

UniPrint Client User's Guide

UniPrint Client Version 3.6.1

Released: February 2006

Copyright Notice

INGENICA, a division of Bell Business Solutions and its affiliates, makes no representations or warranties with respect to the contents or use of this publication. INGENICA, a division of Bell Business Solutions specially disclaims any expressed or implied warranties, merchantability or fitness for any particular purpose. INGENICA, a division of Bell Business Solutions reserves the right to make any changes in specifications and other information contained in this publication without prior notice and without obligation to notify any person or entity of such revisions or changes.

© Copyright 1999 - 2006 INGENICA, a division of Bell Business Solutions. All rights reserved.

Information in this document is subject to change without notice. Companies, names and data used in examples herein are fictitious unless otherwise noted. Other than printing one copy for personal use, no part of this document may be reproduced or transmitted in any form or by any means, electronic or mechanical, for any purposes, without the expressed written consent of:

INGENICA, a division of Bell Business Solutions
2 Gibbs Road
Toronto, Ontario
Canada M9B 6L6
(416) 503-9800

Toll Free: (866) 488-3188 (North America only)

www.uniprint.net www.ingenica.net

Trademark Acknowledgements

UniPrint is a trademark of INGENICA, a division of Bell Business Solutions.

Microsoft, Windows, Windows NT, Windows 2000/2003, Windows XP, Microsoft Access, Microsoft Word, Remote Desktop Protocol (RDP), ASP.NET and Active Directory are either registered trademarks or trademarks of Microsoft Corporation.

Citrix, MetaFrame, and ICA (Independent Computing Architecture) are registered trademarks of Citrix Systems.

Adobe, Acrobat, Reader are registered trademarks of Adobe Systems Inc.

All other trademarks and registered trademarks are the property of their owners.

Table of Contents

Introduction	1
What's New in Version 3.6	1
Installation	3
Minimum System Requirements	3
Installing UniPrint Client	3
Setting User Preferences	7
General Tab	8
Print	8
Use UniPrint Application	8
Use Acrobat® Application	8
View	8
No Preview	8
Preview with UniPrint	8
Preview with Acrobat® Reader	10
Display Print Dialog	10
Help	11
Use local help file	11
Use www.uniprint.net	11
Provide Feedback	11
Buttons	11
OK	11
Cancel	11
Apply	11
Default Settings	11
Advanced Tab	12
Options	12
Advanced Options	12
Enable Printer Properties	12
Email Option	12
Exit Option	13
Virtual Channel Spool Progress Bar	13
Enable Bandwidth Throttling Options	13
Local Spool Path	13
Debug Tools	13
Bandwidth Throttling Tab	14
Options	14
Packet Latency (milliseconds)	14
Packet Size (Bytes)	14
Using UniPrint	15
UniPrint Printer Properties	16
Configuration Tab	17
Paper Size	17
Resolution	17
Orientation	17

Paper	17
Custom paper size (in millimeters)	18
Image Compression Tab	18
Algorithm	18
Advanced options Tab	20
Multi-language character support	20
Postscript simulation	20
Font embedding options	20
Convert colors to gray scale	21
Mail printed document	21
Physical margins (in millimeters)	21
Save Options Tab	22
Save to PDF file	22
UniPrint Plug-in for Acrobat	23
Printing from Acrobat to UniPrint	23
Upgrading and Uninstalling Client	25
Upgrading UniPrint Client	25
Determining the UniPrint Client software version	25
Manually Upgrading to UniPrint Client 3.6.1	26
Automatically Updating the UniPrint Client	28
Uninstalling UniPrint Client	29
Contact and Support	33
Glossary	35

Introduction

UniPrint is a Portable Document Format (PDF) compatible [printer driver](#). When you print with the UniPrint Printer Driver, a PDF document is created on the Terminal/Citrix Server and is then sent to the UniPrint Client.

The UniPrint Client software can be configured to print automatically, [preview](#), e-mail or save the PDF document.

Since the PDF format is truly portable, you can print any document [rendered](#) by UniPrint to any accessible printer.

What's New in Version 3.6

UniPrint Client 3.6 provides new features such as [bandwidth throttling](#) and the ability to provide direct feedback to our support team from the **Settings** dialog box.

Bandwidth throttling provides administrators with the ability to limit the amount of network traffic being consumed by server-based printing through UniPrint and allows more important transmissions higher priority. Bandwidth throttling is adjusted using the UniPrint Client by setting the **Packet Latency** and **Packet Size** options.

UniPrint Client 3.6.1 enhances features available in the previous version, specifically the UniPrint Application Print component.

Installation

Minimum System Requirements

UniPrint Client 3.6.1 requires the following:

- Microsoft Windows 98/NT 4.0/2000/XP
- Microsoft Terminal Services Client and/or Citrix ICA Client version 6.00.910 or later
- **Optional:** Adobe Acrobat Reader version 4.05 or later

Installing UniPrint Client

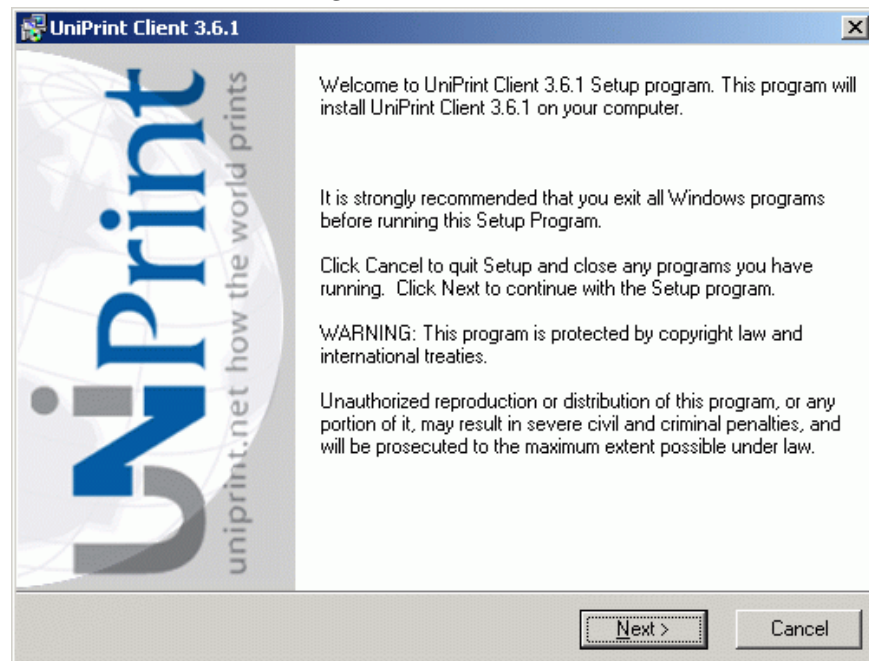
The instructions that follow assume that you are using Windows XP Professional. The exact steps may vary depending on the client [operating system](#) and the version of UniPrint Client. Refer to the product documentation for your operating system to complete these steps.

Note:

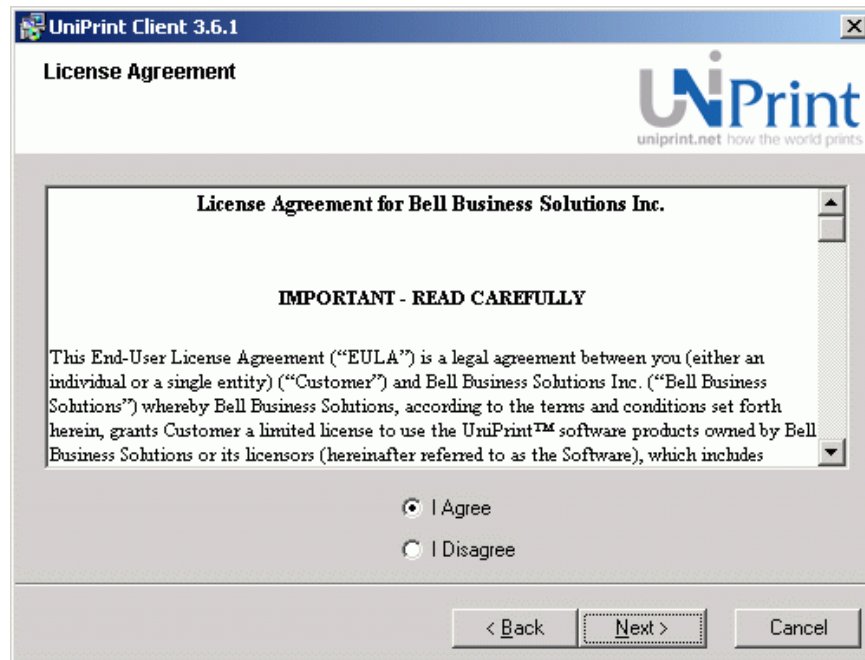
Speak to your [Network Administrator](#) before installing the UniPrint Client. You will need to have administrative rights to your computer and your computer will need to be restarted to complete the installation process.

1. Log on to the [workstation](#) with full administrative rights.
2. Run **UniPrintClient.exe**.

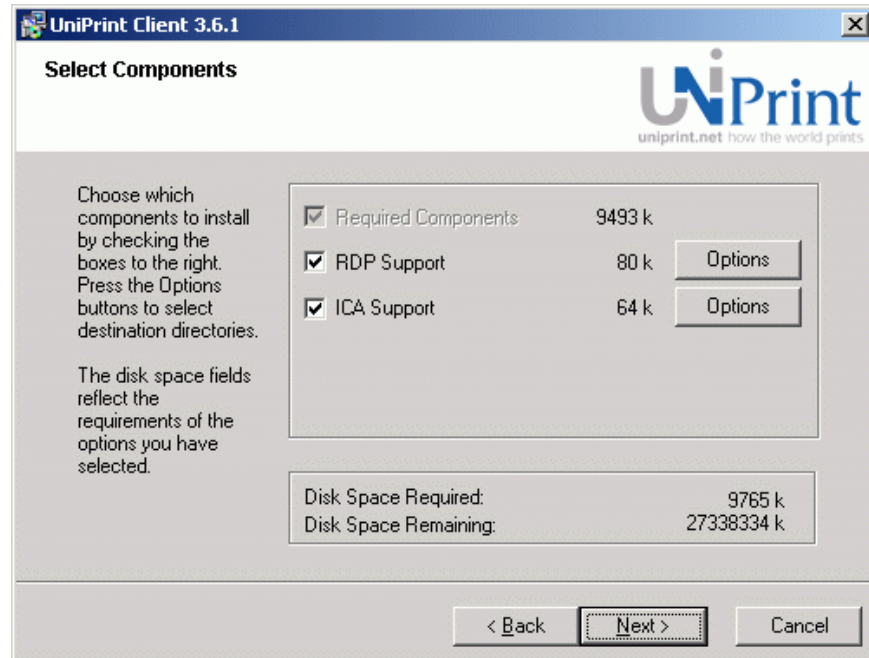
3. In the **Welcome** dialog box, click **Next**.



4. In the **License Agreement** dialog box, click **I Agree** and then click **Next**.



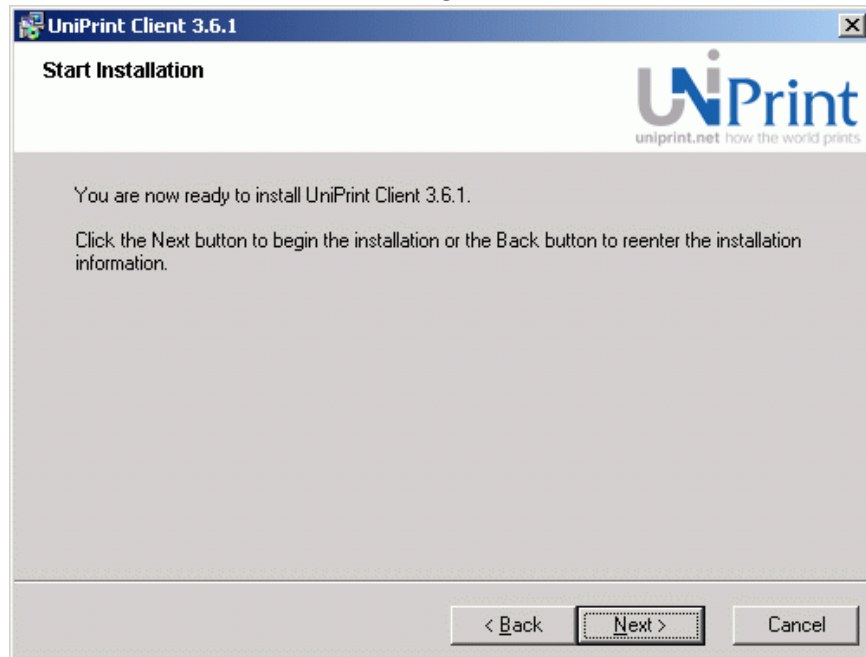
5. In the **Select Components** dialog box, select the components to install. To change the destination folder for a particular component, click **Options**. Click **Next**.



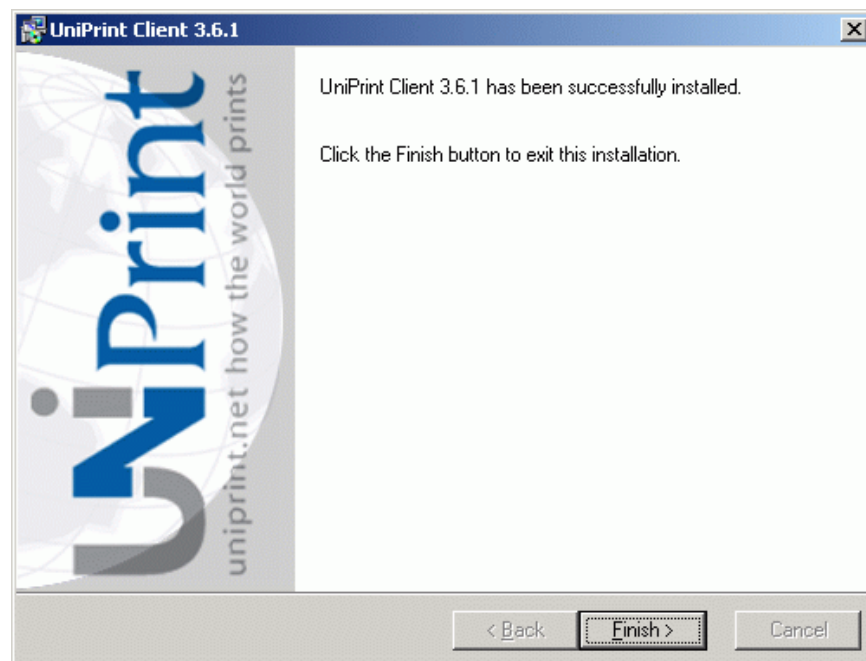
Note:

The UniPrint ICA components must be installed in the same folder as the ICA Client. Do not change the default location unless you suspect the installation routine has incorrectly identified the ICA Client location.

6. At the **Start Installation** dialog box, click **Next**.





7. If you want to use Adobe Acrobat to process print jobs, Adobe Acrobat 4.05 or later is required. If it is not detected a message will be displayed. Click **OK**.
8. Click **Finish**.

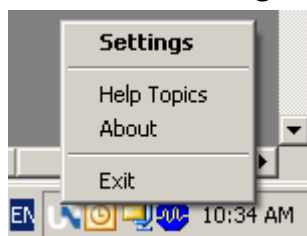


Setting User Preferences

UniPrint Client automatically launches whenever a connection is made to the Terminal/Citrix [Server](#).

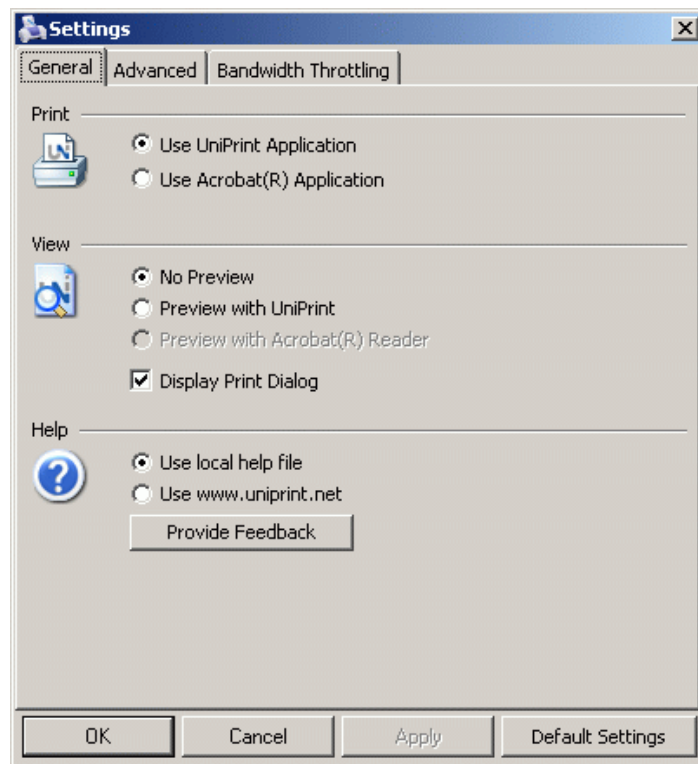
To change the [client](#) settings

- In the notification area, double-click  or
- Right-click , and then click **Settings**.



Within the Settings [dialog box](#) there are three tabs, **General**, **Advanced** and **Bandwidth Throttling**. To view a [pop-up description](#) of an option, hover the mouse over any enabled option.

General Tab



Print

Use UniPrint Application

Eliminates the need to install Adobe Acrobat Reader on the machine when printing PDF files created by the UniPrint Printer Driver. UniPrint Client uses its own printing mechanism to process the [print job](#).

Use Acrobat® Application

Uses Acrobat's printing mechanism to process the print job. This option is disabled if Acrobat Reader 4.05 or later is not installed on the client [workstation](#).

View

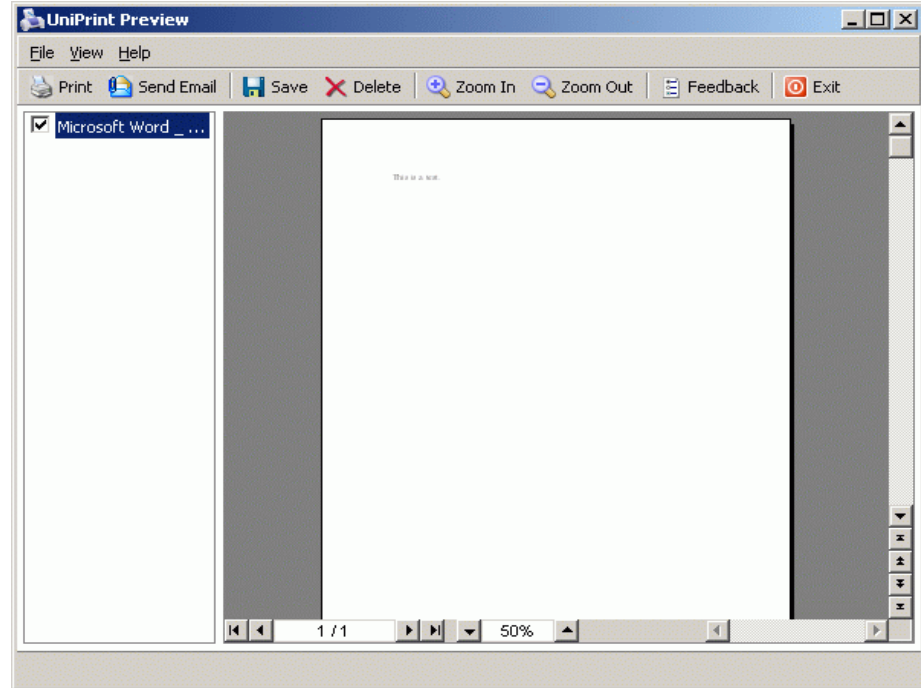
No Preview

If the **Display Print Dialog** [check box](#) is selected, the print [dialog box](#) will open first and you can select printer specific options. If the **Display Print Dialog** check box is cleared, UniPrint sends the print job directly to the default printer defined on the client workstation without previewing it first.

Preview with UniPrint

Displays the print job in the **UniPrint Preview** dialog box where you can utilize features such as saving the print job as a PDF document or sending it as an e-mail attachment.

Each print job is added to a list on the left pane where users can selectively print or e-mail multiple jobs at the same time.



Note:

To print using Acrobat 7.x, select **Use Acrobat® Application**.

Print

Prints the selected print jobs directly to a printer.

Send Email

Opens a locally installed e-mail client like Microsoft Outlook and sends the selected print jobs as attachment(s).

Save

Save the currently viewed document to an accessible [network drive](#).

Delete

Deletes the currently viewed document.

Zoom In

Zoom in on the currently viewed document.

Zoom Out

Zoom out on the currently viewed document.

Feedback

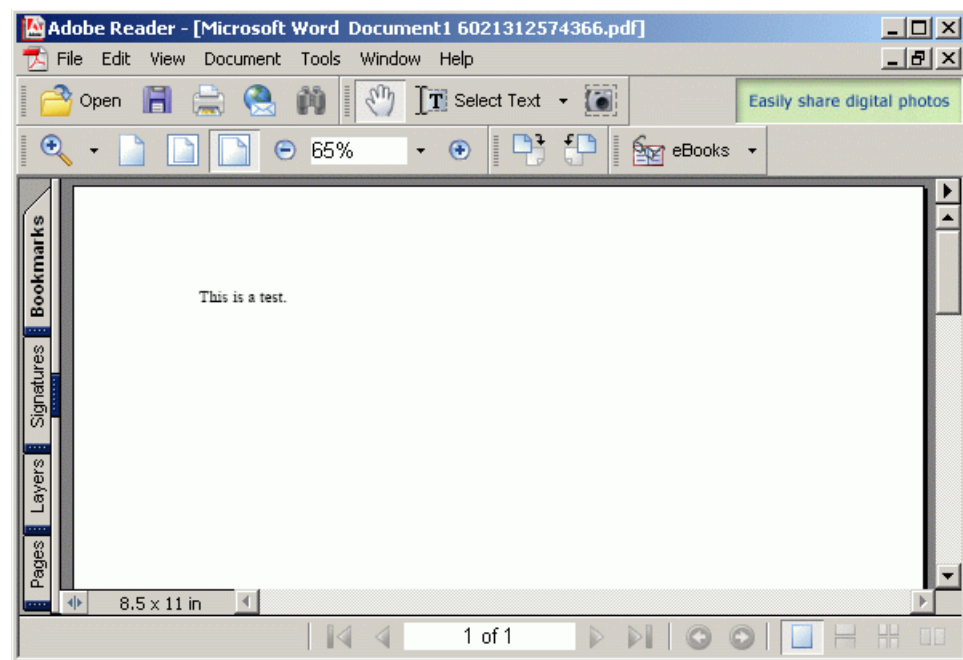
Launches local web browser and connects to the **Customer Feedback** page of the UniPrint Web site.

Exit

Exits **UniPrint Preview** dialog box without printing or e-mailing any documents.

**Preview with
Acrobat®
Reader**

Loads the print job in Acrobat Reader where users have access to Acrobat-specific features. This setting is disabled if Acrobat Reader 4.05 or later is not installed on the client workstation.



Note:

Preview with Acrobat® Reader only works in conjunction with the **Use Acrobat® Application** setting under **Print**.

**Display Print
Dialog**

Allows the user to have access to the print dialog box and printer specific features.

Note:

This setting is not available if **Preview with Acrobat® Reader** is selected.

Help

Use local help file

Help is available through a locally installed help file.

To access the local help file

- In the notification area, right-click , and then click **Help Topics**.

Use www.uniprint.net

Help is available through the UniPrint Web site, www.uniprint.net.

Provide Feedback

Launches local web browser and connects to the **Customer Feedback** page of the UniPrint Web site, www.uniprint.net.

Buttons

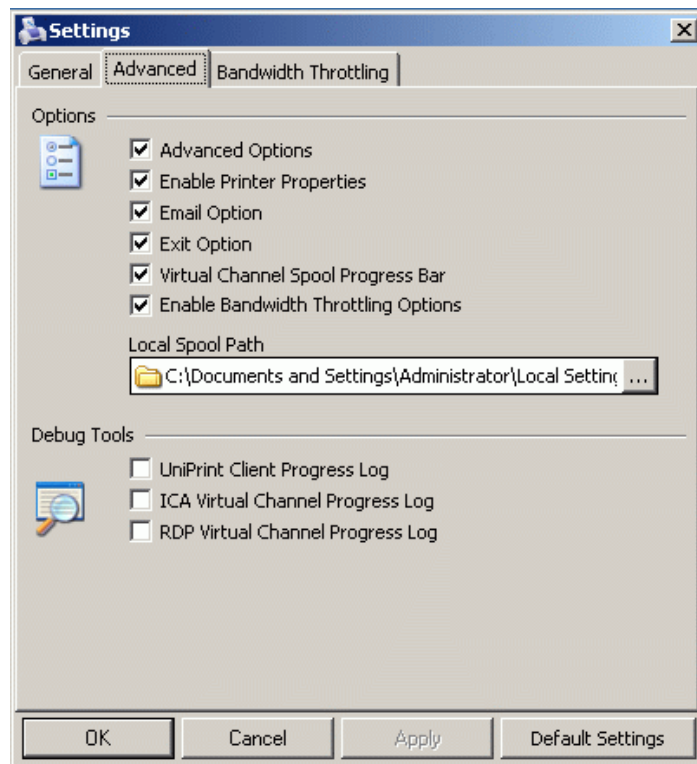
OK Accepts your option selections and closes the **Settings** dialog box.

Cancel Cancels any option selection changes and closes the **Settings** dialog box.

Apply Applies all option selection changes and leaves the **Settings** dialog box open.

Default Settings Restores the option settings to the default values set during installation. This action is irreversible. Any previous settings will be lost.

Advanced Tab




Note:

If you do not see an **Advanced** tab, then it has been disabled by your [Network Administrator](#). **Speak to your Network Administrator before changing any of these settings.**

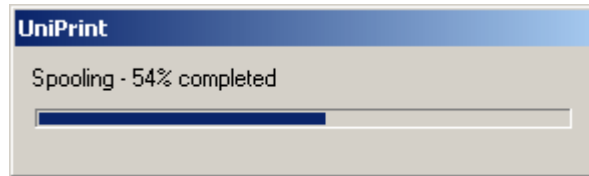
Options

- | | |
|----------------------------------|---|
| Advanced Options | Displays the Advanced tab. If this setting is cleared, the next time UniPrint Client is launched the Advanced tab will not be available. |
| Enable Printer Properties | Sets printer properties based on the ones selected on the UniPrint Printer (from the Print dialog box). |
| Email Option | Enables the e-mail feature within the UniPrint Preview dialog box, allowing you to send the print document(s) as e-mail attachment(s) using a locally installed e-mail client such as Microsoft Outlook. |

To view which e-mail client will be used, start **Internet Explorer**, click **Tools, Internet Options** and then click the **Programs** tab.

Exit Option Enables the **Exit** option when you right-click , allowing you to manually terminate the UniPrint Client. For security reasons, Network Administrators may choose to clear this check box and disable this option.

Virtual Channel Spool Progress Bar Displays a [spool](#) progress bar which indicates the status of print jobs arriving at the client workstation.



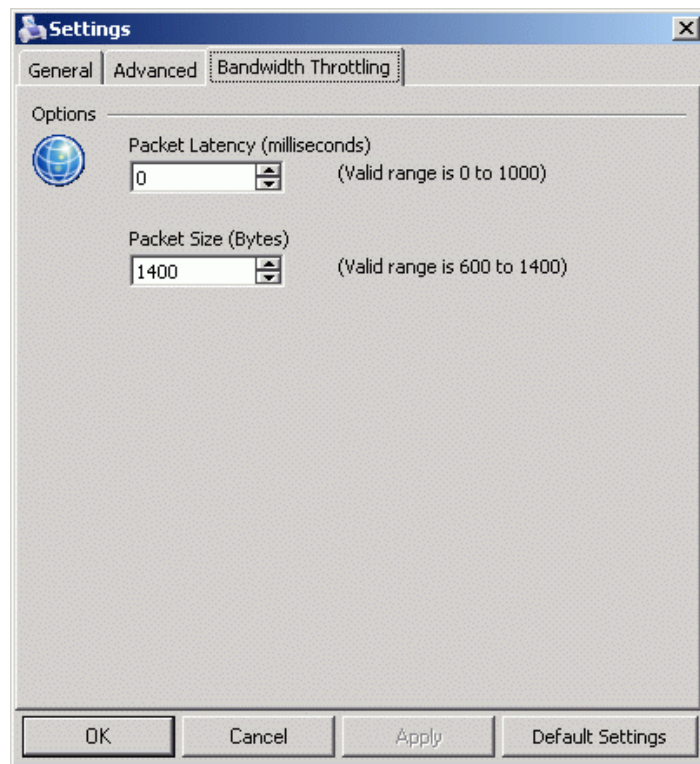
Enable Bandwidth Throttling Options Displays the **Bandwidth Throttling** tab. For security reasons, Network Administrators may choose to clear the check box and disable this option.

Local Spool Path Changes the local spool directory. By default UniPrint Client is configured to monitor incoming print jobs in the user temp folder, for example C:\Documents and Settings\Administrator\Local Settings\Temp. **Speak to your Network Administrator before changing this setting.**

Debug Tools

These settings are for your Network Administrator's use only. **Speak to your Network Administrator before enabling any of these settings.**

Bandwidth Throttling Tab





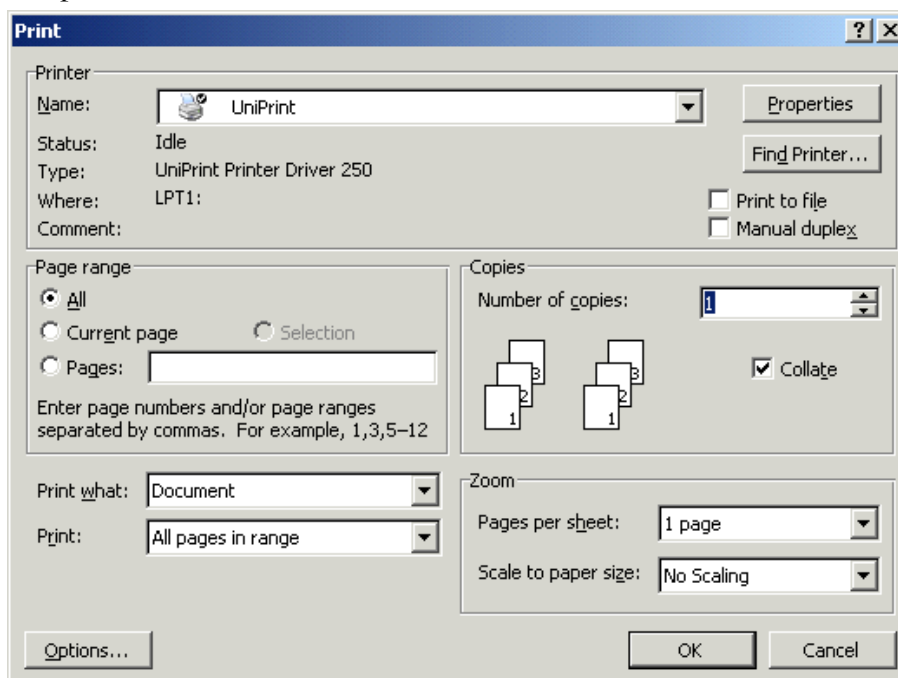
Options

Packet Latency (milliseconds) Sets the transmit interval ([latency](#)) when receiving print jobs from UniPrint Server. Valid values are 0 to 1000 milliseconds. *Default = 0 ms.*

Packet Size (Bytes) Sets the maximum [packet](#) size. Valid values are 600 to 1400 bytes. *Default = 1400 bytes.*

Using UniPrint

1. Log on to the Terminal/Citrix Server and ensure that the UniPrint icon  appears in the notification area.
2. Click on the print function from any application (for example, Microsoft Word). If the user clicks the Printer icon , the print job will be sent directly to the UniPrint printer. UniPrint is set as default printer during installation, however, the Network Administrator can change the default settings.
3. From the Printer list in the **Print** dialog box, select the **UniPrint** printer and then click **OK**.



4. You can change any of the settings in the **Page range**, **Copies**, **Print what** and **Zoom** panes. These options can, however, be application-specific.
5. Optionally, click **Properties** to change the UniPrint Printer Properties for **Configuration**, **Image Compression**, **Advanced Options** and **Save Options**.

6. Click **OK**.

Depending on your UniPrint Client Settings, the document will either be printed directly to your default printer, or appear in one of the preview windows, UniPrint Preview or Acrobat Reader.

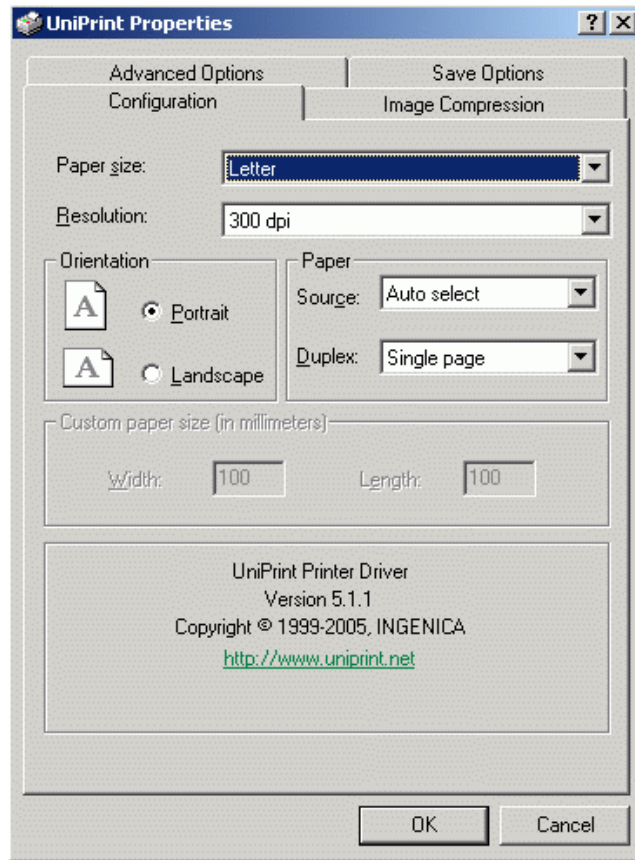
UniPrint Printer Properties

You can change UniPrint's printer properties on a job-by-job basis. These affect how the PDF file is created. In some cases, printer properties (for example, orientation) may be automatically changed by the application you are printing from.

The following instructions and screen shots display a typical Windows print dialog box from a Windows XP operating system. Refer to your operating system and/or application documentation for instructions on accessing printer properties if you see a different screen. However, once you have access to the printer properties, the UniPrint tabs and functions will be the same.

When you are ready to print your document, click **File** and then click **Print**. The **Windows Print dialog** box will appear. To access the **UniPrint Printer Properties** dialog box, click **Properties**.

Configuration Tab



Paper Size This option sets the paper size for this print job. There are 49 paper size settings including Custom. To use the Custom paper, from the paper size list, click Custom and then under Custom paper size (in millimeters) enter the paper size dimensions.

Resolution The [resolution](#) for a document can be set to 75, 150, 300, 600, or 1200 dpi. This option mainly affects image resolution, but text precision can also be improved by increasing this value. The designated printer must be capable of printing at the desired resolution setting.

Orientation The orientation of a document can be set to either [Portrait](#) or [Landscape](#).

Paper Source

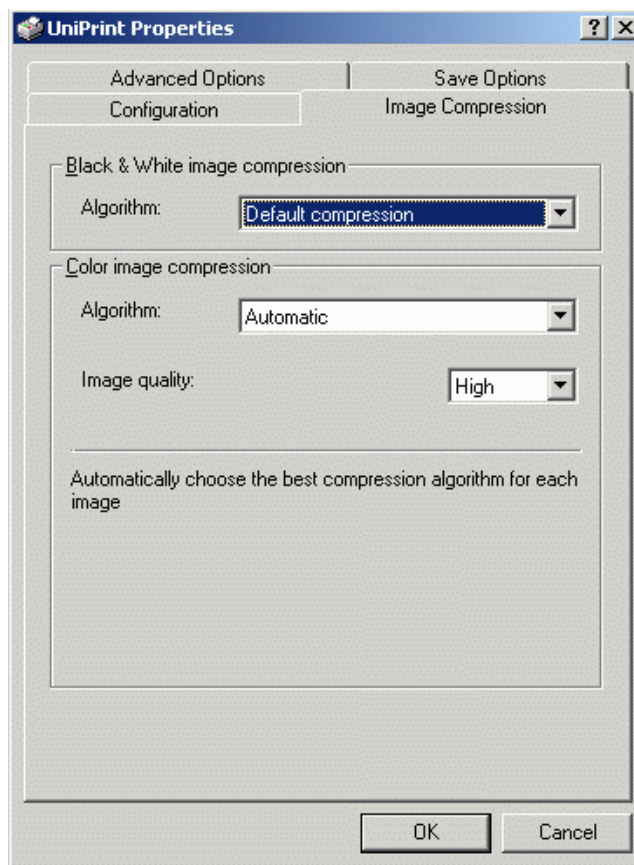
This option sets the paper tray source. The options are Auto Select, Manual Feed, Envelope Feed and up to six tray selections.

Duplex

This option sets the [duplex](#) mode. The options are Single page, Double-sided Horizontal and Double-sided Vertical. The printer must have duplexing capabilities.

Custom paper size (in millimeters)

If custom under the Paper size list is selected. Enter the Width and Length of the custom paper size in millimeters. The printer must support custom paper sizes. If your Network Administrator has disabled the Custom paper Size feature, this option will appear dimmed.

Image Compression Tab

Set the desired image compression for both black and white images and color images.

Algorithm Default compression

The default image compression for black and white images makes use of color palettes to reduce the overall size of 24-bit images. This algorithm works well as long as the number of colors does not exceed 256.

CCITT Fax Group 4

The [CCITT Fax Group 4](#) algorithm is recommended to reduce the size of black and white images. Image quality is not affected by this type of compression but file size can be greatly reduced.

256 color compression

The 256 color compression algorithm calculates the most used 256 colors in an image and replaces all other color pixels by their closest match. This lossless compression algorithm usually works very well with most applications but is relatively slow on large images with a large number of colors.

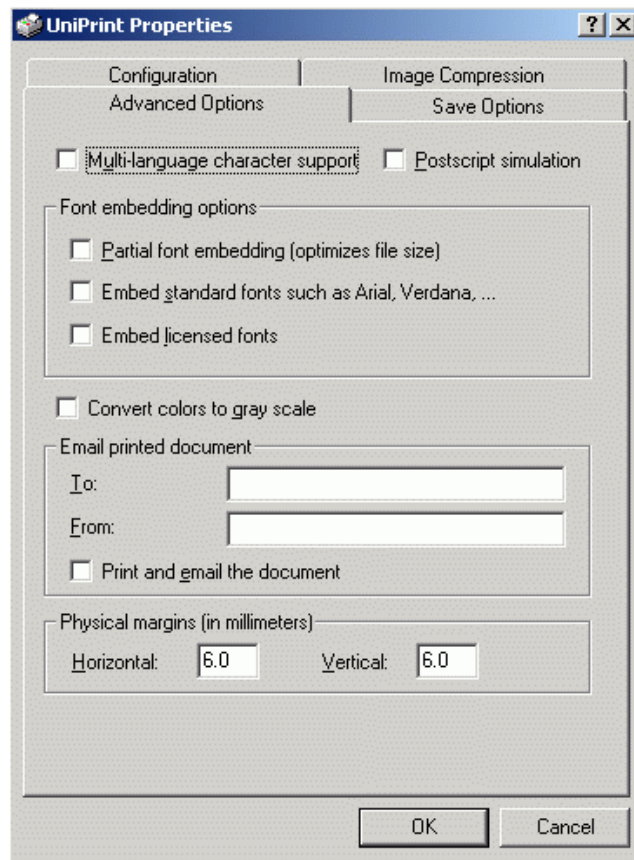
JPEG compression

This lossy compression algorithm produces excellent results for real life true color images with a small distortion of the source image. Since it removes image data and may reduce image quality, compressing images that have already been compressed using JPEG compression will lead to additional loss of information. It is, therefore, not recommended for graphics other than real pictures. When JPEG compression is selected the **JPEG compression level** selection box appears, allowing you to choose from level 1 to 9. Level 1 produces poor quality images with a large compression ratio, whereas, level 9 produces good quality images with a medium compression ratio. The level is 7, which produces images suitable for most situations.

Automatic

With this compression algorithm, each image is analyzed separately to determine the best suited compression algorithm. This best suited compression algorithm is then applied to the individual image. When Automatic compression is selected, the [Image quality](#) can be chosen from Maximum to Minimum quality.

Advanced options Tab



Multi-language character support

If enabled, the UniPrint Driver will convert characters that are not in Western European or US character sets (such as Eastern European and Far Eastern (2 byte) characters). This conversion tends to increase the file size.

Postscript simulation

This feature provides improved graphic rendering and can be selected on a per print job basis. When this option is enabled, the UniPrint Driver will recognize a [PostScript](#) interpreter that is not from Adobe Systems, Inc.

Font embedding options

Fonts are software and subject to license restrictions. Standard fonts are commonly found within software operating systems and applications, and are legally transferable. Licensed fonts are generally specialized fonts that are purchased and subject to license agreement terms and conditions.

In UniPrint, enabling any font embedding option enables the driver to include all True Type fonts used by the document in the output PDF file. This will increase the file size but ensures consistent look of the document on any platform.

Partial font embedding (optimizes file size)

The UniPrint driver will embed only portions of the font file that are used by the document.

Embed standard fonts

If enabled, the UniPrint driver will [embed](#) the Arial and Times New Roman font files. These fonts are not embedded by default as they are provided with Acrobat Reader. This option works in conjunction with Partial font embedding. If Partial font embedding is enabled only portions of the font file that are used by the document will be embedded.

Embed licensed fonts

If enabled, the UniPrint driver will embed licensed fonts that are installed on the Terminal/Citrix Server. However, the Network Administrator may not enable this setting if the user does not have access to licensed fonts. This option works in conjunction with Partial font embedding. If Partial font embedding is enabled only portions of the font file that are used by the document will be embedded.

Convert colors to gray scale

Enabling this setting instructs the UniPrint Driver to render the print job in grayscale. This reduces the file size if the document was originally created in color.

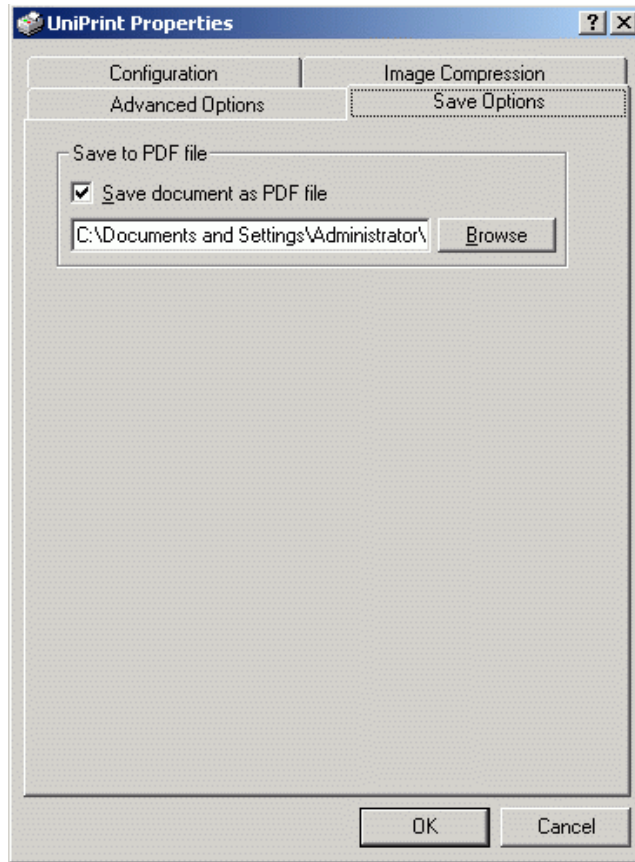
Mail printed document

By filling out the **To** (recipient's e-mail address) and **From** (sender's name) fields, the print job will be sent as an e-mail attachment from the Terminal/Citrix Server, if the e-mail feature is supported. You can e-mail to multiple recipients by separating the e-mail addresses with a semi-colon (;). To e-mail and print at the same time, select the **Print and email the document** check box.

Physical margins (in millimeters)

Most printers have a minimum physical margin outside of which they can not generate any output. Applications use this value to prevent users from drawing outside the printable area. **Horizontal** specifies the margin from the top and bottom edge of the paper. **Vertical** specifies the margin from the left and right edge of the paper.

Save Options Tab




Save to PDF file If **Save document as PDF file** is selected, then the UniPrint Driver will convert the document into a PDF file and then save it to a [network drive](#) specified in the field below, without the print job being processed by UniPrint Client. Click **Browse** to change the location.

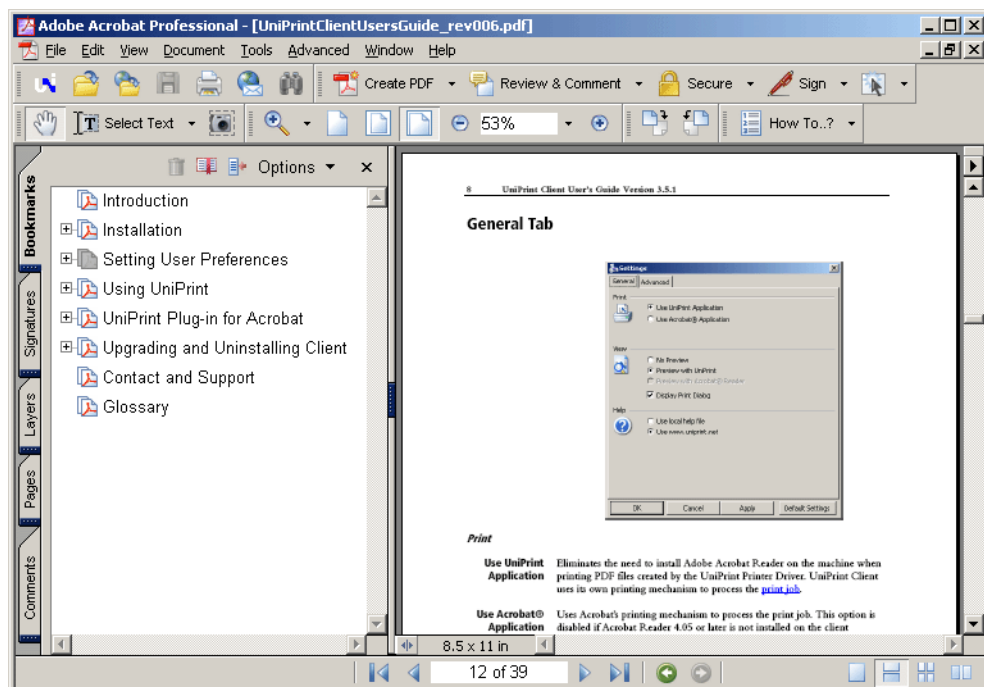
UniPrint Plug-in for Acrobat

At times re-rendering a document that is already in PDF format through the UniPrint driver can produce undesirable results. In such cases, it is recommended that the UniPrint Plug-in for Acrobat be used. This utility informs UniPrint to avoid re-processing the document.

Printing from Acrobat to UniPrint

To print from Acrobat to UniPrint

- In the Acrobat toolbar, click . **OR**
- On the **File** menu, click **Print to UniPrint** or simply click **Print** if your [Network Administrator](#) has enabled a feature that automatically invokes the UniPrint Plug-in for Acrobat.



Upgrading and Uninstalling Client

Upgrading UniPrint Client

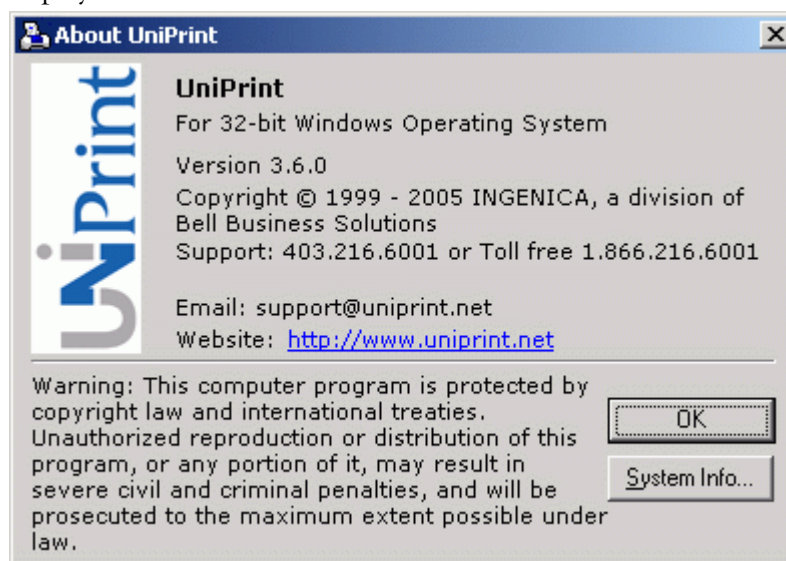
Note:

Speak to your Network Administrator before upgrading the UniPrint Client. You will need to have administrative rights to your computer and your computer will need to be restarted to complete the upgrade process.

Determining the UniPrint Client software version

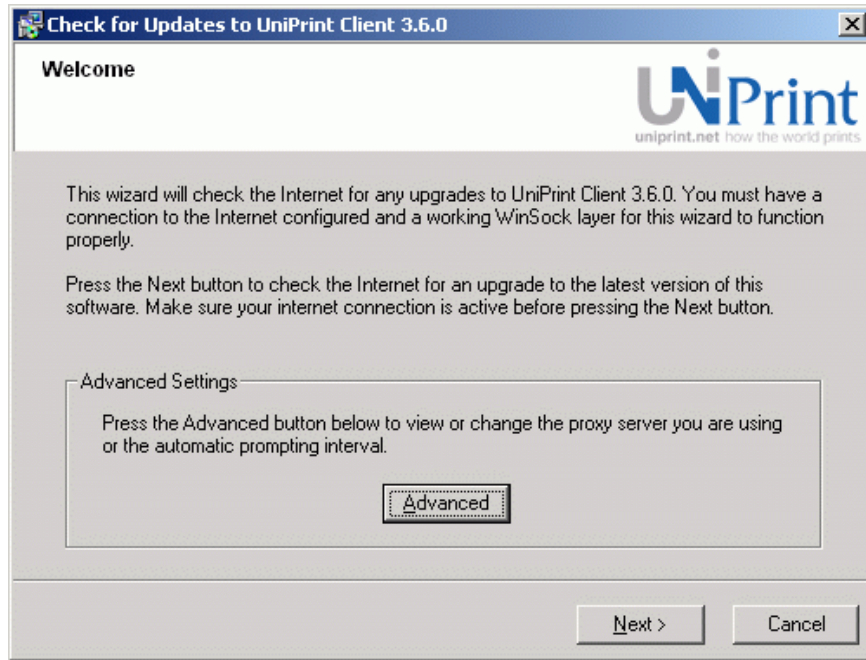
UniPrint Client software can be downloaded from our Web site, www.uniprint.net. To determine the version of UniPrint Client software already on your computer follow the steps outlined below.

1. In the notification area, right-click  and then click **About**.
2. The **About UniPrint** dialog box appears and the Version number is displayed.

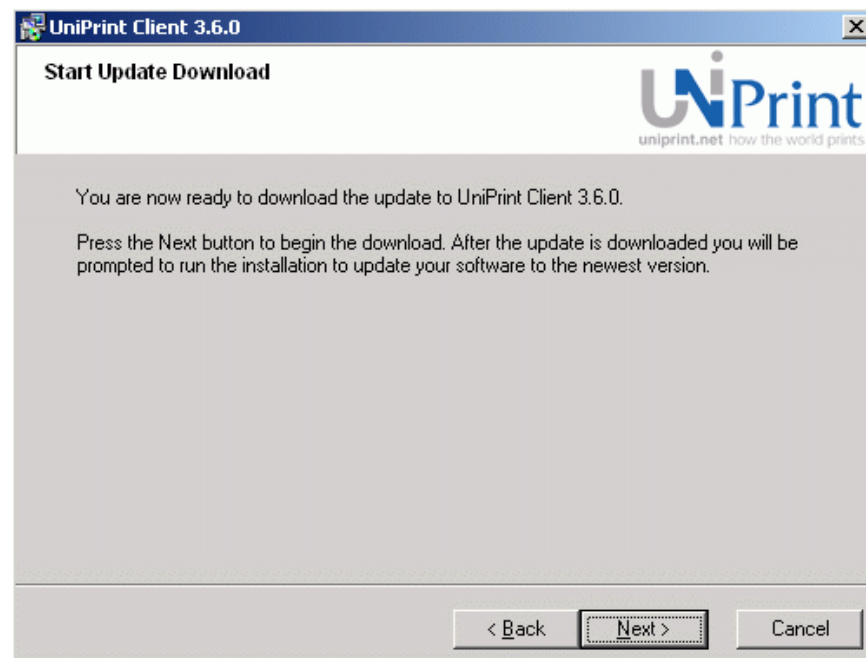


Manually Upgrading to UniPrint Client 3.6.1

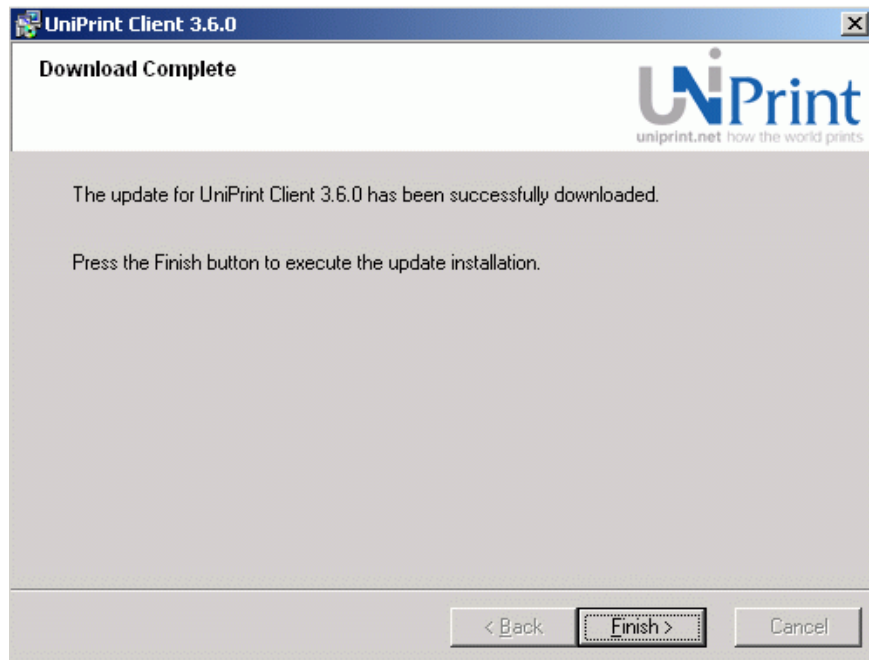
1. Click **Start**, point to **Programs, UniPrint Client**, and then click **Check for Updates**.
2. In the **Welcome** dialog box, click **Next**.



3. In the **Start Update Download** dialog box, click **Next**.



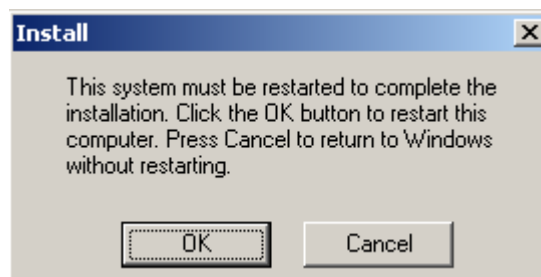
4. In the **Download Complete** dialog box, click **Next**.



5. In the **Update UniPrint Client** dialog box, click **Yes** to install now, or click **No** to install later. Ensure that all Terminal/Citrix [sessions](#) have been closed before installing.

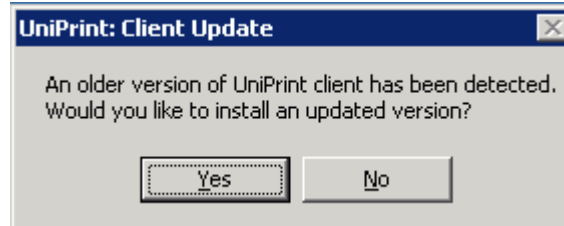


6. Click **OK** to restart your computer.

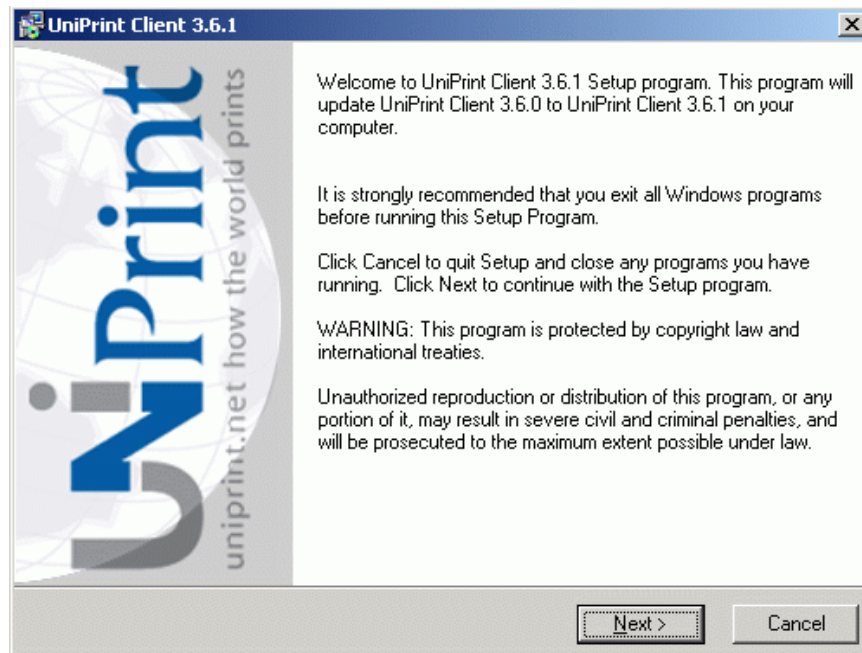


Automatically Updating the UniPrint Client

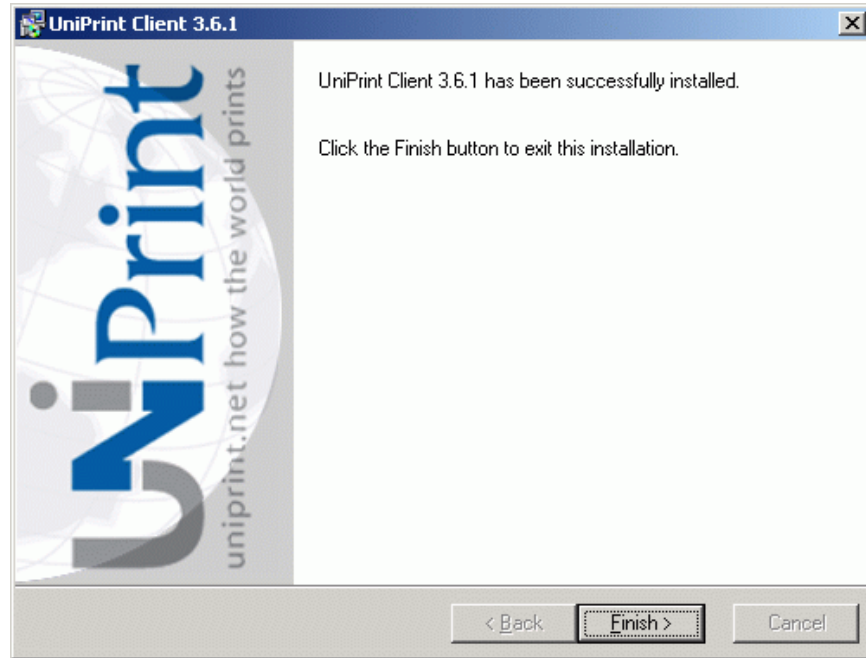
If your [Network Administrator](#) has enabled Automatic Client Update on the Terminal/Citrix Server you will get the following dialog box:



1. Click **Yes** to update your UniPrint Client to the latest version.
2. In the **Welcome** dialog box, click **Next**.




3. The update program will install files on your computer. Click **Finish** to complete the installation.



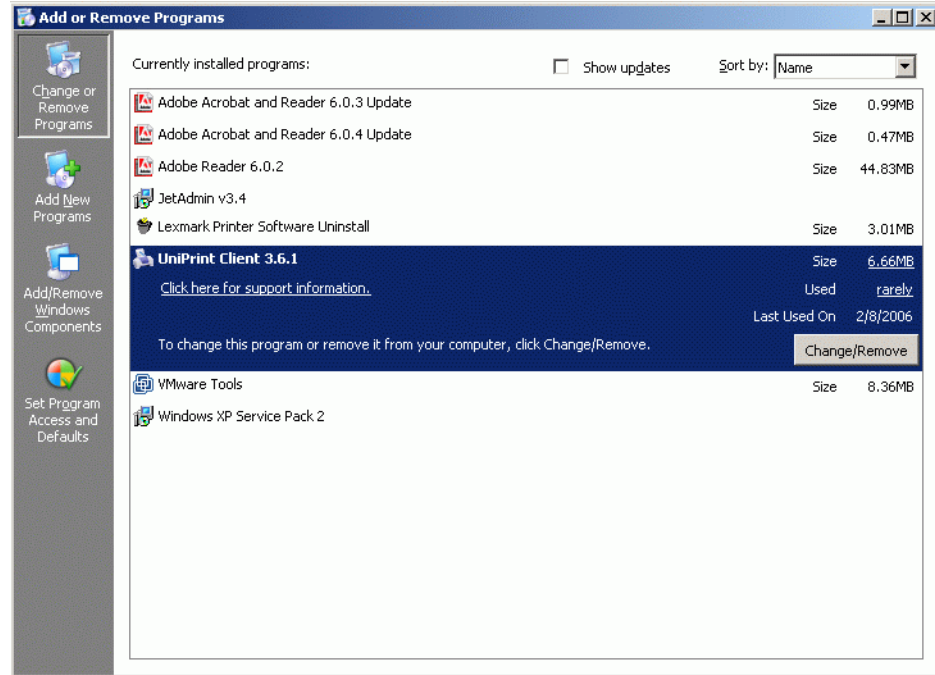
Uninstalling UniPrint Client

Note:

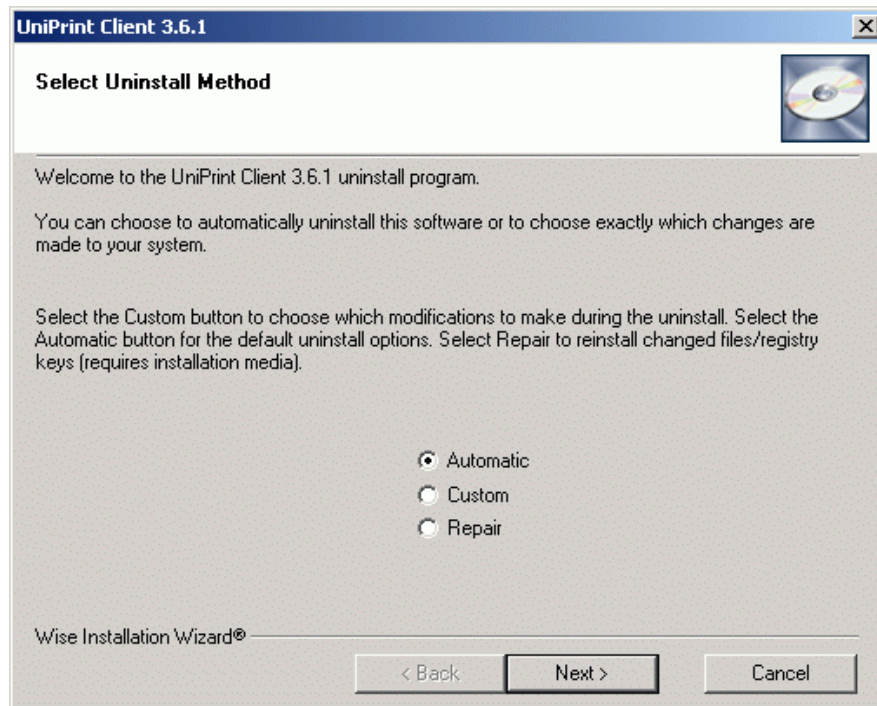
Speak to your Network Administrator before uninstalling the UniPrint Client. You will need to have administrative rights to your computer and your computer will need to be restarted to complete the uninstall process.

1. Log off the Terminal/Citrix Server.
2. If the UniPrint Client is still running, from the notification area right-click , and then click **Exit**.
3. Click **Start**, point to **Settings, Control Panel** and then click **Add or Remove Programs**.
4. Click **Change or Remove Programs**.

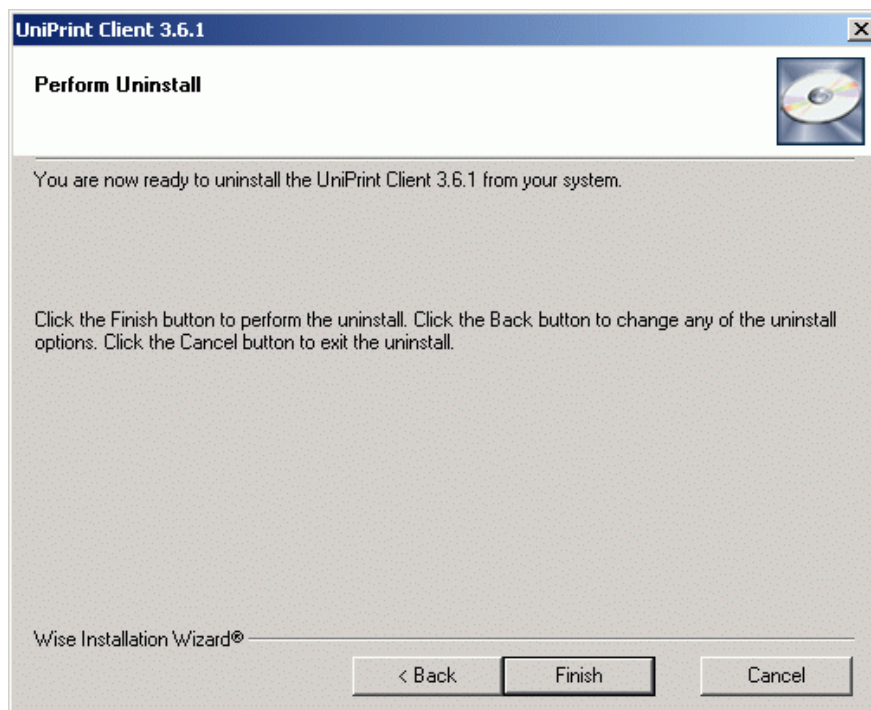
5. From the **Currently installed programs** list, click **UniPrint Client 3.6.1** and then click **Change/Remove**.



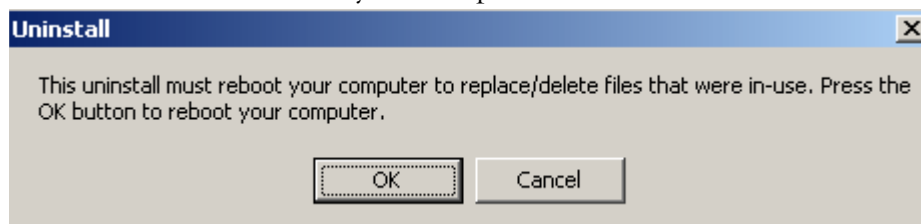
6. In the **Select Uninstall Method** dialog box, click **Automatic** and then click **Next**.



7. In the **Perform Uninstall** dialog box, click **Finish** to start the uninstall.



8. Click **OK** to restart your computer.



Contact and Support

UniPrint Support

North America Hours of Operation

04:00 – 19:00 EST Monday to Friday

Toll Free Phone Number (North America only)

(866) 488-3188 option 3

Local Phone Number

(416) 503-9800 option 3

Europe, Middle East, and Africa Hours of Operation

09:00 – 24:00 GMT Monday to Friday

Phone Number

(44) 0134 420 6144

E-mail support@uniprint.net

Office Locations

Head Office INGENICA, a division of Bell Business Solutions
2 Gibbs Road
Toronto, ON M9B 6L6
Canada

Phone Number: (416) 503-9800

Toll Free Phone Number: (866) 488-3188 (North America only)

Glossary

bandwidth throttling	A method of ensuring that a bandwidth intensive process like server-based printing, will limit (“throttle”) the amount of network traffic within a specified period of time. Bandwidth throttling helps provide quality of service (QoS) by limiting network congestion.
CCITT Fax Group 4	One of a set of four standards recommended by the Comité Consultatif International Télégraphique et Téléphonique (International Telegraph and Telephone Consultative Committee) for the encoding and transmission of images over fax machines. Group 4 supports images of up to 400 dpi; supports data compression based on a beginning row of white pixels (dots), with each succeeding line encoded as a series of changes from the line before, compressing images to 3 to 10 percent of the original.
check box	An interactive control often found in graphical user interfaces. Check boxes are used to enable or disable one or more features or options from a set. When an option is selected, an x or a check mark appears in the box.
client	On a network, a computer that accesses shared network resources provided by another computer (called a server).
compression	A means of reducing the amount of space or bandwidth needed to store or transmit a block of data, used in data communications, facsimile transmission, file storage and transfer.
dialog box	In a graphical user interface, a special window displayed by the system or application to solicit a response from the user.
duplex	Printing on both sides of the page.
embed	To insert information created in one program into another program. After the object is embedded, the information becomes part of the document file.
high resolution	The capability for reproducing text and graphics with relative clarity and fineness of detail. High resolution is achieved by using a large number of pixels (dots) to create an image in a given area. In printing, resolution refers to the number of dots per inch (dpi) produced by the printer, such as 300 to 600 dpi for a laser or ink-jet printer or 1000 to 2000 dpi for a production-quality imagesetter.

image quality	The quality and clarity of an image produced by a printer. Image quality varies with the type of printer; in general, dot-matrix printers produce lower-quality output than laser printers.
landscape mode	A horizontal print orientation in which text or images are printed “sideways”—that is, the width of the image on the page is greater than the height.
latency	The time required for a signal to travel from one point on a network to another.
low resolution	Appearing in relatively coarse detail, used in reference to text and graphics in raster-oriented computer displays and printing. Low-resolution printing is comparable to draft-quality dot-matrix output printed at 125 dots per inch or less.
network administrator	The person in charge of operations on a computer network. The duties of a network administrator can be broad and might include such tasks as installing new workstations and other devices, adding and removing individuals from the list of authorized users, archiving files, overseeing password protection and other security measures, monitoring usage of shared resources, and handling malfunctioning equipment.
network drive	On a network, a disk drive whose disk is available to other computers on the network. Access to a network drive might not be allowed to all users of the network. Many operating systems contain security provisions that enable a network administrator to grant or deny access to part or all of a network drive.
operating system	The software that controls the allocation and usage of hardware resources such as memory, central processing unit (CPU) time, disk space, and peripheral devices. The operating system is the foundation software on which applications depend on. Popular operating systems include Windows XP, Windows 2000, Mac OS, Linux and UNIX.
packet	A unit of information transmitted as a whole from one device to another on a network.
pop-up description	Messages that appear as pop-up balloons when the user clicks or hovers the mouse on a topic or area of the screen about which a description of the function is desired.
portrait mode	A vertical print orientation in which a document is printed across the narrower dimension of a rectangular sheet of paper. This is the print mode typical of most letters, reports, and other such documents.

PostScript	A page-description language from Adobe Systems that offers flexible font capability and high-quality graphics. PostScript uses English-like commands to describe page layout and to load and scale outline fonts.
preview	In word processors and other applications, the feature that formats a document for printing but displays it on the video monitor rather than sending it directly to the printer.
printer driver	A software program designed to enable other programs to work with a particular printer without concerning themselves with the specifics of the printer's hardware and internal firmware. Application programs can communicate properly with a variety of printers by using printer drivers, which handle all of the subtleties of each printer so that the application program doesn't have to.
print job	A batch of characters printed as a unit. A print job usually consists of a single document, which can be one page or hundreds of pages long. To avoid having to print individual documents separately, some software can group multiple documents into a single print job.
render	To produce a graphic image from a data file on an output device such as a monitor or printer.
resolution	The fineness of detail attained by a printer or a monitor in producing an image. For printers that form characters from small, closely spaced dots, resolution is measured in dots per inch, or dpi, and ranges from about 125 dpi for low-quality dot-matrix printers to about 600 dpi for some laser and ink-jet printers (typesetting equipment can print at resolutions of over 1000 dpi). See also high resolution , low resolution .
session	The time during which a program is running. In most interactive programs, a session is the time during which the program accepts input and processes information.
server	1. A computer running administrative software that controls access to the network and its resources, such as printers and disk drives, and provides resources to computers functioning as workstations on the network. 2. A software program that responds to commands from a client. For example, a file server may contain an archive of data or program files; when a client submits a request for a file, the server transfers a copy of the file to the client. See client .
spool	To store a data document in a queue, where it awaits its turn to be printed. Spool is an acronym created from "simultaneous peripheral operations on line."
workstation	A desktop, laptop or terminal connected to a network.