance, the users will not need to enter their passwords when they use the print function.
- **Page Limits**
- **Page Counters**

Related Information

- Secure Function Lock 3.0

Configure Secure Function Lock 3.0 Using Web Based Management

Related Models: LJ4000DN/LJ5000DN

1. Start your web browser.
2. Type "http://machine's IP address" in your browser's address bar (where "machine's IP address" is the machine's IP address).

   For example:

   http://192.168.1.2
3. Click the **Administrator** tab.
4. Click the **User Restriction Function** menu in the left navigation bar.
5. Select **Secure Function Lock**.
6. Click **Submit**.
7. Click the **Restricted Functions** menu in the left navigation bar.
8. In the **User List / Restricted Functions** field, type a group name or user name (alphanumeric, up to 15 digits).
9. In the **Print** and the other columns, select a check box to allow or clear a check box to restrict the function listed.
10. To configure the maximum page count, select the **On** check box in the **Page Limits** column, and then type the maximum number in the **Max. Pages** field.
11. Click **Submit**.
12. Click the **User List** menu in the left navigation bar.
13. In the **User List** field, type the user name.
14. In the **PIN Number** field, type a four-digit password.
15. Select **User List / Restricted Functions** from the drop-down list for each user.
16. Click **Submit**.

Related Information

- Secure Function Lock 3.0

Configure Public Mode for Secure Function Lock 3.0

Related Models: LJ4000DN/LJ5000DN

Use the Secure Function Lock screen to set up Public Mode, which limits the functions available to public users. Public users will not need to enter a password to access the features made available through Public Mode settings.

Public Mode includes print jobs sent via AirPrint.

1. Start your web browser.
2. Type "http://machine's IP address" in your browser's address bar (where "machine's IP address" is the machine's IP address).

   For example:

   http://192.168.1.2
3. Click the **Administrator** tab.
4. Click the **User Restriction Function** menu in the left navigation bar.
5. Select **Secure Function Lock**.
6. Click **Submit**.
7. Click the **Restricted Functions** menu.
8. In the **Public Mode** row, select a check box to allow or clear a check box to restrict the function listed.
9. Click **Submit**.

Related Information

- Secure Function Lock 3.0

Additional Secure Function Lock 3.0 Features

Related Models: LJ4000DN/LJ5000DN

Configure the following features in the Secure Function Lock screen:

All Counter Reset

Click **All Counter Reset**, in the **Page Counters** column, to reset the page counter.

Export to CSV file

Click **Export to CSV file**, to export the current page counter including **User List / Restricted Functions** information as a CSV file.

Last Counter Record

Click **Last Counter Record** if you want the machine to retain the page count after the counter has been reset.

Related Information

- Secure Function Lock 3.0

Manage Your Network Machine Securely Using SSL/TLS

- Introduction to SSL/TLS
- Certificates and Web Based Management
- Manage Your Network Machine Securely Using Web Based Management
- Print Documents Securely Using SSL/TLS

Introduction to SSL/TLS

Related Models: LJ4000DN/LJ5000DN

Secure Socket Layer (SSL) or Transport Layer Security (TLS) is an effective method of protecting data sent over a local or wide area network (LAN or WAN). It works by encrypting data, such as a print job, sent over a network, so anyone trying to capture it will not be able to read it.

SSL/TLS will work with other forms of security such as firewalls.

Related Information

- Manage Your Network Machine Securely Using SSL/TLS
- Brief History of SSL/TLS
- Benefits of Using SSL/TLS

Brief History of SSL/TLS

Related Models: LJ4000DN/LJ5000DN

SSL/TLS was originally created to secure web traffic information, particularly data sent between web browsers and servers. For example, when you use Internet Explorer® for Internet Banking and you see https:// and the little padlock icon in the web browser, you are using SSL. SSL grew to work with additional applications, such as Telnet, printer, and FTP software, in order to become a universal solution for online security. Its original design intentions are still being used today by many online retailers and banks to secure sensitive data, such as credit card numbers, customer records, etc.

SSL/TLS uses extremely high levels of encryption and is trusted by banks all over the world.

Related Information

- Introduction to SSL/TLS

Benefits of Using SSL/TLS

Related Models: LJ4000DN/LJ5000DN

The primary benefit of using SSL/TLS on Lenovo machines is to guarantee secure printing over an IP network by restricting unauthorised users from reading data sent to the machine. SSL's key selling point is that it can be used to print confidential data securely. For example, an HR department in a large company may be printing wage slips on a regular basis. Without encryption, the data contained on these wages slips can be read by other network users. However, with SSL/TLS, anyone trying to capture the data will see a confusing page of code and not the actual wage slip.

Related Information

- Introduction to SSL/TLS

Certificates and Web Based Management

You must configure a certificate to manage your networked Lenovo machine securely using SSL/TLS. You must use Web Based Management to configure a certificate.

- Supported Security Certificate Features
- Create and Install a Certificate
- Manage Multiple Certificates

Supported Security Certificate Features

Related Models: LJ4000DN/LJ5000DN

Your Lenovo machine supports the use of multiple security certificates, which allows secure management, authentication, and communication with the machine. The following security certificate features can be used with the machine:

- SSL/TLS communication
- SSL communication for SMTP
- IEEE 802.1x authentication
- IPsec

The Lenovo machine supports the following:

- Pre-installed certificate

  Your machine has a pre-installed self-signed certificate. This certificate enables you to use SSL/TLS communication without creating or installing a different certificate.

  The pre-installed self-signed certificate cannot protect your communication from being compromised. We recommend using a certificate that is issued by a trusted organization for better security.

- Self-signed certificate

  This print server issues its own certificate. Using this certificate, you can easily use the SSL/TLS communication without creating or installing a different certificate from a CA.

- Certificate from a Certificate Authority (CA)

  There are two methods for installing a certificate from a CA. If you already have a certificate from a CA or if you want to use a certificate from an external trusted CA:

  - When using a Certificates Signing Request (CSR) from this print server.
  - When importing a certificate and a private key.

- Certificate Authority (CA) Certificate

  To use a CA certificate that identifies the CA and owns its private key, you must import that CA certificate from the CA before configuring the security features of the Network.

  - If you are going to use SSL/TLS communication, we recommend contacting your system administrator first.
  - When you reset the print server back to its default factory settings, the certificate and the private key that are installed will be deleted. If you want to keep the same certificate and the private key after resetting the print server, export them before resetting, and then reinstall them.

Related Information

- Certificates and Web Based Management

Create and Install a Certificate

- Step by Step Guide for Creating and Installing a Certificate
- Create and Install a Self-signed Certificate
- Create and Install a Certificate from a Certificate Authority (CA)
- Import and Export a CA Certificate

Step by Step Guide for Creating and Installing a Certificate

Related Models: LJ4000DN/LJ5000DN

There are two options when choosing a security certificate: use a self-signed certificate or use a certificate from a Certificate Authority (CA).

These are a brief summary of the actions required, based on the option you choose.

Option 1

Self-Signed Certificate

1. Create a self-signed certificate using Web Based Management.
2. Install the self-signed certificate on your computer.

Option 2

Certificate from a CA

1. Create a Certificate Signing Request (CSR) using Web Based Management.
2. Install the certificate issued by the CA on your Lenovo machine using Web Based Management.
3. Install the certificate on your computer.

Related Information

- Create and Install a Certificate

Create and Install a Self-signed Certificate

- Create a Self-signed Certificate
- Install the Self-signed Certificate for Windows® users with Administrator Rights
- Import and Export the Self-signed Certificate on your Lenovo Machine

Create a Self-signed Certificate

Related Models: LJ4000DN/LJ5000DN

1. Start your web browser.
2. Type "http://machine's IP address" in your browser's address bar (where "machine's IP address" is the machine's IP address).

   For example:

   http://192.168.1.2

   - If you are using a Domain Name System or enable a NetBIOS name, you can type another name, such as "SharedPrinter" instead of the IP address.
     - For example:

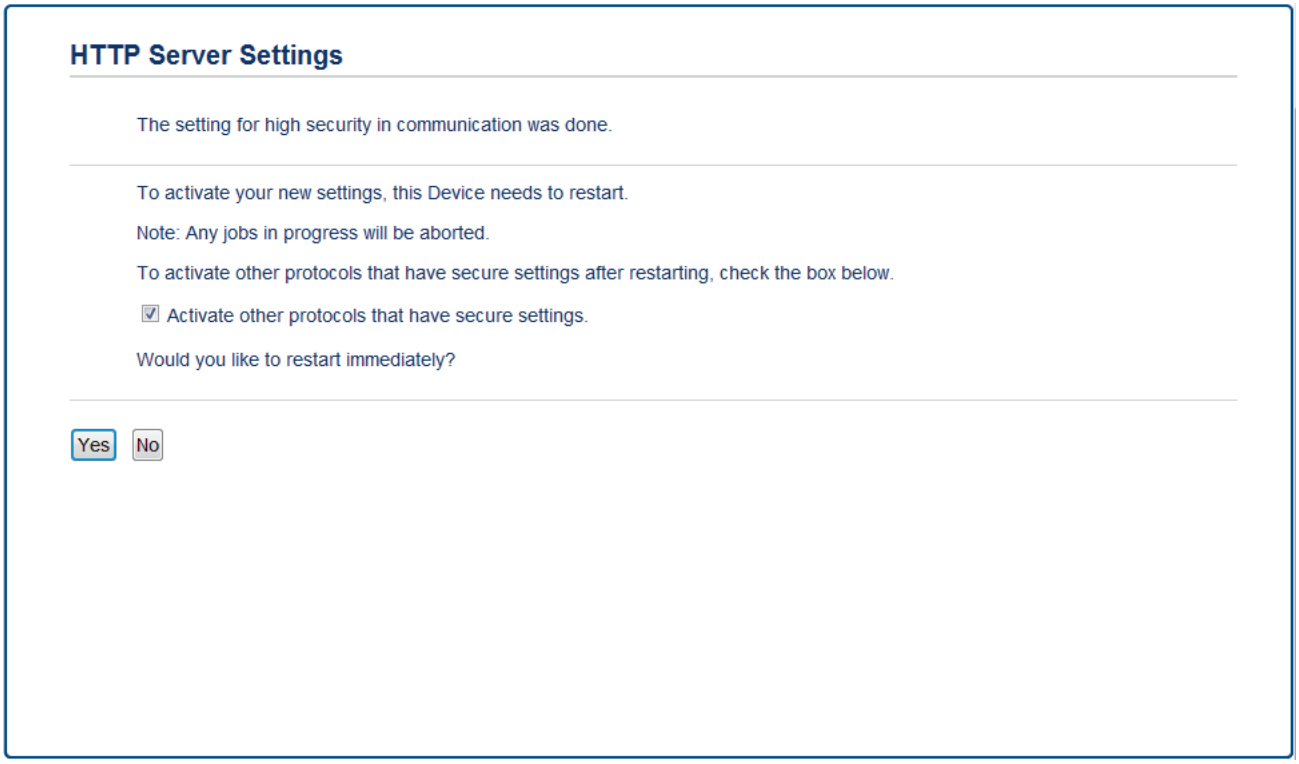
       http://SharedPrinter

     If you enable a NetBIOS name, you can also use the node name.
     - For example:

       http://brnxxxxxxxxxxx

     The NetBIOS name can be found in the Network Configuration Report.
   - For Macintosh, access Web Based Management by clicking the machine's icon on the **Status Monitor** screen.
3. No password is required by default. Type a password if you have set one, and then click .
4. Click the **Network** tab.
5. Click **Security**.
6. Click **Certificate**.
7. Click **Create Self-Signed Certificate**.
8. Enter a **Common Name** and a **Valid Date**.
   - The length of the **Common Name** is less than 64 bytes. Enter an identifier, such as an IP address, node name, or domain name to use when accessing this machine through SSL/TLS communication. The node name is displayed by default.
   - A warning will appear if you use the IPPS or HTTPS protocol and enter a different name in the URL than the **Common Name** that was used for the self-signed certificate.
9. Select your setting from the **Public Key Algorithm** drop-down list. The default setting is **RSA(2048bit)**.
10. Select your setting from the **Digest Algorithm** drop-down list. The default setting is **SHA256**.
11. Click **Submit**.
12. Click **Network**.
13. Click **Protocol**.
14. Click **HTTP Server Settings**.
15. Select the certificate you want to configure from the **Select the Certificate** drop-down list.
16. Click **Submit**.

    The following screen appears.



17. Click **Yes** to restart your print server.

The self-signed certificate is created and saved in your machine's memory.

To use SSL/TLS comunication, the self-signed certificate must be installed on your computer.

Related Information

- Create and Install a Self-signed Certificate

Install the Self-signed Certificate for Windows® users with Administrator Rights

Related Models: LJ4000DN/LJ5000DN

The following steps are for Microsoft® Internet Explorer®. If you use another web browser, consult the documentation for your web browser to get help with installing certificates.

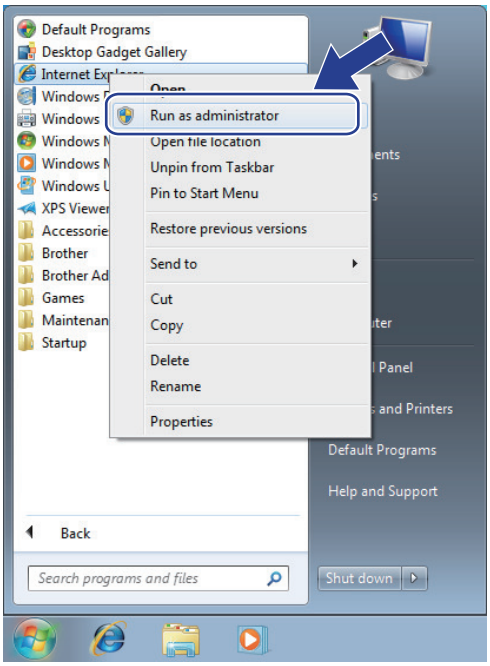
1. Do one of the following:
   - (Windows® XP)

     Start your web browser, and then go to step 3.
   - (Windows Vista®, Windows® 7, Windows Server® 2008)

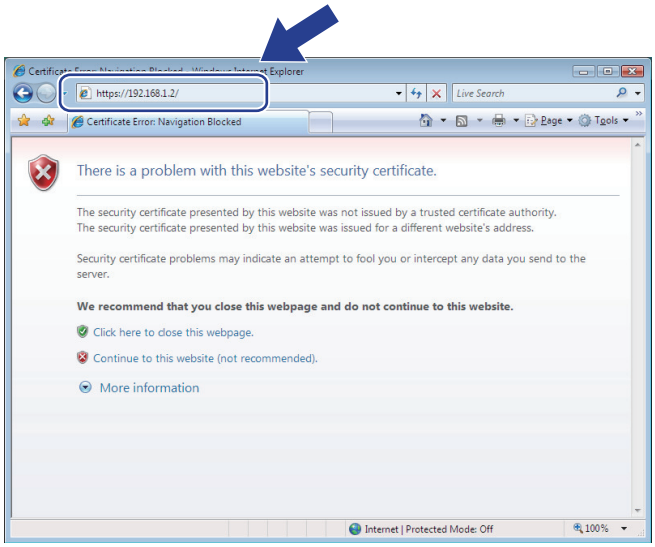
     Click **(Start)** > **All Programs**.
   - (Windows® 8)

     Right-click the **(Internet Explorer)** icon on the taskbar.
   - (Windows Server® 2012 and Windows Server® 2012 R2)

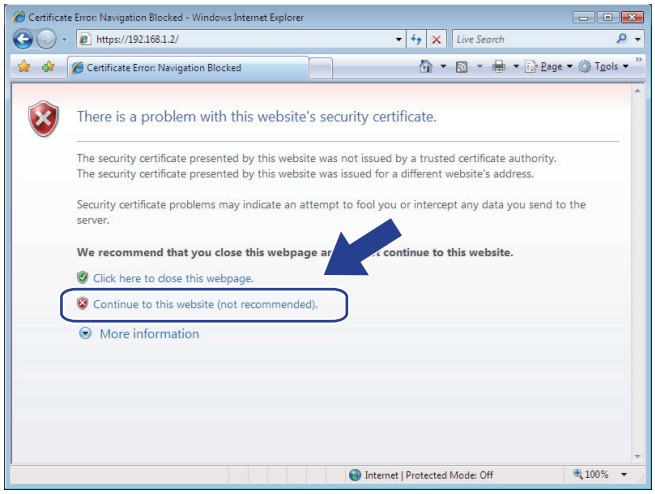
     Click **(Internet Explorer)**, and then right-click the **(Internet Explorer)** icon that appears on the taskbar.
2. Right-click **Internet Explorer**, and then click **Run as administrator**.



   If the **User Account Control** screen appears,
   - (Windows Vista®) Click **Continue (Allow)**.
   - (Windows® 7/Windows® 8) Click **Yes**.
3. Type "https://machine's IP address/" in your browser's address bar to access your machine (where "machine's IP address" is the machine's IP address or the node name that you assigned for the certificate).



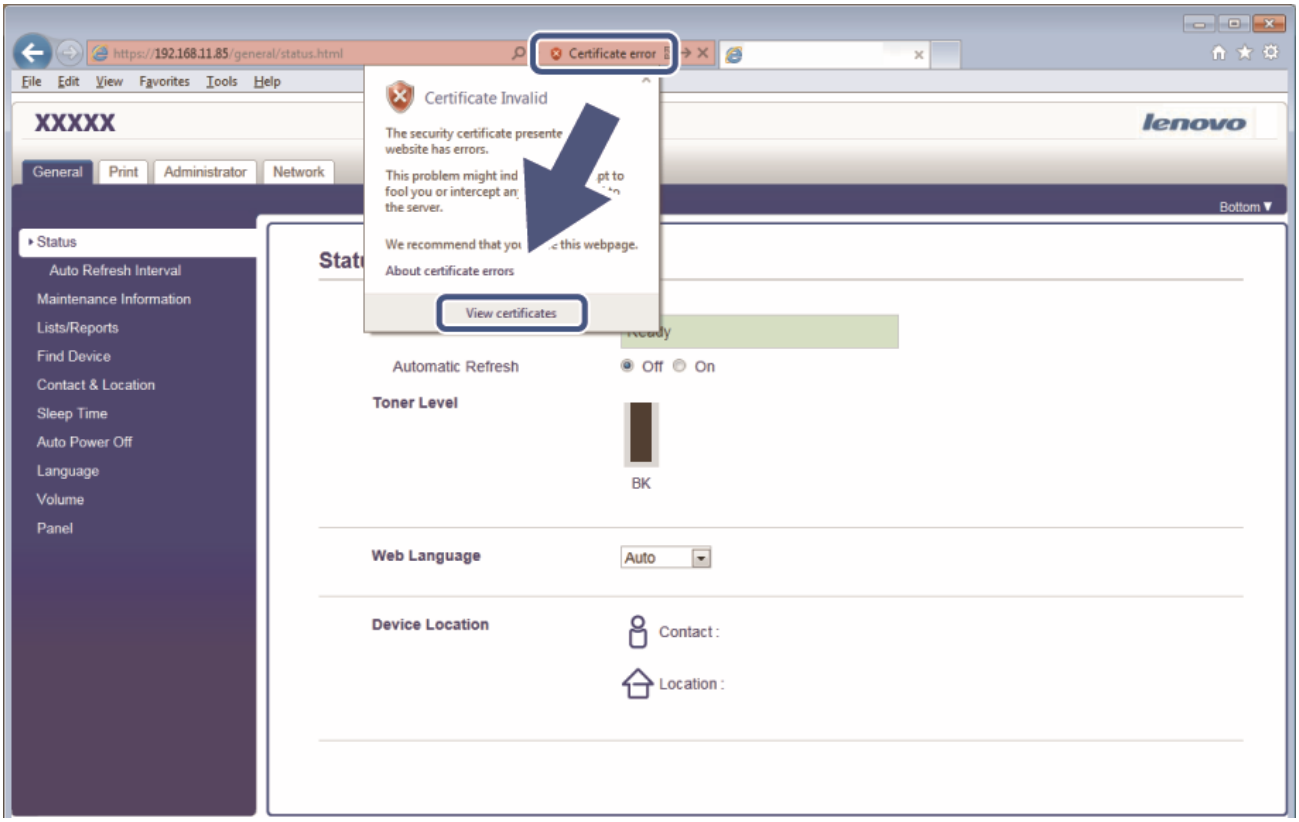
4. Click **Continue to this website (not recommended).**



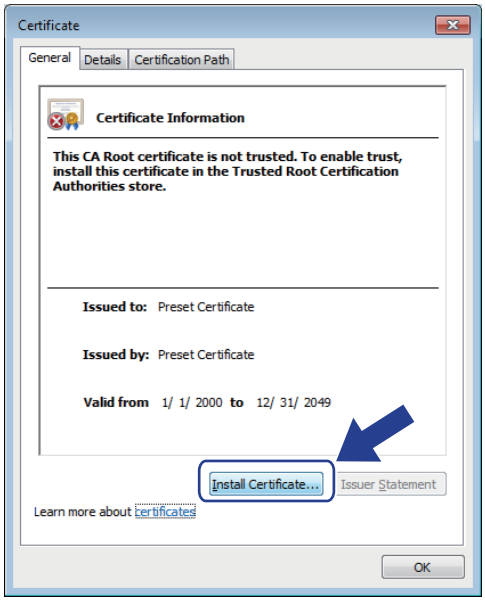
(Windows® XP)

When the following dialog box appears, click **View Certificate**, and then go to step 6.

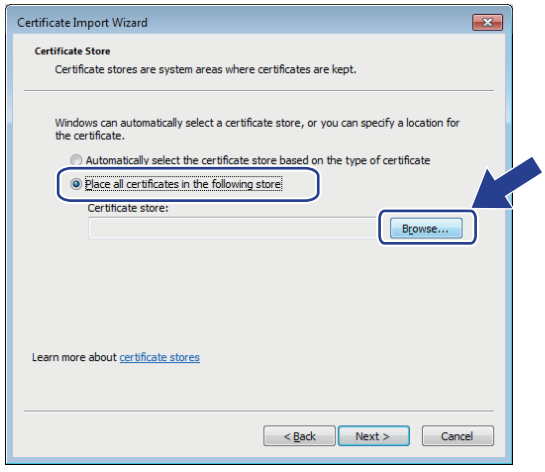
5. Click **Certificate Error**, and then click **View certificate**.



6. Click **Install Certificate...**.

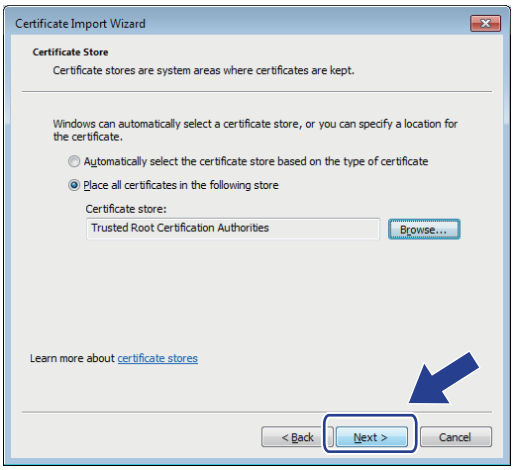


7. When the **Certificate Import Wizard** appears, click **Next**.
8. Select **Place all certificates in the following store**, and then click **Browse...**.

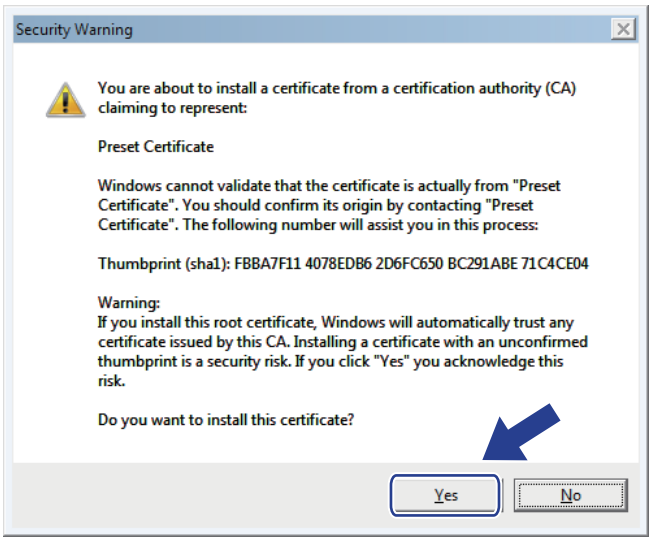


9. Select **Trusted Root Certification Authorities**, and then click **OK**.

10. Click **Next**.



11. Click **Finish**.
12. Click **Yes**, if the fingerprint (thumbprint) is correct.



The fingerprint (thumbprint) is printed on the Network Configuration Report.

13. Click **OK**.

The self-signed certificate is now installed on your computer, and SSL/TLS communication is available.

Related Information

- Create and Install a Self-signed Certificate

Import and Export the Self-signed Certificate on your Lenovo Machine

You can store the self-signed certificates on your Lenovo machine and manage them by importing and exporting.

- Import the Self-signed Certificate
- Export the Self-signed Certificate

Import the Self-signed Certificate

Related Models: LJ4000DN/LJ5000DN

1. Start your web browser.
2. Type "http://machine's IP address" in your browser's address bar (where "machine's IP address" is the machine's IP address).

   For example:

   http://192.168.1.2

- If you are using a Domain Name System or enable a NetBIOS name, you can type another name, such as "SharedPrinter" instead of the IP address.
  - For example:

    http://SharedPrinter

  If you enable a NetBIOS name, you can also use the node name.
  - For example:

    http://brnxxxxxxxxxxx

  The NetBIOS name can be found in the Network Configuration Report.
- For Macintosh, access Web Based Management by clicking the machine's icon on the **Status Monitor** screen.

3. No password is required by default. Type a password if you have set one, and then click .
4. Click the **Network** tab.
5. Click **Security**.
6. Click **Certificate**.
7. Click **Import Certificate and Private Key**.
8. Browse to the file you want to import.
9. Type the password if the file is encrypted, and then click **Submit**.

The self-signed certificate is imported to your machine.

To use SSL/TLS communication, the self-signed certificate must also be installed on your computer. Contact your network administrator.

Related Information

- Import and Export the Self-signed Certificate on your Lenovo Machine

Export the Self-signed Certificate

Related Models: LJ4000DN/LJ5000DN

1. Start your web browser.
2. Type "http://machine's IP address" in your browser's address bar (where "machine's IP address" is the machine's IP address).

   For example:

   http://192.168.1.2

   - If you are using a Domain Name System or enable a NetBIOS name, you can type another name, such as "SharedPrinter" instead of the IP address.
     - For example:

       http://SharedPrinter

     If you enable a NetBIOS name, you can also use the node name.
     - For example:

       http://brnxxxxxxxxxxx

     The NetBIOS name can be found in the Network Configuration Report.
   - For Macintosh, access Web Based Management by clicking the machine's icon on the **Status Monitor** screen.
3. No password is required by default. Type a password if you have set one, and then click .
4. Click the **Network** tab.
5. Click **Security**.
6. Click **Certificate**.
7. Click **Export**.
8. If you want to encrypt the file, type a password in the **Enter Password** field.

   If the **Enter Password** field is blank, your output file will not be encrypted.
9. Type the password again in the **Retype Password** field, and then click **Submit**.
10. Specify the location where you want to save the file.

The self-signed certificate is exported to your computer.

You can also import the self-signed certificate to your computer.

Related Information

- Import and Export the Self-signed Certificate on your Lenovo Machine

Create and Install a Certificate from a Certificate Authority (CA)

If you already have a certificate from an external trusted CA, you can store the certificate and private key on the machine and manage them by importing and exporting. If you do not have a certificate from an external trusted CA, create a Certificate Signing Request (CSR), send it to a CA for authentication, and install the returned certificate on your machine.

- Create a Certificate Signing Request (CSR)
- Install a Certificate on Your Lenovo Machine
- Import and Export the Certificate and Private Key

Create a Certificate Signing Request (CSR)

Related Models: LJ4000DN/LJ5000DN

A Certificate Signing Request (CSR) is a request sent to a Certificate Authority (CA) to authenticate the credentials contained within the certificate.

We recommend installing a Root Certificate from the CA on your computer before creating the CSR.

1. Start your web browser.
2. Type "http://machine's IP address" in your browser's address bar (where "machine's IP address" is the machine's IP address).

   For example:

   http://192.168.1.2

   - If you are using a Domain Name System or enable a NetBIOS name, you can type another name, such as "SharedPrinter" instead of the IP address.
     - For example:

       http://SharedPrinter

     If you enable a NetBIOS name, you can also use the node name.
     - For example:

       http://brnxxxxxxxxxxx

     The NetBIOS name can be found in the Network Configuration Report.
   - For Macintosh, access Web Based Management by clicking the machine's icon on the **Status Monitor** screen.
3. No password is required by default. Type a password if you have set one, and then click .
4. Click the **Network** tab.
5. Click **Security**.
6. Click **Certificate**.
7. Click **Create CSR**.
8. Type a **Common Name** (required) and add other information about your **Organization** (optional).

   - Your company details are required so that a CA can confirm your identity and verify it to the outside world.
   - The length of the **Common Name** must be less than 64 bytes. Enter an identifier, such as an IP address, node name, or domain name to use when accessing this printer through SSL/TLS communication. The node name is displayed by default. The **Common Name** is required.
   - A warning will appear if you type a different name in the URL than the Common Name that was used for the certificate.
   - The length of the **Organization**, the **Organization Unit**, the **City/Locality** and the **State/Province** must be less than 64 bytes.
   - The **Country/Region** should be a two character ISO 3166 country code.
   - If you are configuring an X.509v3 certificate extension, select the **Configure extended partition** check box, and then select **Auto (Register IPv4)** or **Manual**.
9. Select your setting from the **Public Key Algorithm** drop-down list. The default setting is **RSA(2048bit)**.
10. Select your setting from the **Digest Algorithm** drop-down list. The default setting is **SHA256**.
11. Click **Submit**.

The CSR appears on your screen. Save the CSR as a file or copy and paste it into an online CSR form offered by a Certificate Authority.

12. Click **Save**.

- Follow your CA's policy regarding the method to send a CSR to your CA.
- If you are using the Enterprise root CA of Windows Server ® 2008/2012/2012 R2, we recommend using the Web Server for the certificate template to securely create the Client Certificate. If you are creating a Client Certificate for an IEEE 802.1x environment with EAP-TLS authentication, we recommend using User for the certificate template.

Related Information

- Create and Install a Certificate from a Certificate Authority (CA)

Install a Certificate on Your Lenovo Machine

Related Models: LJ4000DN/LJ5000DN

When you receive a certificate from a CA, follow the steps below to install it into the print server:

Only a certificate issued with your machine's CSR can be installed onto the machine. When you want to create another CSR, make sure that the certificate is installed before creating another CSR. Create another CSR only after installing the certificate on the machine. If you do not, the CSR you create before installing will be invalid.

1. Start your web browser.
2. Type "http://machine's IP address" in your browser's address bar (where "machine's IP address" is the machine's IP address).

   For example:

   http://192.168.1.2

- If you are using a Domain Name System or enable a NetBIOS name, you can type another name, such as "SharedPrinter" instead of the IP address.
  - For example:

    http://SharedPrinter

  If you enable a NetBIOS name, you can also use the node name.
  - For example:

    http://brnxxxxxxxxxxx

  The NetBIOS name can be found in the Network Configuration Report.
- For Macintosh, access Web Based Management by clicking the machine's icon on the **Status Monitor** screen.

3. No password is required by default. Type a password if you have set one, and then click .
4. Click the **Network** tab.
5. Click **Security**.
6. Click **Certificate**.
7. Click **Install Certificate**.
8. Browse to the file that contains the certificate issued by the CA, and then click **Submit**.

   The certificate has been created successfully and saved in your machine's memory successfully.

To use SSL/TLS communication, the Root Certificate from the CA must be installed on your computer. Contact your network administrator.

Related Information

- Create and Install a Certificate from a Certificate Authority (CA)

Import and Export the Certificate and Private Key

Store the certificate and private key on your machine and manage them by importing and exporting them.

- Import a Certificate and Private Key
- Export the Certificate and Private Key

Import a Certificate and Private Key

Related Models: LJ4000DN/LJ5000DN

1. Start your web browser.
2. Type "http://machine's IP address" in your browser's address bar (where "machine's IP address" is the machine's IP address).

   For example:

   http://192.168.1.2

- If you are using a Domain Name System or enable a NetBIOS name, you can type another name, such as "SharedPrinter" instead of the IP address.
  - For example:

    http://SharedPrinter

  If you enable a NetBIOS name, you can also use the node name.
  - For example:

    http://brnxxxxxxxxxxx

  The NetBIOS name can be found in the Network Configuration Report.
- For Macintosh, access Web Based Management by clicking the machine's icon on the **Status Monitor** screen.

3. No password is required by default. Type a password if you have set one, and then click .
4. Click the **Network** tab.
5. Click **Security**.
6. Click **Certificate**.
7. Click **Import Certificate and Private Key**.
8. Browse to the file you want to import.
9. Type the password if the file is encrypted, and then click **Submit**.

The certificate and private key are imported to your machine.

To use SSL/TLS communication, the Root Certificate from the CA must also be installed on your computer. Contact your network administrator.

Related Information

- Import and Export the Certificate and Private Key

Export the Certificate and Private Key

Related Models: LJ4000DN/LJ5000DN

1. Start your web browser.
2. Type "http://machine's IP address" in your browser's address bar (where "machine's IP address" is the machine's IP address).

   For example:

   http://192.168.1.2

- If you are using a Domain Name System or enable a NetBIOS name, you can type another name, such as "SharedPrinter" instead of the IP address.
  - For example:

    http://SharedPrinter

  If you enable a NetBIOS name, you can also use the node name.
  - For example:

    http://brnxxxxxxxxxxx

  The NetBIOS name can be found in the Network Configuration Report.
- For Macintosh, access Web Based Management by clicking the machine's icon on the **Status Monitor** screen.

3. No password is required by default. Type a password if you have set one, and then click .
4. Click the **Network** tab.
5. Click **Security**.
6. Click **Certificate**.
7. Click **Export** shown with **Certificate List**.
8. Enter the password if you want to encrypt the file.

   If a blank password is used, the output is not encrypted.
9. Enter the password again for confirmation, and then click **Submit**.
10. Specify the location where you want to save the file.

The certificate and private key are exported to your computer.

You can also import the certificate to your computer.

Related Information

- Import and Export the Certificate and Private Key

Import and Export a CA Certificate

You can import, export and store CA certificates on your Lenovo machine.

- Import a CA Certificate
- Export a CA Certificate

Import a CA Certificate

Related Models: LJ4000DN/LJ5000DN

1. Start your web browser.
2. Type "http://machine's IP address" in your browser's address bar (where "machine's IP address" is the machine's IP address).

   For example:

   http://192.168.1.2

   - If you are using a Domain Name System or enable a NetBIOS name, you can type another name, such as "SharedPrinter" instead of the IP address.
     - For example:

       http://SharedPrinter

     If you enable a NetBIOS name, you can also use the node name.
     - For example:

       http://brnxxxxxxxxxxx

     The NetBIOS name can be found in the Network Configuration Report.
   - For Macintosh, access Web Based Management by clicking the machine's icon on the **Status Monitor** screen.
3. No password is required by default. Type a password if you have set one, and then click .
4. Click the **Network** tab.
5. Click **Security**.
6. Click **CA Certificate**.
7. Click **Import CA Certificate** and select the certificate.
8. Click **Submit**.

Related Information

- Import and Export a CA Certificate

Export a CA Certificate

Related Models: LJ4000DN/LJ5000DN

1. Start your web browser.
2. Type "http://machine's IP address" in your browser's address bar (where "machine's IP address" is the machine's IP address).

   For example:

   http://192.168.1.2

   - If you are using a Domain Name System or enable a NetBIOS name, you can type another name, such as "SharedPrinter" instead of the IP address.
     - For example:

       http://SharedPrinter

     If you enable a NetBIOS name, you can also use the node name.
     - For example:

       http://brnxxxxxxxxxxx

     The NetBIOS name can be found in the Network Configuration Report.
   - For Macintosh, access Web Based Management by clicking the machine's icon on the **Status Monitor** screen.
3. No password is required by default. Type a password if you have set one, and then click .
4. Click the **Network** tab.
5. Click **Security**.
6. Click **CA Certificate**.
7. Select the certificate you want to export and click **Export**.
8. Click **Submit**.
9. Click **Save**.
10. Specify where on your computer you want to save the exported certificate, and save it.

Related Information

- Import and Export a CA Certificate

Manage Multiple Certificates

Related Models: LJ4000DN/LJ5000DN

The multiple certificate feature allows you to use Web Based Management to manage each certificate installed on your machine. In Web Based Management, navigate to the **Certificate** or **CA Certificate** screen to view certificate content, delete, or export your certificates.

	Maximum Number of Certificates Stored UP on Lenovo Machine
Self-signed Certificate or Certificate Issued by a CA	5
CA Certificate	6

We recommend storing one less certificate than allowed, reserving an empty spot in case of certificate expiration. When a certificate expires, import a new certificate into the reserved spot, and then delete the expired certificate. This ensures that you avoid configuration failure.

- When you use HTTPS/IPPS, or IEEE 802.1x, you must select which certificate you are using.
- When you use SSL for SMTP communications, you do not have to choose the certificate. The necessary certificate will be chosen automatically.

Related Information

- Certificates and Web Based Management

Manage Your Network Machine Securely Using Web Based Management

Related Models: LJ4000DN/LJ5000DN

To manage your network machine securely, you must use management utilities with security protocols.

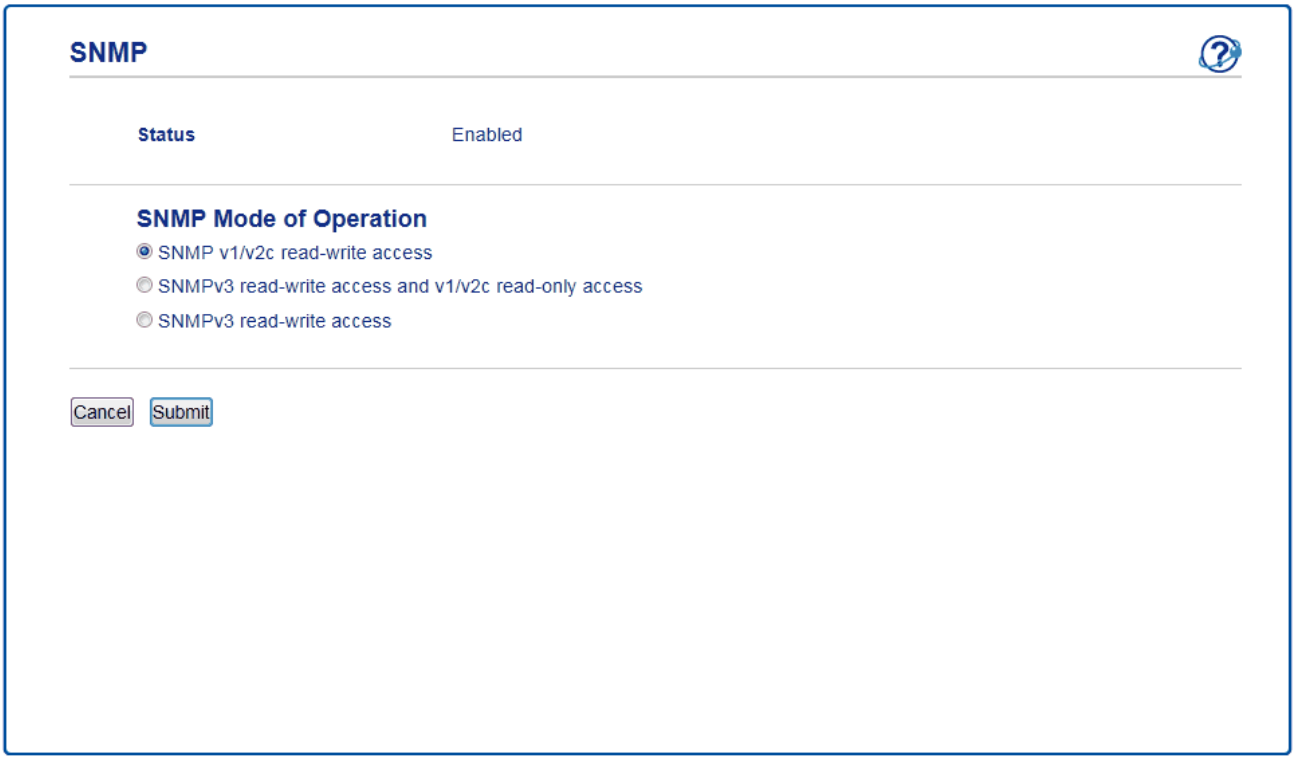
We recommend using the HTTPS protocol for secure management. To use this protocol, HTTPS must be enabled on your machine.

- The HTTPS protocol is enabled by default.
- You can change the HTTPS protocol settings using the Web Based Management screen.
  1. Click the **Network** tab.
  2. Click the **Protocol** menu in the left navigation bar.
  3. Click **HTTP Server Settings**.

1. Start your web browser.
2. Type "https://Common Name" in your browser's address bar (where "Common Name" is the Common Name that you assigned to the certificate; this could be your IP address, node name, or domain name).
3. No password is required by default. Type a password if you have set one, and then click .
4. You can now access the machine using HTTPS.

- If you use the SNMPv3 protocol, follow the steps below.

5. Click the **Network** tab.
6. Click **Protocol**.
7. Make sure the **SNMP** setting is enabled, and then click **Advanced Settings**.
8. Configure the SNMP settings.



There are three options for **SNMP Mode of Operation**.

- **SNMP v1/v2c read-write access**

In this mode, the print server uses version 1 and version 2c of the SNMP protocol. You can use all Lenovo applications in this mode. However, it is not secure since it will not authenticate the user, and data will not be encrypted.

- **SNMPv3 read-write access and v1/v2c read-only access**

  In this mode, the print server uses the read-write access of version 3 and the read-only access of version 1 and version 2c of the SNMP protocol.

When you use **SNMPv3 read-write access and v1/v2c read-only access** mode, some Lenovo applications (such as BRAdmin Light) that access the print server do not work correctly since they authorize the read-only access of version 1 and version 2c. If you want to use all applications, we recommend using **SNMP v1/v2c read-write access** mode.

- **SNMPv3 read-write access**

  In this mode, the print sever uses version 3 of the SNMP protocol. If you want to manage the print server securely, use this mode.

When you use **SNMPv3 read-write access** mode, note the following:

- You can use only Web Based Management to manage the print server.
- All applications that use SNMPv1/v2c will be restricted. To allow the use of SNMPv1/v2c applications, use **SNMPv3 read-write access and v1/v2c read-only access** or **SNMP v1/v2c read-write access** mode.

Related Information

- Manage Your Network Machine Securely Using SSL/TLS

Print Documents Securely Using SSL/TLS

Related Models: LJ4000DN/LJ5000DN

To print documents securely with IPP protocol, use the IPPS protocol.

1. Start your web browser.
2. Type "http://machine's IP address" in your browser's address bar (where "machine's IP address" is the machine's IP address).

   For example:

   http://192.168.1.2

   - If you are using a Domain Name System or enable a NetBIOS name, you can type another name, such as "SharedPrinter" instead of the IP address.
     - For example:

       http://SharedPrinter

     If you enable a NetBIOS name, you can also use the node name.
     - For example:

       http://brnxxxxxxxxxxx

     The NetBIOS name can be found in the Network Configuration Report.
   - For Macintosh, access Web Based Management by clicking the machine's icon on the **Status Monitor** screen.
3. No password is required by default. Type a password if you have set one, and then click .
4. Click the **Network** tab.
5. Click **Protocol**. Make sure the **IPP** check box is selected.

   If the **IPP** check box is not selected, select the **IPP** check box, and then click **Submit**.

   Restart your machine to activate the configuration.

   After the machine restarts, return to the machine's web page, click the **Network** tab, and then click **Protocol**.
6. Click **HTTP Server Settings**.
7. Select the **HTTPS(Port443)** check box, and then click **Submit**.
8. Restart your machine to activate the configuration.

Communication using IPPS cannot prevent unauthorised access to the print server.

Related Information

- Manage Your Network Machine Securely Using SSL/TLS

Manage Your Network Machine Securely Using IPsec

- Introduction to IPsec
- Configure IPsec Using Web Based Management
- Configure an IPsec Address Template Using Web Based Management
- Configure an IPsec Template Using Web Based Management

Introduction to IPsec

Related Models: LJ4000DN/LJ5000DN

IPsec (Internet Protocol Security) is a security protocol that uses an optional Internet Protocol function to prevent manipulation and ensure the confidentiality of data transmitted as IP packets. IPsec encrypts data carried over the network, such as print data sent from computers to a printer. Because the data is encrypted at the network layer, applications that employ a higher-level protocol use IPsec even if the user is not aware of its use.

IPsec supports the following functions:

- IPsec transmissions

  According to the IPsec setting conditions, the network-connected computer sends data to and receives data from the specified device using IPsec. When the devices start communicating using IPsec, keys are exchanged using Internet Key Exchange (IKE) first, and then the encrypted data is transmitted using the keys.

  In addition, IPsec has two operation modes: the Transport mode and Tunnel mode. The Transport mode is used mainly for communication between devices and the Tunnel mode is used in environments such as a Virtual Private Network (VPN).

  For IPsec transmissions, the following conditions are necessary:
  - A computer that can communicate using IPsec is connected to the network.
  - Your Lenovo machine is configured for IPsec communication.
  - The computer connected to your Lenovo machine is configured for IPsec connections.

- IPsec settings

  The settings that are necessary for connections using IPsec. These settings can be configured using Web Based Management.

  To configure the IPsec settings, you must use the browser on a computer that is connected to the network.

Related Information

- Manage Your Network Machine Securely Using IPsec

Configure IPsec Using Web Based Management

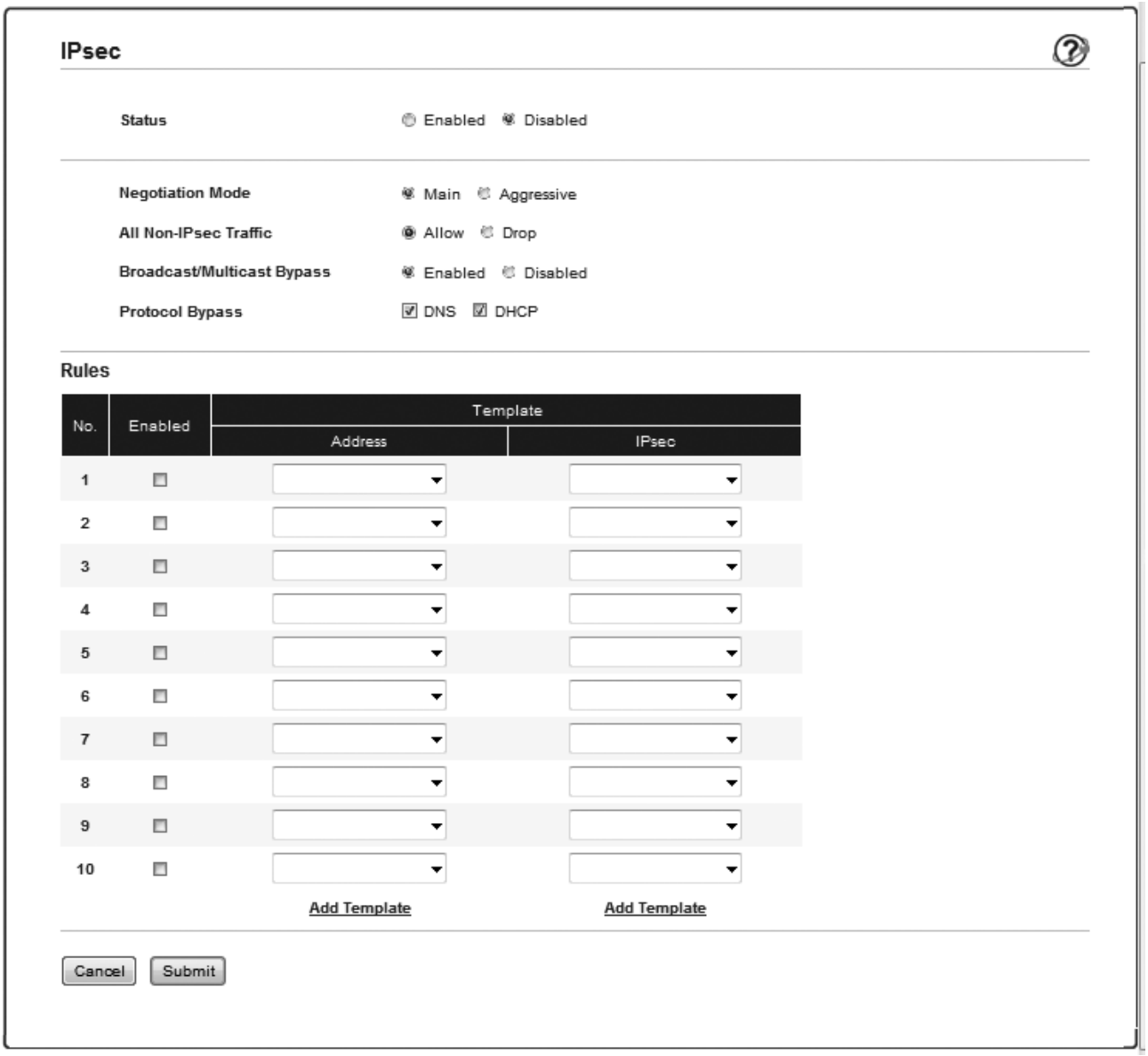
Related Models: LJ4000DN/LJ5000DN

The IPsec connection conditions are comprised of two **Template** types: **Address** and **IPsec**. You can configure up to 10 connection conditions.

1. Start your web browser.
2. Type "http://machine's IP address" in your browser's address bar (where "machine's IP address" is the machine's IP address).

   For example:

   http://192.168.1.2
3. No password is required by default. Type a password if you have set one, and then click .
4. Click the **Network** tab.
5. Click **Security**.
6. Click the **IPsec** menu in the left navigation bar.



7. In the **Status** field, enable or disable IPsec.
8. Select **Negotiation Mode** for IKE Phase 1.

IKE is a protocol that is used to exchange encryption keys in order to carry out encrypted communication using IPsec.

In **Main** mode, the processing speed is slow, but the security is high. In **Aggressive** mode, the processing speed is faster than **Main** mode, but the security is lower.

9. In the **All Non-IPsec Traffic** field, select the action to be taken for non-IPsec packets.

   When using Web Services, you must select **Allow** for **All Non-IPsec Traffic**. If you select **Drop**, Web Services cannot be used.

10. In the **Broadcast/Multicast Bypass** field, select **Enabled** or **Disabled**.
11. In the **Protocol Bypass** field, select the check box for the option or options you want.
12. In the **Rules** table, select the **Enabled** check box to activate the template.

    When you select multiple check boxes, the lower numbered check boxes have priority if the settings for the selected check boxes conflict.

13. Click on the corresponding drop-down list to select the **Address Template** that is used for the IPsec connection conditions.

    To add an **Address Template**, click **Add Template**.

14. Click on the corresponding drop-down list to select the **IPsec Template** that is used for the IPsec connection conditions.

    To add an **IPsec Template**, click **Add Template**.

15. Click **Submit**.

    If the computer must be restarted to register the new settings, the restart confirmation screen will appear.

    If there is a blank item in the template you enabled in the **Rules** table, an error message appears. Confirm your choices and submit again.

Related Information

- Manage Your Network Machine Securely Using IPsec

Configure an IPsec Address Template Using Web Based Management

Related Models: LJ4000DN/LJ5000DN

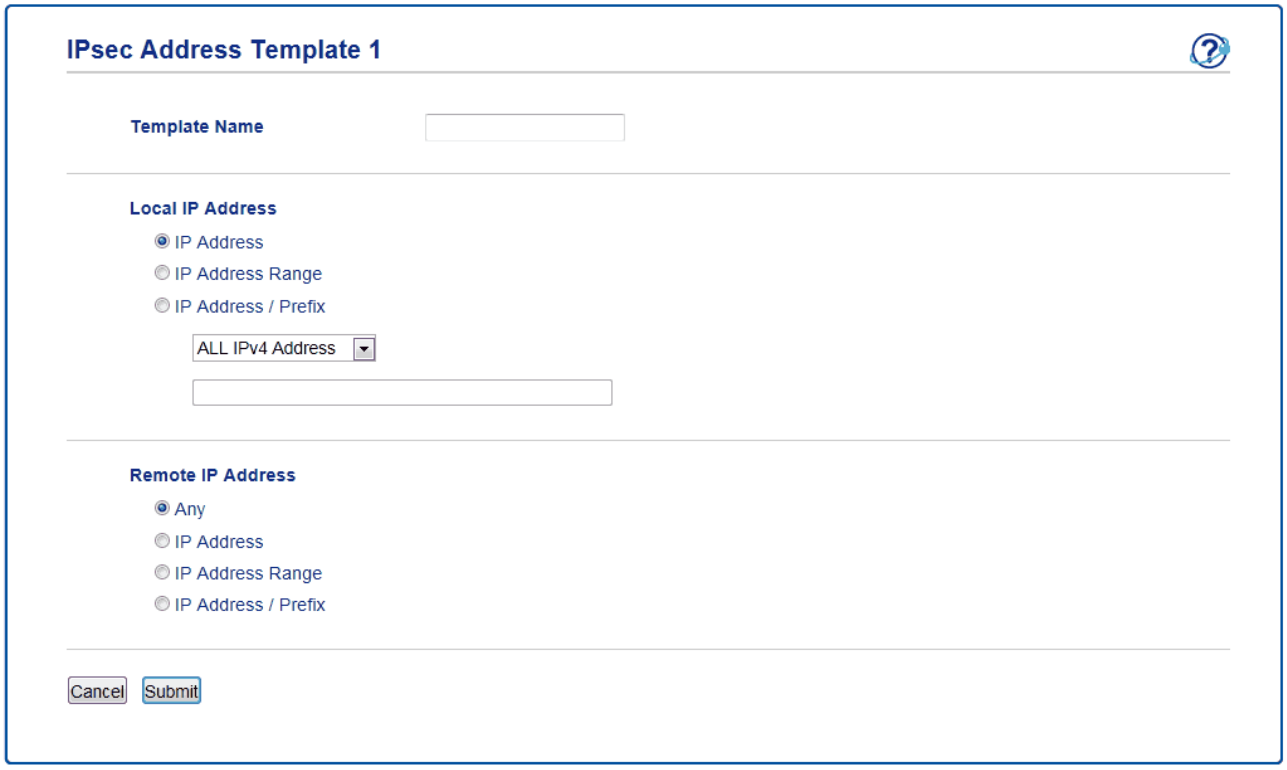
1. Start your web browser.
2. Type "http://machine's IP address" in your browser's address bar (where "machine's IP address" is the machine's IP address).

   For example:

   http://192.168.1.2
3. No password is required by default. Type a password if you have set one, and then click .
4. Click the **Network** tab.
5. Click **Security**.
6. Click the **IPsec Address Template** menu in the left navigation bar.

   The Template List appears, displaying 10 Address Templates.

   Click the **Delete** button to delete an **Address Template**. When an **Address Template** is in use, it cannot be deleted.
7. Click the **Address Template** that you want to create. The **IPsec Address Template** appears.



8. In the **Template Name** field, type a name for the template (up to 16 characters).
9. Select a **Local IP Address** option to specify the IP address conditions for the sender:
   - **IP Address**

     Specify the IP address. Select **ALL IPv4 Address**, **ALL IPv6 Address**, **All Link Local IPv6**, or **Custom** from the drop-down list.

     If you select **Custom** from the drop-down list, type the IP address (IPv4 or IPv6) in the text box.
   - **IP Address Range**

     Type the starting and ending IP addresses for the IP address range in the text boxes. If the starting and ending IP addresses are not standardized to IPv4 or IPv6, or the ending IP address is smaller than the starting address, an error will occur.

- **IP Address / Prefix**

  Specify the IP address using CIDR notation.

  For example: 192.168.1.1/24

  Because the prefix is specified in the form of a 24-bit subnet mask (255.255.255.0) for 192.168.1.1, the addresses 192.168.1.xxx are valid.

10. Select a **Remote IP Address** option to specify the IP address conditions for the recipient:
    - **Any**

      If you select **Any**, all IP addresses are enabled.
    - **IP Address**

      Type the specified IP address (IPv4 or IPv6) in the text box.
    - **IP Address Range**

      Type the starting and ending IP addresses for the IP address range. If the starting and ending IP addresses are not standardized to IPv4 or IPv6, or the ending IP address is smaller than the starting address, an error will occur.
    - **IP Address / Prefix**

      Specify the IP address using CIDR notation.

      For example: 192.168.1.1/24

      Because the prefix is specified in the form of a 24-bit subnet mask (255.255.255.0) for 192.168.1.1, the addresses 192.168.1.xxx are valid.
11. Click **Submit**.

When you change the settings for the template currently in use, the IPsec screen in Web Based Management will close and open again.

Related Information

- Manage Your Network Machine Securely Using IPsec

Configure an IPsec Template Using Web Based Management

Related Models: LJ4000DN/LJ5000DN

1. Start your web browser.
2. Type "http://machine's IP address" in your browser's address bar (where "machine's IP address" is the machine's IP address).

   For example:

   http://192.168.1.2
3. No password is required by default. Type a password if you have set one, and then click .
4. Click the **Network** tab.
5. Click **Security**.
6. Click **IPsec Template** in the left navigation bar.

   The Template List appears, displaying 10 IPsec Templates.

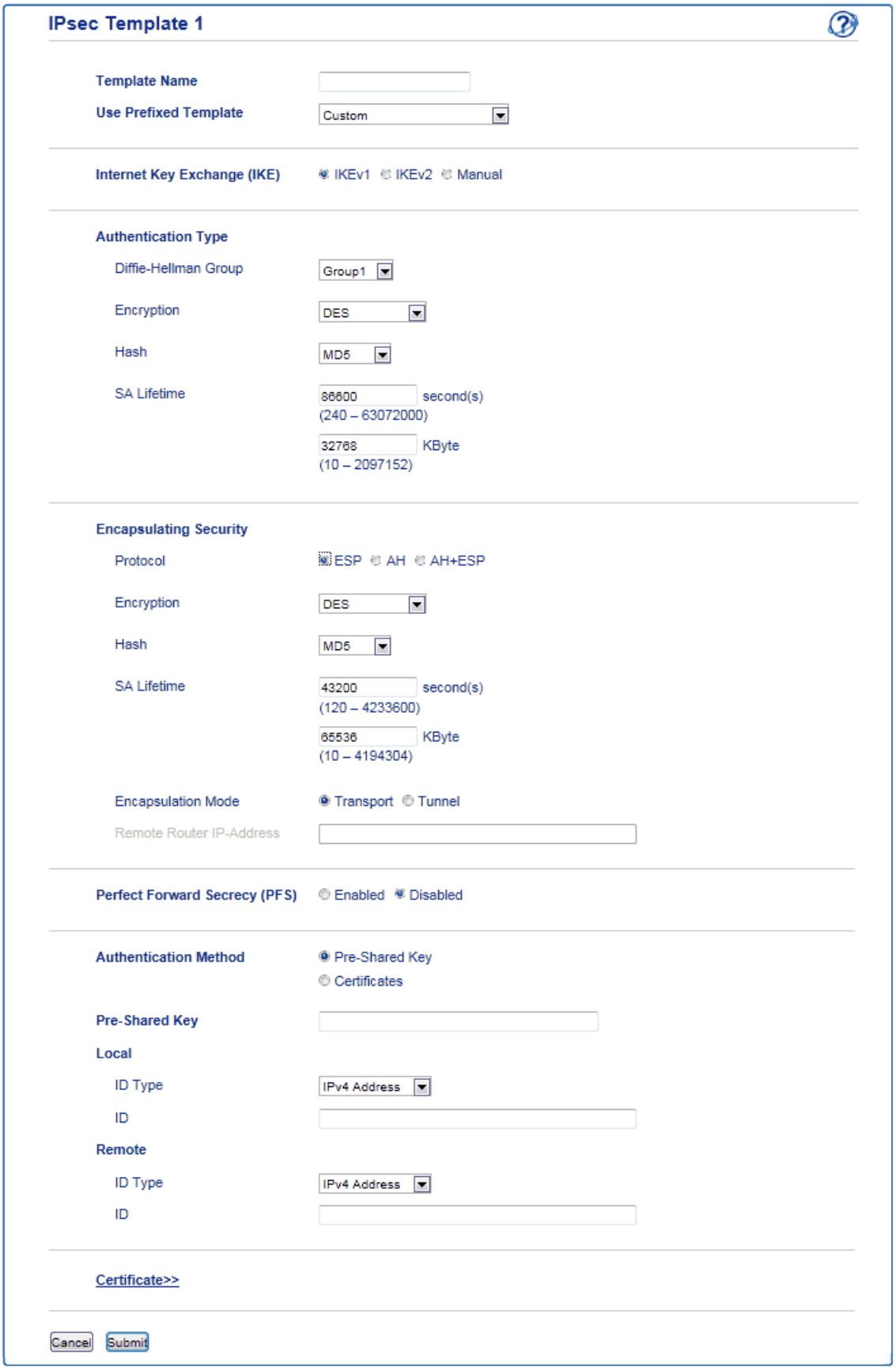
   Click the **Delete** button to delete an **IPsec Template**. When an **IPsec Template** is in use, it cannot be deleted.
7. Click **IPsec Template** that you want to create. The **IPsec Template** screen appears. The configuration fields differ based on the **Use Prefixed Template** and **Internet Key Exchange (IKE)** you select.
8. In the **Template Name** field, type a name for the template (up to 16 characters).
9. Select the **Internet Key Exchange (IKE)** options.
10. Click **Submit**.

Related Information

- Manage Your Network Machine Securely Using IPsec
- IKEv1 Settings for an IPsec Template
- IKEv2 Settings for an IPsec Template
- Manual Settings for an IPsec Template

IKEv1 Settings for an IPsec Template

Related Models: LJ4000DN/LJ5000DN



Template Name

Type a name for the template (up to 16 characters).

Use Prefixed Template

Select **Custom**, **IKEv1 High Security** or **IKEv1 Medium Security**. The setting items are different depending on the selected template.

The default template differs depending on whether you chose **Main** or **Aggressive** for **Negotiation Mode** on the **IPsec** configuration screen.

Internet Key Exchange (IKE)

IKE is a communication protocol that is used to exchange encryption keys in order to carry out encrypted communication using IPsec. To carry out encrypted communication for that time only, the encryption algorithm that is necessary for IPsec is determined and the encryption keys are shared. For IKE, the encryption keys are exchanged using the Diffie-Hellman key exchange method, and encrypted communication that is limited to IKE is carried out.

If you selected **Custom** in **Use Prefixed Template**, select **IKEv1**.

Authentication Type

Configure the IKE authentication and encryption.

- **Diffie-Hellman Group**

  This key exchange method allows secret keys to be securely exchanged over an unprotected network. The Diffie-Hellman key exchange method uses a discrete logarithm problem, not the secret key, to send and receive open information that was generated using a random number and the secret key.

  Select **Group1**, **Group2**, **Group5**, or **Group14**.

- **Encryption**

  Select **DES**, **3DES**, **AES-CBC 128**, or **AES-CBC 256**.

- **Hash**

  Select **MD5**, **SHA1**, **SHA256**, **SHA384** or **SHA512**.

- **SA Lifetime**

  Specify the IKE SA lifetime.

  Type the time (seconds) and number of kilobytes (KByte).

Encapsulating Security

- **Protocol**

  Select **ESP**, **AH** or **AH+ESP**.

- ESP is a protocol for carrying out encrypted communication using IPsec. ESP encrypts the payload (communicated contents) and adds additional information. The IP packet is comprised of the header and the encrypted payload, which follows the header. In addition to the encrypted data, the IP packet also includes information regarding the encryption method and encryption key, the authentication data, and so on.
- AH is part of the IPsec protocol that authenticates the sender and prevents manipulation (ensures the completeness) of the data. In the IP packet, the data is inserted immediately after the header. In addition, the packets include hash values, which are calculated using an equation from the communicated contents, secret key, and so on, in order to prevent the falsification of the sender and manipulation of the data. Unlike ESP, the communicated contents are not encrypted, and the data is sent and received as plain text.

- **Encryption**

  Select **DES**, **3DES**, **AES-CBC 128**, or **AES-CBC 256**. The encryption can be selected only when **ESP** is selected in **Protocol**.

- **Hash**

  Select **None**, **MD5**, **SHA1**, **SHA256**, **SHA384**, or **SHA512**. **None** can be selected only when **ESP** is selected in **Protocol**.

When **AH+ESP** is selected in **Protocol**, select each protocol for **Hash(ESP)** and **Hash(AH)**.

- **SA Lifetime**

  Specify the IPsec SA lifetime.

  Type the time (seconds) and number of kilobytes (KByte) before the IPsec SA will expire.

- **Encapsulation Mode**

  Select **Transport** or **Tunnel**.

- **Remote Router IP-Address**

  Type the IP address (IPv4 or IPv6) of the remote router. Enter this information only when the **Tunnel** mode is selected.

SA (Security Association) is an encrypted communication method using IPsec or IPv6 that exchanges and shares information, such as the encryption method and encryption key, in order to establish a secure communication channel before communication begins. SA may also refer to a virtual encrypted communication channel that has been established. The SA used for IPsec establishes the encryption method, exchanges the keys, and carries out mutual authentication according to the IKE (Internet Key Exchange) standard procedure. In addition, the SA is updated periodically.

Perfect Forward Secrecy (PFS)

PFS does not derive keys from previous keys that were used to encrypt messages. In addition, if a key that is used to encrypt a message was derived from a parent key, that parent key is not used to derive other keys. Therefore, even if a key is compromised, the damage will be limited only to the messages that were encrypted using that key.

Select **Enabled** or **Disabled**.

Authentication Method

Select the authentication method. Select **Pre-Shared Key** or **Certificates**.

Pre-Shared Key

When encrypting communication, the encryption key is exchanged and shared beforehand using another channel.

If you selected **Pre-Shared Key** for the **Authentication Method**, type the **Pre-Shared Key** (up to 32 characters).

- **Local/ID Type/ID**

  Select the sender's ID type, and then type the ID.

  Select **IPv4 Address**, **IPv6 Address**, **FQDN**, **E-mail Address**, or **Certificate** for the type.

  If you select **Certificate**, type the common name of the certificate in the **ID** field.

- **Remote/ID Type/ID**

  Select the recipient's ID type, and then type the ID.

  Select **IPv4 Address**, **IPv6 Address**, **FQDN**, **E-mail Address**, or **Certificate** for the type.

  If you select **Certificate**, type the common name of the certificate in the **ID** field.

Certificates

If you selected **Certificates** for **Authentication Method**, select the certificate.

You can select only the certificates that were created using the **Certificate** page of Web Based Management's Security configuration screen.

Related Information

- Configure an IPsec Template Using Web Based Management

IKEv2 Settings for an IPsec Template

Related Models: LJ4000DN/LJ5000DN

Template Name

Type a name for the template (up to 16 characters).

Use Prefixed Template

Select **Custom**, **IKEv2 High Security**, or **IKEv2 Medium Security**. The setting items are different depending on the selected template.

Internet Key Exchange (IKE)

IKE is a communication protocol that is used to exchange encryption keys in order to carry out encrypted communication using IPsec. To carry out encrypted communication for that time only, the encryption algorithm that is necessary for IPsec is determined and the encryption keys are shared. For IKE, the encryption keys are exchanged using the Diffie-Hellman key exchange method, and encrypted communication that is limited to IKE is carried out.

If you selected **Custom** in **Use Prefixed Template**, select **IKEv2**.

Authentication Type

Configure the IKE authentication and encryption.

- **Diffie-Hellman Group**

  This key exchange method allows secret keys to be securely exchanged over an unprotected network. The Diffie-Hellman key exchange method uses a discrete logarithm problem, not the secret key, to send and receive open information that was generated using a random number and the secret key.

  Select **Group1**, **Group2**, **Group5**, or **Group14**.

- **Encryption**

  Select **DES**, **3DES**, **AES-CBC 128**, or **AES-CBC 256**.

- **Hash**

  Select **MD5**, **SHA1**, **SHA256**, **SHA384** or **SHA512**.

- **SA Lifetime**

  Specify the IKE SA lifetime.

  Type the time (seconds) and number of kilobytes (KByte).

Encapsulating Security

- **Protocol**

  Select **ESP**.

ESP is a protocol for carrying out encrypted communication using IPsec. ESP encrypts the payload (communicated contents) and adds additional information. The IP packet is comprised of the header and the encrypted payload, which follows the header. In addition to the encrypted data, the IP packet also includes information regarding the encryption method and encryption key, the authentication data, and so on.

- **Encryption**

  Select **DES**, **3DES**, **AES-CBC 128**, or **AES-CBC 256**.

- **Hash**

  Select **MD5**, **SHA1**, **SHA256**, **SHA384**, or **SHA512**.

- **SA Lifetime**

  Specify the IPsec SA lifetime.

  Type the time (seconds) and number of kilobytes (KByte) before the IPsec SA will expire.

- **Encapsulation Mode**

  Select **Transport** or **Tunnel**.

- **Remote Router IP-Address**

  Type the IP address (IPv4 or IPv6) of the remote router. Enter this information only when the **Tunnel** mode is selected.

SA (Security Association) is an encrypted communication method using IPsec or IPv6 that exchanges and shares information, such as the encryption method and encryption key, in order to establish a secure communication channel before communication begins. SA may also refer to a virtual encrypted communication channel that has been established. The SA used for IPsec establishes the encryption method, exchanges the keys, and carries out mutual authentication according to the IKE (Internet Key Exchange) standard procedure. In addition, the SA is updated periodically.

Perfect Forward Secrecy (PFS)

PFS does not derive keys from previous keys that were used to encrypt messages. In addition, if a key that is used to encrypt a message was derived from a parent key, that parent key is not used to derive other keys. Therefore, even if a key is compromised, the damage will be limited only to the messages that were encrypted using that key.

Select **Enabled** or **Disabled**.

Authentication Method

Select the authentication method. Select **Pre-Shared Key**, **Certificates**, **EAP - MD5**, or **EAP - MS-CHAPv2**.

Pre-Shared Key

When encrypting communication, the encryption key is exchanged and shared beforehand using another channel.

If you selected **Pre-Shared Key** for the **Authentication Method**, type the **Pre-Shared Key** (up to 32 characters).

- **Local/ID Type/ID**

  Select the sender's ID type, and then type the ID.

  Select **IPv4 Address**, **IPv6 Address**, **FQDN**, **E-mail Address**, or **Certificate** for the type.

  If you select **Certificate**, type the common name of the certificate in the **ID** field.

- **Remote/ID Type/ID**

  Select the recipient's ID type, and then type the ID.

  Select **IPv4 Address**, **IPv6 Address**, **FQDN**, **E-mail Address**, or **Certificate** for the type.

  If you select **Certificate**, type the common name of the certificate in the **ID** field.

Certificates

If you selected **Certificates** for **Authentication Method**, select the certificate.

You can select only the certificates that were created using the **Certificate** page of Web Based Management's Security configuration screen.

EAP

EAP is an authentication protocol that is an extension of PPP. By using EAP with IEEE802.1x, a different key is used for user authentication during each session.

The following settings are necessary only when **EAP - MD5** or **EAP - MS-CHAPv2** is selected in **Authentication Method**:

- **Mode**

  Select **Server-Mode** or **Client-Mode**.

- **Certificate**

  Select the certificate.

- **User Name**

  Type the user name (up to 32 characters).

- **Password**

  Type the password (up to 32 characters). The password must be entered two times for confirmation.

- **Certificate**

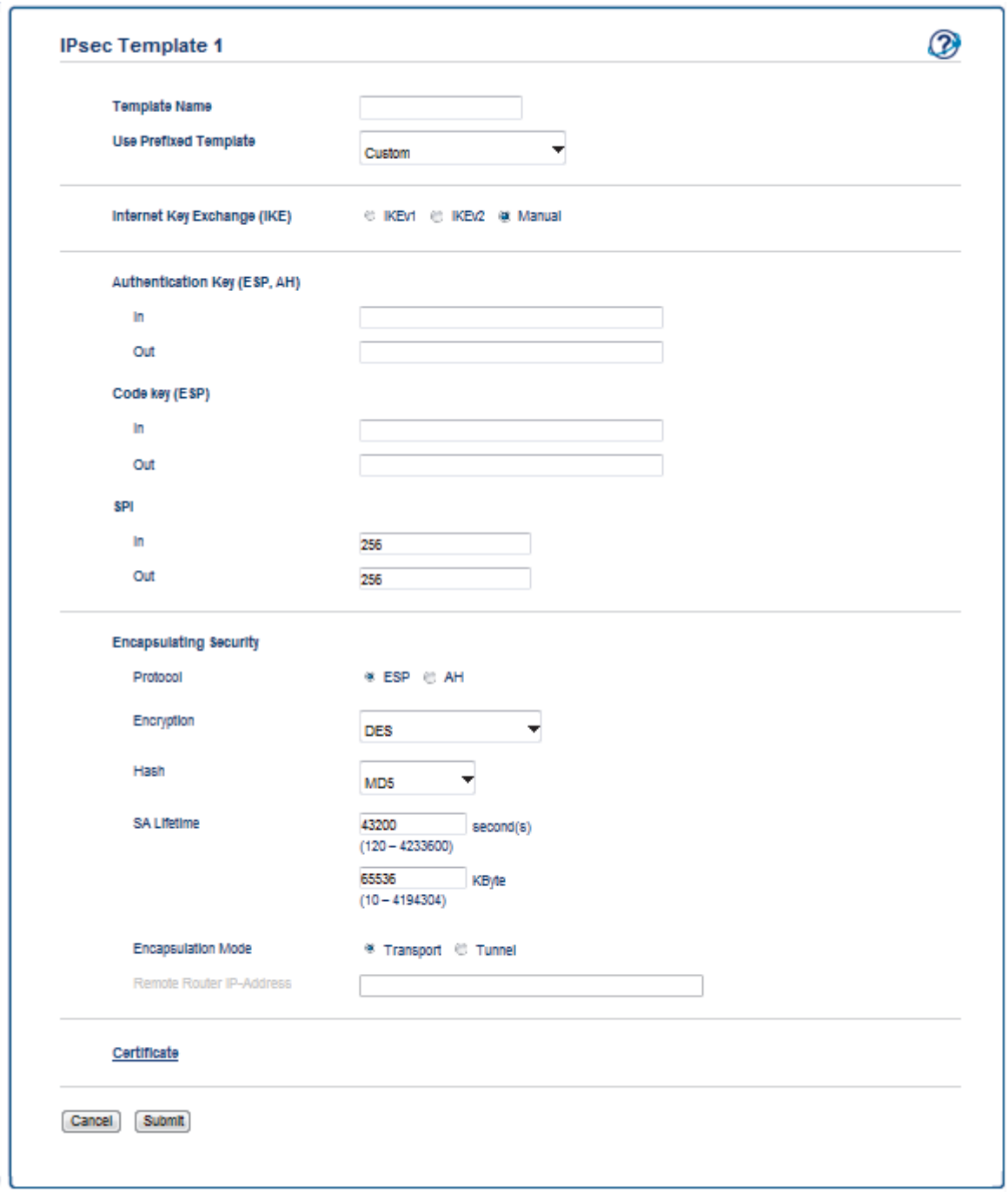
  Click this button to move to the **Certificate** configuration screen.

Related Information

- Configure an IPsec Template Using Web Based Management

Manual Settings for an IPsec Template

Related Models: LJ4000DN/LJ5000DN



Template Name

Type a name for the template (up to 16 characters).

Use Prefixed Template

Select **Custom**.

Internet Key Exchange (IKE)

IKE is a communication protocol that is used to exchange encryption keys in order to carry out encrypted communication using IPsec. To carry out encrypted communication for that time only, the encryption algorithm

that is necessary for IPsec is determined and the encryption keys are shared. For IKE, the encryption keys are exchanged using the Diffie-Hellman key exchange method, and encrypted communication that is limited to IKE is carried out.

Select **Manual**.

Authentication Key (ESP,AH)

Specify the key to use for authentication. Type the **In/Out** values.

These settings are necessary when **Custom** is selected for **Use Prefixed Template**, **Manual** is selected for **IKE**, and a setting other than **None** is selected for **Hash** for **Encapsulating Security** section.

The number of characters you can set differs depending on the setting you chose for **Hash** in the **Encapsulating Security** section.

If the length of the specified authentication key is different than the selected hash algorithm, an error will occur.

- **MD5**: 128 bits (16 bytes)
- **SHA1**: 160 bits (20 bytes)
- **SHA256**: 256 bits (32 bytes)
- **SHA384**: 384 bits (48 bytes)
- **SHA512**: 512 bits (64 bytes)

When you specify the key in ASCII Code, enclose the characters in double quotation marks (").

Code key (ESP)

Specify the key to use for encryption. Type the **In/Out** values.

These settings are necessary when **Custom** is selected in **Use Prefixed Template**, **Manual** is selected in **IKE**, and **ESP** is selected in **Protocol** in **Encapsulating Security**.

The number of characters you can set differs depending on the setting you chose for **Encryption** in the **Encapsulating Security** section.

If the length of the specified code key is different than the selected encryption algorithm, an error will occur.

- **DES**: 64 bits (8 bytes)
- **3DES**: 192 bits (24 bytes)
- **AES-CBC 128**: 128 bits (16 bytes)
- **AES-CBC 256**: 256 bits (32 bytes)

When you specify the key in ASCII Code, enclose the characters in double quotation marks (").

SPI

These parameters are used to identify security information. Generally, a host has multiple Security Associations (SAs) for several types of IPsec communication. Therefore, it is necessary to identify the applicable SA when an IPsec packet is received. The SPI parameter, which identifies the SA, is included in the Authentication Header (AH) and Encapsulating Security Payload (ESP) header.

These settings are necessary when **Custom** is selected for **Use Prefixed Template**, and **Manual** is selected for **IKE**.

Enter the **In/Out** values. (3-10 characters)

Encapsulating Security

- **Protocol**

  Select **ESP** or **AH**.

- ESP is a protocol for carrying out encrypted communication using IPsec. ESP encrypts the payload (communicated contents) and adds additional information. The IP packet is comprised of the header and the encrypted payload, which follows the header. In addition to the encrypted data, the IP packet also includes information regarding the encryption method and encryption key, the authentication data, and so on.
- AH is part of the IPsec protocol that authenticates the sender and prevents manipulation of the data (ensures the completeness of the data). In the IP packet, the data is inserted immediately after the header. In addition, the packets include hash values, which are calculated using an equation from the communicated contents, secret key, and so on, in order to prevent the falsification of the sender and manipulation of the data. Unlike ESP, the communicated contents are not encrypted, and the data is sent and received as plain text.

- **Encryption**

  Select **DES**, **3DES**, **AES-CBC 128**, or **AES-CBC 256**. The encryption can be selected only when **ESP** is selected in **Protocol**.

- **Hash**

  Select **None**, **MD5**, **SHA1**, **SHA256**, **SHA384**, or **SHA512**. **None** can be selected only when **ESP** is selected in **Protocol**.

- **SA Lifetime**

  Specify the IKE SA lifetime.

  Type the time (seconds) and number of kilobytes (KByte) before the IPsec SA will expire.

- **Encapsulation Mode**

  Select **Transport** or **Tunnel**.

- **Remote Router IP-Address**

  Specify the IP address (IPv4 or IPv6) of the connection destination. Enter this information only when the **Tunnel** mode is selected.

SA (Security Association) is an encrypted communication method using IPsec or IPv6 that exchanges and shares information, such as the encryption method and encryption key, in order to establish a secure communication channel before communication begins. SA may also refer to a virtual encrypted communication channel that has been established. The SA used for IPsec establishes the encryption method, exchanges the keys, and carries out mutual authentication according to the IKE (Internet Key Exchange) standard procedure. In addition, the SA is updated periodically.

Submit

Click this button to register the settings.

When you change the settings for the template currently in use, the IPsec screen in Web Based Management will close and open again.

Related Information

- Configure an IPsec Template Using Web Based Management

Send an Email Securely

- Configure Email Sending Using Web Based Management
- Send an Email with User Authentication
- Send an Email Securely Using SSL TLS

Configure Email Sending Using Web Based Management

Related Models: LJ4000DN/LJ5000DN

We recommend using Web Based Management to configure secured email sending with user authentication, or email sending using SSL/TLS.

1. Start your web browser.
2. Type "http://machine's IP address" in your browser's address bar (where "machine's IP address" is the machine's IP address).

   For example:

   http://192.168.1.2

   - If you are using a Domain Name System or enable a NetBIOS name, you can type another name, such as "SharedPrinter" instead of the IP address.
     - For example:

       http://SharedPrinter

     If you enable a NetBIOS name, you can also use the node name.
     - For example:

       http://brnxxxxxxxxxxx

     The NetBIOS name can be found in the Network Configuration Report.
   - For Macintosh, access Web Based Management by clicking the machine's icon on the **Status Monitor** screen.
3. No password is required by default. Type a password if you have set one, and then click .
4. Click the **Network** tab.
5. Click **Protocol** in the left navigation bar.
6. In the **SMTP** field, click **Advanced Settings** and make sure the status of **SMTP** is **Enabled**.
7. Configure the **SMTP** settings.
   - Confirm that the email settings are correct after configuration by sending a test email.
   - If you do not know the SMTP server settings, contact your network administrator or Internet Service Provider (ISP).
8. When finished, click **Submit**.

   The **Test Send E-mail Configuration** dialog box appears.
9. Follow the instructions in the dialog box to test the current settings.

Related Information

- Send an Email Securely

Send an Email with User Authentication

Related Models: LJ4000DN/LJ5000DN

Your Lenovo machine supports the SMTP-AUTH method to send email via an email server that requires user authentication. This method prevents unauthorised users from accessing the email server.

You can use the SMTP-AUTH method for email notification and email reports.

We recommend using Web Based Management to configure the SMTP authentication.

Email Server Settings

You must configure your machine's SMTP authentication method to match the method used by your email server. For details about your email server settings, contact your network administrator or Internet Service Provider (ISP).

To enable SMTP server authentication, in the Web Based Management **SMTP** screen, under **Server Authentication Method**, you must select **SMTP-AUTH**.

Related Information

- Send an Email Securely

Send an Email Securely Using SSL TLS

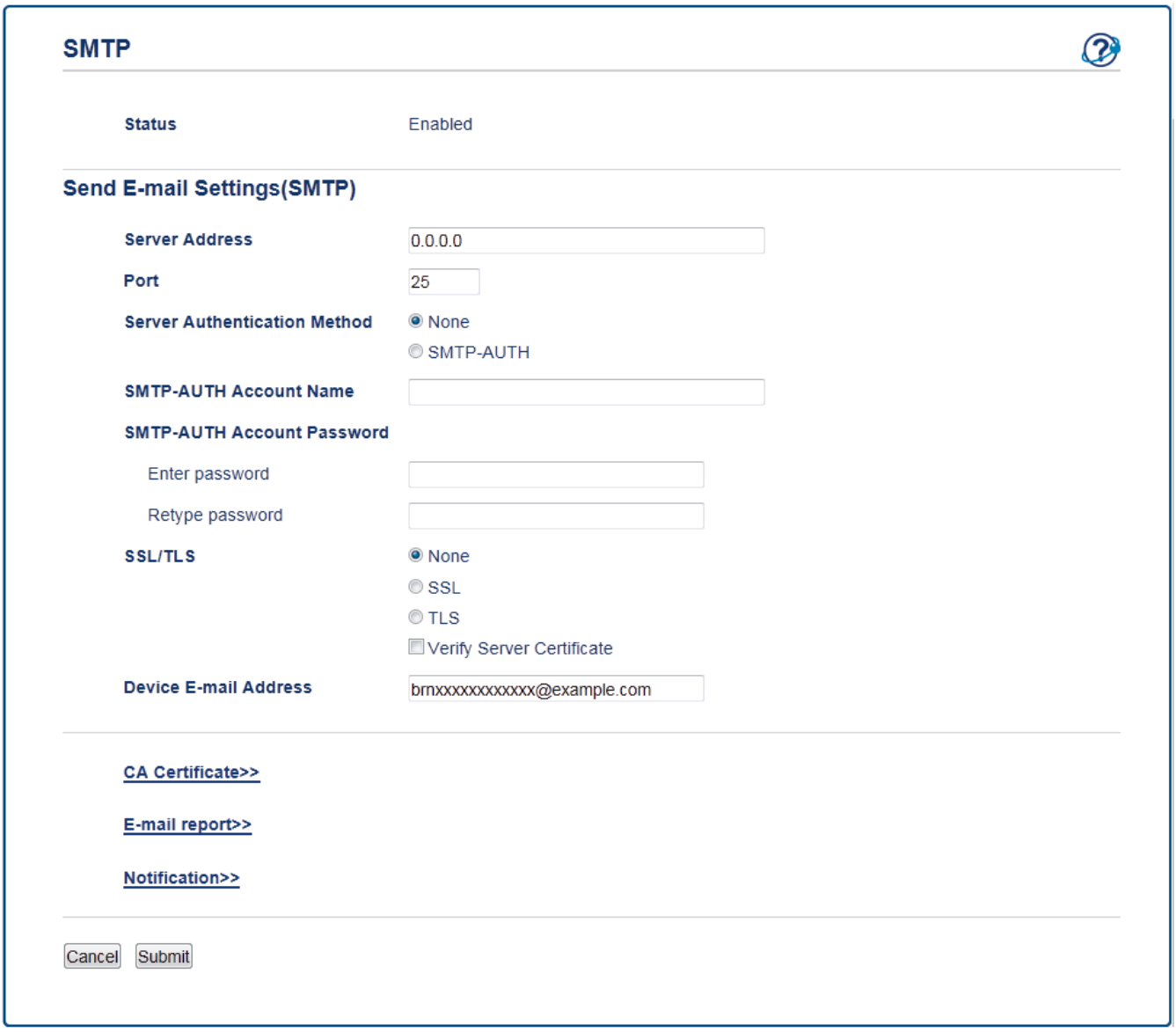
Related Models: LJ4000DN/LJ5000DN

Your Lenovo machine supports SSL/TLS methods to send an email via an email server that requires secure SSL/TLS communication. To send email via an email server that is using SSL/TLS communication, you must configure SMTP over SSL/TLS.

We recommend using Web Based Management to configure SSL/TLS.

Verify Server Certificate

Under **SSL/TLS**, if you choose **SSL** or **TLS**, the **Verify Server Certificate** check box will be selected automatically.



- Before you verify the server certificate, you must import the CA certificate issued by the CA that signed the server certificate. Contact your network administrator or your Internet Service Provider (ISP) to confirm if importing a CA certificate is necessary.
- If you do not need to verify the server certificate, clear the **Verify Server Certificate** check box.

Port Number

If you select **SSL**, the **Port** value will be changed to match the protocol. To change the port number manually, type the port number after you choose **SSL/TLS**.

You must configure your machine's SMTP communication method to match the method used by your email server. For details about your email server settings, contact your network administrator or your ISP.

In most cases, the secured webmail services require the following settings:

SMTP	**Port**	587
	Server Authentication Method	**SMTP-AUTH**
	SSL/TLS	**TLS**

Related Information

- Send an Email Securely

Use IEEE 802.1x Authentication

- What Is IEEE 802.1x Authentication?
- Configure IEEE 802.1x Authentication Using Web Based Management (Web Browser)
- IEEE 802.1x Authentication Methods

What Is IEEE 802.1x Authentication?

Related Models: LJ4000DN/LJ5000DN

IEEE 802.1x is an IEEE standard for wired and wireless networks that limits access from unauthorised network devices. Your Lenovo machine (supplicant) sends an authentication request to a RADIUS server (Authentication server) through your access point or HUB. After your request has been verified by the RADIUS server, your machine can access the network.

Related Information

- Use IEEE 802.1x Authentication

Configure IEEE 802.1x Authentication Using Web Based Management (Web Browser)

Related Models: LJ4000DN/LJ5000DN

- If you configure your machine using EAP-TLS authentication, you must install the client certificate issued by a CA before you start configuration. Contact your network administrator about the client certificate. If you have installed more than one certificate, we recommend writing down the certificate name you want to use.
- Before you verify the server certificate, you must import the CA certificate that has been issued by the CA that signed the server certificate. Contact your network administrator or your Internet Service Provider (ISP) to confirm whether a CA certificate import is necessary.

1. Start your web browser.
2. Type "http://machine's IP address" in your browser's address bar (where "machine's IP address" is the machine's IP address).

   For example:

   http://192.168.1.2

   - If you are using a Domain Name System or enable a NetBIOS name, you can type another name, such as "SharedPrinter" instead of the IP address.
     - For example:

       http://SharedPrinter

     If you enable a NetBIOS name, you can also use the node name.
     - For example:

       http://brnxxxxxxxxxxxx

     The NetBIOS name can be found in the Network Configuration Report.
   - For Macintosh, access Web Based Management by clicking the machine's icon on the **Status Monitor** screen.
3. No password is required by default. Type a password if you have set one, and then click .
4. Click the **Network** tab.
5. Click **Wired**, and then select **Wired 802.1x Authentication**.
6. Configure the IEEE 802.1x authentication settings.

   - To enable IEEE 802.1x authentication for wired networks, select **Enabled** for **Wired 802.1x status** on the **Wired 802.1x Authentication** page.
   - If you are using **EAP-TLS** authentication, you must select the client certificate that has been installed (shown with certificate name) for verification from the **Client Certificate** drop-down list.
   - If you select **EAP-FAST**, **PEAP**, **EAP-TTLS**, or **EAP-TLS** authentication, select the verification method from the **Server Certificate Verification** drop-down list. Verify the server certificate using the CA certificate, imported to the machine in advance, that has been issued by the CA that signed the server certificate.

   Select one of the following verification methods from the **Server Certificate Verification** drop-down list:

Option	Description
No Verification	The server certificate can always be trusted. The verification is not performed.
CA Cert.	The verification method to check the CA reliability of the server certificate, using the CA certificate that has been issued by the CA that signed the server certificate.

Option	Description
CA Cert. + ServerID	The verification method to check the common name [1] value of the server certificate, in addition to the CA reliability of the server certificate.

7. When finished with configuration, click **Submit**.

   For wired networks: After configuring, connect your machine to the IEEE 802.1x supported network. After a few minutes, print the Network Configuration Report to check the <**Wired IEEE 802.1x**> Status.

Option	Description
Success	The wired IEEE 802.1x function is enabled and the authentication was successful.
Failed	The wired IEEE 802.1x function is enabled; however, the authentication failed.
Off	The wired IEEE 802.1x function is not available.

Related Information

- Use IEEE 802.1x Authentication

1 The common name verification compares the common name of the server certificate to the character string configured for the **Server ID**. Before you use this method, contact your system administrator about the server certificate's common name and then configure **Server ID**.

IEEE 802.1x Authentication Methods

Related Models: LJ4000DN/LJ5000DN

EAP-FAST

Extensible Authentication Protocol-Flexible Authentication via Secured Tunneling (EAP-FAST) has been developed by Cisco Systems, Inc., which uses a user ID and password for authentication, and symmetric key algorithms to achieve a tunnelled authentication process.

The Lenovo machine supports the following inner authentication methods:

- EAP-FAST/NONE
- EAP-FAST/MS-CHAPv2
- EAP-FAST/GTC

EAP-MD5

Extensible Authentication Protocol-Message Digest Algorithm 5 (EAP-MD5) uses a user ID and password for challenge-response authentication.

PEAP

Protected Extensible Authentication Protocol (PEAP) is a version of EAP method developed by Cisco Systems, Inc., Microsoft Corporation and RSA Security. PEAP creates an encrypted Secure Sockets Layer (SSL)/Transport Layer Security (TLS) tunnel between a client and an authentication server, for sending a user ID and password. PEAP provides mutual authentication between the server and the client.

The Lenovo machine supports the following inner authentications:

- PEAP/MS-CHAPv2
- PEAP/GTC

EAP-TTLS

Extensible Authentication Protocol-Tunneled Transport Layer Security (EAP-TTLS) has been developed by Funk Software and Certicom. EAP-TTLS creates a similar encrypted SSL tunnel to PEAP, between a client and an authentication server, for sending a user ID and password. EAP-TTLS provides mutual authentication between the server and the client.

The Lenovo machine supports the following inner authentications:

- EAP-TTLS/CHAP
- EAP-TTLS/MS-CHAP
- EAP-TTLS/MS-CHAPv2
- EAP-TTLS/PAP

EAP-TLS

Extensible Authentication Protocol-Transport Layer Security (EAP-TLS) requires digital certificate authentication both at a client and an authentication server.

Related Information

- Use IEEE 802.1x Authentication

Store Print Log to Network

- Store Log to Network Overview
- Configure the Store Print Log to Network Settings Using Web Based Management
- Use the Store Print Log to Network's Error Detection Setting

Store Log to Network Overview

Related Models: LJ4000DN/LJ5000DN

The Store Print Log to Network feature allows you to save the print log file from your Lenovo machine to a network server using the Common Internet File System (CIFS) protocol. You can record the ID, type of print job, job name, user name, date, time and the number of printed pages for every print job. CIFS is a protocol that runs over TCP/IP, allowing computers on a network to share files over an intranet or the Internet.

The following print functions are recorded in the print log:

- Print jobs from your computer

- The Store Print Log to Network feature supports Kerberos authentication and NTLMv2 authentication. You must configure the SNTP protocol (network time server) for Authentication.
- You can set the file type to TXT or CSV when storing a file to the server.

Related Information

- Store Print Log to Network

Configure the Store Print Log to Network Settings Using Web Based Management

Related Models: LJ4000DN/LJ5000DN

1. Start your web browser.
2. Type "http://machine's IP address" in your browser's address bar (where "machine's IP address" is the machine's IP address).

   For example:

   http://192.168.1.2
3. No password is required by default. Type a password if you have set one, and then click .
4. Click the **Administrator** tab.
5. Click the **Store Print Log to Network** menu.
6. In the **Print Log** field, click **On**.
7. Configure the following settings:

Option	Description
Network Folder Path	Type the destination folder where your log will be stored on the CIFS server (for example: lenovo\abc).
File Name	Type the file name you want to use for the print log (up to 32 characters).
File Type	Select the **TXT** or **CSV** option for the Print Log file type.
Auth. Method	Select the authentication method required for access to the CIFS server: **Auto**, **Kerberos**, or **NTLMv2**. Kerberos is an authentication protocol which allows devices or individuals to securely prove their identity to network servers using a single sign-on. NTLMv2 is the authentication method used by Windows® to log into servers. • **Auto**: If you select **Auto**, NTLMv2 will be used to the authentication method. • **Kerberos**: Select the **Kerberos** option to use Kerberos authentication only. • **NTLMv2**: Select the **NTLMv2** option to use NTLMv2 authentication only. • For the **Kerberos** and **NTLMv2** authentication, you must also configure the SNTP protocol (network time server) and DNS server.
Username	Type the user name for the authentication (up to 96 characters). If the user name is part of a domain, enter the user name in one of the following styles: user@domain or domain\user.
Password	Type the password for the authentication (up to 32 characters).
Kerberos Server Address (if needed)	Type the KDC host address (for example: kerberos.example.com; up to 64 characters) or the IP address (for example: 192.168.56.189).
Error Detection Setting	Choose what action should be taken when the Print Log cannot be stored to the server due to a network error.

8. In the **Connection Status** field, confirm the last log status.

You can also confirm the error status on the LCD of your machine.

9. Click **Submit** to display the **Test Print Log to Network** page.
   To test your settings, click **Yes** and then go to the next step.
   To skip the test, click **No**. Your settings will be submitted automatically.
10. The machine will test your settings.
11. If your settings are accepted, **Test OK** appears on the screen.
    If **Test Error** appears, check all settings, and then click **Submit** to display the Test page again.

Related Information

- Store Print Log to Network

Use the Store Print Log to Network's Error Detection Setting

Related Models: LJ4000DN/LJ5000DN

Use Error Detection Settings to determine the action that is taken when the print log cannot be stored to the server due to a network error.

1. Start your web browser.
2. Type "http://machine's IP address" in your browser's address bar (where "machine's IP address" is the machine's IP address).

   For example:

   http://192.168.1.2
3. Click the **Administrator** tab.
4. Click the **Store Print Log to Network** menu in the left navigation bar.
5. In the **Error Detection Setting** section, select the **Cancel Print** or **Ignore Log & Print** option.

Option	Description
Cancel Print	If you select the **Cancel Print** option, the print jobs are cancelled when the print log cannot be stored to the server.

Ignore Log & Print	If you select the **Ignore Log & Print** option, the machine prints the documentation even if the print log cannot be stored to the server.
	When the store print log function has recovered, the print log is recorded as follows:
	`Id, Type, Job Name, User Name, Date, Time, Print Pages`
	`1, Print(xxxxxxx), "Document01.doc", "user01", 20xx/03/03, 14:01:32, 52`
	`2, Print(xxxxxxx), "Document02.doc", "user01", 20xx/03/03, 14:45:30, ?` — a
	`3, <ERROR>, ?, ?, ?, ?, ?` — b
	`4, Print(xxxxxxx), "Report01.xls", "user02", 20xx/03/03, 19:30:40, 4`
	a. If the log cannot be stored at the end of printing, the print log except the number of printed pages will be recorded.
	b. If the print log cannot be stored at the beginning and the end of printing, the print log of the job will not be recorded. When the function has recovered, the error is reflected in the log.

6. Click **Submit** to display the **Test Print Log to Network** page.

   To test your settings, click **Yes** and then go to the next step.

   To skip the test, click **No**. Your settings will be submitted automatically.
7. The machine will test your settings.
8. If your settings are accepted, **Test OK** appears on the screen.

   If **Test Error** appears, check all settings, and then click **Submit** to display the Test page again.

Related Information

- Store Print Log to Network

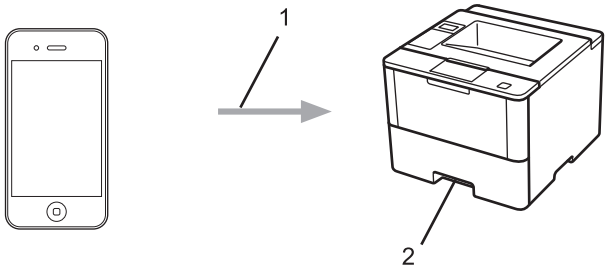
Mobile

- Print with AirPrint

Print with AirPrint

Related Models: LJ4000DN/LJ5000DN

Use Lenovo AirPrint to wirelessly print photos, emails, web pages, and documents from your iPad, iPhone and iPod touch without installing a printer driver on the device.



1. Print request
2. Printed photos, emails, web pages, and documents

Related Information

- Mobile

Troubleshooting

Use this section to resolve typical problems you may encounter when using your Lenovo machine. You can correct most problems yourself.

IMPORTANT

For technical help, you must call Lenovo customer service or your local Lenovo dealer.

Using non-Lenovo supplies may affect the print quality, hardware performance, and machine reliability.

First, check the following:

- The machine's power cord is connected correctly and the machine's power is on. See the *Quick Setup Guide*.
- All of the protective materials have been removed. See the *Quick Setup Guide*.
- Paper is loaded correctly in the paper tray.
- The interface cables are securely connected to the machine and the computer.
- Error and maintenance messages

If you did not solve the problem with the checks, identify the problem and then see *Related Information*.

Related Information

- Error and Maintenance Messages
- Paper Jams
- Printing Problems
- Improve the Print Quality
- Network Problems
- Other Problems
- Check the Machine Information
- Reset Functions

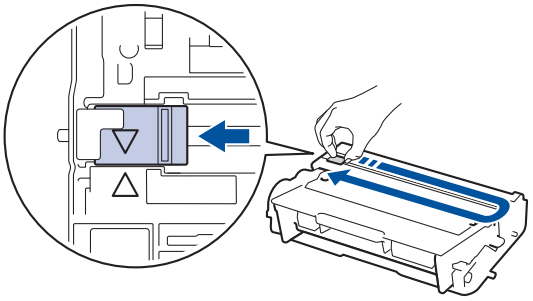
Error and Maintenance Messages

As with any sophisticated office product, errors may occur and supply items may have to be replaced. If this happens, your machine identifies the error or required routine maintenance and shows the appropriate message. The most common error and maintenance messages are shown in the table.

Follow the instructions in the **Action** column to solve the error and remove the message.

You can correct most errors and perform routine maintenance by yourself. If you need more tips: Visit http://www.lenovo.com.

Error Message	Cause	Action
2-sided Disabled	The back cover of the machine is not closed completely.	Close the back cover of the machine until it locks in the closed position.
	The 2-sided tray is not installed completely.	Install the 2-sided tray firmly in the machine.
Access Denied	The function you want to use is restricted by Secure Function Lock 3.0.	Call your administrator to check your Secure Function Lock Settings.
Cartridge Error	The toner cartridge is not installed correctly.	Remove the toner cartridge and drum unit assembly. Take out the toner cartridge, and put it back in the drum unit again. Reinstall the toner cartridge and drum unit assembly in the machine. If the problem continues, contact Lenovo customer service or your local Lenovo dealer.
Cooling Down	The temperature of the inside of the machine is too hot. The machine will pause its current print job and go into cooling down mode.	Make sure you can hear the fan in the machine spinning and that the exhaust outlet is not blocked. If the fan is spinning, remove any obstacles that surround the exhaust outlet, and then leave the machine turned on but do not use it for several minutes. If the fan is not spinning, disconnect the machine from the power for several minutes, then reconnect it.
Cover is Open	The front cover is not completely closed.	Open and then firmly close the front cover of the machine.
Cover is Open	The fuser cover is not completely closed.	Close the fuser cover located inside the back cover of the machine.

Error Message	Cause	Action
Drum !	The corona wire on the drum unit must be cleaned.	Clean the corona wire on the drum unit.  See *Related Information*: *Clean the Corona Wire*. If the problem continues, replace the drum unit with a new one.
	The drum unit or the toner cartridge and drum unit assembly is not installed correctly.	Remove the drum unit, remove the toner cartridge from the drum unit, and put the toner cartridge back into the drum unit. Reinstall the drum unit in the machine.
Drum End Soon	The drum unit is near the end of its life.	Order a new drum unit before the LCD displays Replace Drum.
Jam 2-sided	The paper is jammed in the 2-sided tray or inside the back cover.	Remove the 2-sided tray and open the back cover to pull out all jammed paper.
Jam Inside	The paper is jammed inside the machine.	Open the front cover, remove the toner cartridge and drum unit assembly, and pull out all jammed paper. Close the front cover.
Jam MP Tray	The paper is jammed in the MP tray.	Remove all jammed paper from in and around the MP tray. Press **Go**.
Jam Rear	The paper is jammed in the back of the machine.	Open the fuser cover and remove all jammed paper. Close the fuser cover.
Jam Tray 1 Jam Tray 2 Jam Tray 3 Jam Tray 4	The paper is jammed in the indicated paper tray.	Pull out the paper tray indicated on the LCD and remove all jammed paper.
Limit Exceeded	The print limit set in Secure Function Lock 3.0 was reached.	Call your administrator to check your Secure Function Lock Settings.
Media Mismatch	The media type specified in the printer driver differs from the paper type specified in the machine's menu.	Load the correct type of paper in the tray indicated on the LCD, and then select the correct media type in the Paper Type setting on the machine.
No Drum Unit	The drum unit is not installed correctly.	Reinstall the toner cartridge and drum unit assembly.
No Paper	The machine is out of paper, or paper is not loaded correctly in the paper tray.	• Refill paper in the paper tray. Make sure the paper guides are set to the correct size. • If paper is in the tray, remove it and load it again. Make sure the paper guides are set to the correct size. • Do not overfill the paper tray.
No Paper Fed T1 No Paper Fed T2 No Paper Fed T3 No Paper Fed T4	The machine failed to feed paper from the indicated paper tray.	Pull out the paper tray indicated on the LCD and remove all jammed paper.

Error Message	Cause	Action
No Paper MP	The MP tray is out of paper, or paper is not loaded correctly in the MP tray.	Do one of the following: • Refill paper in the MP tray. Make sure the paper guides are set to the correct size. • If paper is in the tray, remove it and load it again. Make sure the paper guides are set to the correct size.
No Paper T1 No Paper T2 No Paper T3 No Paper T4	The machine failed to feed paper from the indicated paper tray.	Do one of the following: • Refill paper in the paper tray indicated on the LCD. Make sure the paper guides are set to the correct size. • If paper is in the tray, remove it and load it again. Make sure the paper guides are set to the correct size. • Do not overfill the paper tray.
No Toner	The toner cartridge or the toner cartridge and drum unit assembly is not installed correctly.	Remove the toner cartridge and drum unit assembly. Remove the toner cartridge from the drum unit, and reinstall the toner cartridge back in the drum unit. Reinstall the toner cartridge and drum unit assembly back in the machine. If the problem continues, replace the toner cartridge with a new one.
No Tray T1 No Tray T2 No Tray T3 No Tray T4	The paper tray is not installed or not installed correctly.	Reinstall the paper tray indicated on the LCD.
Out of Memory	The machine's memory is full.	Press **Cancel** and reduce the print resolution.
Paper Low Tray 1 Paper Low Tray 2 Paper Low Tray 3 Paper Low Tray 4	The paper tray is nearly empty.	Refill the paper in the paper tray indicated on the LCD.
Print Data Full	The machine's memory is full.	Press **Cancel** and delete the previously stored secure print data.
Print Unable ##	The machine has a mechanical problem.	• Press and hold to turn the machine off, wait a few minutes, and then turn it on again. • If the problem continues, contact Lenovo customer service.
Replace Drum	It is time to replace the drum unit.	Replace the drum unit with a new one. See *Related Information*: *Replace the Drum Unit.*
	The drum unit counter was not reset when a new drum was installed.	Reset the drum unit counter. See the instructions included with the new drum unit.
Replace Toner	The toner cartridge is at the end of its life. The machine stops all print operations.	Replace the toner cartridge with a new one.
Self-Diagnostic	The temperature of the fuser unit does not rise to a specified temperature within the specified time.	Press and hold to turn the machine off, wait a few seconds, and then turn it on again. Leave the machine idle for 15 minutes with the power on.
	The fuser unit is too hot.	

Error Message	Cause	Action
Size Error	The paper size defined in the printer driver is not supported by the defined tray.	Choose a paper size supported by the defined tray.
Size Error DX	The paper size specified in the machine's paper size setting is not available for automatic 2-sided printing.	Press **Cancel** (if required). Load the correct size of paper in the tray and set the tray for that paper size. Choose a paper size supported by 2-sided printing. Paper size available for automatic 2-sided printing is A4.
	The paper in the tray is not the correct size and is not available for automatic 2-sided printing.	
Size Mismatch	The paper in the tray is not the correct size.	Load the correct size of paper in the tray indicated on the LCD and set the size of paper for the tray. Press **Go**.
Toner Low	If the LCD displays this message, you can still print. The toner cartridge is near the end of its life.	Order a new toner cartridge now so you have it ready when the LCD displays Replace Toner.
Too Many Trays	The number of installed Optional Trays exceeds the maximum number.	Reduce the number of Optional Trays.

Related Information

- Troubleshooting
- Replace Supplies
- Load and Print Using the Paper Tray
- Load and Print Using the Multi-purpose Tray (MP Tray)
- Replace the Drum Unit
- Clean the Corona Wire

Paper Jams

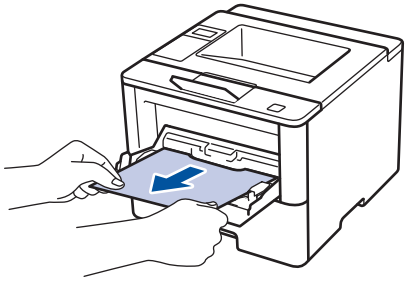
Always remove the remaining paper from the paper tray and straighten the stack when you are adding new paper. This helps prevent multiple sheets of paper from feeding through the machine at one time and prevents paper jams.

- Paper is Jammed in the MP tray
- Paper is Jammed in the Paper Tray
- Paper is Jammed in the Back of the Machine
- Paper is Jammed inside the Machine
- Paper is Jammed in the 2-sided Tray

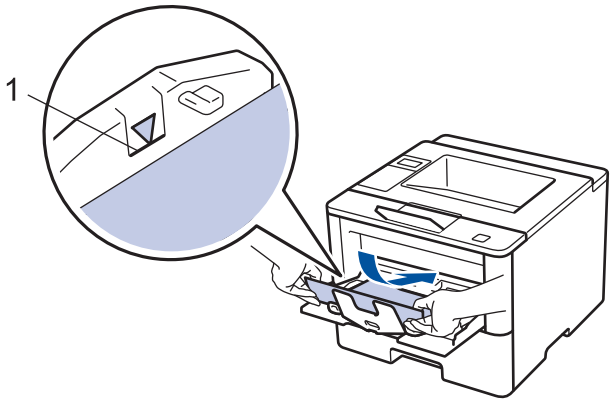
Paper is Jammed in the MP tray

If the machine's control panel or the Status Monitor indicates that there is a jam in the machine's MP tray, follow these steps:

1. Remove the paper from the MP tray.
2. Remove any jammed paper from in and around the MP tray.



3. Fan the paper stack, and then put it back in the MP tray.
4. Reload paper in the MP tray and make sure the paper stays under the maximum paper height guides (1) on both sides of the tray.



5. Press **Go** to resume printing.

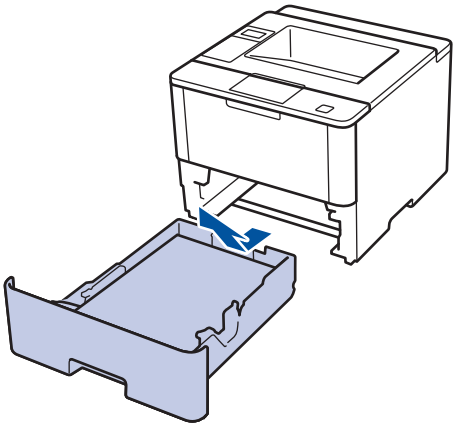
Related Information

- Paper Jams

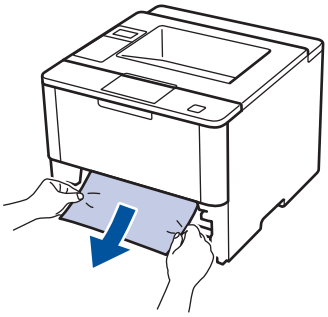
Paper is Jammed in the Paper Tray

If the machine's control panel or the Status Monitor indicates that there is a jam in the paper tray, follow these steps:

1. Pull the paper tray completely out of the machine.

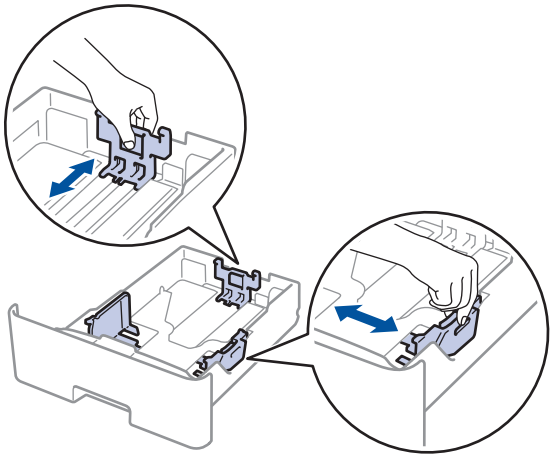


2. Slowly pull out the jammed paper.

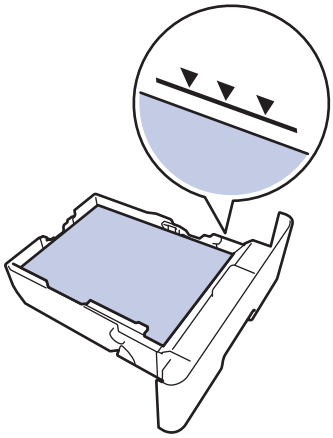


Pulling the jammed paper downward using both hands allows you to remove the paper more easily.

3. Fan the stack of paper to prevent further jams, and slide the paper guides to fit the paper size.



4. Make sure the paper is below the maximum paper mark (▼▼▼).



5. Put the paper tray firmly back in the machine.

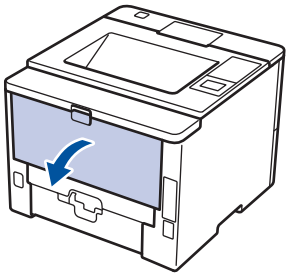
Related Information

- Paper Jams

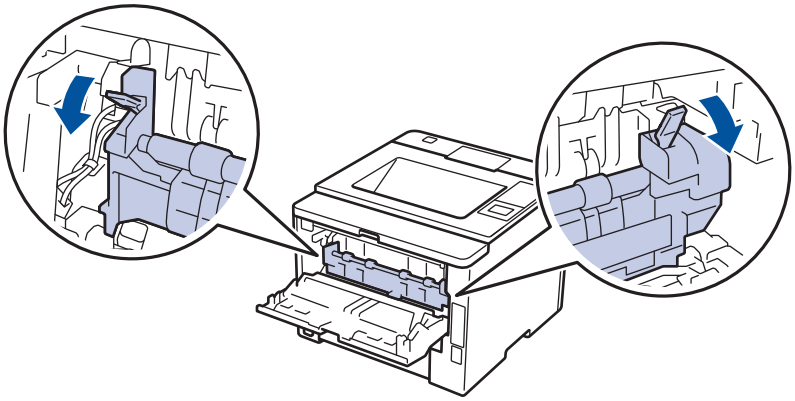
Paper is Jammed in the Back of the Machine

If the machine's control panel or the Status Monitor indicates that there is a jam in the back (Rear) of the machine, follow these steps:

1. Leave the machine turned on for 10 minutes for the internal fan to cool the extremely hot parts inside the machine.
2. Open the back cover.



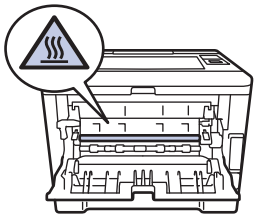
3. Pull the green levers at the left and right sides toward you to release the fuser cover.



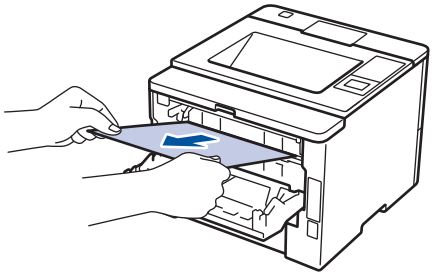
⚠ WARNING

HOT SURFACE

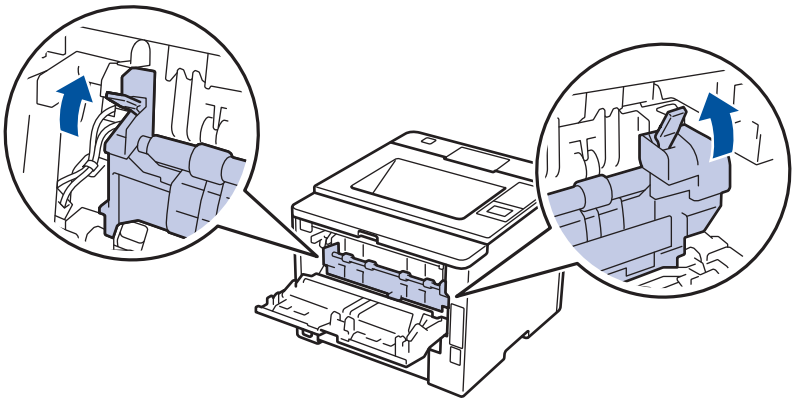
The machine's internal parts will be extremely hot. Wait for the machine to cool down before touching them.



4. Use both hands to gently pull the jammed paper out of the fuser unit.



5. Close the fuser cover.



6. Close the back cover until it locks in the closed position.

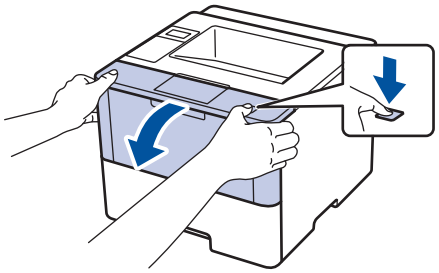
Related Information

- Paper Jams

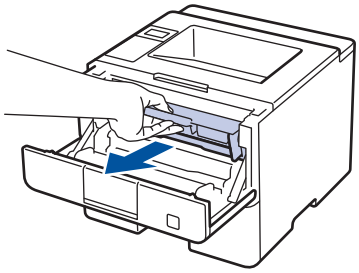
Paper is Jammed inside the Machine

If the machine's control panel or the Status Monitor indicates that there is a jam inside the machine, follow these steps:

1. Leave the machine turned on for 10 minutes for the internal fan to cool the extremely hot parts inside the machine.
2. Open the front cover.



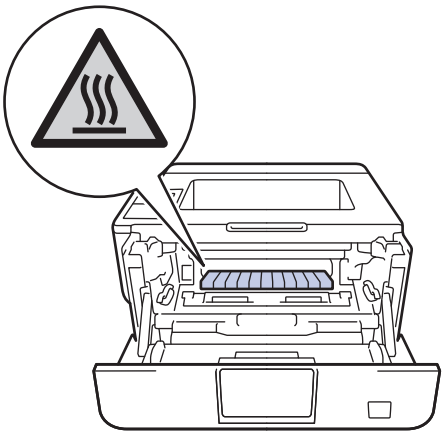
3. Remove the toner cartridge and drum unit assembly.



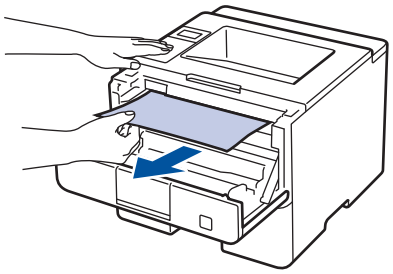
WARNING

HOT SURFACE

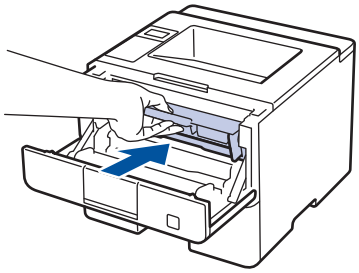
The machine's internal parts will be extremely hot. Wait for the machine to cool down before touching them.



4. Pull out the jammed paper slowly.



5. Install the toner cartridge and drum unit assembly into the machine.



6. Close the front cover.

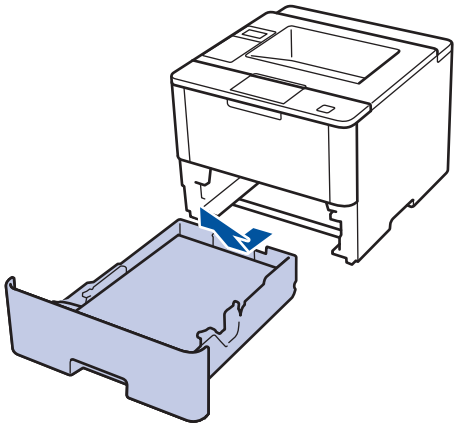
Related Information

- Paper Jams

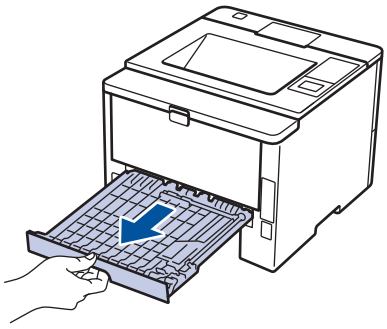
Paper is Jammed in the 2-sided Tray

If the machine's control panel or the Status Monitor indicates that there is a jam in the 2-sided paper tray, follow these steps:

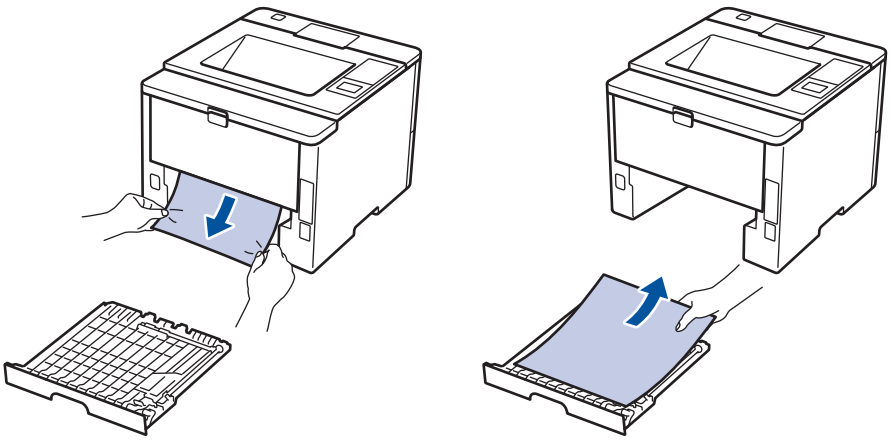
1. Leave the machine turned on for 10 minutes for the internal fan to cool the extremely hot parts inside the machine.
2. Pull the paper tray completely out of the machine.



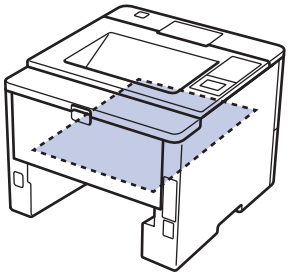
3. At the back of the machine, pull the 2-sided tray completely out of the machine.



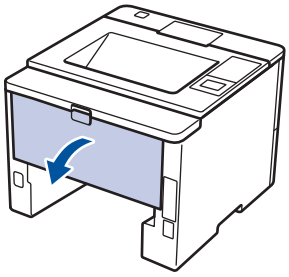
4. Pull the jammed paper out of the machine or out of the 2-sided tray.



5. Remove paper that may have jammed under the machine due to static electricity.



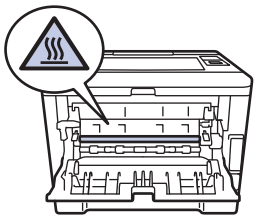
6. If paper is not caught inside the 2-sided tray, open the back cover.



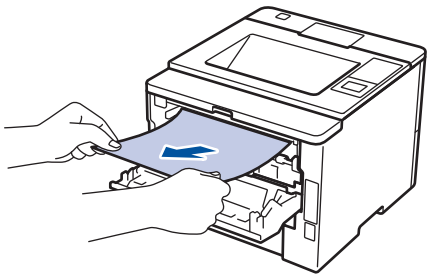
WARNING

HOT SURFACE

The machine's internal parts will be extremely hot. Wait for the machine to cool down before touching them.



7. Use both hands to gently pull the jammed paper out of the back of the machine.



8. Close the back cover until it locks in the closed position.
9. Put the 2-sided tray firmly back in the rear of the machine.
10. Put the paper tray firmly back in the front of the machine.

Related Information

- Paper Jams

Printing Problems

Difficulties	Suggestions
No printout	Check that the correct printer driver has been installed and selected.
	Check to see if the Status Monitor or the machine's control panel displays an error status.
	Check that the machine is online: • Windows® 7 and Windows Server® 2008 R2 Click /**Start** > **Devices and Printers** . Right-click **Lenovo XXXX** and click **See what's printing**. Click **Printer** in the menu bar. Make sure **Use Printer Offline** is not selected. • Windows Vista® and Windows Server® 2008 Click /**Start** > **Control Panel** > **Hardware and Sound** > **Printers**. Right-click **Lenovo XXXX**. Make sure **Use Printer Online** is not listed. If it is listed, click this option to set the driver Online. • Windows® XP Click the **Start** > **Printers and Faxes**. Right-click **Lenovo XXXX**. Make sure **Use Printer Online** is not listed. If it is listed, click this option to set the driver Online. • Windows® 8 and Windows Server® 2012 Move your mouse to the lower right corner of your desktop. When the menu bar appears, click **Settings** > **Control Panel** > **Hardware and Sound** > **View devices and printers**. Right-click the **Lenovo XXXX**. Click **See what's printing**. If printer driver options appear, select your printer driver. Click **Printer** in the menu bar and make sure that **Use Printer Offline** is not selected. • Windows Server® 2012 R2 Click **Control Panel** on the **Start** screen. In the **Hardware** group, click **View devices and printers**. Right-click the **Lenovo XXXX**. Click **See what's printing**. If printer driver options appear, select your printer driver. Click **Printer** in the menu bar and make sure **Use Printer Offline** is not selected.
	Check the machine is not in Power Off mode. If the machine is in Power Off mode, press on the control panel, and then send the print data again.
The machine is not printing or has stopped printing.	Press **Cancel**. The machine will cancel the print job and clear it from the machine's memory. The printout may be incomplete. Send the print data again.
The machine prints unexpectedly or it prints garbage. The headers or footers appear when the document displays on the screen but they do not show up when it is printed.	There is an unprintable area on the top and bottom of the page. Adjust the top and bottom margins in your document to allow for this.
	Press **Cancel**.
	Check the settings in your application to make sure they are set up to work with your machine.

Difficulties	Suggestions
The machine prints unexpectedly or it prints garbage. The headers or footers appear when the document displays on the screen but they do not show up when it is printed.	Confirm that the Lenovo printer driver is selected in your application's Print window.
The machine prints the first couple of pages correctly, then some pages have missing text.	Check the settings in your application to make sure they are set up to work with your machine.
	Your computer is not recognising the full signal of the machine's input buffer. Make sure you connected the interface cable correctly.
The machine does not print on both sides of the paper even though the printer driver setting is 2-sided and the machine supports automatic 2-sided printing.	Check the paper size setting in the printer driver. You must select A4 paper that is 60 to 105 g/m^2.
Print speed is too slow.	Try changing the printer driver setting. The highest resolution needs longer data processing, sending and printing time.
The machine does not feed paper.	If there is paper in the paper tray, make sure it is straight. If the paper is curled, straighten it. Sometimes it is helpful to remove the paper, turn the stack over and put it back in the paper tray.
	Reduce the amount of paper in the paper tray, and then try again.
	Make sure **MP Tray** is not selected for **Paper Source** in the printer driver.
	Clean the paper pick-up rollers.
The machine does not feed paper from the MP tray.	Fan the paper well and put it back in the MP tray firmly.
	Make sure **MP Tray** is selected as **Paper Source** in the printer driver.
The machine does not feed envelopes.	Load envelopes in the MP tray. Your application must be set to print the envelope size you are using. This is usually done in the Page Setup or Document Setup menu of your application.

Related Information

- Troubleshooting
- Monitor the Status of the Machine from Your Computer (Windows®)
- Monitor the Status of the Machine from Your Computer (Macintosh)
- Cancel a Print Job
- Load and Print Using the Paper Tray
- Clean the Paper Pick-up Rollers
- Load and Print Using the Multi-purpose Tray (MP Tray)

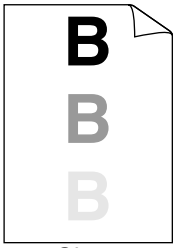
Improve the Print Quality

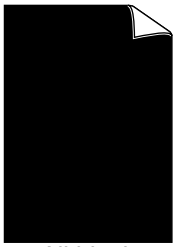
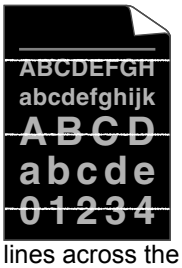
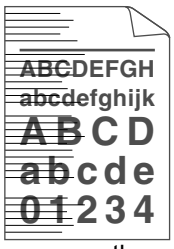
If you have a print quality problem, print a test page first. If the printout looks good, the problem is probably not the machine. Check the interface cable connections and try printing a different document. If the printout or test page printed from the machine has a quality problem, check the examples of poor print quality in the table and follow the recommendations.

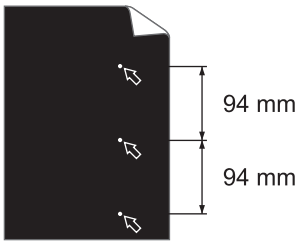
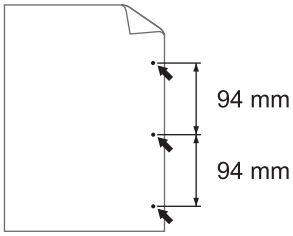
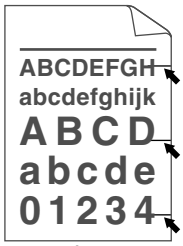
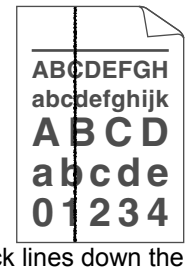
IMPORTANT

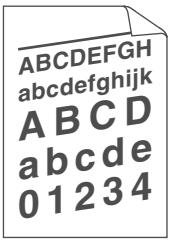
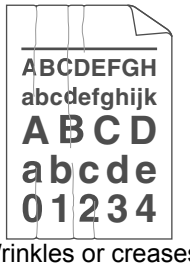
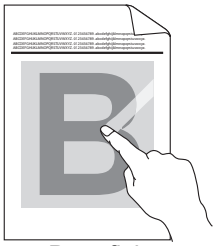
Using non-Lenovo supplies may affect the print quality, hardware performance, and machine reliability.

1. To get the best print quality, we suggest using recommended print media. Make sure you use paper that meets our specifications.
2. Check that the toner cartridge and drum unit are installed correctly.

Examples of poor print quality	Recommendation
 Faint	• If the machine indicates Replace Toner status, install a new toner cartridge. • Check the machine's environment. Conditions such as humidity, high temperatures, and so on, may cause this print fault. • If the whole page is too light, Toner Save may be turned on. Turn off Toner Save mode in the machine's menu settings or the printer driver. • Clean the drum unit. • Clean the corona wire on the drum unit. • Replace the toner cartridge with a new toner cartridge. • Replace the drum unit with a new drum unit.
 Grey background	• Check the machine's environment. Conditions such as high temperatures and high humidity can increase the amount of background shading. • Clean the drum unit. • Replace the toner cartridge with a new toner cartridge. • Replace the drum unit with a new drum unit.
 Ghost	• Check the machine's environment. Conditions such as low humidity and low temperatures may cause this print quality problem. • Select the appropriate media type in the printer driver. • Select the appropriate media type in the menu setting. • Clean the drum unit. • Replace the drum unit with a new drum unit. • Replace the toner cartridge with a new toner cartridge. • The fuser unit may be contaminated. Contact Lenovo customer service.

Examples of poor print quality	Recommendation
 Toner specks	• Make sure the media type setting in the driver matches the type of paper you are using. • Clean the drum unit. • The toner cartridge may be damaged. Replace the toner cartridge with a new toner cartridge. • The drum unit may be damaged. Replace the drum unit with a new drum unit. • The fuser unit may be contaminated. Contact Lenovo customer service.
 Hollow print	• Select **Thick Paper** mode in the printer driver or use thinner paper than you are currently using. • Select the appropriate media type in the menu setting. • Check the machine's environment. Conditions such as high humidity can cause hollow print. • The drum unit may be damaged. Replace the drum unit with a new drum unit.
 All black	• Clean the corona wire inside the drum unit. • The drum unit may be damaged. Replace the drum unit with a new drum unit.
 White lines across the page	• Select the appropriate media type in the printer driver. • Select the appropriate media type in the menu setting. • The problem may disappear by itself. Print multiple blank pages to clear this problem, especially if the machine has not been used for a long time. • Clean the drum unit. • The drum unit may be damaged. Replace the drum unit with a new drum unit.
 Lines across the page	• Clean the drum unit. • The drum unit may be damaged. Replace the drum unit with a new drum unit.
 White lines, bands or ribbing across the page	• Check the machine's environment. Conditions such as high humidity and high temperatures may cause this print quality problem. • Clean the drum unit. • If the problem is not solved after printing a few pages, replace the drum unit with a new drum unit.

Examples of poor print quality	Recommendation
 White Spots on black text and graphics at 94 mm intervals  Black spots at 94 mm intervals	• If the problem is not solved after printing a few pages, the drum unit may have foreign material, such as glue from a label, stuck on the drum. Clean the drum unit. See *Related Information*:*Clean the Drum Unit.* • The drum unit may be damaged. Replace the drum unit with a new drum unit.
 Black toner marks across the page	• If you use label sheets for laser printers, the glue from the sheets may sometimes stick to the drum surface. Clean the drum unit. See *Related Information*:*Clean the Drum Unit.* • If you used paper that has clips or staples, the drum unit may be damaged. • If the unpacked drum unit is in direct sunlight (or room light for long periods of time), the unit may be damaged. • Clean the drum unit. • The toner cartridge may be damaged. Replace the toner cartridge with a new toner cartridge. • The drum unit may be damaged. Replace the drum unit with a new drum unit.
 Black lines down the page Printed pages have toner stains down the page	• Clean the corona wire inside the drum unit by sliding the green tab. Make sure that the green tab on the drum unit is in the Home position. • The toner cartridge may be damaged. Replace the toner cartridge with a new toner cartridge. • The drum unit may be damaged. Replace the drum unit with a new drum unit. • The fuser unit may be contaminated. Contact Lenovo customer service.
 White lines down the page	• Make sure foreign material such as a torn piece of paper, sticky notes or dust is not inside the machine and around the toner cartridge and drum unit. • The toner cartridge may be damaged. Replace the toner cartridge with a new toner cartridge. • The drum unit may be damaged. Replace the drum unit with a new drum unit.

Examples of poor print quality	Recommendation
 Image skewed	• Make sure the paper or other print media is loaded correctly in the paper tray and the guides are not too tight or too loose against the paper stack. • Set the paper guides correctly. • The paper tray may be too full. • Check the paper type and quality. • Check for loose objects such as torn paper inside the machine. • If the problem only occurs during automatic 2-sided printing, check for torn paper in the 2-sided tray. Verify the 2-sided tray is inserted completely and the back cover is closed completely.
 Curled or wavy	• Check the paper type and quality. High temperatures and high humidity will cause paper to curl. • If you do not use the machine often, the paper may have been in the paper tray too long. Turn over the stack of paper in the paper tray. Also, fan the paper stack, and then rotate the paper 180° in the paper tray. • Open the back cover (face up output tray) to let the printed paper exit onto the face up output tray. • Choose **Reduce Paper Curl** mode in the printer driver when you do not use our recommended print media.
 Wrinkles or creases	• Make sure paper is loaded correctly. • Check the paper type and quality. • Turn over the stack of paper in the tray or rotate the paper 180° in the input tray.
 Poor fixing	• Make sure the media type setting in the driver matches the type of paper you are using. • Choose **Improve Toner Fixing** mode in the printer driver. If this selection does not provide enough improvement, change the printer driver setting in **Media Type** to a thick setting. If you are printing an envelope, choose **Env. Thick** in the media type setting.
 Envelope creases	• Make sure envelopes are printed with the back cover (face up output tray) opened. • Make sure envelopes are fed only from the MP tray.

Related Information

- Troubleshooting
- Test Print

- Clean the Drum Unit

Network Problems

- Error Messages
- Where Can I Find My Lenovo Machine's Network Settings?
- My Lenovo Machine Cannot Print over the Network
- I Want to Check that My Network Devices are Working Correctly

Error Messages

Related Models: LJ4000DN/LJ5000DN

Your Lenovo machine will display an error message if an error occurs. The most common error messages are shown in the table.

Error Messages	Cause	Action
`Authentication Error, contact your administrator.`	Your authentication setting for the Store Print Log to Network feature is not correct.	• Make sure the **Username** and **Password** in **Authentication Setting** are correct. If the username is part of a domain, enter the username in one of the following styles: user@domain or domain\user. • Make sure the SNTP time server settings are configured correctly so the time matches the time used for authentication by Kerberos or NTLMv2.
`File Access Error, contact your administrator.`	The Lenovo machine cannot access the destination folder for the Store Print Log to Network feature.	• Make sure the stored directory name is correct. • Make sure the stored directory is write-enabled. • Make sure the file is not locked.
`Log Access Error`	In Web Based Management, you have selected the **Cancel Print** option in the **Error Detection Setting** of **Store Print Log to Network**.	Wait for about 60 seconds until this message disappears from the LCD.
`Server Timeout, contact your administrator.`	The Lenovo machine cannot connect to the server for the Store Print Log to Network feature.	• Make sure your server address is correct. • Make sure your server is connected to the network. • Make sure the machine is connected to the network.
`Wrong Date&Time, contact your administrator.`	The Lenovo machine does not obtain the time from the SNTP time server.	• Make sure the settings to access the SNTP time server are configured correctly in Web Based Management.

Related Information

- Network Problems

Where Can I Find My Lenovo Machine's Network Settings?

- Print the Network Configuration Report
- Change Machine Settings from Your Computer

My Lenovo Machine Cannot Print over the Network

Related Models: LJ4000DN/LJ5000DN

Cause	Action	Interface
Your security software blocks your machine's access to the network.	Some security software might block access without showing a security alert dialog box even after successful installation. To allow access, see the instructions for your security software or ask the software manufacturer.	Wired
Your Lenovo machine was not assigned an available IP address.	• Confirm the IP address and the Subnet Mask. Verify that both the IP addresses and Subnet Masks of your computer and the Lenovo machine are correct and located on the same network. For more information about how to verify the IP address and the Subnet Mask, ask your network administrator.	Wired
The failed print job is still in your computer's print queue.	• If the failed print job is still in your computer's print queue, delete it. • Otherwise, double-click the printer icon in the following folder and cancel all documents: - (Windows® XP) Click **Start** > **Printers and Faxes**. - (Windows Vista®) Click **(Start)** > **Control Panel** > **Hardware and Sound** > **Printers**. - (Windows® 7) Click **(Start)** > **Devices and Printers** > **Printers and Faxes**. - (Windows® 8) Move your mouse to the lower right corner of your desktop. When the menu bar appears, click **Settings** > **Control Panel**. In the **Hardware and Sound** group, click **View devices and printers** > **Printers**. - (Windows Server® 2008) Click **Start** > **Control Panel** > **Printers**. - (Windows Server® 2012) Move your mouse to the lower right corner of your desktop. When the menu bar appears, click **Settings** > **Control Panel**. In the **Hardware** group, click **View devices and printers** > **Printers**. - (Windows Server® 2012 R2) Click **Control Panel** on the **Start** screen. In the **Hardware** group, click **View devices and printers**. - (OS X v10.8.5) Click **System Preferences** > **Print & Scan**. - (OS X v10.9.x, 10.10.x) Click **System Preferences** > **Printers & Scanners**.	Wired

If you have checked and tried all of the above, but your Lenovo machine still cannot print, uninstall the printer driver and reinstall it.

Related Information

- Network Problems
- I Want to Check that My Network Devices are Working Correctly

I Want to Check that My Network Devices are Working Correctly

Related Models: LJ4000DN/LJ5000DN

Check	Action	Interface
Check that your Lenovo machine, access point/ router, or network hub is turned on.	**Check the following:** • The power cord is connected correctly and the Lenovo machine is turned on. • The access point/router or hub is turned on and its link button is blinking. • All protective packaging has been removed from the machine. • The toner cartridge and drum unit are installed correctly. • The front and back covers are fully closed. • Paper is inserted correctly in the paper tray. • A network cable is securely connected to the Lenovo machine and to the router or hub.	Wired
Check the **Link Status** in the Network Configuration Report.	Print the Network Configuration Report and check that **Ethernet Link Status** is **Link OK**.	Wired
Check that you can "ping" the Lenovo machine from your computer.	Ping the Lenovo machine from your computer using the IP address or the node name in the Windows® command prompt or Macintosh Terminal application: ping `<ipaddress>` or `<nodename>`. • Successful: Your Lenovo machine is working correctly and connected to the same network as your computer. • Unsuccessful: Your Lenovo machine is not connected to the same network as your computer. (Windows®) Ask the network administrator to fix the IP address and the subnet mask. (Macintosh) Confirm that the IP address and the Subnet Mask are set correctly.	Wired

Related Information

- Network Problems
- Print the Network Configuration Report
- My Lenovo Machine Cannot Print over the Network

Other Problems

Difficulties	Suggestions
The machine will not turn on.	Adverse conditions on the power connection (such as lightning or a power surge) may have triggered the machine's internal safety mechanisms. Unplug the power cord. Wait for ten minutes, then plug in the power cord and press to turn on the machine. If the problem is not solved and you are using a power breaker, disconnect it to make sure it is not the problem. Plug the machine's power cord directly into a different known working wall electrical socket. If there is still no power, try a different power cable.
The machine cannot print EPS data that includes binary with the BR-Script3 printer driver.	**(Windows®)** To print EPS data, do the following: 1. For Windows® 7 and Windows Server® 2008 R2: Click the (**Start**) button > **Devices and Printers**. For Windows Vista® and Windows Server® 2008: Click the (**Start**) button > **Control Panel** > **Hardware and Sound** > **Printers**. For Windows® XP: Click the **Start** button > **Printers and Faxes**. For Windows® 8 and Windows Server® 2012: Move your mouse to the lower right corner of your desktop. When the menu bar appears, click **Settings** > **Control Panel**. In the **Hardware and Sound** [1] group, click **View devices and printers**. For Windows Server® 2012 R2: Click **Control Panel** on the **Start** screen. In the **Hardware** group, click **View devices and printers**. 2. Right-click the **Lenovo XXXX BR-Script3** icon, select **Printer properties**. 3. From the **Device Settings** tab, choose TBCP (Tagged binary communication protocol) in **Output Protocol**. **(Macintosh)** If your machine is connected to a computer with a USB interface, you cannot print EPS data that includes binary. You can print the EPS data at the machine through a network. For help installing the BR-Script3 printer driver through the network, visit http://www.lenovo.com.
The Lenovo software cannot be installed.	**(Windows®)** If the Security Software warning appears on the computer screen during the installation, change the Security Software settings to permit the Lenovo product setup program or other program to run. **(Macintosh)** If you are using a firewall function of anti-spyware or antivirus security software, temporarily disable it and then install the Lenovo software.

[1] For Windows Server® 2012: **Hardware and Sound**

Related Information

- Troubleshooting

Check the Machine Information

Follow these instructions to check your Lenovo machine's serial number and firmware version.

1. Press ▲ or ▼ to select the `[Machine Info.]` option, and then press **OK**.
2. Press ▲ or ▼ to select one of the following options:

Option	Description
`Print Settings`	Print a list of your settings.
`Print NetSetting`	Print a list of your Network settings.
`Print File List`	Print a list of data saved in the memory.
`Test Print`	Print a test page.
`Drum Dot Print`	Print the Drum Dot Check Sheet.
`Print Font`	Print a list of the machine’s internal fonts.
`Serial No.`	Check your machine's serial number.
`Version`	Check your machine's firmware version.
`Page Count`	Check the number of total pages the machine has printed.
`Parts Life`	Check the percentage of the supplies' life that remains available.

3. Press **OK**.

Related Information

- Troubleshooting

Reset Functions

- Network Reset
- Factory Reset

Network Reset

Related Models: LJ4000DN/LJ5000DN

Use the Network Reset function to restore the print server's network settings, such as password and IP address, back to its default factory settings.

- Unplug all the interface cables before you perform a Network Reset.

1. Press ▲ or ▼ to select the `[Reset Menu]` option, and then press **OK**.
2. Press ▲ or ▼ to select the `[Network]` option, and then press **OK**.
3. Press ▲ to select `[Yes]`.

The machine will restart automatically.

Related Information

- Reset Functions

Factory Reset

Use the Factory Reset function to restore all settings back to the factory settings.

Unplug all the interface cables before you perform a Factory Reset.

1. Press ▲ or ▼ to select the [Reset Menu] option, and then press **OK**.
2. Press ▲ or ▼ to select the [Factory Reset] option, and then press **OK**.
3. Press ▲ to select [Reset].

Related Information

- Reset Functions

Routine Maintenance

- Replace Supplies
- Clean the Machine
- Check the Remaining Life of Parts
- Pack and Ship Your Lenovo Machine

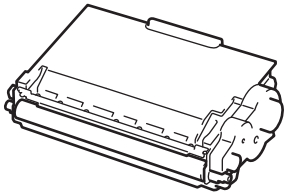
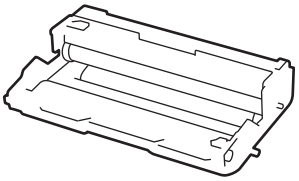
Replace Supplies

You must replace supplies when the machine indicates that the life of the supply is over.

Using non-Lenovo supplies may affect the print quality, hardware performance, and machine reliability.

- The toner cartridge and drum unit are two separate supplies. Make sure both are installed as an assembly.
- The model name of supplies may vary depending on the country.

This table lists the messages to replace supplies when they reach their end of life. To avoid any inconvenience, you may want to buy spare supplies to keep as replacements before the machine stops printing.

Indication	Supply	Model Name	Approximate Life
Toner Low Replace Toner	Toner cartridge 	LT401 [1] LT401H [2] LT401SH [3]	Approximately 3,000 pages [1 4 5] Approximately 8,000 pages [2 4 5] Approximately 12,000 pages [3 4 5]
Drum ! Drum End Soon Replace Drum	Drum unit 	LD401	Approximately 30,000 pages/50,000 pages [6]

1 Standard toner cartridge

2 High yield toner cartridge

3 Super high yield toner cartridge

4 A4 or Letter size 1-sided pages.

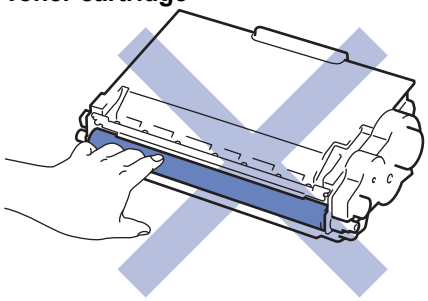
5 Approximate cartridge yield is declared in accordance with ISO/IEC 19752.

6 Approximately 30,000 pages based on 1 page per job and 50,000 pages based on 3 pages per job [A4/letter simplex pages]. The number of pages may be affected due to a variety of factors including but not limited to media type and media size.

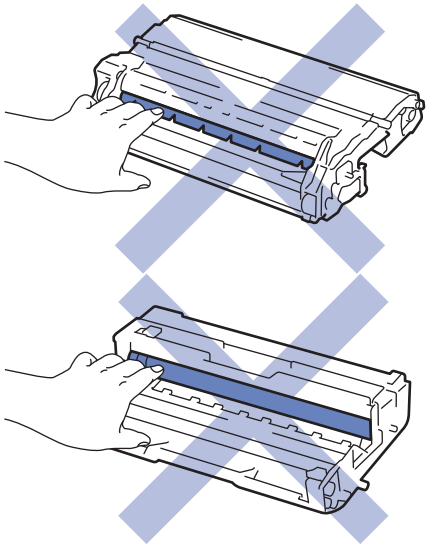
NOTE

- Be sure to seal up the used supplies tightly in a bag so that toner powder does not spill out of the cartridge.
- Discard used consumable items according to local regulations, keeping it separate from domestic waste. If you have questions, call your local waste disposal office. Be sure to reseal the consumable items tightly so that the material inside does not spill.
- We recommend placing used supplies on a piece of paper to prevent accidentally spilling or scattering the material inside.
- If you use paper that is not a direct equivalent for the recommended print media, the life of supplies and machine parts may be reduced.
- The projected life for each of the toner cartridges is based on ISO/IEC 19752. Frequency of replacement will vary depending on the print volume, percentage of coverage, types of media used, and powering on/off the machine.
- Frequency of replacing supplies except toner cartridges will vary depending on the print volume, types of media used, and powering on/off the machine.
- Handle the toner cartridge carefully. If toner scatters on your hands or clothes, immediately wipe or wash it off with cold water.
- To avoid print quality problems, DO NOT touch the shaded parts shown in the illustrations.

Toner cartridge



Drum unit

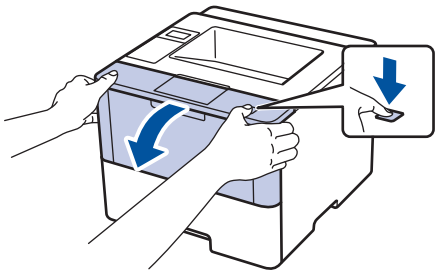


Related Information

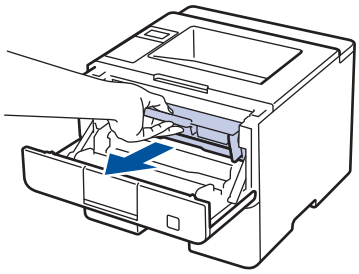
- Routine Maintenance
- Replace the Toner Cartridge
- Replace the Drum Unit
- Error and Maintenance Messages
- Supplies

Replace the Toner Cartridge

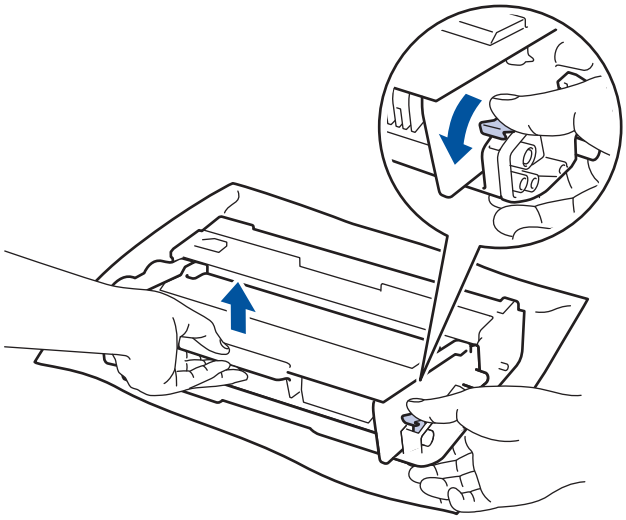
1. Make sure the machine is turned on.
2. Open the front cover.



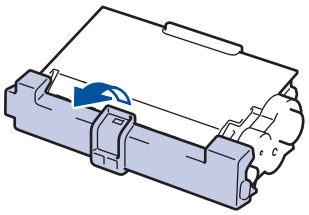
3. Remove the toner cartridge and drum unit assembly from the machine.



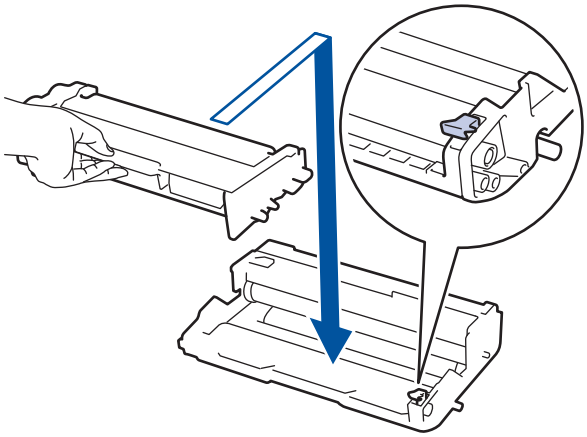
4. Push down the green lock lever and take the toner cartridge out of the drum unit.



5. Unpack the new toner cartridge.
6. Remove the protective cover.



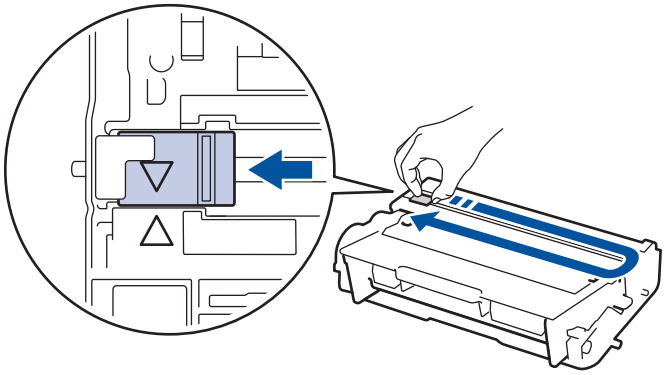
7. Put the new toner cartridge firmly into the drum unit until you hear it lock into place.



Make sure you put the toner cartridge in correctly or it may separate from the drum unit.

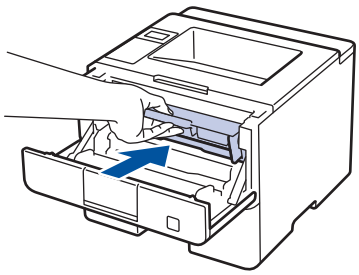
If you put it in properly, the green lock lever will lift automatically.

8. Clean the corona wire inside the drum unit by gently sliding the green tab from left to right and right to left several times.



Be sure to return the tab to the Home position (▲). The arrow on the tab must be aligned with the arrow on the drum unit. If it is not, printed pages may have a vertical stripe.

9. Install the toner cartridge and drum unit assembly back into the machine.



10. Close the front cover of the machine.

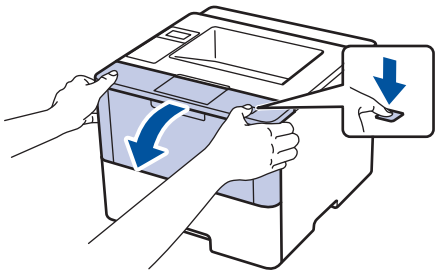
- Do not turn off the machine or open the front cover until the machine returns to Ready Mode.
- The toner cartridge that comes with your Lenovo machine is a Inbox toner cartridge.
- It is a good idea to keep a new toner cartridge ready for use when you see the Toner Low warning.
- To ensure high quality printing, we recommend using only Lenovo Original toner cartridges. When you want to buy toner cartridges, contact Lenovo Dealer.
- DO NOT unpack the new toner cartridge until you are ready to install it.
- If a toner cartridge is left unpacked for a long time, the toner life will be shortened.
- Lenovo strongly recommends you DO NOT refill the toner cartridge provided with your machine. We also strongly recommend you continue to use only Lenovo Original replacement toner cartridges. Use or attempted use of third party toner and/or cartridges in the Lenovo machine may cause damage to the machine and/or may result in unsatisfactory print quality. Our limited warranty coverage does not apply to any problem that is caused by the use of third party toner and/or cartridges. To protect your investment and obtain premium performance from the Lenovo machine, we strongly recommend the use of Lenovo Original Supplies.

Related Information

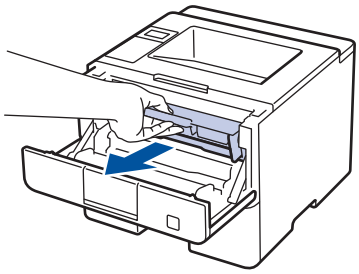
- Replace Supplies

Replace the Drum Unit

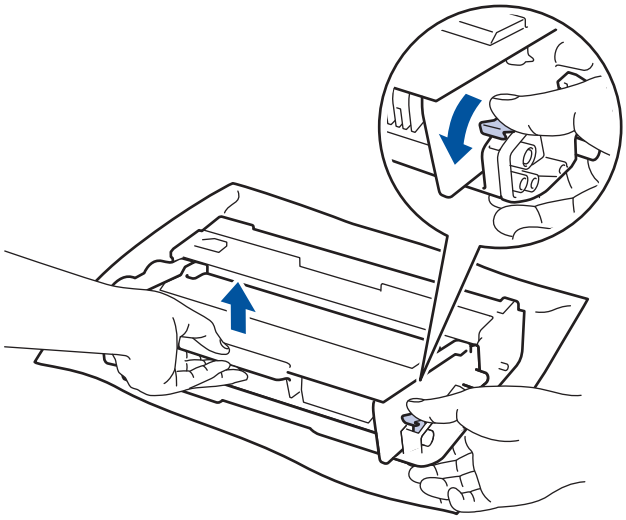
1. Make sure the machine is turned on.
2. Open the front cover.



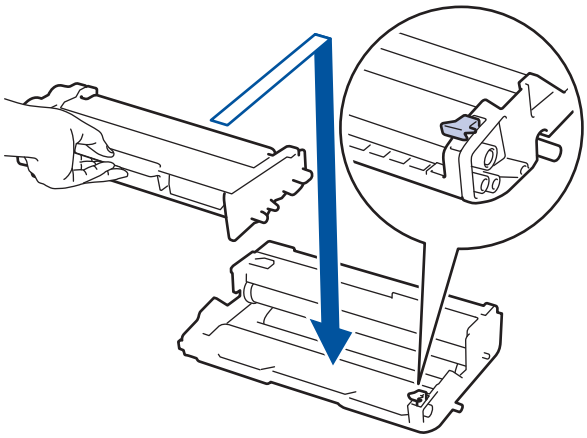
3. Remove the toner cartridge and drum unit assembly from the machine.



4. Push down the green lock lever and take the toner cartridge out of the drum unit.

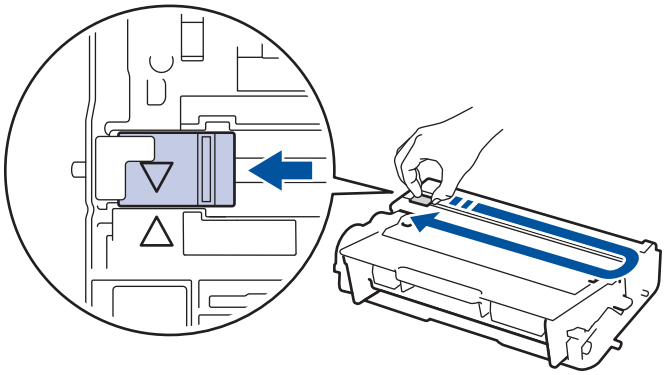


5. Unpack the new drum unit.
6. Put the toner cartridge firmly into the new drum unit until you hear it lock into place.



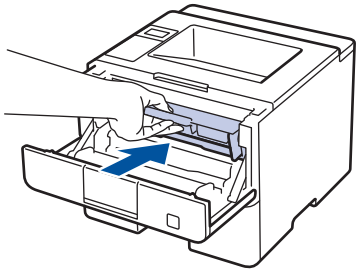
Make sure you put the toner cartridge in correctly or it may separate from the drum unit.
If you put it in properly, the green lock lever will lift automatically.

7. Clean the corona wire inside the drum unit by gently sliding the green tab from left to right and right to left several times.



Be sure to return the tab to the Home position (▲). The arrow on the tab must be aligned with the arrow on the drum unit. If it is not, printed pages may have a vertical stripe.

8. Install the toner cartridge and drum unit assembly back into the machine.



9. Close the front cover of the machine.

NOTE

- Drum wear and tear occurs due to use and rotation of the drum and interaction with paper, toner and other materials in the paper path. In designing this product, Lenovo decided to use the number of rotations of the drum as a reasonable determinant of the drum life. When a drum reaches the factory-established rotation limit corresponding to the rated page yield, the product's LCD will advise you to replace the drum. The product will continue to function; however, print quality may not be optimal.
- If an unpacked drum unit is placed in direct sunlight (or room light for long periods of time), the unit may be damaged.
- There are many factors that determine the actual drum life, such as the temperature, humidity, type of paper, type of toner used and so on. Under ideal conditions, the average drum life is estimated at approximately 30,000 pages based on 1 page per job and 50,000 pages based on 3 pages per job [A4/letter simplex pages]. The number of pages may be affected due to a variety of factors including but not limited to media type and media size.

  Because we have no control over the many factors that determine the actual drum life, we cannot guarantee a minimum number of pages that will be printed by your drum.
- For best performance, use only Lenovo Original toner.
- The machine should be used only in a clean, dust-free environment with adequate ventilation.

  Printing with a non-Lenovo drum unit may reduce not only the print quality but also the quality and life of the machine itself. Warranty coverage does not apply to problems caused by the use of a non-Lenovo drum unit.

Related Information

- Replace Supplies
- Error and Maintenance Messages

Clean the Machine

Clean the outside and inside of the machine regularly with a dry, lint-free cloth.

When you replace the toner cartridge or the drum unit, make sure you clean the inside of the machine. If printed pages are stained with toner, clean the inside of the machine with a dry, lint-free cloth.

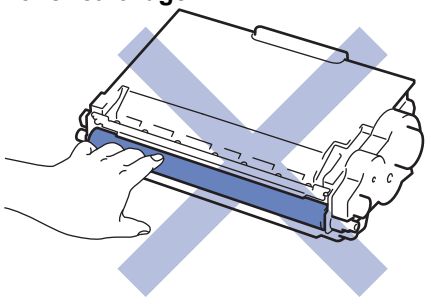
WARNING

- DO NOT use flammable substances, any type of spray, or an organic solvent/liquid containing alcohol or ammonia to clean the inside or outside of the product. Doing so could cause a fire. Instead, use only a dry, lint-free cloth.

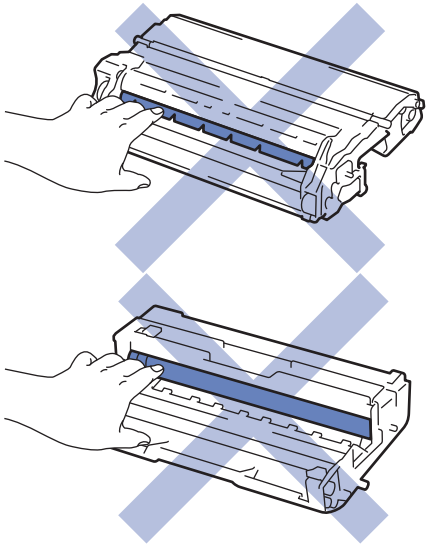
IMPORTANT

- DO NOT use isopropyl alcohol to remove dirt from the control panel. It may crack the panel.
- To avoid print quality problems, DO NOT touch the shaded parts shown in the illustrations.

Toner cartridge



Drum unit



Related Information

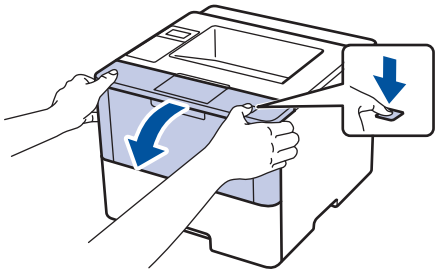
- Routine Maintenance
- Clean the Corona Wire
- Clean the Drum Unit

- Clean the Paper Pick-up Rollers

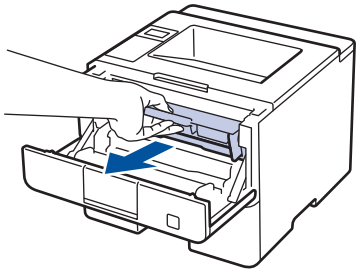
Clean the Corona Wire

If you have print quality problems or the control panel displays `[Drum !]` status, clean the corona wire.

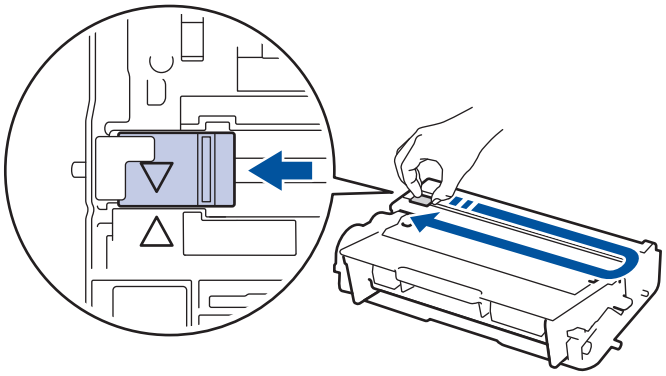
1. Open the front cover.



2. Remove the toner cartridge and drum unit assembly from the machine.

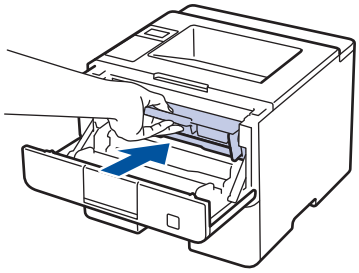


3. Clean the corona wire inside the drum unit by gently sliding the green tab from left to right and right to left several times.



Be sure to return the tab to the Home position (▲). The arrow on the tab must be aligned with the arrow on the drum unit. If it is not, printed pages may have a vertical stripe.

4. Install the toner cartridge and drum unit assembly back into the machine.



5. Close the front cover of the machine.

Related Information

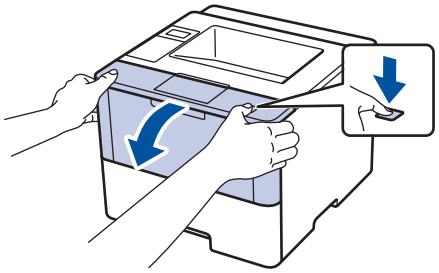
- Clean the Machine
- Error and Maintenance Messages

Clean the Drum Unit

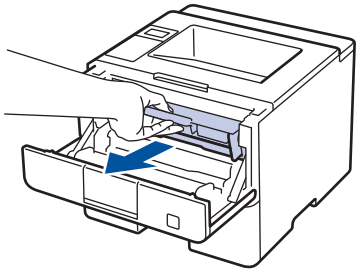
If your printout has dots or other repeating marks at 94 mm intervals, the drum may have foreign material, such as glue from a label, stuck on the drum surface.

1. Make sure the machine is in Ready Mode.
2. Press ▲ or ▼ to display the `[Machine Info.]` option, and then press **OK**.
3. Press ▲ or ▼ to select the `[Drum Dot Print]` option.
4. Press **OK**.

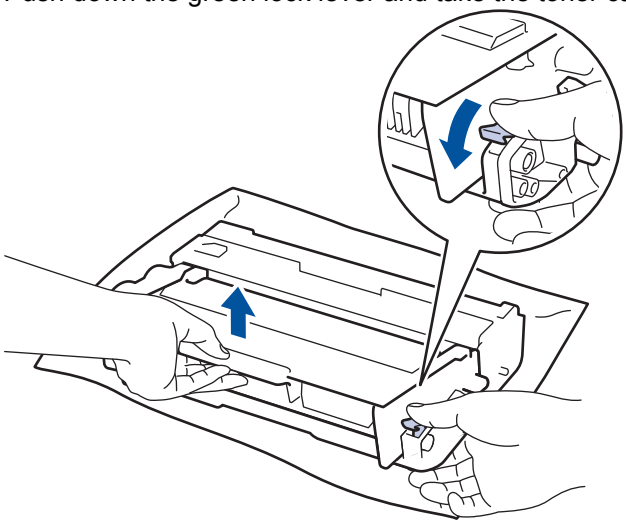
   The machine prints the Drum Dot Check Sheet.
5. Press and hold to turn the machine off.
6. Open the front cover.



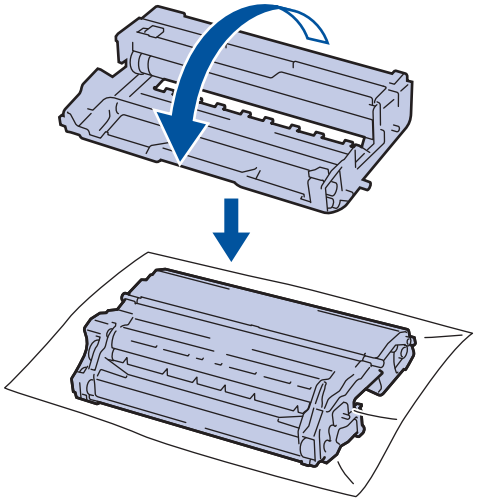
7. Remove the toner cartridge and drum unit assembly from the machine.



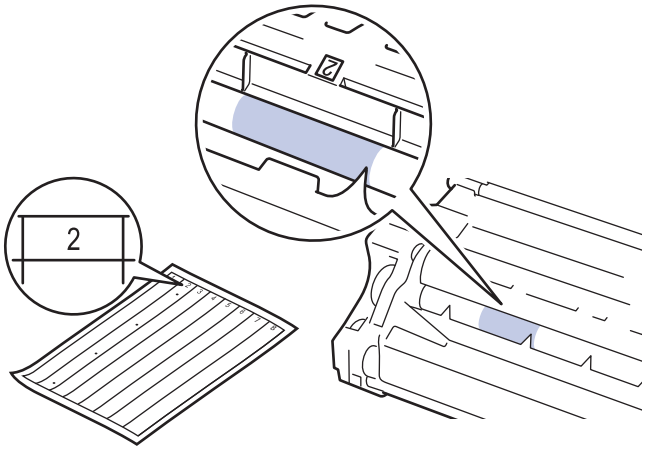
8. Push down the green lock lever and take the toner cartridge out of the drum unit.



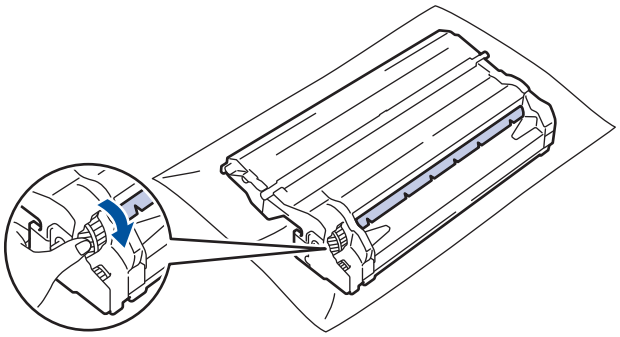
9. Turn the drum unit as shown in the illustration. Make sure that the drum unit gear is on the left side.



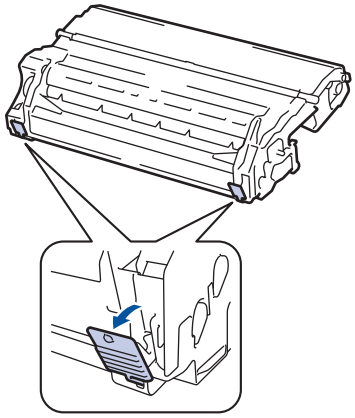
10. Use the numbered markers next to the drum roller to find the mark on the drum. For example, a dot in column 2 on the check sheet means that there is a mark in drum region “2”.



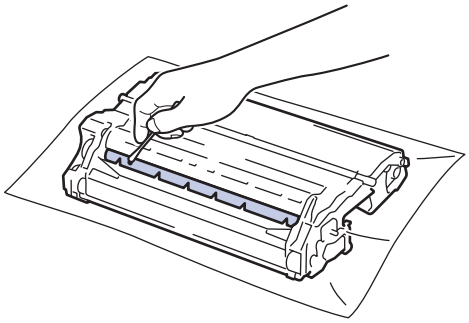
11. Turn the edge of the drum unit toward you while looking at the drum surface to find the mark.



- To avoid print quality problems, DO NOT touch the surface of the drum unit, only the edge.
- You can turn the drum unit gear more easily by pulling down the black levers. When you have finished turning the gear, push the levers back to the original position.



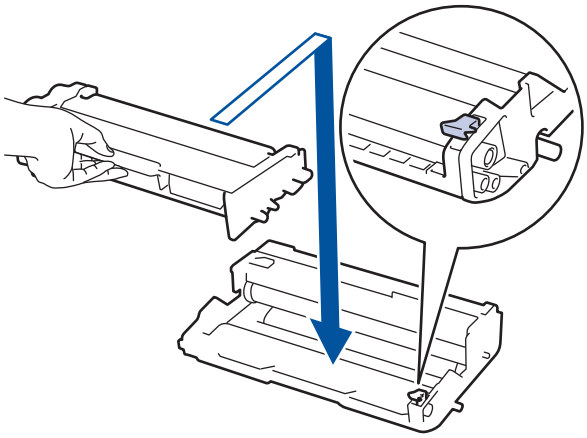
12. Wipe the surface of the drum gently with a dry cotton swab until the mark on the surface comes off.



NOTE

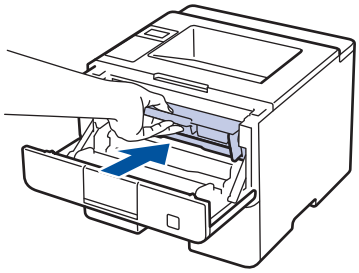
DO NOT clean the surface of the photosensitive drum with a sharp object or any liquids.

13. Put the toner cartridge firmly into the drum unit until you hear it lock into place.



Make sure you put the toner cartridge in correctly or it may separate from the drum unit. If you put it in properly, the green lock lever will lift automatically.

14. Install the toner cartridge and drum unit assembly back into the machine.



15. Close the front cover of the machine.
16. Press to turn the machine on.

Related Information

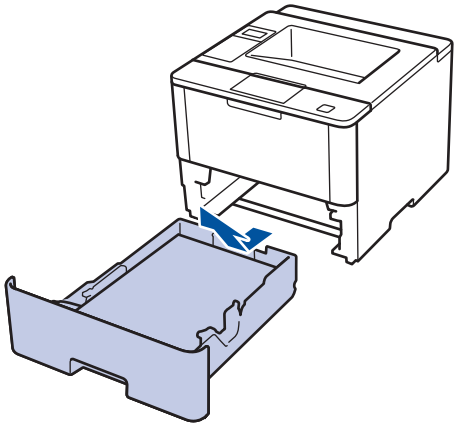
- Clean the Machine
- Improve the Print Quality

Clean the Paper Pick-up Rollers

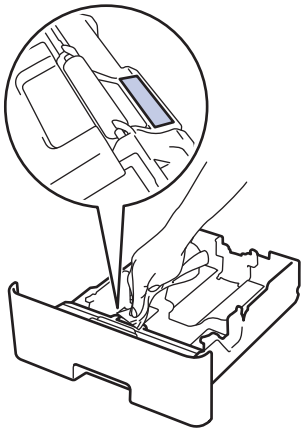
Cleaning the paper pick-up rollers periodically may prevent paper jams by ensuring that paper feeds properly.

If you have paper feed problems, clean the pick-up rollers as follows:

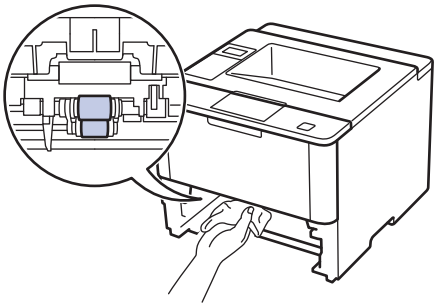
1. Press and hold to turn the machine off.
2. Pull the paper tray completely out of the machine.



3. If paper is loaded or something is stuck inside in the paper tray, remove it.
4. Tightly wring out a lint-free cloth soaked in lukewarm water, and then wipe the separator pad on the paper tray to remove dust.



5. Wipe the two pick-up rollers inside the machine to remove dust.



6. Reload the paper and put the paper tray firmly back in the machine.
7. Press to turn the machine on.

Related Information

- Clean the Machine
- Printing Problems

Check the Remaining Life of Parts

1. Press ▲ or ▼ to display the [Machine Info.] option, and then press **OK**.
2. Press ▲ or ▼ to select the [Parts Life] option, and then press **OK**.
3. Press ▲ or ▼ to select the machine part you want to check, and then press **OK**.
   The LCD displays the approximate remaining part life.

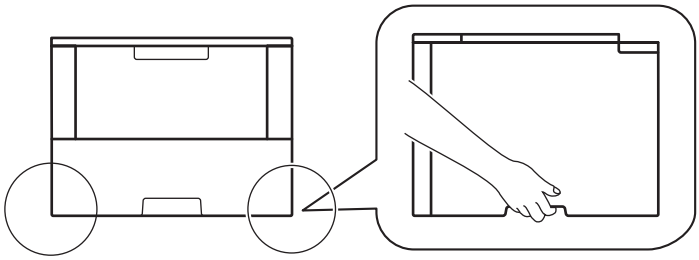
Related Information

- Routine Maintenance

Pack and Ship Your Lenovo Machine

⚠ WARNING

- When you move the machine, carry the machine as shown in the illustration below.



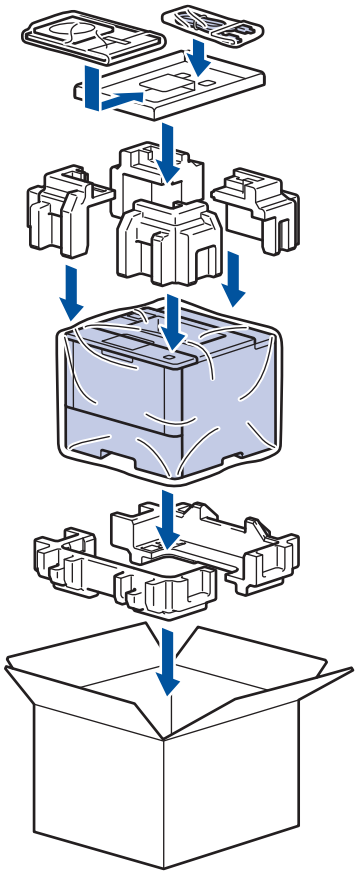
- If the machine has the Optional Tray(s) installed, remove the Optional Tray(s) BEFORE moving the machine. Attempting to move the machine without removing the Optional Tray(s) may cause injury to you or damage to the machine.
- Pack the Optional Tray(s) separately in its original carton with original packing material.

- If for any reason you must ship your machine, carefully repack the machine in the original packaging to avoid any damage during transit. The machine should be adequately insured with the carrier.

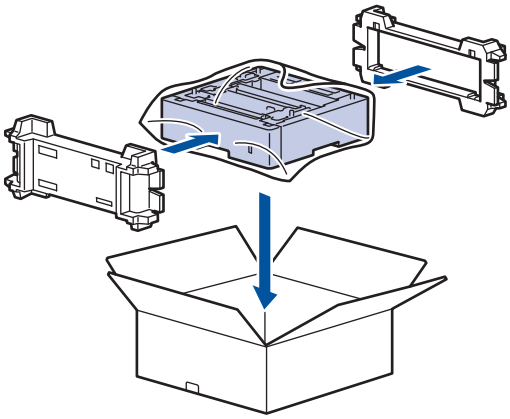
1. Press and hold to turn the machine off. Leave the machine off for at least 10 minutes to cool down.
2. Disconnect all the cables, and then unplug the power cord from the electrical socket.

The machine is equipped with a non-detachable AC power cord depending on the model.

3. Put the machine into the bag it originally came in.
4. Pack the machine and the printed materials in the original carton with the original packing material as shown.



5. Close the carton and tape it shut.
6. If you have a Lower Tray, repack it as shown.



Related Information

- Routine Maintenance

Machine Settings

Customise settings and features, create shortcuts, and work with options displayed on the machine's LCD to make your Lenovo machine a more efficient work tool.

- Change Machine Settings from the Control Panel
- Change Machine Settings from Your Computer

Change Machine Settings from the Control Panel

- General Settings
- Settings and Features Tables

General Settings

- Set Sleep Mode Countdown
- About Deep Sleep Mode
- Set Auto Power Off Mode
- Reduce Toner Consumption
- Reduce Printing Noise
- Change the Language on the LCD

Set Sleep Mode Countdown

The Sleep Mode (or Power Save Mode) setting can reduce power consumption. Select how long the machine must be idle before it goes into Sleep Mode. The Sleep Mode timer is reset when the machine receives a print job.

When the machine is in Sleep Mode, it acts as if it is turned off. The machine will wake up and start printing when it receives a print job. Use these instructions to set a time delay (countdown) before the machine enters Sleep Mode.

1. Press ▲ or ▼ to select the `[General Setup]` option, and then press **OK**.
2. Press ▲ or ▼ to select the `[Ecology]` option, and then press **OK**.
3. Press ▲ or ▼ to select the `[Sleep Time]` option, and then press **OK**.
4. Press ▲ or ▼ to enter the length of time, in minutes, that the machine should remain idle before entering Sleep Mode.

   Press **Go**.

Related Information

- General Settings

About Deep Sleep Mode

If the machine is in Sleep Mode and does not receive any jobs for certain length of time, the machine will automatically enter Deep Sleep Mode. The length of time is based on your specific model and settings.

Deep Sleep Mode uses less power than Sleep Mode.

Applicable Models	Machine's LCD in Deep Sleep Mode	Conditions That Will Wake the Machine
All models	The LCD displays `Deep Sleep`.	• The machine receives a job. • Someone presses a button on the control panel.

Related Information

- General Settings

Set Auto Power Off Mode

If the machine is in Deep Sleep Mode for certain length of time, based on your model and settings, the machine will go into Power Off Mode automatically. The machine does not go into Power Off Mode when the machine is connected to a network or has secure print data in the memory.

- To start printing, press on the control panel and then send a print job.

Select how long the machine must be in Deep Sleep Mode before it goes into Auto Power Off Mode.

1. Press ▲ or ▼ to display the `[General Setup]` option, and then press **OK**.
2. Press ▲ or ▼ to display the `[Ecology]` option, and then press **OK**.
3. Press ▲ or ▼ to select the `[Auto Power Off]` option, and then press **OK**.
4. Press ▲ or ▼ to select the option you want, and then press **Go**.

Related Information

- General Settings

Reduce Toner Consumption

Using the Toner Save feature may reduce toner consumption. When Toner Save is set to on, the print on your documents appears lighter.

We DO NOT recommend using the Toner Save feature for printing photo or greyscale images.

1. Press ▲ or ▼ to display the `[General Setup]` option, and then press **OK**.
2. Press ▲ or ▼ to display the `[Ecology]` option, and then press **OK**.
3. Press ▲ or ▼ to display the `[Toner Save]` option, and then press **OK**.
4. Press ▲ or ▼ to display `[On]`, and then press **Go**.

Related Information

- General Settings

Reduce Printing Noise

The Quiet Mode setting can reduce printing noise. When Quiet Mode is turned on, the print speed becomes slower. The factory setting is off.

1. Press ▲ or ▼ to display the [General Setup] option, and then press **OK**.
2. Press ▲ or ▼ to display the [Ecology] option, and then press **OK**.
3. Press ▲ or ▼ to select the [Quiet Mode] option, and then press **OK**.
4. Press ▲ or ▼ to display the [On] or [Off] option, and then press **Go**.

Related Information

- General Settings

Change the Language on the LCD

Change the LCD language if needed.

This feature is not available in some countries.

1. Press ▲ or ▼ to display the [General Setup] option, and then press **OK**.
2. Press ▲ or ▼ to display the [Local Language] option, and then press **OK**.
3. Press ▲ or ▼ to display your language, and then press **Go**.

Related Information

- General Settings

Settings and Features Tables

The Settings tables will help you understand the menu selections and options that are found in the machine's programs.

- Access Menus and Change Your Machine's Settings
- Settings Tables

Access Menus and Change Your Machine's Settings

Use the control panel to access the machine's menus and change various settings.

1. Scroll through each menu level by pressing ▲ or ▼.
2. When the option you want appears on the LCD, press **OK**.
   The LCD displays the next menu level.
3. Press ▲ or ▼ to scroll to your selection.
4. Press **OK** or **Go**.
5. When you have finished setting an option, the LCD displays `[Accepted]`.

Related Information

- Settings and Features Tables

Settings Tables

Use these tables to understand the various menus and options that you will use to set your preferences on the machine.

[Machine Info.]

Level 1	Level 2	Description
Print Settings	-	Print the Printer Settings page.
Print NetSetting (LJ4000DN/LJ5000DN)	-	Print the Network Configuration Report.
Print File List	-	Print a list of data saved in the memory.
Test Print	-	Print the test page.
Drum Dot Print	-	Print the Drum Dot Check Sheet.
Print Font	HP LaserJet	Print the font list and samples of HP LaserJet.
	BR-Script 3	Print the font list and samples of BR-Script.
Serial No.	-	Display the machine's serial number.
Version	Main Version	Display the main firmware version.
	Sub1 Version	Display the sub firmware version.
Page Count	-	Display the total printed pages.
Parts Life [1]	Toner Life	Display the remaining life of the toner cartridge.
	Drum Life	Display the remaining life of the drum unit.
	PF KitMP Life	Display the remaining life of the PF kit MP.
	PF Kit1 Life	Display the remaining life of the PF Kit 1.
	PF Kit2 Life [2]	Display the remaining life of the PF Kit 2.
	PF Kit3 Life [2]	Display the remaining life of the PF Kit 3.
	PF Kit4 Life [2]	Display the remaining life of the PF Kit 4.
	Fuser Life	Display the remaining life of the fuser unit.
	Laser Life	Display the remaining life of the laser unit.

1 Life is approximate and may vary by type of use.

2 Available if the Lower Tray(s) is installed.

[Paper Tray]

Level 1	Level 2	Description
Tray Use	-	Select the tray that will be used.
Priority	-	When Auto is selected in Tray Use, select the order in which the machine uses paper trays that contain paper of the same size.
Skip Tray [1]	-	Select a specific tray you do not want to use; if it is loaded with paper of the wrong size.
Separator Tray [1]	-	Select the tray that contains the paper used as the separator paper, which is inserted between each print job.
2-sided	2-sided Print	Select whether to print on both sides of the paper.

Level 1	Level 2	Description
2-sided	Single Image	For a print job where the last page is a 1-sided image, select the 1-sided Feed option to reduce printing time. When you use Letterhead or Preprinted paper, you must select the 2-sided Feed option. If you select 1-sided Feed for Letterhead or Preprinted paper, the last page will be printed on the reverse side.
Paper Type	MP Tray	Select the paper type that matches the paper in the MP tray.
	Tray1	Select the paper type that matches the paper in the standard paper tray.
	Tray2 [1]	Select the paper type that matches the paper in the Optional Tray (Tray 2).
	Tray3 [1]	Select the paper type that matches the paper in the Optional Tray (Tray 3).
	Tray4 [1]	Select the paper type that matches the paper in the Optional Tray (Tray 4).
Paper Size	MP Tray	Select the size of paper you loaded in the MP tray.
	Tray1	Select the size of paper you loaded in the standard paper tray.
	Tray2 [1]	Select the size of paper you loaded in the Optional Tray (Tray 2).
	Tray3 [1]	Select the size of paper you loaded in the Optional Tray (Tray 3).
	Tray4 [1]	Select the size of paper you loaded in the Optional Tray (Tray 4).
Paper Low Notice	Notification	Select whether to display a message telling you that the paper tray is nearly empty.
	Notice Level	Select the minimum paper level that will trigger the message.
Check Size	-	Select whether to display a message telling you to check that the size of the paper in the machine and the machine's Paper Size setting match.

[1] Available if the Optional Tray(s) is installed.

[General Setup]

Level 1	Level 2	Description
Local Language	-	Select the LCD language for your country.
Resolution	-	Choose a print resolution.
Density	-	Increase or decrease the print density.
Ecology	Toner Save	Increase the page yield of the toner cartridge.
	Sleep Time	Set how much time will pass before the machine enters Power Saving Mode.
	Sleep Mode	Enable or disable the Sleep Mode function.
	Quiet Mode	Decrease printing noise.
	Auto Power Off	Set the number of hours that the machine will remain in Deep Sleep Mode before going into Power Off Mode.
Panel Control	Button Repeat	Set the time for the LCD message to change when holding ▲ or ▼ at intervals.
	Message Scroll	Set the time in seconds that an LCD message will scroll across the LCD. From Level 1=0.2 sec to Level 10=2.0 sec.
	LCD Contrast	Adjust the contrast of the LCD.
	Auto Online	Set the machine to return to Ready Mode after it has been idle for 30 seconds.
Setting Lock	-	Lock your machine’s settings using the Setting Lock password.
Interface	Select	Select the interface to use. If you select Auto, the machine changes the interface to USB or Network depending on which interface is receiving data.

Level 1	Level 2	Description
Interface	Auto IF Time	Set the time-out period for the auto interface selection.
	Input Buffer	Increase or decrease the input buffer capacity.
	Inputprime [1]	Select if you want to use the signal of parallel ports as a reset.
Delete Storage	Macro ID	Delete the registered Macro data.
	Font ID	Delete the registered Font data.
	Format	Restore the Macro and Font data of your machine to the default settings.

[1] For LJ4000D

[Print Menu]

Level 1	Level 2	Description
Emulation	-	Choose the emulation mode.
Auto Continue	-	Select this setting if you want the machine to clear paper size errors or media type errors, and use paper from other trays.
Paper Type	-	Set the type of paper.
Paper Size	-	Set the size of paper.
Copies	-	Set the number of printed pages.
Orientation	-	Set pages to print in either portrait or landscape orientation.
Print Position	X Offset	Move the print start position (at the top-left corner of pages) horizontally up to -500 (left) to +500 (right) dots in 300 dpi.
	Y Offset	Move the print start position (at the top-left corner of pages) vertically up to -500 (up) to +500 (down) dots in 300 dpi.
Auto FF	-	Allow the machine to print any remaining data automatically.
HP LaserJet	Font No.	Set the font number.
	Font Pitch	Set the font pitch. The Font Pitch menu appears when you choose I012 to I018, I031 to I037 or I097 to I109 in Font No. setting.
	Font Point	Set the font size. The Font Point menu appears when you choose I000 to I011, I019 to I030 or I038 to I096 in Font No. setting.
	Symbol Set	Select the symbol or character set.
	Table Print	Print the code table.
	Auto LF	ON: CR -> CR+LF, OFF: CR -> CR
	Auto CR	ON: LF -> LF+CR, FF -> FF+CR, or VT -> VT+CR OFF: LF -> LF, FF -> FF, or VT -> VT
	Auto WRAP	Choose whether a line feed and carriage return will happen when the machine reaches the right margin.
	Auto SKIP	Choose whether a line feed and carriage return will happen when the carriage position reaches the bottom margin.
	Left Margin	Set the left margin at column 0 to 70 columns at 1 cpi.
	Right Margin	Set the right margin at column 10 to 80 columns at 1 cpi.
	Top Margin	Set the top margin distance from the top edge of the paper.
	Bottom Margin	Set the bottom margin distance from the bottom edge of the paper.
	Lines	Set the number of lines on each page.

Level 1	Level 2	Description
HP LaserJet	Tray Command	Select this setting if a tray mismatch appears when you use the HP drivers.
Epson FX-850	Font No.	Set the font number.
	Font Pitch	Set the font pitch. The Font Pitch menu appears when you choose I012 to I018, I031 to I037 or I097 to I109 in Font No. setting.
	Font Point	Set the font size. The Font Point menu appears when you choose I000 to I011, I019 to I030 or I038 to I096 in Font No. setting.
	Character Set	Select the symbol or character set.
	Table Print	Print the code table.
	Auto LF	ON: CR -> CR+LF, OFF: CR -> CR
	Auto Mask	Set the top and bottom margins to two-line each. When you set Auto Mask to On, this setting overrides the Top Margin and Bottom Margin settings.
	Left Margin	Set the left margin at column 0 to 70 columns at 1 cpi.
	Right Margin	Set the right margin at column 10 to 80 columns at 1 cpi.
	Top Margin	Set the top margin distance from the top edge of the paper.
	Bottom Margin	Set the bottom margin distance from the bottom edge of the paper.
	Lines	Set the number of lines on each page.
IBM Proprinter	Font No.	Set the font number.
	Font Pitch	Set the font pitch. The Font Pitch menu appears when you choose I012 to I018, I031 to I037 or I097 to I109 in Font No. setting.
	Font Point	Set the font size. The Font Point menu appears when you choose I000 to I011, I019 to I030 or I038 to I096 in Font No. setting.
	Character Set	Select the symbol or character set.
	Table Print	Print the code table.
	Auto LF	ON: CR -> CR+LF, OFF: CR -> CR
	Auto CR	ON: LF -> LF+CR, FF -> FF+CR, or VT -> VT+CR OFF: LF -> LF, FF -> FF, or VT -> VT
	Auto Mask	Set the top and bottom margins to two-line each. When you set Auto Mask to On, this setting overrides the Top Margin and Bottom Margin settings.
	Left Margin	Set the left margin at column 0 to 70 columns at 1 cpi.
	Right Margin	Set the right margin at column 10 to 80 columns at 1 cpi.
	Top Margin	Set the top margin distance from the top edge of the paper.
	Bottom Margin	Set the bottom margin distance from the bottom edge of the paper.
	Lines	Set the number of lines on each page.
BR-Script 3	Error Print	Choose whether the machine prints the error information when errors occur.
Carbon Menu	Carbon Copy	Enable or disable the Carbon Copy function.
	Copies	Set the number of printed pages.
	Copy1 Tray	Select the tray you use for Copy1.

Level 1	Level 2	Description
Carbon Menu	Copy1 Macro	Select a macro for Copy1.
	Copy2 Tray ... Copy8 Tray	Select the tray you use for Copy2 to 8. The menu appears when printing two pages or more.
	Copy2 Macro ... Copy8 Macro	Select a macro for Copy2 to 8. The menu appears when printing two pages or more.

[Network] (LJ4000DN/LJ5000DN)

Level 1	Level 2	Description
TCP/IP	Boot Method	Choose the IP method that best suits your needs.
	IP Address	Enter the IP address.
	Subnet Mask	Enter the Subnet mask.
	Gateway	Enter the Gateway address.
	IP Boot Tries	Specify the number of attempts the machine will try to obtain an IP address when the Boot Method is set to any setting except Static.
	APIPA	Allocate the IP address from the link-local address range automatically [1].
	IPv6	Enable or disable the IPv6 protocol.
Ethernet	-	Choose the Ethernet link mode.
Wired Status	-	Display the Ethernet link status.
MAC Address	-	Display the MAC address of the machine.
IPsec	-	IPsec is an optional security feature of the IP protocol that provides authentication and encryption services. We recommend contacting your network administrator before changing this setting.
Network Reset	-	Restore all network settings of your machine to the factory settings.

1 On connection to the network, if the machine's 'Boot Method' is 'Auto' the machine will attempt to set the IP address and Subnet Mask from a boot server such as DHCP. If a boot server cannot be found, an APIPA IP address will be allocated, such as 169. 254. [001-254]. [000-255]. If the 'Boot Method' of the machine is set to 'Static' you must manually enter an IP address from the machine's control panel.

[Factory Reset] (LJ4000D)

Description
Reset the machine and restore the printer settings (including command settings) to the factory settings.

[Reset Menu] (LJ4000DN/LJ5000DN)

Level 1	Description
Network	Restore all network settings of your machine to the factory settings.
Factory Reset	Reset the machine and restore the printer settings (including command settings) to the factory settings.

Related Information

- Settings and Features Tables

Change Machine Settings from Your Computer

- Change Machine Settings Using Web Based Management
- Where Can I Find My Lenovo Machine's Network Settings?
- Network Management Software and Utilities

Change Machine Settings Using Web Based Management

Web Based Management is a utility that uses a standard web browser to manage your machine using the Hyper Text Transfer Protocol (HTTP) or Hyper Text Transfer Protocol over Secure Socket Layer (HTTPS).

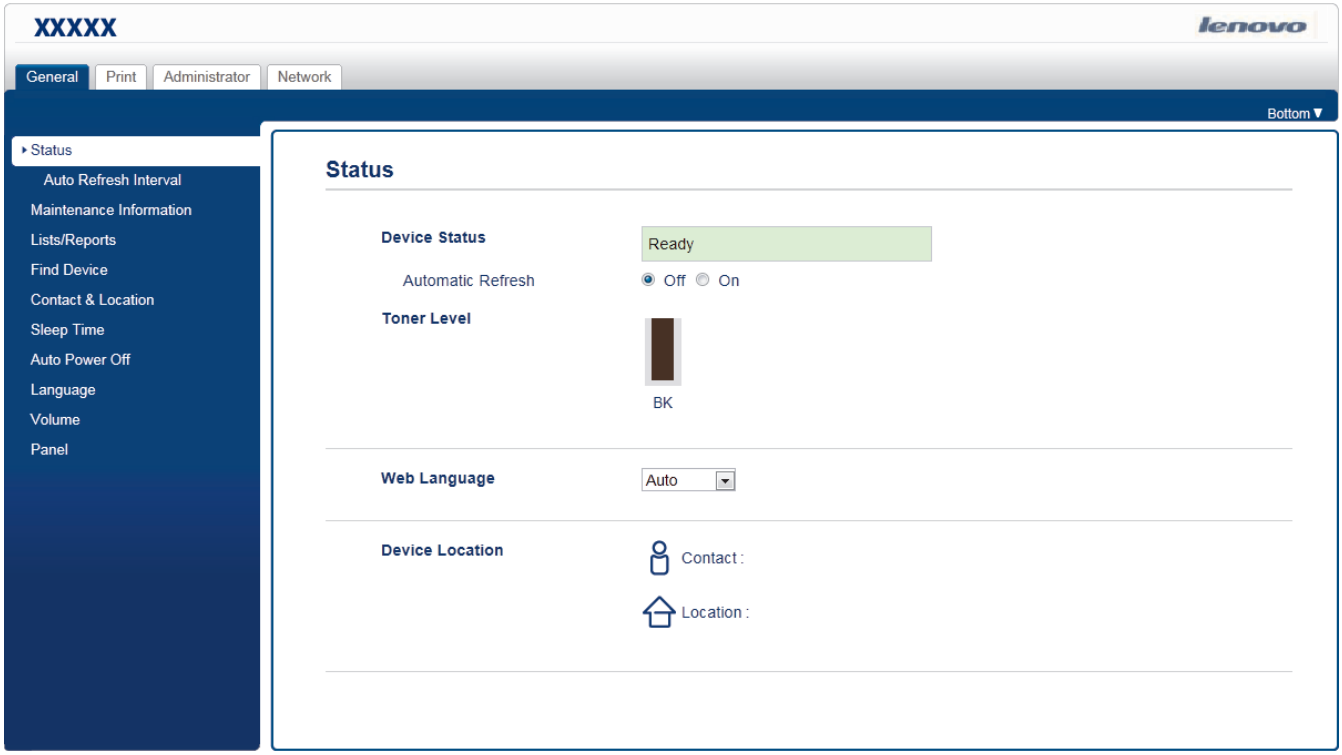
- What is Web Based Management?
- Access Web Based Management
- Set a Login Password for Web Based Management
- Network Management Software and Utilities

What is Web Based Management?

Related Models: LJ4000DN/LJ5000DN

Web Based Management is a utility that uses a standard web browser to manage your machine using the Hyper Text Transfer Protocol (HTTP) or Hyper Text Transfer Protocol over Secure Socket Layer (HTTPS). Type your machine's IP address into your web browser to access and change your print server settings.

- We recommend Microsoft® Internet Explorer® 8.0/10.0/11.0 for Windows®, and Safari 8.0 for Macintosh. Make sure that JavaScript and Cookies are always enabled in whichever browser you use. If you use different web browser, make sure it is compatible with HTTP 1.0 and HTTP 1.1.
- You must use the TCP/IP protocol on your network and have a valid IP address programmed into the print server and your computer.



- The actual screen may differ from the screen shown above.
- The following explanations are examples. The available functions vary according to the model.

General

Use this tab to confirm the current status of your Lenovo machine and to change basic settings, such as the timer settings.

Print

Use this tab to confirm and change the print settings.

Administrator

Use this tab to set the Web Based Management password, reset various settings, and configure the function settings that are mainly used by administrators. You can also use Secure Function Lock to restrict functions according to the user.

Network

Use this tab to change the network settings, enable or disable the network protocols, and configure the security and certificate settings.

Related Information

- Change Machine Settings Using Web Based Management

Access Web Based Management

Related Models: LJ4000DN/LJ5000DN

- We recommend using the HTTPS security protocol when configuring settings using Web Based Management.
- When you use HTTPS for Web Based Management configuration, your browser will display a warning dialog box.

1. Start your web browser.
2. Type "http://machine's IP address" in your browser's address bar (where "machine's IP address" is the machine's IP address).

   For example:

   http://192.168.1.2

- If you are using a Domain Name System or enable a NetBIOS name, you can type another name, such as "SharedPrinter" instead of the IP address.
  - For example:

    http://SharedPrinter

  If you enable a NetBIOS name, you can also use the node name.
  - For example:

    http://brnxxxxxxxxxxx

  The NetBIOS name can be found in the Network Configuration Report.
- For Macintosh, access Web Based Management by clicking the machine's icon on the **Status Monitor** screen.

3. No password is required by default. Type a password if you have set one, and then click .

You can now change the print server settings.

If you change the protocol settings, you must restart the machine after clicking **Submit** to activate the configuration.

Related Information

- Change Machine Settings Using Web Based Management
- Print the Network Configuration Report

Set a Login Password for Web Based Management

Related Models: LJ4000DN/LJ5000DN

We recommend setting a login password to prevent unauthorised access to Web Based Management.

1. Start your web browser.
2. Type "http://machine's IP address" in your browser's address bar (where "machine's IP address" is the machine's IP address).

   For example:

   http://192.168.1.2

   - If you are using a Domain Name System or enable a NetBIOS name, you can type another name, such as "SharedPrinter" instead of the IP address.
     - For example:

       http://SharedPrinter

     If you enable a NetBIOS name, you can also use the node name.
     - For example:

       http://brnxxxxxxxxxxx

     The NetBIOS name can be found in the Network Configuration Report.
   - For Macintosh, access Web Based Management by clicking the machine's icon on the **Status Monitor** screen.
3. No password is required by default. Type a password if you have set one, and then click .
4. Click **Administrator**.
5. Type the password you want to use in the **Enter New Password** field (up to 32 characters).
6. Retype the password in the **Confirm New Password** field.
7. Click **Submit**.

In the future, every time you access Web Based Management, type the password in the **Login** field, and then click .

After configuring the settings, log off by clicking .

If you have not previously set a login password, you can also set a password by clicking the **Please configure the password** button on the machine's web page.

Related Information

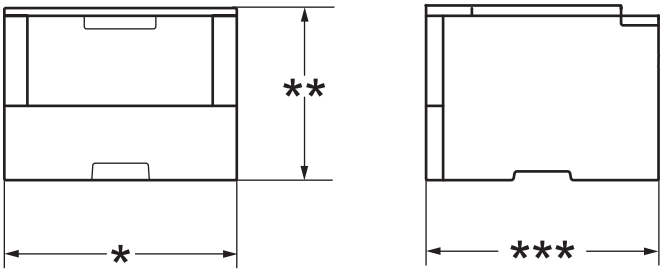
- Change Machine Settings Using Web Based Management

Appendix

- Specifications
- Supplies
- Accessories

Specifications

General Specifications

Printer Type		• Laser
Print Method		• Electrophotographic Laser Printer
Memory Capacity	**Standard**	• (LJ4000D/LJ4000DN) 256 MB • (LJ5000DN) 512 MB
LCD (liquid crystal display)		• 16 characters x 1 line
Power Source		• 220 to 240 V AC 50/60Hz
Power Consumption (Average)	**Peak** [1]	• Approximately 1344 W
	Printing [1]	• (LJ4000D/LJ4000DN) Approximately 640 W at 25 °C • (LJ5000DN) Approximately 770 W at 25 °C
	Printing (Quiet Mode) [1]	• Approximately 390 W at 25 °C
	Ready [1]	• Approximately 32 W at 25 °C
	Sleep [1]	• Approximately 6.5 W
	Deep Sleep [1]	• Approximately 1.2 W
	Power Off [2] [3]	• Approximately 0.04 W
Dimensions 		Unit: mm • (LJ4000D/LJ4000DN) * 373 ** 255 *** 388 • (LJ5000DN) * 373 ** 287 *** 388
Weights (with supplies)		• (LJ4000D/LJ4000DN) 10.7 kg • (LJ5000DN) 12.0 kg

Noise Level	**Sound Pressure**	**Printing**	• (LJ4000D/LJ4000DN) LpAm = 52 dB (A) • (LJ5000DN) LpAm = 54 dB (A)
		Printing (Quiet Mode)	• LpAm = 50 dB (A)
		Ready	• (LJ4000D/LJ4000DN) LpAm = 34.0 dB (A) • (LJ5000DN) LpAm = 35.0 dB (A)
	Sound Power	**Printing**	• (LJ4000D/LJ4000DN) LWAd = 6.90 B (A) • (LJ5000DN) LWAd = 6.92 B (A)
		Printing (Quiet Mode)	• LWAd = 6.47 B (A)
		Ready	• (LJ4000D/LJ4000DN) LWAd = 4.70 B (A) • (LJ5000DN) LWAd = 4.80 B (A)
Temperature	**Operating**		• 10 to 32 °C [4]
	Storage		• 0 to 40 °C
Humidity	**Operating**		• 20 to 80% (without condensation)
	Storage		• 35 to 85% (without condensation)

1 Measured when the machine is connected to the USB interface.

2 Measured according to IEC 62301 Edition 2.0.

3 Power consumption varies slightly depending on the usage environment.

4 To ensure the high print quality, the maximum ambient temperature we recommend is 32 °C. The maximum ambient temperature to safely use this machine is 35 °C.

Print Media Specifications

Paper Input	**Paper Tray (Standard)**	**Paper Type**	• Plain Paper, Letterhead, Coloured Paper, Thin Paper, Recycled Paper, Thick Paper [1]
		Paper Size	• A4, Letter, B5 (JIS), A5, A5 (Long Edge), A6, Executive, Legal, Folio, 16K(195x270mm), 16K(184x260mm), 16K(197x273mm), Mexico Legal, India Legal
		Paper Weight	• 60 to 120 g/m^2
		Maximum Paper Capacity	• (LJ4000D/LJ4000DN) Up to 250 sheets of 80 g/m^2 Plain Paper • (LJ5000DN) Up to 520 sheets of 80 g/m^2 Plain Paper
	Multi-purpose tray (MP tray)	**Paper Type**	• Plain Paper, Letterhead, Coloured Paper, Thin Paper, Thick Paper, Thicker Paper, Recycled Paper, Bond, Label, Envelope, Env.Thin, Env.Thick

Paper Input	**Multi-purpose tray (MP tray)**	**Paper Size**	• Width: 76.2 to 215.9 mm • Length: 127 to 355.6 mm
		Paper Weight	• 60 to 200 g/m^2
		Maximum Paper Capacity	• Up to 50 sheets of 80 g/m^2 Plain Paper • Envelope: 10 envelopes up to 10 mm thick
	Paper Tray 2, 3, 4 (Optional) [2] [3]	**Paper Type**	• Plain Paper, Letterhead, Coloured Paper, Thin Paper, Recycled Paper, Thick Paper [1]
		Paper Size	• A4, Letter, B5 (JIS), A5, Executive, Legal, Folio, 16K(195x270mm), 16K(184x260mm), 16K(197x273mm), Mexico Legal, India Legal
		Paper Weight	• 60 to 120 g/m^2
		Maximum Paper Capacity	• (PT4050-250) Up to 250 sheets of 80 g/m^2 Plain Paper • (PT4050-520) Up to 520 sheets of 80 g/m^2 Plain Paper
Paper Output [4]	**Face Down Output Tray**		• Up to 150 Sheets of 80 g/m^2 Plain Paper (face down delivery to the face down output paper tray)
	Face Up Output Tray		• One sheet (face up delivery to the face up output tray)
2-sided	**Automatic 2-sided Printing**	**Paper Type**	• Plain Paper, Letterhead, Coloured Paper, Thin Paper, Recycled Paper
		Paper Size	• A4
		Paper Weight	• 60 to 105 g/m^2

1 Open the back cover (face up output tray) before printing to let the printed paper exit onto the face up output tray.

2 LJ4000D/LJ4000DN: You can install up to two Lower Trays, PT4050-250 (250 sheets) or PT4050-520 (520 sheets).

3 LJ5000DN: You can install up to three Lower Trays (only for the 250 sheets Lower Trays PT4050-250). If you install the 520 sheets Lower Tray, you can install up to only two Lower Trays.

4 For labels, we recommend removing the printed sheets from the output paper tray immediately after they exit the machine to avoid the possibility of smudging.

Printer Specifications

Automatic 2-sided Print		• Yes
Emulation		• PCL6, BR-Script3, IBM Proprinter XL, Epson FX-850, PDF version1.7, XPS version 1.0
Resolution		• Up to 1200 x 1200 dpi [1]
Print Speed [2]	**1-sided print**	• (LJ4000D/LJ4000DN) Up to 42 pages/minute (Letter size) Up to 40 pages/minute (A4 size) • (LJ5000DN) Up to 52 pages/minute (Letter size) Up to 50 pages/minute (A4 size)
	2-sided Print	• (LJ4000D/LJ4000DN) Up to 20 sides/minute (Up to 10 sheets/minute) (Letter or A4 size) • (LJ5000DN) Up to 24 sides/minute (Up to 12 sheets/minute) (Letter or A4 size)

First Print Time [3]	• (LJ4000D/LJ4000DN) Less than 7.2 seconds at 23 °C / 230 V • (LJ5000DN) Less than 7.5 seconds at 23 °C / 230 V

1 HQ1200 is a Lenovo image processing technology that enables vivid, sharp and smooth quality of printing.

2 The print speed may change depending on the type of document you print.

3 From Ready mode and standard tray

Interface Specifications

Parallel [1]	• (LJ4000D) Compliant with IEEE1284
USB [2 3]	• Hi-Speed USB 2.0 Use a USB 2.0 interface cable that is no longer than 6 ft (2 m).
LAN	• (LJ4000DN) 10BASE-T/100BASE-TX [4] • (LJ5000DN) 10BASE-T/100BASE-TX/1000Base-T [4 5]

1 If the parallel cable is not provided with the machine in your country or region, please contact Lenovo customer service or your local Lenovo dealer to purchase the optional parallel cable (PC-5000).

2 Your machine has a USB 2.0 Hi-Speed interface. The machine can also be connected to a computer that has a USB 1.1 interface.

3 Third party USB ports are not supported.

4 Use a straight-through Category 5 (or greater) twisted-pair cable.

5 When you connect the machine to a Gigabit Ethernet Network, use network devices complying with the 1000BASE-T specification.

Supported Protocols and Security Features

Ethernet

10Base-T/100Base-TX/1000Base-T

Protocols (IPv4)

ARP, RARP, BOOTP, DHCP, APIPA(Auto IP), WINS/NetBIOS name resolution, DNS Resolver, mDNS, LLMNR responder, LPR/LPD, Custom Raw Port/Port9100, IPP/IPPS, FTP Server, TELNET Server, HTTP/HTTPS server, TFTP client and server, SMTP Client, SNMPv1/v2c/v3, ICMP, Web Services (Print), CIFS client, SNTP client

Protocols (IPv6)

NDP, RA, DNS resolver, mDNS, LLMNR responder, LPR/LPD, Custom Raw Port/Port9100, IPP/IPPS, FTP Server, TELNET Server, HTTP/HTTPS server, TFTP client and server, SMTP Client, SNMPv1/v2c, ICMPv6, Web Services (Print), CIFS Client, SNTP Client

Network Security (Wired)

SMTP-AUTH, SSL/TLS (IPPS, HTTPS, SMTP), SNMP v3 802.1x (EAP-MD5, EAP-FAST, PEAP, EAP-TLS, EAP-TTLS), Kerberos, IPSec

Computer Requirements Specifications

Supported Operating Systems And Software Functions

Computer Platform & Operating System Version	**PC Interface**			**Processor**	**Hard Disk Space to Install**
	Parallel [1] **(IEEE1284)**	**USB** [2]	**10Base-T/ 100Base-TX/ 1000Base-T** [3 4] **(Ethernet)**		

Windows® Operating System	Windows® XP Home Windows® XP Professional	Printing		32 bit (x86) (SP3) or 64 bit (x64) (SP2) processor	80 MB
	Windows Vista®			32 bit (x86) or 64 bit (x64) processor	
	Windows® 7 / 8 / 8.1				
	Windows® 10 Home / 10 Pro / 10 Education / 10 Enterprise				
	Windows Server® 2008	Printing		32 bit (x86) or 64 bit (x64) processor	
	Windows Server® 2008 R2			64 bit (x64) processor	
	Windows Server® 2012				
	Windows Server® 2012 R2				
Macintosh Operating System	OS X v10.8.5	N/A	Printing	Intel® Processor	80 MB
	OS X v10.9.x				
	OS X v10.10.x				
	OS X v10.11.x				

1 Applicable to LJ4000D

2 Third party USB ports are not supported.

3 LJ4000DN supports 10Base-T/100Base-TX

4 LJ5000DN supports 10Base-T/100Base-TX/1000Base-T

For the latest driver updates, visit http://www.lenovo.com.

All trademarks, brand and product names are the property of their respective companies.

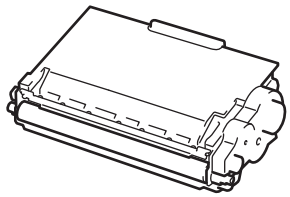
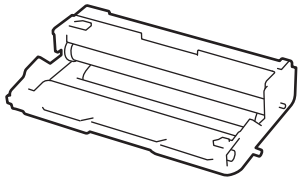
Related Information

- Appendix

Supplies

When the time comes to replace supplies, such as the toner or drum, an error message will appear on your machine's control panel or in the Status Monitor. For more information about the supplies for your machine, visit http://www.lenovo.com.cn or contact your local Lenovo dealer.

- The toner cartridge and drum unit are two separate parts.
- The toner cartridge number will vary depending on your country and region.

Supply	Supply Model Name	Approximate Life (Page Yield)	Applicable Models
Toner Cartridge 	**Standard Toner:** LT401	Approximately 3,000 pages [1] (A4 or Letter page)	LJ4000D/LJ4000DN/ LJ5000DN
	High Yield Toner: LT401H	Approximately 8,000 pages [1] (A4 or Letter page)	LJ4000D/LJ4000DN/ LJ5000DN
	Super High Yield Toner: LT401SH	Approximately 12,000 pages [1] (A4 or Letter page)	LJ4000D/LJ4000DN/ LJ5000DN
	Inbox Toner: supplied with your machine	Approximately 3,000 pages [1] (A4 or Letter page)	LJ4000D/LJ4000DN/ LJ5000DN
Drum Unit 	LD401	Approximately 30,000 pages/ 50,000 pages [2]	LJ4000D/LJ4000DN/ LJ5000DN

1 Approximate cartridge yield is declared in accordance with ISO/IEC 19752.

2 Approximately 30,000 pages based on 1 page per job and 50,000 pages based on 3 pages per job [A4/letter simplex pages]. The number of pages may be affected due to a variety of factors including but not limited to media type and media size.

Related Information

- Appendix
- Replace Supplies

Accessories

Availability of accessories may vary depending on your country or region. For more information about the accessories for your machine, visit http://www.lenovo.com.cn or contact your Lenovo dealer or Lenovo customer service.

Model Name	Item	Applicable Models
PT4050-250	Lower Tray (250 sheets)	All models
PT4050-520	Lower Tray (520 sheets)	All models

Related Information

- Appendix

Glossary

This is a comprehensive list of features and terms that appear in Lenovo manuals. Availability of these features depends on the model you purchased.

A B C D G H I L M N P R S T W

A

- APIPA
- ARP

B

- BOOTP
- BRAdmin Light (Windows®)

C

- CA
- CA Certificate
- Certificate
- CIFS
- CSR
- Custom Raw Port

D

- Density
- DHCP
- DNS Client
- DNS Server

G

- Gateway

H

- HTTP (Web Server)
- HTTPS

I

- IEEE 802.1x
- IP Address
- IPP
- IPPS
- IPsec
- IPv6

L

- LLMNR
- LPD
- LPR

M

- MAC Address
- mDNS

N

- NetBIOS Name Resolution
- Network Configuration Report
- Network Shared Printing
- Node Name

P

- PEAP

- Peer-to-Peer
- Protocols
- Public Key Cryptosystem

R

- RARP
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S

- Secure Function Lock 3.0
- Settings Tables
- SMTP Client
- SMTP over SSL
- SMTP-AUTH
- SNMP
- SNMPv3
- SNTP
- SSL/TLS
- Status Monitor
- Store Print Log to Network
- Subnet Mask

T

- TCP/IP
- TELNET

W

- Web Based Management
- Web Services

- WINS
- WINS Server

APIPA

If you do not assign an IP address manually or automatically (using a DHCP, BOOTP, or RARP server), the Automatic Private IP Addressing (APIPA) protocol will automatically assign an IP address from the range 169.254.1.0 to 169.254.254.255.

ARP

Address Resolution Protocol (ARP) performs mapping of an IP address to a MAC address in a TCP/IP network.

BOOTP

The Bootstrap Protocol (BOOTP) is a network protocol used by a network client to obtain an IP Address from a configuration server.

To use BOOTP, contact your network administrator.

BRAdmin Light (Windows®)

BRAdmin Light is a utility for the initial setup of Lenovo network-connected devices. This utility can search for Lenovo products on your network, view the status and configure the basic network settings, such as IP address.

You can download Lenovo's latest BRAdmin Light utility from http://www.lenovo.com.

CA

A Certificate Authority (CA) is an entity that issues digital certificates (especially X.509 certificates) and vouches for the binding between the data items in a certificate.

CA Certificate

A CA Certificate is the certification that identifies the CA itself and owns its private key. A CA Certificate verifies a certificate issued by the CA.

Certificate

A Certificate is the information that binds together a public key with an identity. The certificate can be used to verify that a public key belongs to an individual. The format is defined by the X.509 standard.

CIFS

The Common Internet File System (CIFS) is the standard way that computer users share files and printers in Windows®.

CSR

A Certificate Signing Request (CSR) is a message sent from an applicant to a Certificate Authority (CA) to apply for issue of a certificate. The CSR contains information identifying the applicant, the public key generated by the applicant and the digital signature of the applicant.

Custom Raw Port

Custom raw port is a commonly used printing protocol on a TCP/IP network that enables interactive data transmission. Default is Port 9100.

Density

Changing the Density makes the whole image lighter or darker.

DHCP

The Dynamic Host Configuration Protocol (DHCP) is a network protocol that is used to configure network devices so that they can communicate on an IP Network.

To use DHCP, contact your network administrator.

DNS Client

The Lenovo print server supports the Domain Name System (DNS) client feature. This feature allows the print server to communicate with other devices using its DNS name.

DNS Server

The Domain Name System (DNS) is a technology to manage the names of web sites and internet domains. A DNS server allows your computer to find its IP address automatically.

Gateway

A gateway is a network point that acts as an entrance to another network and sends data transmitted via the network to an exact destination. The router knows where to direct data that arrives at the gateway. If a destination is located on an external network, the router transmits data to the external network. If your network communicates with other networks, you may need to configure the Gateway IP address. If you do not know the Gateway IP address, then contact your Network Administrator.

HTTP (Web Server)

Hypertext Transfer Protocol (HTTP) is used to transmit the data between a web server and a web browser. The Lenovo print server is equipped with a built-in web server that allows you to monitor its status or change some of its configuration settings using a web browser.

HTTPS

HTTPS (HTTP over SSL/TLS) is the version of the Hypertext Transfer Protocol (HTTP) that uses SSL/TLS so that web content is transferred and displayed securely.

IEEE 802.1x

IEEE 802.1x is a networking authentication standard used to connect to LAN. It restricts connections which are not authentic and only users authenticated by a central authority are allowed to be connected.

IP Address

An Internet Protocol (IP) address is a series of numbers that identifies each device connected to a network. An IP address consists of four numbers separated by dots. Each number is between 0 and 255.

Example: In a small network, you would normally change the final number.

192.168.1.1

192.168.1.2

192.168.1.3

How the IP address is assigned to your print server:

If you have a DHCP/BOOTP/RARP server in your network, the print server will automatically obtain its IP address from that server.

On smaller networks, the DHCP server may also be the Router.

If you do not have a DHCP/BOOTP/RARP server, the Automatic Private IP Addressing (APIPA) protocol will automatically assign an IP address from the range 169.254.1.0 to 169.254.254.255.

IPP

The Internet Printing Protocol (IPP Version 1.0) allows you to print documents directly to any accessible machine via the Internet.

IPPS

IPPS (Internet Printing Protocol) is the printing protocol that uses SSL. IPPS is used to send and receive printing data and manage printing devices.

IPsec

IPsec is an optional security feature of the IP protocol that provides authentication and encryption services.

IPv6

IPv6 is the next generation Internet protocol.

LLMNR

The Link-Local Multicast Name Resolution (LLMNR) protocol resolves the names of neighboring computers, if the network does not have a Domain Name System (DNS) server. The LLMNR Responder feature works in both the IPv4 or IPv6 environment when using Windows Vista® or greater.

LPD

Line Printer Daemon (LPD or LPR) protocol is a commonly-used printing protocol on a TCP/IP network, mainly for UNIX®-based operating systems.

LPR

Line Printer Daemon (LPR or LPD) protocol is a commonly-used printing protocol on a TCP/IP network.

MAC Address

The MAC Address (Ethernet Address) is a unique number assigned for the machine's network interface.

mDNS

Multicase DNS (mDNS) allows the Lenovo print server to configure itself to work in an OS X Simple Network Configuration system automatically.

NetBIOS Name Resolution

Network Basic Input/Output System (NetBIOS) name resolution enables you to obtain the IP address of the other device using its NetBIOS name during the network connection.

Network Configuration Report

The Network Configuration Report prints a report listing the current network configuration, including the network print server settings.

Network Shared Printing

Network Shared Printing is a type of printing in a network shared environment. In a network shared environment, each computer sends data via a server or print server.

Node Name

The Node Name is a machine name on the network. This name is often referred to as a NetBIOS name; it will be the name that is registered by the WINS server on your network. Lenovo recommends the name "BRNxxxxxxxxxxx" for a wired network (where "xxxxxxxxxxx" is your machine's MAC address / ethernet address.)

PEAP

Protected Extensible Authentication Protocol (PEAP) is a version of EAP method developed by Cisco Systems, Inc., Microsoft Corporation and RSA Security. PEAP creates an encrypted Secure Sockets Layer (SSL)/ Transport Layer Security (TLS) tunnel between a client and an authentication server, for sending a user ID and password. PEAP provides mutual authentication between the server and the client.

The Lenovo machine supports the following inner authentications:

- PEAP/MS-CHAPv2
- PEAP/GTC

Peer-to-Peer

Peer-to-Peer is a type of printing in a peer-to-peer environment. In a peer-to-peer environment, each computer sends and receives data directly to and from each device. There is no central server controlling access or machine sharing.

Protocols

Protocols are the standardised sets of rules for transmitting data on a network. Protocols allow users to gain access to network-connected resources. The print server used on your Lenovo machine supports the Transmission Control Protocol/Internet Protocol (TCP/IP) protocol.

Public Key Cryptosystem

A Public Key Cryptosystem is a modern branch of cryptography in which the algorithms employ a pair of keys (a public key and a private key) and use a different component of the pair for different steps of the algorithm.

RARP

Reverse Address Resolution Protocol (RARP) finds the logical address for a machine that knows only its physical address.

To use RARP, contact your network administrator.

Resolution

The number of vertical and horizontal lines per inch.

Secure Function Lock 3.0

Secure Function Lock 3.0 increases security by restricting the use of functions.

Settings Tables

At-a-glance instructions that show all the settings and options that are available for setting up your machine.

SMTP Client

Simple Mail Transfer Protocol (SMTP) client is used to send emails via the Internet or Intranet.

SMTP over SSL

SMTP over SSL feature enables sending encrypted email using SSL.

SMTP-AUTH

SMTP Authentication (SMTP-AUTH) expands SMTP (the Internet email sending protocol) to include an authentication method that ensures the true identity of the sender is known.

SNMP

The Simple Network Management Protocol (SNMP) is used to manage network devices including computers, routers and Lenovo network-ready machines. The Lenovo print server supports SNMPv1, SNMPv2c and SNMPv3.

SNMPv3

Simple Network Management Protocol version 3 (SNMPv3) provides user authentication and data encryption to manage network devices securely.

SNTP

The Simple Network Time Protocol (SNTP) is used to synchronize computer clocks on a TCP/IP network. You can configure the SNTP settings using Web Based Management.

SSL/TLS

Secure Socket Layer (SSL) or Transport Layer Security (TLS) is an effective method of protecting data that is sent over a local or wide area network. SSL/TLS works by encrypting data, such as a print job, sent over a network, so anyone trying to capture it will not be able to read it .

SSL/TLS will work with other forms of security such as firewalls.

Status Monitor

The Status Monitor utility is a configurable utility to monitor the status of one or more devices, allowing you to get immediate notification when there is a problem, for example, when the machine runs out of paper or jams.

Store Print Log to Network

The Store Print Log to Network feature allows you to save the print log file from your Lenovo machine to a network server using CIFS.

Subnet Mask

A subnet mask allows you to identify which part of an IP address is used as the network address and which part is used as the host address.

In the following example, the last segment of the IP address is known as the host address and the first three segments are the network address.

Example: Computer 1 can talk to Computer 2

- Computer 1

  IP Address: 192.168.1.2

  Subnet Mask: 255.255.255.0
- Computer 2

  IP Address: 192.168.1.3

  Subnet Mask: 255.255.255.0

0 denotes that there is no limit to communication at this part of the address.

TCP/IP

Transmission Control Protocol/Internet Protocol (TCP/IP) is the most popular set of protocols used for communication, such as Internet and email. This protocol can be used in almost all operating systems, including Windows®, Windows Server®, OS X and Linux®.

TELNET

The TELNET protocol allows you to control the remote network devices on a TCP/IP network from your computer.

Web Based Management

A standard Web Browser can be used to manage your machine using the Hyper Text Transfer Protocol (HTTP) or Hyper Text Transfer Protocol over Secure Socket Layer (HTTPS). You can perform the function listed or get the following information from a machine on your network using a web browser:

- Machine status information
- Change network settings, such as TCP/IP information
- Configure Gigabit Ethernet
- Configure Secure Function Lock 3.0
- Configure Store Print Log to Network
- Software version information of the machine and print server
- Change network and machine configuration details

To use Web Based Management, you must use the TCP/IP protocol on your network and have a valid IP address programmed into the print server and your computer.

Web Services

The Web Services protocol enables Windows Vista®, Windows® 7, or Windows® 8 users to install the drivers used for printing by right-clicking on the machine icon in the **Network** folder. Web Services also lets you check the current status of the machine from your computer.

WINS

Windows® Internet Name Service (WINS) is an information-providing service for NetBIOS name resolution. It consolidates an IP address and a NetBIOS name that is in the local network.

WINS Server

Windows® Internet Name Service (WINS) Server maps IP addresses to computer names (NetBIOS names) in a Windows® network.

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