PDF X1 Printer Driver

Black Ice Software

MSI Installation Guide for Network Administrators

07082025-R3320

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Introduction

The MSI installer for PDF X1 Printer Driver designed for large scale deployment of PDF X1 Printer Driver in Active Directory environments. The MSI installer can install PDF X1 Printer Driver in silent mode without user interaction and provides custom installation for users.

PDF X1 Printer Driver MSI cannot be used for evaluation! This version can only be installed as a full Release version with a purchased serial number. In case the serial number is not correct or missing the Printer Driver MSI will abort the installation and delete all already installed files and an entry will be generated in the Windows Event log. To see examples of the entries in the Windows Event log please see the **Licensing Error codes and Event Viewer error messages** section in this Installation Guide.

The PDF X1 Printer Driver MSI installer can either be installed using command line parameters or using Group Policy settings.

With the Group Policy Settings the PDF X1 Printer Driver's recommended deployment method is assigning to computer and not publishing or assigning to users.

For Citrix VDI deployment, a special installer is required. You can request a special installer from sales@blackice.com. Please note: VDI deployment is not supported with individual license keys.

With version 15.75 the printer **driver Installation, Uninstallation, and Update does not require system reboot.**
For updating the printer driver, please see the Update section of the manual.
The Printer driver installation and Uninstallation does not require reboot.

Supported Operating Systems

- Windows 11 (64 bit)
- Windows 10 (32 bit and 64 bit)
- Windows 8.1 (32 bit and 64 bit)
- Windows 8 (32 bit and 64 bit)
- Windows 7 (32 bit and 64 bit)

Requirement

.NET framework 4.0 or higher

Windows XP may need Root Certificate update from Microsoft .

- The update can be found at: http://download.windowsupdate.com/msdownload/update/v3/static/trustedr/en/rootsupd.exe

Command Line Installation

Installing the PDF X1 Printer Driver on VDI

Installing the PDF X1 Printer Driver on Citrix VDI

Registering through a Proxy server

Available Parameters of the MSI install

How to install the PDF X1 Printer Driver silently

How to update the PDF X1 Printer Driver

Unavailable Parameters of the PDF X1 Printer Driver MSI update

How to uninstall the PDF X1 Printer Driver silently

How to uninstall the PDF X1 Printer Driver MSI silently

Quick Reference Guide for Windows MSI installers

Examples for Command Line installation

Installing the PDF X1 Printer Driver on VDI

The PDF X1 Printer Driver can be installed on Azure VDI, AWS VDI, VMware VDI, or any VDI system from the master image.
The base requirement for **licensing** of the PDF X1 Printer Driver is the **PDF X1 Printer Driver Special Installer** with the licensing mechanism designed for VDI.
The MSI or Interactive PDF X1 Printer Driver Special Installer can be requested from Black Ice Software Sales sales@blackice.com.

The Interactive or MSI PDF X1 Printer Driver Special Installer for VDI is not available for a single license and is not available from the online store only directly from Black Ice Software sales.

Installing the PDF X1 Printer Driver on Citrix VDI

Installing the PDF X1 Printer Driver on Citrix VDI for Citrix Virtual Apps and Desktops.

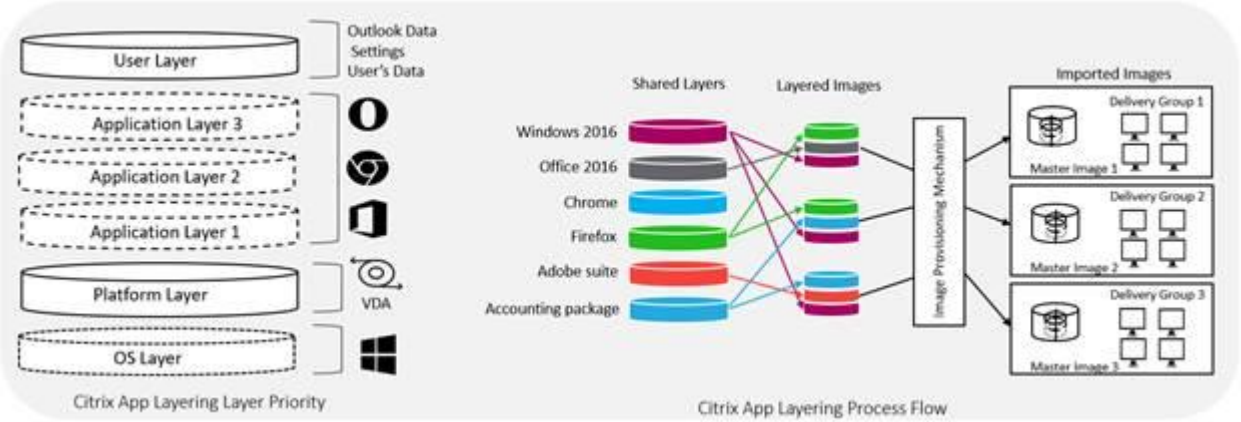
The diagram below illustrates the Citrix App Layering. The **Citrix App Layering** actually puts **applications** on a plane separate from the OS and splits the **application** into three main **layers**. Each **layer is** stored as a virtual disk. The **base layer** contains the **OS itself**.

The PDF X1 Printer Driver should be **installed** and activated/registered on the **OS layer,** otherwise the PDF X1 Printer Driver will deactivate as soon as the desktop is delivered to users.
An **alternative** solution is to install the PDF X1 Printer Driver on the Master Image

and **activate/register** on the **Master Image**. Installing the PDF X1 Printer Driver on the Master image could be cumbersome and time consuming. The PDF X1 Printer Driver should **not** be **installed** and **activated/registered** on the **Application Layer**.

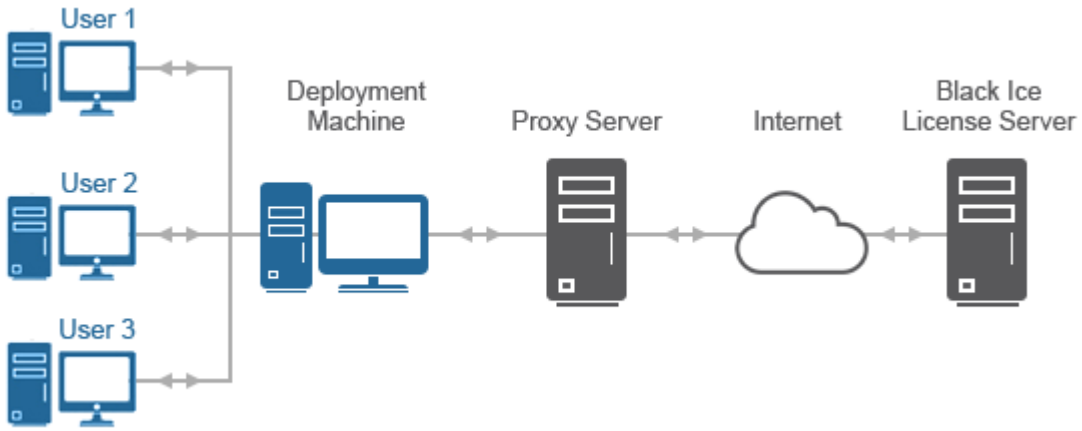
For the available installation parameters and examples, please see:
Available Parameters of the MSI install
Examples for Command Line installation

For Citrix VDI deployment, a special installer is required. You can request a **special installer** from sales@blackice.com. **Please note:** VDI deployment is not supported with individual license keys.



Registering through a Proxy server

In a secured environment where computers have no active Internet connection or Port 443 is being blocked by a firewall, the product can be registered through a **proxy server** with the **PTYPE parameter**.



Available options:

1. **Automatic Proxy setting**

The Automatic Proxy uses the system proxy settings. When the Automatic Proxy setting is selected, the product uses the proxy IP address and port number configured in the *Control Panel > Internet Options > Connections > LAN Settings > Proxy Server area or in the Internet Explorer > Internet Options > Connections > LAN Settings > Proxy Server* area.

Parameter: PTYPE=1
Optional parameters: PIP, PPORT, PUSER, PPW

NOTE: The registration process cannot read the Proxy Username and Proxy User password from the Windows system. If the Proxy server is using user authentication, the Username and Password must be specified by using the PUSER and PPW parameters.

To use authentication for the Proxy Server connection, please use the PTYPE=2 (HTTP proxy) or PTYPE=3 (SOCKS proxy) options.

2. **HTTP Proxy option**
   Use the HTTP proxy option to configure the HTTP Proxy IP Address and port number manually. The HTTP proxy server receives HTTP requests from the Black Ice Printer Driver during registration and license validation and then forwards the requests to licenseserver.blackice.com. The user needs to specify the Proxy IP address and port. The default port is 8080.

   Parameter: PTYPE=2
   Required parameters: PIP, PPORT
   Optional parameters: PUSER, PPW

   NOTE: If the Proxy server is using user authentication, the Username and Password must be specified by using the PUSER and PPW parameters.

3. **SOCKS Proxy option**
   Use the SOCKS proxy option to configure the Proxy IP address and port number manually. SOCKS proxy servers establish a TCP connection to licenseserver.blackice.com and forward TCP messages from the Black Ice Printer Driver during registration and license validation. The user needs to specify the Proxy IP address and port. The default port is 1080.

   Parameter: PTYPE=3
   Required parameters: PIP, PPORT
   Optional parameters: PUSER, PPW

   NOTE: Please make sure what type of proxy is using the Proxy server. For example: If the proxy server using HTTP proxy, then use the PTYPE=2 parameter.

   NOTE: If the Proxy server is using user authentication, the Username and Password must be specified by using the PUSER and PPW parameters.

For more information about how to register the Printer Driver through a Proxy server, please see the Available Parameters of the MSI install section.

Available Parameters of the MSI install

PDF Printer Driver can be installed using the following command:

NOTE: If the parameter value has **space** characters, then it is required to use the quotation marks (") on the beginning and end of the value.

msiexec /i "BlackIcePDF_X1.msi" /q TARGETDIR="C:\Black Ice\PDFX1" REGNUM=XXXXX-XXXXXXXX-XXXXXXXXXX

Parameters	*Meaning*
/i **Can be used for updating the Printer Driver.**	Installs the product. Command line only **Please make sure to run the command line as administrator when installing/uninstalling the Printer Driver.**
/x	Uninstalls the product. Command line only **Please make sure to run the command line as administrator when installing/uninstalling the Printer Driver.**
/q **Can be used for updating the Printer Driver.**	Silent installation that displays no user interface. Command line only
(optional) **/l* log.txt** *(lowercase "L")* **Can be used for updating the Printer Driver.**	Logs the MSI system calls to install the product to the "C:\temp\log.txt" file. Command line only For more information about the /l *(lowercase "L")* parameter, please refer to the Quick Reference Guide for Windows MSI installers section.
(optional) **ALLUSERS=1**	The **ALLUSERS** property configures the installation context of the Start Menu items and desktop shortcuts. The Windows Installer performs a per-user installation or per-machine installation depending on the access privileges of the user. If **ALLUSERS=1** performs a per-machine installation. If **ALLUSERS** is not set, the installer does a per-user installation.

REGNUM= **(required for silent mode)** **Can be used for updating the Printer Driver.**	Use the serial number received during purchase with the REGNUM parameter to automatically register the product for every user on the computer. The serial number included how many printers can be installed on the Windows system. The MSI installer automatically installs the number of printers assigned to the serial key. To use evaluation/demo registration, use the **REGNUM=evaluation**. **NOTE: Evaluation will expire after 15-days.**
MP=(optional) **0:** Disable multi-threaded **1:** Multi-printer (default) **2:** Multi-port	The **MP** parameter can be used to specify to install either a multi-printer or multi-threaded printer driver. **0:** Disable multi-threading. **1:** Install multi-printer. (default) **2:** Install multi-thread for a printer driver. Multi-printer or multi-thread installations are allowed if the serial number supports multi-printer/multi-thread installations. This parameter will be ignored, if the serial number does not support multi-printer/multi-thread installation. Note: If the serial number is for a single printer/single thread, the Printer Driver will install 3 threads for the printer driver (default).
TARGETDIR=(optional) **Can be used for updating the Printer Driver.**	Set target installation directory. If this value is not specified, the product will be installed to **"**\Program Files\Black Ice Software LLC\Black Ice PDF X1 Printer Driver**"**
OCRTARGETDIR=(optional)	Set the OCR target installation directory. If this value is not specified, the product will be installed to "\Program Files\Black Ice Software LLC\OCR Data for printers drivers"
PMTARGETDIR=(optional) **Can be used for updating the Printer Driver.**	Set the Printer Manager target installation directory. If this value is not specified, the product will be installed to "\Program Files\Black Ice Software LLC\Black Ice printer manager"

CUSTOMINI=(optional) **Can be used for updating the Printer Driver.**	The full path to the custom INI file. Path cannot contain variables. (Full path need to be specified even if the INI file is located right next to the msi) The full path needs to be accessible from the computers where it will be installed by the GPO. For example; **CUSTOMINI=C:\temp\customPDFX1MSI.ini**
	Printer Driver Update: This parameter can be useful during the update, if the new Printer Driver version contains new features, which has to be configured during the installation. **NOTE: The update will not change the Printer Driver settings, even if a custom INI file has been provided during the update. The update will only apply the custom INI to the Default Settings of the Printer Driver. The Default Settings will only take effect in case of new Users, or if an existing user restore the default Printer Driver settings in the Printing Preferences.**
BITRACE =(optional) 0 disables the Trace log (default) 1 enables the Trace log **Can be used for updating the Printer Driver.**	By Enables detailed Trace log, will logs every event in the Custom Action section of the MSI installation, uninstallation, and registration. For more information about the Trace log and location of the Trace log, please refer to Printer Driver MSI Installer Trace log section.
DPD=(optional) 0: Keep the current Default Printer (default) 1: Set Up Default Printer for current user 2: Set Up Default Printer for all users **Can be used for updating the Printer Driver.**	The DPD parameter sets up the Black Ice Printer Driver as default printer for current user or all users. Otherwise the installation will keep the current default printer.
BIEMAIL=(optional)	The full path to the custom Email INI file. Path cannot contain variables. (Full path need to be specified even if the INI file is located right next to the msi) The full path needs to be accessible from the computers where it will be installed by the GPO. For more information about the BIEMAIL parameter, please refer to the Email Configuration INI File section. For example; **BIEMAIL=c:\customBiemail.ini**

BIFTP=(optional)	The full path of the INI file which contains the Upload to FTP settings. Path cannot contain variables. (Full path need to be specified even if the INI file is located right next to the msi) The full path needs to be accessible from the computers where it will be installed by the GPO. For more information about the BIFTP.INI file, please refer to the following section: Upload to FTP configuration through BIFTP.INI file For example; BIFTP=c:\BIFTP.ini
PRINTERNAME=(optional)	To rename the Black Ice printer driver to custom printer driver name. Use this option to specify a custom printer name for the installed Black Ice Printer Driver on the system. The printer name must be between 3 and 30 characters, and cannot contain any of the following characters: <> / * ? \" | % @"
PM=(optional)	The PM parameter can be used to preconfigure which version of Printer Manager will be installed with the Printer Driver. As of version 14.83 of the Printer Driver, the Printer Manager has a new improved user interface to enhance user's experience. If the parameter is not specified, then the new Printer Manager will be installed. Possible options: 0: Install printer driver without Printer Manager 1: Install printer driver with old Printer Manager C++ version. This version does not require .NET framework. 2: Install printer driver with Printer Manager C# version **(Default).** This version requires .NET framework 4.0 or higher.
Registration configuration parameters	
(optional) **LICSER=** **Can be used for updating the Printer Driver.**	License server domain name. "licenseserver.blackice.com"

(optional) **CPORT=**0 (default) Port number (0, 65536) **Can be used for updating the Printer Driver.**	Client port is out going port to connect to the Black Ice License server. Default and Recommended port parameter value is 0. When using port parameter CPORT=0, the installation automatically selects a TCP/IP port which is currently not used by any other process on the system. When using a specific port number for CPORT parameter, the installation uses the specified port on the system/PC for the registration. If the specified port is used by another process on the system/PC, the registration will be unsuccessful.
(optional) **SPORT=1** **Can be used for updating the Printer Driver.**	The SPORT parameter defines the TCPI/IP port to connect to Black Ice License Server port. Default port is HTTPS port 443 the **SSL parameter must be 1**. Alternatively, the following TCP/IP ports can be used for the registration: 80, 3500, 15000 **NOTE: For using alternative TCP/IP ports (80, 3500, 15000) for the registration set the SSL parameter to 0.**
(optional) **SSL=** 1 enable the SSL (default) 0 disable the SSL **Can be used for updating the Printer Driver.**	Set SSL parameter used for authentication for connecting to the license server. Parameter value set to 1, if using License Server port 443 for the registration. If the SSL= parameter is not specified, port 443 will be used by default. Parameter value set to 0, if using license server TCP/IP port 80, 3500, 15000 for the registration.
Proxy Server configuration parameters	
(optional) **PTYPE=** 0: Not using proxy server 1: Attempt to discover automatic proxy settings 2: Use HTTP proxy 3: Use SOCKS proxy **Can be used for updating the Printer Driver.**	Set proxy server type for the connection. In a secured environment where the port 443 cannot be enabled, the product can be registered through proxy server with the PTYPE parameter. The PTYPE=1 - Using the system proxy settings. (Optional parameters: PIP, PPORT, PUSER, PPW) **NOTE:** Automatic Proxy Configuration

	(PTYPE=1) uses the proxy settings of Internet Explorer, and it is only able to discover the proxy address and port. The MSI Installer cannot read the User Name and Password of the Proxy Server automatically. Please use (Permit all connection) without user name and password parameter, with the PTYPE=1. If you need **authentication** for the Proxy Server connection, please use the PTYPE=2 (HTTP proxy) or PTYPE=3 (SOCKS proxy) options. The PTYPE=2 – Using HTTP proxy settings (Required parameter: PIP, PPORT, Optional parameter: PUSER, PPW) The PTYPE=3 – Using SOCKS proxy settings (Required parameter: PIP, PPORT, Optional parameter: PUSER, PPW) **NOTE: Please make sure, that what type of proxy is using the Proxy server.** For example: If the proxy server using HTTP proxy, then use the **PTYPE=2** parameter.
(optional) **PIP=** **Can be used for updating the Printer Driver.**	The proxy server host name or IP address **NOTE: The PIP parameter is required, if the server using HTTP (PTYPE=2) or SOCKS (PTYPE=3) proxy settings.**
(optional) **PPORT=** **Can be used for updating the Printer Driver.**	Port number on the PC to communicate with the Proxy server. The installation uses the specified port to reach the Proxy server. **NOTE: The PPORT parameter is required, if the server using HTTP (PTYPE=2) or SOCKS (PTYPE=3) proxy settings.**
(optional) **PUSER=** **Can be used for updating the Printer Driver.**	User name for proxy servers which require authentication. **NOTE: The PUSER parameter is optional, if the server using HTTP (PTYPE=2) or SOCKS (PTYPE=3) proxy settings.** **NOTE:** If the Proxy server and the computer, where you are doing the installation are in the same domain, **please do not use the domain name in the PUSER parameter.**

(optional) **PPW=** **Can be used for updating the Printer Driver.**	User password for proxy servers which require authentication. **NOTE: The PPW parameter is optional, if the server using HTTP (PTYPE=2) or SOCKS (PTYPE=3) proxy settings.**
Agent Printer configuration parameters	
AP1NAME=(optional) **Can be used for updating the Printer Driver.**	The name of the first Agent printer. Maximum length is 62. This parameter is required for adding an Agent Printer during the installation.
AP1DESC=(optional) **Can be used for updating the Printer Driver.**	The description of the first Agent printer. Maximum length is 254. This parameter is optional for adding an Agent Printer during the installation.
AP1PROFILE=(optional) **Can be used for updating the Printer Driver.**	The profile file with full path which contains the settings for the first Agent printer. Maximum length is 263. This parameter is required for adding an Agent Printer during the installation.
AP2NAME=(optional) **Can be used for updating the Printer Driver.**	The name of the second Agent printer. Maximum length is 62. This parameter is required for adding an Agent Printer during the installation.
AP2DESC=(optional) **Can be used for updating the Printer Driver.**	The description of the second Agent printer. Maximum length is 254. This parameter is optional for adding an Agent Printer during the installation.
AP2PROFILE=(optional) **Can be used for updating the Printer Driver.**	The profile file with full path which contains the settings for the second Agent printer. Maximum length is 263. This parameter is required for adding an Agent Printer during the installation.
AP3NAME=(optional) **Can be used for updating the Printer Driver.**	The name of the third Agent printer. Maximum length is 62. This parameter is required for adding an Agent Printer during the installation.
AP3DESC=(optional) **Can be used for updating the Printer Driver.**	The description of the third Agent printer. Maximum length is 254. This parameter is optional for adding an Agent Printer during the installation.
AP3PROFILE=(optional) **Can be used for updating the Printer Driver.**	The profile file with full path which contains the settings for the third Agent printer. Maximum length is 263. This parameter is required for adding an Agent Printer during the installation.

AP4NAME=(optional) **Can be used for updating the Printer Driver.**	The name of the fourth Agent printer. Maximum length is 62. This parameter is required for adding an Agent Printer during the installation.
AP4DESC=(optional) **Can be used for updating the Printer Driver.**	The description of the fourth Agent printer. Maximum length is 254. This parameter is optional for adding an Agent Printer during the installation.
AP4PROFILE=(optional) **Can be used for updating the Printer Driver.**	The profile file with full path which contains the settings for the fourth Agent printer. Maximum length is 263. This parameter is required for adding an Agent Printer during the installation.
AP5NAME=(optional) **Can be used for updating the Printer Driver.**	The name of the fifth Agent printer. Maximum length is 62. This parameter is required for adding an Agent Printer during the installation.
AP5DESC=(optional) **Can be used for updating the Printer Driver.**	The description of the fifth Agent printer. Maximum length is 254. This parameter is optional for adding an Agent Printer during the installation.
AP5PROFILE=(optional) **Can be used for updating the Printer Driver.**	The profile file with full path which contains the settings for the fifth Agent printer. Maximum length is 263. This parameter is required for adding an Agent Printer during the installation.
APLIST=(optional) **Can be used for updating the Printer Driver.**	By using the APLIST parameter Administrators can add more than 5 Agent Printers. APLIST parameter requires an INI file with full path, which contains the name, description and profile file of the desired Agent Printers as in the following example; [Agent Printer 1] Name= Description= Profile= [Agent Printer 2] Name= Description= Profile= … MSI parameter example: APLIST=c:\Temp\agentlist.ini

FORMLISTINI=(optional)	By using the FORMLISTINI parameter Administrators can add custom forms for Cover Page Filler. FORMLISTINI parameter requires an INI file with full path, which contains the file of the forms as in the following example; [Form 1] File=c:\Temp\Form1.tif [Form 2] File=c:\Temp\Form2.tif … MSI parameter example: FORMLISTINI=c:\Temp\FormFiles.ini
FORCEU=(optional)	Possible values: 1: Force uninstallation of the Printer Driver, even if the Printer Driver is registered with a transferable license, and the license cannot be validated with the Black Ice License server. Caution: Upon network problems, this option could result that a transferable license will not be removed properly from the Black Ice License server. This parameter can be used when there is no active internet connection. 0 (default): The uninstaller will notify the user of the occurring errors during the uninstallation.
(optional) **FORCECHECK=** 0: Disabled (default) 1: Enabled.	The FORCECHECK parameter can be used during the uninstallation. This parameter uninstalls the Printer Driver and forces license type validation (static or transferable). This scenario is recommended, if product was initially registered and installed with a static serial number, but after installation the serial number was upgraded and converted to a transferable serial number by the Black Ice Sales team. Using the FORCECHECK parameter will allow the user to transfer the serial number. This parameter requires an active internet connection.
(optional) **NOSERIAL=** 0: Disabled (default). 1: Enabled.	The Printer Driver can be installed without registration with NOSERIAL=1 parameter. The Printer Driver cannot be used until Printer Driver is registered/activated for evaluation or with a license key by the Administrator after the installation.

NPI=(optional)	You will be able to use this installer without the windows hotfix on Windows 7 and Windows Server 2008 R2, but the Printer Driver will only be sharable from 32 bit systems to 32 bit systems and from 64 bit systems to 64 bit systems, like Black Ice Printer Drivers version 14.96 or earlier. Possible values: 1: No package installation. **NOTE: The 64-bit MSI installers for the Printer Driver do not support the NPI parameter.**

Quotation Marks for the parameters:

If the parameter value has **space** characters, then it is required to use the quotation marks (") on the beginning and end of the value.

For example:
msiexec /i "BlackIcePDF_X1.msi" /q TARGETDIR="C:\Black Ice\PDF X1" CREGNUM=XXXXX-XXXXXXXX-XXXXXXXXXX

Quotation marks are necessary to make sure the installer will take the value as a single parameter.

NOTE: Please make sure that you use regular double quotation marks. (type the command directly to CMD, or copy and paste the command from this installation guide, or from Notepad.)

***Note: To connect to the Black Ice License Server (licenseserver.blackice.com) it is required to use secure internet connection (HTTPS) on port 443. The Printer Driver Licensed MSI Installer attempts to reach the Black Ice License Server three times during the registration to avoid momentary internet connection issues.**

How to install the PDF X1 Printer Driver silently

To install the PDF X1 Printer Driver MSI with silent mode, please open the Command Prompt as Administrator.

PDF X1 Printer Driver can be installed using the following command:

msiexec /i "<<PATH>>\BlackIcePDF_X1.msi" /q TARGETDIR="C:\PDF_X1" REGNUM="XXXXX-XXXXXXXX-XXXXXXXXXX"

Note: the XXXXX-XXXXXXXX-XXXXXXXXXX must be the serial number of the customer.
Note: the Installation Update and Uninstallation does not require system reboot.

How to update the PDF X1 Printer Driver

Upgrade the PDF X1 Printer Driver without uninstalling and reinstalling the PDF X1Printer Driver MSI.
The upgrade process will keep the Users current configuration of the PDF X1 Server Printer Driver.
The printer driver Update does NOT require system restart.
The Printer Driver Update is backward compatible with printer driver version 14.70.
To Update Printer Drivers **prior to version 14.70**, the printer driver must be **uninstalled** and the system **must be rebooted**.
PDF X1 Printer Driver MSI can be updated using the following command:

msiexec /i "<<PATH>>\BlackIcePDF_X1.msi"

Unavailable Parameters of the PDF X1 Printer Driver MSI update

Please make sure that following parameters are **not used in the Printer Driver Update.**
The following parameters will be ignored.

Parameters	*Meaning*
(optional) **ALLUSERS=1**	The **ALLUSERS** property configures the installation context of the Start Menu items and desktop shortcuts. The Windows Installer performs a per-user installation or per-machine installation depending on the access privileges of the user. If **ALLUSERS=1** performs a per-machine installation. If **ALLUSERS** is not set, the installer does a per-user installation.
MP=(optional) 1: Multi-printer (default) 2: Multi-port	The **MP** parameter specifies to install either multi-printer or multi-port printer driver. Multi-printer or multi-port installations allowed if the serial number supports multi-printer/multi-port installations. This parameter will be ignored, if the serial number does not support multi-printer/multi-port installation.
OCRTARGETDIR=(optional)	Set the OCR target installation directory. If this value is not specified, the product will be installed to "\Program Files\Black Ice Software LLC\OCR Data for printers drivers"
BIEMAIL=(optional)	The full path to the custom Email INI file. Path cannot contain variables. (Full path need to be specified even if the INI file is located right next to the msi) The full path needs to be accessible from the computers where it will be installed by the GPO. For more information about the BIEMAIL parameter, please refer to the Email Configuration INI File section. For example; **BIEMAIL=c:\customBiemail.ini**

BIFTP=(optional)	The full path of the INI file which contains the Upload to FTP settings. Path cannot contain variables. (Full path need to be specified even if the INI file is located right next to the msi) The full path needs to be accessible from the computers where it will be installed by the GPO. For more information about the BIFTP.INI file, please refer to the following section: Upload to FTP configuration through BIFTP.INI file For example; BIFTP=c:\BIFTP.ini
PRINTERNAME=(optional)	To rename the Black Ice printer driver to custom printer driver name. Use this option to specify a custom printer name for the installed Black Ice Printer Driver on the system. The printer name must be between 3 and 30 characters, and cannot contain any of the following characters: <> / * ? \" | % @"
PM=(optional)	The PM parameter can be used to preconfigure which version of Printer Manager will be installed with the Printer Driver. As of version 14.83 of the Printer Driver, the Printer Manager has a new improved user interface to enhance user's experience. If the parameter is not specified, then the new Printer Manager will be installed. Possible options: 0: Install printer driver without Printer Manager 1: Install printer driver with old Printer Manager C++ version. This version does not require .NET framework. 2: Install printer driver with Printer Manager C# version **(Default).** This version requires .NET framework 4.0 or higher.
NOSERIAL=(optional)	Install Printer Driver without registration. The Printer Driver must be registered by the Administrator after the installation. Possible values: 1: Enabled. 0: Disabled (default).

NPI=(optional)	You will be able to use this installer without the windows hotfix on Windows 7 and Windows Server 2008 R2, but the Printer Driver will only be sharable from 32 bit systems to 32 bit systems and from 64 bit systems to 64 bit systems, like Black Ice Printer Drivers version 14.96 or earlier. Possible values: 1: No package installation. **NOTE: The 64-bit MSI installers for the Printer Driver do not support the NPI parameter.**

How to uninstall the PDF X1 Printer Driver silently

The **recommended** command to silently uninstall the Printer Driver is using the GUID.
Use this command to uninstall the printer driver or before installing a newer versions of the printer driver.

msiexec.exe /x {3BD3BAE6-05B8-4514-A740-1670EB07861C} /q

The Installer uses GUIDs to uniquely identify applications or packages. The product code is the GUID used by the Installer to distinguish one application from another.

Silently uninstall PDF X1 Printer Driver

msiexec.exe /x "BlackIcePDF_X1.msi" /q

You must use the original MSI file which was used for the installation. For example if Printer Driver MSI 14.10 is installed on the computer, you must use the same version 14.10 MSI file for the uninstallation.

Please note: The MSI uninstallation process can only uninstall printer drivers that was installed with the MSI installer. If the printer driver was installed manually using the interactive installer, the printer driver cannot be uninstalled. Please see the uninstallation process through Windows Control Panel or the BiUninstall utility.

How to uninstall the PDF X1 Printer Driver MSI silently

The recommended command to silently uninstall PDF X1 Printer Driver MSI:

Version	Command
15.70 or less	MSIExec.exe /x {3BD3BAE6-05B8-4514-A740-1670EB07861C} /q
15.75	MSIExec.exe /x {FE89B829-77BC-4E32-985B-0F52F788F9D3} /q

Alternatively the PDF X1 Printer Driver can be uninstalled by using the .msi file in the command:
msiexec.exe /x "<<PATH>>\BlackIcePDF_X1.msi " /q

You must use the BlackIcePDF_X1.msi file which was used for the installation.
For example if PDF X1 Printer Driver MSI 15.00 is installed on the computer, you must use the same version 15.00 BlackIcePDF_X1.msi file for the uninstallation.

Use this command before installing a newer versions or reinstalling previous versions. The above command will work even if there was no prior PDF X1 Printer Driver MSI installation.

Quick Reference Guide for Windows MSI installers

The following section contains information about general parameters, and options which can be used with any Windows MSI installer, including the Black Ice MSI installations.

Applies to Windows ® Installer. V 5.0.7601.23432

msiexec /Option <Required Parameter> [Optional Parameter]

Install Options

</package | /i> <Product.msi>
Installs or configures a product

/a <Product.msi>
Administrative install - Installs a product on the network

/j<u|m> <Product.msi> [/t <Transform List>] [/g <Language ID>]
Advertises a product - m to all users, u to current user

</uninstall | /x> <Product.msi | ProductCode>
Uninstalls the product

Display Options

/quiet
Quiet mode, no user interaction

/passive
Unattended mode - progress bar only

/q[n|b|r|f]
Sets user interface level
n - No UI
b - Basic UI
r - Reduced UI
f - Full UI (default)
/help
Help information

Restart Options

/norestart
Do not restart after the installation is complete

/promptrestart
Prompts the user for restart if necessary

/forcerestart
Always restart the computer after installation

Logging Options

/l[i|w|e|a|r|u|c|m|o|p|v|x|+|!|*] <LogFile> *(lowercase "L")*
i - Status messages
w - Nonfatal warnings
e - All error messages
a - Start up of actions
r - Action-specific records
u - User requests
c - Initial UI parameters
m - Out-of-memory or fatal exit information
o - Out-of-disk-space messages
p - Terminal properties
v - Verbose output
x - Extra debugging information
+ - Append to existing log file
! - Flush each line to the log
* - Log all information, except for v and x options
/log <LogFile> *(lowercase "L")*
Equivalent of /l* <LogFile> *(lowercase "L")*

Update Options

/update <Update1.msp>[;Update2.msp]
Applies update(s)

/uninstall <PatchCodeGuid>[;Update2.msp] /package <Product.msi | ProductCode>
Remove update(s) for a product

Repair Options

/f[p|e|c|m|s|o|d|a|u|v] <Product.msi | ProductCode>
Repairs a product
p - only if file is missing
o - if file is missing or an older version is installed (default)

e - if file is missing or an equal or older version is installed
d - if file is missing or a different version is installed
c - if file is missing or checksum does not match the calculated value
a - forces all files to be reinstalled
u - all required user-specific registry entries (default)
m - all required computer-specific registry entries (default)
s - all existing shortcuts (default)
v - runs from source and recaches local package

Setting Public Properties

[PROPERTY=PropertyValue]

Consult the Windows ® Installer SDK for additional documentation on the command line syntax.

Examples for Command Line installation

(Administrator privilege required)

Please run the command line as administrator.

NOTE: If the parameter value has **space** characters, then it is required to use the quotation marks (") on the beginning and end of the value.

Example 1: Install and register PDF X1 Printer Driver silently to the default target directory into the Program Files folder.

msiexec.exe /i "<<PATH>>\BlackIcePDF_X1.msi" /q REGNUM=xxxxx-xxxxxxxx-xxxxxxxxxx

Example 2: Install PDF X1 Printer Driver evaluation version with silent mode to the default target directory into the Program Files folder.

msiexec.exe /i "<<PATH>>\BlackIcePDF_X1.msi" REGNUM=evaluation /q

Example 3: Install and register PDF X1 Printer Driver silently, the target directory is C:\Black Ice\PDF X1

msiexec.exe /i "<<PATH>>\BlackIcePDF_X1.msi" /q TARGETDIR="C:\Black Ice\PDF X1" REGNUM=xxxxx-xxxxxxxx-xxxxxxxxxx

Example 4: Install and register PDF Printer Driver, silently, the target directory is C:\Black Ice\PDF X1

msiexec.exe /i "<<PATH>>\BlackIcePDF_X1.msi" /q TARGETDIR="C:\Black Ice\PDF X1" REGNUM=xxxxx-xxxxxxxx-xxxxxxxxxx

Example 5: Install and register PDF X1 Printer Driver silently and generate log from the installation.

msiexec.exe /i "<<PATH>>\BlackIcePDF_X1.msi" /q /l* "log.txt" REGNUM=xxxxx-xxxxxxxx-xxxxxxxxxx

Example 6: Install and register PDF X1 Printer Driver silently with a custom INI file. Please specify the full path of the INI file:

msiexec /i "<<PATH>>\BlackIcePDF_X1.msi" /q TARGETDIR="C:\Black Ice\PDF X1" CUSTOMINI="C:\<<PATH>>\PDFX1MSI.ini" REGNUM=xxxxx-xxxxxxxx-xxxxxxxxxx

PowerShell Example (Terminal & Terminal (Admin)):
Example 6: Install the PDF X1 Printer Driver silently with a custom INI file. Please specify the full path of the INI file:

msiexec /i '"<<PATH>>\BlackIcePDF_X1.msi"' /q TARGETDIR= '"C:\Black Ice\PDF X1"' CUSTOMINI= '"C:\<<PATH>>\PDFX1MSI.ini"' REGNUM=xxxxx-xxxxxxxx-xxxxxxxxxx

Example 7: Install and register PDF X1 Printer Driver silently, and generate a trace log from installation. Trace log could be very useful to identify and troubleshoot problems during the installation.

msiexec.exe /i "<<PATH>>\BlackIcePDF_X1.msi" /q REGNUM=xxxxx-xxxxxxxx-xxxxxxxxxx BITRACE=1

Example 8: Install and register PDF X1 Printer Driver silently, and sets up the Black Ice Printer Driver as default printer for current user.

msiexec.exe /i "<<PATH>>\BlackIcePDF_X1.msi" /q REGNUM=xxxxx-xxxxxxxx-xxxxxxxxxx DPD=1

Example 9: Install and register PDF X1 Printer Driver silently with a custom BIEMAIL INI file.

msiexec.exe /i "<<PATH>>\BlackIcePDF_X1.msi" /q REGNUM=xxxxx-xxxxxxxx-xxxxxxxxxx BIEMAIL="c:\customBiemail.ini"

Example 10: Install and register PDF X1 Printer Driver silently with a custom BIFTP INI file.

msiexec.exe /i "<<PATH>>\BlackIcePDF_X1.msi" /q REGNUM=xxxxx-xxxxxxxx-xxxxxxxxxx BIFTP="c:\BIFTP.ini"

Example 11: Install and register PDF X1 Printer Driver silently with a custom Printer name.

msiexec.exe /i "<<PATH>>\BlackIcePDF_X1.msi" /q REGNUM=xxxxx-xxxxxxxx-xxxxxxxxxx PRINTERNAME="My Printer Name"

Example 12: Install and register PDF X1 Printer Driver silently using the LICSER parameter to contact the Black Ice License Server.

msiexec.exe /i "<<PATH>>\BlackIcePDF_X1.msi" /q REGNUM=xxxxx-xxxxxxxx-xxxxxxxxxx LICSER=licenseserver.blackice.com

Example 13: Install and register PDF X1 Printer Driver silently using a port 80 to contact the Black Ice License Server, without SSL authentication.

msiexec.exe /i "<<PATH>>\BlackIcePDF_X1.msi" /q REGNUM=xxxxx-xxxxxxxx-xxxxxxxxxx LICSER=licenseserver.blackice.com CPORT=0 SPORT=80 SSL=0

Example 14: Install and register PDF X1 Printer Driver silently, and contact the Black Ice License Server through an automatically discovered proxy server.

msiexec.exe /i "<<PATH>>\BlackIcePDF_X1.msi" /q REGNUM=xxxxx-xxxxxxxx-xxxxxxxxxx PTYPE=1

Example 15: Install and register PDF X1 Printer Driver silently, and add Agent Printer.

msiexec.exe /i "<<PATH>>\BlackIcePDF_X1.msi" /q REGNUM=xxxxx-xxxxxxxx-xxxxxxxxxx AP1NAME="Black Ice PDF X1 Printer" AP1DESC="Black Ice agent printer" AP1PROFILE="c:\test\agent profile.bip"

Example 16: Install and register PDF X1 Printer Driver silently, and add three Agent Printer with three different Printer Driver profile file.

msiexec.exe /i "<<PATH>>\BlackIcePDF_X1.msi" /q REGNUM=xxxxx-xxxxxxxx-xxxxxxxxxx AP1NAME="Black Ice PDF X1 Printer" AP1DESC="Black Ice agent printer" AP1PROFILE="c:\test\agent profile.bip" AP2NAME="Black Ice PDF X1 Printer 2" AP2DESC="Black Ice agent printer 2" AP2PROFILE="c:\test\agent profile2.bip" AP3NAME="Black Ice PDF X1 Printer 3" AP3DESC="Black Ice agent printer 3" AP3PROFILE="c:\test\agent profile3.bip"

Example 17: Install and register PDF X1 Printer Driver silently, using the APLIST parameter to add more than five printers with custom APLIST INI files.

msiexec.exe /i "<<PATH>>\BlackIcePDF_X1.msi" /q REGNUM=xxxxx-xxxxxxxx-xxxxxxxxxx APLIST="c:\Temp\agentlist.ini"

Example 18: Install and register PDF X1 Printer Driver silently, using the FORMLISTINI parameter to add custom forms to the Cover Page Filler with form list ini file

msiexec.exe /i "<<PATH>>\BlackIcePDF_X1.msi" /q REGNUM=xxxxx-xxxxxxxx-xxxxxxxxxx FORMLISTINI="c:\Temp\formlist.ini"

Example for formlist.ini:

```
[Form 1]
File=c:\Temp\Form1.tif
[Form 2]
File=c:\Temp\Form2.tif
```

Example 19: Install PDF X1 Printer Driver silently without registration. In this case, the Printer Driver cannot be used until Printer Driver is registered/activated for evaluation or with a license key by the Administrator after the installation.

msiexec.exe /i "<<PATH>>\BlackIcePDF_X1.msi" /q NOSERIAL=1

Example 20: Install PDF X1 Printer Driver silently with a transformation file:

msiexec.exe /i "<<PATH>>\BlackIcePDF_X1.msi" TRANSFORMS="PDF_X1.mst" /q

Example 21: Install and register PDF X1 Printer Driver silently, and contact the Black Ice License Server through a HTTP proxy server.

msiexec.exe /i "<<PATH>>\BlackIcePDF_X1.msi" /q REGNUM=xxxxx-xxxxxxxx-xxxxxxxxxx PTYPE=2 PIP=192.168.0.100 PPORT=8080 PUSER=John.Doe PPW=mypassword

The **PPORT** parameter specifies the HTTP Proxy server port that PDF X1 Printer Driver will use for connecting to the HTTP Proxy Server.

Please note that most HTTP Proxy Servers by default uses **port 8080**, therefore in most cases, the PPORT should be 8080.
If the specified HTTP Proxy server IP address or the HTTP Proxy server port is incorrect, **error code 57** occurs.
If the **PUSER** or **PPW** (Proxy User / Password) is incorrect **error code 81** occurs.
If the **PUSER** or **PPW** (Proxy User / Password) is **correct** and HTTP Proxy Server cannot connect to the Black Ice License Server, **error code 81** occurs.

Example 22: Install and register PDF X1 Printer Driver silently, and contact the Black Ice License Server through a SOCKS proxy server.

msiexec.exe /i "<<PATH>>\BlackIcePDF_X1.msi" /q REGNUM=xxxxx-xxxxxxxx-xxxxxxxxxx PTYPE=3 PIP=192.168.0.100 PPORT=1080 PUSER=John.Doe PPW=mypassword

The **PPORT** parameter specifies the SOCKS Proxy server port that PDF X1 Printer Driver will use for connecting to the SOCKS Proxy Server.

Please note that most SOCKS Proxy Servers by default uses **port 1080**, therefore in most cases, the PPORT should be 1080.
If the specified SOCKS Proxy server IP address or the SOCKS Proxy server port is incorrect, **error code 57** occurs.
If the **PUSER** or **PPW** (Proxy User / Password) is incorrect **error code 81** occurs.
If the **PUSER** or **PPW** (Proxy User / Password) is **correct** and SOCKS Proxy Server cannot connect to the Black Ice License Server, **error code 81** occurs.

Example 23: Install PDF X1 Printer Driver silently without driver package. Please note, the 64-bit MSI installers for the Printer Driver do not support the NPI parameter.

msiexec.exe /i "<<PATH>>\BlackIcePDF_X1.msi" /q NPI=1 REGNUM=xxxxx-xxxxxxxx-xxxxxxxxxx

Example 24: Install and register PDF X1 Printer Driver silently, the target directory is C:\Black Ice\PDFX1 and OCR target directory is c:\Black Ice\OCR

msiexec.exe /i "<<PATH>>\BlackIcePDF_X1.msi" /q TARGETDIR="C:\Black Ice\PDFX1" OCRTARGETDIR="C:\Black Ice\OCR" REGNUM=xxxxx-xxxxxxxx-xxxxxxxxxx

Example 25: Install and register PDF X1 Printer Driver silently, the target directory is C:\Black Ice\PDFX1 and Pinter Manager target directory is c:\Black Ice\Printer Manager

msiexec.exe /i "<<PATH>>\BlackIcePDF_X1.msi" /q TARGETDIR="C:\Black Ice\PDFX1" PMTARGETDIR="C:\Black Ice\Printer Manager" REGNUM=xxxxx-xxxxxxxx-xxxxxxxxxx

Example 26: Install and register PDF X1 Printer Driver silently with 1 printer with 1 thread (disabled multi-threading).

msiexec.exe /i "<<PATH>>\BlackIcePDF_X1.msi" /q MP=0 REGNUM=xxxxx-xxxxxxxx-xxxxxxxxxx

Example 27: Silently uninstall PDF X1 Printer Driver

msiexec.exe /x "<<PATH>>\BlackIcePDF_X1.msi" /q

Example 28: Silently uninstall PDF X1 Printer Driver if the MSI installer location is unknown:

msiexec.exe /x {3BD3BAE6-05B8-4514-A740-1670EB07861C} /q

Example 29: Force uninstallation of the PDF X1 Printer Driver, even if the Printer Driver is registered with a transferable license, and the license cannot be validated with the Black Ice License server. Caution: Upon network problems, this option could result that a transferable license will not be removed properly from the Black Ice License server. This parameter can be used when there is no active internet connection.

msiexec.exe /x "<<PATH>>\BlackIcePDF_X1.msi" FORCEU=1 /q

Example 30: Uninstalls PDF X1 Printer Driver silently and forces license type validation (static or transferable). This scenario is recommended, if the Printer Driver was initially registered and installed with a static serial number, but after installation the serial number was upgraded and converted to a transferable serial number by the Black Ice Sales team. Using the FORCECHECK parameter will allow the user to transfer the serial number. This parameter requires an active internet connection.

msiexec.exe /x "<<PATH>>\BlackIcePDF_X1.msi" FORCECHECK=1 /q

How to set up Group Policy to install the Printer Driver

This section covers the following descriptions:

How to create MST (transform file) for Group Policy Object deployment

How to use ORCA

How to set up a Group Policy Object for installing PDF X1 Printer Driver MSI on domain computers automatically

How to upgrade existing installation of PDF X1 Printer Driver using Group Policy Object

How to uninstall the PDF X1 Printer Driver MSI from computers with the Group Policy Object

Uninstall Printer Driver silently with the BiUninstaller Utility through Group Policy

How to create MST (transform file) for Group Policy Object deployment

With the help of transformation files (MST), one can customize the PDF X1 Printer Driver MSI install. Transformation files can be created using the ORCA tool. ORCA is available in the *Windows SDK Components for Windows Installer Developers*.

For more information about ORCA please see the following Microsoft Knowledge Base webpage: http://support.microsoft.com/kb/255905

Supported Installation methods using Group Policy

Assign to Computer (silent install)
Assign to User (silent install)
Publish

How to use ORCA

1. Open BlackIcePDF_X1.msi with ORCA .
2. Start a new transform by clicking on *Transform\New Transform.*
3. Select *Property* Table from tables (Figure 1).
4.

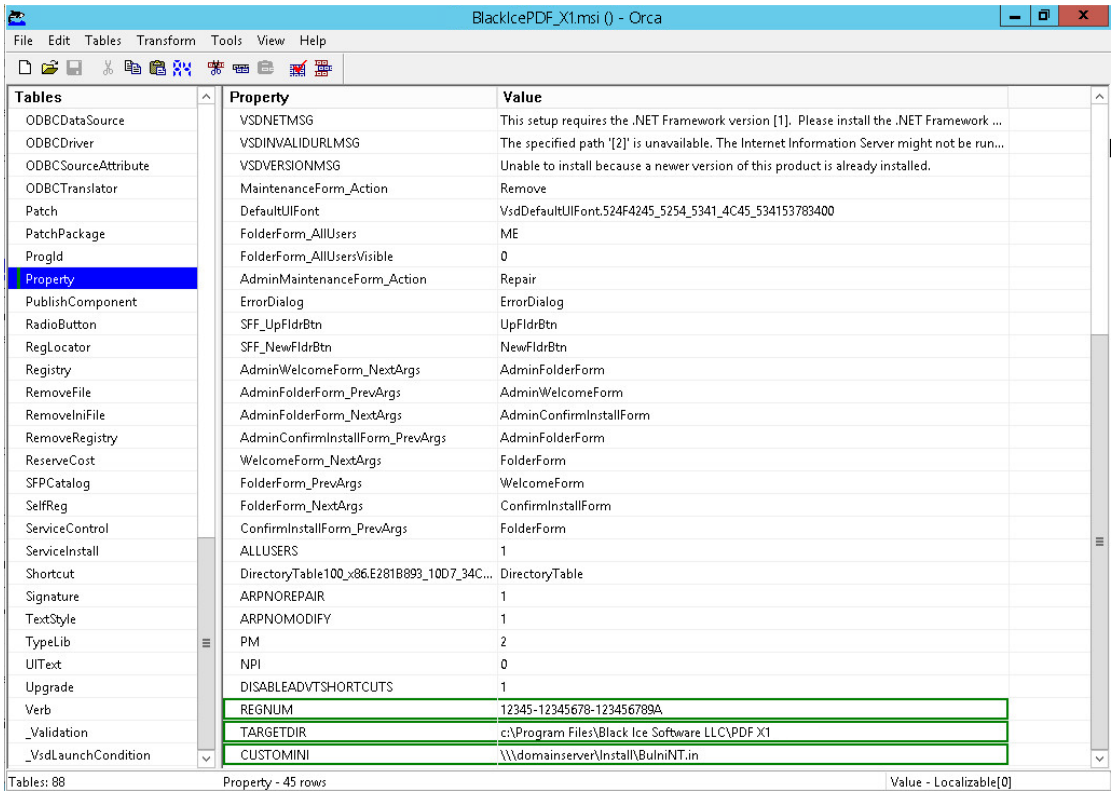
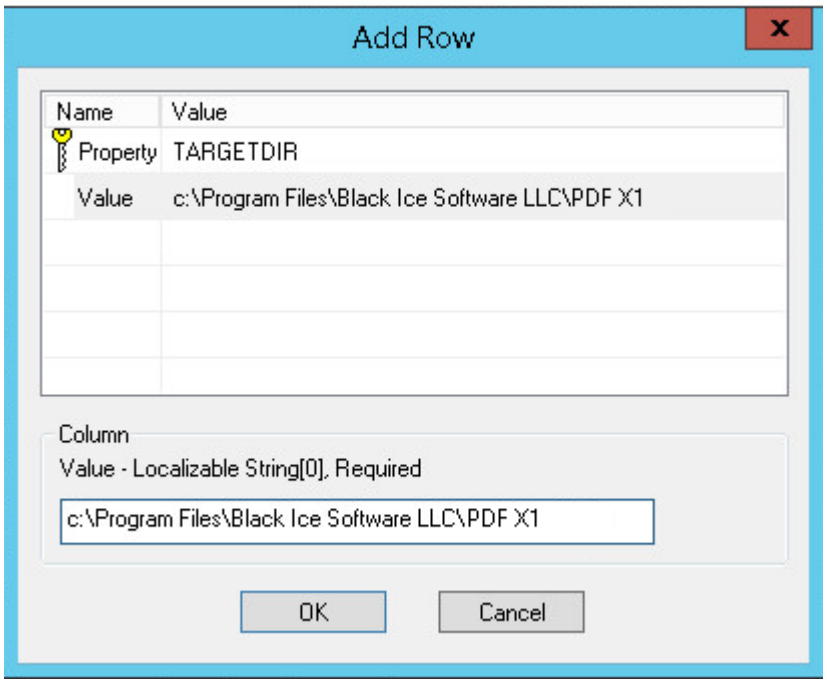


Figure 1

5. From the Table menu, select Add Row to display the Add Row dialog box.
6. Select Property name. You can specify the property names described above. For example, TARGETDIR, REGNUM, CUSTOMINI, PRINTERNAME… etc.
7. Select Value and enter Property Value, for example the Target directory in most systems is the c:\Program Files\Black Ice Software LLC\PDF X1.



8. Click OK.
9. Save Transform by clicking Transform\Generate Transform… sub-menu. For Example: "PDF_X1.mst" transform file.

Assign the transform file(s) in the Group Policy Manager when specifying the deployable software package (MSI).

If installing the PDF X1 Printer Driver from command line, the transformation file can be entered like this:

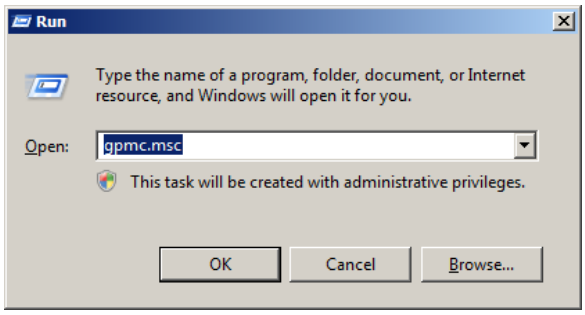
msiexec.exe /i "BlackIcePDF_X1.msi" TRANSFORMS="PDF_X1.mst" /q

How to set up a Group Policy Object for installing PDF X1 Printer Driver MSI on domain computers automatically

1. Copy the Install packages to a network share that **can be accessed from the computers** where the software needs to be installed.

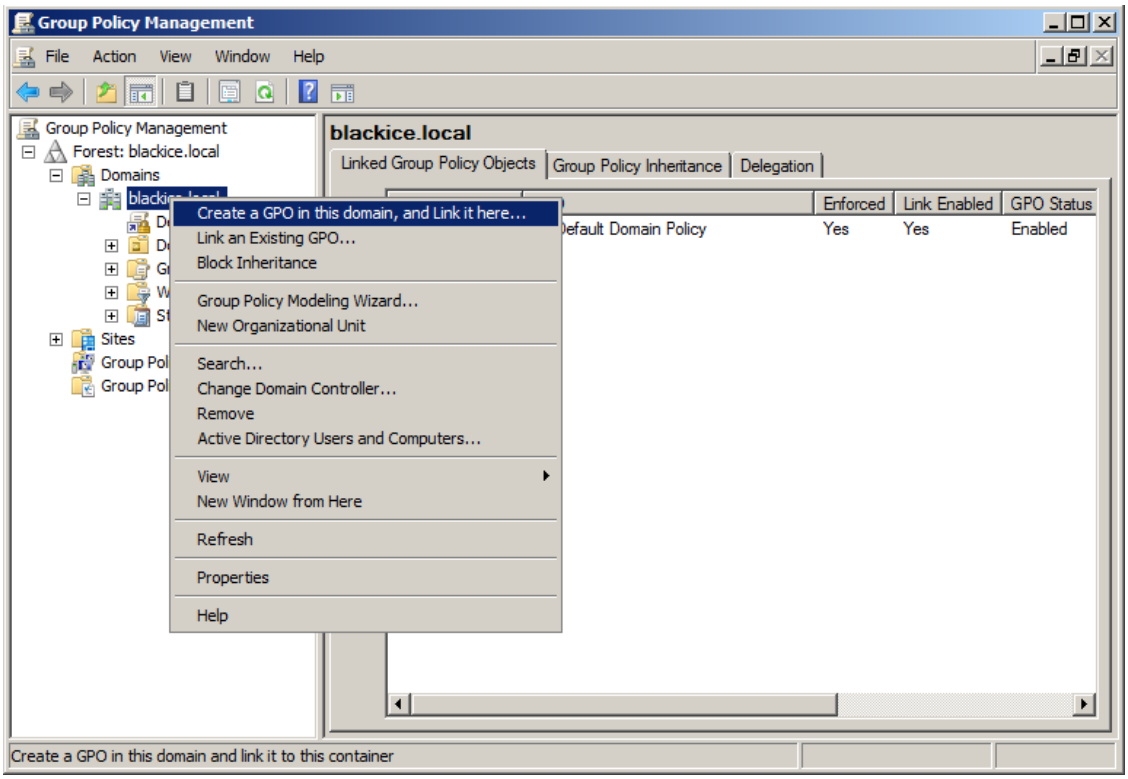
2. To set up a *Group Policy Object, start* the *Group Policy Management console* on a Domain controller computer.

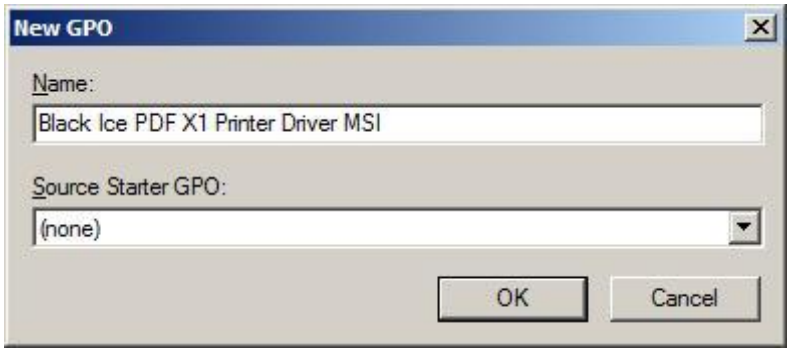
   Run *gpmc.msc*



3. Create a new Group Policy

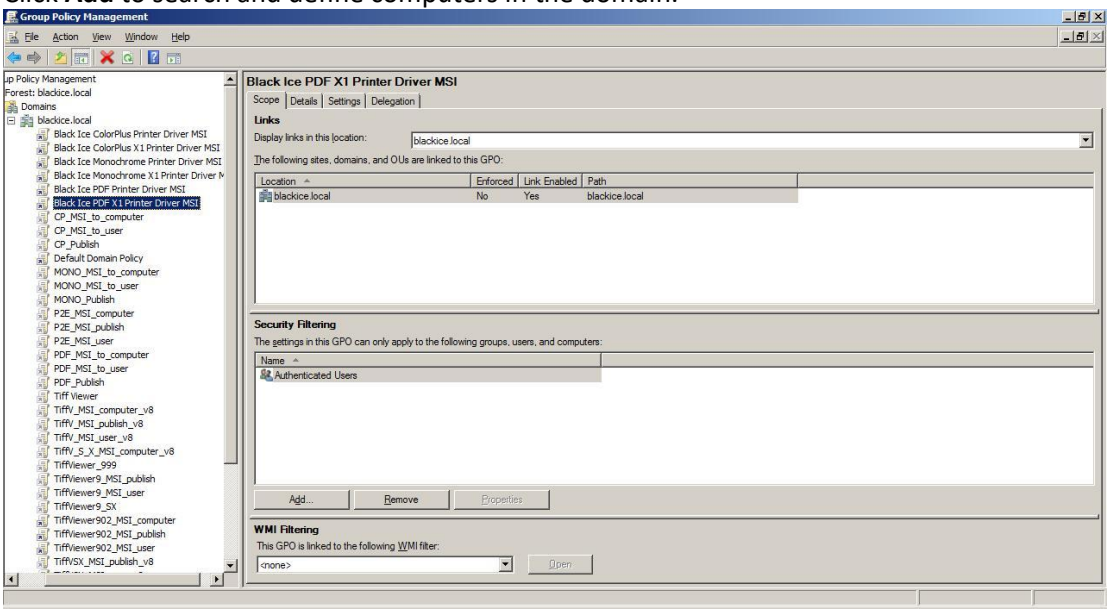
   Left click on the desired Domain and select "*Create a GPO in this domain, and Link it here…".* Define a new GPO by defining the name and press OK.



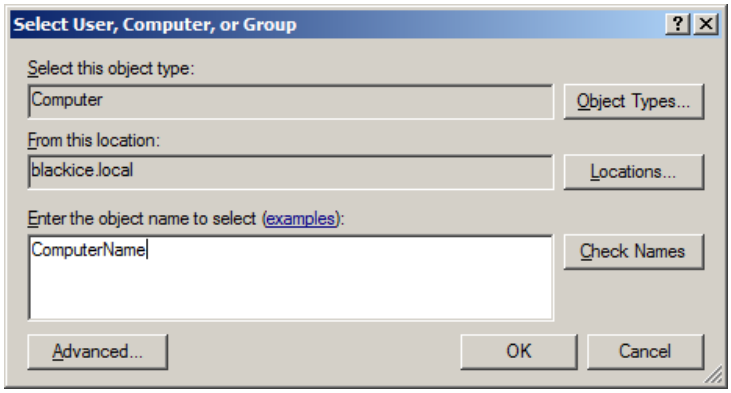


4. Define computers for the GPO.

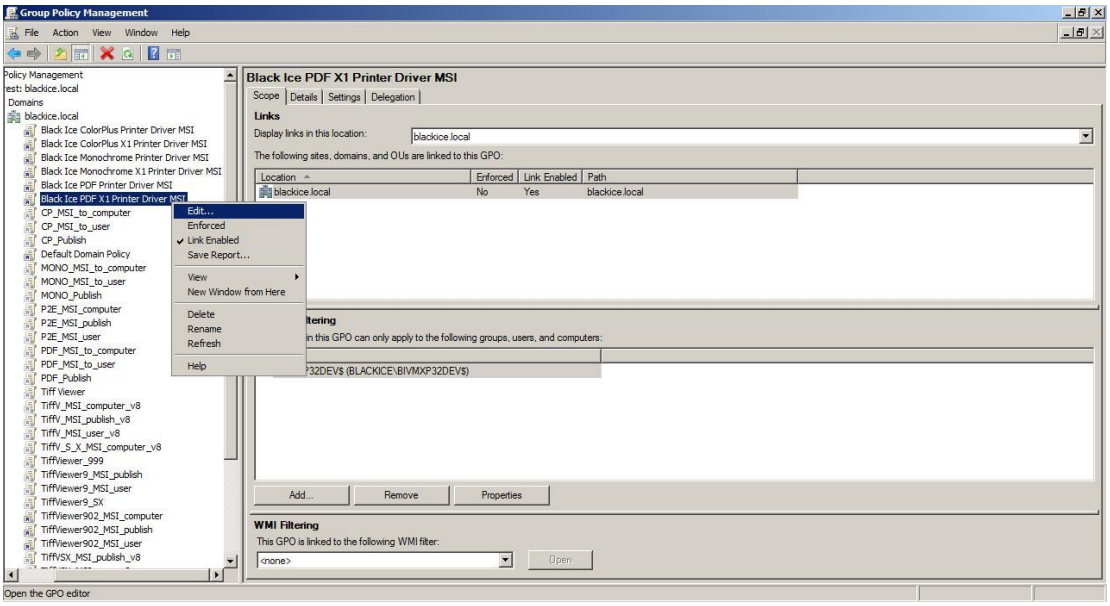
   Remove the default Groups and Users from the **Security Filtering Options**.
   Click **Add** to search and define computers in the domain.



5. Add computers

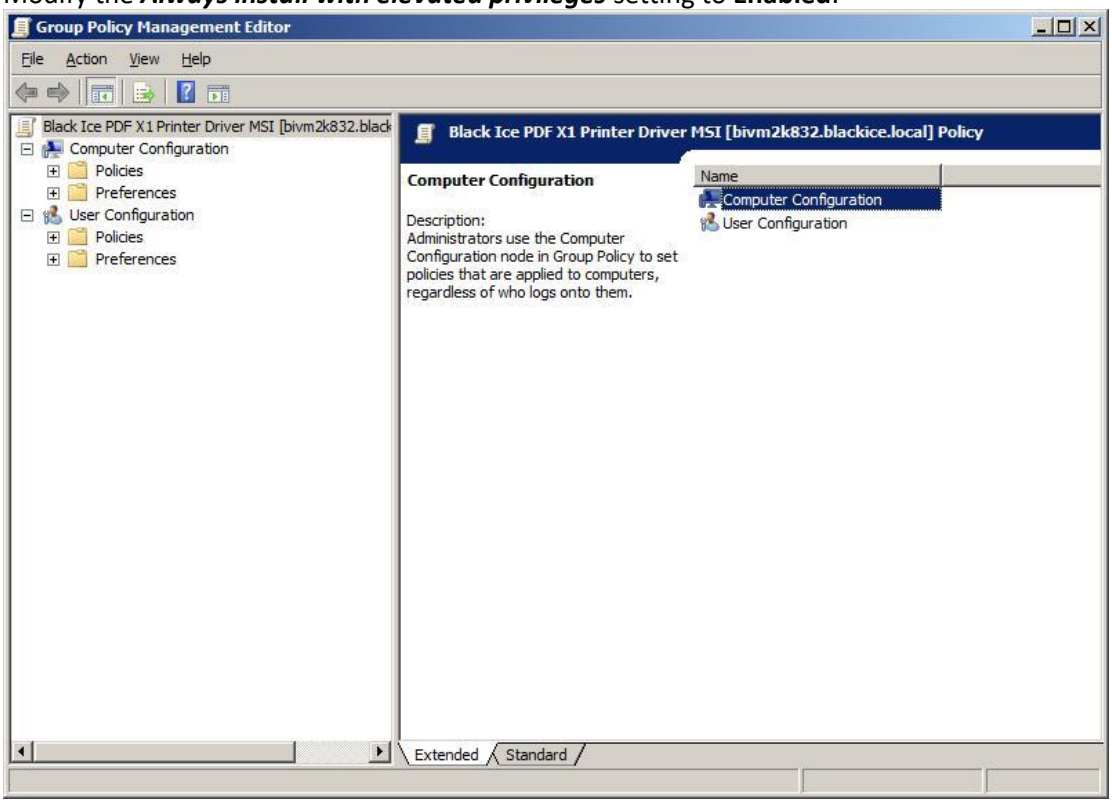


6. Edit Group Policy Object by left clicking on the GPO name and selecting **Edit**.



7. Change Privilege for the installation
   Navigate to: ***Computer Configuration \ Policies \ Administrative Templates \ Windows Components \ Windows Installer*.**

   Modify the ***Always install with elevated privileges*** setting to **Enabled**.

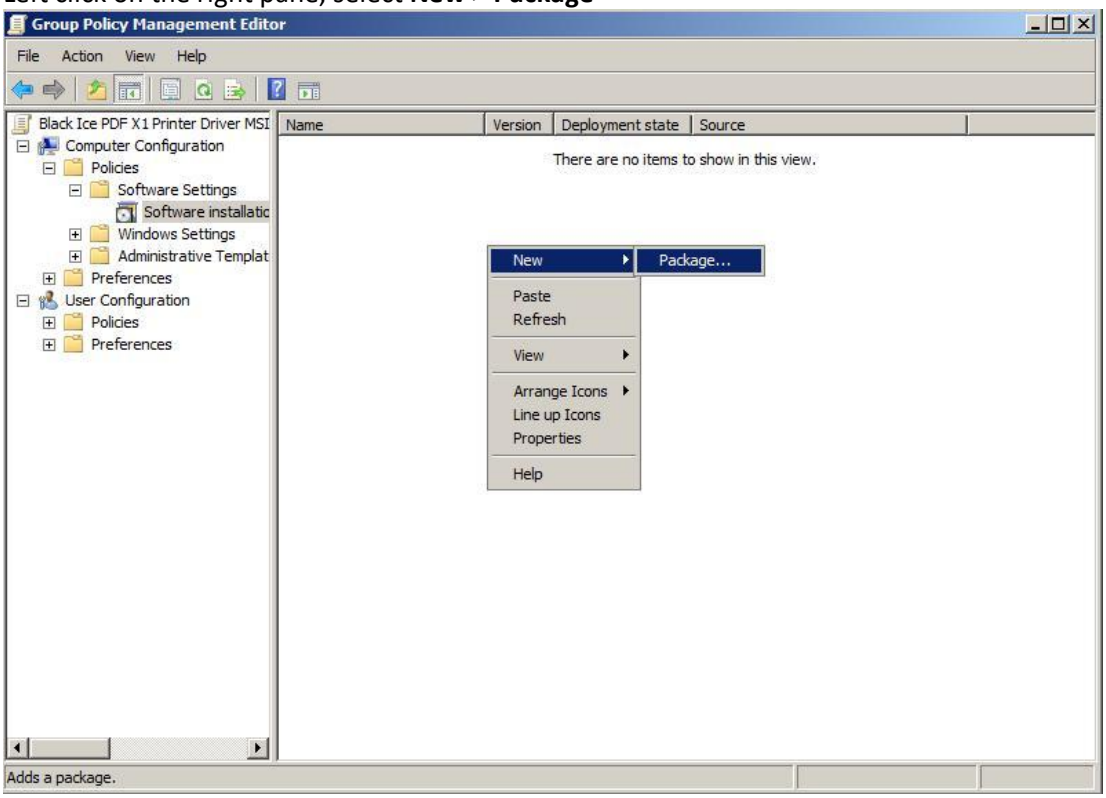


8. Prepare the mst configuration file with ORCA to be used with the install package.

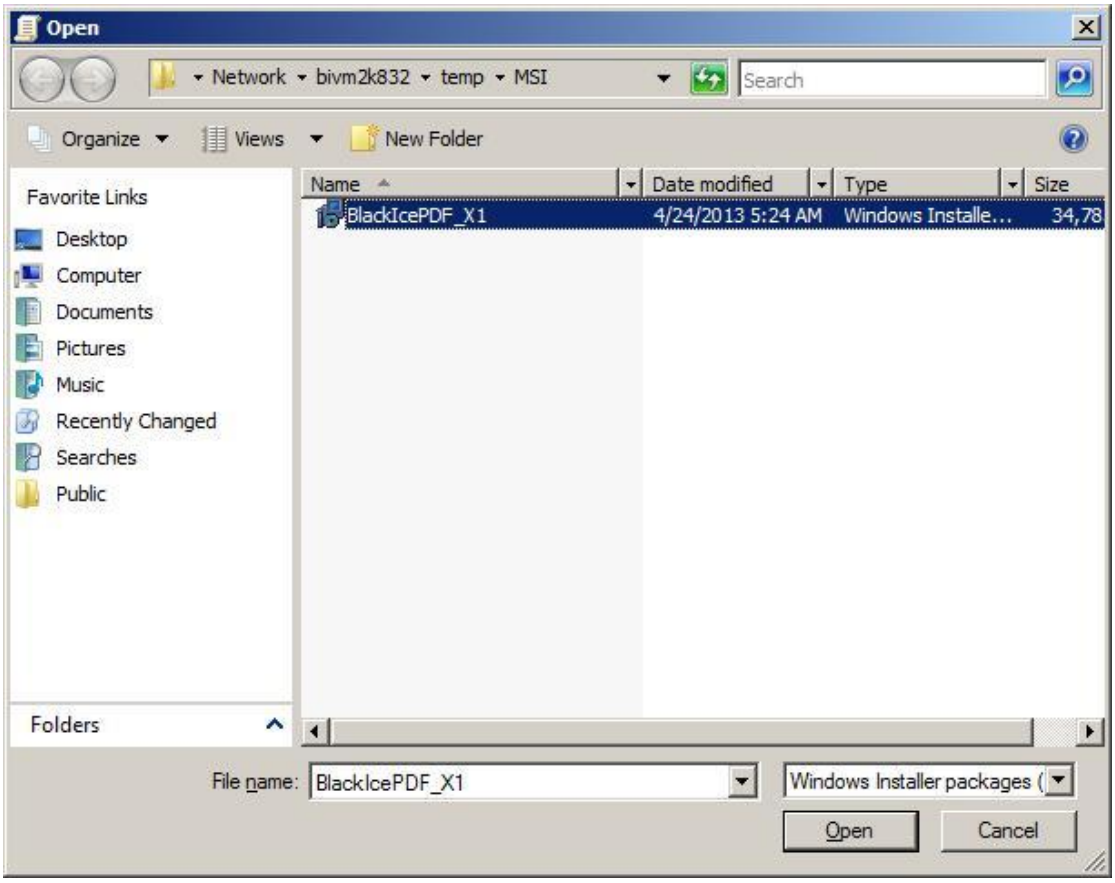
See the **How to create MST (transform file) for GPO deployment** section of this documentation.

9. Add the PDF X1 Printer Driver MSI installer package.
   Navigate to: ***Computer Configuration \ Policies \ Software Settings \ Software installation***

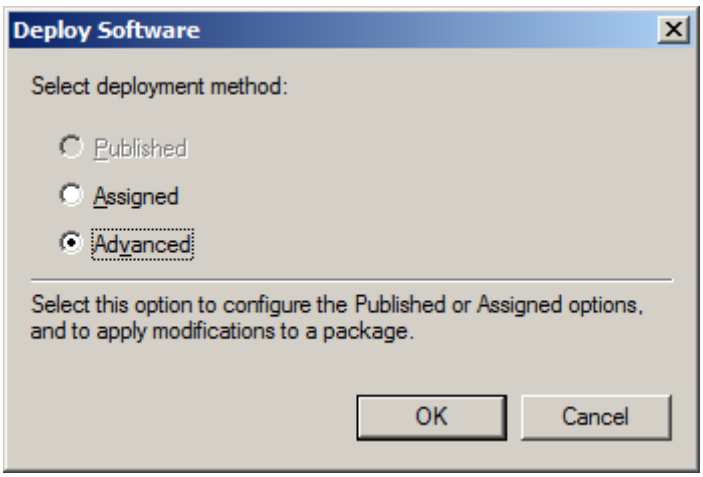
   Left click on the right pane, select **New > Package**



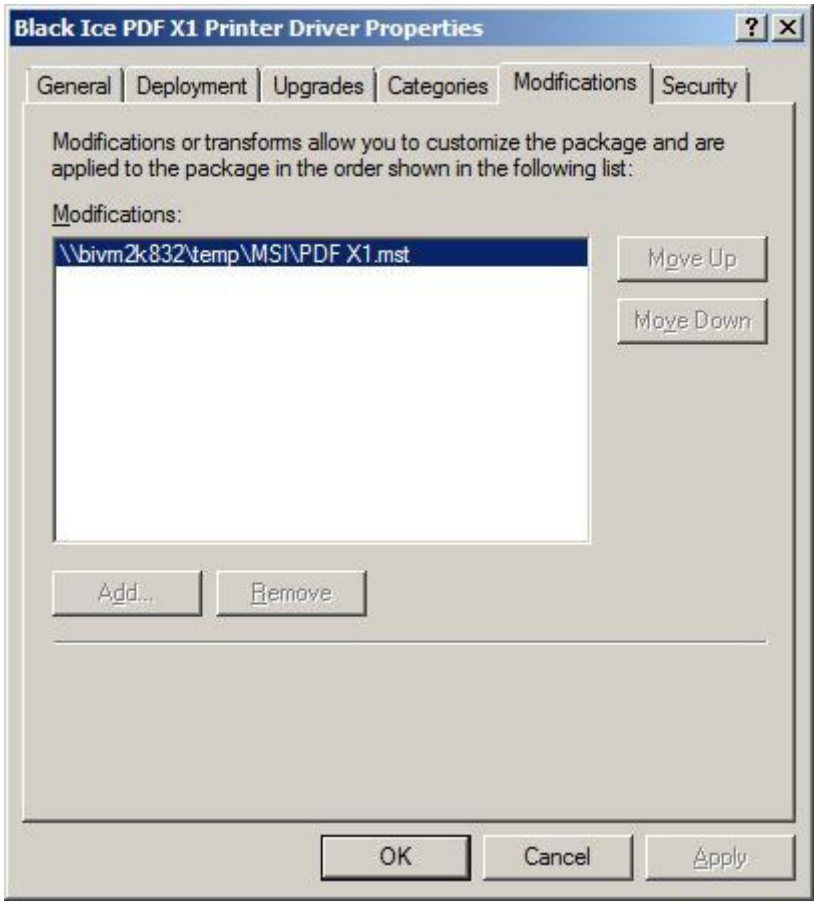
10. **Copy the Install packages to a network share** which is accessible from the computers where the software needs to be installed.



11. Select **Advanced** Software Deployment.

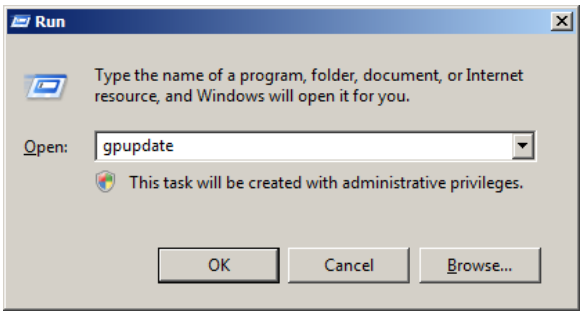


12. On the Modifications tab, please **add the previously created mst** file with the REGNUM and optionally the TARGETDIR or other properties. Click OK.



13. To Update the *Group Policies Object* please run the following command on the

    Run *gpupdate*

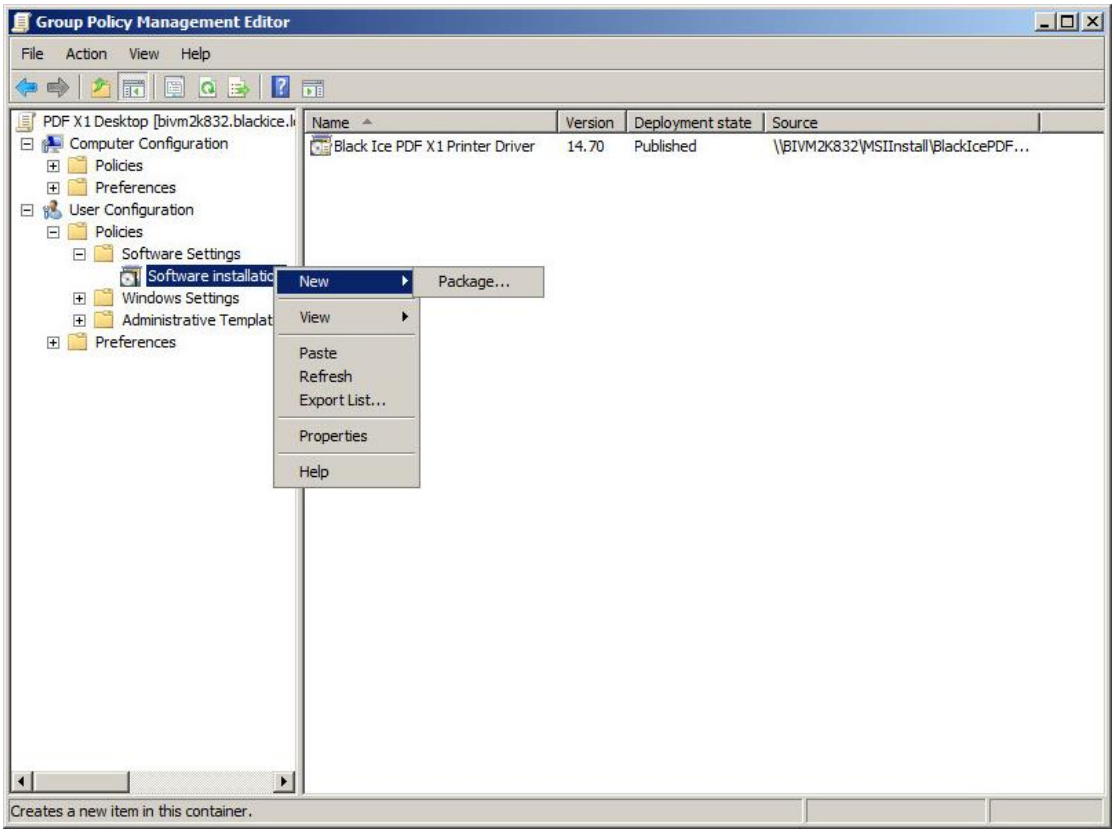


14. Restart the client computers to install the software.

How to upgrade existing installation of PDF X1 Printer Driver using Group Policy Object

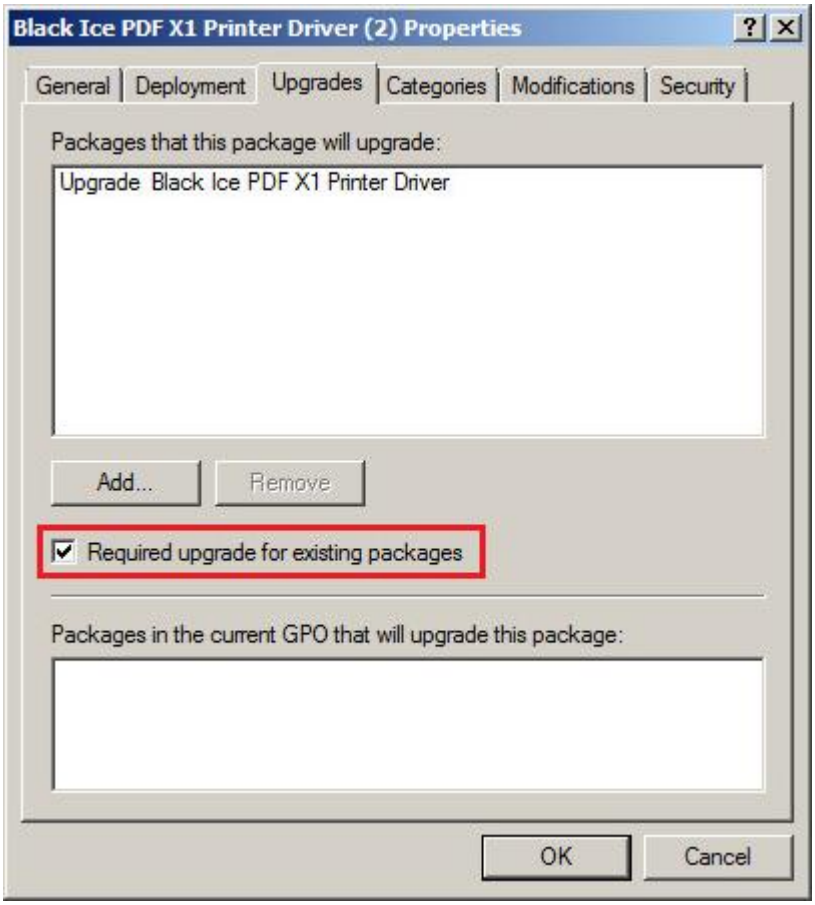
One needs to add the new version of PDF X1 Printer Driver as a Software Package to the same Group Policy Object where the previous version of PDF X1 Printer Driver is located.

1. Navigate to **Policies > Software Settings > Software installation**



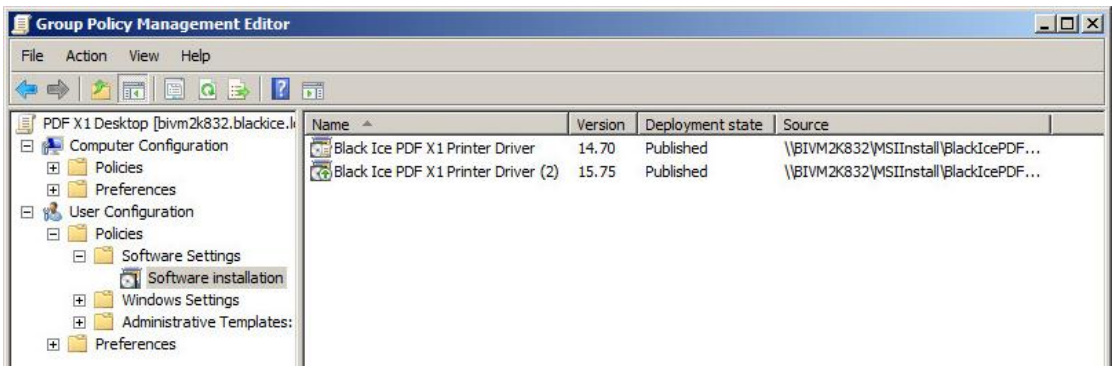
2. Right click in the open area, choose **New > Package...**
3. Navigate to the new version of the PDF X1 Printer Driver MSI you want to use to upgrade your existing installations.

4. In the **Upgrades** tab select "**Required upgrade for existing packages**".



The rest of the settings should be the same as the old version of the PDF X1 Printer Driver software package.

5. When the Group Policy Object configuration is finished the **Software installation** window should look similar to the picture below:

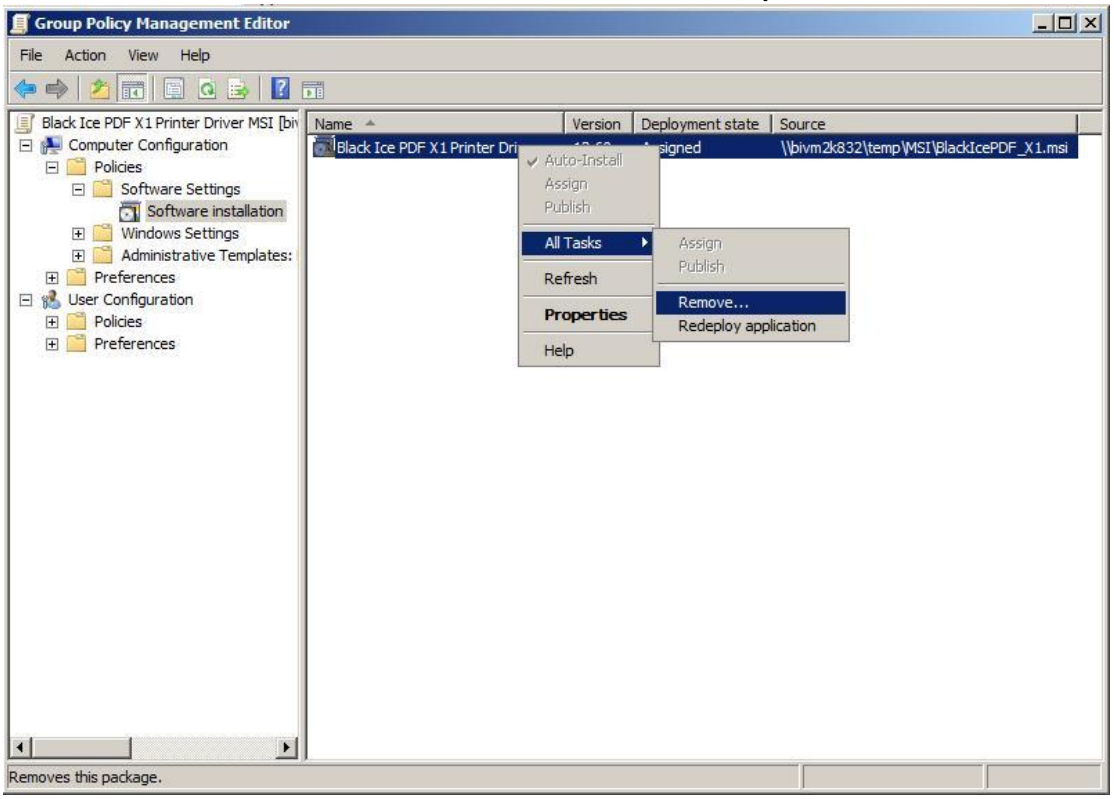


How to uninstall the PDF X1 Printer Driver MSI from computers with the Group Policy Object

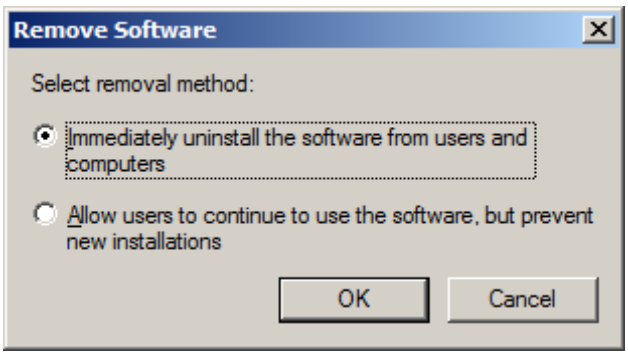
1. Navigate to and Edit the previously created Group Policy Object by left clicking on the GPO name and selecting **Edit**.

2. Select the PDF X1 Printer Driver MSI installer package.
   Navigate to: ***Computer Configuration \ Policies \ Software Settings \ Software installation***

   Left click on the PDF X1 Printer Driver MSI and select **All Tasks \ Remove…**



3. Select **Immediately Uninstall the Software from users and computers** option to remove the software from the computers.



4. Restart the client computers to uninstall the software.

Note: Please make sure the new Group Policy has been updated on the client computers. In certain situations the client computers might need to be rebooted twice.

Uninstall Printer Driver silently with the BiUninstaller Utility through Group Policy

The BiUninstaller can delete/remove the Licensed and OEM Black Ice printer drivers in silent mode.
The OEM printer driver can be deleted or removed from a system if the OEM printer driver components were not renamed.

Please Note: The BiUninstaller utility will not free up the license associated with the system/computer.

How to use:
Please use the following command for automatically uninstall the selected Black Ice product from the computer:
BiUninstaller.exe /q [Product ID]

Product ID	Product
1	Every Black Ice product
2	Printer Drivers
3	Tiff Viewer
4	Print2Email
5	BiBatchConverter
6	Document Converter
7	Print2RDP Server
8	Print2Desktop

To uninstall the **Every Black Ice product** silently, please run the BiUninstaller with the following parameter:

BiUninstaller.exe /q **1**

To uninstall only the **Black Ice Printer Drivers** silently, please run the BiUninstaller with the following parameter:

BiUninstaller.exe /q **2**

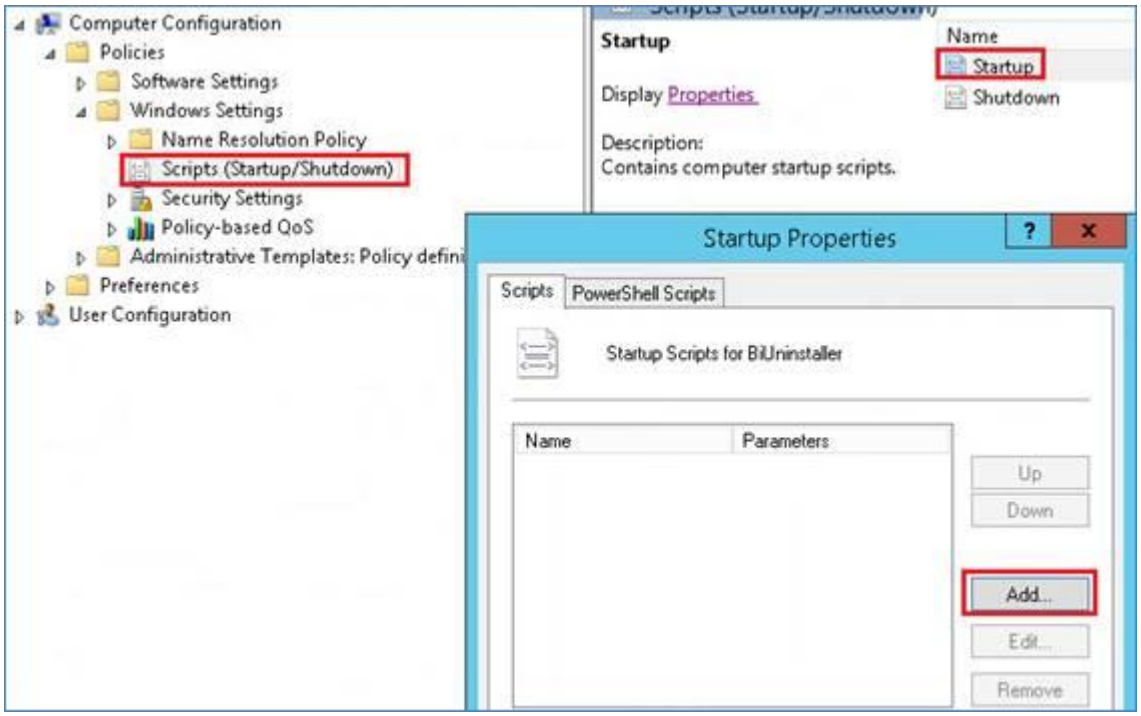
To uninstall only the **Tiff Viewer** silently, please run the BiUninstaller with the following parameter:

BiUninstaller.exe /q **3**

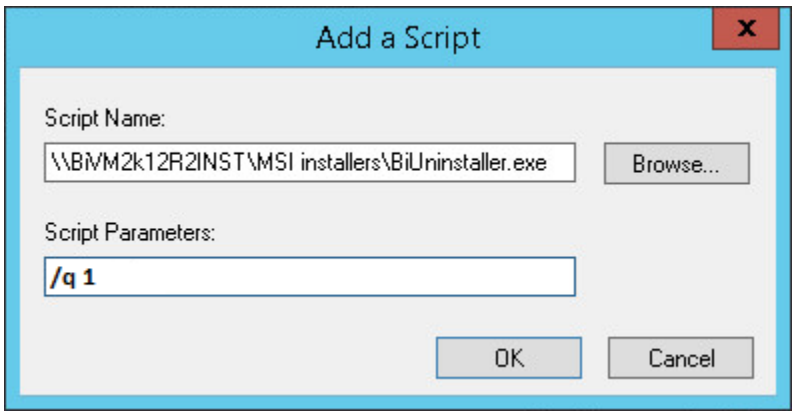
Example for the Group Policy login script:

Copy the BiUninstaller.exe to the shared directory.

Open the Group Policy Management and add new logon script:



Add Script Name:
[Shared directory path]**BiUninstaller.exe**
Add Script Parameters (For example, Uninstall Every Black Ice Product):
/q 1



Click on the **OK** button and then **Apply** on the Startup Properties window.

Note:

The computer restart may will be required, although you can restart the machine later to finish the uninstall process.
If computer restart required, you **MUST** restart the computer **before you install the new version** of the printer driver.

Requirements:

- Microsoft .NET Framework 4.0 or higher version
http://www.microsoft.com/en-us/download/details.aspx?id=24872

If you have successfully run the BiUninstaller utility in silent mode please try to install the Black Ice Product on the system.

Intune Deployment of product using MSI Packages

This section includes a step-by-step description on how to deploy the Printer Driver MSI package to enrolled users and devices with the help of Microsoft Intune.

Install the MSI installer with the “Line-of-business app” option

Install the MSI installer with the Windows app (Win32) option

Sync an app to the enrolled device

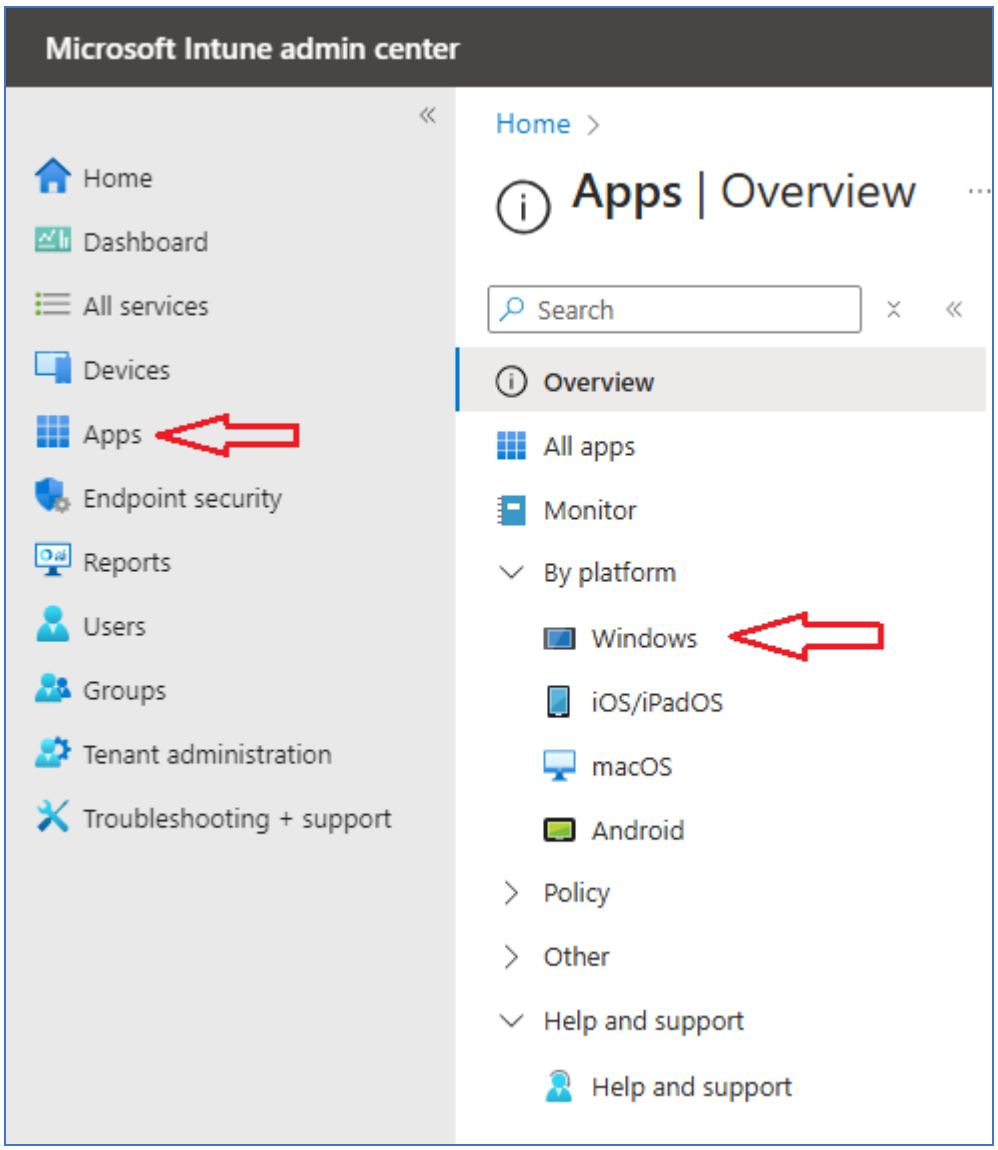
Status/Monitoring – Intune MSI Application Deployment

Update/Upgrade a Printer Driver

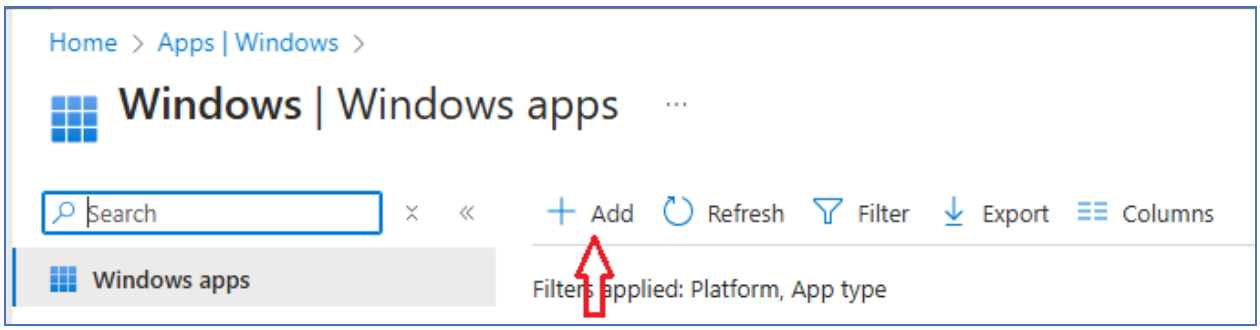
Uninstall a Printer Driver

Install the MSI installer with the "Line-of-business app" option

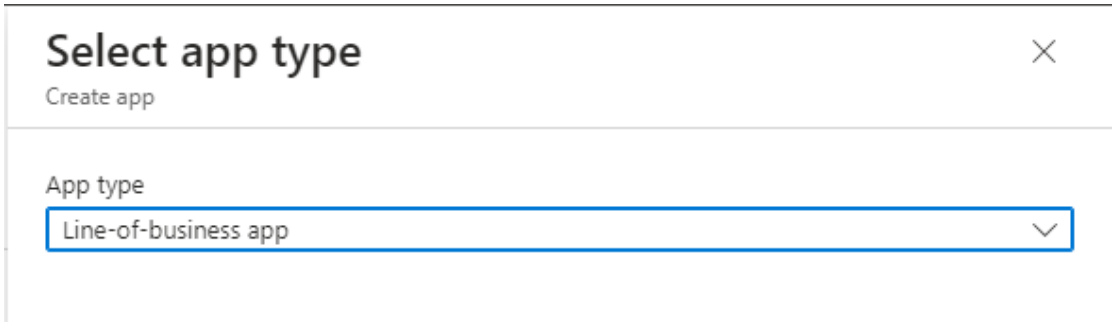
Login to [Microsoft Intune admin center]
Navigate to the Apps -> Windows:



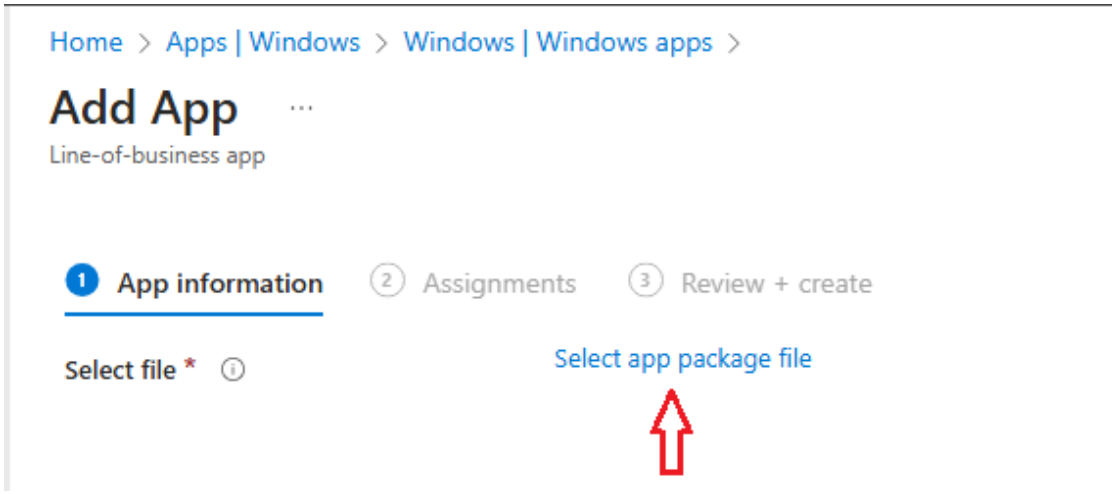
Click on **+Add** to add a new Intune application for deployment.



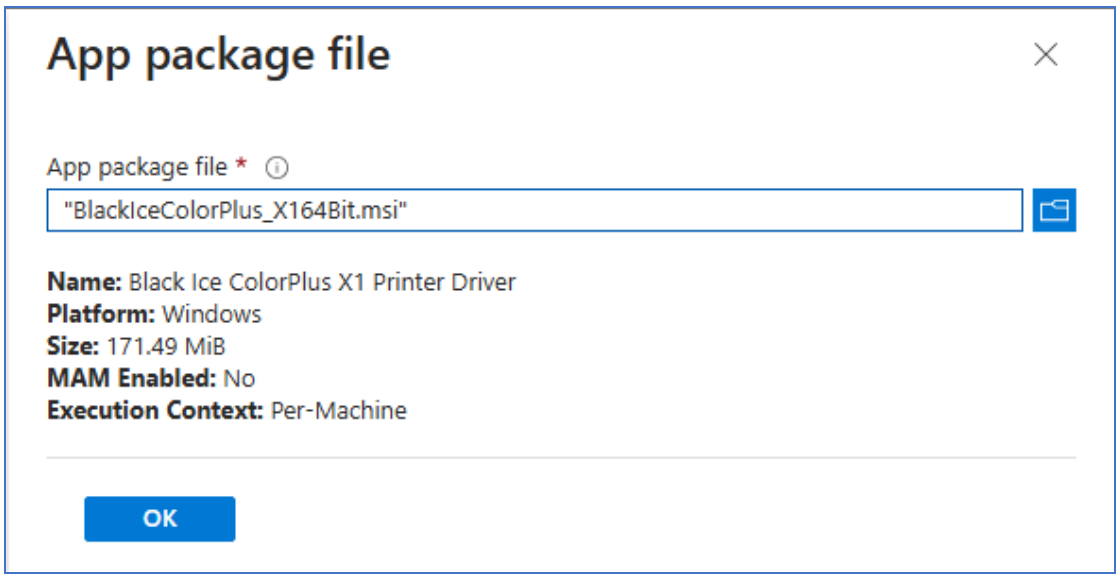
Select the **Line-of-Business app** - App Type drop-down menu from the Add app.



Click on the “Select app package file” to upload the BlackIceColorPlus_X164Bit.msi file to Intune.:

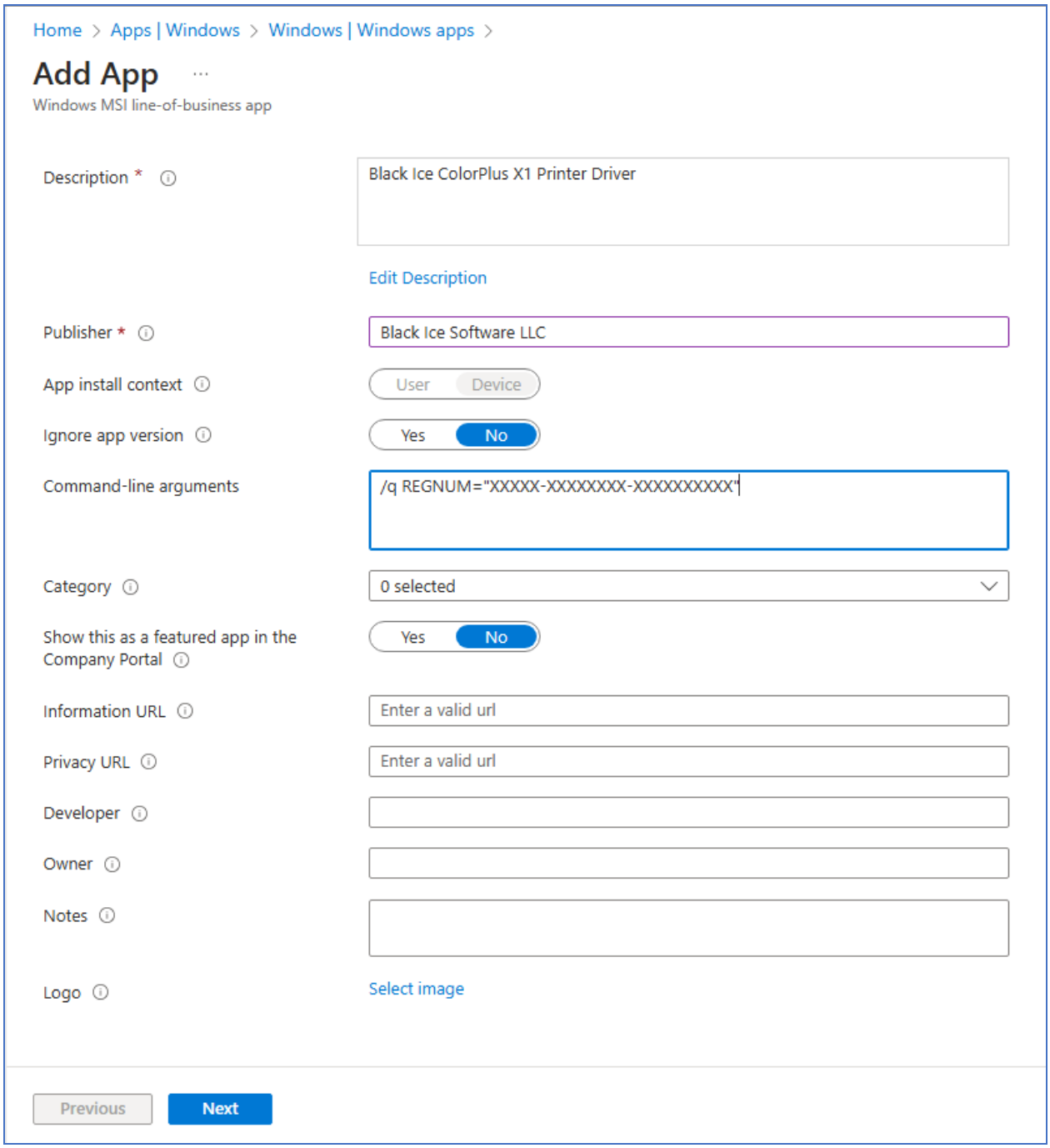


On the App package file, check out the following settings Name:



Click on OK on the App Package file.

Click on the App Information option from Add App in Intune Application Information Details.



Fill in the following information details in App Information.
Command-line Argument: /q REGNUM="XXXXX-XXXXXXXX-XXXXXXXXXX"
Note: the XXXXX-XXXXXXXX-XXXXXXXXXX must be the serial number of the customer.

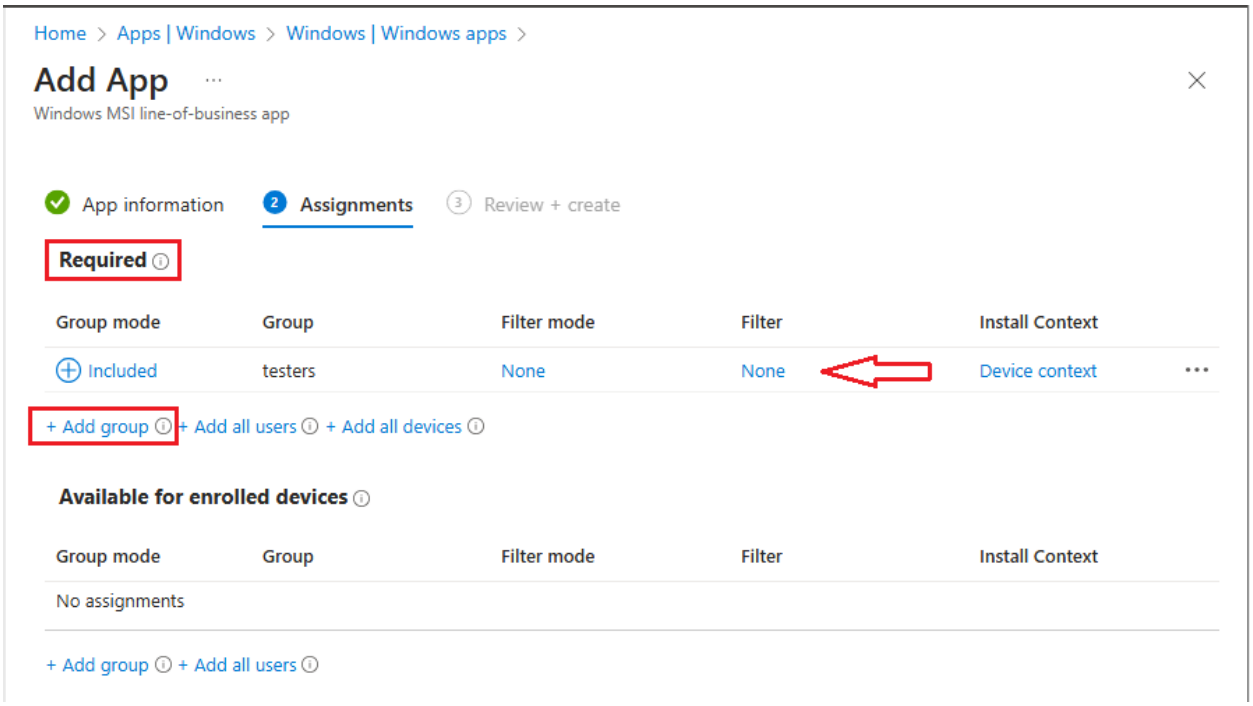
After filling in the information, click the Next option.
The next page will appear for Intune MSI Application Deployment - Assignment Options.

Click on the Add Group button from the Assignment tab of the application created.

Select groups where you want to assign this app from Add Group.
There are 3 (three) Assignment types - Select one assignment type.
You can deploy the MSI application to **some group of devices** or **users** as required.

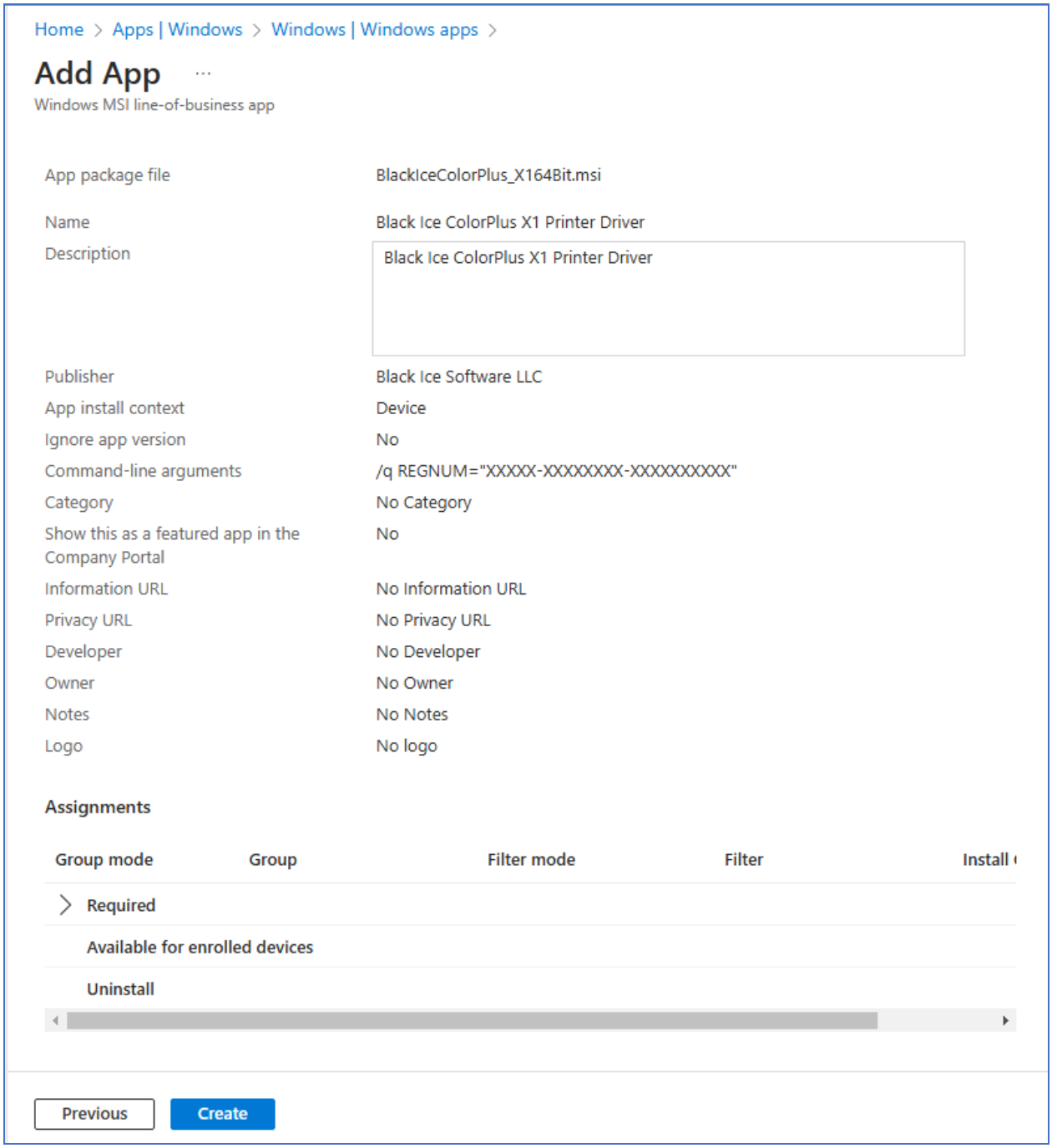
The MSI application is per machine then it will get installed in the machine context.
Select Required or Available for Enrolled Devices.
Click on Included Groups from **Add Group**.

Select the groups you want to make this app required or available from Assign.
Click on Select Groups to select a Group for the required assignment from Assign.
Search the Device/user Group in the search option in Select Groups and select the DEVICE/USER group that you want to deploy.



Click **Next** to save the Assignment.

On the following page, Review the values and settings you entered for the app.

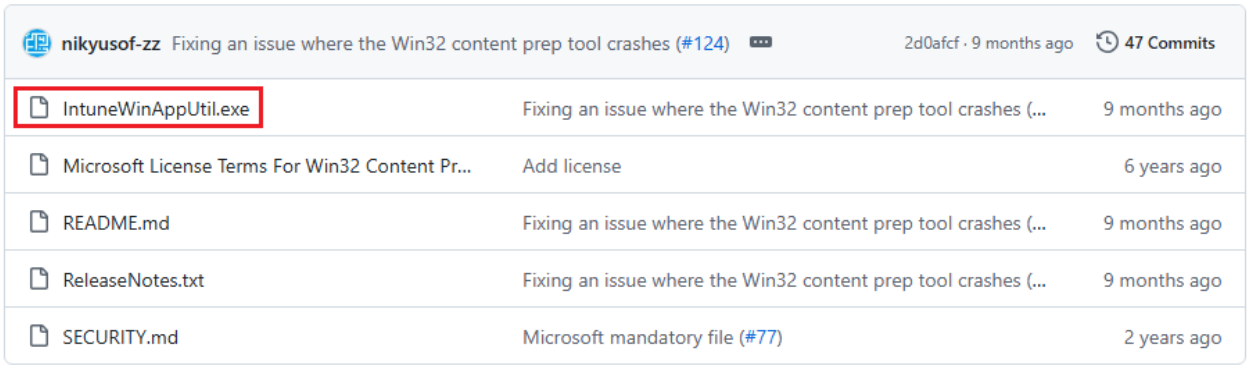


When you are done, click **Create** to add the app to Intune.

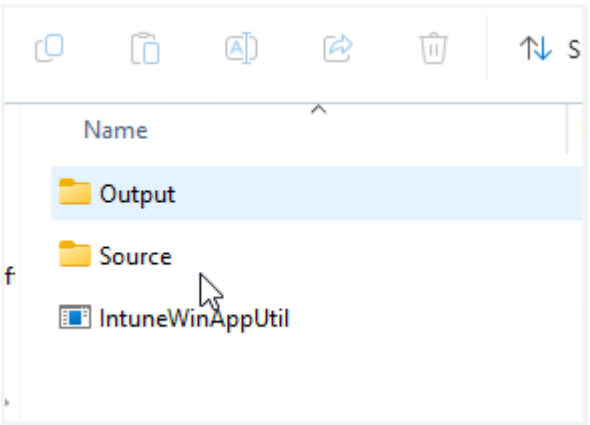
Install the MSI installer with the Windows app (Win32) option

First, the .MSI package needs to be converted into an .INTUNEWIN format so it can be uploaded to Intune.

Download the Microsoft Win32 Content Prep tool from Microsoft's official link. This tool is essential for converting your .MSI files into .INTUNEWIN format, suitable for Intune.



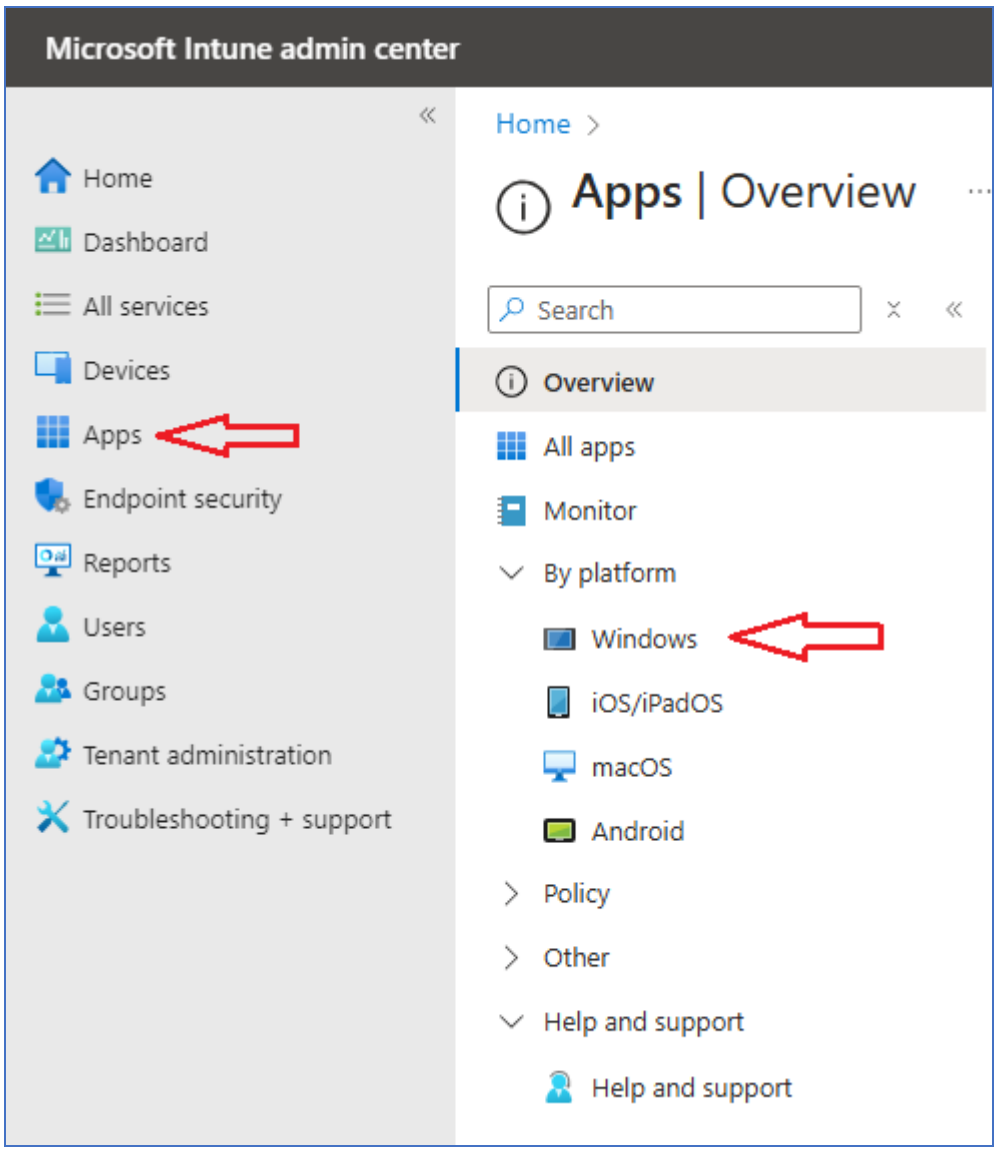
Organize Your Files: Create a dedicated folder, such as 'Microsoft Win32 Content Prep', and within it, establish Source and Output subfolders for better management of the original and converted files.



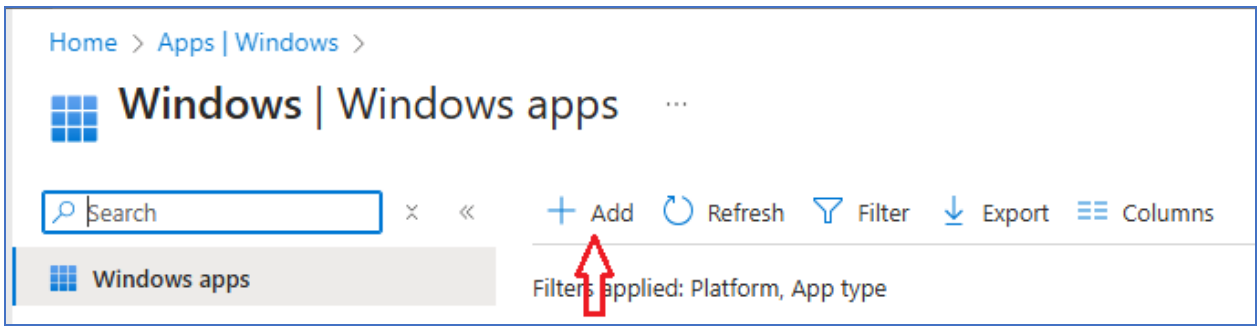
Run the **IntuneWinAppUtil** tool with the following parameters:
IntuneWinAppUtil.exe -c "C:\Microsoft Win32 Content Prep\Source" -s "BlackIceColorPlus_X164Bit.msi" -o "C:\Microsoft Win32 Content Prep\Output"

The **Output** folder contains the .INTUNEWIN file for installation.

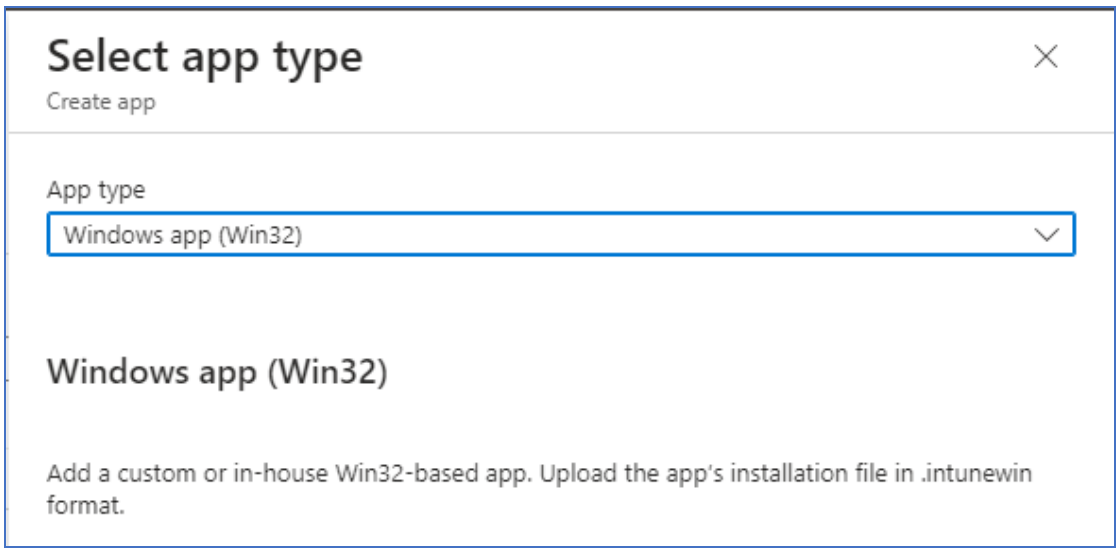
Login to Microsoft Intune admin center
Navigate to the Apps -> Windows:



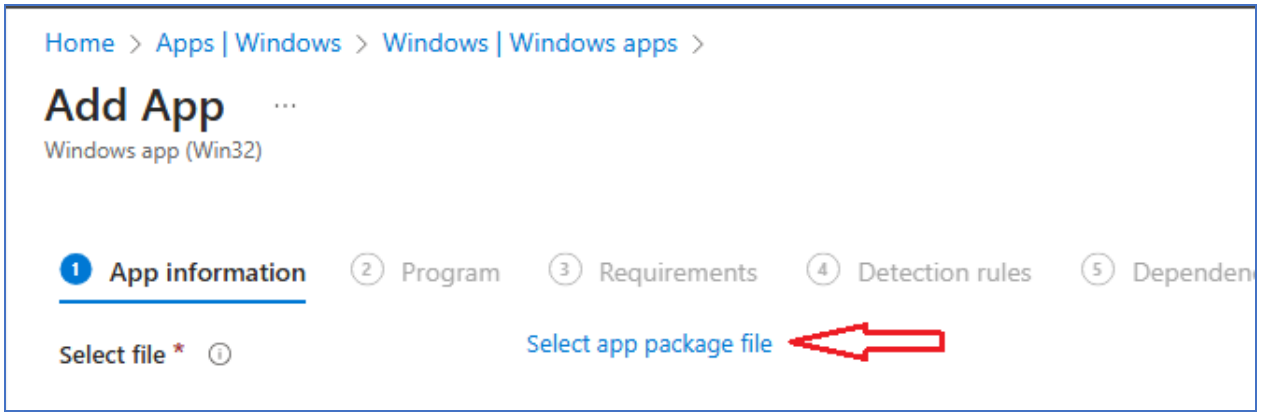
Click on **+Add** to add a new Intune application for deployment.



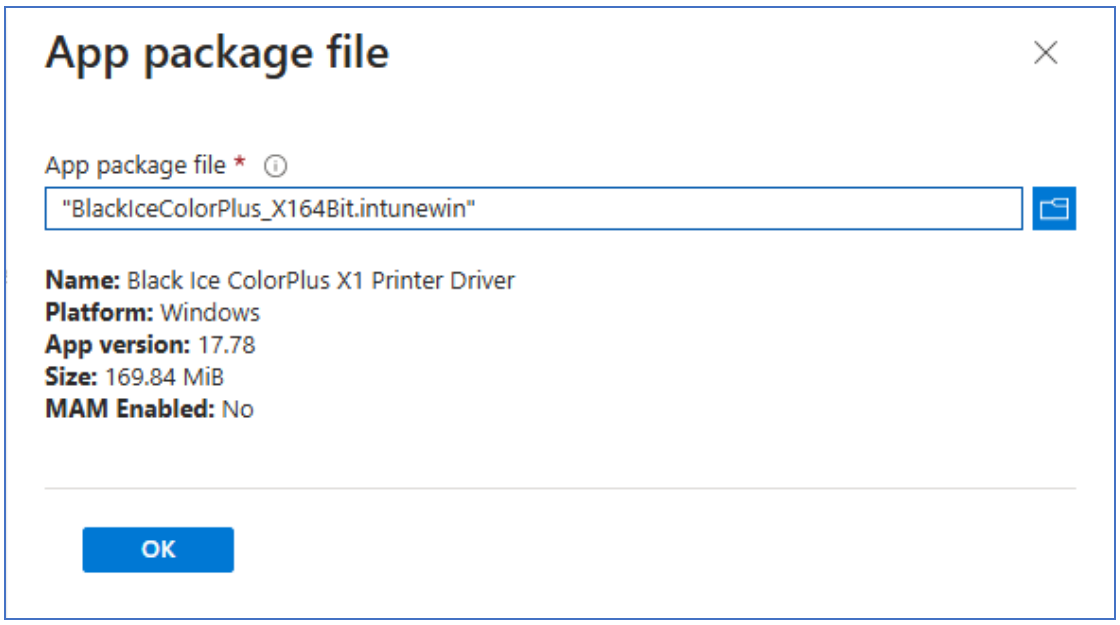
Select the **Line-of-Business app** - App Type drop-down menu from the Add app.



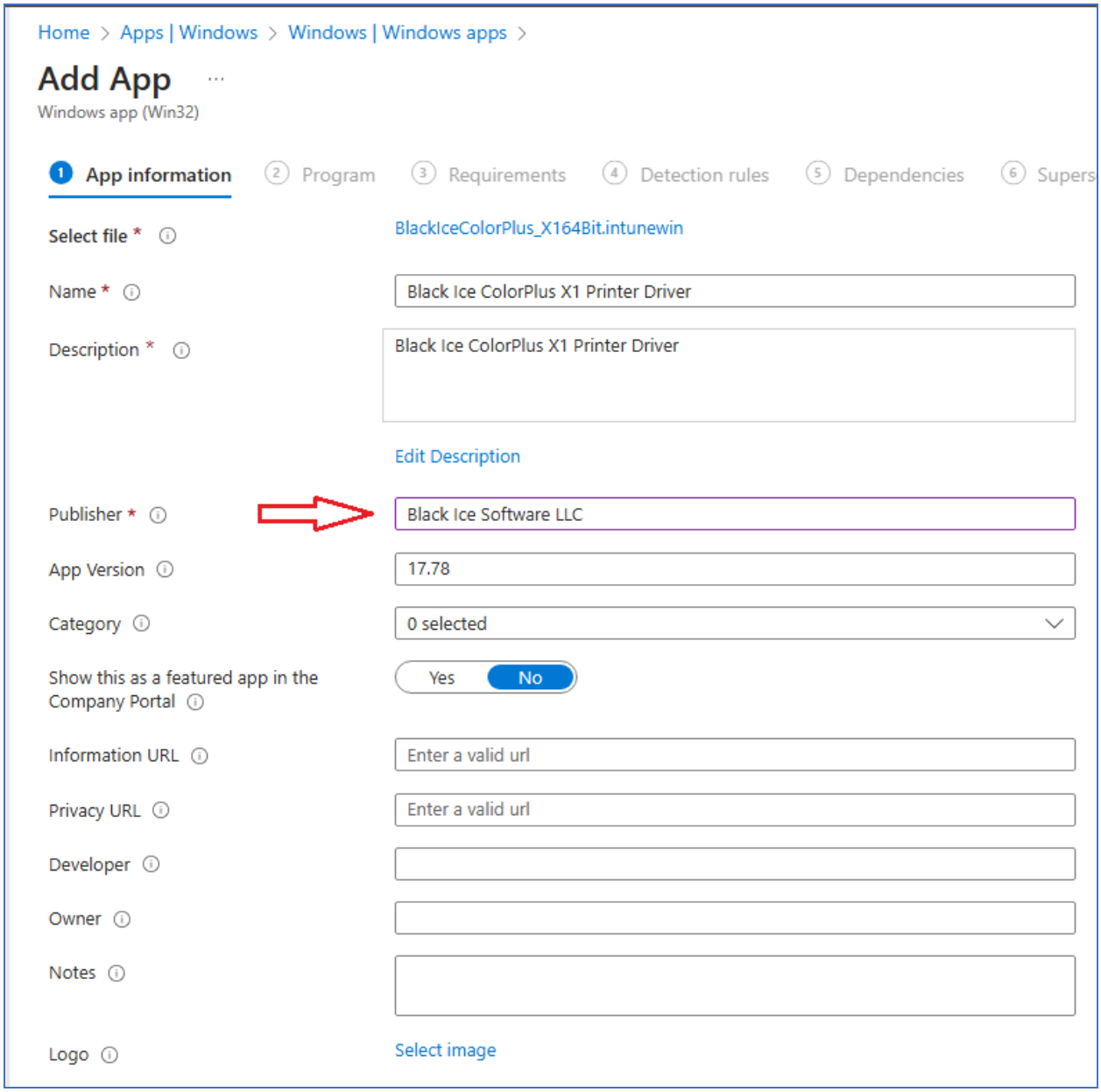
Click on the “Select app package file” to upload the BlackIceColorPlus_X164Bit.intunewin file to Intune.:



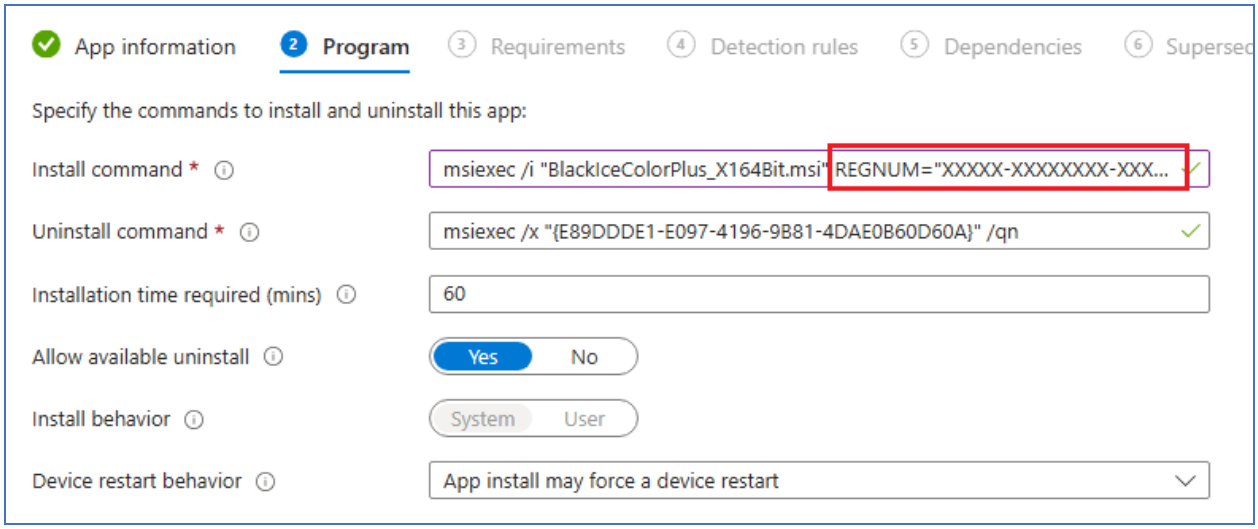
On the App package file, check out the following settings Name:



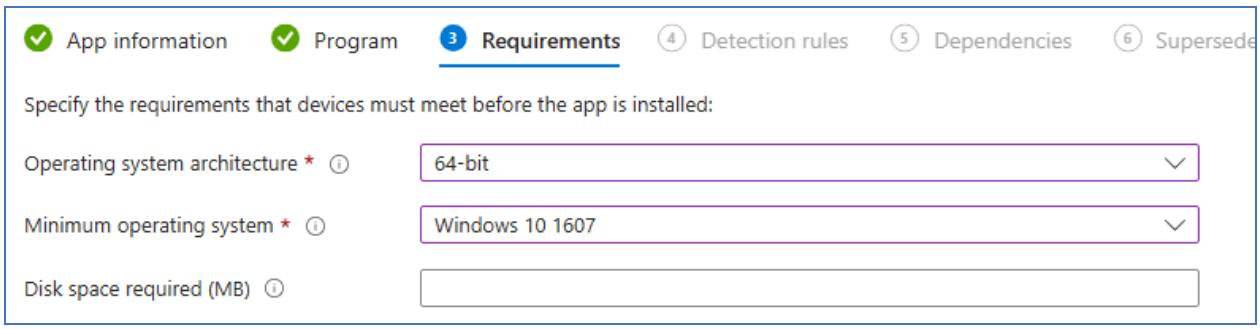
Click on OK on the App Package file.
Click on the **App Information** option from Add App in Intune Application Information Details.
Need to specify the Publisher field.



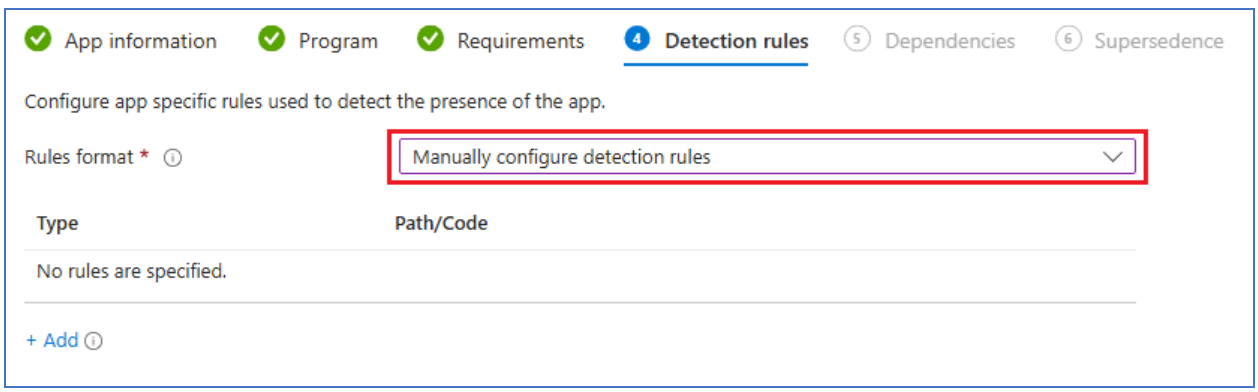
The Intune automatic field is the Install and Uninstall command field.
Important: Add the REGNUM="XXXXX-XXXXXXXX-XXXXXXXXXX" to the Install command field.
Note: the XXXXX-XXXXXXXX-XXXXXXXXXX must be the serial number of the customer.



On the Requirements page, specify the rules for the app to be installed on the device. I am going to require 64-bit for Operating System architecture and the Minimum operating system of Windows 10 1607. Specify the best choices based on your company's needs.

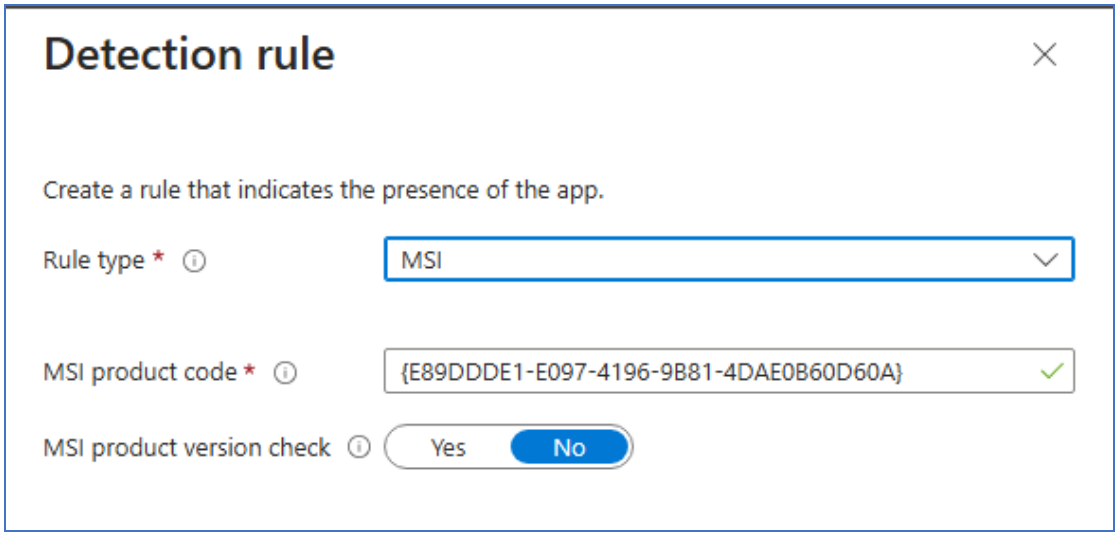


Next, the **Detection rules** allow us to check the device to see whether the application being deployed is already on that device or not. If the application version is already on that device, it will not install. However, if nothing is detected it will go ahead and deploy. There are two options: one is to Manually configure detection rules and the other is to use a custom detection script. We will use Manually configure detection rules > + Add:

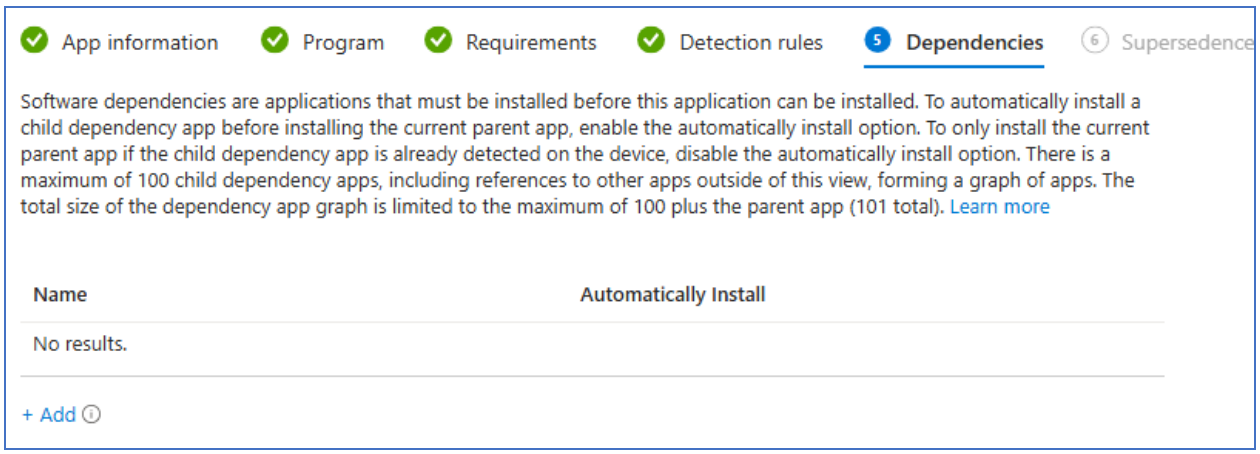


There are three Rule types to choose from: MSI, File, and Registry. Since we used an MSI package, it will automatically populate the MSI product code, so we will go ahead and click MSI.

See the rule here requires using the MSI Product code and I have the option to use the MSI Product version check. We will not need it in this case.

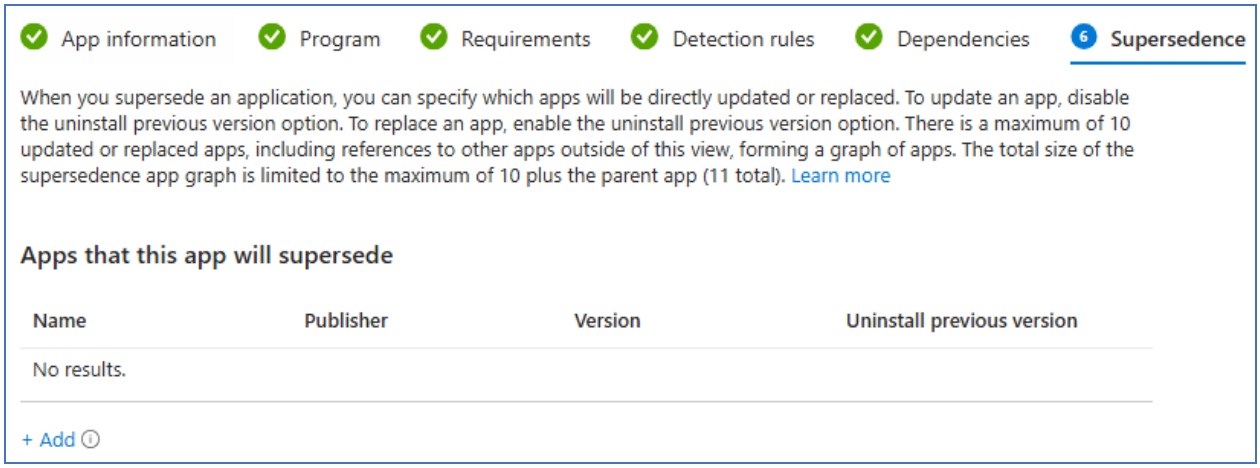


Next, **Dependencies** enables us to add apps that might need to be paired together for this application to be installed. We are selecting no dependencies in this case.



Next, **Supersedence** enables us to specify which apps will be either updated or replaced.

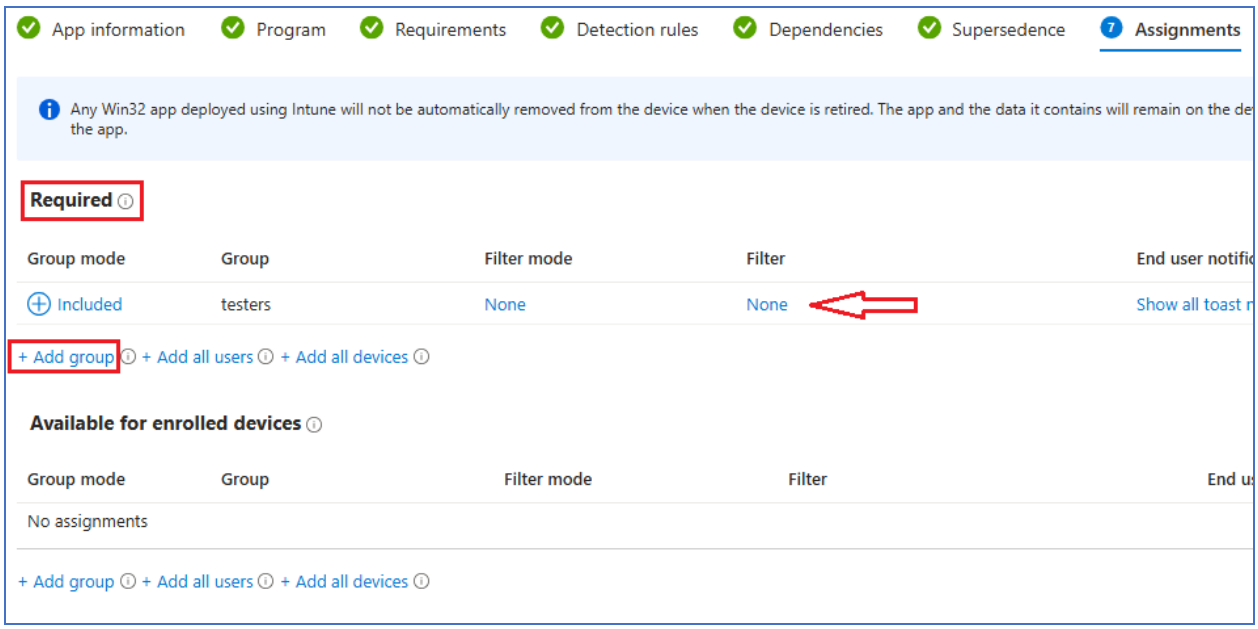
Note: If you want to update an app, disable the “Uninstall previous version” option. If you want to replace an app, however, you can enable that choice. In this case, there is nothing under Supersedence, but I may write another blog on this topic shortly if people are interested.



The next page will appear for Intune MSI Application Deployment - Assignments Options.

Click on the **Add Group** button from the Assignment tab of the application created.
Select groups where you want to assign this app from Add Group.

There are 3 (three) Assignment types - Select one assignment type.
You can deploy the MSI application to some group of devices or users as required.
The MSI application is per machine then it will get installed in the machine context.
Select Required or Available for Enrolled Devices.
Click on Included Groups from Add Group.
Select the groups you want to make this app required or available from Assign.
Click on Select Groups to select a Group for the required assignment from Assign.
Search the Device/user Group in the search option in Select Groups and select the DEVICE/USER group that you want to deploy.

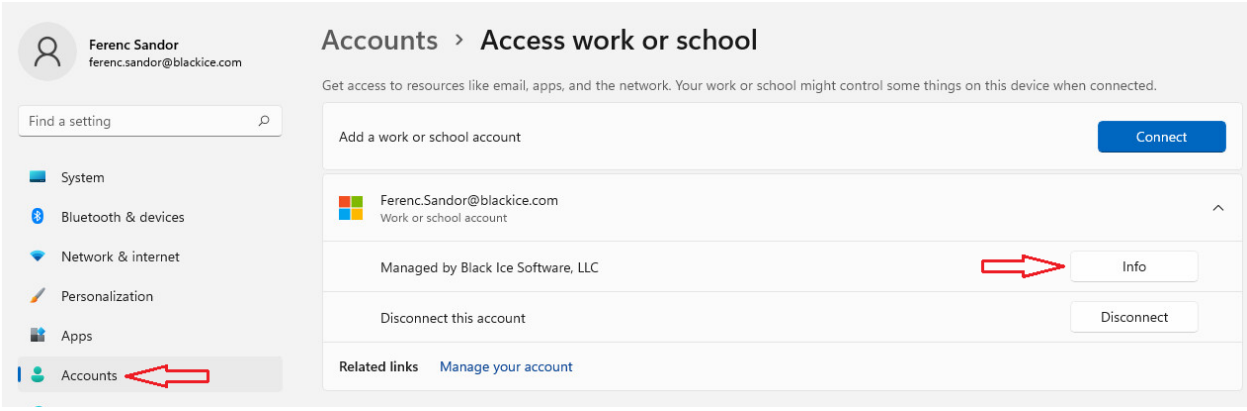


Review your MSI installation and click **Create** when you are ready.

Sync an app to the enrolled device

Once the application is deployed from Microsoft Intune, it can be synced to a device by following the below steps:
Go to an enrolled device, in our case we used a Windows 11 machine.
Right-click on the Windows icon and then go to Settings.
Click on Accounts -> Access work or school.

Click on the **Info** button.

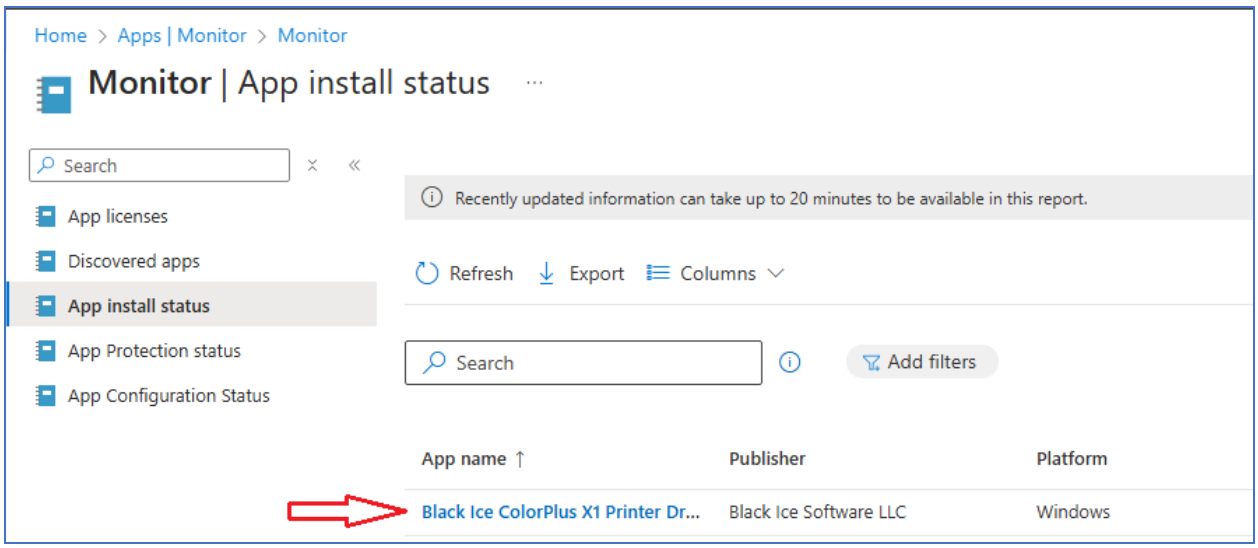


Click on sync for syncing apps and policies.
Optional: Restart your machine if the app does not appear on your device.

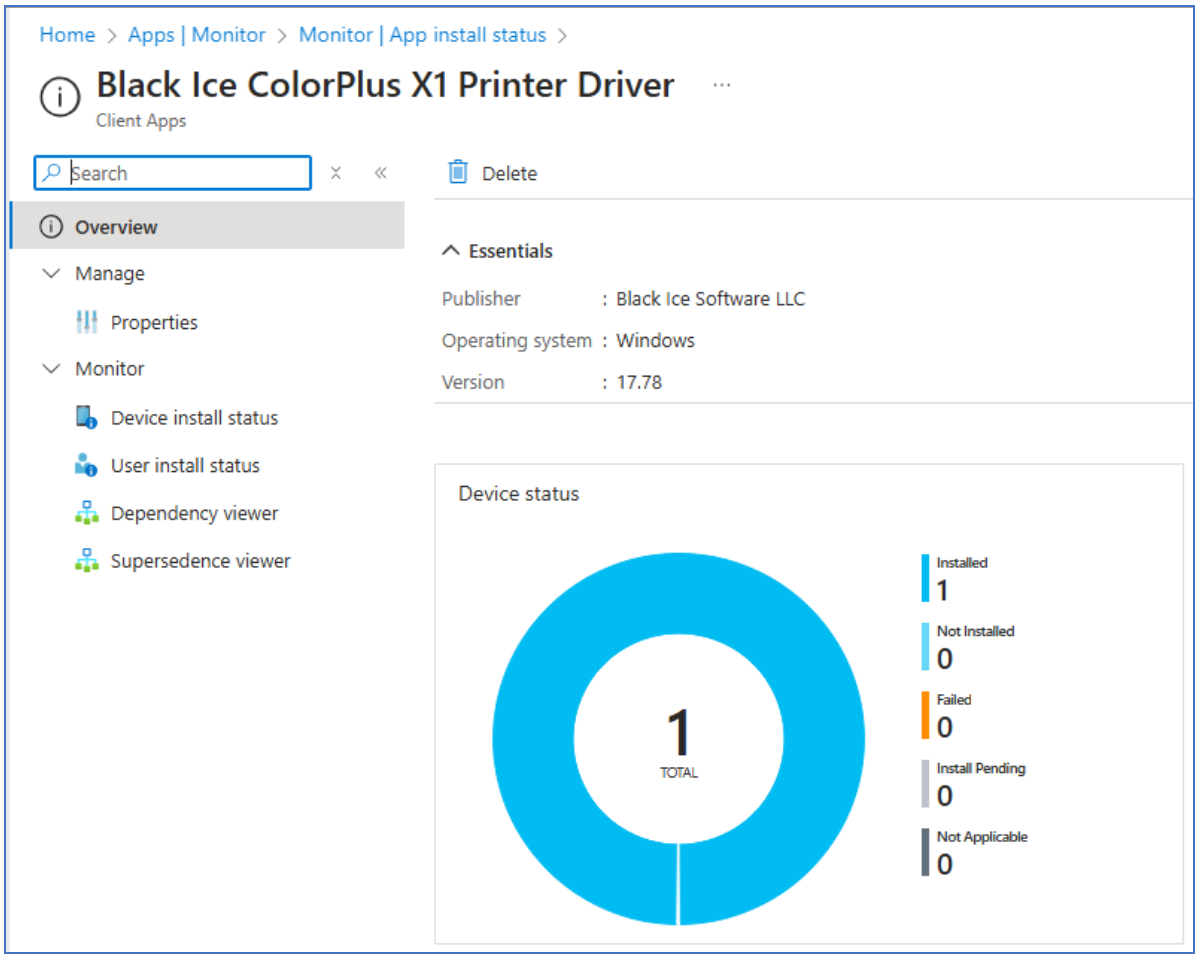
Status/Monitoring – Intune MSI Application Deployment

You can check the state of the deployed application.

Navigate via Microsoft Intune - Apps > **Monitor**.
Click on **App Install Status** and select the application you want to know the status of the application.



From the application (this will be in the application name), click on Overview to get a graphical view of the MSI application deployment status.



Update/Upgrade a Printer Driver

Intune will automatically reinstall, update, or remove a required app based on the following conditions:

- If an end user uninstalls an app that you have required to be installed on the end user's device, Intune will automatically reinstall the app.
- If a required app install fails or somehow the app is not present on the device, Intune evaluates compliance and reinstalls the app.
- If the admin deploys uninstall intent and the app is present on the device and failed to uninstall, Intune evaluates compliance and uninstalls the app.

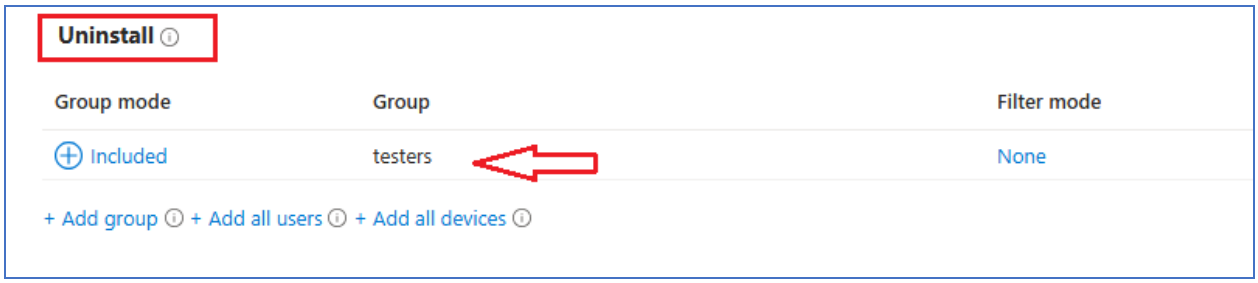
When you need to update or upgrade an already installed app, use the following steps:

Navigate via Microsoft Intune – Apps > **All apps**.
Find and select your app from the list of apps.
Select **Properties** under Manage from the app pane.
Select **Edit** next to **App information**.
Click on the listed file next to **Select file to update**.
The **App package file** pane is displayed.

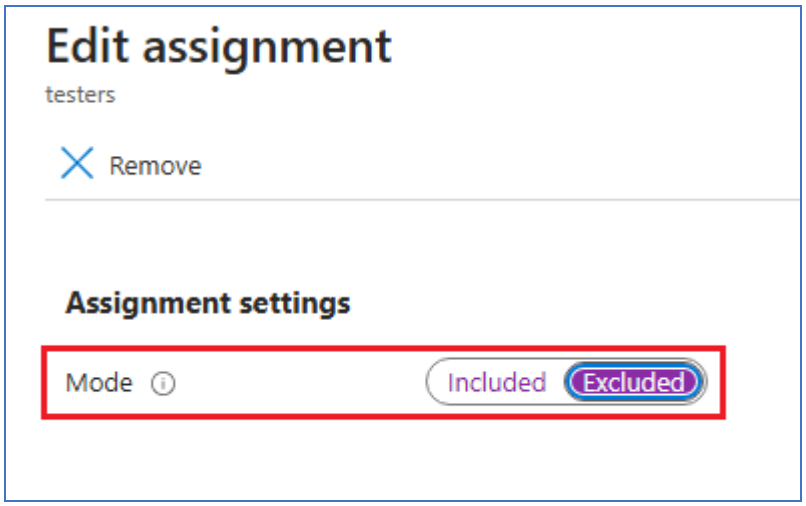
Uninstall a Printer Driver

When you need to uninstall an app from a user's device, use the following steps:
Navigate via Microsoft Intune – Apps > All apps > Black Ice ColorPlus X1 Printer Driver > Manage > Properties > Assignments > Edit.

In the **Add group** pane, select **Uninstall**.
Select **Included Groups** to select the groups of users that are affected by this app assignment.
Select the groups that you want to apply the uninstall assignment.
Click **Select** on the **Select groups** pane.
Click **OK** on the **Assign** pane to set the assignment.



Note: If you want to exclude any groups of users from being affected by this app assignment, select **Exclude Groups**.



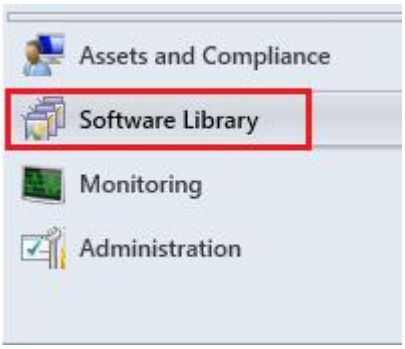
Select **OK** in the **Add group** pane.
Select **Review and Save** in the app **Assignments** pane.

Installing the PDF X1 Printer Driver with SCCM

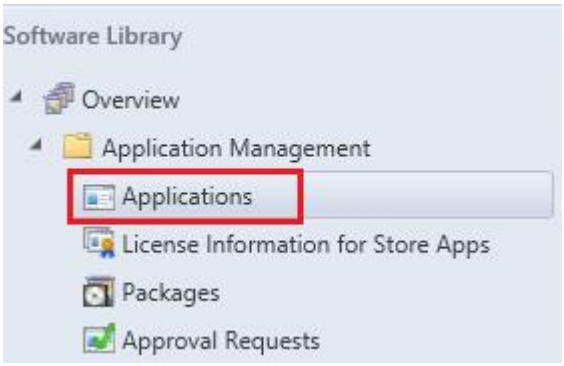
To deploy the PDF X1 Printer Driver MSI installer with SCCM (System Center Configuration Manager), please follow the steps below how to create an Application package for PDF X1 Printer Driver in SCCM.

Open the System Center Configuration Manager

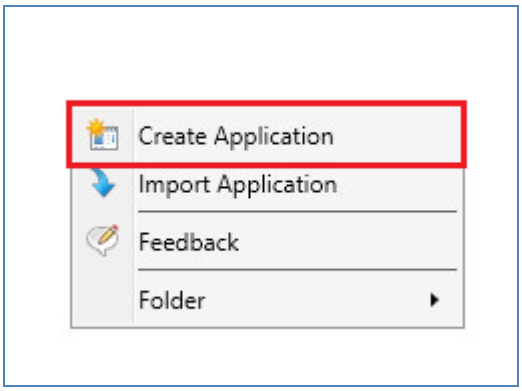
Navigate to Software Library



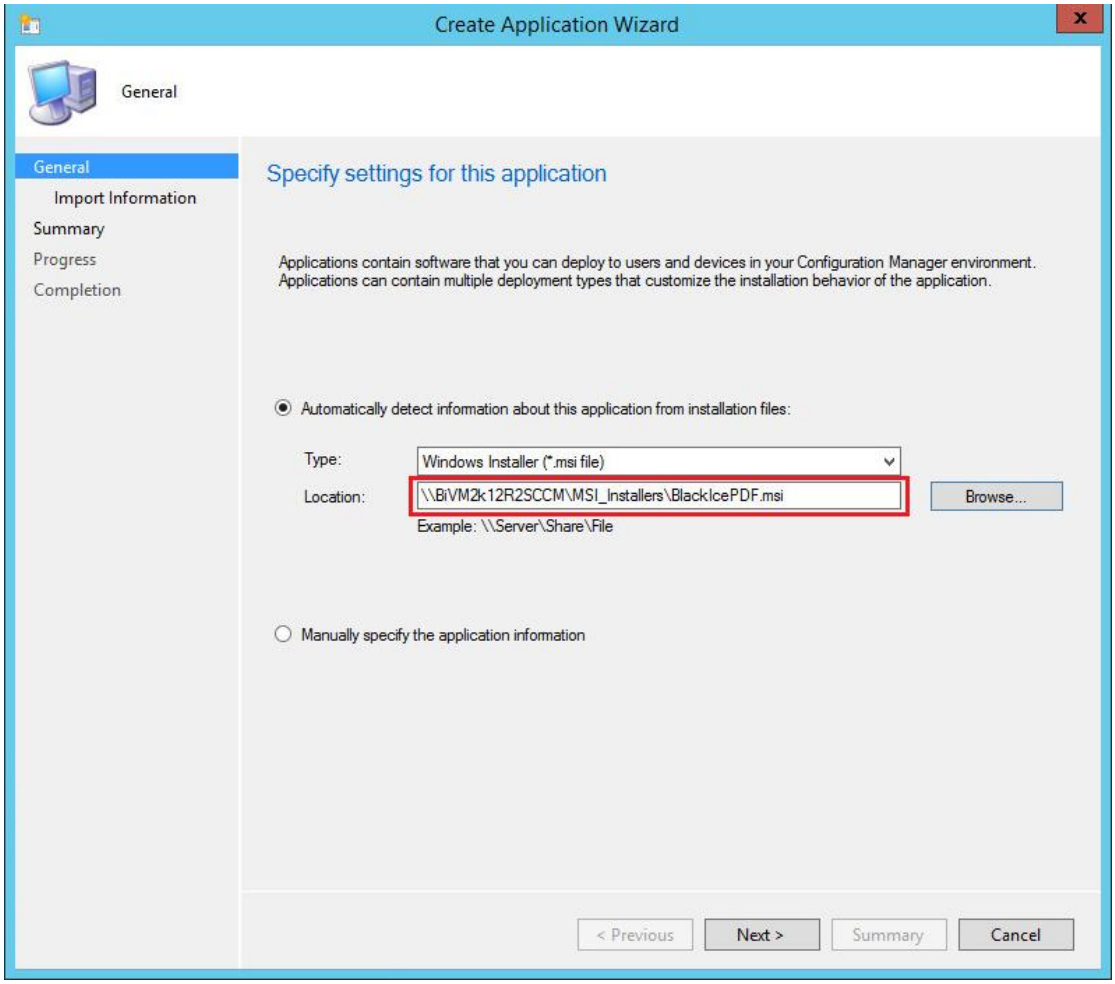
Select Applications



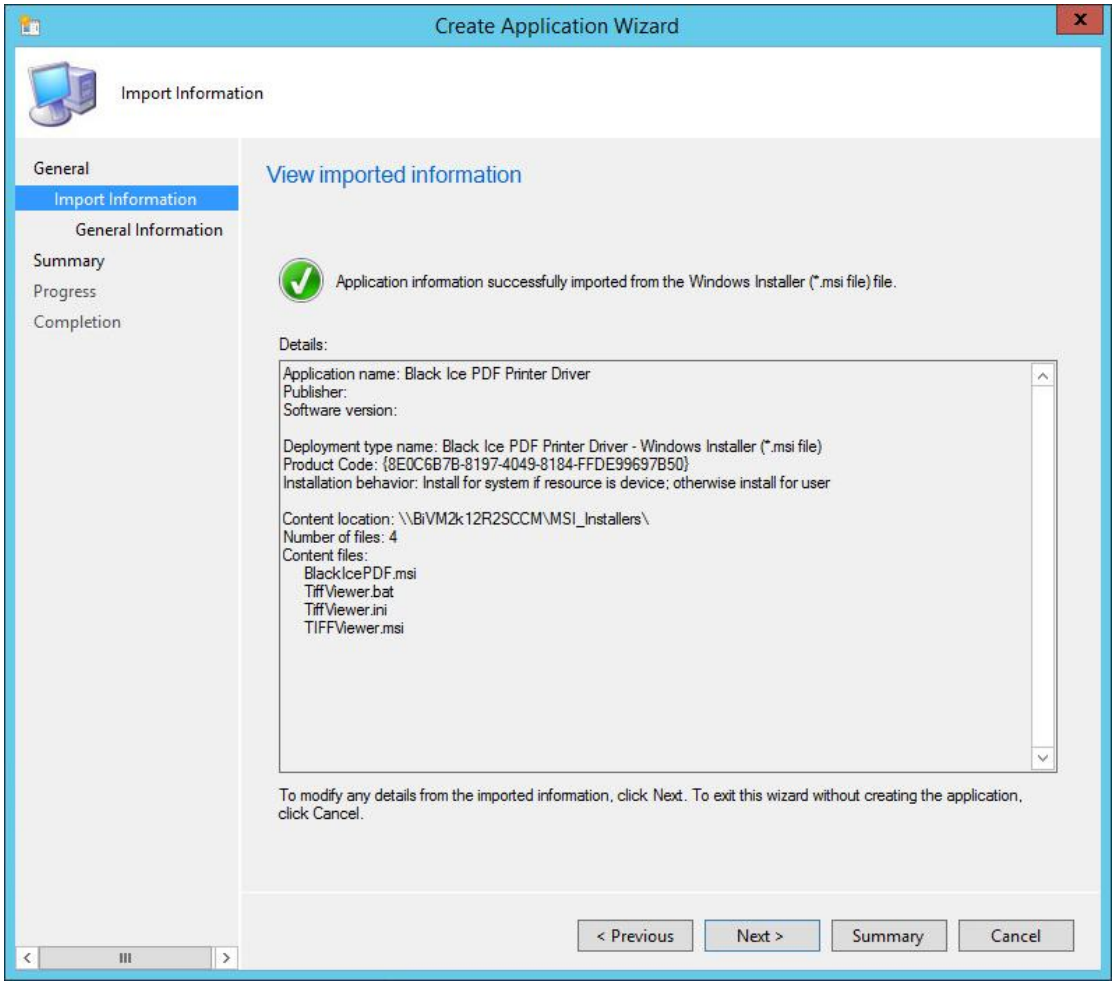
Right click on form and select **Create Application**



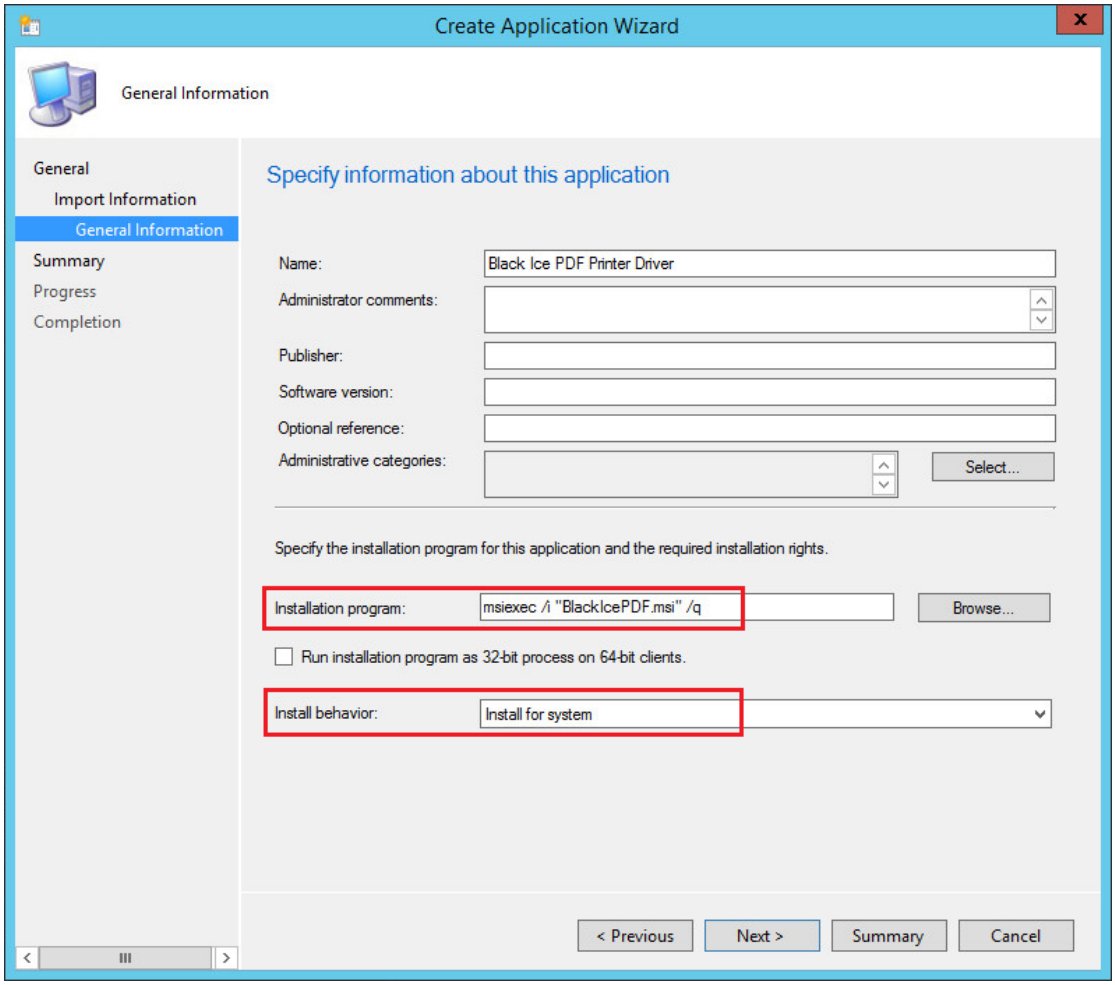
Add MSI installer file (Example: \\BiVM2k12R2SCCM\MSI_Installers\BlackIcePDF.msi)
Type: Windows Installer (*.msi file)
Note: The location file from shared directory on SCCM server.



Click **Next** button.



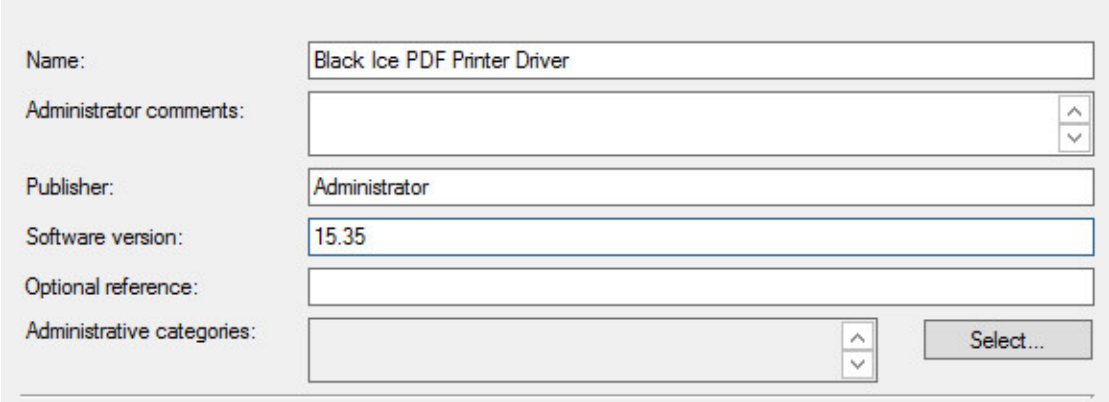
Click **Next** button.



Configure the following entries:

- Publisher
- Software version

Example:

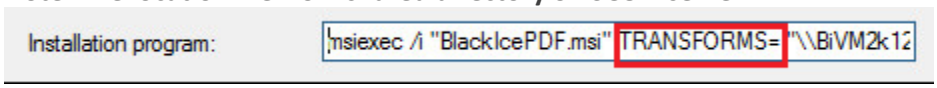


The SCCM automatically fills the Installation program.
Msiexec /i "BlackIcePDF.msi" /q

Install with TRANSFORM parameter.
Create transforms (MST) file with Orca", read the "**How to use ORCA**" section.
Add the TRANSFORM parameter with transformation file with full path.

Example: **[SCCM Server]**\MSI installers\BlackIcePDF.mst

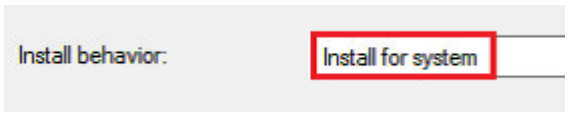
Note: The location file from shared directory on SCCM server.



The MSI installer does not support the environments variable.

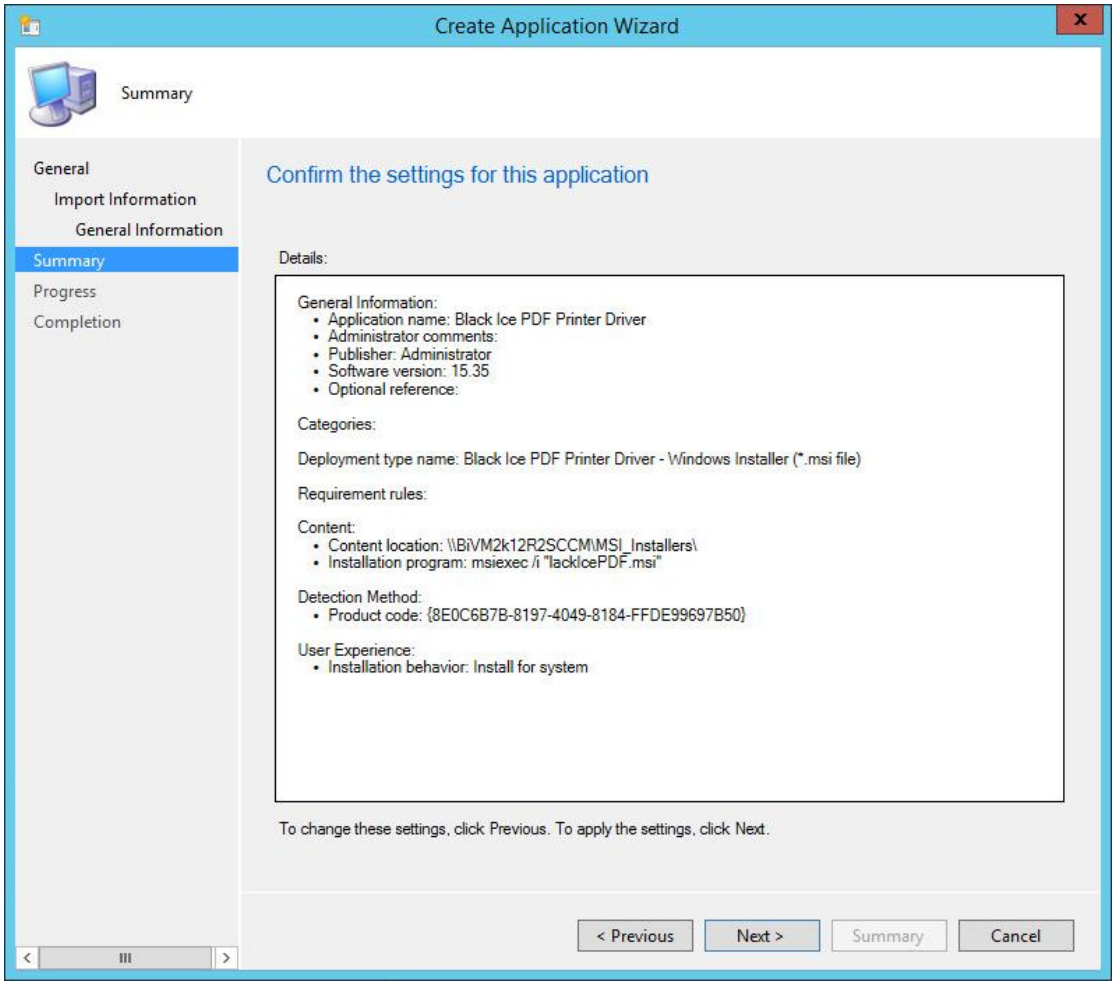
If using the environments variable for the CUSTOMINI or TARGETDIR parameters, create a batch file with the following text:
msiexec /i "BlackIcePDF.msi" CUSTOMINI="%randomname% BlackIcePDF.ini" CREGNUM=xxxxx-xxxxxxxx-xxxxxxxxxx /q

NOTE: The Installer behavior is **Install for system**.

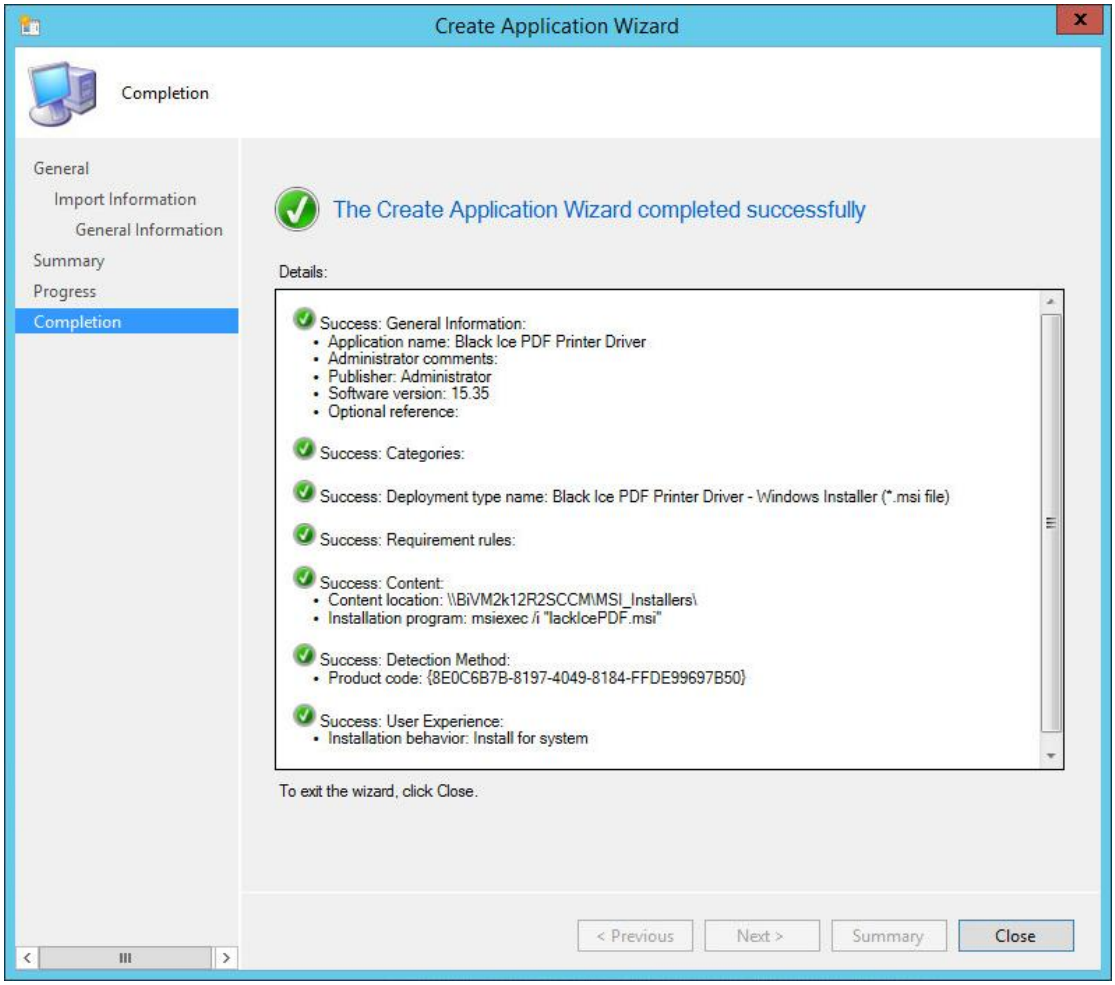


Check the **Run installation program as 32-bit process on 64-bit clients**.

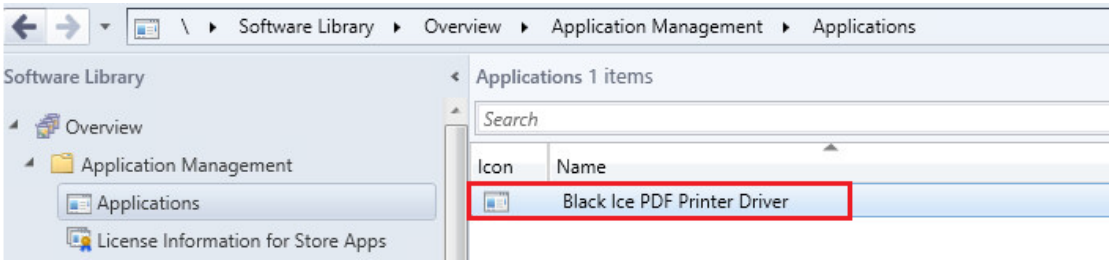
Click **Next** button.



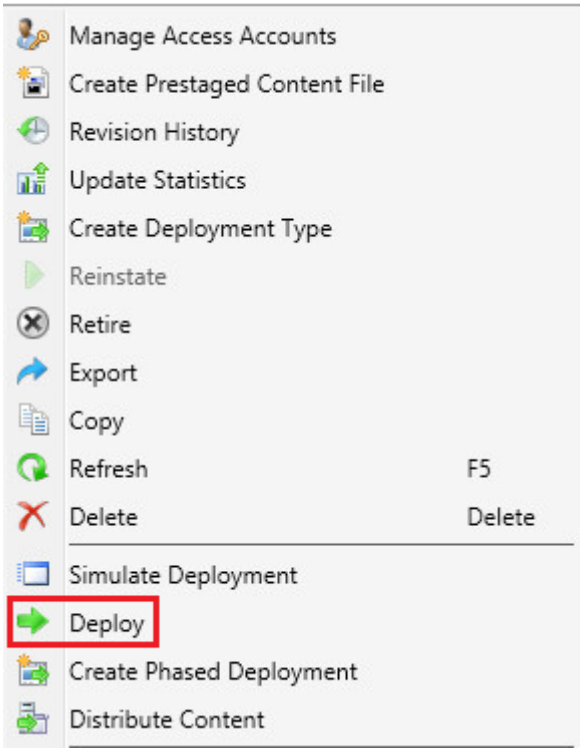
Click **Next** button.



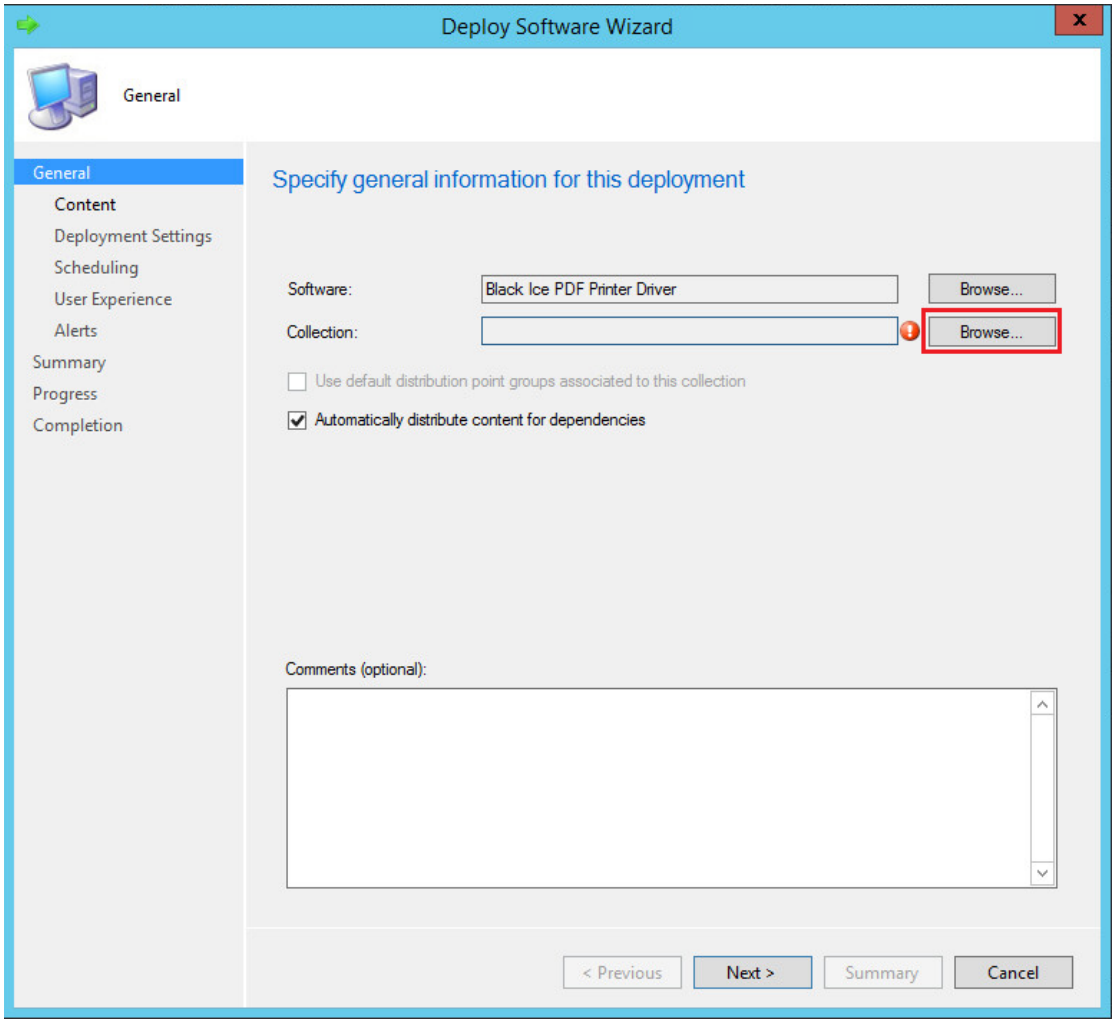
Click the **Close** button.
Finished the install package:



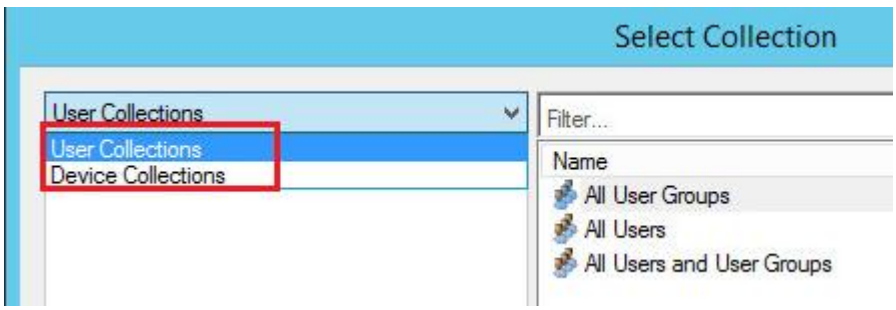
Install (**Deploy**) the Application to client(s)
Right click on Application (Example: Black Ice Monochrome)
Select the Deploy:



Click to Collection -> Browse… button.



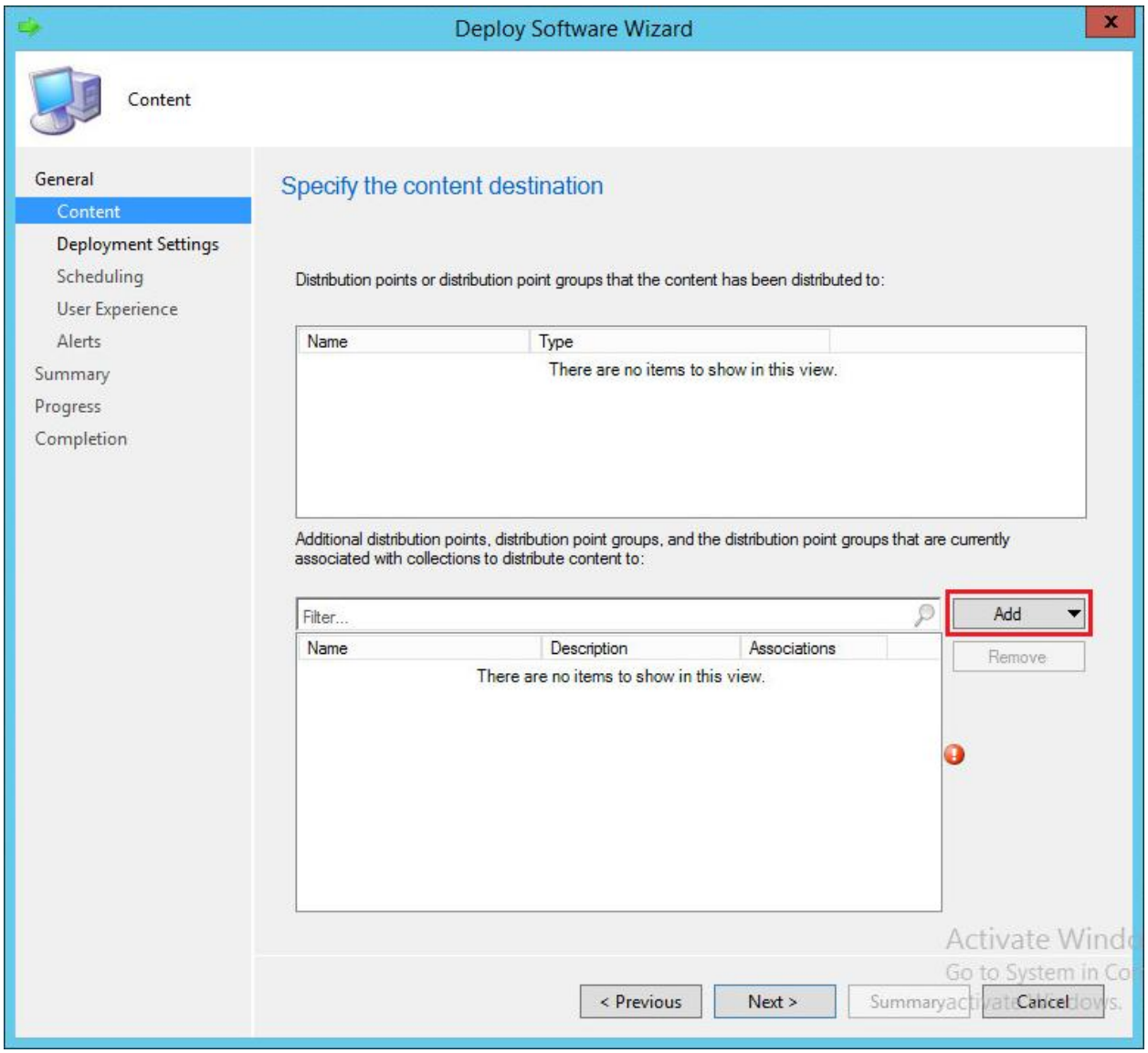
You can add Application to Users or Devices

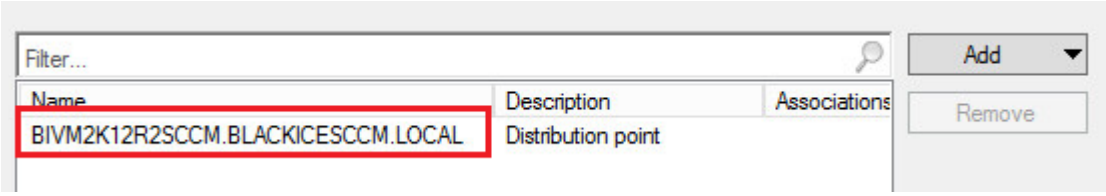


Install for Users, select the User Collections
Install for Computers, select the Device Collections

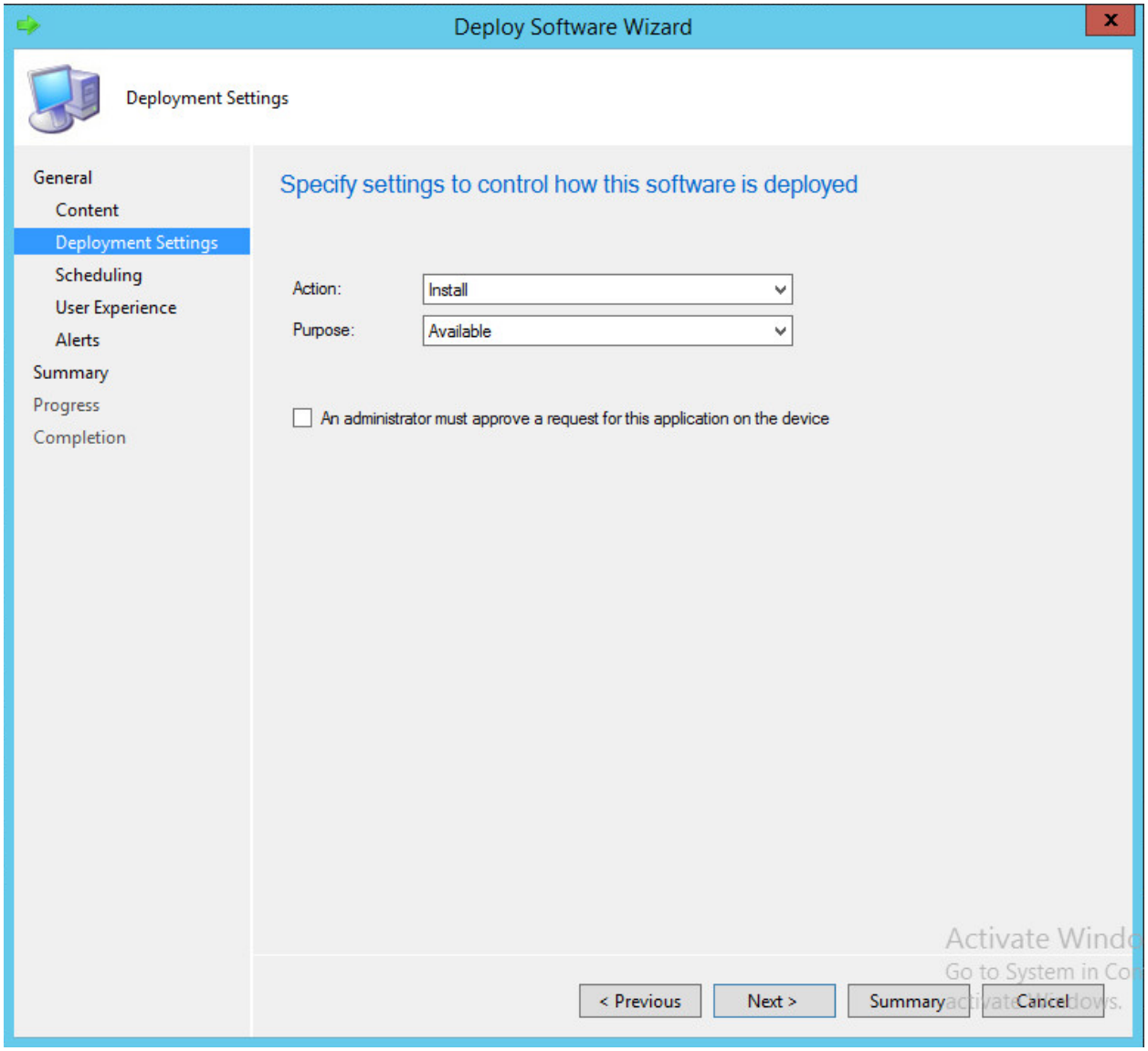
Example for User:
Select the Testers
Click **Next** button.

Click **Add** button and select the Distribution Point

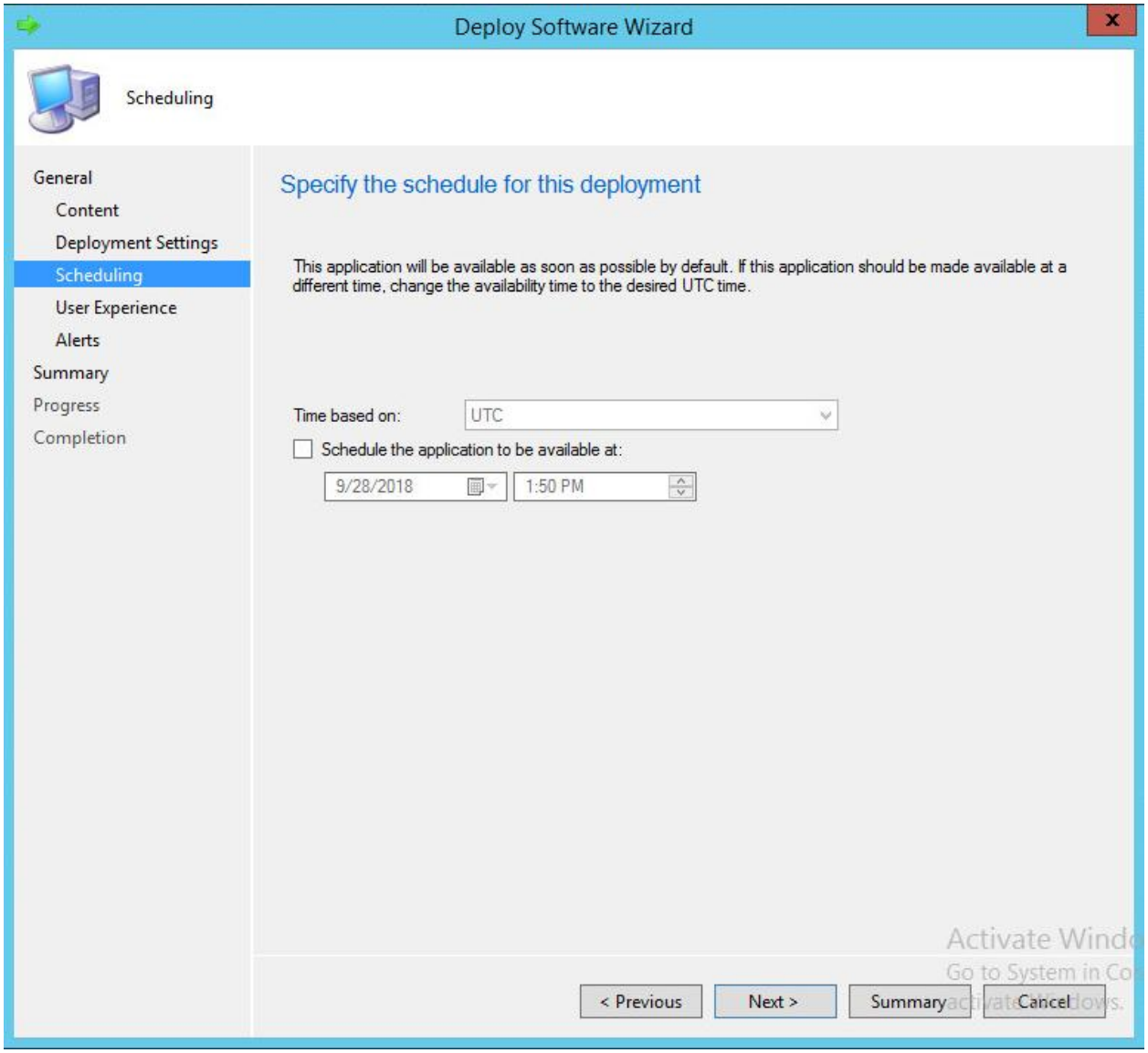




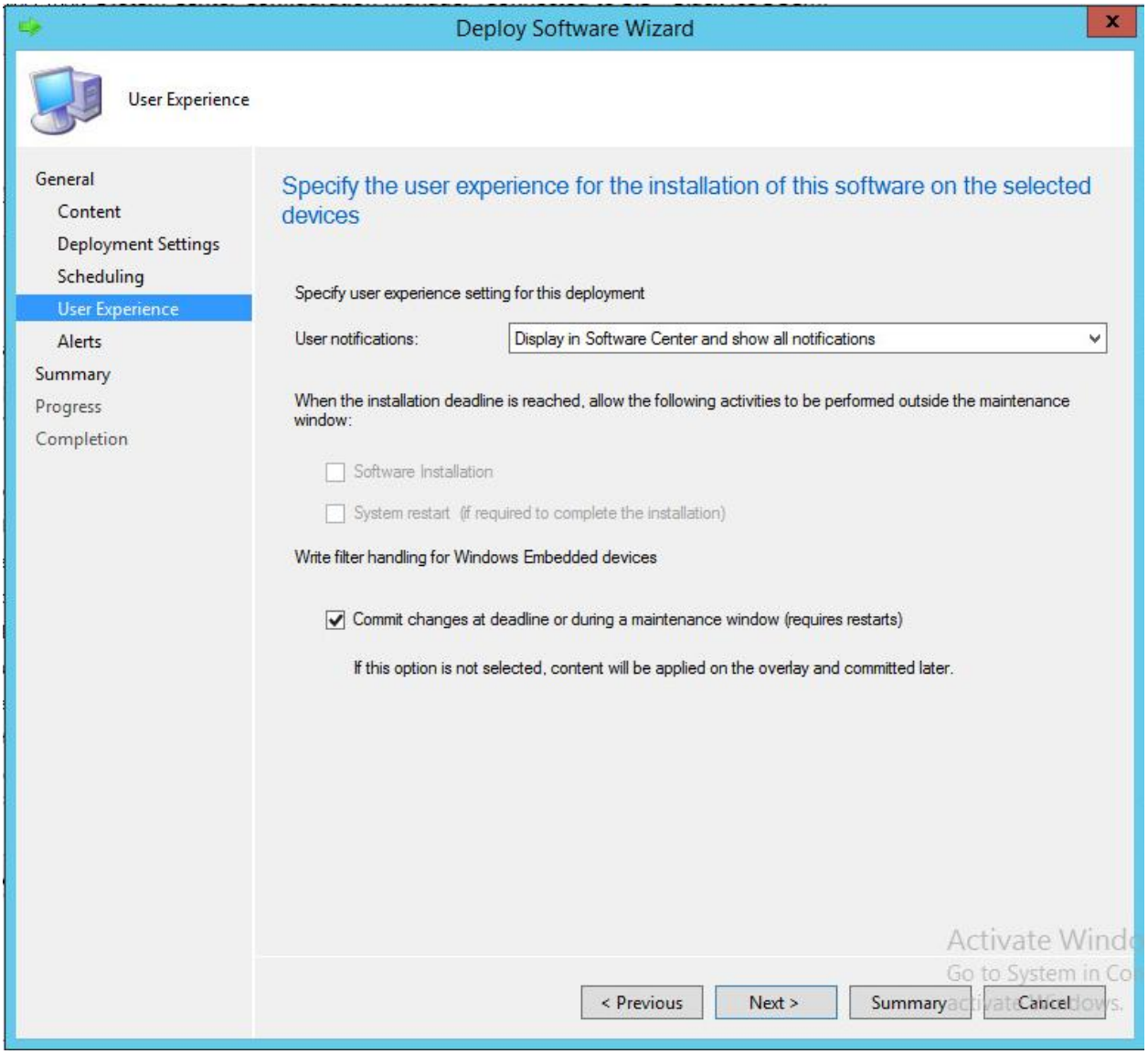
Click **Next** button.



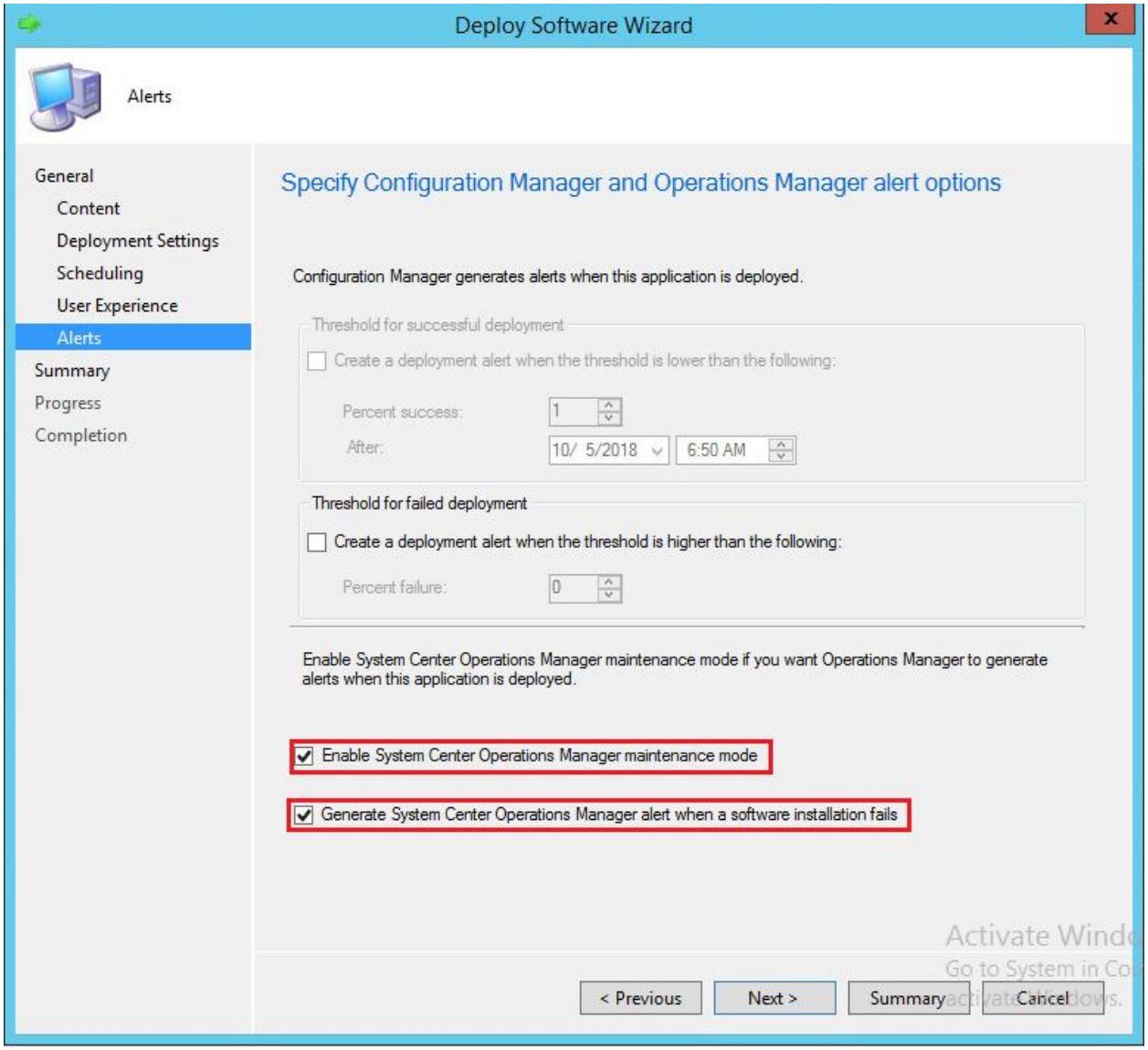
Use default settings and click **Next** button.
You can configure the installation time.



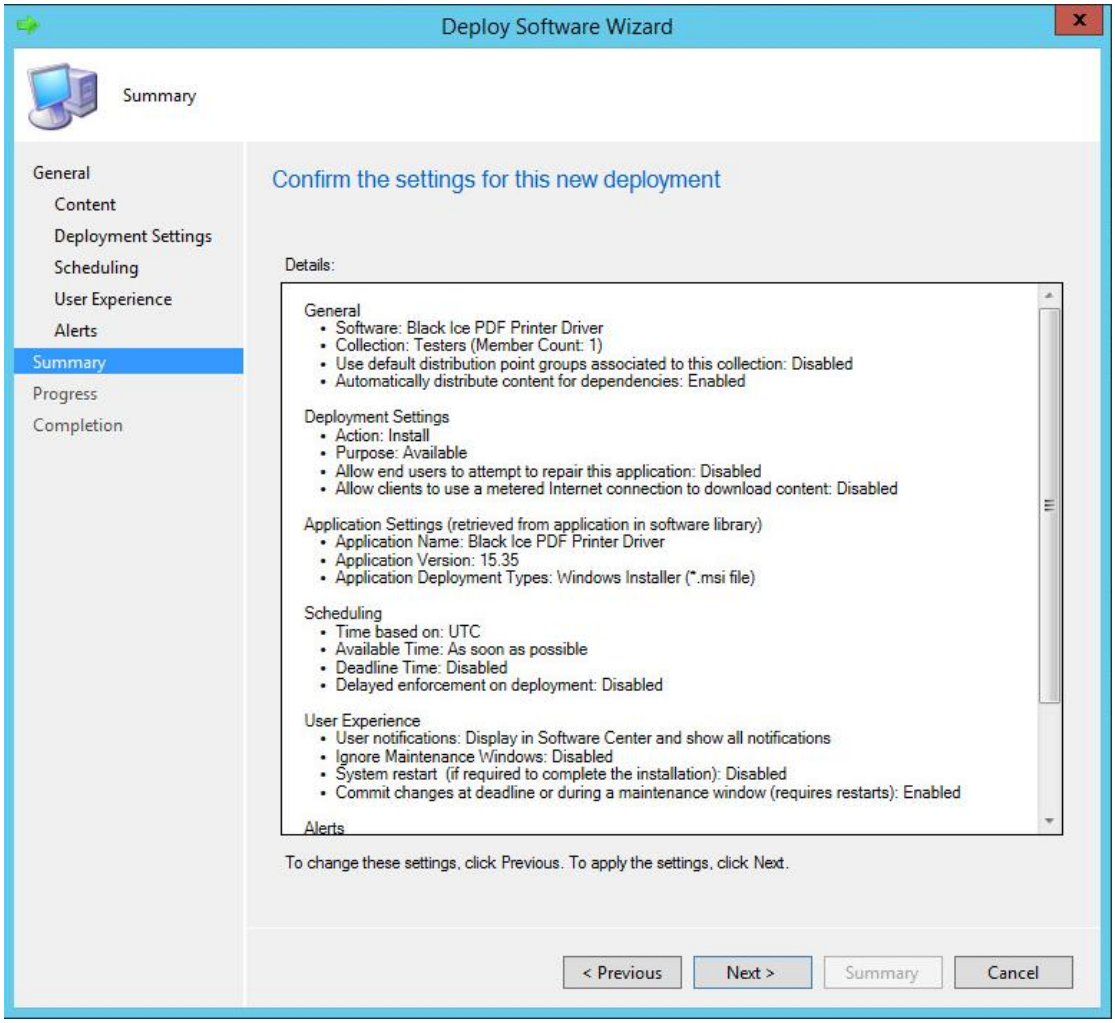
Click **Next** button.



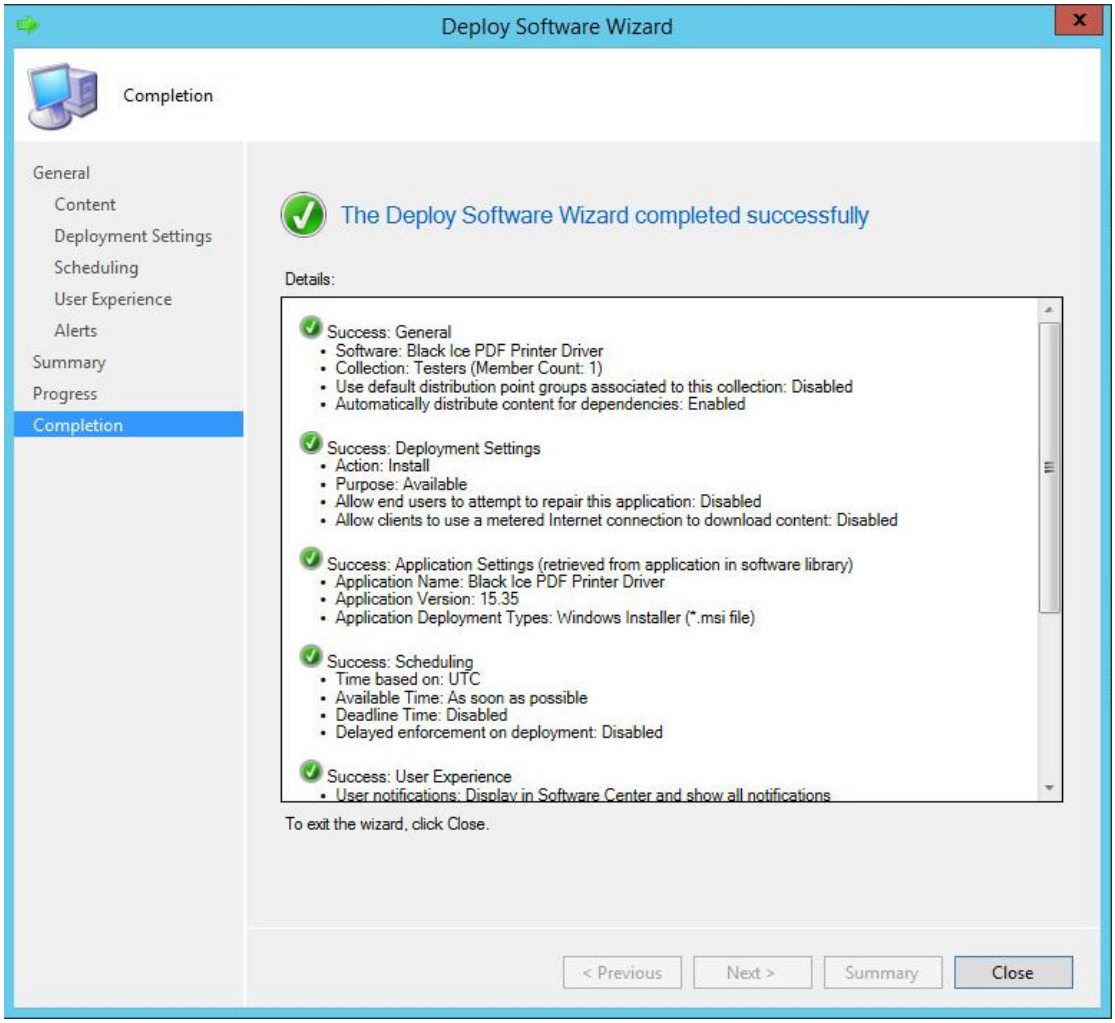
Click **Next** button.



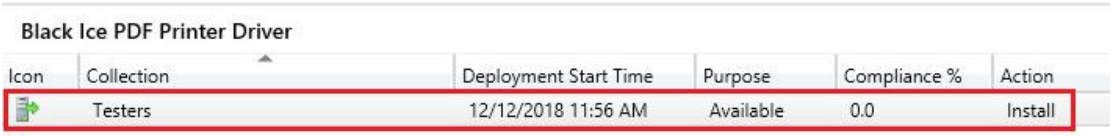
Click **Next** button.



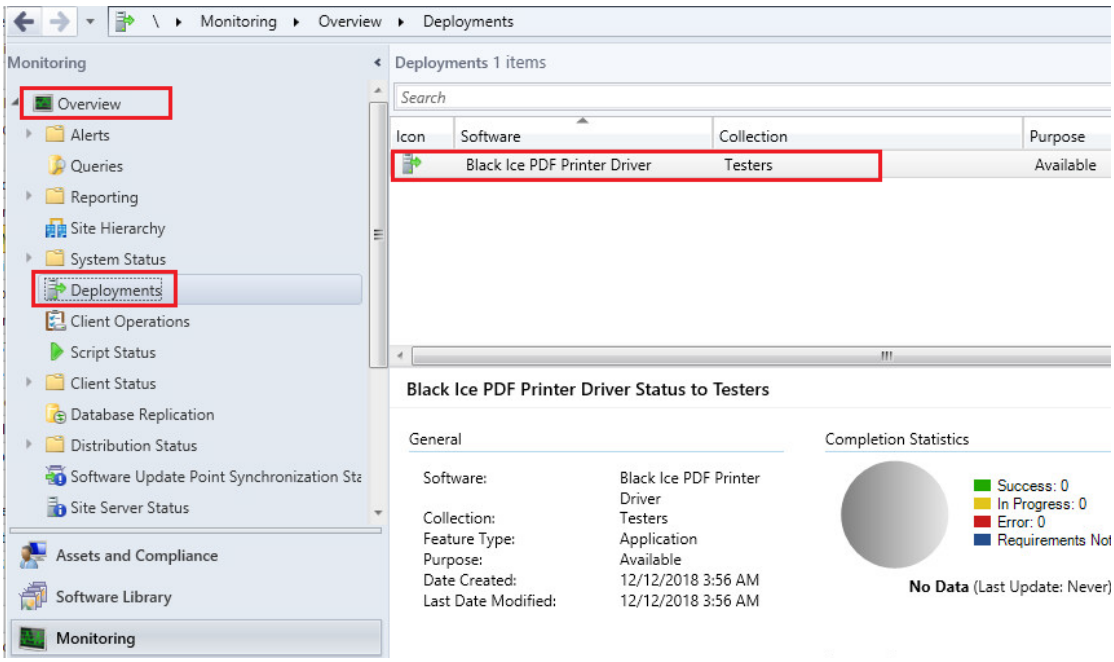
Click **Next** button.



Click **Close** button.
Finished the installation.

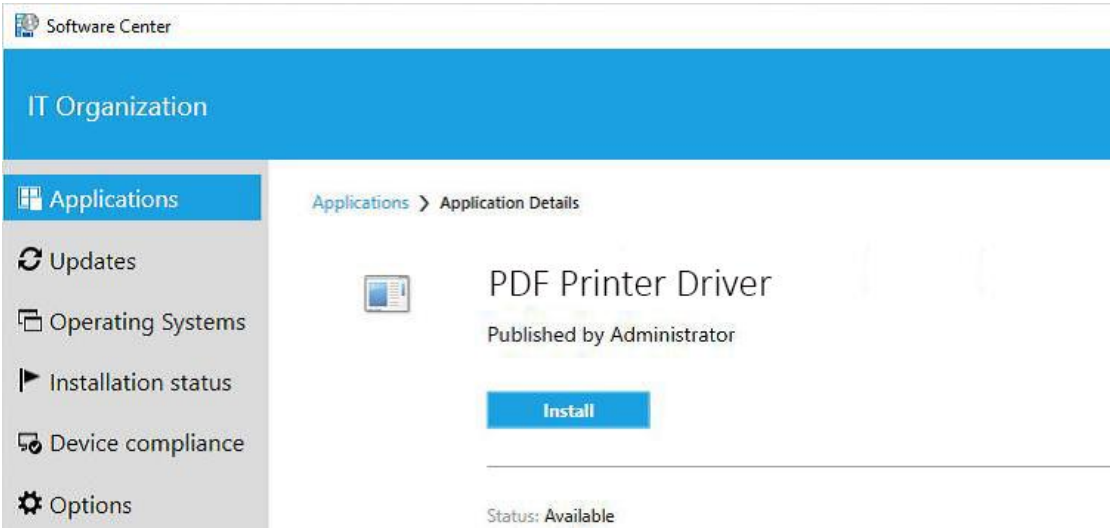


Check **Installation**.
Select the Monitoring -> Overview -> Deployments



Install the PDF X1 Printer Driver MSI on client computers

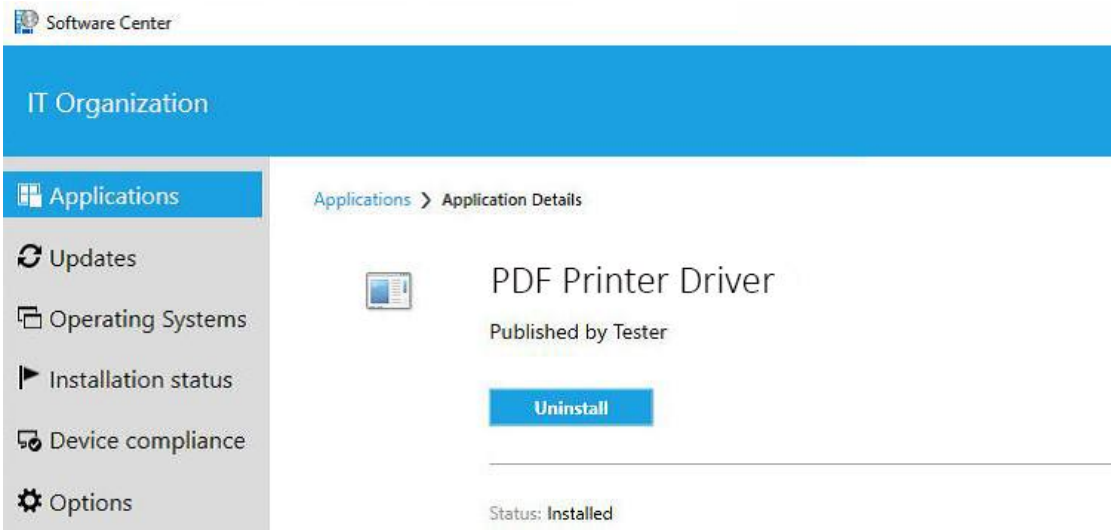
Open the **System Center** and select **Applications**.



Click **Install** button.

Uninstall the PDF X1 Printer Driver MSI from client computer

Open the **System Center** and select **Applications**.



Click **Uninstall** button.

Configuring the Printer driver with Custom Configuration INI file

The Black Ice printer driver can be configured during installation with an configuration INI file, to use a System Administrator defined configuration settings. Configuration Settings specified in the INI file will be used by the MSI installation process, to configure the Black Ice printer driver default settings for every user on the system.

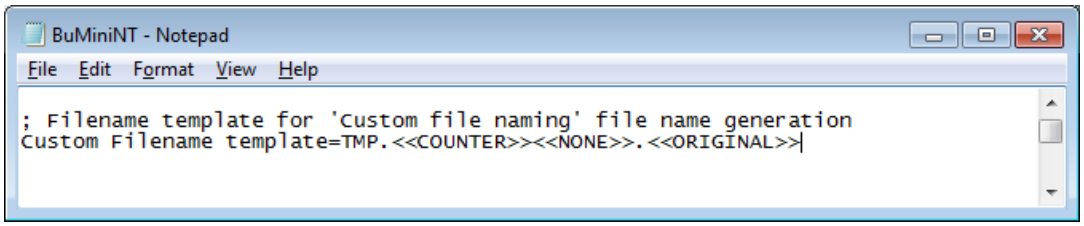
> For example:
> msiexec /i "<<PATH>>\BlackIcePDF_X1.msi" CUSTOMINI="<<PATH>>\BuPiniNT.ini" REGNUM=XXXXX-XXXXXXXX-XXXXXXXXXX

For the complete list of the available parameters please refer to the Available Parameters of the MSI install section of this manual.

In order to generate a custom INI file please refer to the How to use Custom Configuration INI file with PDF X1 InstallShield installer section of this manual.

The User can modify the INI file with almost any text editor (e.g. Notepad) However, **it's very important that the custom INI file must contain all values (the whole INI file), not just what the User wants to modify**. The MSI Installation with a truncated or insufficient INI file will not be applied to the printer driver.

Furthermore, **some of the settings in the default INI file are just examples**. If the ; semicolon mark is at the beginning of the line, the installer will ignore the line. So if you need to modify the **Custom Filename Template** for example, you should change it as you can see on the following image (delete the ; semicolon mark);



When using a CUSTOM INI please take into account that by default the printer driver is installed to an operating system specific location.
Please note that some parameters need full path, make sure that the correct paths are set in the INI file for the computer the printer driver will be installed to.

The Default INI files can be found in the following directories;

32 bit
C:\Windows\System32\Spool\Drivers\w32x86\BuPiniNT.ini
C:\Windows\System32\Spool\Drivers\w32x86\3\BuPiniNT.ini

64 bit
C:\Windows\System32\spool\drivers\x64\BuPiniNT.ini
C:\Windows\System32\spool\drivers\x64\3\BuPiniNT.ini

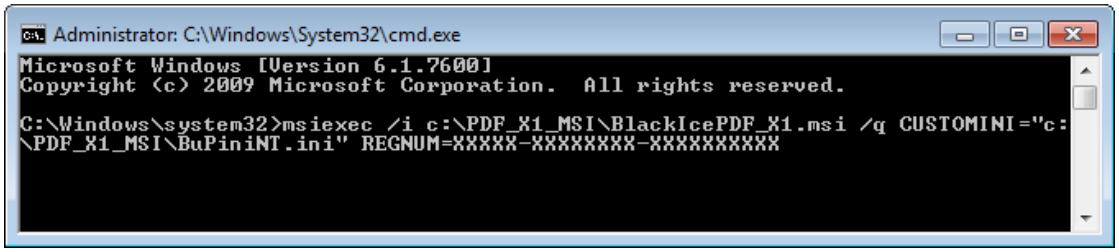
How to Install the Black Ice Printer Driver MSI with custom INI file

To install the MSI with custom INI file, please open the Command Prompt;
On Windows 7 > Go to **Start menu** and type "**cmd**". The cmd will appear, right click on it and select run as administrator.
On Windows XP > Go to **Start menu** and Click to **run**. Type: "**cmd**" and press enter.

Command line installation will be the following with the custom INI file;

msiexec /i "<<PATH>>\BlackIcePDF_X1.msi" /q TARGETDIR="C:\Black Ice\PDF_X1" CUSTOMINI="<<PATH>>\BuPiniNT.ini" REGNUM="XXXXX-XXXXXXXX-XXXXXXXXXX"

For example, if the MSI Install file and the custom INI located in c:\PDF_X1_MSI folder, the command line have to be the following;



msiexec /i c:\PDF_X1_MSI\BlackIcePDF_X1.msi /q
CUSTOMINI="c:\PDF_X1_MSI\BuPiniNT.ini" REGNUM="XXXXX-XXXXXXXX-XXXXXXXXXX"

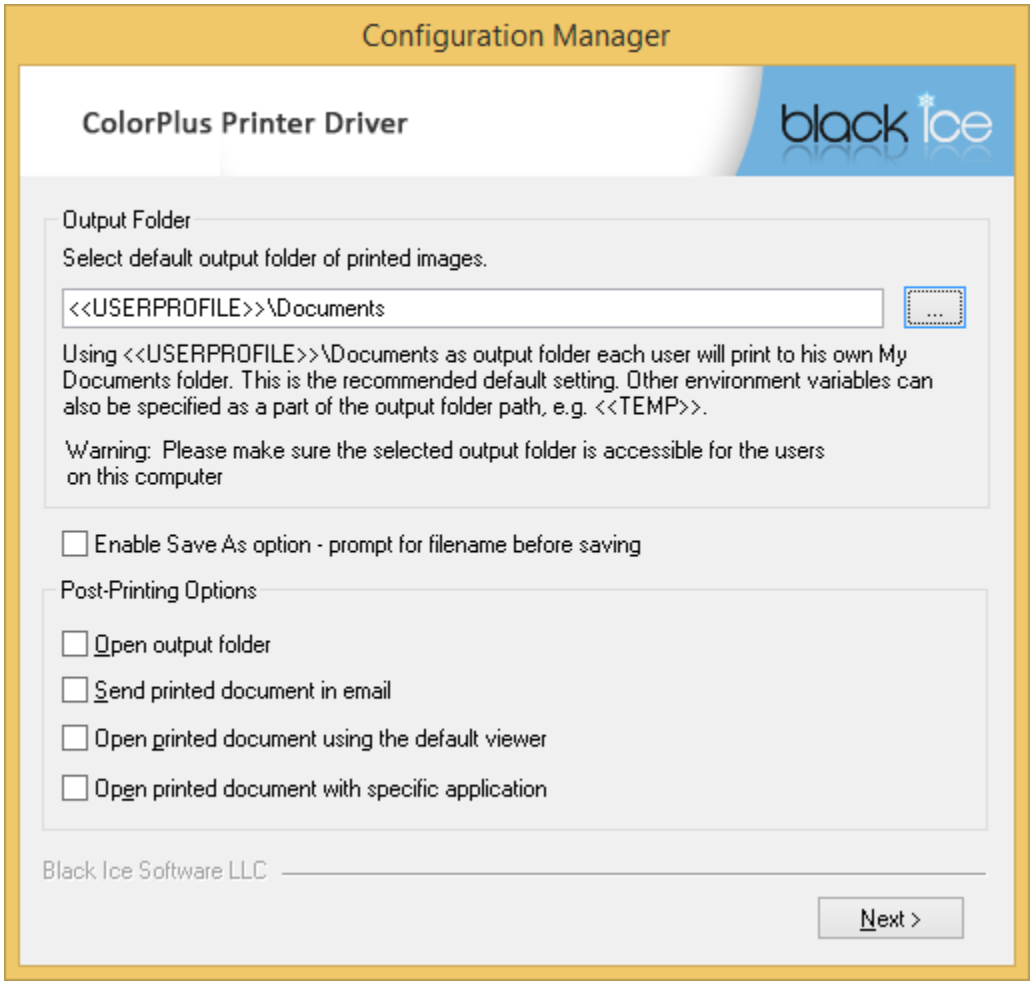
Note: the XXXXX-XXXXXXXX-XXXXXXXXXX must be the serial number of the customer.

Creating a custom configuration file 'CUSTOMINI'

The Printer Drivers Installer has a built-in feature to generate custom INI files through the usual installation process of the Black Ice Printer Drivers.

To create a custom INI file one needs a system to perform a manual installation of the printer driver to configure the printer with the desired features and functions.
Start a standard manual installation process of the printer driver.

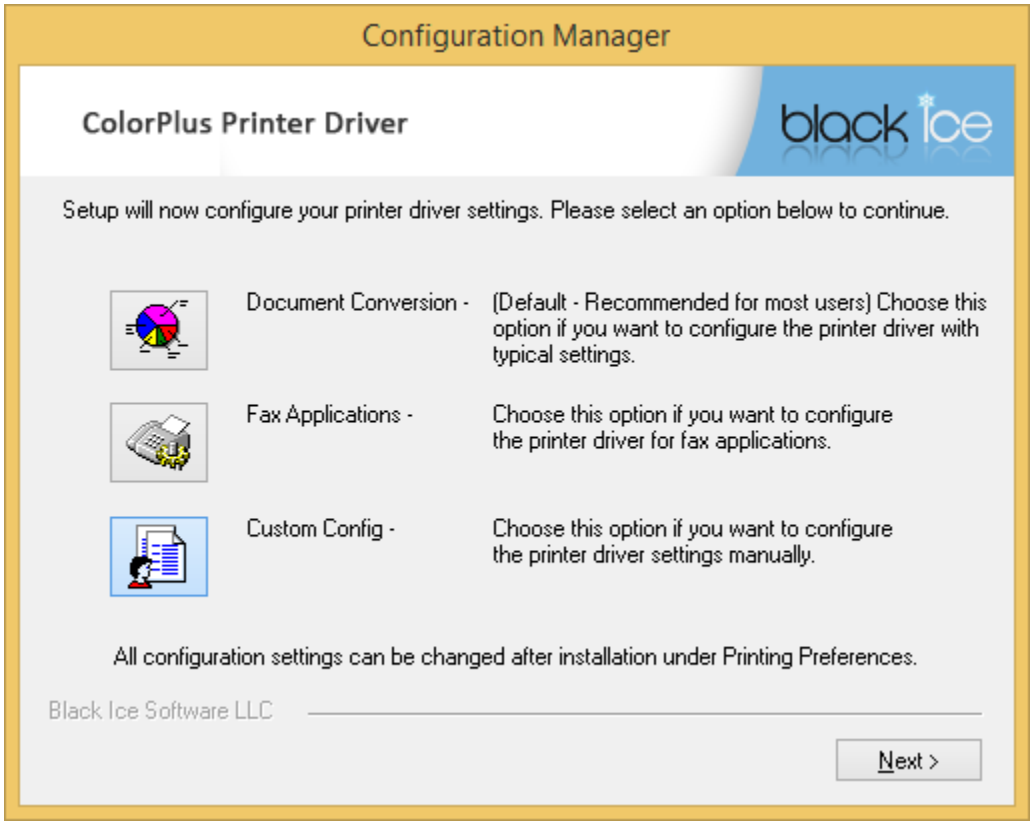
During the installation process the **Configuration Manager** window will be displayed.



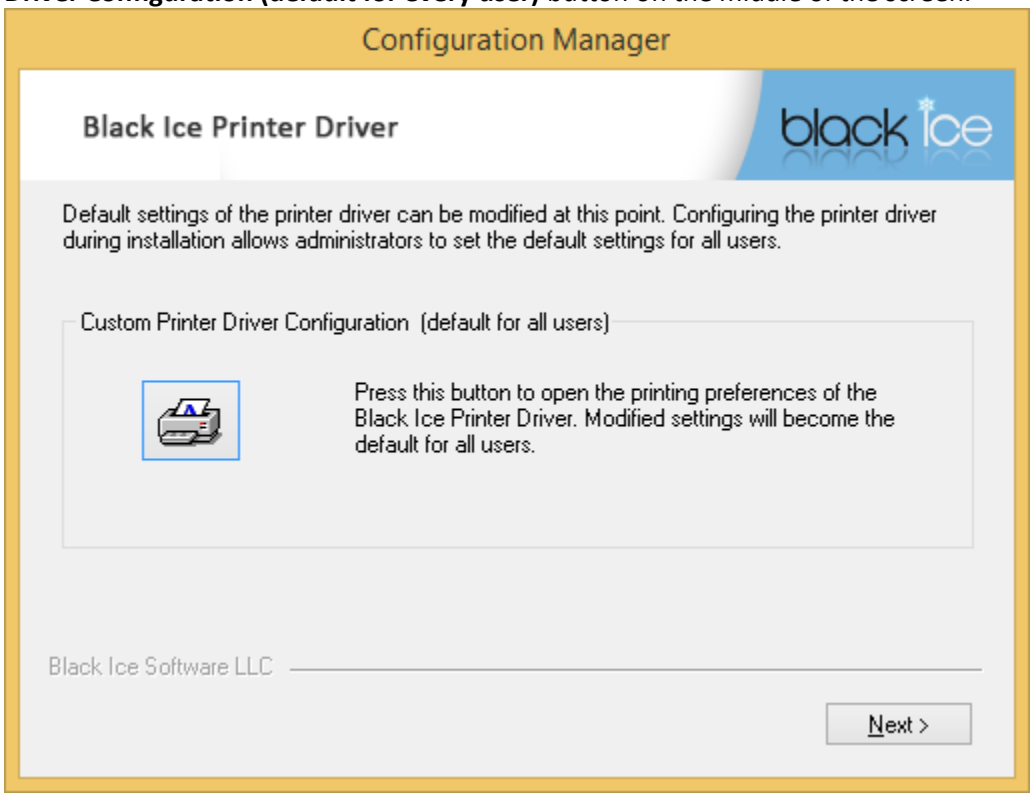
You can specify the following feature:

- Output Folder
- Enable Save As option - prompt for filename before saving
- Open output folder
- Send printed document in email
- Open printed document using the default viewer
- Open printed document using with specific application

Select the **Custom Config** option and click the **Next** button.

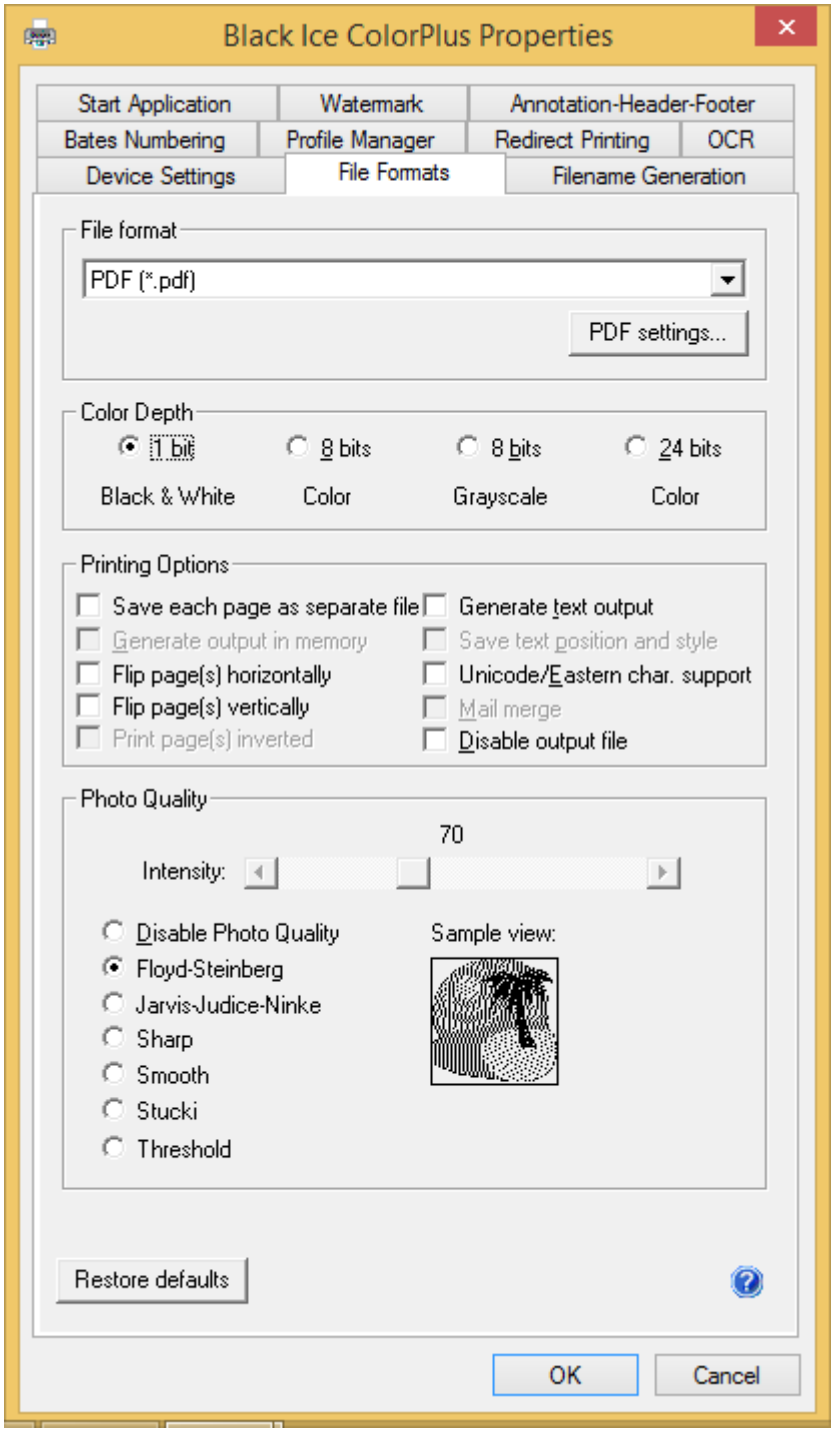


The second **Configuration Manager** Window will be displayed, click on the **Custom Printer Driver Configuration (default for every user)** button on the middle of the screen.

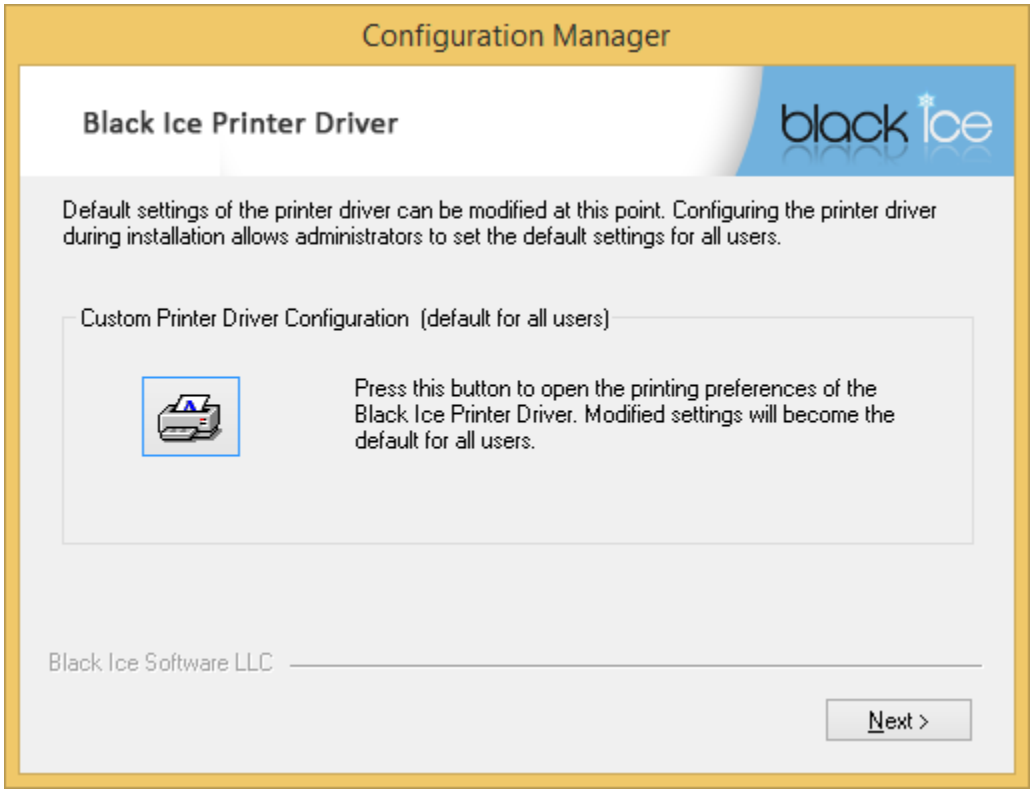


The Printer Driver Printing Preferences window appears with the available printer driver feature Tabs. One can manually configure desired options for every Tab. Once every Tab is configured, click on the **OK** button to close the Printing Preferences and the installation

continues.



Click on the **Next** button, and follow the instructions to complete the Printer Driver installation.



Once the Installation is finished successfully, the Installer generates the customized INI file in the following directories:

On 32-bit operating systems
c:\Windows\System32\spool\drivers\W32X86\BuPiniNT.ini
c:\Windows\System32\spool\drivers\W32X86\3\BuPiniNT.ini

On 64-bit operating systems
c:\Windows\System32\spool\drivers\x64\BuPiniNT.ini
c:\Windows\System32\spool\drivers\x64\3\BuPiniNT.ini

The generated INI files can be copied and used for custom MSI Installations for large scale deployments, or to export/import custom configurations between systems.

There are some infrequently used features of the printer driver that cannot be configured through the printer driver's Printing Preferences user interface.
These features still require manual editing of the INI file. For specific information about the Printer Driver INI please see The Printer Driver Configuration INI File section in the Printer Driver Resource Toolkit manual.

Configure the printer driver with a Profile file

Printer Driver installations can be configured by using the CUSTOMINI parameter with a Printer Driver Profile file as in the following example:

msiexec /i "<<PATH>>\BlackIcePDF_X1.msi" /q
CUSTOMINI="C:\<<PATH>>\ProfileFile.bip" REGNUM=xxxxx-xxxxxxxx-xxxxxxxxxx

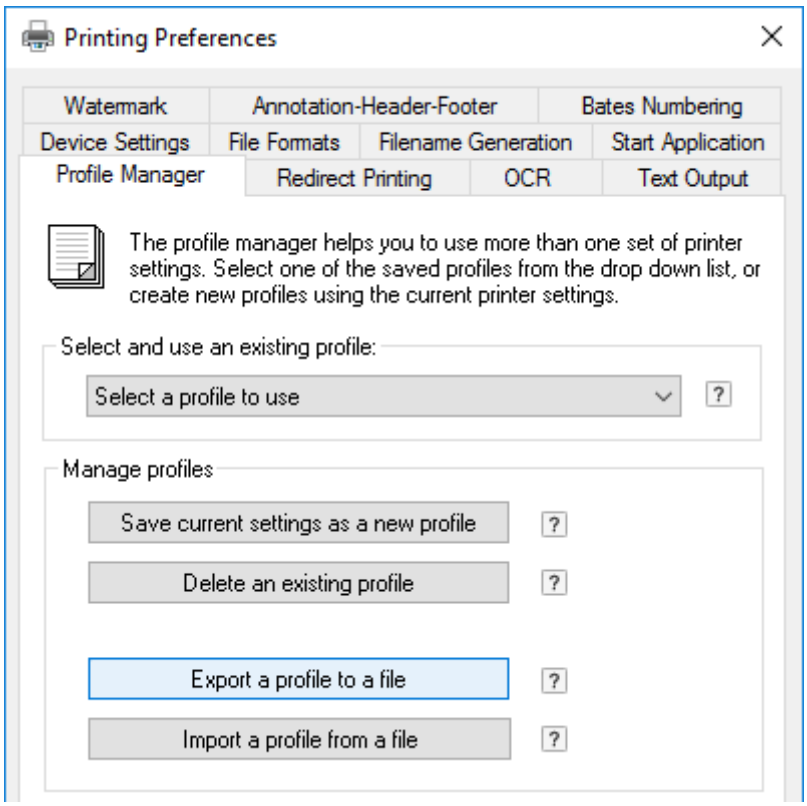
The customized Profile file for the MSI installer can be generated by an already installed “End-User” Printer Driver with the following steps:

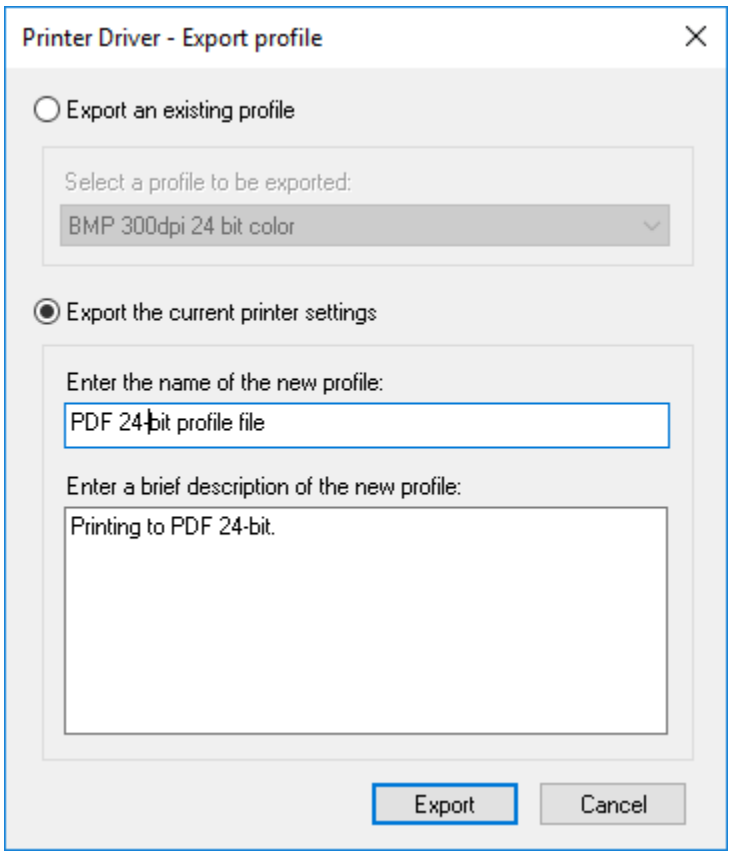
Creating Profile File

Black Ice Profile files can be created with installed BiBatchConverter or Black Ice Printer Driver on the system. To create a profile, go to Control Panel > Devices and Printers > right click on a product, to generate profiles with (BiBatchConverter or Black Ice Printer Driver) > Printing Preferences > set up the desired configuration that.

For example: If one would like to create a profile, which print documents into PDF 24-bit file format, go to File Formats tab, and select PDF (.pdf) option in the File Format dropdown list and 24-bit.*

When the configuration is finished, go to the Profile Manager tab, and click on **Export a profile to a file…**

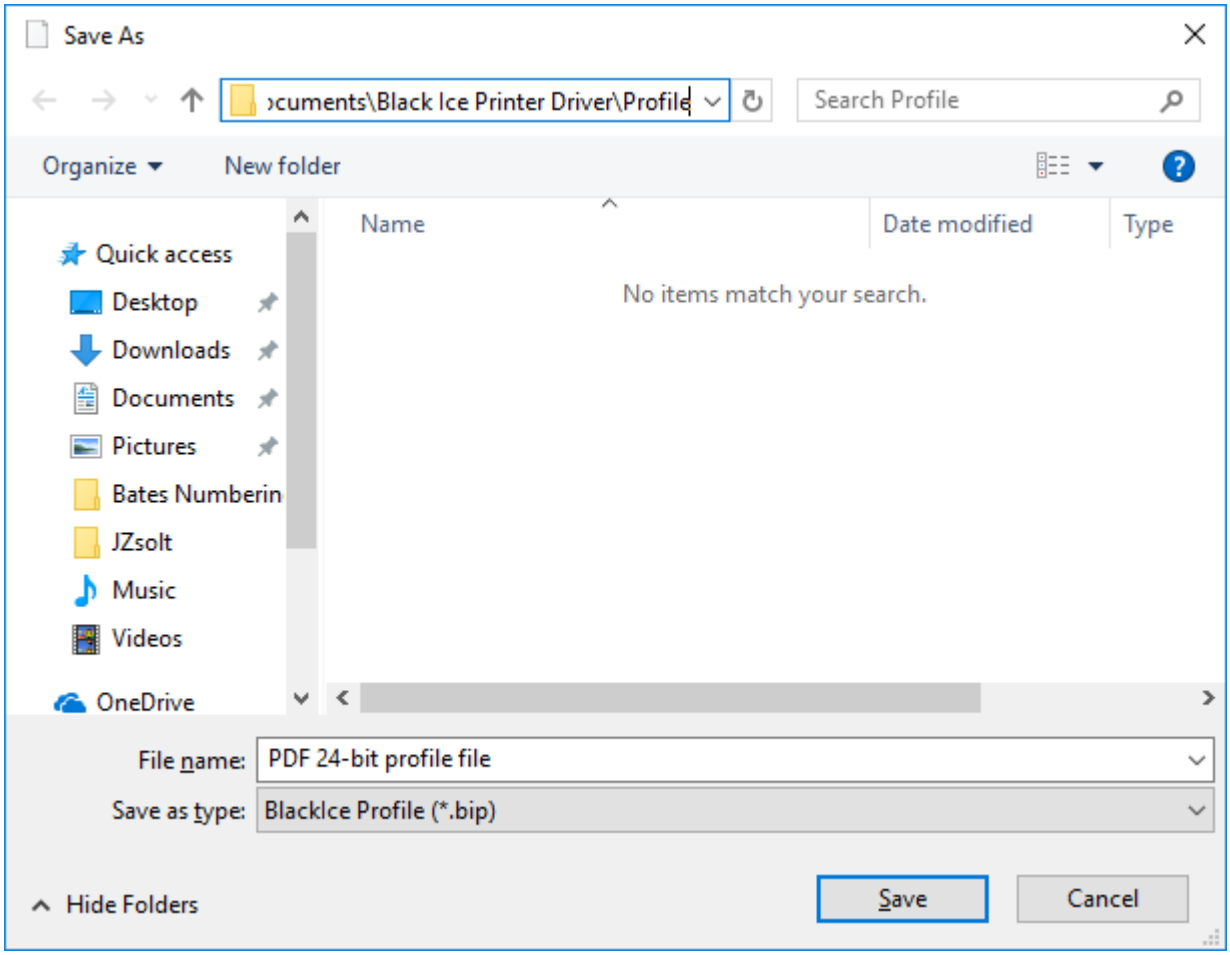




Select the Export the current printer settings option, and enter a name for the profile and a description. When finished click on **Export** button.

Alternatively, one can export an existing profile by selecting the **Export an existing profile** option.

Browse the directory and specify the name to save the profile file.



The saved profile can be imported into the Black Ice Printer Drivers on other computers by using the Import a profile from a file… button.

The Profile files are located at:
<<Printer Driver Installation directory>>\Common Profiles

Configuring Agent Printer through INI file

Additional Agent Printers can be installed during the MSI installation by using the Agent Printer parameters, and adding a customized profile (BIP) file, which contains the Agent Printer name, description and settings, as in the following example:

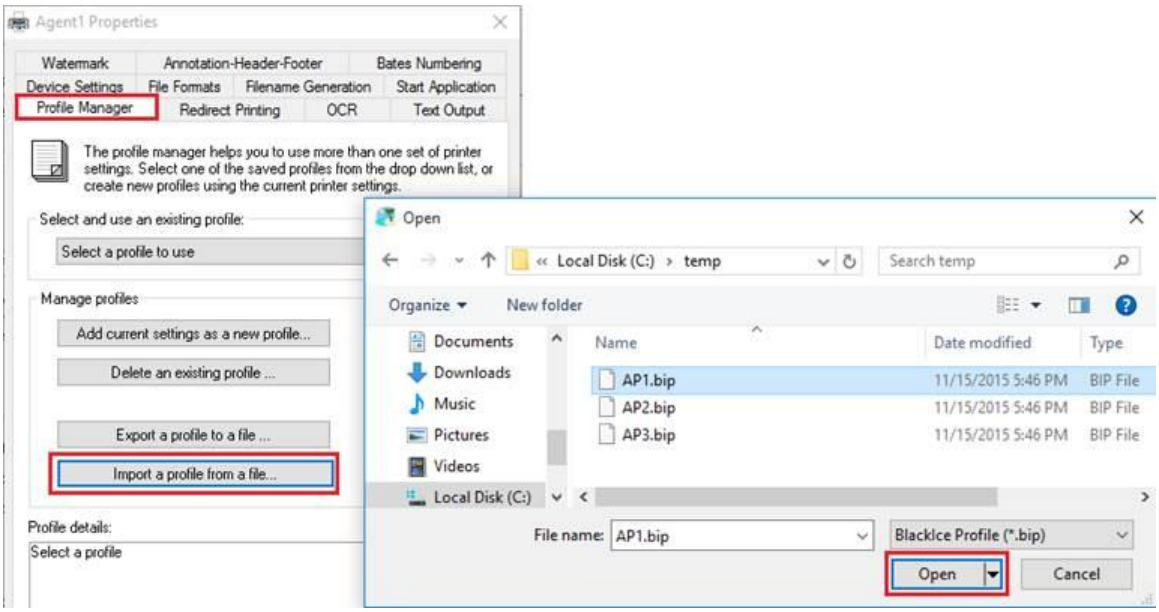
msiexec.exe /i "<<PATH>>\BlackIcePDF_X1.msi" REGNUM="XXXXX-XXXXXXXX-XXXXXXXXXX" AP1NAME="Agent printer with PDF output" AP1DESC="Agent printer with PDF file format" AP1PROFILE="c:\test\PDF profile for Agent printer.bip"

The **APLIST** parameter also can be used, which specified a list of Agent Printers to install and configure.

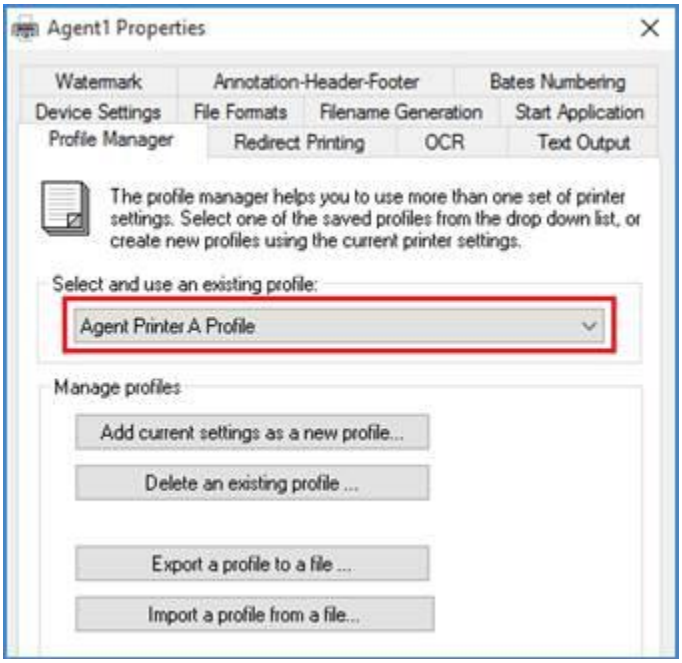
For more information about the available parameters and how to use them, please refer to the **Available Parameters of the MSI install** section.

Importing Profiles into Agent Printers after the installation:

1. In order to import an already existing agent printer profile after the installation, Go to the Agent Printer's Printing Preferences > Profile Manager > Import a profile from a file…
2. Browse the directory where the profiles are saved, select the appropriate profile, and click on the Open button.



3. After imported the profile, the profile name will appears in the list of the existing profiles. Select the newly imported profile from the list, and press OK to save the settings.



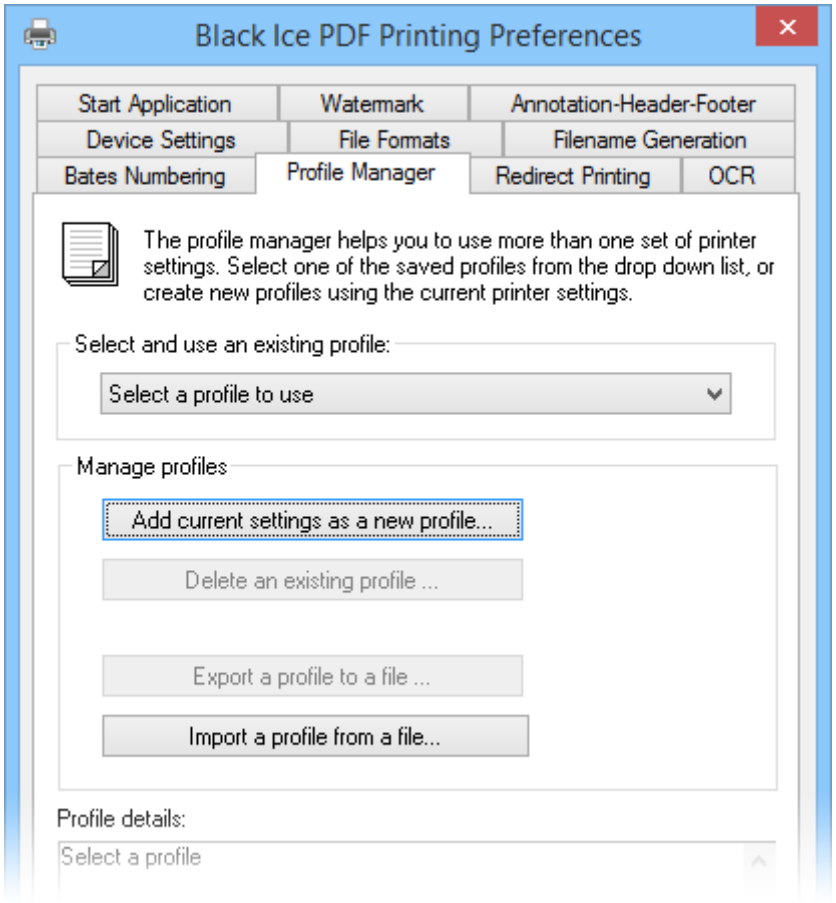
The customized Profile file for the MSI installer can be generated by an already installed "End-User" Printer Driver with the following steps:

Creating Profile File

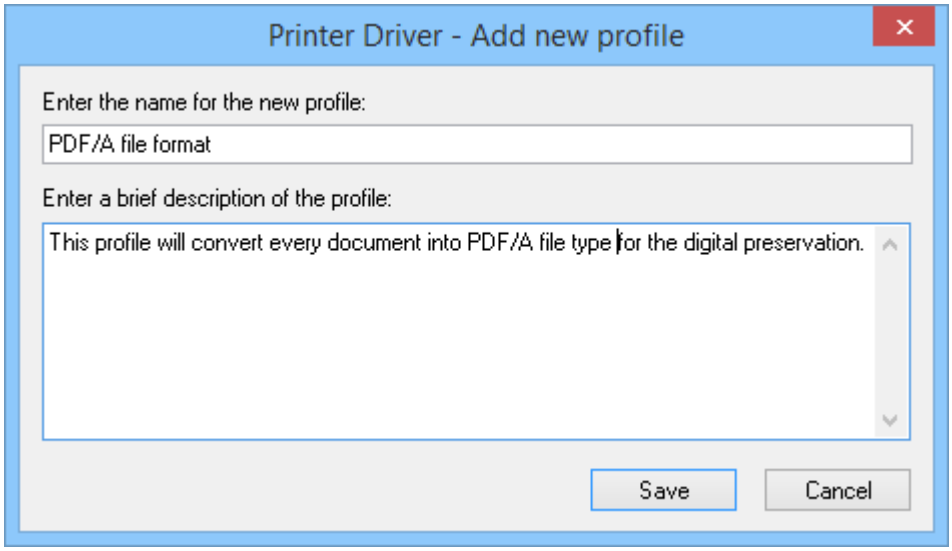
Black Ice Profile files can be created with an installed Black Ice Printer Driver on the system. To create a profile, go to Control Panel > Devices and Printers > right click on the Black Ice Printer > Printing Preferences > Set up the desired configuration.

For example: If one would like to create a profile, which print documents into PDF/A file format, go to File Formats tab, and select PDF/A (.pdf) option in the File Format dropdown list.*

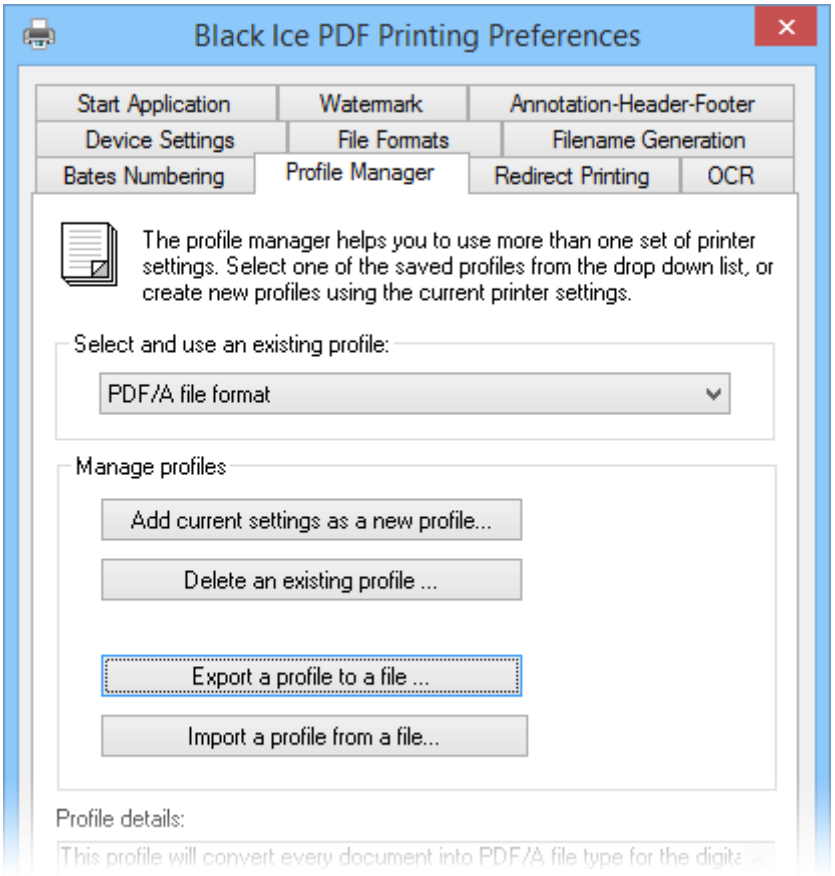
When the configuration is finished, go to the **Profile Manager** tab, and click on Add current settings as a new profile…



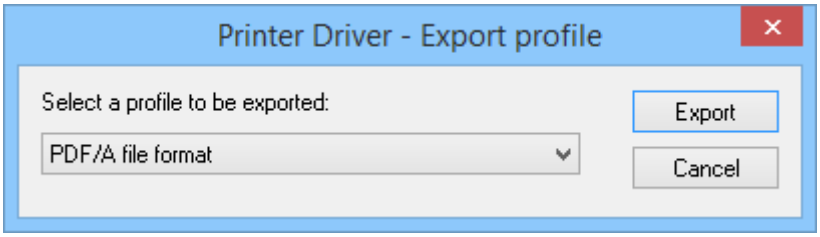
The following window appears where the user can enter a name for the profile and a description. When finished click on **Save** button:



The profile can be exported in the Profile Manager tab, by clicking on **Export a profile to a file…** button.



Select the newly created profile and click on **Export** button.



The profile will be saved to the following location:
c:\Users\<<USERNAME>>\Documents\Black Ice Printer Driver\Profile\Profile0.bip
The saved profile can be using in the MSI installations to preconfigure Agent Printers, and also imported into the Black Ice Printer Drivers on other computers by using the Import a profile from a file… button.

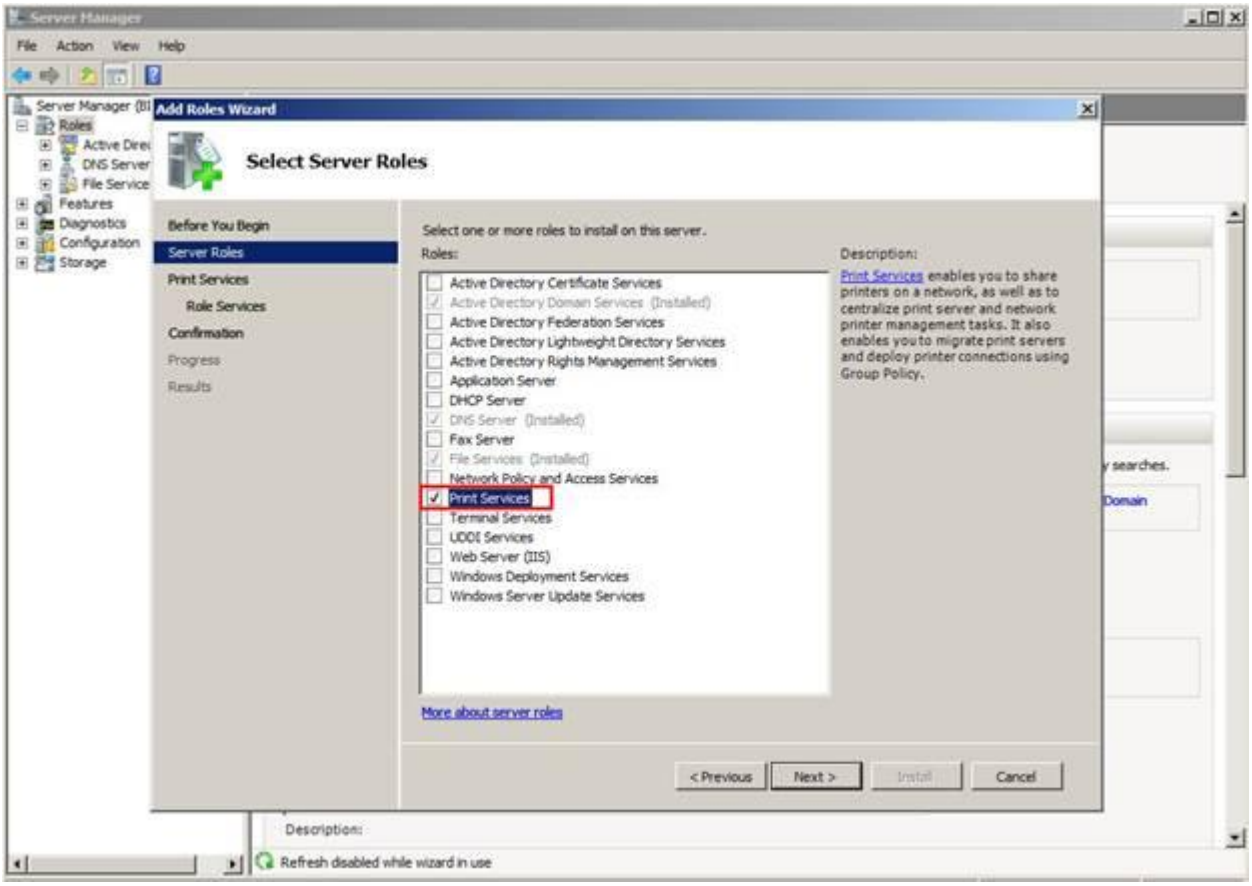
Adding Shared Printer driver in Group Policy

Adding the Print Management for Windows Server 2008

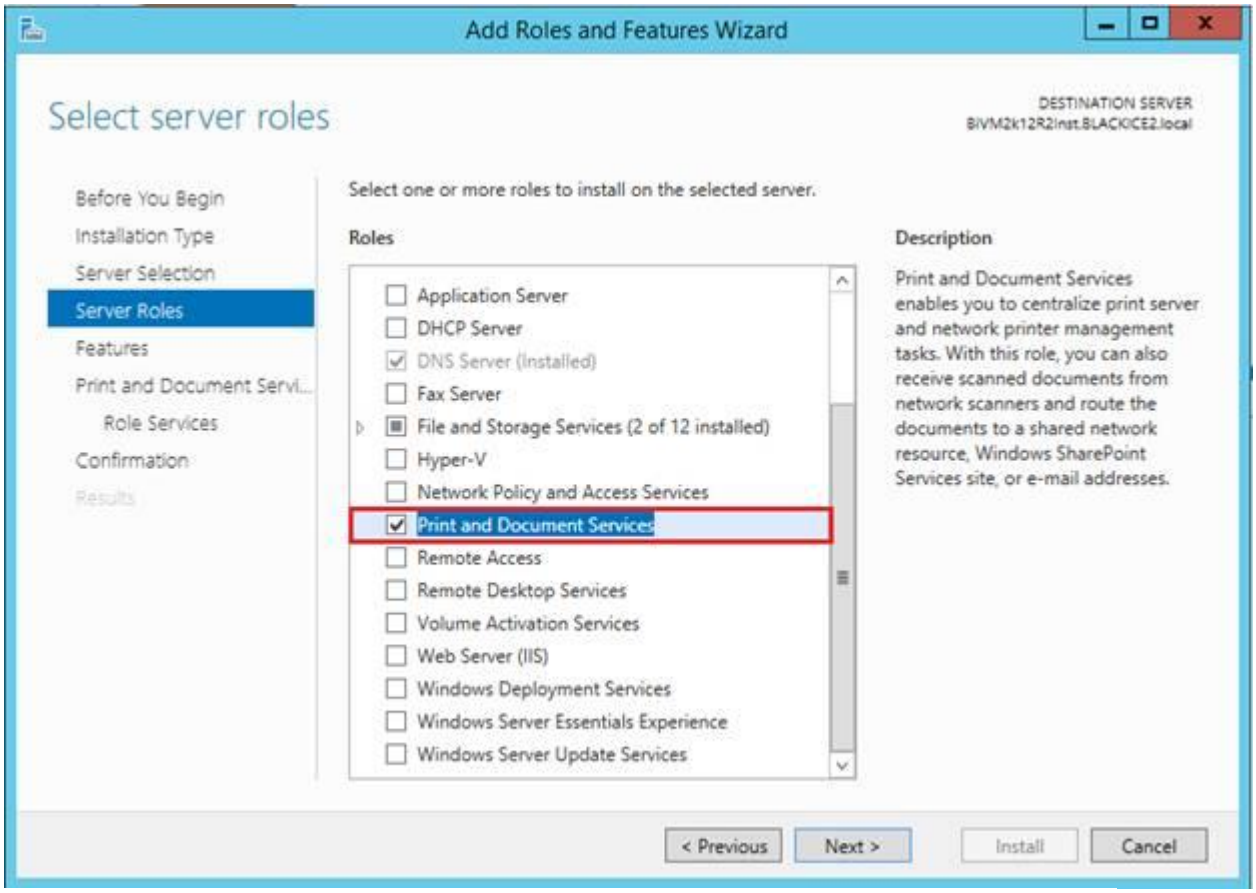
- From Server Manager, use the Add Roles Wizard to install the **Print Services** role. It will install the Print Management snap-in and configure the server to be a print server.

- From Server Manager, use the Add Features Wizard to install the **Print Services Tools** option of the **Remote Server Administration Tools** feature. The **Print Services Tools** option installs the Print Management snap-in, although it does not configure the server to be a print server.

On Windows Server 2008
Check the Print Services role



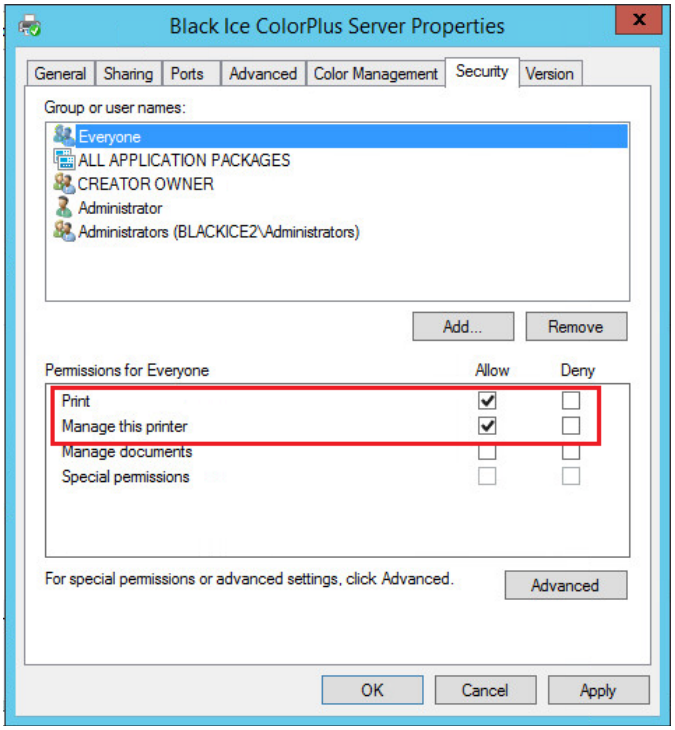
On Window Server 2012 R2
Check the Print and Document Services role.



Once the necessary roles and features are installed, proceed with the following steps.

Share the PRINTER and setup the security

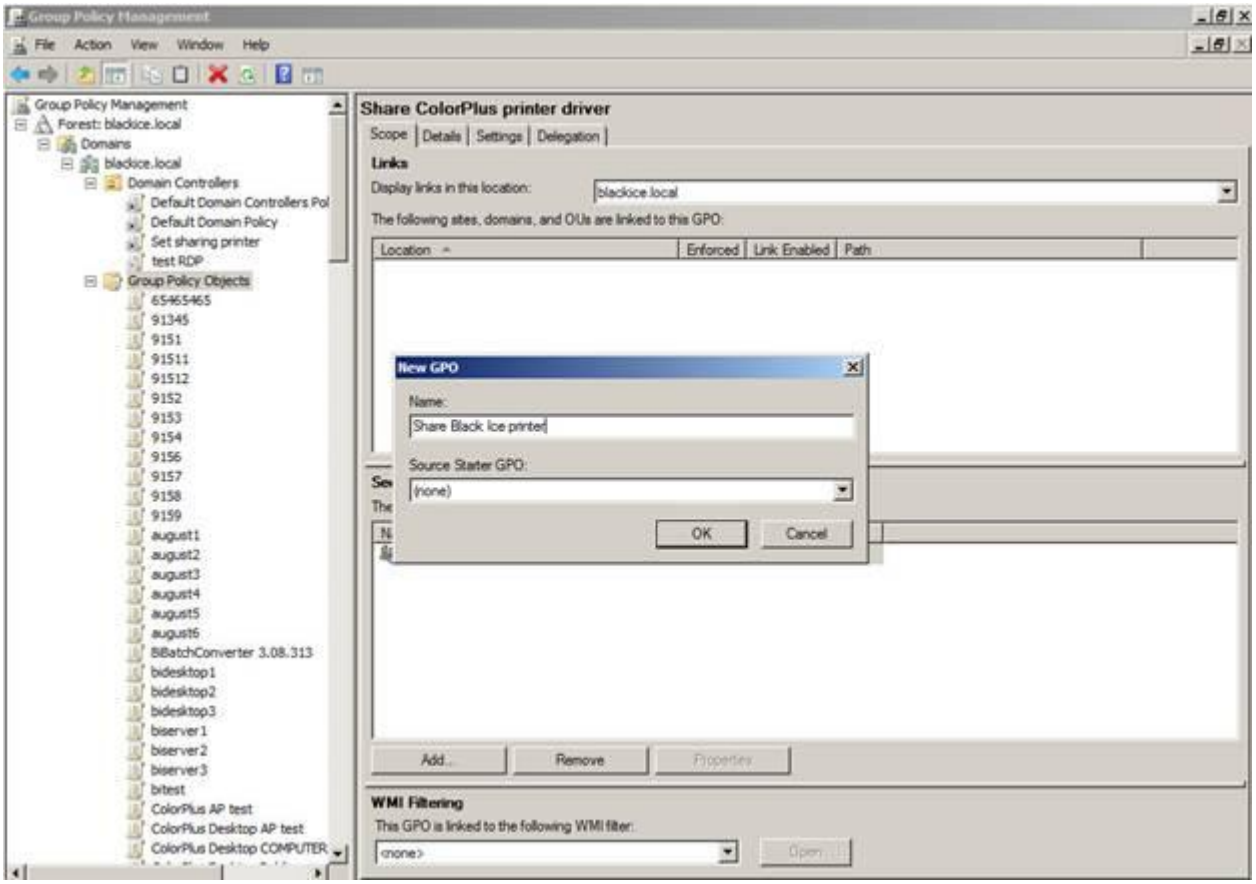
- Select the printer, Printer Properties and choose the **Security** tab
- Add **Print** and **Manage this printer** role



Configure Printer Management role by user

- Open print management and select "installed printers" Control Panel -> Administrative Tools ->
- Select the printer you want to deploy
- Create a "Shared Black Ice printer" on Group Policy

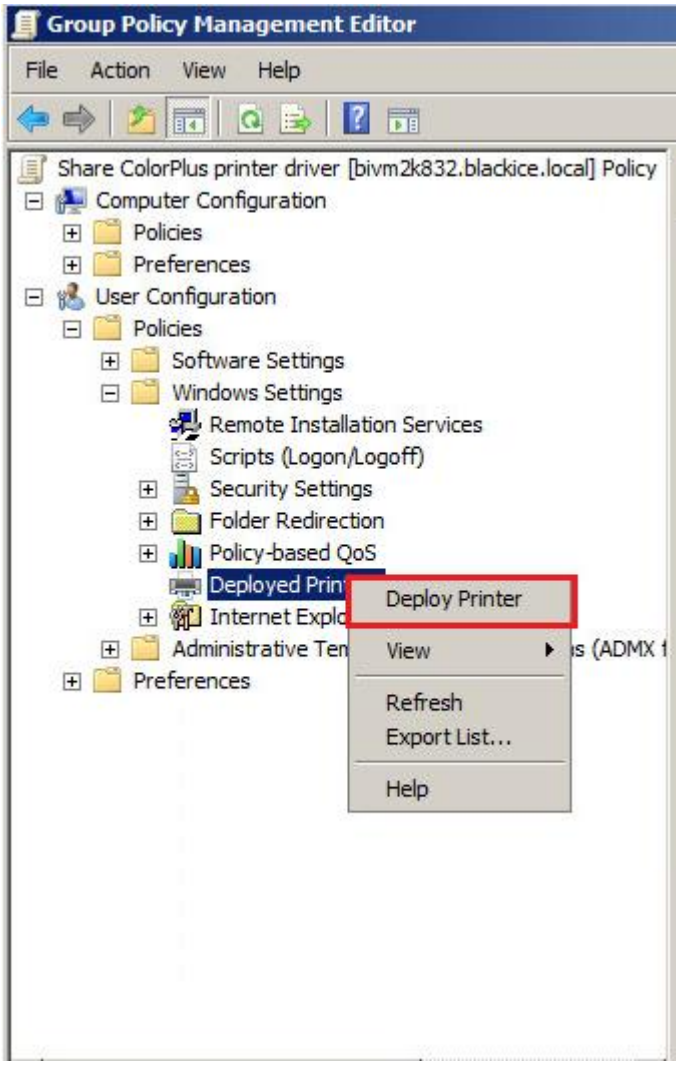
In Group Policy Management Console navigate to Group Policy objects container and create new Group Policy Object by right clicking the inside the Contents tab.
Enter name of your GPO and click OK.



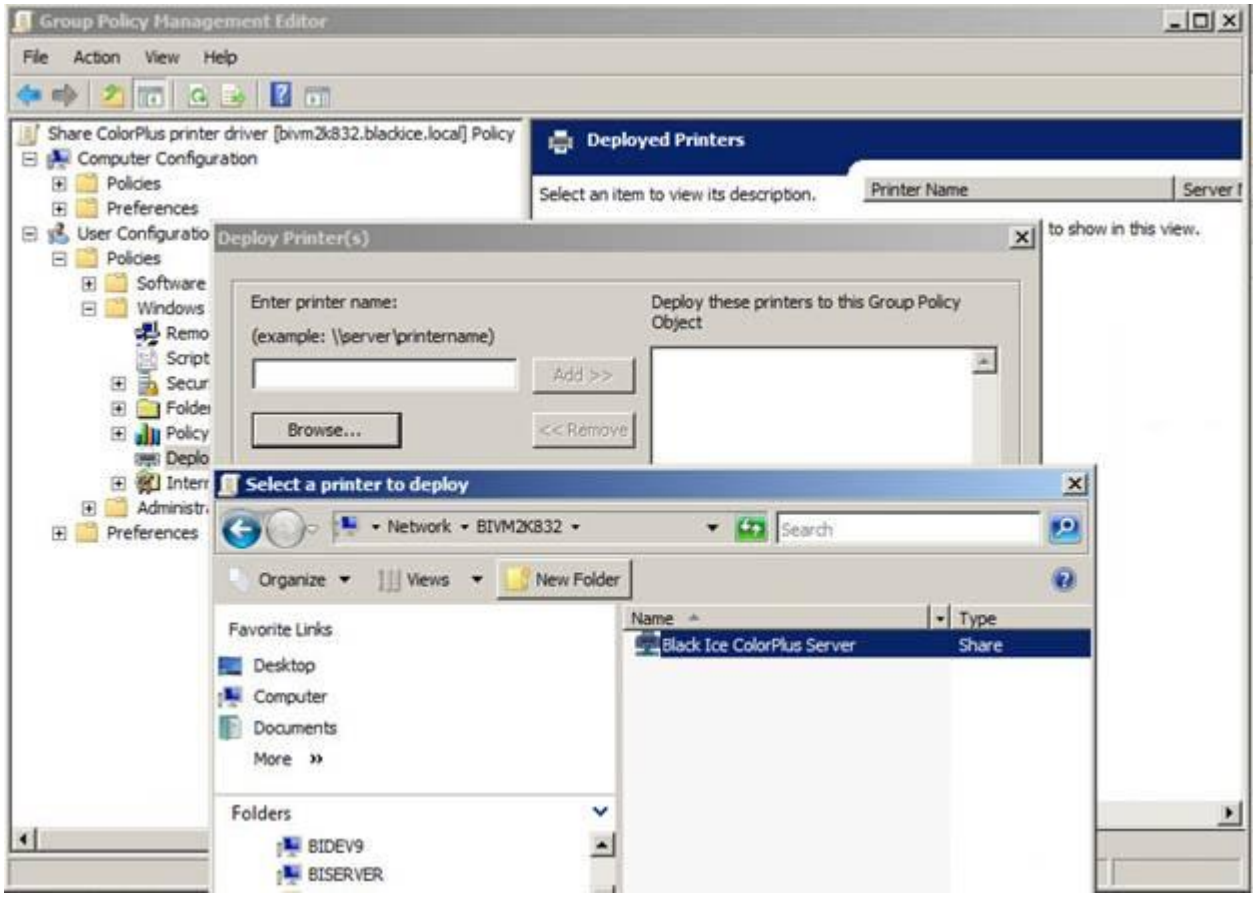
Right click on the newly created GPO and select Edit.

Add Shared printer

Navigate to User Configuration > Policies > Windows Settings > right click on the **Deployed Printers** and select **Deploy Printer.**

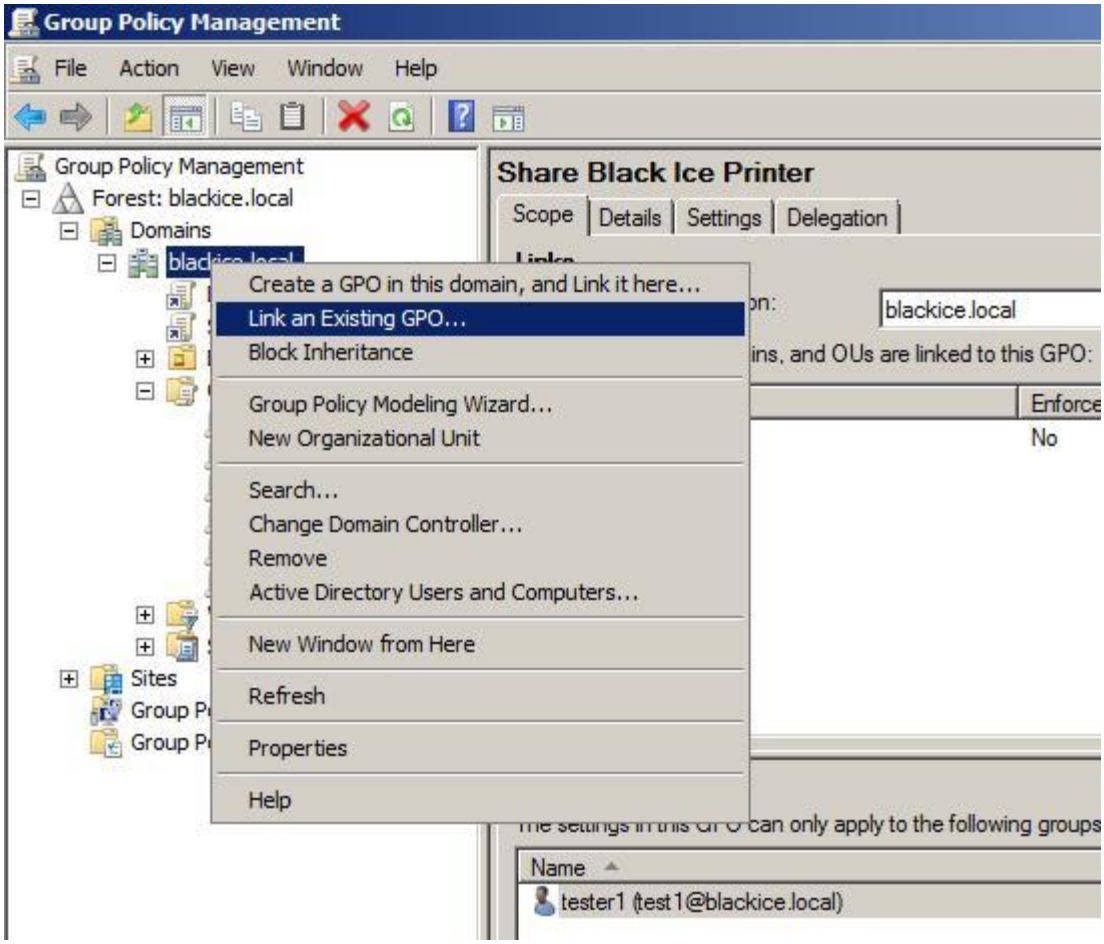


Click on the Browse… button and browse the shared Black Ice printer driver:

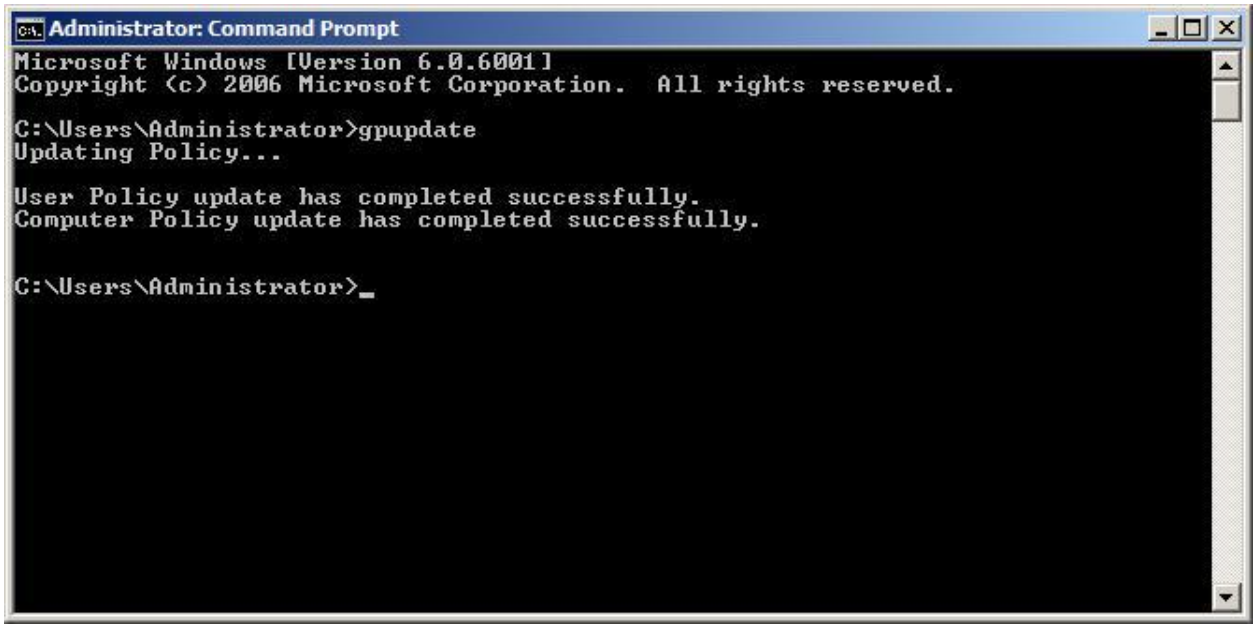


Click on the **Add** and then the **OK** button.

In the Group Policy Management window, right click on the Domain, click on the Link an Existing GPO and select the newly created GPO, and make sure that the necessary groups, users and computers are added under the GPO Scope tab.



When finished, update the Group Policy by opening a command line, and type the following command: **gpupdate**



Next time when an appropriate user logs in, the Shared printers will be automatically added in Devices and Printers.

Using the custom configuration INI file for shared network drive

To use the custom INI file from a shared network drive, one has to specify the full UNC path of the shared network drive in the CUSTOMINI parameter.

To install the Printer Driver Using the custom configuration INI file for shared network drive, one has to run the command prompt as Administrator, and execute the following command:

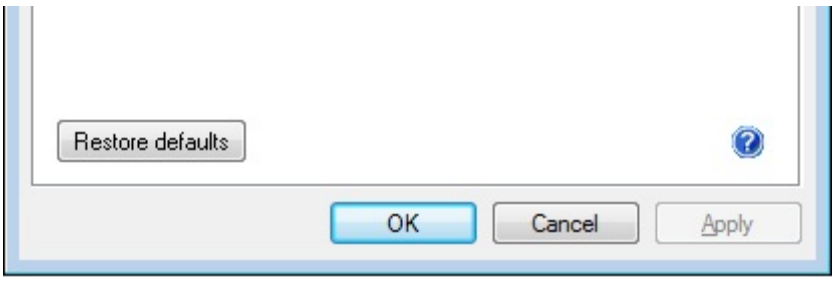
> **msiexec /i "C:\temp\BlackIcePDF_X1.msi" CUSTOMINI="\\servername\TestMSI\custom.ini" REGNUM= XXXXX-XXXXXXXX-XXXXXXXXXX**

Please note the Printer Driver cannot be installed with the CUSTOMINI parameter if the custom INI files path is defined with a network drive letter.

For example: msiexec /i "C:\temp\BlackIcePDF_X1.msi" CUSTOMINI="T:\TestMSI\custom.ini" REGNUM= XXXXX-XXXXXXXX-XXXXXXXXXX

How to test your Configuration INI file

The easiest way to test your configuration is to replace the default INI file for the already installed Printer Driver with your modified INI file(please see: The Default INI files locations below), and Restore the Default Settings on the Device Settings tab for the Printer Driver.



The Restore Default Settings will load the settings from your INI file, and on the Printer Driver Printing Preferences you can check that the desired modifications are shown. Please see example below.

The Default INI files locations;

32 bit
C:\Windows\System32\Spool\Drivers\w32x86\BuPiniNT.ini
C:\Windows\System32\Spool\Drivers\w32x86\3\BuPiniNT.ini

64 bit
C:\Windows\System32\spool\drivers\x64\BuPiniNT.ini
C:\Windows\System32\spool\drivers\x64\3\BuPiniNT.ini

If the printer driver does not find the INI file or the INI file contains incorrect values, the default printer settings will be applied. The default printer settings are hard coded in the printer driver.

Any change to the INI file after installation will have no effect on the printer driver until the system is rebooted or clicked on the "**Restore defaults**" bottom of the "**Device Settings**" Tab of the printer driver.

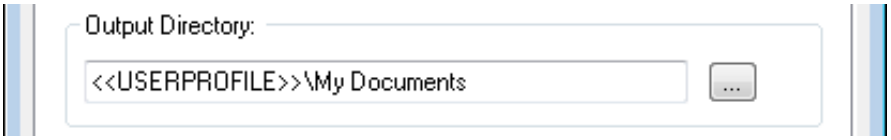
Sample how to change the output directory in the INI file

To change the default output directory in the INI file, open the file with Notepad, and search the following part;

OutputDirectory=<<USERPROFILE>>\Documents

The **<<USERPROFILE>>\Documents** is the current output directory. To change it do the steps below;

- Modify the line; **OutputDirectory=<<USERPROFILE>>\My Documents**
- Save the file to another location, and then overwrite the original INI file. See the default INI file locations above.
- Go to the Start menu > Devices and Printers > right click on the Printer Driver > Printing Preferences > Device Settings tab and click to **Restore Defaults**.
- Go to Filename Generation tab in the Printing Preferences, and check the Output Directory. It should be **<<USERPROFILE>>\My Documents.**



Email Configuration through MSI Printer Driver Installation

Email Configuration can be preconfigured before a large scale deployment through the INI file. To change the default email sending configurations in the INI file, open the file with Notepad, and search the following part;

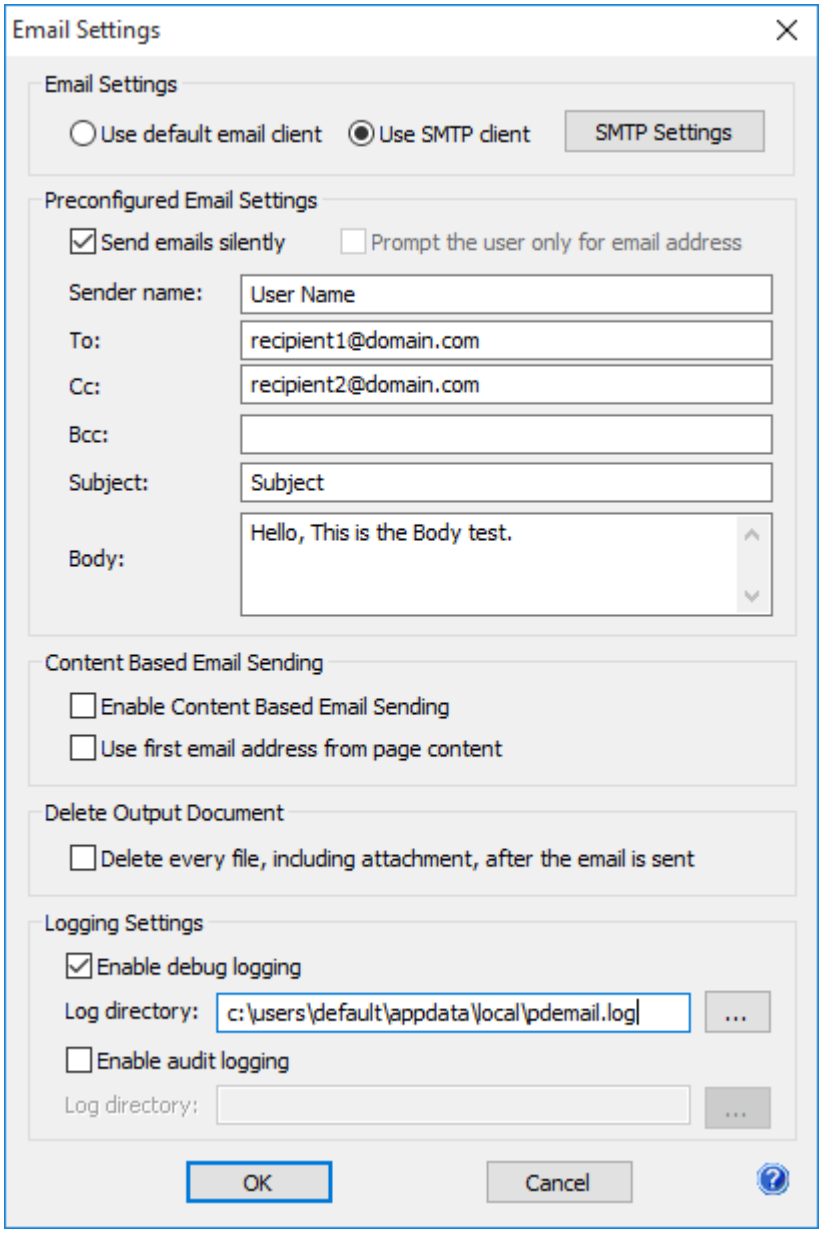
[Email Settings]

Configure the following entries under the [Email Settings] part;

Sender Client=**1**
SMTP Server=**smtp.domain.com**
SMTP Port=**587**
SMTP UserName=**user@domain.com**
SMTP Sender Email=user@domain.com
SMTP Password=**************

SMTP Enable SSL=Yes
Ask For Address=No
Email Send Silently=**Yes**
Email Sender=**User Name**
Email To=**recipient1@domain.com**
Email Cc=**recipient2@domain.com**
Email Subject=**Subject**
Email Body=**Hello, This is the Body text.**
Logging Enabled=**Yes**
Logging Directory=**C:\Users\Tester\Documents\Black Ice Printer Driver\PDemail.log**
Audit Logging Enabled=No
Audit Logging Directory=
Delete Files After Sending=No
Disable About Box Links=No
Disable Email Settings=No
Content Based Email=No
Simple Content Based Email=No

Save the file to another location, and then overwrite the original INI file. If the Printer Driver will be installed through MSI Installation with this custom INI file, the Email Configurations will be the following by default on every installed system;



SharePoint Configuration through MSI Printer Driver Installation

Upload to SharePoint configuration can be preconfigured before a large scale deployment through the INI file. To change the default upload to SharePoint configurations in the INI file, open the file with Notepad, and search the following part;

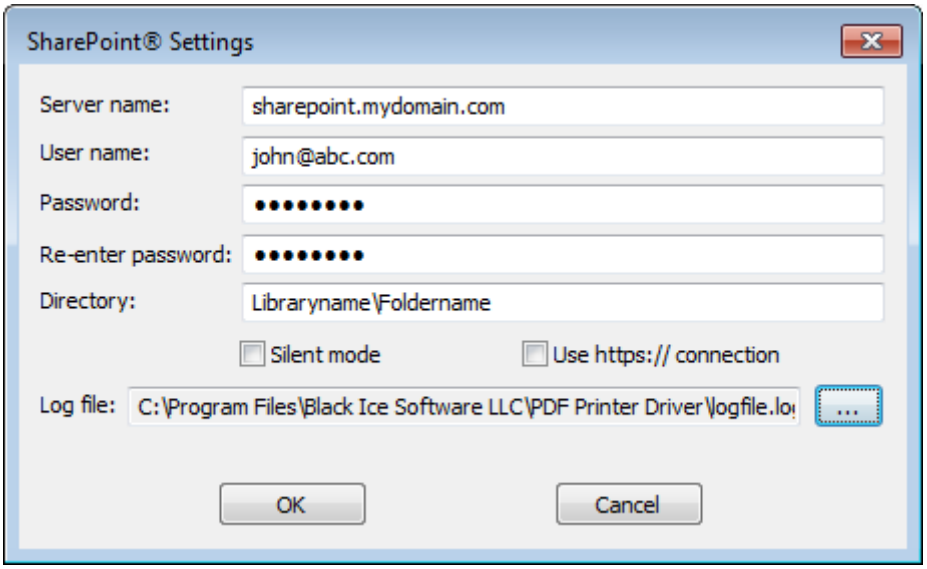
[Post Print Options]

Configure the following entries under the [Post Print Options] part;

SharePoint Upload=**1**
SharePoint Server=**sharepoint.mydomain.com**
SharePoint Directory=**Libraryname\Foldername**
SharePoint User=**john@abc.com**
SharePoint Pass=**********

SharePoint Logfile=**C:\Program Files\Black Ice Software LLC\PDF Printer Driver\logfile.log**

Save the file to another location, and then overwrite the original INI file. If the Printer Driver will be installed through MSI Installation with this custom INI file, the SharePoint settings will be the following by default on every installed system;



The Printer Driver Configuration INI File

The Black Ice printer drivers can be configured to use a developer defined group of settings at installation time by using the CUSTOMINI parameter in conjunction with the INI file associated with the driver. Settings specified in the ini file will be used to configure the Black Ice printer driver at installation time as the default settings for any Black Ice printer driver user on the system. To set the printer driver settings at install time a specific INI file can be used and modified to reflect the desired settings.

The Default INI files locations;

32 bit
C:\Windows\System32\Spool\Drivers\w32x86\BuPiniNT.ini
C:\Windows\System32\Spool\Drivers\w32x86\3\BuPiniNT.ini

64 bit
C:\Windows\System32\spool\drivers\x64\BuPiniNT.ini
C:\Windows\System32\spool\drivers\x64\3\BuPiniNT.ini

Description of the INI file values

[Default Settings]

Paper Size=<number>

Windows operating system has 335 paper size definition.
The custom paper size definition start at 336 for “WindowsPaperCode”; If one adds another custom paper size, the number must be increased; each additional custom paper sizes are 336, 337,....n
If a new custom paper is added do not forget to increment the 'Number of Paper Sizes' entry.

Black Ice Software printer driver INI file contain 178 paper size definition in the INI file. Paper1, Paper2, … Paper178.
The first custom paper size definition is “Paper179” prefix. For example, if one adds one more custom paper size, the prefix must be Paper179.

Paper Size Prefix in the INI file	Paper size name	Value (WindowsPaperCode)
Paper1	A4, 210 x 297 mm	9
Paper2	Letter, 8 1/2 x 11"	1
Paper77	10 x 11"	45
Paper78	10 x 14"	16
Paper79	11 x 17"	17
Paper80	12 x 11"	90
Paper81	15 x 11"	46
Paper76	9 x 11"	44
Paper52	A (ANSI) Sheet, 8 1/2 x 11"	298
Paper18	A0, 841 x 1189 mm	278
Paper19	A1, 594 x 841 mm	279
Paper27	A10, 26 x 37 mm	283
Paper20	A2, 420 x 594 mm	66
Paper93	A3 Extra Transverse	68
Paper92	A3 Extra, 322 x 445 mm	63
Paper94	A3 Rotated, 420 x 297 mm	76
Paper95	A3 Transverse, 297 x 420 mm	67
Paper21	A3, 297 x 420 mm	8
Paper96	A4 Extra, 235 x 322 mm	53
Paper3	A4 Plus, 210 x 330 mm	60
Paper97	A4 Rotated, 297 x 210 mm	77
Paper98	A4 small, 210 x 297 mm	10
Paper99	A4 Transverse, 210 x 297 mm	55
Paper100	A5 Extra, 174 x 235 mm	64
Paper101	A5 Rotated, 210 x 148 mm	78
Paper102	A5 Transverse, 148 x 210 mm	61
Paper22	A5, 148 x 210 mm	11
Paper103	A6 Rotated, 148 x 105 mm	83
Paper23	A6, 105 x 148 mm	70
Paper24	A7, 74 x 105 mm	280

Paper25	A8, 52 x 74 mm	281
Paper26	A9, 37 x 52 mm	282
Paper62	ARCH A Sheet, 9 x 12"	305
Paper63	ARCH B Sheet, 12 x 18"	306
Paper64	ARCH C Sheet, 18 x 24"	307
Paper65	ARCH D Sheet, 24 x 36"	308
Paper66	ARCH E Sheet, 36 x 48"	309
Paper156	Avery 4150-4151, 1 1/8 x 3 1/2"	310
Paper157	Avery 4153, 2 1/8 x 4"	311
Paper158	Avery 9170, 1 x 2 5/8"	312
Paper159	Avery 9173, 2 1/8 x 3 1/3"	313
Paper160	Avery 9176, 11/16 x 3 7/16"	314
Paper161	Avery 9177, 1/2 x 1 3/4"	315
Paper162	Avery Dennison, 4.4 - 100 x 150 mm	316
Paper163	Avery Dennison, 4.4 - 100 x 75 mm	317
Paper53	B (ANSI) Sheet, 11 x 17"	299
Paper105	B0 (JIS), 1030 x 1456 mm	325
Paper28	B0, 1000 x 1414 mm	284
Paper106	B1 (JIS), 728 x 1030 mm	326
Paper29	B1, 707 x 1000 mm	285
Paper38	B10, 31 x 44 mm	293
Paper107	B2 (JIS), 515 x 728 mm	327
Paper30	B2, 500 x 707 mm	286
Paper108	B3 (JIS), 364 x 515 mm	328
Paper31	B3, 353 x 500 mm	287
Paper109	B4 (JIS), 257 x 364 mm	12
Paper110	B4 (JIS), Rotated	79
Paper32	B4, 250 x 353 mm	42
Paper111	B5 (JIS), 182 x 257 mm	13
Paper112	B5 (JIS), Rotated	80
Paper113	B5 (JIS), Transverse, 182 x 257 mm	62
Paper104	B5 Extra, 201 x 276 mm	65
Paper33	B5, 176 x 250 mm	288
Paper115	B6 (JIS) Rotated	89
Paper114	B6 (JIS), 128 x 182 mm	88
Paper34	B6 , 125 x 176 mm	289
Paper35	B7, 88 x 125 mm	290
Paper36	B8, 62 x 88 mm	291
Paper37	B9 , 44 x 62 mm	292
Paper164	Badge Size, 2 5/16 x 3 1/2"	318
Paper6	Broadsheet, 17 x 22"	276
Paper165	Business Card CR-80, 3 3/8 x 2 1/8"	319
Paper54	C (ANSI) Sheet, 17 x 22"	24

Paper166	Credit Card size, 2 1/8 x 3 3/8"	320
	Custom paper size	336
Paper55	D (ANSI) Sheet, 22 x 34"	25
Paper167	Data Collection Size, 2 5/16 x 3 1/4"	321
Paper56	E (ANSI) Sheet, 34 x 44"	26
Paper68	Envelope #10, 4 1/8 x 9 1/2"	20
Paper69	Envelope #11, 4 1/2 x 10 3/8"	21
Paper70	Envelope #12, 4 1/2 x 11"	22
Paper71	Envelope #14, 5 x 11 1/2"	23
Paper67	Envelope #9, 3 7/8 x 8 7/8"	19
Paper73	Envelope 6 3/4, 3 5/8 x 6 1/2"	38
Paper49	Envelope B4, 250 x 353 mm	33
Paper50	Envelope B5, 176 x 250 mm	34
Paper51	Envelope B6, 176 x 125 mm	35
Paper39	Envelope C0, 917 x 1297 mm	294
Paper40	Envelope C1, 648 x 917 mm	295
Paper41	Envelope C2, 458 x 648 mm	296
Paper42	Envelope C3, 324 x 458 mm	29
Paper43	Envelope C4, 229 x 324 mm	30
Paper44	Envelope C5, 162 x 229 mm	28
Paper45	Envelope C6, 114 x 162 mm	31
Paper46	Envelope C65, 114 x 229 mm	32
Paper47	Envelope C7, 81 x 114 mm	297
Paper48	Envelope DL, 110 x 220 mm	27
Paper74	Envelope Invite, 220 x 220 mm	47
Paper72	Envelope Monarch, 3 7/8 x 7 1/2"	37
Paper75	Envelope, 110 x 230 mm	36
Paper7	Executive, 7 1/4 x 10 1/2"	7
Paper57	F (ANSI) Sheet, 28 x 40"	300
Paper5	Fax Paper, 215.1 x 285.1 mm	257
Paper8	Folio, 8 1/2 x 13"	14
Paper58	G (ANSI) Sheet, 11 x 22 1/2"	301
Paper15	German Legal Fanfold, 8 1/2 x 13"	41
Paper16	German Standard Fanfold, 8 1/2 x 12"	40
Paper168	Government Size, 2 5/8 x 3 7/8"	322
Paper59	H (ANSI) Sheet, 28 x 44"	302
Paper169	ID-1, 85.6 x 53.98 mm	229
Paper170	ID-2, 105 x 74 mm	323
Paper171	ID-3, 125 x 88 mm	324
Paper172	Index card, 3 x 5"	331
Paper173	Index card, 4 x 6"	332
Paper174	Index card, 5 x 8"	333
Paper60	J (ANSI) Sheet, 34 x 55"	303

Paper129	Japan Double Postcard Rotated	82
Paper128	Japan Double Postcard, 200 x 148 mm	69
Paper116	Japan Envelope Chou #3 Rotated	86
Paper117	Japan Envelope Chou #3, 120 x 235 mm	73
Paper118	Japan Envelope Chou #4 Rotated	87
Paper119	Japan Envelope Chou #4, 90 x 205 mm	74
Paper120	Japan Envelope Kaku #2 Rotated	84
Paper121	Japan Envelope Kaku #2, 240 x 332 mm	71
Paper122	Japan Envelope Kaku #3 Rotated	85
Paper123	Japan Envelope Kaku #3, 216 x 277 mm	72
Paper124	Japan Envelope You #4 Rotated	92
Paper125	Japan Envelope You #4, 105 x 235 mm	91
Paper127	Japan Postcard Rotated	81
Paper126	Japan Postcard, 100 x 148 mm	43
Paper175	Japanese business card, 55 x 91 mm	335
Paper9	Junior Legal, 5 x 8"	277
Paper61	K (ANSI) Sheet, 40 x 62 11/16"	304
Paper10	Ledger, 17 x 11"	4
Paper82	Legal Extra, 9 1/2 x 15"	51
Paper4	Legal, 8 1/2 x 14"	5
Paper83	Letter Extra Transverse, 9 1/2 x 12"	56
Paper84	Letter Extra, 9 1/2 x 12"	50
Paper85	Letter Plus, 8 1/2 x 12 11/16"	59
Paper86	Letter Rotated, 11 x 8 1/2"	75
Paper87	Letter Small, 8 1/2 x 11"	2
Paper88	Letter Transverse, 8 1/2 x 11"	54
Paper11	Note, 8 1/2 x 11"	18
Paper177	Optimized HTML Resolution, 256.6 x 291 mm	330
Paper130	PRC 16K, 146 x 215 mm	93
Paper131	PRC 16K, Rotated	106
Paper132	PRC 32K(Big), 97 x 151 mm	95
Paper133	PRC 32K(Big), Rotated	108
Paper134	PRC 32K, 97 x 151 mm	94
Paper135	PRC 32K, Rotated	107
Paper136	PRC Envelope #1, 102 x 165 mm	96
Paper137	PRC Envelope #1, Rotated	109
Paper154	PRC Envelope #10, 324 x 458 mm	105
Paper155	PRC Envelope #10, Rotated	118
Paper138	PRC Envelope #2 Rotated	110
Paper139	PRC Envelope #2, 102 x 176 mm	97
Paper140	PRC Envelope #3 Rotated	111
Paper141	PRC Envelope #3, 125 x 176 mm	98
Paper142	PRC Envelope #4 Rotated	112

Paper143	PRC Envelope #4, 110 x 208 mm	99
Paper144	PRC Envelope #5 Rotated	113
Paper145	PRC Envelope #5, 110 x 220 mm	100
Paper146	PRC Envelope #6 Rotated	114
Paper147	PRC Envelope #6, 120 x 230 mm	101
Paper148	PRC Envelope #7 Rotated	115
Paper149	PRC Envelope #7, 160 x 230 mm	102
Paper150	PRC Envelope #8 Rotated	116
Paper151	PRC Envelope #8, 120 x 309 mm	103
Paper152	PRC Envelope #9 Rotated	117
Paper153	PRC Envelope #9, 229 x 324 mm	104
Paper17	Quarto, 215 x 275 mm	15
Paper12	Statement, 5 1/2 x 8 1/2"	6
Paper89	SuperA/A4, 227 x 356 mm	57
Paper90	SuperB/A3, 305 x 487 mm	58
Paper91	Tabloid Extra, 12 x 18"	52
Paper13	Tabloid, 11 x 17"	3
Paper176	US business card, 2 x 3 1/2"	334
Paper14	US Standard Fanfold, 14 7/8 x 11"	39

Paper Width=<number>
The width of the paper in tenths of millimeter. Must be specified if *Variable Paper size* selected. Value can be between 1 and 65535.

Paper Length=<number>
The length of the paper in tents of millimeter . Must be specified if *Variable Paper size* selected. Value can be between 1 and 65535.

X DPI =<number>
The horizontal DPI of the image. Can be a value between 1 and 1500.

Y DPI =<number>
The vertical DPI of the image. Can be a value between 1 and 1500.

Rotation=<number>
Sets the angle of page rotation in degrees, counter-clockwise. Only multiples of 90 are supported, can be one of the following values: 0, 90, 180, 270

File Format=<number>
The output file format for the printer. For configuring a file format in the Printer Driver INI file, please use the desired file format **Value** in the Printer Driver INI file, for the **File Format** INI file key.

For example, for PDF file format:
File Format=36

The value can be one of the following:

File format	Value	Available for Printer				
		Color	Color Plus	EMF	TIFF\Monochrome	PDF
CALS (*.cg4)	11	X	X		X	
Enhanced Metafile (*.emf)	18		X	X		
GIF (*.gif)	25	X	X		X	
HTML - editable (*.htm)	37	X	X			
HTML with BMP (*.htm)	29	X	X		X	
HTML with GIF (*.htm)	26	X	X		X	
HTML with JPEG (*.htm)	28	X	X		X	
HTML with PNG (*.htm)	27	X	X		X	
IBM MMR IOCA (*.mca)	19	X	X		X	
Intel DCX (*.dcx)	2	X	X		X	
JPEG (*.jpg)	16	X	X			
JPEG LAB (*.jpg)	17	X	X			
Microsoft Bitmap (*.bmp)	0	X	X		X	
PCX (*.pcx)	1	X	X		X	
PDF (*.pdf)	36		X			X
PDF Image (*.pdf)	20		X			X
PDF/A	38		X			X
PNG (*.png)	24	X	X		X	
RAW CCITT (no header) Group 3, 1 Dimension (*.raw)	12	X	X		X	
RAW CCITT (no header) Group 3, 1 Dimension with Fillbits (*.raw)	13	X	X		X	
RAW CCITT (no header) Group 3, 2 Dimension (*.raw)	14	X	X		X	
RAW CCITT (no header) Group 4 (*.raw)	15	X	X		X	
TIFF for CISCO (*.tif)	30	X	X		X	
TIFF for Dialogic boards (*.tif)	21	X	X		X	
TIFF for Gammalink boards (*.tif)	23	X	X		X	
TIFF for NMS boards (*.tif)	22	X	X		X	
TIFF Group 3, 1 Dimension (*.tif)	4	X	X		X	
TIFF Group 3, 1 Dimension with Fillbits (*.tif)	5	X	X		X	
TIFF Group 3, 2 Dimension (*.tif)	6	X	X		X	
TIFF Group 4 (*.tif)	7	X	X		X	
TIFF JPEG (*.tif)	10	X	X		X	
TIFF Lempel-Ziv & Welch (*.tif)	9	X	X		X	
TIFF Packed (*.tif)	8	X	X		X	
TIFF Uncompressed (*.tif)	3	X	X		X	

XML - editable (*.xml)	39	X	X			
XML with BMP (*.xml)	34	X	X			
XML with GIF (*.xml)	31	X	X			
XML with JPEG (*.xml)	33	X	X			
XML with PDF (*.xml)	35		X			X
XML with PNG (*.xml)	32	X	X			

Orientation=<number>
The orientation of the paper. Set <number> to 1 for portrait or 2 for landscape.

BitsPerPixel=<number>
The values of the BitsPerPixel can be 1, 8, 8gray or 24

Flags=<number>
To set the enable or disable features of the printer at install time simply add or remove the value of the required flag. The values of the flags are defined in the 'devmode.h' file located in the Resource Toolkit. The value of the flag can be one or a combination of the following values:

Option	Flag Name	Hexadecimal number	Available for Printer				
			Color	ColorPlus	EMF	TIFF\Monochrome	PDF
200x200 DPI Fax resolution	BLF_FAX200	0x00000002	X	X		X	
Enable File Format -> TIFF Settings -> Internet TIFF Format	BLF_INTERNETTIFF	0x00000004	X	X		X	
Enable File Format -> TIFF Settings -> Add Page Numbering Tag	BLF_PAGENUMBERING	0x00000008	X	X		X	
Enable File Format -> TIFF Settings -> Reverse Bit Order in TIFF	BLF_REVERSEFILLORDER	0x00000010	X	X		X	
Enable File Format -> Save each page as separate file	BLF_MULTIIMAGE	0x00000020	X	X	X	X	X
Enable File Format -> Generate text output	BLF_WRITETEXT	0x00000040	X	X	X	X	X

Enable File Format -> Unicode/Eastern Character Support	BLF_UNICODETEXT (This flag is only used for OCR feature in 14.56 and in newer versions. For Text Output, please use the **Encoding** INI file key under **[Text Output Settings]**)	0x00000080	X	X	X	X	X
Enable File Format -> Mail Merge	BLF_MAILMERGE	0x00000100	X	X	X	X	X
Enable File Format -> Save text position and style **(This flag is no longer available in 14.56 and newer versions.)**	BLF_ADVANCEDTEXT (This flag is no longer available in 14.56 and newer versions. Please use the **Formatting Style=1** INI file key under **[Text Output Settings]**)	0x00000200	X	X	X	X	X
Enable File Format -> Disable output file	BLF_DISABLEIMAGE	0x00000400	X	X	X	X	X
Enable Filename Generation -> Disable Group File	BLF_DISABLEGROUPFILE	0x00000800	X	X	X	X	X
204x98 DPI compatibility mode	BLF_LOWFAXCOMPATIBLE	0x00001000	X	X		X	
Disable Start Application -> Disable the Messaging Interface	BLF_SENDMESSAGE	0x00002000	X	X	X	X	X
Enable the use of the TIFF32.dll	BLF_ENABLETIFFDLL	0x00004000	X	X	X	X	X
Enable the use of the JPEG32.dll	BLF_ENABLEJPEGDLL	0x00008000	X	X	X	X	X
Enable Decive Settings -> Create faxable image	BLF_FAXOUTPUT	0x00010000	X	X		X	X
Enable Filename Generation -> Overwrite Existing Files	BLF_OVERWRITE	0x00020000	x	x	x	x	x
Enable Decive Settings -> Rotate Landscape image to Portrait	BLF_ROTATEPAPER	0x00040000	X	X	X	X	X

Enable Filename Generation -> Delete Group File After Printing	BLF_DELETEGROUPFILE	0x00080000	X	X	X	X	X
Disable Filename Generation -> Combine/Merge multiple documents into a single file	BLF_APPEND	0x00100000	X	X	X	X	X
Enable Filename Generation -> Use custom extension	BLF_CUSTOMEXT	0x00400000	X	X	X	X	X
204x98 DPI Fax resolution	BLF_LOWFAXRES	0x00800000	X	X		X	
Force to printer resolution to the document	BLF_FORCEPRINTERDPI	0x01000000	X	X	X	X	X
Enable Redirect Printing -> Enable Redirect printing	BLF_REDIRECT_PRINTING	0x02000000	X	X	X	X	X
Enable File Format -> Generate output in memory (TIFF, DIB, EMF) (4)	BLF_MEMIMAGE(4)	0x04000000	X	X	X	X	
Enable Bates Numbering -> Enable Bates Numbering	BLF_BATES	0x08000000	X	X(3)		X	X
Enable File Format -> Print page(s) inverted	BLF_INVERTIMAGE	0x10000000	X	X (1)			
Enable File Format -> Flip page(s) horizontally	BLF_FLIPHORIZONTAL	0x20000000	X	X (2)			
Enable File Format -> Flip page(s) vertically	BLF_FLIPVERTICAL	0x40000000	X	X (2)			
Enable Filename Generation -> Save As Option	BLF_ENABLESAVEAS	0x80000000	X	X	X	X	X

1: This feature is not supported when using the PDF, HTML, XML or EMF output file format.

2: This feature is not supported when using the HTML, XML or EMF output file format.

3: This feature is not supported when using the EMF file format.

4: If the BLF_MEMIMAGE flag is enabled, the driver will generate the output in the memory only, the driver will not write an output file. The handle to the image is passed to the application using the Messaging Interface.

The **BLF_ENABLETIFFDLL** and **BLF_ENABLEJPEGDLL** flags should be set to generate image files.

For example if you want to use the Page Numbering, and BLF_MULTIIMAGE the value of the Flags in the INI file can be calculated like this:

(BLF_ENABLETIFFDLL) 0x00004000 +
(BLF_ENABLEJPEGDLL) 0x00008000
(BLF_PAGENUMBERING) 0x00000008
(BLF_MULTIIMAGE) 0x00000020

_____
0x0000C028

C028 HEX value in decimal is 49192.

You have to write in the INI file:
Flags=49192

If you don't need the flags specified in the INI file, simply comment the line with the ';' like this:
;Flags=49192

To enable fax output, the following values should be added to the *Flags* value:

- **204x98 DPI Standard Fax:**
  BLF_FAXOUTPUT + BLF_LOFAXRES = 0x00810000 = 8454144
- **204x98 DPI Standard Fax Compatibility:**
  BLF_FAXOUTPUT + BLF_LOFAXCOMPATIBLE = 0x00011000 = 69632
- **204x196 DPI Fine Fax:**
  BLF_FAXOUTPUT = 0x00010000 = 65536
- **204x196 DPI Fine Fax Compatibility:**
  BLF_FAXOUTPUT + BLF_FAX200 = 0x00010002 = 65538

For example, to enable Fax Image generation with 204x98 DPI Standard Fax Compatibility Mode, the value of the Flags key in the INI file can be calculated like this:

(BLF_ENABLETIFFDLL) 0x00004000 +
(BLF_ENABLEJPEGDLL) 0x00008000
(BLF_MULTIIMAGE) 0x00000020
(BLF_FAXOUTPUT) 0x00010000
(BLF_FAXLOWCOMPATIBLE) 0x00001000

_____
0x0001D020

1D020 HEX value in decimal is 118816.

The following has to be written to the INI file:
Flags=118618

Brightness=<number>
The brightness value for the image. Can be a value between 1 and 199. Not used by the EMF driver.

PaperWidthInPixels=<number>
Specify the paper width in pixels when Variable Paper Size In Pixels is set for the paper size. Can be a value between 1 and 65535.

PaperHeightInPixels=<number>
Specify the paper height in pixels when Variable Paper Size In Pixels is set for the paper size. Can be a value between 1 and 65535.

FAXheader=<number>
The size in pixels for the fax header. Can be a value between 0 and 65535.

LossRatio=<number>
The loss ration setting for the Jpeg images. Can be a value between 0 and 100. Used only by the color driver.

UseWindowsSessionID=< string>
Available values: Yes, No
The default value used in the installations is “Yes”.
If the value is not specified, “No” is used.
This value is used only on Terminal Servers. When set to “Yes”, the printer driver will use the current Windows session ID of the user as the messaging interface session ID, and the “SessionID” key is ignored. If set to “No”, the driver will use the session ID specified in the “SessionID” key.

SessionID=<number>
Default value: 0
This value is used only on Terminal Servers, when the “UseWindowsSessionID” key is set to “No”. The Session ID value is used in the Message Interface name. If one wants to force the printer driver to use one session ID for every print job, regardless of the user’s current Windows session ID, set this value to any number and set “UseWindowsSessionID” to “No”

The SessionID is an optional value. This is for advanced users only. Changing this value after installation is not recommended, because the value might not propagate and the old value might get used by some applications that store the printer settings themselves.

Dithering=<number>
Set the dithering method. The value can be :

Description	<number>
NONE (disable photo quality)	0
Floyd-Steinberg	1
Jarvis-Judice-Ninke	2
Smooth	3
Sharp	4
Stucki	5
Threshold	6

FileNameGenerationFlags=<number>
Set the file name generation method. The value can be:

Description	<number>
Use this prefix and extension	0
Prefix and extension from the registry	1
Prefix and extension from INI file	2
Exact filename	3
Exact Filename from registry	4
Exact Filename from INI	5
Use document's name	6
Custom file naming	7
Use the document name with the output directory from the INI file	8

NOTE: The INI file location must be configured at the ***INIFileName*** INI file flag in the Printer Driver INI file with full path.

The configured INI file for the INIFileName flag must contain the following information:

[Black Ice PDF X1]
OutputDirectory=C:\temp

NOTE: Black Ice PDF X1 must be substituted with the Printer Driver's name.

FileNamePrefix=AAA
Sets the prefix for the generated file. Can be maximum 3 characters

FileExtension=TIF
Sets the extension for the generated file. Can be maximum 3 characters.

INIFileName=<string>
This will specify the name of the INI file if the File Generation Method is "Prefix and extension from the INI file" or "Exact Filename from INI" or "Use the document name with the output directory from the INI file"

If the File Generation Method is "Prefix and extension from the Registry" or "Exact Filename from the registry" this will represent the registry key.

FixedFileName=<string>

This is the name of the file to be generated by the printer driver if the File Generation Method is “Exact filename”

Custom Filename template=<string>
This is the file name template to be used for generating the output filename when the filename generation method is ‘Custom file naming’. The filename template has to be valid. For more information please see the SetCustomFilenameTemplate function.

Read Directory From INI File=<1 or 0>
This option configures the **Use output folder from INI file** in the Printer Driver Filename Generation tab, under Custom file naming.

> **Possible values:**
> 1: The Printer Driver will use output folder from INI file
> 0: The Printer Driver will ignore the INI file, and use the Output Directory under the Filename Generation tab.

NOTE: The INI file location must be configured at the ***INIFileName*** INI file flag in the Printer Driver INI file with full path.

The configured INI file for the INIFileName flag must contain the following information:

> *[Black Ice PDF X1]*
> *OutputDirectory=C:\temp*

NOTE: Black Ice PDF X1 must be substituted with the Printer Driver’s name.

ApplicationPath=<string>
Full path and filename for the start application to be launched by the printer driver. The ApplicationPath parameter can also be configured by using a valid environment variable.

LaunchFlags=<number>
Set the flags for the application launching. The summarized HEX value of the required flags must be written to the LaunchFlags INI file key in decimal format.

For example, for using the following settings:

Enable launch application	0x00000001
Start before printing	0x00000002
Enable Pass Parameters	0x00000004

The summarized HEX value will be 0x00000007, and the decimal format will be 7. Therefore, the INI file must contain the following setting:
LaunchFlags=7

Can be one or a combination of the following values.

Option	Hexadecimal number
Enable launch application	0x00000001
Start before printing	0x00000002
Enable **Pass Parameters**	0x00000004
Start application in **normal** window	0x00000008
Start application **minimized**	0x00000010
Start application **hidden**	0x00000020
Do not start in user context	0x00000040
Start for Messaging	0x00000080
Read Custom Parameter From Registry	0x00000100

The "Start After Printing" option does not have an explicit flag, the application is started after printing, if neither the BLF_STARTBEFOREPRINT nor the BLF_STARTFORMESSAGING flag is set. E.g.:

Start after printing: "LaunchFlags=13" will start the application after printing (13 = BLF_LAUNCHAPP + BLF_PASSPARAMETERS + BLF_STARTNORMAL)

Start before printing: "LaunchFlags=15" will start the application before printing (15 = BLF_LAUNCHAPP + BLF_PASSPARAMETERS + BLF_STARTNORMAL + BLF_STARTBEFOREPRINT)

Start for messaging: "LaunchFlags=141" will start the application for messaging (141 = BLF_LAUNCHAPP + BLF_PASSPARAMETERS + BLF_STARTNORMAL + BLF_STARTFORMESSAGING)

The "Do not start in user context" flag can be used to start the Application directly in the spooler's session instead of the user's session that printed the document. An application started with this flag cannot interact with the user or display any windows.

The "Read Custom Parameter From Registry" flag is for internal use only, and is set automatically by the driver. Its value in the INI file is ignored.

InterfaceName=<string>
The name of the messaging interface

ResourceDLLName=<string>
The name and full path for the resource dll.

TIFFDLLName=<string>
The name and full path for the TIFF32.dll.

JPEGDLLName=<string>
The name and full path for the JPEG32.DLL

AppStarterEXEName=<string>
The name and full path for the application starter, Bu*App*.exe.

UNICODE Group File=<0 or 1>
Set this value to 1 if you want to create UNICODE group file

OutputDirectory=<string>
The output directory for the printer. The image files will be generated here.

AnnotationText=<string>
Specifies a user definable string that will appear in the annotation text. Default value is the empty string. The annotation text can contain any ASCII characters and field definitions. Fields are marked with the << and >> character pair. The following fields are supported:
<<DOMAINNAME>> - the printer driver will replace the field's name with the name of the domain where the printing user is currently logged on to print.
<<USERNAME>>- the printer driver will replace the field's name with the name of the printing user.
<<COMPUTERNAME>>- the printer driver will replace the field's name with the name computer where the printing has been initiated.
<<IPADDRESS>>- the printer driver will replace the field's name with the IP address of the computer where the printing has been initiated.
<<DOCNAME>>- the printer driver will replace the field's name with the name of the document that is currently printed.
<<PAGENUM>>- the printer driver will replace the field's name with the current page number.
<<PRINTERNAME>>- the printer driver will replace the field's name printer's name.
<<ANY_ENVIRONMENT_VARIABLE>> - if a valid environment variable name is specified, the printer driver will replace the field's name with the value of the specified environment variable.

The total length of the annotation string (including the length of the fields) can be 128 characters. Longer text will be cut.
Example: to specify the name of the printing user and the IP address of the printing machine use the following line in the INI file Default Settings section:
AnnotationText=User name is: <<USERNAME>>, IP Address is: <<IPADDRESS>>.

AnnotationSeparator=<string>
Specifies a character or text that will separate the annotation text, the date, and the time. Default value is the empty string. Maximum number of characters are 128.

AnnotationFlags=<number>
The value of the AnnotationFlag is the decimal value of the sum of all the selected hexadecimal flags. Annotation is not supported when using the EMF output file format.

For example, for using the following settings:

Enable annotation	0x00000001
Enable Text	0x00000002
Set annotation mode: Transparent	0x00008000

The summarized HEX value will be 0x00008003, and the decimal format will be 32771. Therefore, the INI file must contain the following setting:
AnnotationFlags=32771

The following values can be used. The default values are in bold.

Option	Flag Name	Hexadecimal number
Enable annotation	#define BLF_ANNOTATION_ENABLED	0x00000001
Enable Text	#define BLF_ANNOTATION_TEXT_ENABLED	0x00000002
Enable Date	#define BLF_ANNOTATION_DATE_ENABLED	0x00000004
Set date format: MM/DD/YYYY	**#define BLF_ANNOTATION_DATE_FORMAT_MMDDYYYY**	0x00000008
Set date format: M/D/YY (no zero padding)	#define BLF_ANNOTATION_DATE_FORMAT_MDYY	0x00000010
Set date format: DD/MM/YYYY (European)	#define BLF_ANNOTATION_DATE_FORMAT_DDMMYYYY	0x00000020
Set date format: DD - MON - YYYY	#define BLF_ANNOTATION_DATE_FORMAT_DDMONYYYY	0x00000040
Set date format: YYYY/MM/DD	#define BLF_ANNOTATION_DATE_FORMAT_YYYYMMDD	0x00000080
Set date format: Julian Date	#define BLF_ANNOTATION_DATE_FORMAT_JULIAN	0x00000100
Enable Time	#define BLF_ANNOTATION_TIME_ENABLED	0x00000200
Set time format: 12 Hour	**#define BLF_ANNOTATION_TIME_FORMAT_12HOUR**	0x00000400
Set time format: 24 Hour	#define BLF_ANNOTATION_TIME_FORMAT_24HOUR	0x00000800
Enable Minutes	**#define BLF_ANNOTATION_TIME_FORMAT_MINUTES**	0x00001000
Enable Seconds	**#define BLF_ANNOTATION_TIME_FORMAT_SECONDS**	0x00002000
Enable Time zone	**#define BLF_ANNOTATION_TIME_FORMAT_TIMEZONE**	0x00004000
Set annotation mode: Transparent	**#define BLF_ANNOTATION_TRANSPARENT**	0x00008000
Set annotation mode: Opaque	#define BLF_ANNOTATION_OPAQUE	0x00010000
Set position: Top Left	#define BLF_ANNOTATION_POSITION_TOP_LEFT	0x00020000

Set position: Top Right	#define BLF_ANNOTATION_POSITION_TOP_RIGHT	0x00040000
Set position: Center	**#define BLF_ANNOTATION_POSITION_CENTER**	0x00080000
Set position: Bottom Left	#define BLF_ANNOTATION_POSITION_BOTTOM_LEFT	0x00100000
Set position: Bottom Right	#define BLF_ANNOTATION_POSITION_BOTTOM_RIGHT	0x00200000
Set Units: 0.1*mm	#define BLF_ANNOTATION_UNITS_MM	0x00400000
Set Units: 0.1*inch	#define BLF_ANNOTATION_UNITS_INCH	0x00800000
Set Units: Pixel	**#define BLF_ANNOTATION_UNITS_PIXELS**	0x01000000

AnnotationRotation=<number>
Specifies the number of degrees the text will be rotated. Default value is 0. Value can range from -180 to 180.

AnnotationColor=<number>
Specifies the color of the annotation text as a COLORREF value. Default value is 0.

AnnotationXOffset=<number>
Specifies the horizontal distance of the annotation from the origin point. Default value is 0. Maximum 6 digit number can be defined. The origin point and the unit can be set using Annotation Flags. By default the origin point is center and the unit is measured in pixels.

AnnotationYOffset=<number>
Specifies the vertical distance of the top left corner of the annotation from the origin point. Default value is 0. Maximum 6 digit number can be defined. The origin point and the unit can be set using Annotation Flags. By default the origin point is center and the unit is measured in pixels.

Plugin Filename=<string>
Specifies the full path or file name of the plugin dll. If the entry is missing from the INI file, the default “BiPlugin.dll” name is used.
If the full path is not specified, the driver will look for the dll in the windows system directory first (C:\Windows\System32 by default), then in the directories specified in the PATH environment variable. For details, please see: http://msdn.microsoft.com/en-us/library/windows/desktop/ms682586(v=vs.85).aspx#search_order_for_desktop_applications

WatermarkDirectory=<string>
Full path for the watermarks of the printer driver. The WatermarkDirectory parameter can also be configured by using a valid environment variable.

WatermarkFlags=<number>

The value of the WatermarkFlags is the decimal value of the sum of all the selected hexadecimal flags. The selected values must be added together and converted to a decimal number. The default values are in bold.

Option	Flag Name	Hexadecimal number
Enable watermark	BLF_WATERMARK_ENABLE	0x00000001
Enable Add watermark to the first page only	BLF_WATERMARK_FIRST_PAGE_ONLY	0x00000002
Set Portrait pages -> Position: Stretch to Fit	BLF_WATERMARK_POSITION_PORTRAIT_STRETCH_TO_FIT	0x00000004
Set Portrait pages -> Position: Stretch to Width	BLF_WATERMARK_POSITION_PORTRAIT_STRETCH_TO_WIDTH	0x00000008
Set Portrait pages -> Position: Center	**BLF_WATERMARK_POSITION_PORTRAIT_CENTER**	0x00000010
Set Portrait pages -> Position: Tile	BLF_WATERMARK_POSITION_PORTRAIT_TILE	0x00000020
Set Landscape pages -> Position: Stretch to Fit	BLF_WATERMARK_POSITION_LANDSCAPE_STRETCH_TO_FIT	0x00000040
Set Landscape pages -> Position: Stretch to Width	BLF_WATERMARK_POSITION_LANDSCAPE_STRETCH_TO_WIDTH	0x00000080
Set Landscape pages -> Position: Center	**BLF_WATERMARK_POSITION_LANDSCAPE_CENTER**	0x00000100
Set Landscape pages -> Position: Position: Tile	BLF_WATERMARK_POSITION_LANDSCAPE_TILE	0x00000200
Enable Unique watermark on the first page	BLF_WATERMARK_UNIQUE_FIRST_PAGE	0x00000400
Set Portrait pages -> Position: Botton	BLF_WATERMARK_POSITION_PORTRAIT_BOTTOM	0x00000800
Set Landscape pages -> Position: Botton	BLF_WATERMARK_POSITION_LANDSCAPE_BOTTOM	0x00001000
Set Portrait pages -> Position: Fit to With - Bottom	BLF_WATERMARK_POSITION_PORTRAIT_BOTTOM_STRETCH	0x00002000
Set Landscape pages -> Position: Fit to With - Bottom	BLF_WATERMARK_POSITION_LANDSCAPE_BOTTOM_STRETCH	0x00004000

For example to enable the watermark feature and stretch the image to the page add the hexadecimal values 0x00000001, 0x00000004 and 0x00000040. The result is hexadecimal 0x00000045 = decimal 69. So the INI file should contain the following line:
WatermarkFlags=69

WatermarkFilePortrait=<string>

Full path for the watermarks when printing documents to portrait orientation. The WatermarkFilePortrait parameter can also be configured by using a valid environment variable.

WatermarkFileLandscape=<string>
Full path for the watermarks when printing documents to landscape orientation. The WatermarkFileLandscape parameter can also be configured by using a valid environment variable.

FirstWatermarkFilePortrait=<string>
Full path for the watermarks printing on the first page only to portrait orientation. The FirstWatermarkFilePortrait parameter can also be configured by using a valid environment variable.

FirstWatermarkFileLandscape=<string>
Full path for the watermarks printing on the first page only to landscape orientation. The FirstWatermarkFileLandscape parameter can also be configured by using a valid environment variable.

CHM Help File=<string>
Full path for the CHM Help file of the printer driver. The CHM Help File parameter can also be configured by using a valid environment variable.

Show Compatibility Warning=<0 or 1>
If this value is set to 1 and the Printer Driver detects an application that is incompatible with the driver, it will show a warning message with a possible workaround and aborts the print job.
Set this value to 0 if you do not want to receive compatibility warnings and do not want the print job to be aborted (please note this may result in an application or printer driver crash). The default value is 1.

Disable Output Directory Access Check=<0 or 1>
0: The printer driver checks the directory access during printing and if the directory is not accessible during printing, a warning message will appear and then the Save As dialog is shown. (default)
1: The printer driver will not check the directory access during printing and will not throw any warning messages or Save As dialogs during printing, even if the output folder is incorrect. This option can be useful since the access check is not completely accurate due to the technical limitations of the Windows printer driver architecture, and in some cases when the driver is automated the message boxes or dialogs are not allowed.

NOTE: The option does not affect the checks and messages when saving settings in the Printing Preferences dialog. This option only affects the behavior during printing.

[UI Tabs Settings]

Display File Format Tab=<0 or 1>

Display Filename Generation Tab=<0 or 1>
Display Start Application Tab=<0 or 1>
Display Watermark Tab=<0 or 1>
Display Annotation Tab=<0 or 1>
Display Profile Manager Tab=<0 or 1>
Display Bates Tab=<0 or 1>
Display Redirect Printing Tab=<0 or 1>
Display Barcode Tab=<0 or 1>
Display OCR Tab=<0 or 1>
Display Text Output Tab=<0 or 1>
Display FTP =<0 or 1>
Display Email =<0 or 1>
Display SharePoint =<0 or 1>
Display Tooltips=<0 or 1>

Using these values you can display or hide individual tabs on the printer driver User Interface. The default values are 1, the values can be 0 or 1:

Hide the tab 0
Display the tab 1

The "Device settings" tab cannot be hidden and will always be displayed.
Please note, if you use the API functions *EnableTab* or *DisableTab* from the BlackIceDEVMODE dll or ActiveX control, it will override the settings of the INI file until you reinstall the driver or delete the following registry key:
HKEY_CURRENT_USER\Software\Black Ice Software LLC\<Name of the Black Ice Printer>\UI Tabs Settings

Display FTP =<0 or 1>
When set to 0, the printer driver will hide the FTP options from the Printing Preferences dialog.
0: Disable the FTP options
1: Enable the FTP options (default)

Display Email =<0 or 1>
When set to 0, the printer driver will hide the Email sending options from the Printing Preferences dialog.
0: Disable the Email sending options
1: Enable the Email sending options (default)

Display SharePoint =<0 or 1>
When set to 0, the printer driver will hide the SharePoint options from the Printing Preferences dialog.
0: Disable the SharePoint options
1: Enable the SharePoint options (default)

Display Tooltips =<0 or 1>
This option hides or shows the tooltip icons and descriptions on the Printer Driver user interface.
0: Hide the Tooltips on the user interface
1: Show the Tooltips on the user interface (default)

StartApplicationParameterOrder=<string>

Specifies which parameters are passed to the application launched by the printer, and in what order. Each character (number or letter) represents a parameter; see the values in the list below.

Values of each parameter:

None:	0
Document Name:	1
Group Filename:	2
Printer Name:	3
Number of Pages:	4
Multipage:	5
Orientation:	6
Custom Parameter:	7
Output Filename:	8
User Name:	9
Computer Name:	A
Timestamp:	B
First Bates Number:	C
Last Bates Number:	D

Specify the parameter order by specifying which parameter you would like to have on which position, without spaces between. For example the value 123456789ABCD means pass all parameters (the first parameter is the document name, etc.).

The default parameter list is 1234568000000 (Document Name, Group Filename, Printer Name, Number of Pages, Multipage, Orientation and Output Filename are passed.)

To specify the parameter list in reverse order enter StartApplicationParameterOrder=DCBA987654321 to the INI file.

To pass the printer name and the group file name only, enter StartApplicationParameterOrder=3200000000000 into the INI file specifying 0 for the unused parameters.

In order to pass only the group file name as parameter enter the following line in the INI file:
StartApplicationParameterOrder=2000000000000

CustomStartApplicationParameter=<string>

Custom parameter for the application launched by the printer.

Start Application Timeout=<number>

Start Application Timeout=5000

If the start before print option is enabled the printer driver will wait for the specified time before every print job. The value is specified in milliseconds and it is read at the beginning of each print job, so changes take effect immediately, without restoring the default printer settings. The default value is 5 seconds.

Messaging Timeout=<number>
Messaging Timeout=5000

If the “Start for Messaging” option is enabled the printer driver will wait for the specified time for the application to start listening to messages. The value is specified in milliseconds and it is read at the beginning of each print job, so changes take effect immediately, without restoring the default printer settings. The default value is 5 seconds.

Messaging Timeout 2=<number>
Messaging Timeout 2=2000

This key sets the timeout value for each Message Capture read or write operation. This timeout value is used whenever Message Capture is used. The “Start for Messaging” option does not have to be enabled. The default value is 2 seconds.

StartDoc Delay=<number>

StartDoc Delay=0

For compatibility with applications started by the driver. This value sets the waiting time before the printer driver raises the StartDoc event. It is specified in milliseconds and it is read at the beginning of each print job.

EndPage Delay=<number>

EndPage Delay=0

This value sets the waiting time before the printer driver raises the EndPage event. It is specified in milliseconds and it is read at the beginning of each print job.

EndDoc Delay=<number>

EndDoc Delay=0

This value sets the waiting time before the printer driver raises the EndDoc event. It is specified in milliseconds and it is read at the beginning of each print job.

PDF Flags:

Enter the following into the INI file:

PDFFlags=

Value can be any of the followings:

#define BLF_PDF_FILTER_NO_COMPRESSION 0x0020
#define BLF_PDF_FILTER_FLATE_DECODE 0x0200
#define BLF_PDF_FILTER_RUNLENGTH_DECODE 0x0400
#define BLF_PDF_FILTER_CCITT_FAX_DECODE 0x0800
#define BLF_PDF_FILTER_DCT_JPEG_DECODE 0x1000

Important! Make sure that the color depth matches the compression, such as BLF_PDF_FILTER_DCT_JPEG_DECODE can be used only for 24 bit images, BLF_PDF_FILTER_CCITT_FAX_DECODE can be used only for 1 bit images.

[Redirect Printing]

Number of printers=<number>

This value specifies the number of printers to redirect printing jobs. If this value is zero the redirect printing feature is disabled. If this value is greater than zero you have to specify the printer names in the INI file. For example:

[Redirect Printing]
Number of printers=2
Printer1=Printer_name_1
Printer2=Printer_name_2

Scaling Mode=<number>

Specifies the scaling mode for the redirect printing option. The currently available settings are the following:

- **0**: Scale to printable area - scales the printed page down by the size of the physical margin of the target printer, so content very close to the edge of the page can still be printed and nothing will be cut off. This is the default setting.
- **1**: Scale to physical page size - scales the printed page to the physical size of the page, ignoring the target printer's physical margins. This means the output will be the exact same as when printing to a file. Content outside the physical margins of the target printer is cut off.

[Redirect Printing]
Scaling Mode=0

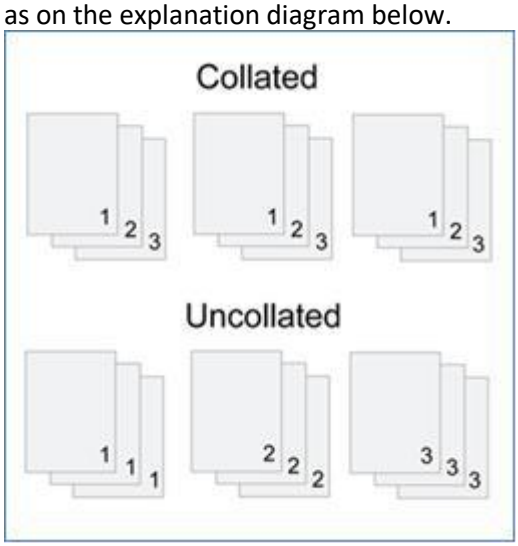
Redirect Printing Log File=<string>

Full path for the Log File of the redirect printing. The Redirect Printing Log File parameter can also be configured by using a valid environment variable.

Use number of copies=<string>
Available values: Yes, No
Default value: No
Override the Number of copies and Collate settings coming from the application and use the settings defined in the Printing Preferences (set in the INI file) instead. This setting does not affect the normal output, only the “Redirect printing” feature.

Number of copies=<number>
Available values: 1-999
Default value: 1
Set the number of copies to print. If this value is set to 1, the value is taken from the printing application. This setting does not affect the normal output, only the “Redirect printing” feature. The “Use number of copies” value must be set to “Yes”.

Collate pages=<string>
Available values: Yes, No
Default value: Yes
Collated printing will print page documents after each other in proper order, while uncollated printing will print the first page copies, then the second page copies, and so on, as on the explanation diagram below.



This setting does not affect the normal output, only the “Redirect printing” feature. The “Use number of copies” value must be set to “Yes”.

[UI FileName Generation Methods]

The available filename generation methods can be specified in the *UI FileName Generation Methods* INI file section. By default all filename generation methods are enabled at the *Filename Generation* tab of the printing preferences. If you set a filename generation method to 0 in the INI file the specified method will not be displayed among the filename generation methods and can’t be used. See the following example:

[UI FileName Generation Methods]
Use this prefix and extension=0
Prefix and extension from the registry=0
Prefix and extension from the INI file=0
Exact filename=1
Exact filename from the registry=0
Exact filename from the INI file=0
Use the document name=1
Custom file naming=0

In this case only the *Use document name* and *Exact filename* can be used at the *Filename Generation* tab.
Note: At least one filename generation method must be enabled.

[PDF Settings]

Document Title=
Document Subject=
Document Author=
Document Keywords=
Document User Password=
Document Owner Password=
Document Encryption=
Document Security Flag=
JPEG Quality=
Color Image Compression=
Mono Image Compression=
Stream Compression=
Embed all fonts=
Create subset=
Embed licensed fonts=
Embed Adobe fonts=
Embed Windows fonts=
Linearized=
Transparency=
URL Parsing=
Resampling Method=
Resampling Rate=
Color Patterns=
Open Page Layout=0
Open Page View=0
Open Magnification=0
Open At Page=1
Open Zoom=100
Open Hide Menubar=0
Open Hide Toolbar=0
Open Hide Controls=0
Open Fit To Window=0

Open Center Window=0
Open Show Title=0

Document Title=<string>
This value specifies the title of the PDF documents.

Document Subject=<string>
This value specifies the subject of the PDF documents.

Document Author=<string>
This value specifies the author of the PDF documents.

Document Keywords=<string>
This value specifies the keywords of the PDF documents.

Document User Password=<string>
This value specifies the user password of the PDF documents.

Document Owner Password=<string>
This value specifies the owner password of the PDF documents.

Document Encryption=<number>
Available values: 0: no encryption
1: 40bit encryption
Default value: 0 (no encryption)
This value specifies the encryption of the PDF documents.

Document Security Flag=<number>
Available values: 0: no flag set
1: print flag
2: copy flag
4: comment flag
8: edit flag
More flags can be specified in this value.
Default value: 0 (no flag set)
This value specifies the security flags of the PDF documents.

Stream Compression=<number>
Available values: 0: no stream compression
104: LZW compression
105: flate compression
Default value: 105 (flate compression)
This value specifies the stream compression of the PDF documents.

Mono Image Compression=<number>
Available values: 0: no compression
304: LZW compression
305: flate compression
306: Runlength
307: CCITT Fax
Default value: 307 (CCITT Fax compression)

This value specifies the compression of the monochrome images in the PDF documents.

Color Image Compression=<number>

Available values: 0: no compression
204: LZW compression
205: flate compression
206: Runlength
207: JPEG compression

Default value: 207 (JPEG compression)
This value specifies the compression of the color images in the PDF documents.

Resampling Method=<number>

Available values: 0: no resampling applied to the images
1: Bilinear interpolation
2: Cubic spline interpolation

Default value: 0
This value specifies, by using which method should be the resampling done on the images (to reduce the resulting file size)

Resampling Rate=<number>

Available values: Positive integer value between 1 and 200.
Default value: 100
This value specifies, how the height and the width of the images should change after resampling (expressed as a percentage)

Color Patterns=<number>

Available values: 0: color patterns disabled, threshold will be applied for the colors
1: patterns will be generated for the stroking and filling colors for better visual accuracy

Default value: 0
This value specifies if color patterns should be used for the stroking and filling colors in the resulting PDF document or a threshold should be applied for them.

Jpeg quality=<number>

Available values: Positive integer value between 1 and 100.
Default value: 85
This value specifies the quality of JPEG compressed images in the PDF documents.

Open Page Layout=<number>

Specifies how the pages of the printed multipage PDF will be displayed in the PDF viewer.
Available values:

0: Use the viewer's settings (Default) – The printed PDF will use the PDF viewer's settings by default.

1: Single Page View – The PDF viewer application displays only one page at the time on the screen.

2: Two Page View (Left) – The PDF viewer application displays two pages next to each other at the time, and the odd pages are positioned to the left.

3: Two Page View (Right) - The PDF viewer displays two pages next to each other at the time, and the odd pages are positioned to the right.

4: Single Page Continuous – The PDF viewer displays the pages in one column.

5: Two Page Continuous (Left) – The PDF viewer displays the pages in two columns and the odd pages are positioned to the left.

6: Two Page Continuous (Right) – The PDF viewer displays the pages in two columns and the odd pages are positioned to the right.

Open Page View=<number>
Specifies whether the PDF viewer displays thumbnails, bookmarks or only pages. Available values:

0: Pages only (Default) – Displays only pages in the PDF viewer

1: Pages and Thumbnails – Displays the pages and thumbnails in the PDF viewer

2: Pages and Bookmarks – Displays the pages and bookmarks in the PDF viewer

3: Full Screen – Opens the PDF viewer in full screen

Open Magnification=<number>
Specifies the zoom settings of the printed PDF. Available values:

0: Default option uses the PDF viewer's default zoom settings.

1: Fit to Width option scales the PDF to fit to the width of the viewing window.

2: Fit to Height option scales the PDF to fit to the height of the viewing window.

3: Fit to Window option scales the PDF to fit to the height and width of the viewing window.

4: Custom option specifies the custom zoom percentage of the opened PDF in the PDF viewer.

Open At Page=<number>
Specifies the first page to open in the PDF viewer.

Open Zoom=<number>
Specifies the zoom percentage of the PDF document when the Open Magnification is set to Custom

Open Hide Menubar=<number>
Available values: 0, 1. (default value is 0)
1: Hides the viewer application's menu bar when the document is opened.

0: Shows the viewer application's menu bar when the document is opened.

Open Hide Toolbar=<number>
Available values: 0, 1. (default value is 0)
1: Hides the viewer application's toolbar when the document is opened.
0: Shows the viewer application's toolbar when the document is opened.

Open Hide Controls=<number>
Available values: 0, 1. (default value is 0)
1: Hides the user interface elements in the document's window (for example: scroll bars and navigation controls), and leaves only the document's content displayed.
0: Shows the user interface elements in the document's window (for example: scroll bars and navigation controls), and leaves only the document's content displayed.

Open Fit To Window=<number>
Available values: 0, 1. (default value is 0)
1: Resizes the document's window to fit the size of the first displayed page.

Open Center Window=<number>
Available values: 0, 1. (default value is 0)
1: Position the document's window in the center of the screen.

Open Show Title=<number>
Available values: 0, 1. (default value is 0)
1: Displays the Document Title specified in the document's properties (In the Black Ice Printer Driver Printing Preferences > File Formats > Select PDF or PDF/A file format > PDF Settings > Description Tab) in the window's title bar.

Embed all fonts=<number>
The *Embed all fonts* entry specifies the default font embedding mode. It can be the followings:
0: disable default embedding. Only the forced fonts will be embedded.
1 (default): enables default embedding. All fonts will be embedded, except the forbidden ones.

The *Create subset* entry specifies the font subsetting. It can be the followings:
0: disable font subsetting. The fonts will be embedded in original form.
1 (default): enables font subsetting for TrueType/OpenType fonts.

Embed licensed fonts=<number>
Available values: 0, 1
Default value: 0
If this value is 1 the licensed fonts will be embedded into the PDF documents. This value can be 1 if the 'Embed all Fonts' is 1 also.

Embed Adobe fonts=<number>
Available values: 0, 1
Default value: 0
If this value is 1 the Adobe standard fonts will be embedded into the PDF documents. This value can be 1 if the 'Embed all Fonts' is 1 also.

Embed Windows fonts=<number>
Available values: 0, 1
Default value: 0
If this value is 1 the Windows standard fonts will be embedded into the PDF documents. This value can be 1 if the 'Embed all Fonts' is 1 also.

Linearized=<number>
Available values: 0, 1
Default value: 0
If this value is 1, a linearized PDF is generated.

Transparency=<number>
Available values: 0, 1
Default value: 0
If this value is 1 the transparency option is turned on.

URL Parsing=<number>
Available values: 0, 1
Default value: 0
If this value is 1 URLs in the PDF document are turned into clickable links.

[PDF Force Font Settings]

Count=
Font 1=

This section specifies the 'Force to embed' fonts in PDF documents.

Count=<number>
Number of the specified fonts.

Font 1, Font2, …=<string>
Name of the font to force to embed.

[PDF Forbidden Font Settings]

Count=
Font 1=

This section specifies the 'Forbidden to embed' fonts in PDF documents.

Count=<number>
Number of the specified fonts.

Font 1, Font2, …=<string>
Name of the font to forbidden to embed.

[PDFA Settings]

Document Title=

Document Subject=
Document Author=
Document Keywords=
Stream Compression=
Color Image Compression=
Mono Image Compression=
JPEG Quality=
Transparency=
URL Parsing=
Resampling Method=
Resampling Rate=
Color Patterns=
Open Page Layout=0
Open Page View=0
Open Magnification=0
Open At Page=1
Open Zoom=100
Open Hide Menubar=0
Open Hide Toolbar=0
Open Hide Controls=0
Open Fit To Window=0
Open Center Window=0
Open Show Title=0

This section contains the settings of the PDF/A output format.

Document Title=<string>
This value specifies the title of the PDF/A documents.

Document Subject=<string>
This value specifies the subject of the PDF/A documents.

Document Author=<string>
This value specifies the author of the PDF/A documents.

Document Keywords=<string>
This value specifies the keywords of the PDF/A documents.

Stream Compression=<number>
Available values: 0: no stream compression
105: flate compression
Default value: 105 (flate compression)
This value specifies the stream compression of the PDF/A documents.

Mono Image Compression=<number>
Available values: 0: no compression
305: flate compression
306: Runlength
307: CCITT Fax
Default value: 307 (CCITT Fax compression)

This value specifies the compression of the monochrome images in the PDF/A documents.

Color Image Compression=<number>
Available values: 0: no compression
205: flate compression
206: Runlength
207: JPEG compression
Default value: 207 (JPEG compression)
This value specifies the compression of the color images in the PDF/A documents.

Jpeg quality=<number>
Available values: Positive integer value between 1 and 100.
Default value: 85
This value specifies the quality of JPEG compressed images in the PDF/A documents.

Transparency=<number>
Available values: 0, 1
Default value: 0
If this value is 1 the transparency option is turned on.

URL Parsing=<number>
Available values: 0, 1
Default value: 0
If this value is 1 URLs in the PDF document are turned into clickable links.

Resampling Method=<number>
Available values: 0: no resampling applied to the images
1: Bilinear interpolation
2: Cubic spline interpolation
Default value: 0
This value specifies, by using which method should be the resampling done on the images (to reduce the resulting file size)

Resampling Rate=<number>
Available values: Positive integer value between 1 and 200.
Default value: 100
This value specifies, how the height and the width of the images should change after resampling (expressed as a percentage)

Color Patterns=<number>
Available values: 0: color patterns disabled, threshold will be applied for the colors
1: patterns will be generated for the stroking and filling colors for better visual accuracy

Default value: 0
This value specifies if color patterns should be used for the stroking and filling colors in the resulting PDF/A document or a threshold should be applied for them.

Open Page Layout=<number>
Specifies how the pages of the printed multipage PDF will be displayed in the PDF viewer.
Available values:

0: Use the viewer's settings (Default) – The printed PDF will use the PDF viewer's settings by default.

1: Single Page View – The PDF viewer application displays only one page at the time on the screen.

2: Two Page View (Left) – The PDF viewer application displays two pages next to each other at the time, and the odd pages are positioned to the left.

3: Two Page View (Right) - The PDF viewer displays two pages next to each other at the time, and the odd pages are positioned to the right.

4: Single Page Continuous – The PDF viewer displays the pages in one column.

5: Two Page Continuous (Left) – The PDF viewer displays the pages in two columns and the odd pages are positioned to the left.

6: Two Page Continuous (Right) – The PDF viewer displays the pages in two columns and the odd pages are positioned to the right.

Open Page View=<number>
Specifies whether the PDF viewer displays thumbnails, bookmarks or only pages. Available values:

0: Pages only (Default) – Displays only pages in the PDF viewer

1: Pages and Thumbnails – Displays the pages and thumbnails in the PDF viewer

2: Pages and Bookmarks – Displays the pages and bookmarks in the PDF viewer

3: Full Screen – Opens the PDF viewer in full screen

Open Magnification=<number>
Specifies the zoom settings of the printed PDF. Available values:

0: Default option uses the PDF viewer's default zoom settings.

1: Fit to Width option scales the PDF to fit to the width of the viewing window.

2: Fit to Height option scales the PDF to fit to the height of the viewing window.

3: Fit to Window option scales the PDF to fit to the height and width of the viewing window.

4: Custom option specifies the custom zoom percentage of the opened PDF in the PDF viewer.

Open At Page=<number>

Specifies the first page to open in the PDF viewer.

Open Zoom=<number>
Specifies the zoom percentage of the PDF document when the Open Magnification is set to Custom

Open Hide Menubar=<number>
Available values: 0, 1. (default value is 0)
1: Hides the viewer application's menu bar when the document is opened.
0: Shows the viewer application's menu bar when the document is opened.

Open Hide Toolbar=<number>
Available values: 0, 1. (default value is 0)
1: Hides the viewer application's toolbar when the document is opened.
0: Shows the viewer application's toolbar when the document is opened.

Open Hide Controls=<number>
Available values: 0, 1. (default value is 0)
1: Hides the user interface elements in the document's window (for example: scroll bars and navigation controls), and leaves only the document's content displayed.
0: Shows the user interface elements in the document's window (for example: scroll bars and navigation controls), and leaves only the document's content displayed.

Open Fit To Window=<number>
Available values: 0, 1. (default value is 0)
1: Resizes the document's window to fit the size of the first displayed page.

Open Center Window=<number>
Available values: 0, 1. (default value is 0)
1: Position the document's window in the center of the screen.

Open Show Title=<number>
Available values: 0, 1. (default value is 0)
1: Displays the Document Title specified in the document's properties (In the Black Ice Printer Driver Printing Preferences > File Formats > Select PDF or PDF/A file format > PDF Settings > Description Tab) in the window's title bar.

[HTML Settings]

Html content output directory=C:\HTML
CSS settings=0
Page size setting=0
Vector graphics display mode=0
Embed all fonts=
Create subset=
Separate pages=
Embed Licensed fonts=

The *HTML Settings* section defines the default values of the HTML settings.
Html content output directory=<string>

The *Html content output directory* entry specifies the full path of the contents directory of the HTML file format.

Page size setting=<number>
The *Page size setting* entry specifies the page size settings. It can be the followings:
0 (default): page size based on page width
1: page size based on page height
2: page size based on the specified paper size

CSS settings=<number>
The *CSS settings* entry specifies the CSS settings. It can be the followings:
0 (default): Only one CSS file will be generated for all printed pages.
1: Every printed pages have own CSS file separated from the HTML.
2: Every printed pages have own CSS file embedded in the HTML.

Vector graphics display mode=<number>
The *Vector graphics display mode* entry specifies the vector graphics display mode. It can be the followings:
0: disable vector graphics
1 (default): display as PNG image

Embed all fonts=<number>
The *Embed all fonts* entry specifies the default font embedding mode. It can be the followings:
0: disable default embedding. Only the forced fonts will be embedded.
1 (default): enables default embedding. All fonts will be embedded, except the forbidden ones.

Create subset=<number>
The *Create subset* entry specifies the font subsetting. It can be the followings:
0: disable font subsetting. The fonts will be embedded in original form.
1 (default): enables font subsetting for TrueType/OpenType fonts.

Separate pages=<number>
The *Separate pages* entry specifies page processing. It can be the followings:
0 (default): disable page separation. The document will be saved to one HTML file.
1: enables page separation. The document pages will be saved to different HTML files.

Embed Licensed fonts=<number>
Available values: 0, 1
Default value: 0
If this value is 1 the licensed fonts will be embed into the HTML document.

[XML Settings]

XML content output directory=
Include Text=
Include Images=
Include Path=
Include DTD=
Image Format=

This section contains the settings of the editable XML output format.

XML content output directory=<string>
The *XML content output directory* entry specifies the full path of the contents directory of the XML file format.

Include Text=<number>
Enables or disables the use of text tags in the XML output.
0: disable text tags.
1 (default): enable text tags.

Include Images=<number>
Enables or disables the use of image tags in the XML output.
0: disable image tags.
1 (default): enable image tags.

Include Path=<number>
Enables or disables the use of path tags in the XML output.
0: disable path tags.
1 (default): enable path tags.

Include DTD=<number>
Enables or disables the inclusion of the DTD chunk in the XML output.
0: disable DTD chunk.
1 (default): enable DTD chunk.

Image Format=<number>
Available values: 0: PNG
1: JPEG
2: GIF
3: BMP
Default value: 0 (PNG)
This value specifies the image format used in the XML output.

[HTML Force Font Settings]

Count=
Font 1=

This section specifies the 'Force to embed' fonts in HTML documents.

Count=<number>
Number of the specified fonts.

Font 1, Font2, …=<string>
Name of the font to force to embed.

[HTML Forbidden Font Settings]

Count=
Font 1=

This section specifies the 'Forbidden to embed' fonts in HTML documents.

Count=<number>
Number of the specified fonts.

Font 1, Font2, …=<string>
Name of the font to forbidden to embed.

[Bates Numbering]

Number of Formats=1
Selected Bates Format=1
Bates Numbering Enabled=0

Number of Formats=<number>
Number of bates formats are defined in the INI file. For example this value is 2 "Bates Number 1" and "Bates Number 2" sections have to be defined in the INI file.

Selected Bates Format=<number>
This value specifies the selected bates format. If this value is 1 values of the "Bates Number 1" section will be selected in the printing preferences.

Bates Numbering Enabled=<number>
If this value is zero the bates numbering feature is disabled, if this value is 1 the bates numbering is enabled and the "Enable Bates Numbering" checkbox is checked in the printing preferences.
Bates numbering is not supported when using the EMF output file format.

[Bates Number 1]

Name=Default Bates Format
Use prefix=1
Prefix=Case number
Start with=1
Transparent=0
X Offset=0
Y Offset=0
Offset unit=1
Rotation=0
Color=4145215
Position=2
Font Height=-16
Font Width=0
Font Escapement=0
Font Orientation=0

Font Weight=400
Font Italic=255
Font Underline=0
Font Strikeout=0
Font Charset=1
Font Outprecisions=3
Font Quality=1
Font Clipprecisions=2
Font PinchAndFamily=34
Font Facename=Verdana
Bates Number Length=0
Bates Padding Character=
Reset bates number at every printing=
Reset bates number=

Name=<string>
Name of the bates numbering format

Use prefix=<number>
Available values: 0, 1.
0: Use prefix checkbox is unchecked in the printing preferences.
1: Use prefix checkbox is checked in the printing preferences.

Prefix=<string>
Specifies the prefix text. The maximum number of characters is 29.

Start with=<number>
Specifies the starting bates number. The default value is 1.

Transparent=<number>
Available values: 0, 1.
0: The Bates Number is opaque on the printed page.
1: The Bates Number is transparent on the printed document.

X Offset, Y Offset=<number>
Specifies the offset values of the Bates Number position.

Offset unit=<number>
Specifies the unit of the offset. Available values:
0: 0.1 mm
1: 0.01 inch
2: pixel

Rotation=<number>
Specifies the rotation value in degrees 0-360.

Color=<number>
Specifies the color of the Bates Number as COLORREF value.

Position=<number>

Specifies the bates numbering position on the page. Available values:
0: Top left
1: Top right
2: Center
3: Bottom left
4: Bottom right

Font Height=<number>
Font Width=<number>
Font Escapement=<number>
Font Orientation=<number>
Font Weight=<number>
Font Italic=<number>
Font Underline=<number>
Font Strikeout=<number>
Font Charset=<number>
Font Outprecisions=<number>
Font Quality=<number>
Font Clipprecisions=<number>
Font PinchAndFamily=<number>
Font Facename=<string>
These values specify the font information of the Bates Number.

Bates Number Length=<number>
Number of characters of the Bates number (excluding prefix text). This value can be an integer value between 0 and 16. This value specifies the length of the bates number. If the length of the Bates number is less than this value, padding character will be added, otherwise no padding characters will be inserted. If you are using “Bates Number 1” and the Bates number is 12588, the printed document will contain 00012588 as Bates number. If “Bates Number 2” is selected the created Bates number will be 12588 (No padding character will be added.).

Bates Padding Character=<character>
This value specifies the padding character. This value can be only any one ANSI character. For example the Bates number is 1258, the Bates Number length is 5 and you are using * as Bates Padding Character, the generated text will be *1258 on the printed document.

Reset bates number at every printing=<number>
Available values:0, 1
0: The “Reset Bates Number at every printing” feature is disabled.
1: The “Reset Bates Number at every printing” feature is enabled.

Reset bates number=<number>
If the “Reset Bates Number at every printing” is enabled this value specifies the starting Bates Number. For example this value is 3 the bates number will start from 3 at every printed document.

[Post Print Options]

View in default viewer=

Send in email=
Email sending program 32bit=
Email sending program 64bit=
Open output folder=

SharePoint Upload=
SharePoint Server=
SharePoint Directory=
SharePoint User=
SharePoint Pass=
SharePoint Silent=
SharePoint Logfile=
SharePoint utility=
SharePoint HTTPS=
SharePoint Delete=

View in default viewer=<string>
Available values: Yes, No
Default value: No
If this value is 'Yes' every printed document will be opened in the default viewer.

Send in email=<string>
Available values: Yes, No
Default value: No
If this value is 'Yes' every printed document will be sent after printing automatically using the email sending utility.

Email sending program 32bit=<string>
This value specified the path and name of the 32 bit version of the email sending utility. This value shouldn't be changed manually. Basically the name of the email sending utility is PDEmailSender.exe. This application is installed by Black Ice Printer Manager or OEM release printer driver. The Email sending program 32bit parameter can also be configured by using a valid environment variable.

Email sending program 64bit=<string>
This value specified the path and name of the 64 bit version of the email sending utility. This value shouldn't be changed manually. Basically the name of the email sending utility is PDEmailSender.exe. This application is installed by Black Ice Printer Manager or OEM release printer driver. The Email sending program 64bit parameter can also be configured by using a valid environment variable.

Open output folder=<string>
Available values: Yes, No
Default value: No
If this value is 'Yes'the output directory will be opened after every printing.

SharePoint upload=<number>
Available values:0, 1
Default value: 0
If this value is 1 the SharePoint® uploading will be enabled.

SharePoint Server=<string>
Name of the SharePoint® server.

SharePoint Directory=<string>
Name of the SharePoint® repository. Use '/' character instead of '\' in the path specification.

SharePoint User=<string>
This value is the SharePoint® user.

SharePoint Pass=<string>
This value is the SharePoint® password.

SharePoint Logfile=<string>
This value is the path and name of the log file where the SharePoint utility writes logging information to. The SharePoint Logfile parameter can also be configured by using a valid environment variable.

SharePoint Silent=<number>
Available values:0, 1
Default value: 0
If this value is 1 the SharePoint® utility will upload the documents silently without user interaction. In this case the logging feature can be used for getting information about the uploading.

SharePoint Utility=<string>
This value specified the path and name of the SharePoint® utility. This value shouldn't be changed manually. Basically the name of the email sending utility is PDSharePointUploader.exe. The SharePoint Utility parameter can also be configured by using a valid environment variable.

SharePoint HTTPS=<number>
Available values:0, 1
Default value: 0
If this value is 1 the HTTPS encryption will be enabled for the SharePoint® uploading.

SharePoint Delete=<number>
Available values:0, 1
Default value: 0
If this value is 1 the Printer Driver deletes the printed documents after successfully uploaded to SharePoint.

[Email Settings]

Sender Client=
SMTP Server=
SMTP Port=
SMTP Sender Email=
SMTP UserName=
SMTP Password=

SMTP Enable SSL=
Ask For Address=
Email Send Silently=
Email Sender=
Email To=
Email Cc=
Email Bcc=
Email Subject=
Email Body=
Logging Enabled=
Logging Directory=
Audit Logging Enabled=
Audit Logging Directory=
Delete Files After Sending=
Disable About Box Links=
Disable Email Settings=
Content Based Email=
Simple Content Based Email=

This section defines the default settings of the email settings utility. These settings can be reached atEmail Settings dialog in the Printing Preferences.

Sender Client=<number>
Available values: 0, 1
Default value: 0
0: Use default mail client
1: Use SMTP client

SMTP Server=<string>
Name of the SMTP server. Maximum length is 127 characters. This value only has to be specified when the selected Sender Client is 1.

SMTP Port=<number>
Port of the SMTP server. Maximum length is 3 characters. This value only has to be specified when the selected Sender Client is 1.

SMTP Sender Email=<string>
Email address of the sender. Maximum length is 64 characters. This value only has to be specified when the selected Sender Client is 1.

SMTP UserName=<string>
SMTP user name (usually with domain). Maximum length is 64 characters. This value only has to be specified when the selected Sender Client is 1.

SMTP Password=<string>
SMTP password. Maximum length is 31 characters. This value only has to be specified when the selected Sender Client is 1.

SMTP Enable SSL=<string>

Available values: No, Yes
Default value: No
If this value is 'Yes' the printer driver uses SSL to connect to the specified SMTP server. This value only has to be specified when the selected Sender Client is 1.

Ask For Address=<string>
Available values: No, Yes
Default value: No
Prompt the user only for the email address. If set to Yes, the Printer Driver will show a window at every email sending where the recipients can be specified, but will not show the complete email sending window.

Email Send Silently=<string>
Available values: No, Yes
Default value: No
If this value is 'Yes' the printer driver will send the printer documents to the predefined email addresses without user interaction.

Email Sender=<string>
Name of the email sender. Maximum length is 127 characters. This value is only used when the silent mail sending or "Prompt the user only for the email address" is enabled.

Email To=<string>
To recipients. More email address can be specified using ; character. Maximum length is 127 characters. This value is only used when the silent mail sending or "Prompt the user only for the email address" is enabled.

Email Cc=<string>
Cc recipients. More email address can be specified using ; character. Maximum length is 127 characters. This value is only used when the silent mail sending or "Prompt the user only for the email address" is enabled.

Email Bcc=<string>
Bcc recipients. More email address can be specified using ; character. Maximum length is 127 characters. This value is only used when the silent mail sending or "Prompt the user only for the email address" is enabled.

Email Subject=<string>
Subject of the email. Maximum length is 63 characters. This value is only used when the silent mail sending or "Prompt the user only for the email address" is enabled.

Email Body=<string>
Body of the email. Maximum length is 515 characters. This value is only used when the silent mail sending or "Prompt the user only for the email address" is enabled.

Logging Enabled=<string>
Available values: No, Yes
Default value: No
If this value is 'Yes' the printer driver will generate log files about email sending.

Logging Directory=<string>

Full path of the log directory. Maximum length is 260 characters. This value is only used when the email logging is enabled. The Logging Directory parameter can also be configured by using a valid environment variable.

Audit Logging Enabled=<string>
Available values: No, Yes
Default value: No
If this value is 'Yes' the printer driver will generate CSV format audit log files about email sending.

Audit Logging Directory=<string>
Full path of the log directory. Maximum length is 260 characters. This value is only used when the email audit logging is enabled. The Audit Logging Directory parameter can also be configured by using a valid environment variable.

Delete Files After Sending=<string>
Available values: No, Yes
Default value: No
If this value is 'Yes' the printer driver will delete all files, including attachments, after the email is sent.

Disable About Box Links=<string>
Available values: No, Yes
Default value: No
If this value is 'Yes', the links on the About Box, on the SMTP email sending window are disabled.

Disable Email Settings=<string>
Available values: No, Yes
Default value: No
If this value is 'Yes', the File/Settings menu item on the SMTP email sending window is disabled.

Content Based Email=<string>
Available values: No, Yes
Default value: No
Enables content based email sending. The content based email sending feature can be used to set the recipients, subject and body text of emails, and passwords of PDF output files by embedding special character sequences into the printed documents (for example: ##~~EmailTo=recipient@domain.com~~).

Simple Content Based Email=<string>
Available values: No, Yes
Default value: No
If this option is turned on, the first email address from the first page of the printed document is extracted and used as the recipient when sending emails.

[Text Output Settings]

Filter Junk Characters=0
Glyph Conversion Method=0
No Page Headers=0
Use Legacy Coordinates=0
Add Space=
Line Breaks=
Separate Text Output Directory=
Text Output Directory=
Action on Existing Files=
Formatting Style=
Encoding=

This section defines the settings of the printer driver text output.

Filter Junk Characters=<number>
Available values: 0, 1
Default value: 0
Some text is passed by the printing application to the printer driver as a series of glyph indexes of a font instead of regular characters. If this value is set to 0, the printer driver tries to convert these indexes to characters using the method defined by the "Glyph Conversion Method" value, but this is not guaranteed to work every time and may result in Junk characters appearing in the text output. Setting this value to 1 will filter glyph indexes from the text output

Glyph Conversion Method=<number>
Method for converting glyph indexes to text. Try to change this if you get junk characters. Default value is 0, available values:

0: Try to guess the best method (default) – This option tries to determine the appropriate method for converting glyph characters to text. This method does not depend on the Character Set setting of the printer driver**;** it is usable for any language.
1: Use glyph table from the font file
2: Shift values (mainly for printing from Adobe Reader)
3: Legacy automatic - The automatic glyph conversion method has changed with Printer Driver version 14.56. This option uses the glyph conversion method from Printer Driver version 14.55 and earlier, and could be useful to achieve the same text output as with version 14.55 and earlier. This method is usable for languages that primarily use the English alphabet. The method depends on the Character Set setting of the printer driver. It is recommended to use the ANSI Character Set in the Text Output configuration. If the Character Set is not set to ANSI, this method is the same as the "Shift values" method.

No Page Headers=<number>
Available values: 0, 1
Default value: 0
If set to 0, the a page header ("Page X" text) is inserted before the content of each page in the text output.

Use Legacy Coordinates=<number>
Available values: 0, 1
Default value: 0

Use the old text coordinate calculations, like in version 14.35 and older Printer Drivers.

Add Space=<number>
The Detect space in text feature automatically detects the space characters between the EMF records from the input document, and inserts the spaces between the appropriate words in the text output.
Available values:

0: Never add space
1: Always add space
2: Automatic

Default value: 2

Line Breaks=<number>
Line Break format specifies the format of the line breaks in the generated text output.
Available values:

1: Windows <CR><LF>
2: UNIX/Mac <LF>
3: Mac OS 9 or older <CR>

Default value: 1

Separate Text Output Directory=<number>
When the Separate Text Output Directory option is disabled, the printer driver will use the same output directory for the Text Output as the normal output. If it is enabled, the text output directory can be specified using the Text Output Directory ini file value.
Available values:

0: Disable
1: Enable

Default value: 0

Text Output Directory=<string>
Full path of the text output directory. Maximum length is 260 characters. This value is only used when the Separate Text Output Directory is enabled.

Action on Existing Files=<number>
Possible actions if the text output file already exists
Available values:

0: Append to the existing file
1: Overwrite the existing file
2: Rename the new file

Default value: 0

Formatting Style=<number>
Formatting style defines whether to generate plain text from the printed document, or to add font information, position and style for the generated text. Adding position, style and font information could be useful if one intend to convert the text back to formatted document.
Available values:

0: Pain text
1: Add font information, position and style
2: Text with layout

Default value: 0

Encoding=<number>
By default, the text file is generated as ANSI text, however, UNICODE text is also supported. In order to turn on the UNICODE text support, select an UNICODE option from the Character Set dropdown list.
Available values:

0: Ansi
1: Unicode UTF-8
2: Unicode UTF-16
3: Unicode UTF-16 Big Endian

Default value: 0

[Barcode Settings]

Enable=
Type=
Value Source=
Value=
Value File=
RegExp File=
RegExp Format File=
First Page Only=
Transparency=
Align=
Vertical Align=
X Offset=
Y Offset=
Orientation=
Unit=

1D Subtype=
1D Write Text=
1D Minimal Bar Width=
1D Minimal Space Width=
1D Ratio=
1D Quiet Zone=

QR EC Level=
QR Module Size=
QR Quiet Zone=

DM Module Size=
DM Quiet Zone=
DM Append=
DM Append Index=
DM Append Total=
DM Append Chain ID=

P417 Truncated=
P417 EC Level=
P417 Quiet Zone=
P417 Columns=
P417 Rows=
P417 Column Width=
P417 Column Height=

Insert Page=

Enable=<number>
Available values: 0, 1
Default value: 0
If this value is 1, barcode printing is enabled
Bates numbering is not supported when using the EMF output file format.

Type=<number>
Available values: 0-3

0: QR
1: Data Matrix
2: PDF 417
3: 1D (Linear) – Set the "1D Subtype" key to set the 1D barcode standard

Default value: 0

Value Source=<number>
Available values: 0-2

0: The "Value" key is used, the barcode value is set directly
1: The "Value File" key is used, a file is given as barcode value
2: The text of the printed page is used as barcode value or the barcode value is generated from the page content using a regular expression (using the "RegExp File" and "RegExp Format File" keys)

Default value: 0

Value=<string>
Used as barcode value if "Value Source" is 0

Value File=<string>
Path to a file that is used as barcode value if "Value Source" is 1

RegExp File=<string>

Path to a Unicode text file (UTF-16 little-endian with byte-order mark) that contains a regular expression that is used for generating the barcode value from the page content if “Value Source” is 3. If this key is not set and “Value Source” is 3, the whole page text is used as barcode value.

RegExp Format File=<string>
Path to a Unicode text file (UTF-16 little-endian with byte-order mark) that contains a regular expression format that is used for generating the barcode value from the page content if “Value Source” is 3. If this key is not set and “Value Source” is 3, the whole page text is used as barcode value. Please see the SetBarcodeRegExpFormatFile API function for the details of this file.

First Page Only=<number>
Available values: 0, 1
Default value: 0
If this value is 1, the barcode is only printed on the first page of the document.

Transparency=<number>
Available values: 0, 1
Default value: 0
If this value is 1, the barcode is printed with transparent background instead of white.

Align=<number>
Sets the horizontal alignment of the barcode.
Available values: 0, 1, 2
- 0: Left
- 1: Center
- 2: Right

Default value: 0

Vertical Align=<number>
Sets the vertical alignment of the barcode.
Available values: 0, 1, 2
- 0: Top
- 1: Middle
- 2: Bottom

Default value: 0

X Offset=<number>
Sets the horizontal position of the barcode on the printed page. If “Align” is set to 2, this key specifies the distance of the right side of the barcode from the right side of the page.
Default value: 0

Y Offset=<number>
Sets the vertical position of the barcode on the printed page. If “Vertical Align” is set to 2, this key specifies the distance of the bottom of the barcode from the bottom of the page.
Default value: 0

Orientation=<number>
Sets the barcode rotation.

Available values: 0, 1, 2, 3

- 0: Do not rotate
- 1: Rotate 90 degrees clockwise
- 2: Rotate 180 degrees clockwise
- 3: Rotate 270 degrees clockwise

Default value: 0

Unit=<number>

Sets the units used by the “X Offset” and “Y Offset” keys
Available values: 0, 1, 3

- 0: the offsets are specified in pixels.
- 1: the offsets are specified in tenths of millimeters.
- 2: the offsets are specified in hundredths of inches.

Default value: 0

1D Subtype=<number>

Sets the used barcode standard if the “Type” key is set to 3 (1D)
Available values: 0-11

- 0: Codabar
- 1: Code 11
- 2: Code 128
- 3: Code 39
- 4: EAN 8
- 5: EAN 13
- 6: Industrial 2 from 5
- 7: Interleaved 2 from 5
- 8: Matrix 2 from 5
- 9: Plessey
- 10: UPC-A
- 11: UPC-E

Default value: 0

1D Write Text=<number>

Available values: 0, 1
Default value: 0
If this value is 1, the value of 1D barcodes is printed under the barcode.

1D Minimal Bar Width=<number>

Sets the minimal width of the bars in pixels. Cannot be less than 1.
Default value: 4

1D Minimal Space Width=<number>

Sets the minimal width of the spaces between bars in pixels. Cannot be less than 1.
Default value: 4

1D Ratio=<number>

Sets the minimal width difference between two neighboring logical level bars or spaces. Cannot be less than 1, it is specified in pixels.
Default value: 4

1D Quiet Zone=<number>
Sets the size of the empty white frame around the barcode. Cannot be less than 1, it is specified in pixels.
Default value: 4

QR EC Level=<number>
Sets the strength of the error correction used in QR codes. The QR code size increases with the error correction level.
Available values: 0-4

0: Level L (Low) 7% of codewords can be restored.
1: Level M (Medium) 15% of codewords can be restored.
2: Level Q (Quartile)[33] 25% of codewords can be restored.
3: Level H (High) 30% of codewords can be restored.

Default value: 2

QR Module Size=<number>
Sets the size of a single QR module (a single black or white rectangle) in pixels.
Default value: 8

QR Quiet Zone=<number>
Sets the size of the empty white frame around the barcode. Cannot be less than 1, it is specified in pixels.
Default value: 8

DM Module Size=<number>
Sets the size of a single data matrix cell (a single black or white rectangle) in pixels.
Default value: 10

DM Quiet Zone=<number>
Sets the size of the empty white frame around the barcode. It is specified in logical units. One unit is the size of a single data matrix module. (Specified by the “DM Module Size” key)
Default value: 1

DM Append=<number>
Available values: 0, 1
Default value: 0
If this value is set to 1, the printer driver will add structured append information to the data matrix code. Using the structured append feature, up to 16 Data Matrix symbols can be linked. The original data or file can be reconstructed from the linked symbols regardless of the order of the symbols.

DM Append Index=<number>
Available values: 1-16
Sets the index of the data matrix symbol that identifies its position in the current group. The index must be between 1 and 16 and must be smaller than or equal to the number of symbols in the group. The structured append feature must be enabled with the “DM Append” key.
Default value: 1

DM Append Total=<number>

Available values: 2-16
Sets the total number of symbols in the current group. The number must be between 2 and 16. The structured append feature must be enabled with the “DM Append” key.
Default value: 2

DM Append Chain ID=<number>
Available values: 0-64515
Sets the chain ID (File ID / FID) of the group. The number must be between 0 and 64515. The structured append feature must be enabled with the “DM Append” key.
Default value: 0

P417 Truncated=<number>
Available values: 0, 1
Default value: 0
If this value is set to 1, truncated PDF 417 symbols are enabled. Truncated PDF 417 symbols are smaller but they are less tolerant to damage.

P417 EC Level=<number>
Available values: 0-8, 9
Sets the strength of the error correction used in PDF 417 codes. The code size and the tolerance to damage increase with the error correction level.
Values between 0-8 are the normal error correction levels, 9 means automatic.
Default value: 9

P417 Quiet Zone=<number>
Sets the size of the empty white frame around the barcode. It is specified in logical units. One unit is the size of a single cell size. (Specified by the “P417 Column Width” and “P417 Column Height” keys)
Default value: 1

P417 Columns=<number>
Sets the number of data columns in the symbol. If this value is 0, the data columns will be automatically counted.
Default value: 0

P417 Rows=<number>
Sets the number of data rows in the symbol. If this value is 0, the data rows will be automatically counted.
Default value: 0

P417 Column Width=<number>
Sets the width of a single module in pixels.
Default value: 4

P417 Column Height=<number>
Sets the height of a single module in pixels.
Default value: 48

Insert Page=<number>
Available values: 0, 1
Default value: 0

If this value is 1, the barcode will be printed to a page that is inserted before the first page of the document.
If this value is 0, no page is inserted in front of the printed document. The barcode is printed to the pages of the document.

[OCR Settings]

Enabled=
BiOCR.Dll=
BiOCRx.Dll=
Output Directory=
Open Output=
Text Editor=
First Page Only=
Select Area=
Area Unit=
Area Top=
Area Left=
Area Width=
Area Height=
Languages=

Enabled=<string>
Available values: Yes, No
Default value: No
If this value is set to “Yes”, the OCR (Optical Character Recognition) feature of the printer driver is enabled. Please note that enabling the OCR feature will slow down printing.

BiOCR.Dll=<string>
Default value: empty
Specifies the path to the 32-bit OCR dll. (BiOCR.dll) The value should be an absolute path to the dll. If the driver cannot find the dll, the OCR feature will be disabled, and the OCR tab will be hidden from the Printing Preferences page.

BiOCRx.Dll=<string>
Default value: empty
Specifies the path to the 64-bit OCR dll. (BiOCRx.dll) The value should be an absolute path to the dll. If the driver cannot find the dll, the OCR feature will be disabled, and the OCR tab will be hidden from the Printing Preferences page.

Output Directory=<string>
Default value: empty
Specifies the folder where the output of the OCR will be generated. If set to an empty string, the normal printer driver output directory will be used.

Open Output=<string>
Available values: Yes, No
Default value: No
If this value is set to “Yes”, the driver will open the OCR output with the editor specified in the “Text Editor” key. If the “Save each page as separate file” option is turned on, only the first page will be opened, after the whole document is finished printing.

Text Editor=<string>
Default value: empty
Specifies the path to the text editor used for opening the OCR output. If set to an empty string, the default text editor will be used.

First Page Only=<string>
Available values: Yes, No
Default value: No
If this value is set to “Yes”, the OCR is only enabled for the first page of the document.

Select Area=<string>
Available values: Yes, No
Default value: No
Enables or disables Area Selection for the OCR feature of the printer driver. When enabled, you can use the “Area Unit”, “Area Top”, “Area Left”, “Area Width” and “Area Height” keys to set a rectangular area on the page where the OCR will operate.

Area Unit=<number>
Available values: 1-3

1: Pixel
2: 0.1*mm
3: 0.01*Inch

Default value: 1

Area Top=<number>
Default value: 0
Sets the distance of the OCR area from the top of the page. The unit can be specified using the “Area Unit” key.

Area Left=<number>
Default value: 0
Sets the distance of the OCR area from the left edge of the page. The unit can be specified using the “Area Unit” key.

Area Width=<number>
Default value: 0
Sets the width of the OCR area. The unit can be specified using the “Area Unit” key.

Area Height=<number>
Default value: 0
Sets the height of the OCR area. The unit can be specified using the “Area Unit” key.

Languages=<string>
Default value: eng

Selects the languages used in the OCR. The list should be a string of language codes separated by '+' characters. (E.g.: "eng+deu+fra+jpn"). On the printer driver user interface, it is only possible to select a single language at a time, but with the SetOCRLanguages API function or this INI file key, multiple languages can be selected. The list of available languages can vary depending on the language packs installed.

Language code (ISO 639-3)	**Language name**
afr	Afrikaans
sqi	Albanian
grc	Ancient Greek Language
ara	Arabic
aze	Azerbaijani
eus	Basque
bel	Belarusian
ben	Bengali
bul	Bulgarian
cat	Catalan
chr	Cherokee
chi_sim	Chinese (Simplified)
chi_tra	Chinese (Traditional)
hrv	Croatian
ces	Czech
dan	Danish
nld	Dutch
eng	English
epo	Esperanto
epo_alt	Esperanto alternative
est	Estonian
fin	Finnish
frk	Frankish
fra	French
glg	Galician
deu	German
ell	Greek
heb	Hebrew
hin	Hindi
hun	Hungarian
isl	Icelandic
ind	Indonesian
ita	Italian
ita_old	Italian (Old)
jpn	Japanese
kan	Kannada

kor	Korean
lav	Latvian
lit	Lithuanian
mkd	Macedonian
msa	Malay
mal	Malayalam
mlt	Maltese
enm	Middle English (1100-1500)
frm	Middle French (ca. 1400-1600)
nor	Norwegian
pol	Polish
por	Portuguese
ron	Romanian
rus	Russian
srp	Serbian (Latin)
slk	Slovakian
slv	Slovenian
spa	Spanish
spa_old	Spanish (Old)
swa	Swahili
swe	Swedish
tgl	Tagalog
tam	Tamil
tel	Telugu
tha	Thai
tur	Turkish
ukr	Ukrainian
vie	Vietnamese

[Header Settings]

Header Enable=
Header Text=
Header Position=
Header Font Height=
Header Font Width=
Header Font Escapement=
Header Font Orientation=
Header Font Weight=
Header Font Italic=
Header Font Underline=
Header Font Strikeout=
Header Font Charset=
Header Font Outprecisions=
Header Font Clipprecisions=
Header Font Quality=

Header Font PinchAndFamily=
Header Font Facename=
Header Color=
Header Background Mode=
Header Offset X=
Header Offset Y=
Header Offset Units=

Header Enable=<number>
This value enables or disables Header printing.

Available values: 0: Disables Header printing
1: Enables Header printing
Default value: 0 (Disables Header printing)

Header Text=<string>
This value specifies the header text

Header Position=<number>
This value specifies the position of the header.
Available values: 0: left
1: center
2: right
Default value: 0 (left)

Header Font Height=0
Header Font Width=0
Header Font Escapement=0
Header Font Orientation=0
Header Font Weight=0
Header Font Italic=0
Header Font Underline=0
Header Font Strikeout=0
Header Font Charset=0
Header Font Outprecisions=0
Header Font Clipprecisions=0
Header Font Quality=0
Header Font PinchAndFamily=0
Header Font Facename=
These values specify the font information of the Header.

Header Color=
Specifies the color of the Header as COLORREF value.

Header Background Mode=
Available values: 0, 1.
0: The Header is opaque on the printed page.
1: The Header is transparent on the printed document.

Header Offset X=<number>

Specifies the horizontal offset of the Header annotation.

Header Offset Y=<number>
Specifies the vertical offset of the Header annotation.

Header Offset Units=<number>
Specifies the unit of the offset.
0: 0.1 mm
1: 0.01 inch
2: pixel (default value)

[Footer Settings]

Footer Enable=
Footer Text=
Footer Position=
Footer Font Height=
Footer Font Width=
Footer Font Escapement=
Footer Font Orientation=
Footer Font Weight=
Footer Font Italic=
Footer Font Underline=
Footer Font Strikeout=
Footer Font Charset=
Footer Font Outprecisions=
Footer Font Clipprecisions=
Footer Font Quality=
Footer Font PinchAndFamily=
Footer Font Facename=
Footer Color=
Footer Background Mode=
Footer Offset X=
Footer Offset Y=
Footer Offset Units=

Footer Enable=<number>
This value enables or disables Footer printing.

Available values: 0: Disables Footer printing
1: Enables Footer printing
Default value: 0 (Disables Footer printing)

Footer Text=<string>
This value specifies the Footer text

Footer Position=<number>
This value specifies the position of the Footer.
Available values: 0: left
1: center

2: right
Default value: 0 (left)

Footer Font Height=0
Footer Font Width=0
Footer Font Escapement=0
Footer Font Orientation=0
Footer Font Weight=0
Footer Font Italic=0
Footer Font Underline=0
Footer Font Strikeout=0
Footer Font Charset=0
Footer Font Outprecisions=0
Footer Font Clipprecisions=0
Footer Font Quality=0
Footer Font PinchAndFamily=0
Footer Font Facename=
These values specify the font information of the Footer.

Footer Color=0
Specifies the color of the Footer as COLORREF value.

Footer Background Mode=0
Available values: 0, 1.
0: The Footer is opaque on the printed page.
1: The Footer is transparent on the printed document.

Footer Offset X=<number>
Specifies the horizontal offset of the Footer annotation.

Footer Offset Y=<number>
Specifies the vertical offset of the Footer annotation.

Footer Offset Units=<number>
Specifies the unit of the offset.
0: 0.1 mm
1: 0.01 inch
2: pixel (default value)

[Troubleshooting Settings]

Debug Logging Enable=0
Debug Logging Directory=
Event Logging Level=2

Debug Logging Enable=<number>
This value enables or disables Debug Logging.

Available values: 0: Disables Debug Logging
1: Enables Debug Logging
Default value: 0 (Disables Debug Logging)

Debug Logging Directory=<string>
The full path for the directory to save the DDF file generated by Debug Logging. The Debug Logging parameter can also be configured by using a valid environment variable.

Event Logging Level=<0 or 1 or 2 or 3>

Default value: 2

If the Event Logging Level is not 0, the Printer Driver logs specific general information, errors, warnings for every print job into the Event log, into Windows Logs > Application.

Possible values:
0: Disable logging
1: Write only errors into the event log
2: Write errors and warnings into the event log
3: Write errors, warnings and general information for every print job into the event log

[BiGroup.ini]

INI file=<string>
Contains the path and filename of the bi_group.ini file. The default value is C:\Windows\Temp\bi_group.ini

The printer driver writes the path and file name of the latest written group file (*.grp) into the bi_group.ini file. The driver might write errors into the “Print Status” key of the bi_group.ini file such as “Filename is longer than 260 characters”, if the normal group file cannot be written.
Example content of the bi_group.ini file:

[Black Ice ColorPlus]
Group File=
Print status=Filename is longer than 260 characters:
C:\123456789012\Text file with long file name.TIF
[Black Ice EMF]
Group File=C:\Users\Username\Documents\Test Page000001.GRP
[Black Ice Color (Demo)]
Group File=C:\Users\Username\Documents\Test Page000001 (18).GRP

[Sharing Settings]

Ignore extended DEVMODE from clients=<0 or 1>

Default value: 0

If this value is set to **1**, for shared printers, all tabs on the “Printing Preferences” dialog except “Device Settings” are hidden on the client side. The settings that are hidden and disabled on the client side, are visible and can be changed on the Host side. On the client side, only the Paper size, Orientation and DPI settings can be changed.

If this value is set to **0**, the Device Settings, File formats, Filename Generation, Annotation tabs are visible and can be changed on the client side. When printing from a client, these settings are taken from the client side, the host side settings are ignored. The settings that are hidden and disabled on the client side, are visible and can be changed on the Host side.

This option must have the same value on the host and client side INI files. If the value is changed after the printer was attached to the client computer, both the client side and host side INI files have to be changed. If the INI file is modified on the host side before the printer is attached to the client, the INI file value will be copied to the client when the printer is attached to the client.

[FTP Connection <number>]

FTP Show Success=<0 or 1>
When enabled, the printer driver will show a message box with after each successful upload. The message box is only shown if the print job is not printed from a service.
0: Disable the message box (default)
1: Enable the message box

FTP Show Error=<0 or 1>
When enabled, the printer driver will show a message box with the error message if the FTP upload was unsuccessful. The message box is only shown if the print job is not printed from a service.
0: Disable the message box (default)
1: Enable the message box

[Paper Size Definitions]

Number of Paper Sizes=

Paper1 Available=
Paper1 Title=
Paper1 Width=
Paper1 Height=
Paper1 Units=
Paper1 WindowsPaperCode=

…

Paper178 Available=
Paper178 Title=
Paper178 Width=
Paper178 Height=
Paper178 Units=
Paper178 WindowsPaperCode=

Paper178 AdvancePaperSize=

NOTE: The PaperX (For example: Paper1, Paper33, Paper175) prefix helps the user to keep the INI file definitions in an easy-to-read form. For example: Paper1 defines the attributes of one paper size. When adding a custom paper size, one must use a unique Prefix.

Number of Paper Sizes=<number>
Number of Paper Sizes definitions in the configuration INI file. This is the total number of Paper Sizes used and displayed on the Printer Driver User Interface.

Available values: Integer value between 0 and 2147483647
Default value: 177

Paper1 Available=<number>
This value must be set to 1, to make the paper size available on the user interface. If this value is set to 0, then the Paper Size will be hidden on the user interface.
(The values of the standard paper sizes should not be changed)

Available values:
1: Enable the paper size on the user interface.
0: Disable the paper size on the user interface.

Default value: 1.

Paper1 Title=<string>
Displayed name of the paper size, maximum 64 characters
(The values of the standard paper sizes should not be changed)

Paper1 Width=<number>
Paper width in the units specified by the Units value below
(The values of the standard paper sizes should not be changed)

Paper1 Height=<number>
Paper height in the units specified by the Units value below
(The values of the standard paper sizes should not be changed)

Paper1 Units=<string>
Unit of the width and height values, can be one of the following values:
"MM": tenths of millimeters
"Inches": hundredths of inches
"Pixels": pixels
(The values of the standard paper sizes should not be changed)

Paper1 WindowsPaperCode=<number>
The Windows paper code is the predefined paper sizes identifier in Windows.

For custom paper sizes, the WindowsPaperCode should be increment by 1 from the last custom WindowsPaperCode.

The Black Ice INI file definitions are used only by the Black Ice printer driver and WIndowsPaperCode is used by only the Black Ice printer driver.

(The values of the standard paper sizes should not be changed)

AdvancePaperSize=<number>
Advanced paper sizes can be deleted from the user interface.
0: Not advanced paper size.
1: Advanced paper size

Custom Paper Sizes:
The WindowsPaperCode should be increment by 1 from the last custom WindowsPaperCode
If a new custom paper is added do not forget to update the 'Number of Paper Sizes' entry.

The Paper178 prefix for the paper size definition must be increased for every additional custom paper size. For example, if one adds one more custom paper size, the prefix must be Paper179.

[HTTP Upload Settings]

Enabled HTTP Upload =<number>
Available values:0, 1
Default value: 0

If this value is 1 the HTTP uploading will be enabled.

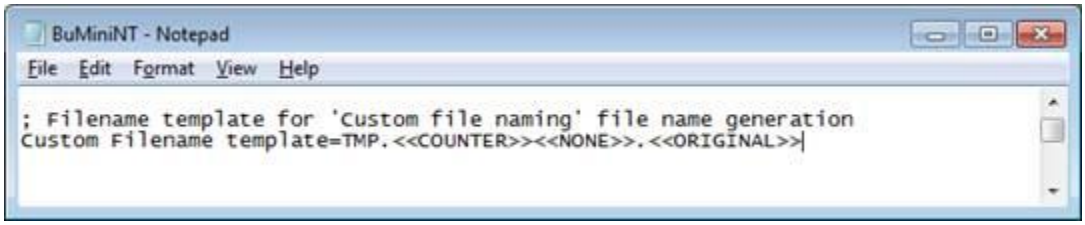
HTTP Utility=<string>
This value specified the path and name of the BiHTTPUpload utility. This value shouldn't be changed manually. Basically the name of the HTTP Upload utility is BiHTTPUpload.exe. The HTTP Utility parameter can also be configured by using a valid environment variable.

Frequently used INI file examples and configurations

The following sections contains examples of how to configure a Black Ice INI file to preconfigure commonly used configurations, such as Merge, Split, Fine Fax Resolution, Standard Fax Resolution.

The examples can be used to easily create CUSTOM INI files for large scale deployments for MSI Installers, and to preconfigure the Black Ice Printer Driver settings right after the installation.

Some of the settings in the default INI file are just examples. If the semicolon ; mark is at the beginning of the line, the printer driver will ignore the line. So if you need to modify the **Custom Filename Template** for example, you should change it as you can see on the following image (*delete the ; mark*);



Split multipage documents to separate single page output documents

Find the following line in the INI file:

Flags=-2147424224
Change the line to the following:
Flags=-2147424256

Merge documents to multipage documents

Find the following lines in the INI file:

Flags=-2147424224
Change the line to the following:
Flags=1105952

FileNameGenerationFlags=6
Change the line to the following:
FileNameGenerationFlags=3

FixedFileName=
Change the line to the following:
FixedFileName=Merged-documents

Printing to 204x196 DPI Fine Fax Compatibility

Find the following lines in the INI file:

X DPI=300
Change the line to the following:
X DPI=200

Y DPI=300
Change the line to the following:
Y DPI=200

File Format=36
Change the line to the following:
File Format=4

Flags=-2147424224
Change the line to the following:
Flags=-2147096542

FileExtension=PDF
Change the line to the following:
FileExtension=TIF

PaperWidthInPixels=2550
Change the line to the following:
PaperWidthInPixels=1700

PaperHeightInPixels=3300
Change the line to the following:
PaperHeightInPixels=2200

Printing to 204x98 DPI Standard Fax Compatibility

X DPI=300
Change the line to the following:
X DPI=204

Y DPI=300
Change the line to the following:
Y DPI=98

File Format=36
Change the line to the following:
File Format=4

Flags=-2147424224
Change the line to the following:
Flags=-2147092448

FileExtension=PDF
Change the line to the following:
FileExtension=TIF

PaperWidthInPixels=2550
Change the line to the following:
PaperWidthInPixels=1734

PaperHeightInPixels=3300
Change the line to the following:
PaperHeightInPixels=1078

Start Application with parameters

LaunchFlags=12
Change the line to the following:
LaunchFlags=13

StartApplicationParameterOrder=12345680
Change the line to the following:
StartApplicationParameterOrder=80000000

ApplicationPath=
Change the line to the following:
ApplicationPath=C:\test*MyApplication.exe*

Once the desired settings are changed in the customized INI file, it can be used for customized MSI Installations with the CUSTOMINI parameter.

For example:

msiexec /i "<<PATH>>\BlackIcePDF_X1.msi" CUSTOMINI="<<PATH>>\BuAiniNT.ini" REGNUM="XXXXX-XXXXXXXX-XXXXXXXXXX"

BuAiniNT.ini must be substituted with the customized INI file name, the BlackIcePDF_X1.msi must be substituted with the MSI installer name and the XXXXX-XXXXXXXX-XXXXXXXXXX must be substituted with a valid serial number.

Hiding the tabs on the printer driver User Interface

In order to set which tabs are being displayed in the printer driver User Interface, modify the following section in the printer driver INI file.

[UI Tabs Settings]

Display File Format Tab=1 - if the value is 1 (default), the “File format” tab is displayed, if the value is 0, the “File format” tab is hidden.

Display Filename Generation Tab=1 - if the value is 1 (default), the “Filename generation” tab is displayed, if the value is 0, the “Filename generation” tab is hidden.

Display Start Application Tab=1 - if the value is 1 (default), the “Start application” tab is displayed, if the value is 0, the “Start application” tab is hidden.

Display Watermark Tab=1 - if the value is 1 (default), the “Watermark” tab is displayed, if the value is 0, the “Watermark” tab is hidden.

Display Annotation Tab=1 - if the value is 1 (default), the “Annotation” tab is displayed, if the value is 0, the “Annotation” tab is hidden.

Display Bates Tab=1 - if the value is 1 (default), the “Bates Numbering” tab is displayed, if the value is 0, the “Bates Numbering” tab is hidden.

Display Profile Manager Tab=1 - if the value is 1 (default), the “Profile Manager” tab is displayed, if the value is 0, the “Profile Manager” tab is hidden.

Display Redirect Printing Tab=1 - if the value is 1 (default), the “Redirect Printing” tab is displayed, if the value is 0, the “Redirect Printing” tab is hidden.

Display Barcode Tab=1 - if the value is 1 (default), the “Barcode” tab is displayed, if the value is 0, the “Barcode” tab is hidden.

Display OCR Tab=1 - if the value is 1 (default), the “OCR” tab is displayed, if the value is 0, the “OCR” tab is hidden.

Display Text Output Tab=1 - if the value is 1 (default), the “Text Output” tab is displayed, if the value is 0, the “Text Output” tab is hidden.

To hide and show the tabs programmatically you can also use the *EnableTab* and *DisableTab* functions from the BlackIceDEVMODE dll or ActiveX control. To get the state of a tab, use the IsTabEnabled function.

The “Device settings” tab cannot be hidden and will always be displayed.
Please note, if you use the API functions, it will override the settings of the INI file until you reinstall the driver or delete the following registry key:
HKEY_CURRENT_USER\Software\Black Ice Software LLC\<Name of the Black Ice Printer>\UI Tabs Settings

Barcode INI File configurations

[Barcode Settings]

Enable=
Type=
Value Source=
Value=
Value File=
RegExp File=
RegExp Format File=
First Page Only=
Transparency=
Align=
Vertical Align=
X Offset=
Y Offset=
Orientation=
Unit=

1D Subtype=
1D Write Text=
1D Minimal Bar Width=
1D Minimal Space Width=
1D Ratio=
1D Quiet Zone=

QR EC Level=
QR Module Size=
QR Quiet Zone=

DM Module Size=
DM Quiet Zone=
DM Append=

DM Append Index=
DM Append Total=
DM Append Chain ID=

P417 Truncated=
P417 EC Level=
P417 Quiet Zone=
P417 Columns=
P417 Rows=
P417 Column Width=
P417 Column Height=

Enable=<number>
Available values: 0, 1
Default value: 0
If this value is 1, barcode printing is enabled
Bates numbering is not supported when using the EMF output file format.

Type=<number>
Available values: 0-3

0: QR
1: Data Matrix
2: PDF 417
3: 1D (Linear) – Set the "1D Subtype" key to set the 1D barcode standard

Default value: 0

Value Source=<number>
Available values: 0-2

0: The "Value" key is used, the barcode value is set directly
1: The "Value File" key is used, a file is given as barcode value
2: The text of the printed page is used as barcode value or the barcode value is generated from the page content using a regular expression (using the "RegExp File" and "RegExp Format File" keys)

Default value: 0

Value=<string>
Used as barcode value if "Value Source" is 0

Value File=<string>
Path to a file that is used as barcode value if "Value Source" is 1

RegExp File=<string>
Path to a Unicode text file (UTF-16 little-endian with byte-order mark) that contains a regular expression that is used for generating the barcode value from the page content if "Value Source" is 3. If this key is not set and "Value Source" is 3, the whole page text is used as barcode value.

RegExp Format File=<string>
Path to a Unicode text file (UTF-16 little-endian with byte-order mark) that contains a regular expression format that is used for generating the barcode value from the page

content if “Value Source” is 3. If this key is not set and “Value Source” is 3, the whole page text is used as barcode value. Please see the SetBarcodeRegExpFormatFile API function for the details of this file.

First Page Only=<number>
Available values: 0, 1
Default value: 0
If this value is 1, the barcode is only printed on the first page of the document.

Transparency=<number>
Available values: 0, 1
Default value: 0
If this value is 1, the barcode is printed with transparent background instead of white.

Align=<number>
Sets the horizontal alignment of the barcode.
Available values: 0, 1, 2
- 0: Left
- 1: Center
- 2: Right

Default value: 0

Vertical Align=<number>
Sets the vertical alignment of the barcode.
Available values: 0, 1, 2
- 0: Top
- 1: Middle
- 2: Bottom

Default value: 0

X Offset=<number>
Sets the horizontal position of the barcode on the printed page. If “Align” is set to 2, this key specifies the distance of the right side of the barcode from the right side of the page.
Default value: 0

Y Offset=<number>
Sets the vertical position of the barcode on the printed page. If “Vertical Align” is set to 2, this key specifies the distance of the bottom of the barcode from the bottom of the page.
Default value: 0

Orientation=<number>
Sets the barcode rotation.
Available values: 0, 1, 2, 3
- 0: Do not rotate
- 1: Rotate 90 degrees clockwise
- 2: Rotate 180 degrees clockwise
- 3: Rotate 270 degrees clockwise

Default value: 0

Unit=<number>

Sets the units used by the “X Offset” and “Y Offset” keys
Available values: 0, 1, 3

0: the offsets are specified in pixels.
1: the offsets are specified in tenths of millimeters.
2: the offsets are specified in hundredths of inches.

Default value: 0

1D Subtype=<number>
Sets the used barcode standard if the “Type” key is set to 3 (1D)
Available values: 0-11

0: Codabar
1: Code 11
2: Code 128
3: Code 39
4: EAN 8
5: EAN 13
6: Industrial 2 from 5
7: Interleaved 2 from 5
8: Matrix 2 from 5
9: Plessey
10: UPC-A
11: UPC-E

Default value: 0

1D Write Text=<number>
Available values: 0, 1
Default value: 0
If this value is 1, the value of 1D barcodes is printed under the barcode.

1D Minimal Bar Width=<number>
Sets the minimal width of the bars in pixels. Cannot be less than 1.
Default value: 4

1D Minimal Space Width=<number>
Sets the minimal width of the spaces between bars in pixels. Cannot be less than 1.
Default value: 4

1D Ratio=<number>
Sets the minimal width difference between two neighboring logical level bars or spaces. Cannot be less than 1, it is specified in pixels.
Default value: 4

1D Quiet Zone=<number>
Sets the size of the empty white frame around the barcode. Cannot be less than 1, it is specified in pixels.
Default value: 4

QR EC Level=<number>

Sets the strength of the error correction used in QR codes. The QR code size increases with the error correction level.
Available values: 0-4

0: Level L (Low) 7% of codewords can be restored.
1: Level M (Medium) 15% of codewords can be restored.
2: Level Q (Quartile)[33] 25% of codewords can be restored.
3: Level H (High) 30% of codewords can be restored.

Default value: 2

QR Module Size=<number>
Sets the size of a single QR module (a single black or white rectangle) in pixels.
Default value: 8

QR Quiet Zone=<number>
Sets the size of the empty white frame around the barcode. Cannot be less than 1, it is specified in pixels.
Default value: 8

DM Module Size=<number>
Sets the size of a single data matrix cell (a single black or white rectangle) in pixels.
Default value: 10

DM Quiet Zone=<number>
Sets the size of the empty white frame around the barcode. It is specified in logical units. One unit is the size of a single data matrix module. (Specified by the “DM Module Size” key)
Default value: 1

DM Append=<number>
Available values: 0, 1
Default value: 0
If this value is set to 1, the printer driver will add structured append information to the data matrix code. Using the structured append feature, up to 16 Data Matrix symbols can be linked. The original data or file can be reconstructed from the linked symbols regardless of the order of the symbols.

DM Append Index=<number>
Available values: 1-16
Sets the index of the data matrix symbol that identifies its position in the current group. The index must be between 1 and 16 and must be smaller than or equal to the number of symbols in the group. The structured append feature must be enabled with the “DM Append” key.
Default value: 1

DM Append Total=<number>
Available values: 2-16
Sets the total number of symbols in the current group. The number must be between 2 and 16. The structured append feature must be enabled with the “DM Append” key.
Default value: 2

DM Append Chain ID=<number>
Available values: 0-64515

Sets the chain ID (File ID / FID) of the group. The number must be between 0 and 64515. The structured append feature must be enabled with the “DM Append” key.
Default value: 0

P417 Truncated=<number>
Available values: 0, 1
Default value: 0
If this value is set to 1, truncated PDF 417 symbols are enabled. Truncated PDF 417 symbols are smaller but they are less tolerant to damage.

P417 EC Level=<number>
Available values: 0-8, 9
Sets the strength of the error correction used in PDF 417 codes. The code size and the tolerance to damage increase with the error correction level.
Values between 0-8 are the normal error correction levels, 9 means automatic.
Default value: 9

P417 Quiet Zone=<number>
Sets the size of the empty white frame around the barcode. It is specified in logical units. One unit is the size of a single cell size. (Specified by the “P417 Column Width” and “P417 Column Height” keys)
Default value: 1

P417 Columns=<number>
Sets the number of data columns in the symbol. If this value is 0, the data columns will be automatically counted.
Default value: 0

P417 Rows=<number>
Sets the number of data rows in the symbol. If this value is 0, the data rows will be automatically counted.
Default value: 0

P417 Column Width=<number>
Sets the width of a single module in pixels.
Default value: 4

P417 Column Height=<number>
Sets the height of a single module in pixels.
Default value: 48

The BIFTP upload to FTP configuration INI file

The BIFTP.INI file with the BIFTP parameter can be used to preconfigure the Upload to FTP feature of the Black Ice Printer Drivers.

For example:
msiexec /i "BlackIcePDF_X1.msi" REGNUM="XXXXX-XXXXXXXX-XXXXXXXXXX"
BIFTP="c:\BIFTP.ini" BITRACE=1

Example of how the BIFTP INI file structure and available flags:

[BIFTP]

[FTP Upload Setting]
FTP Enable=
FTP Selected Connection=

[FTP Connection 1]
FTP Connection Name=
FTP Security mode=
FTP Server Address=
FTP Login Name=
FTP Password=
FTP Port=
FTP Remote Directory=
FTP Is Passive=
FTP Proxy Server Address=
FTP Proxy Port=
FTP Proxy User Name=
FTP Proxy User Password=
FTP Proxy Type=
FTP Proxy Authentication=
FTP Proxy Domain=
FTP Trusted Certificate=
FTP Transfer Method=
FTP Action on Existing Files=
FTP Logging=
FTP Logfile=

Description of the BIFTP.INI file flags:

[BIFTP]

[FTP Upload Setting]

FTP Enable=Enable or disable FTP upload feature (max length: 1 character)
Available values:
0: Disable FTP upload
1: Enable FTP upload

FTP Selected Connection=The ID of the selected FTP connection (max length: 3 characters). Multiple ftp connections can be specified in the [FTP Connection XXX] sections.
For example: to use the settings specified in the [FTP Connection 2] section, set “FTP Selected Connection=2”

[FTP Connection 1] Multiple connections can be specified, this is an example of the first connection.

FTP Connection Name=Name of the connection (max length: 128 characters)

FTP Security mode=FTP Security mode. (max length: 1 characters)
Available values:
0: FTP without security
1: FTP with explicit SSL/TLS encryption (FTPES)
2: FTP with implicit SSL/TLS (FTPS)
3: SFTP

FTP Server Address=URL of the FTP Server or IP Address (max length: 128 characters)

FTP Login Name=FTP Server User name (max length: 128 characters)

FTP Password=FTP Server User password (max length: 64 characters)

FTP Port=FTP server port (max length: 5 characters)

FTP Remote Directory=Destination Directory on the FTP Server (max length: 260 characters)

FTP Is Passive=Passive mode (max length: 1 character)
Available values:
0: not passive
1: Passive

FTP Proxy Server Address=URL of the Proxy Server or IP Address (max length: 128 characters)

FTP Proxy Port=Proxy server port (max length: 5 characters)

FTP Proxy User Name=Proxy Server User name (max length: 128 characters)

FTP Proxy User Password=Proxy Server User password (max length: 64 characters)

FTP Proxy Type=Proxy server type (max length: 1 character)
Available values:
0: None
1: Socks4
2: Socks4A
3: Socks5
4: HttpConnect

FTP Proxy Authentication=Proxy Authentication if proxy type is HttpConnect (max length: 1 character). Available values:
0: Basic
1: Ntlm

FTP Proxy Domain=Proxy Domain if proxy type is HttpConnect and Proxy Authentication is Ntlm (max length: 128 characters)
;To use Proxy Domain, one must use “HttpConnect” and “Ntlm” Authentication

FTP Trusted Certificate=Trusted certificate (max length: 1 characters)
Available values:

0: Always show certificate warning
1: never show certificate warning

FTP Transfer Method=Transfer method (max length: 1 character)
Available values:
0: Printed files are copied
1: Files are moved to the target destination (Printed files are deleted in the source location)

FTP Action on Existing Files=Action on Existing files (max length: 1 character)
Available values:
0: Overwrite All (Existing files are to be always overwritten)
1: Overwrite Different Size (Existing files with different size are to be overwritten)
2: Overwrite Older (Existing files are to be overwritten if they are older than source files. This is strongly discouraged because modification dates are often misreported by FTP and SFTP server, making this mode highly unreliable.)
3: Rename (Existing files are to be renamed according the pattern "filename[number].extension".)
4: Resume If Possible (Existing files are to be resumed if they are smaller than source files.)
5: Skip All (Existing files are to be always skipped)

FTP Logging=Enable or disable logging for FTPUploader (max length: 1 character).
Available values:
0: Disable FTP logging
1: Enable FTP logging

FTP Logfile=Log file for FTPUploader (max length: 260 characters). The default location is [User document folder]\Black Ice Printer Driver\Log\FTPUploader.log

The BIEMAIL email configuration INI File

The Printer Driver email sending feature can be preconfigured during the MSI Installation by using the BIEMAIL parameter.

The BIEMAIL parameter can be used to configure MAPI (Outlook) email client, SMTP Server, silent email sending with preconfigured recipients, email subject, email body.

Point of Sales
The email sending can be configured to prompt the user to enter the recipients by using the **Ask For Address=Yes** flag in the INI file.

Example of how to use the BIEMAIL parameter:
msiexec.exe /i "BlackIcePDF_X1.msi" /q REGNUM="xxxxx-xxxxxxxx-xxxxxxxxxx" BIEMAIL=c:\customEmail.ini

In the INI file configured in the BIEMAIL parameter, the following settings can be specified:

[Post Print Options]
; Yes

; No (default)
Send in Email=Yes
If this value is ‘Yes’ every printed document will be sent after printing automatically using the email sending utility.

[Email Settings]
; Email client type:
; 0: Use default mail client (default)
; 1: Use SMTP client
Sender Client=1

; SMTP server name (max length: 127 characters)
SMTP Server=

; SMTP server port (max length: 5 characters)
SMTP Port=

; SMTP user name (with domain) (max length: 64 characters)
SMTP UserName=

; SMTP password (max length: 64 characters)
SMTP Password=

; Enable SSL
; Yes
; No (default)

SMTP Enable SSL=

; Enable sending emails silently
; Yes
; No (default)
Email Send Silently=

; Sender name (max length: 63 characters)
Email Sender=

; To address(es) (max length: 127 characters)
Email To=

; Cc addresses (max length: 127 characters)
Email Cc=

; Bcc addresses (max length: 127 characters)
Email Bcc=

; Email subject (max length: 63 characters)
Email Subject=

; Email body (max length: 515 characters)
Email Body=

; Enable Ask For Address
; Yes
; No (default)
Ask For Address=Yes
If Yes, the Printer Driver will prompt the user to enter the recipients at every email sending.

; Enable logging
; Yes
; No (default)
Logging Enabled=No

; Log directory (use full absolute path)
Logging Directory=

; Enabled Audit Logging
; Yes
; No (default)
Audit Logging Enabled=No

; Audit Logging Directory (use full absolute path)
Audit Logging Directory=

Event Logging to track conversions and errors

The Black Ice Printer Drivers are capable to log every occurring conversion, warning, error or general information into the operating system **Event Log** under **Application**.
To Enable the Event Logging, one must modify The Printer Driver Configuration INI File.

Open the INI files with any text editor (for example Notepad) and add or edit the existing Event Logging Level line under section:

[Troubleshooting Settings]
Event Logging Level=2

Possible values for Event Logging Level:
0: Disable logging
1: Write only errors into the event log
2: Write errors and warnings into the event log (default)
3: Write errors, warnings and general information for every print job into the event log

Enter the value which fits to your requirements, and save the INI files.
Printer Driver INI files in the following directories:

Location for the INI files on **64 bit Operating Systems;**
c:\Windows\System32\spool\drivers\x64\3\
c:\Windows\System32\spool\drivers\x64\

Location for the INI files on **32 bit Operating Systems;**

c:\Windows\System32\spool\drivers\w32x86\3\
c:\Windows\System32\spool\drivers\w32x86\

Licensed Printer Driver INI file names;

ColorPlus driver	BuAiniNT.ini
TIFF (monochrome) driver	BuMIniNT.ini
PDF driver	BuPIniNT.ini
ColorPlus Terminal Server driver	BuAIniTS.ini
TIFF Terminal Server driver	BuMIniTS.ini
PDF Terminal Server driver	BuPIniTS.ini
ColorPlus X1 driver	BuAiniNT.ini
TIFF (monochrome) X1 driver	BuMIniNT.ini
PDF X1 driver	BuPIniNT.ini
ColorPlus X1 Terminal Server driver	BuAIniTS.ini
TIFF X1 Terminal Server driver	BuMIniTS.ini
PDF X1 Terminal Server driver	BuPIniTS.ini

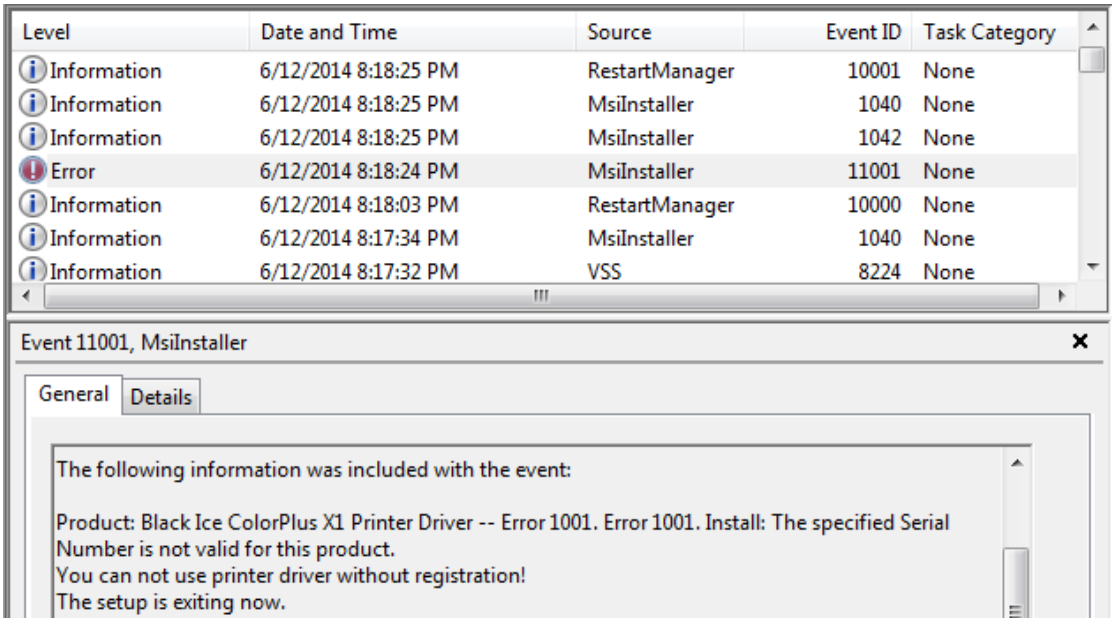
Licensing Error codes and Event Viewer error messages

The Black Ice Printer Driver MSI Installation automatically logs the Product Licensing registration process during the installation in the BiPDMSIRegistrationDataLog.txt file located in the User's temp folder.
(for example: c:\Users\Administrator\temp\BiPDMSIRegistrationDataLog.txt)

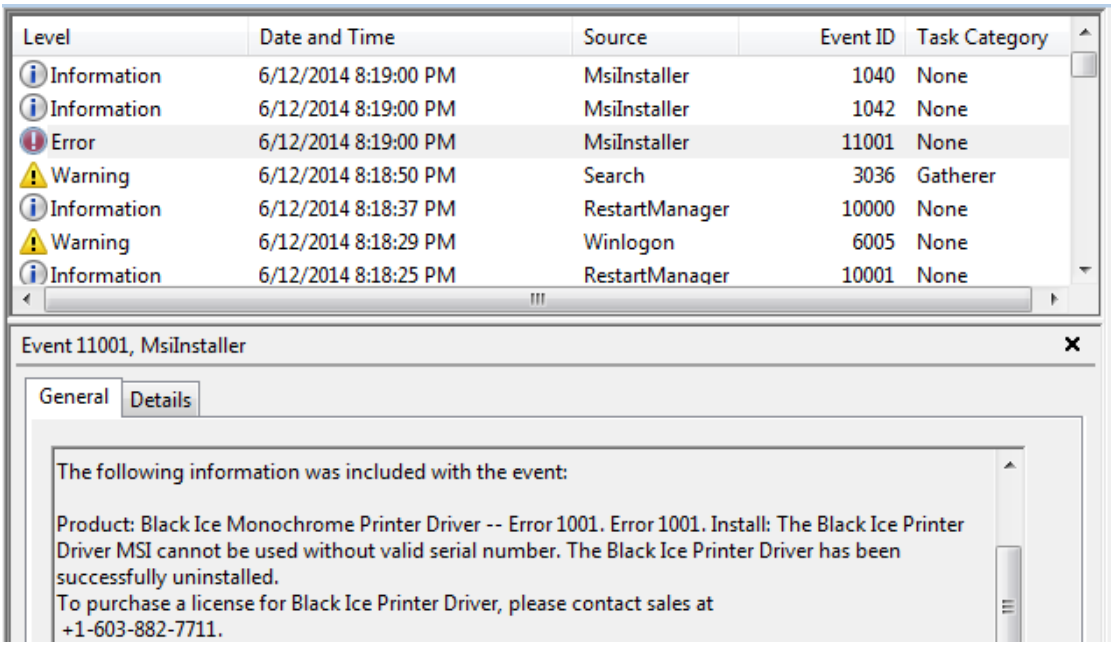
If the registration was successful, the log file contains the following message:
Registration was successful.

Otherwise the error code could be the one of the followings:
Error code 15 - The specified Serial Number is not valid for this product.
Error code 23 - Error receiving answer from the Black Ice Software License Server.
Error code 28 - Error sending license number to the Black Ice Software License Server.
Error code 34 - Error registering the product.
Error code 200 - The Printer driver is already registered.

In case the **format** of the serial number used with REGNUM is not correct the following entry will be added to Windows Event Log:



In case the serial used with REGNUM is **not valid** for the product the following entry will be added to Windows Event Log:



Printer Driver MSI Installer Trace log

The Printer Driver MSI Installation Trace Log is an optional parameter which logs every event of the Black Ice installation Custom Action scripts. The MSI installer saves the logging information in the BiPDMSITraceDataLog.txt file located in the User's temp folder (%TEMP%). The MSI installer log feature of /l* "C:\temp\MSI.log" saves System installation related information and does not records any information during the Custom Action script execution that is specific for the Black Ice printer driver Installation/Uninstallation and registration.

The generated log file located in the User's TEMP folder. To navigate to the User's TEMP folder, open up a folder window and insert %TEMP% into the Address bar then press Enter. Alternatively, you can open a Command Line (cmd.exe), navigate to TEMP directory (cd %TEMP%).
(for example: c:\Users\Administrator\temp\BiPDMSITraceDataLog.txt)

Enable Trace log
To enable the Trace log for the Printer Driver MSI Installation, include the following parameter in the MSI Installation.

BITRACE =(optional) 0 disables the Trace log 1 enables the Trace log	Enables detailed Trace log which logs every event of the MSI Custom Action script during installation/uninstallation and registration.

For example:
msiexec.exe /i "BlackIcePDF_X1.msi**" /q TARGETDIR="C:\Temp" BITrace=1 REGNUM=xxxxx-xxxxxxxx-xxxxxxxxxx**

Using environment variable in installation

The Black Ice printer driver can be configured during installation with an configuration INI file, to use a System Administrator defined configuration settings. Configuration Settings specified in the INI file will be used by the MSI installation process, to configure the Black Ice printer driver default settings for every user on the system.

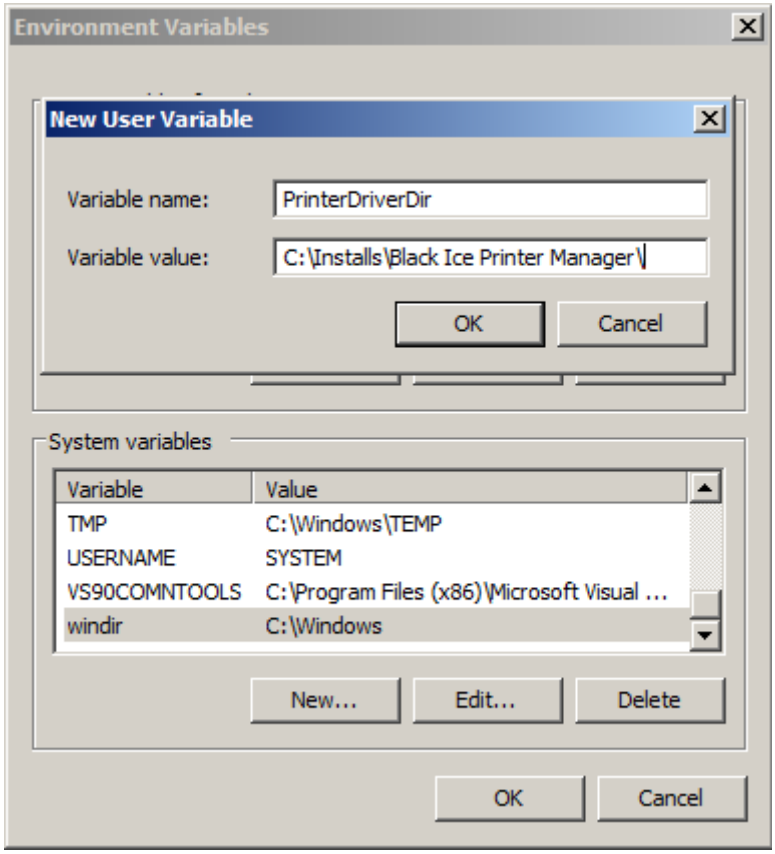
The Black Ice Printer Drivers can be configured through the INI file, by configuring the following entries in the INI:

OutputDirectory
ApplicationPath
WatermarkDirectory
WatermarkFilePortrait
WatermarkFileLandscape
FirstWatermarkFilePortrait
FirstWatermarkFileLandscape
CHM Help File
Redirect Printing Log File
SharePoint Logfile
SharePoint utility
Email sending program 32bit
Email sending program 64bit
Logging Directory (Email settings)

For example the administrator can configure the **SharePoint utility** entry in the INI file with valid environment variable already added on the system. First the administrator have to define an environment variable with the desired name and path in the *Control Panel > System and Security > System > Advanced System Settings > Environment Variables* and use the name of this environment variable in the INI file in the following format;
<<environment variable name>>

NOTE: The user must have read and write access to the defined path and directory in the environment variable.

If the defined environment variable name is **PrinterDriverDir** as on the picture;



The SharePoint utility entry in the INI file must look like the following;
SharePoint utility=<<PrinterDriverDir>>

Troubleshooting

Common installation error codes

MSI Installation error - This installation package could not be opened.

Why is the Black Ice Printer Driver MSI Installs into the Program Files(x86) on a 64-bit Operating System?

System Error 1612 when uninstalling or updating using the MSI installer

Common installation error codes

The following list includes the most commonly occurring installation error codes, and the meanings of the error:

Error code 34 - Error registering the product.
Solution: This error code covers several different registration errors on the server and on the client. This should be followed by the exact error message received from the server. In case the exact error message cannot be resolved, please contact our technical support with the occurring error codes.

Error code 37 - Error getting information for creating serial number. No MAC address could be obtained from the system.
Solution: Please make sure that the computer has an enabled Network Card with valid MAC address.

Error code 51 - Failed to get proxy setting value for the installation.
Solution: Please start the installation (or command line in case of command line installation) as Administrator.

Error code 81 - Error sending license number to the eLicense Server. Check the network settings and connection.
Solution: Please check the network connection, and if the computer have active internet connection. If you are using proxy, please check the proxy server connection, and please make sure that the Proxy server IP address or name is correct.

Error code 1603 – This error code can cover several issues during the installation.
Solution: Please generate a BITRACE log, and contact our technical support with the generated log file.

Error code 1612 / Error code 1714 – Windows cannot find the original MSI installer required for uninstallation or update. For more details, please see the System Error 1612 when uninstalling or updating using the MSI installer section.

Error code 1001 - This error code can cover several issues during the installation in the install script.
Solution: Please generate a BITRACE log, and contact our technical support with the generated log file.

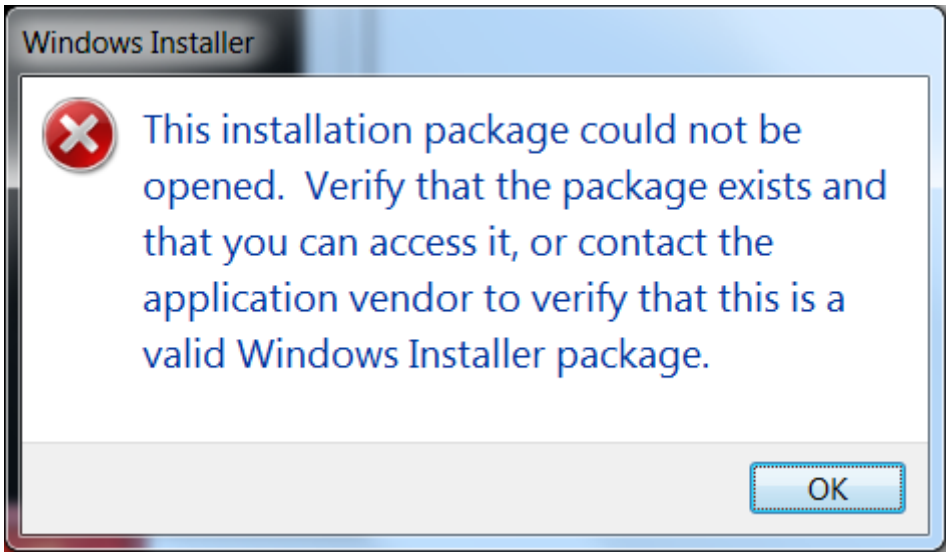
MSI Installation error - This installation package could not be opened.

Description of the problem:
Running the MSI installer and display “This installation package could not be opened.”

msiexec /i "BlackIcePDF_X1.msi" REGNUM="XXXXX-XXXXXXXX-XXXXXXXXXX"

There are several causes of for the problem:

- MSI package is damaged.
- The MSIEXEC command is not executed in the same directory as the "BlackIcePDF_X1.msi" file.
- The quotation mark is not standard quotation marks around the .msi file ("BlackIcePDF_X1.msi"). MS Office product and Word has different quotation marks. To avoid quotation mark errors, please type the MSI command into notepad before you cut and paste it to the command line.



Why is the Black Ice Printer Driver MSI Installs into the Program Files(x86) on a 64-bit Operating System?

The Black Ice Printer Driver MSI installer installs files under Program Files(x86) on 64 bit operating system, since the MSI installers are 32 bit installers and optimized for 32 bit operating system folder structure.

The Black Ice Printer Driver Installation folder can be changed during the installation at the Installation Folder window and also can be changed through the command line Installation with TARGETDIR parameter.

System Error 1612 when uninstalling or updating using the MSI installer

When uninstalling or updating the application using the MSI installer, you may receive the following error in the log files or the Event Viewer:

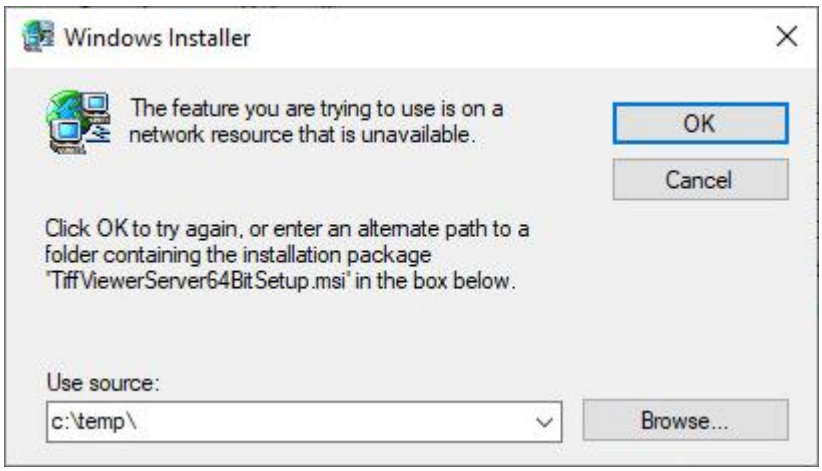
> Product: PDF X1 Printer Driver -- Error 1714. The older version of PDF X1 Printer Driver cannot be removed. Contact your technical support group. System Error 1612.

When installing a product using an MSI installer, the MSI installer is copied to the **C:\Windows\Installer directory**, because the MSI package is necessary for uninstallation or update.
System Error 1612 indicates that Windows cannot find the original MSI installer used for installing the product either at the location used for installation or in the C:\Windows\Installer directory.

To solve the problem, you will need to find the original MSI installer used for installing the application.

If you are trying to uninstall the application, uninstall the product by running the original MSI installer instead of using the Windows Control Panel or Settings.

If you are updating the application, run the installer of the new version manually, or remove the “/q” silent switch from the command line.
During the update process, you will receive the following error message:



Click on the **Browse…** button and find the installer of the old version.
After clicking OK, the update should proceed normally.