

Print2Desktop MSI installation guide

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Introduction

The MSI Print2Desktop Client install allows you to install Print2Desktop clients easily. You can install Print2Desktop clients silently for all users (in a group) of Active Directory.

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.

Command Line Installation

[Installing the Print2Desktop on VDI](#)

[Installing the Print2Desktop on Citrix VDI](#)

[Registering through a Proxy server](#)

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[How to create MST \(transform file\) for GPO deployment](#)

[How to use ORCA](#)

Installing the Print2Desktop on VDI

The Print2Desktop 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 Print2Desktop is the **Print2Desktop Special Installer** with the licensing mechanism designed for VDI.

The MSI or Interactive Print2Desktop Special Installer can be requested from Black Ice Software Sales sales@blackice.com.

The Interactive or MSI Print2Desktop 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 Print2Desktop on Citrix VDI

Installing the Print2Desktop 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**.

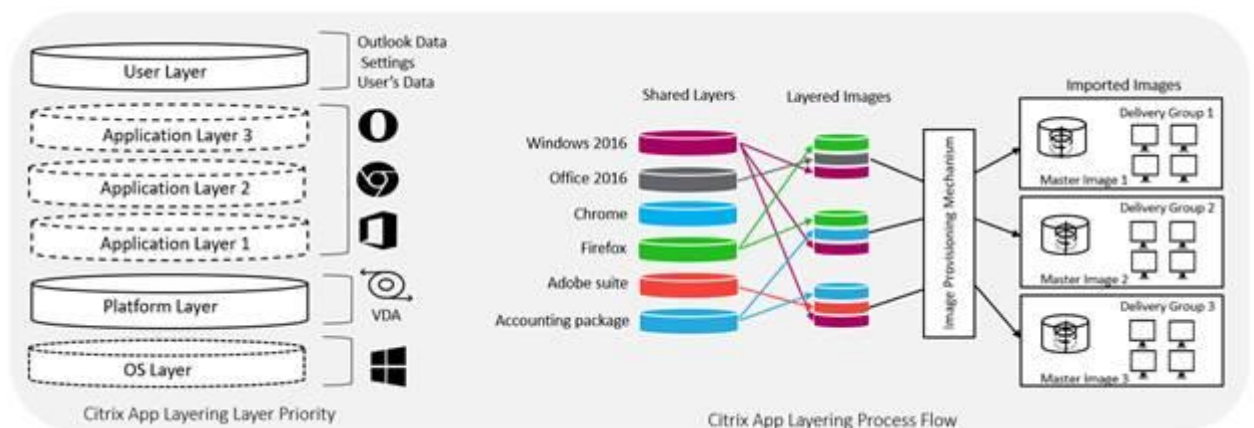
The Print2Desktop should be **installed** and activated/registered on the **OS layer**, otherwise the Print2Desktop will deactivate as soon as the desktop is delivered to users.

An **alternative** solution is to install the Print2Desktop on the Master Image and **activate/register** on the **Master Image**. Installing the Print2Desktop on the Master image could be cumbersome and time consuming. The Print2Desktop should **not** be **installed** and **activated/registered** on the **Application Layer**.

For the available installation parameters and examples, please see:

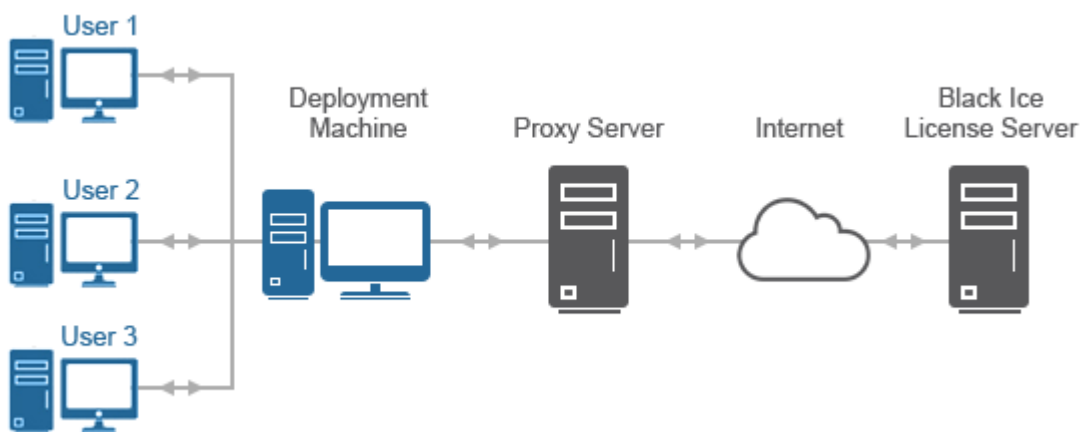
[Available Parameters of the MSI install](#)
[Examples for Command Line installation](#)

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

You can install Print2Desktop clients like this:

```
msiexec /i "Print2Desktop_Client.msi" /q
TARGETDIR="C:\Print2Deskto" INSTALLRDP=1 INSTALLCITIX=0
PRINTERS="HP LasetJet;Canon 1010"
```

Parameter	Meaning
/i	This parameter means that you want to install the product.
/a	You can use a parameter: Administrative install - Installs a product on the network.
/q Can be used for updating the Print2Desktop Client.	Quiet mode. There is no user interaction.
/l* log.txt (Optional Parameter) (lowercase "L") Can be used for updating the Print2Desktop Client.	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.
ALLUSERS: (Optional parameter)	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.

<p>TARGETDIR: (Optional parameter)</p> <p>Can be used for updating the Print2Desktop Client.</p>	<p>You can set the installation directory of the product. If this value is not specified, the product will be installed to the <i>Program Files\Black Ice Software LLC\Print2Deskto Client</i>.</p>
<p>INSTALLRDP: (Optional parameter)</p> <p>Can be used for updating the Print2Desktop Client.</p>	<p>If this parameter is 1, components will be installed for Remote Desktop Connection. The default value is 0.</p>
<p>INSTALLCITRIX: (Optional parameter)</p> <p>Can be used for updating the Print2Desktop Client.</p>	<p>If this parameter is 1, components will be installed for using citrix client. The default value is 0. See also <i>MODULE_INI</i> parameter.</p>
<p>MODULE_INI: (Optional parameter)</p> <p>Can be used for updating the Print2Desktop Client.</p>	<p>If <i>INSTALLCITRIX</i> is 1, you can set the path and filename of Module.ini. The Module.ini is installed by citrix at the target directory of the citrix client. If you didn't installed your citrix client to the <i>Program Files</i> directory, you have to specify the path and filename of Module.ini manually, like this:</p> <pre>MODULE_INI="C:\Citrix Client\Module.ini"</pre> <p>If the Module.ini file doesn't exist at the specified location, you can't use Print2Desktop with your citrix client correctly.</p>
<p>LOGGING: (Optional parameter)</p> <p>Can be used for updating the Print2Desktop Client.</p>	<p>Default Value: 1. If this value is 1, the log function will be enabled, otherwise disabled.</p>
<p>PRINTDLG: (Optional parameter)</p> <p>Can be used for updating the Print2Desktop Client.</p>	<p>Default Value: 0. If this value is 1, the printing preferences dialog will be enabled, otherwise disabled.</p>
<p>NUMOFCOPIESDLG: (Optional</p>	<p>Default Value: 0. If this value is 1, the</p>

parameter) Can be used for updating the Print2Desktop Client.	number of copies dialog will be enabled, otherwise disabled.
PRINTERS: (Optional parameter) Can be used for updating the Print2Desktop Client.	This value contains one or more printer names. The separator between printer names is ;. These printers have to be already installed on the target machine before installing of the Print2Desktop Client. These printers will be added to the server when you connect to Print2Desktop Server. The default printer will be the first printer.
DEFPRINTER: (Optional parameter) Can be used for updating the Print2Desktop Client.	Default Value: 0 . If this value is 1, the users local default printer will be added to Print2Desktop Client printer list. This printer will be added to the server (and will be the default in the session) when you connect to Print2Desktop Server.
ALLPRINTERS: (Optional parameter) Can be used for updating the Print2Desktop Client.	Default Value: 0 . If this value is 1, every local printer of user will be added to the Print2Desktop Client printer list. These printers will be added to the server when the user connect with the Print2Desktop Client to the Print2Desktop Server.
RASTER: (Optional parameter) Can be used for updating the Print2Desktop Client.	Default Value: 0 . If this value is 1, the Print2Desktop sends the printed document to the printer as a raster image (made up of pixels) instead of vectorized data. This feature is added for compatibility with a few applications that output their printing data in a way that gets corrupt when sending through the network. Checking Raster Based Printing will solve such issues at a cost of printing speed.
WRP=1 (Optional parameter) Can be used for updating the Print2Desktop Client.	Enable the Microsoft Remote Desktop printer. If the WRP parameter is 1, then the installer will enable the Microsoft Remote Desktop printer. If the WRP parameter is 0 or not specified, and the Microsoft Remote

	Desktop printer will be disabled during the installation.
--	---

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 "Print2Desktop_Client.msi" /q TARGETDIR="C:\Black Ice\RDPCClient" 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.)

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

/[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 /!* <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.

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Portions of this software are based in part on the work of the Independent JPEG Group.

Command Line Examples

1. Install Remote Desktop with 2 printers (BiBatchConverter and Print2Email) silently, Print2Email will be the default and the target directory is C:\Temp

```
msiexec.exe /i "Print2Desktop_Client.msi" /q  
TARGETDIR="C:\Temp" INSTALLRDP=1  
PRINTERS="Print2Email;BiBatchConverter"
```

PowerShell Example (Terminal & Terminal (Admin)):

1. Install Remote Desktop with 2 printers (BiBatchConverter and Print2Email) silently, Print2Email will be the default and the target directory is C:\Temp

```
msiexec /i '"Print2Desktop_Client.msi"' /q TARGETDIR=
'"C:\Temp"' INSTALLRDP=1
PRINTERS="Print2Email;BiBatchConverter"
```

2. Install Remote Desktop and Citrix silently with default settings

```
msiexec.exe /i "Print2Desktop_Client.msi" /q INSTALLRDP=1
INSTALLCITRIX=1
```

3. Install components for Citrix silently and specify the location of Module.ini file

```
msiexec.exe /i "Print2Desktop_Client.msi" /q
INSTALLCITRIX=1 MODULE_INI="C:\Citrix Client\Module.ini"
```

4. Silently update Print2Desktop Client

```
msiexec.exe /i "Print2Desktop_Client.msi" /q
```

5. Silently uninstall Print2Desktop Client

```
msiexec.exe /x "Print2Desktop_Client.msi" /q
```

Unavailable Parameters of Print2Desktop Client MSI update

Please make sure that following parameters are **not used in the Print2Desktop Client Update**.

The following parameters will be ignored.

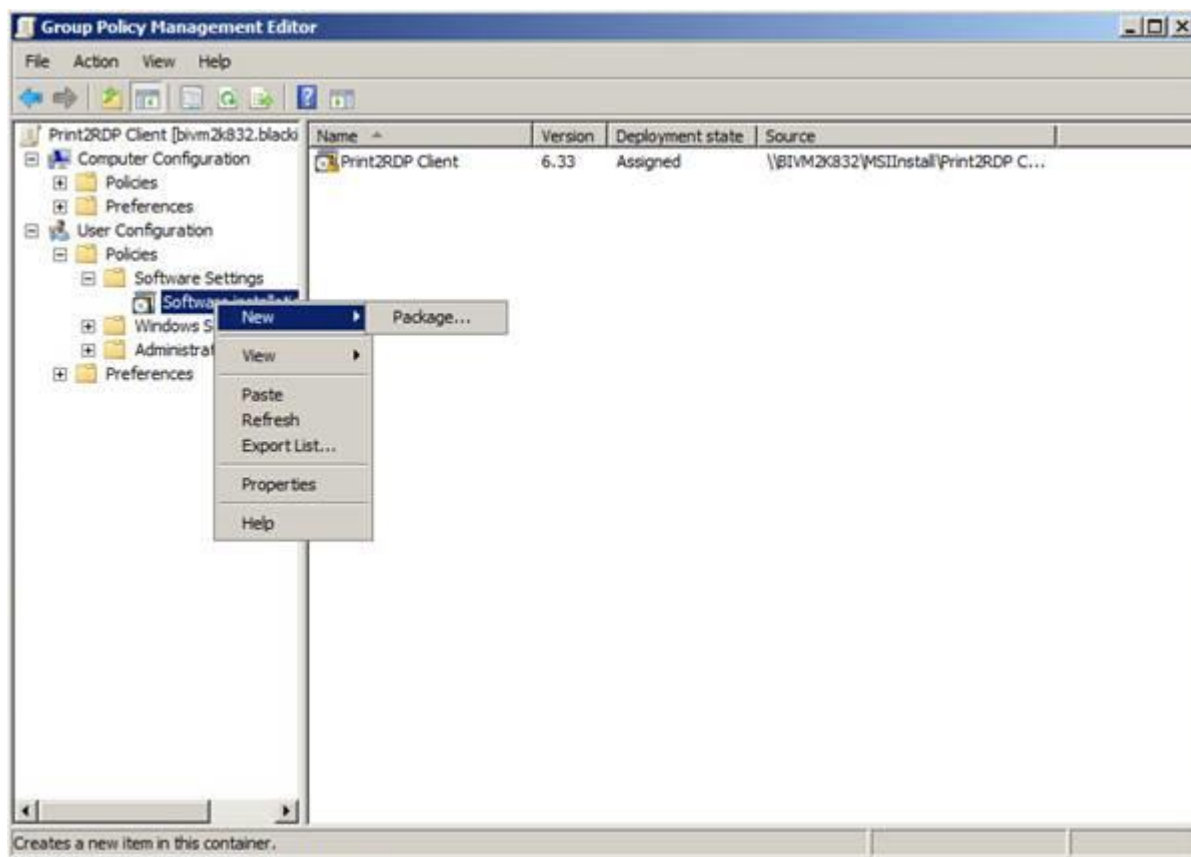
ALLUSERS: (Optional parameter)	The ALLUSERS property configures the installation context of the Start Menu items and desktop shortcuts. The Windows Installer performs a per-user installation or per-machine installation depending on the access privileges of the user.
---------------------------------------	--

	<p>If ALLUSERS=1 performs a per-machine installation.</p> <p>If ALLUSERS is not set, the installer does a per-user installation.</p>
--	--

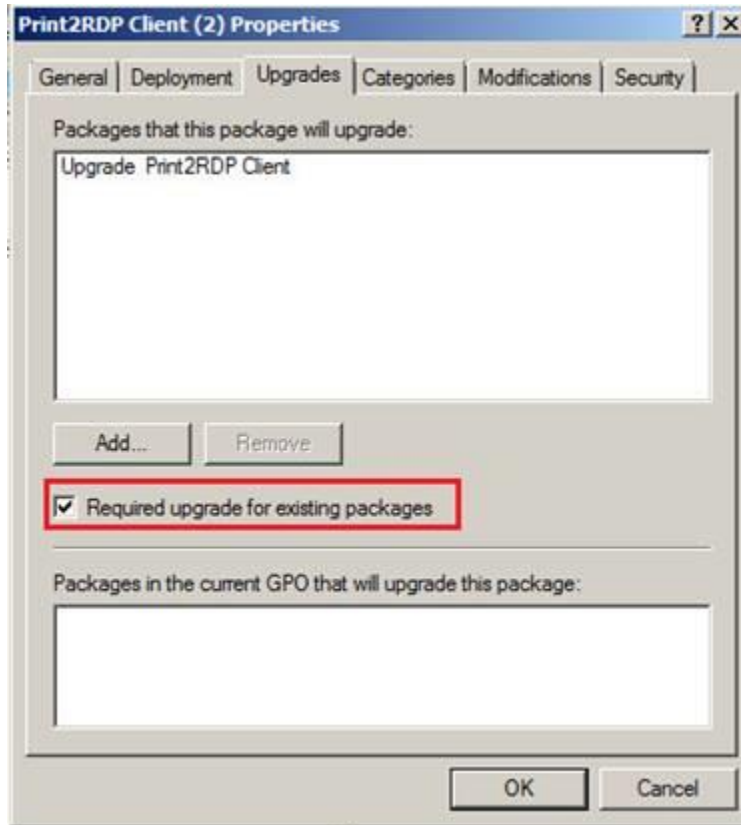
How to upgrade existing installation of Print2Desktop Client using Group Policy Object

One needs to add the new version of Print2Desktop Client as a Software Package to the same Group Policy Object where the previous version of Print2Desktop Client is located.

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

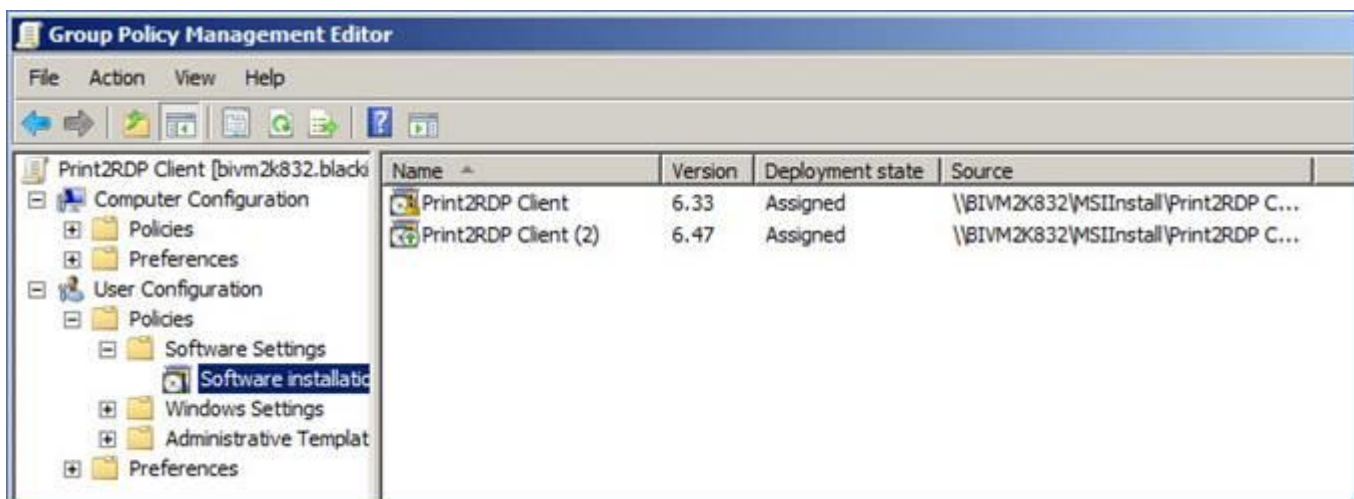


2. Right click in the open area, choose **New > Package...**
3. Navigate to the new version of the Print2Desktop Client MSI you want to use to upgrade your existing installations.
4. In the **Upgrades** tab select "**Required upgrade for existing packages**".



The rest of the settings should be the same as the old version of the Print2Desktop Client software package.

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

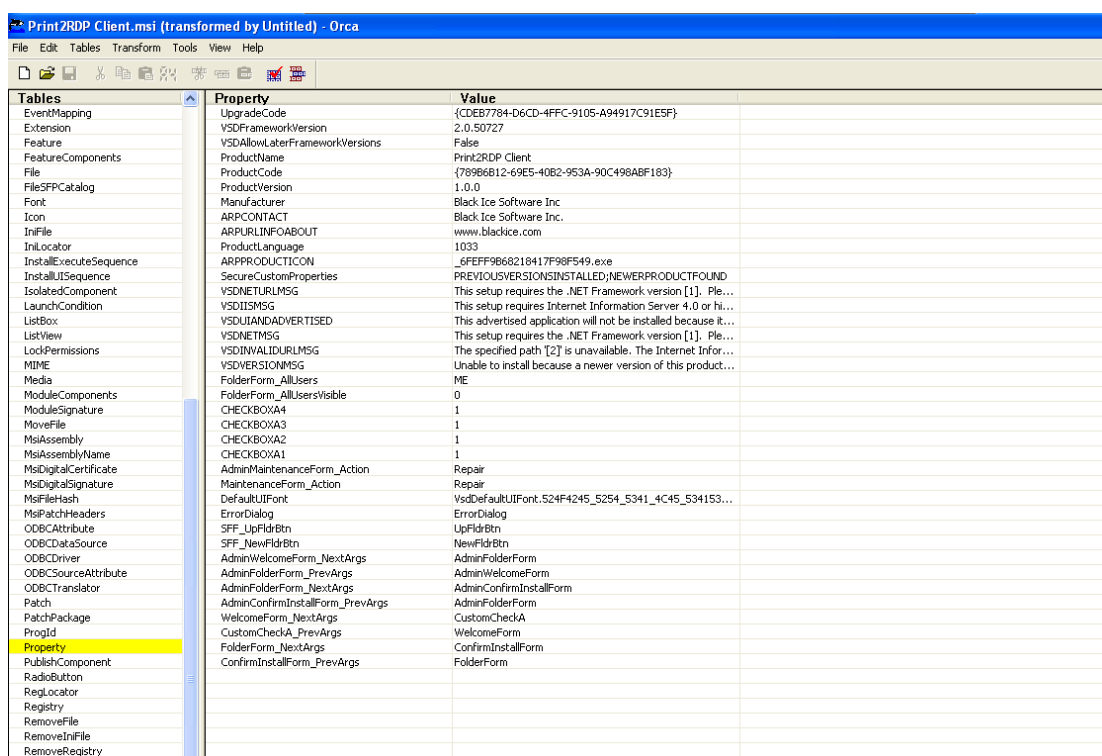


How to create MST (transform file) for GPO deployment

You can create transformation file using ORCA tool. ORCA is available in the *Windows SDK Components for Windows Installer Developers*. You can use the transformation file (MST) for customize your Print2Desktop Client install.

How to use ORCA

1. Open Print2Desktop Client.msi with ORCA
2. Start a new transform by clicking on *Transform\New Transform*
3. Select *Property* Table from tables (Figure 1)



Tables	Property	Value
EventMapping	UpgradeCode	{CDEB7784-D6CD-4FFC-9105-A94917C91E5F}
Extension	VSDFrameworkVersion	2.0.50727
Feature	VSDAllowLaterFrameworkVersions	False
FeatureComponents	ProductName	Print2RDP Client
File	ProductCode	{78986812-69E5-40B2-953A-90C498ABF183}
FileSFPCatalog	ProductVersion	1.0.0
Font	Manufacturer	Black Ice Software Inc
Icon	ARPCONTACT	Black Ice Software Inc.
IniFile	ARPLURLINFOABOUT	www.blackice.com
IniLocator	ProductLanguage	1033
InstallExecuteSequence	ARPPRODUCTICON	_SFEFF9868218417F98F549.exe
InstallUISequence	SecureCustomProperties	PREVIOUSVERSIONSINSTALLED;NEWERPRODUCTFOUND
IsolatedComponent	VSDNETURLMSG	This setup requires the .NET Framework version [1]. Ple...
LaunchCondition	VSDIISMSG	This setup requires Internet Information Server 4.0 or hi...
ListBox	VSDUIANDADVERTISED	This advertised application will not be installed because it...
ListView	VSDNETMSG	This setup requires the .NET Framework version [1]. Ple...
LockPermissions	VSDINVALIDURLMSG	The specified path [2] is unavailable. The Internet Infor...
MIME	VSDVERSIONMSG	Unable to install because a newer version of this product...
Media	FolderForm_AllUsers	ME
ModuleComponents	FolderForm_AllUsersVisible	0
ModuleSignature	CHECKBOXA4	1
MoveFile	CHECKBOXA3	1
MsiAssembly	CHECKBOXA2	1
MsiAssemblyName	CHECKBOXA1	1
MsiDigitalCertificate	AdminMaintenanceForm_Action	Repair
MsiDigitalSignature	MaintenanceForm_Action	Repair
MsiFileHash	DefaultUIFont	VsdDefaultUIFont.524F4245_5254_5341_4C45_534153...
MsiPatchHeaders	ErrorDialog	ErrorDialog
ODBCAttribute	SFF_UpFldrBtn	UpFldrBtn
ODBCDataSource	SFF_NewFldrBtn	NewFldrBtn
ODBCDriver	AdminWelcomeForm_NextArgs	AdminFolderForm
ODBCSourceAttribute	AdminFolderForm_PrevArgs	AdminWelcomeForm
ODBCTranslator	AdminFolderForm_NextArgs	AdminConfirmInstallForm
Patch	AdminConfirmInstallForm_PrevArgs	AdminFolderForm
PatchPackage	WelcomeForm_NextArgs	CustomCheckA
ProgId	CustomCheckA_PrevArgs	WelcomeForm
Property	FolderForm_NextArgs	ConfirmInstallForm
PublishComponent	ConfirmInstallForm_PrevArgs	FolderForm
RadioButton		
RegLocator		
Registry		
RemoveFile		
RemoveIniFile		
RemoveRegistry		

Figure 1

4. From the Table menu, select Add Row to display the Add Row dialog box.
5. Select Property name. You can specify the property names describe above. For example PRINTERS, TARGETDIR, INSTALLRDP, etc.
6. Select Value and enter Property Value.
7. Click OK. (See Figure 2)

ConfirmInstallForm_PrevArgs	FolderForm
INSTALLRDP	1
PRINTERS	FileMorph:Impact_ColorFax:Print2Email
TARGETDIR	C:\Print2RDP Client
LOGGING	0
NUMOFCOPIESDLG	1

Figure 2

8. Save Transform by clicking *Transform\Generate Transform...* menu.

You can assign the transform file(s) in the Group Policy Manager when you are specifying the deployable software package (MSI).

If you install the Print2Desktop Client from command line you can specify the transformation file, like this:

```
msiexec.exe /i "Print2Desktop_Client.msi"
TRANSFORMS="Print2Desktop.mst" /q
```

Intune Deployment of product using MSI Packages

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

The following section demonstrates how to install any Black Ice product using Intune. We use the Black Ice Printer Driver as an example to show the simplicity of the process.

[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](#)

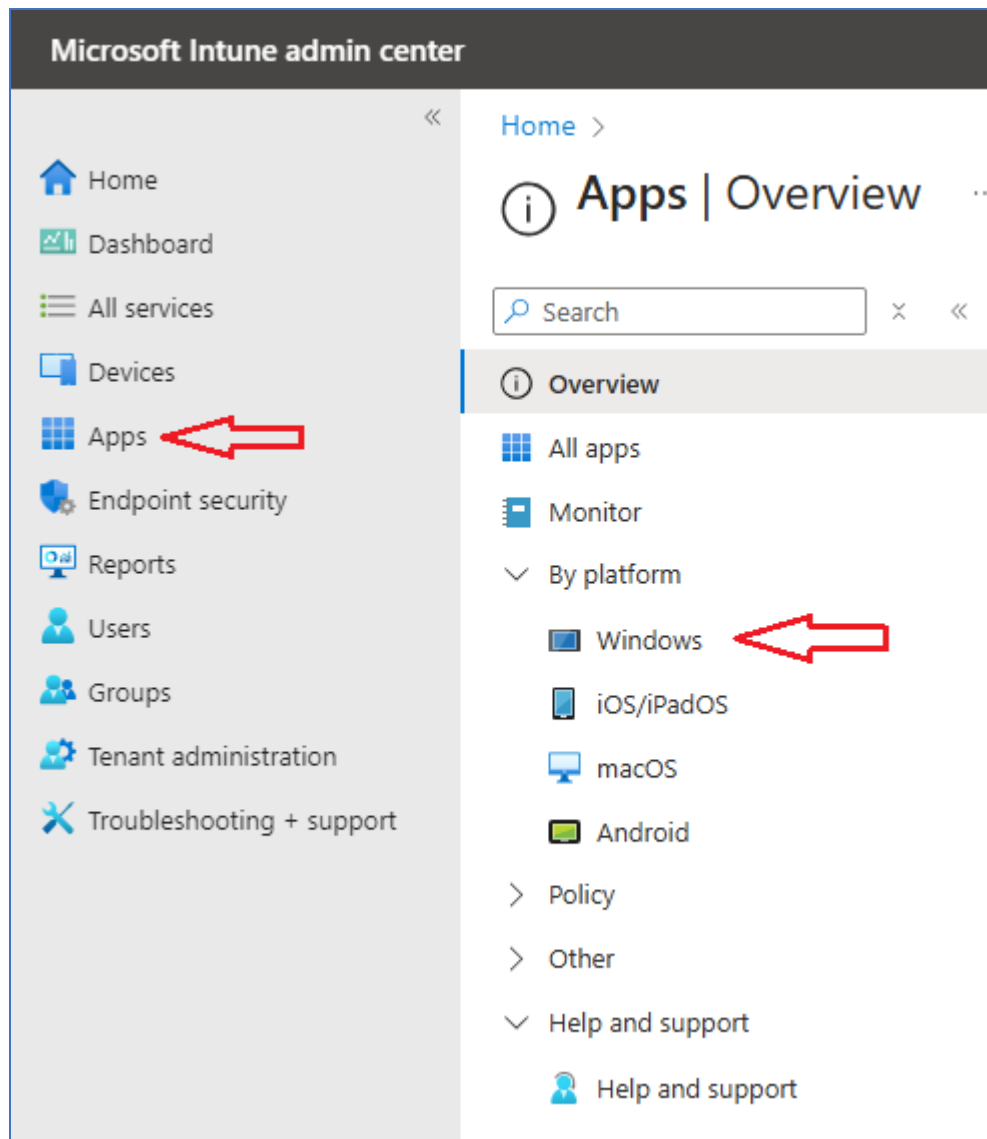
[Update/Upgrade a Printer Driver](#)

[Uninstall a Printer Driver](#)

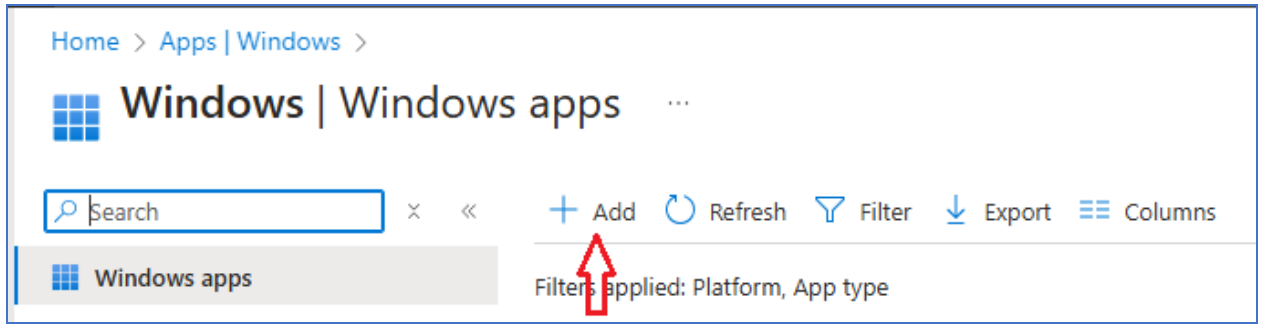
Install the MSI installer with the “Line-of-business app” option

Login to [Microsoft Intune admin center](#)

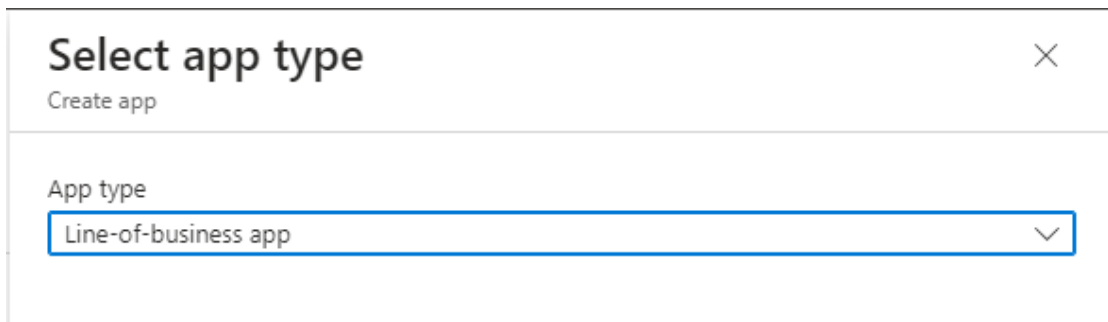
Navigate to the Apps -> Windows:



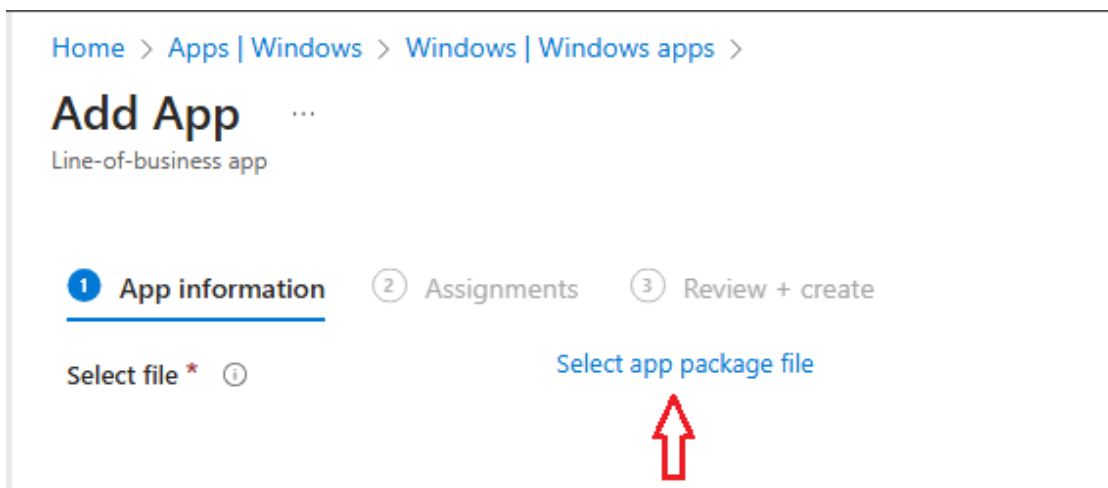
Click on **+Add** to add a new Intune application for deployment.



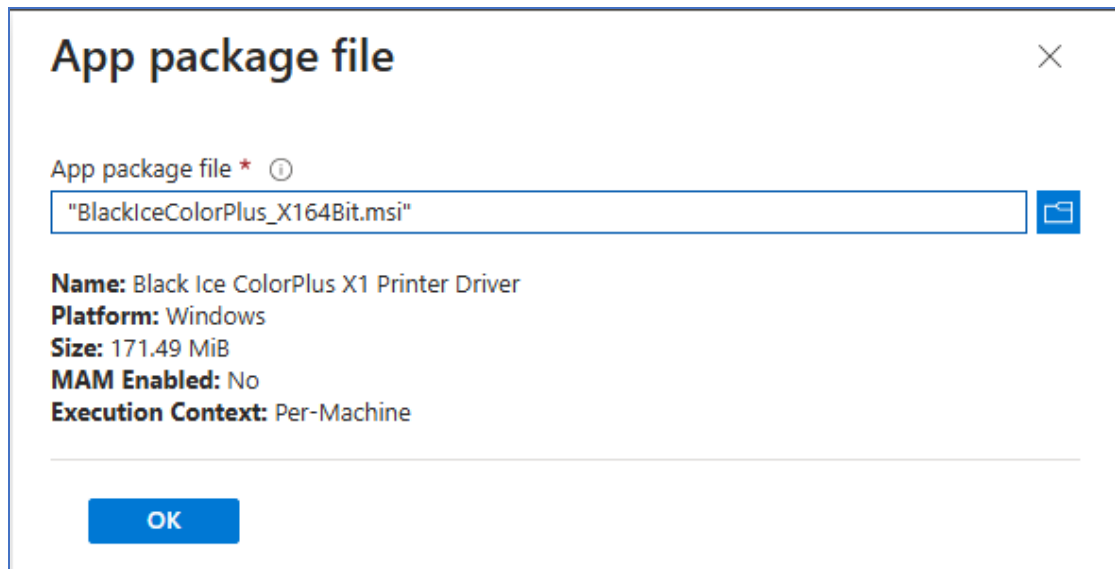
Select the **Line-of-Business app** - App Type drop-down menu from the Add app.



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.

Home > Apps | Windows > Windows | Windows apps >

Add App

Windows MSI line-of-business app

Description * ⓘ

[Edit Description](#)

Publisher * ⓘ

App install context ⓘ User Device

Ignore app version ⓘ Yes No

Command-line arguments

Category ⓘ

Show this as a featured app in the Company Portal ⓘ Yes No

Information URL ⓘ

Privacy URL ⓘ

Developer ⓘ

Owner ⓘ

Notes ⓘ

Logo ⓘ [Select image](#)

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.

Home > Apps | Windows > Windows | Windows apps >

Add App

Windows MSI line-of-business app

1 App information 2 Assignments 3 Review + create

Required

Group mode	Group	Filter mode	Filter	Install Context
Included	testers	None	None	Device context

+ Add group + Add all users + Add all devices

Available for enrolled devices

Group mode	Group	Filter mode	Filter	Install Context
No assignments				

+ Add group + Add all users

Click **Next** to save the Assignment.

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

Add App ...

Windows MSI line-of-business app

App package file	BlackIceColorPlus_X164Bit.msi
Name	Black Ice ColorPlus X1 Printer Driver
Description	Black Ice ColorPlus X1 Printer Driver
Publisher	Black Ice Software LLC
App install context	Device
Ignore app version	No
Command-line arguments	/q REGNUM="XXXXX-XXXXXXXX-XXXXXXXXXX"
Category	No Category
Show this as a featured app in the Company Portal	No
Information URL	No Information URL
Privacy URL	No Privacy URL
Developer	No Developer
Owner	No Owner
Notes	No Notes
Logo	No logo

Assignments

Group mode	Group	Filter mode	Filter	Install
>	Required			
	Available for enrolled devices			
	Uninstall			






[Previous](#) [Create](#)

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

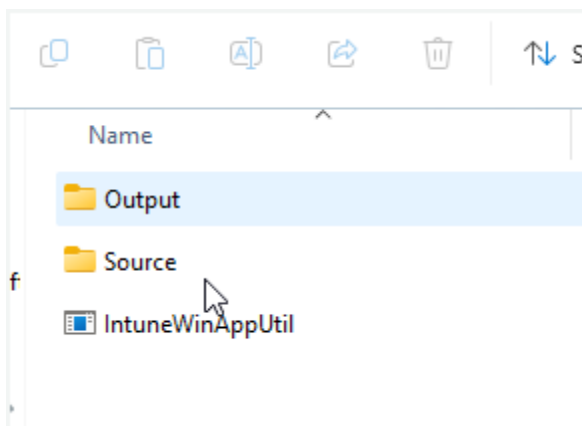
Install the MSI installer with the Windows app (Win32) option

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.

nikyusof-zz Fixing an issue where the Win32 content prep tool crashes (#124) 2d0afcf · 9 months ago 🕒 47 Commits	
 IntuneWinAppUtil.exe	Fixing an issue where the Win32 content prep tool crashes (... 9 months ago
 Microsoft License Terms For Win32 Content Pr...	Add license 6 years ago
 README.md	Fixing an issue where the Win32 content prep tool crashes (... 9 months ago
 ReleaseNotes.txt	Fixing an issue where the Win32 content prep tool crashes (... 9 months ago
 SECURITY.md	Microsoft mandatory file (#77) 2 years ago

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.



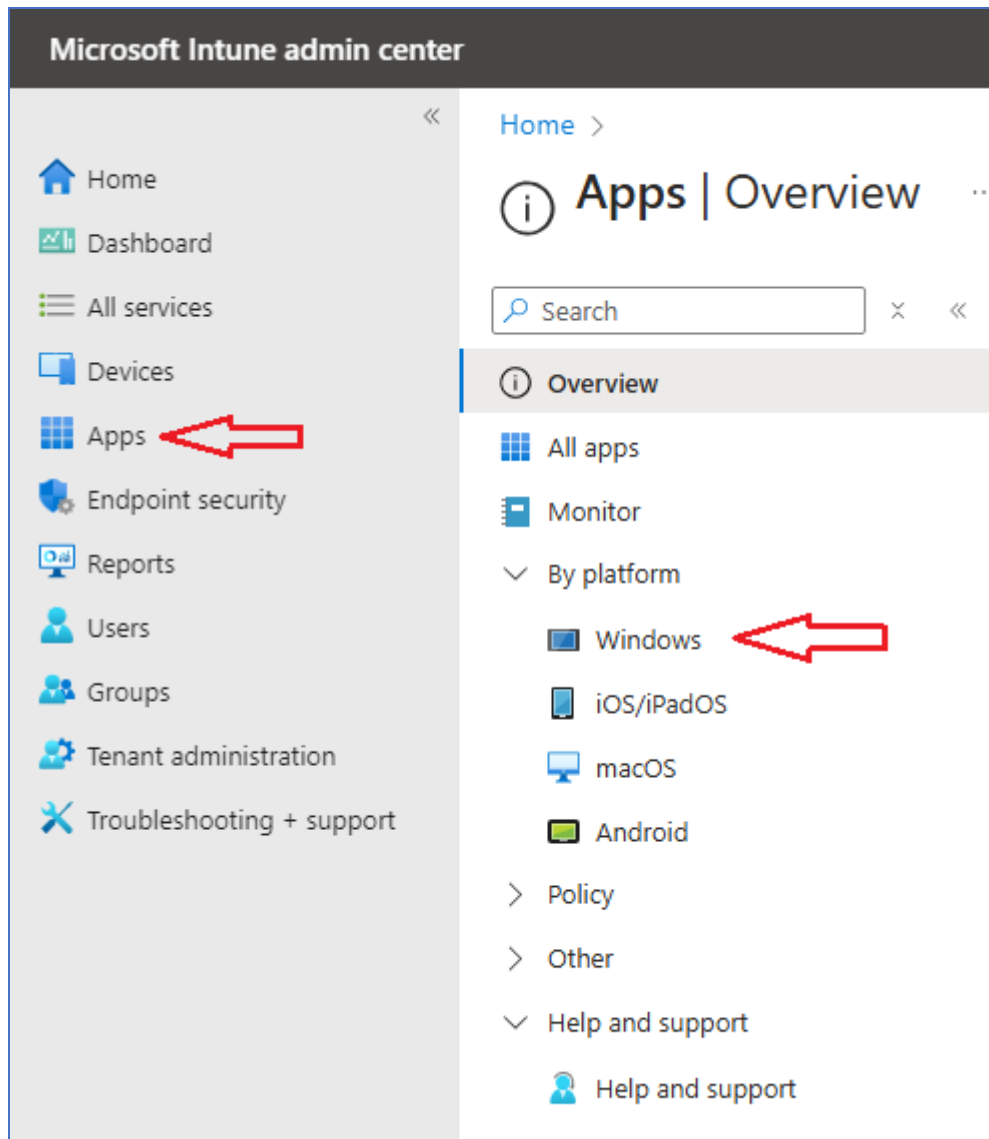
Run the **IntuneWinAppUtil** tool with the following parameters:

```
IntuneWinAppUtil.exe -c "C:\Microsoft Win32 Content Prep\Source" -s  
"BlackIceColorPlus_X164Bit.msi" -o "C:\Microsoft Win32 Content Prep\Output"
```

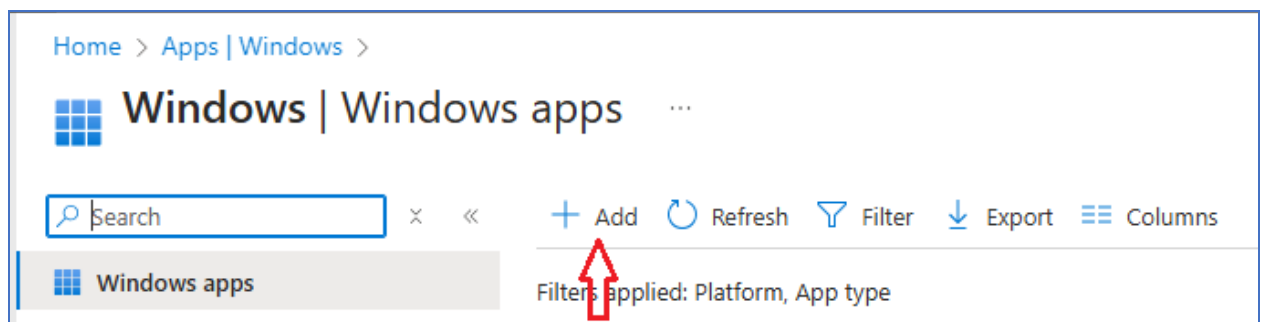
The **Output** folder contains the .INTUNEWIN file for installation.

Login to [Microsoft Intune admin center](#)

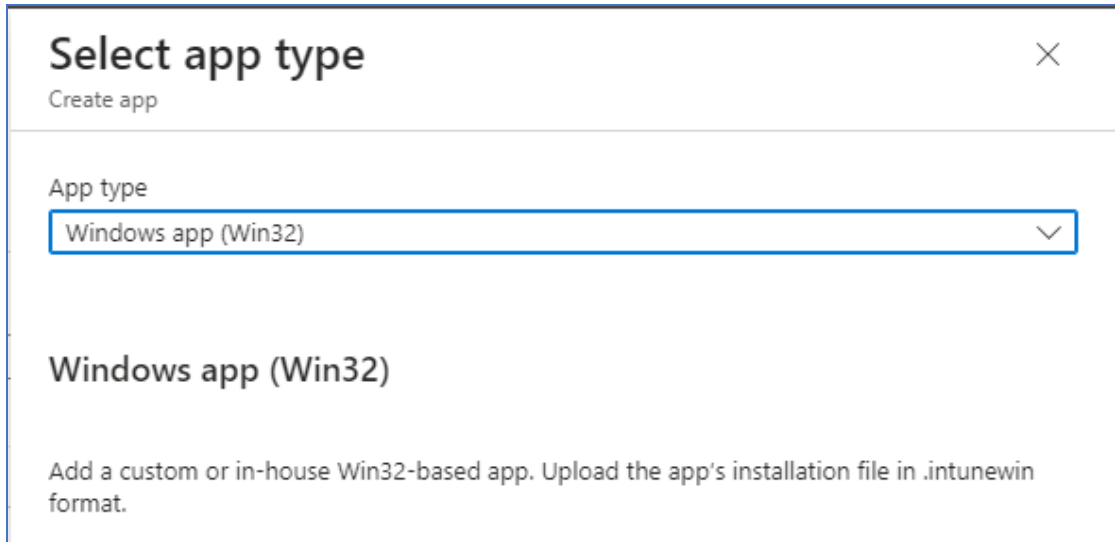
Navigate to the Apps -> Windows:



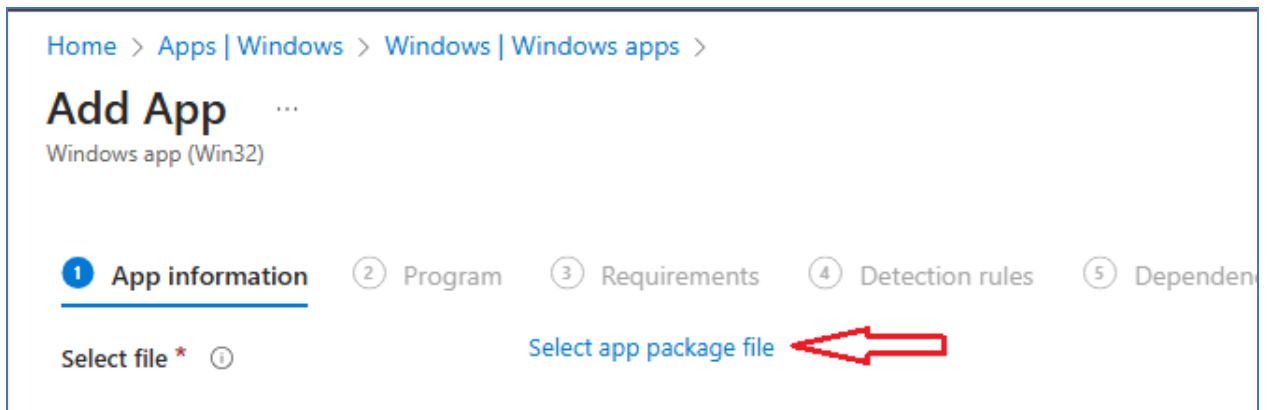
Click on **+Add** to add a new Intune application for deployment.



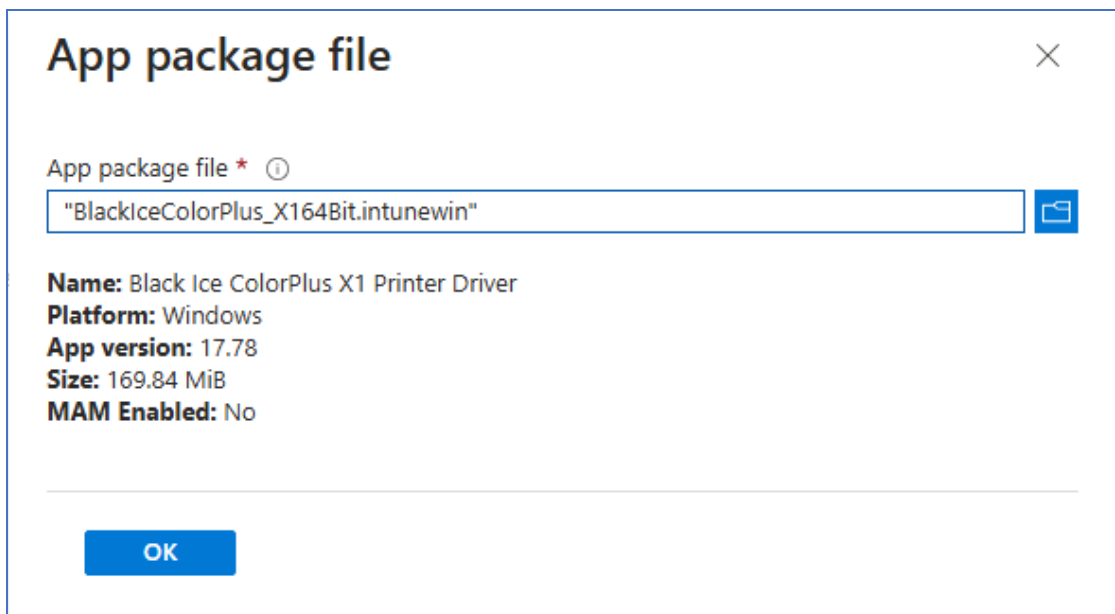
Select the **Line-of-Business app** - App Type drop-down menu from the Add app.



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 screenshot shows the 'Add App' configuration page in Microsoft Intune. The breadcrumb navigation is 'Home > Apps | Windows > Windows | Windows apps >'. The page title is 'Add App' with a sub-header 'Windows app (Win32)'. There are six tabs: '1 App information', '2 Program', '3 Requirements', '4 Detection rules', '5 Dependencies', and '6 Supers'. The 'App information' tab is selected. The form fields are as follows:

- Select file ***: BlackIceColorPlus_X164Bit.intunewin
- Name ***: Black Ice ColorPlus X1 Printer Driver
- Description ***: Black Ice ColorPlus X1 Printer Driver
- Publisher ***: Black Ice Software LLC (highlighted with a red arrow)
- App Version**: 17.78
- Category**: 0 selected
- Show this as a featured app in the Company Portal**: Yes (selected), No
- Information URL**: Enter a valid url
- Privacy URL**: Enter a valid url
- Developer**: (empty)
- Owner**: (empty)
- Notes**: (empty)
- Logo**: Select image

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.

✓ App information **2 Program** 3 Requirements 4 Detection rules 5 Dependencies 6 Supersede

Specify the commands to install and uninstall this app:

Install command * ⓘ ✓

Uninstall command * ⓘ ✓

Installation time required (mins) ⓘ

Allow available uninstall ⓘ Yes No

Install behavior ⓘ System User

Device restart behavior ⓘ ▼

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.

✓ App information ✓ Program **3 Requirements** 4 Detection rules 5 Dependencies 6 Supersede

Specify the requirements that devices must meet before the app is installed:

Operating system architecture * ⓘ ▼

Minimum operating system * ⓘ ▼

Disk space required (MB) ⓘ

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:

✓ App information ✓ Program ✓ Requirements **4 Detection rules** 5 Dependencies 6 Supersede

Configure app specific rules used to detect the presence of the app.

Rules format * ⓘ ▼

Type	Path/Code
No rules are specified.	

[+ 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.

Detection rule ✕

Create a rule that indicates the presence of the app.

Rule type * ⓘ

MSI product code * ⓘ ✓

MSI product version check ⓘ Yes No

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.

✓ App information ✓ Program ✓ Requirements ✓ Detection rules **5 Dependencies** 6 Supersedence

Software dependencies are applications that must be installed before this application can be installed. To automatically install a child dependency app before installing the current parent app, enable the automatically install option. To only install the current parent app if the child dependency app is already detected on the device, disable the automatically install option. There is a maximum of 100 child dependency apps, including references to other apps outside of this view, forming a graph of apps. The total size of the dependency app graph is limited to the maximum of 100 plus the parent app (101 total). [Learn more](#)

Name	Automatically Install
No results.	

+ Add ⓘ

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.

✓ App information
✓ Program
✓ Requirements
✓ Detection rules
✓ Dependencies
6 Supersedence

When you supersede an application, you can specify which apps will be directly updated or replaced. To update an app, disable the uninstall previous version option. To replace an app, enable the uninstall previous version option. There is a maximum of 10 updated or replaced apps, including references to other apps outside of this view, forming a graph of apps. The total size of the supersedence app graph is limited to the maximum of 10 plus the parent app (11 total). [Learn more](#)

Apps that this app will supersede

Name	Publisher	Version	Uninstall previous version
No results.			

+ Add ⓘ

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.

✓ App information
✓ Program
✓ Requirements
✓ Detection rules
✓ Dependencies
✓ Supersedence
7 Assignments

Required ⓘ

Any Win32 app deployed using Intune will not be automatically removed from the device when the device is retired. The app and the data it contains will remain on the device.

Group mode	Group	Filter mode	Filter	End user notification
Included	testers	None	None	Show all toast notifications

+ Add group ⓘ + Add all users ⓘ + Add all devices ⓘ

Available for enrolled devices ⓘ

Group mode	Group	Filter mode	Filter	End user notification
No assignments				

+ Add group ⓘ + Add all users ⓘ + Add all devices ⓘ

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

Sync an app to the enrolled device

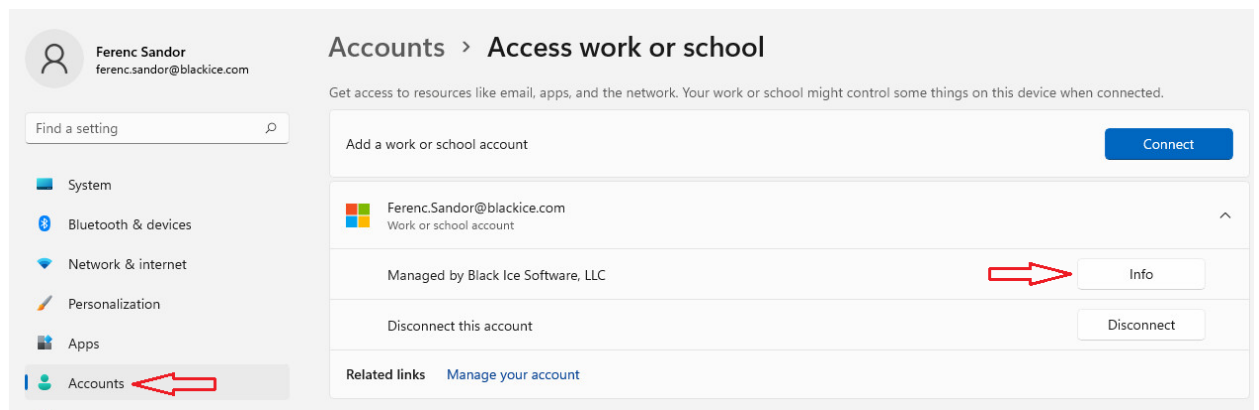
Once the application is deployed from Microsoft Intune, it can be synced to a device by following the below steps:

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.

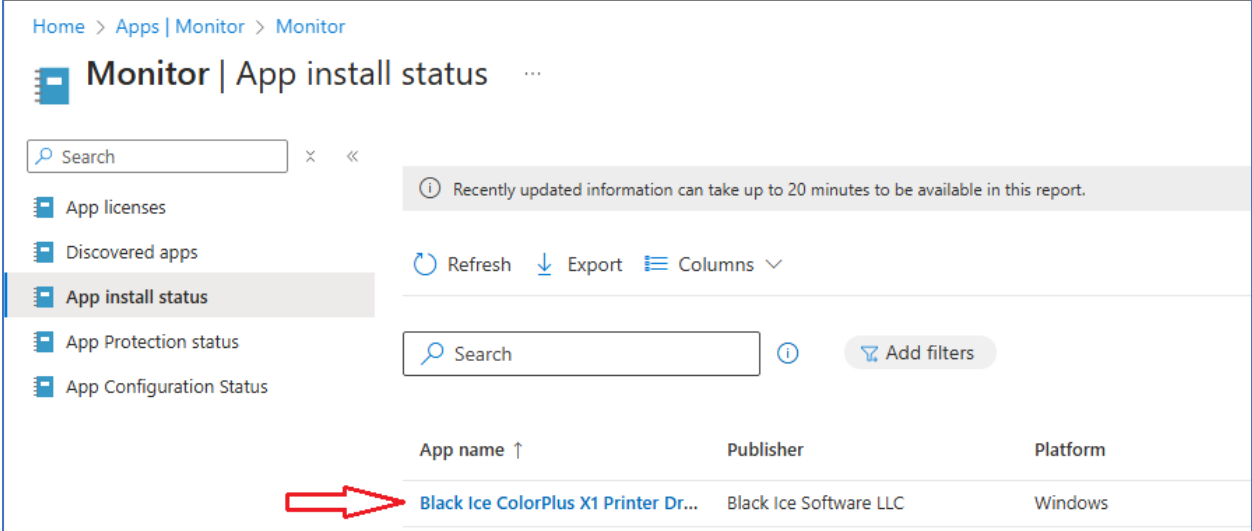
Optional: Restart your machine if the app does not appear on your device.

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.



The screenshot displays the 'Monitor | App install status' page in Microsoft Intune. The breadcrumb navigation is 'Home > Apps | Monitor > Monitor'. The page title is 'Monitor | App install status'. A search bar is present at the top left. A notification states: 'Recently updated information can take up to 20 minutes to be available in this report.' Below the notification are 'Refresh', 'Export', and 'Columns' options. A second search bar is located above the table, with an 'Add filters' button. The table has three columns: 'App name ↑', 'Publisher', and 'Platform'. A red arrow points to the application 'Black Ice ColorPlus X1 Printer Dr...' in the 'App name' column.

App name ↑	Publisher	Platform
Black Ice ColorPlus X1 Printer Dr...	Black Ice Software LLC	Windows


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

Black Ice ColorPlus X1 Printer Driver ...

Client Apps

× <<

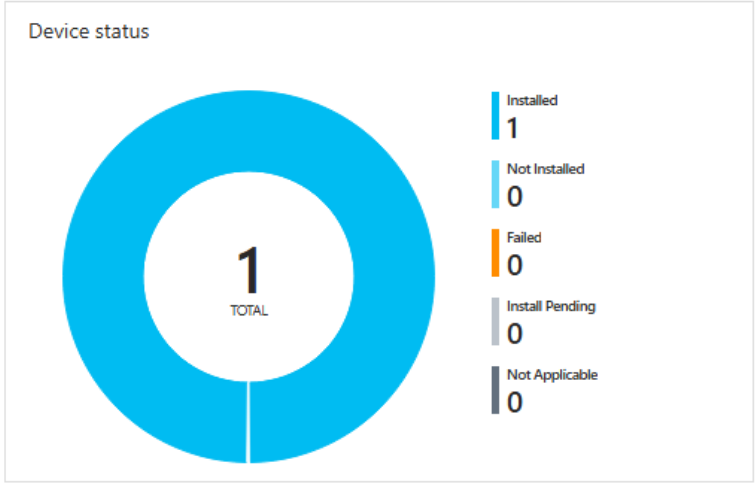
 Delete

 Overview

- Manage
 - Properties
- Monitor
 - Device install status
 - User install status
 - Dependency viewer
 - Supersedence viewer

^ Essentials

Publisher : Black Ice Software LLC
Operating system : Windows
Version : 17.78



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.

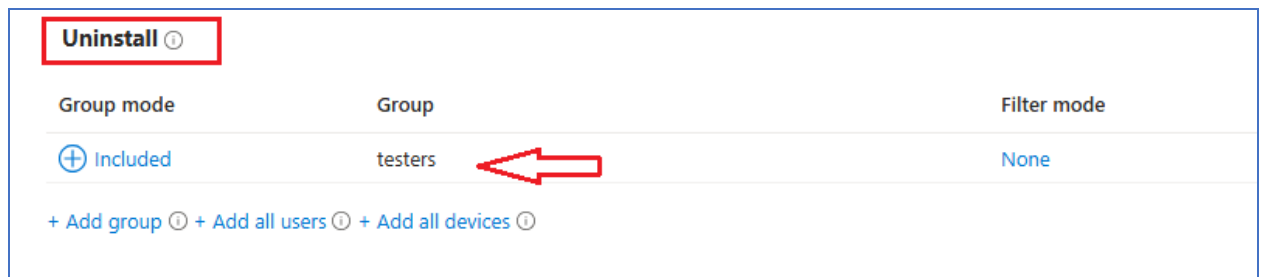
In the **Add group** pane, select **Uninstall**.

Select **Included Groups** to select the groups of users that are affected by this app assignment.

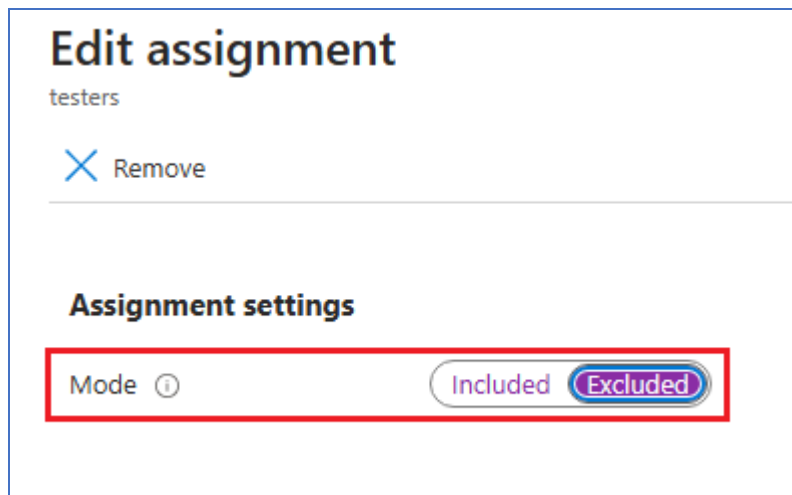
Select the groups that you want to apply the uninstall assignment.

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.

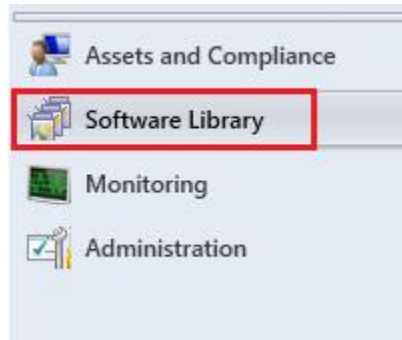
Select **Review and Save** in the app **Assignments** pane.

Installing the Print2Desktop Client with SCCM

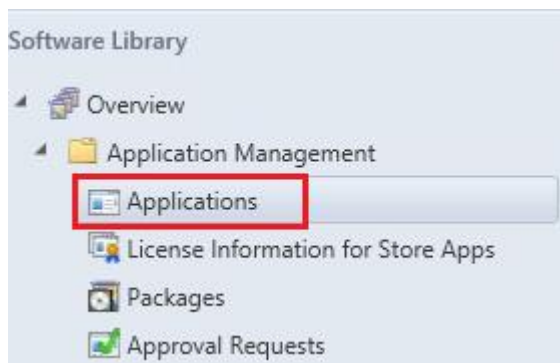
To deploy the Print2Desktop Client MSI installer with SCCM (System Center Configuration Manager), please follow the steps below how to create an Application package for Print2Desktop Client in SCCM.

Open the System Center Configuration Manager

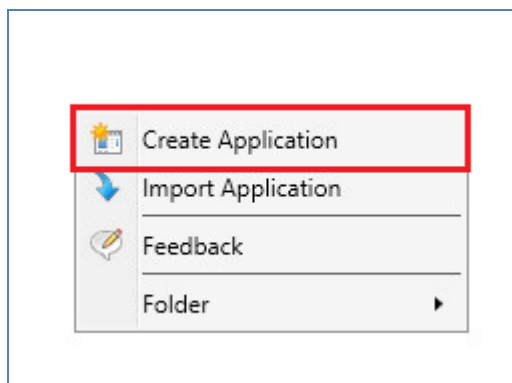
Navigate to Software Library



Select Applications



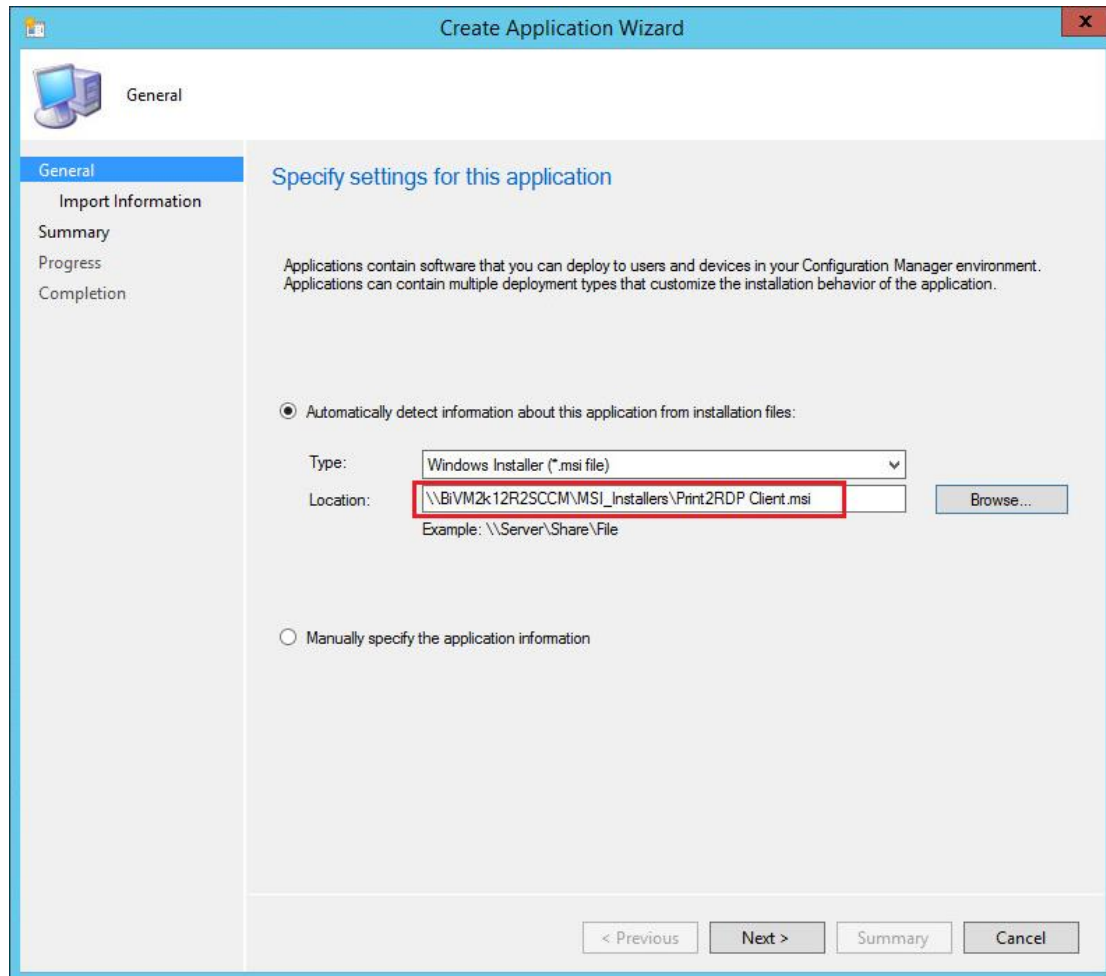
Right click on form and select **Create Application**



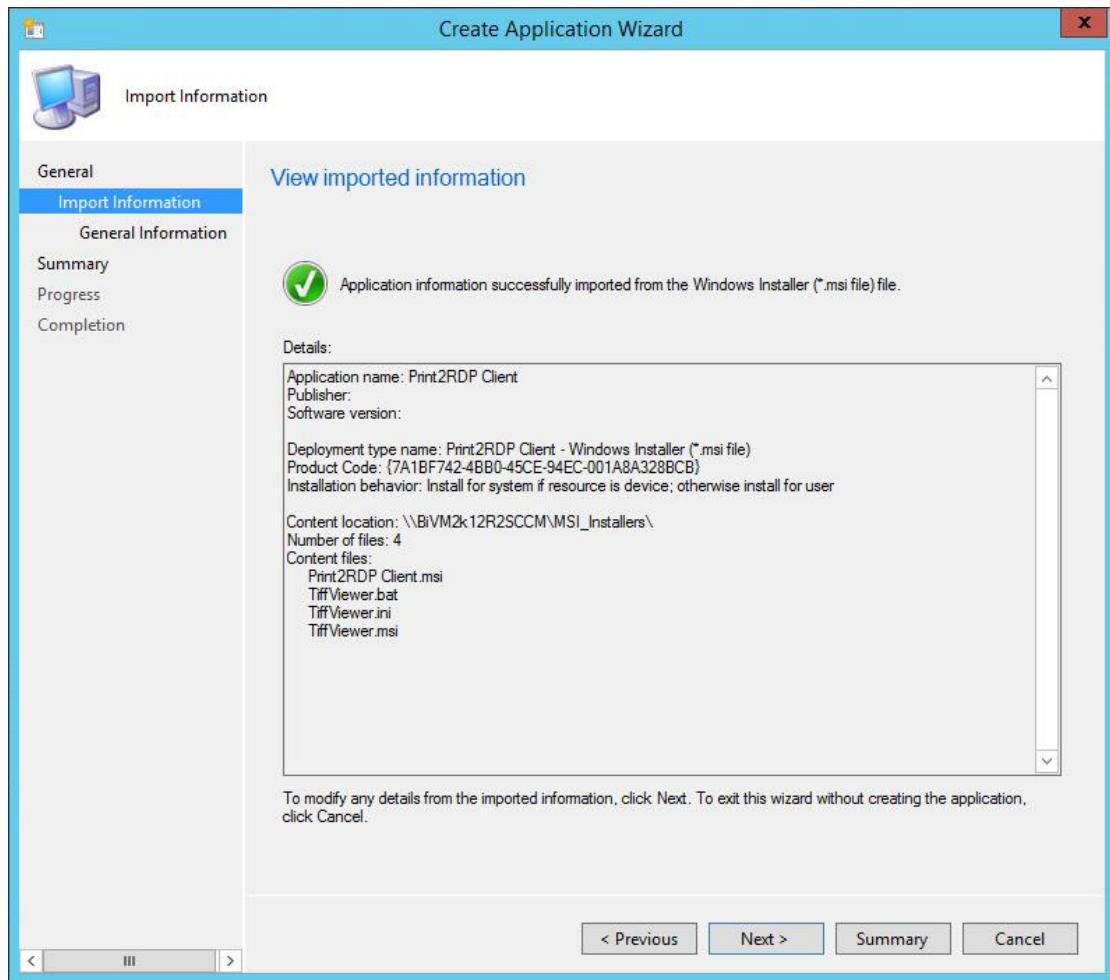
Add MSI installer file (Example:
\\BiVM2k12R2SCCM\MSI_Installers\Print2Desktop Client.msi)

Type: Windows Installer (*.msi file)

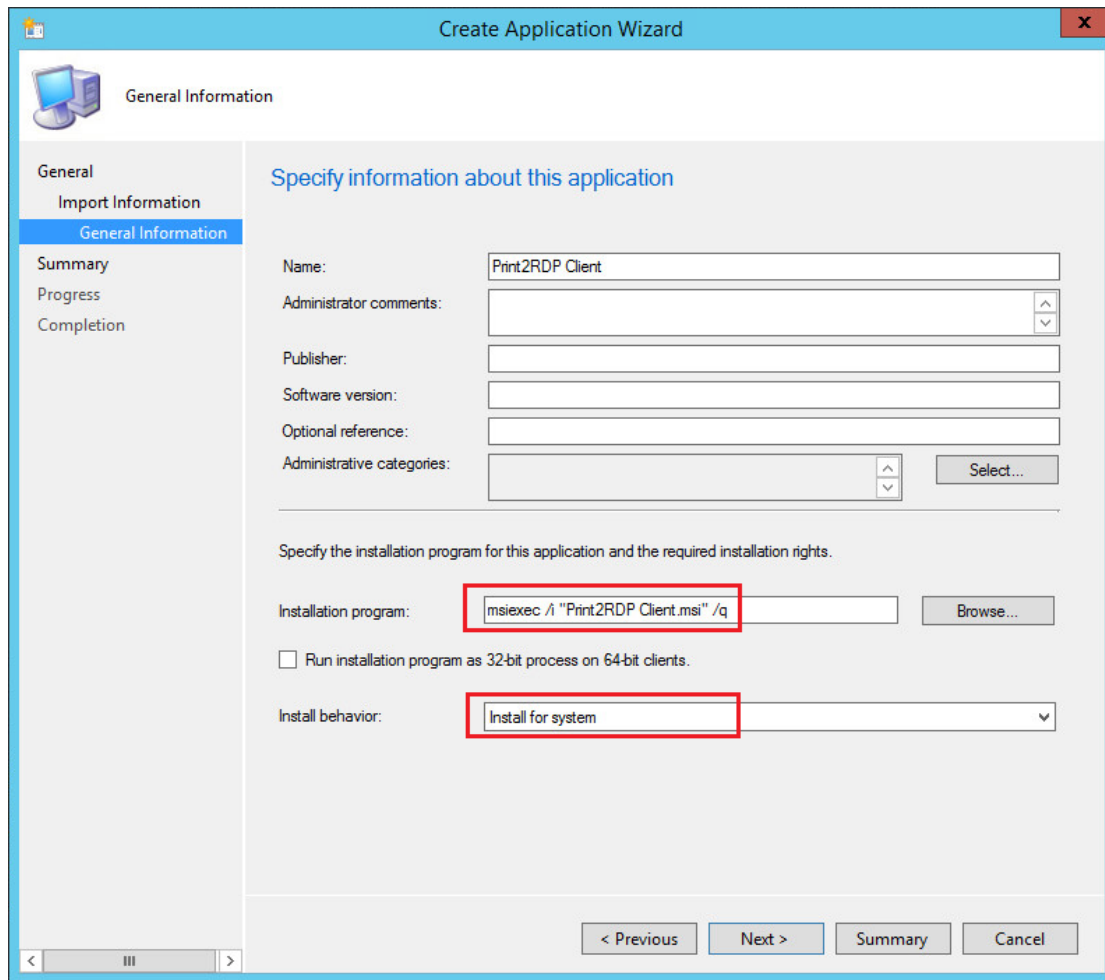
Note: The location file from shared directory on SCCM server.



Click **Next** button.



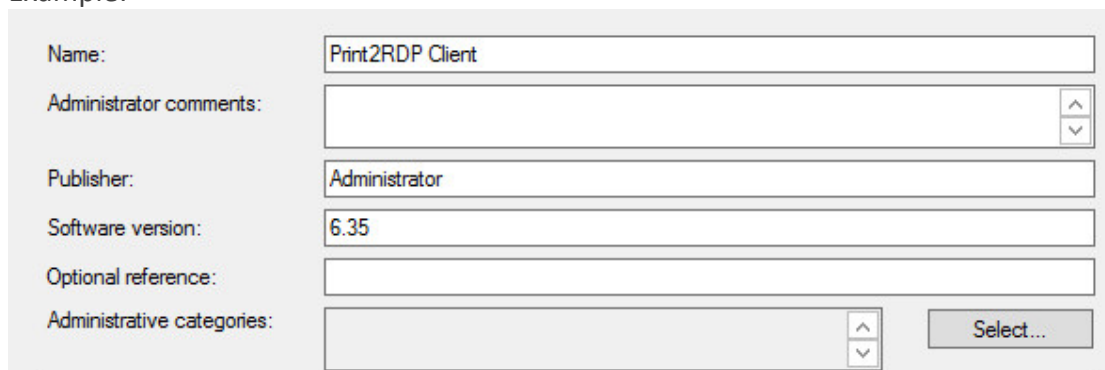
Click **Next** button.



Configure the following entries:

- Publisher
- Software version

Example:



The SCCM automatically fills the Installation program.
 Msiexec /i "Print2Desktop_Client.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\Print2Desktop_Client.mst

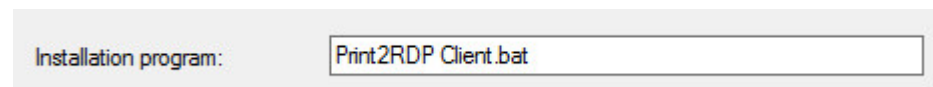
Note: The location file from shared directory on SCCM server.



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:

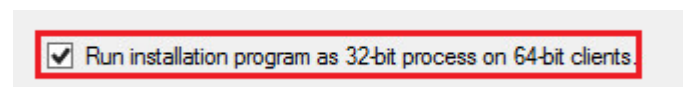
```
msiexec /i "Print2Desktop_Client.msi"  
CUSTOMINI="%randomname%Print2Desktop_Client.ini"  
CREGNUM=xxxxx-xxxxxxxx-xxxxxxxx /q
```



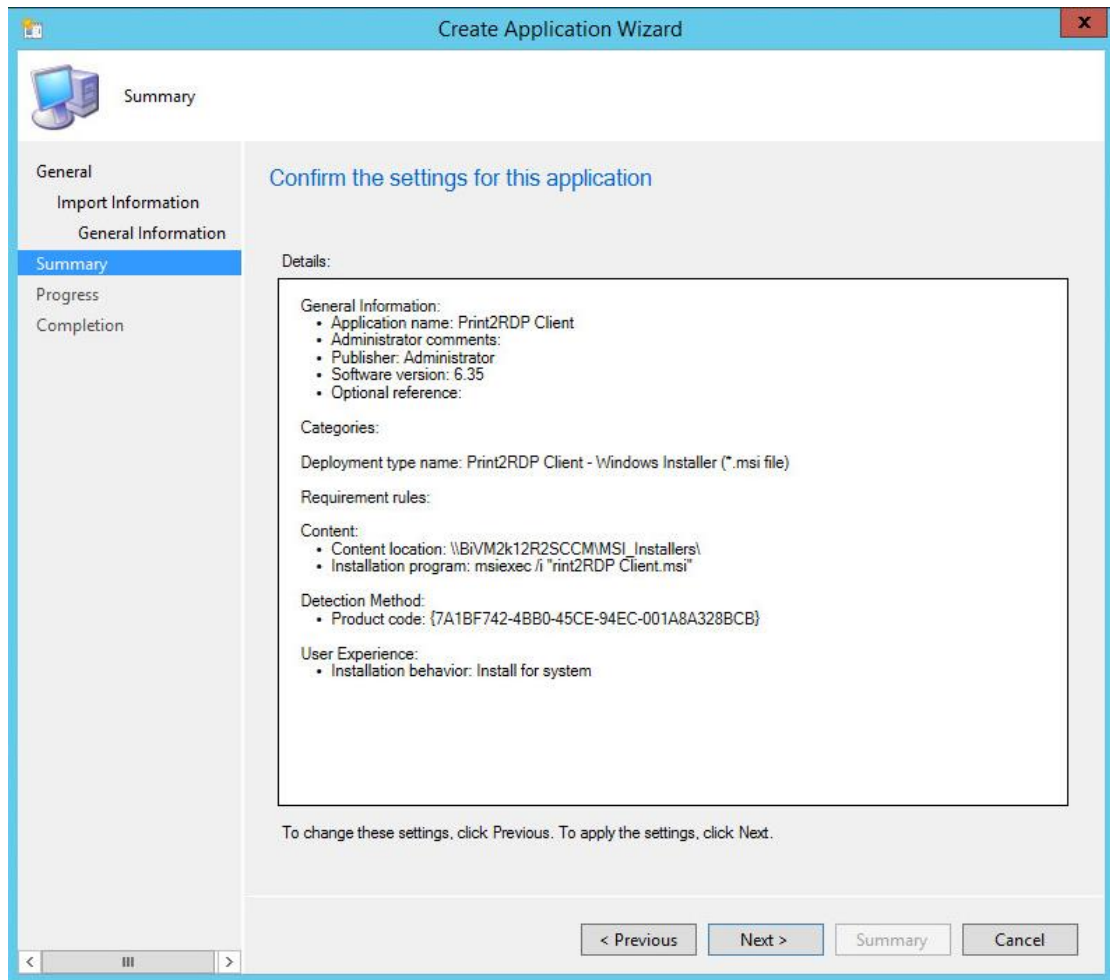
NOTE: The Installer behavior is **Install for system**.



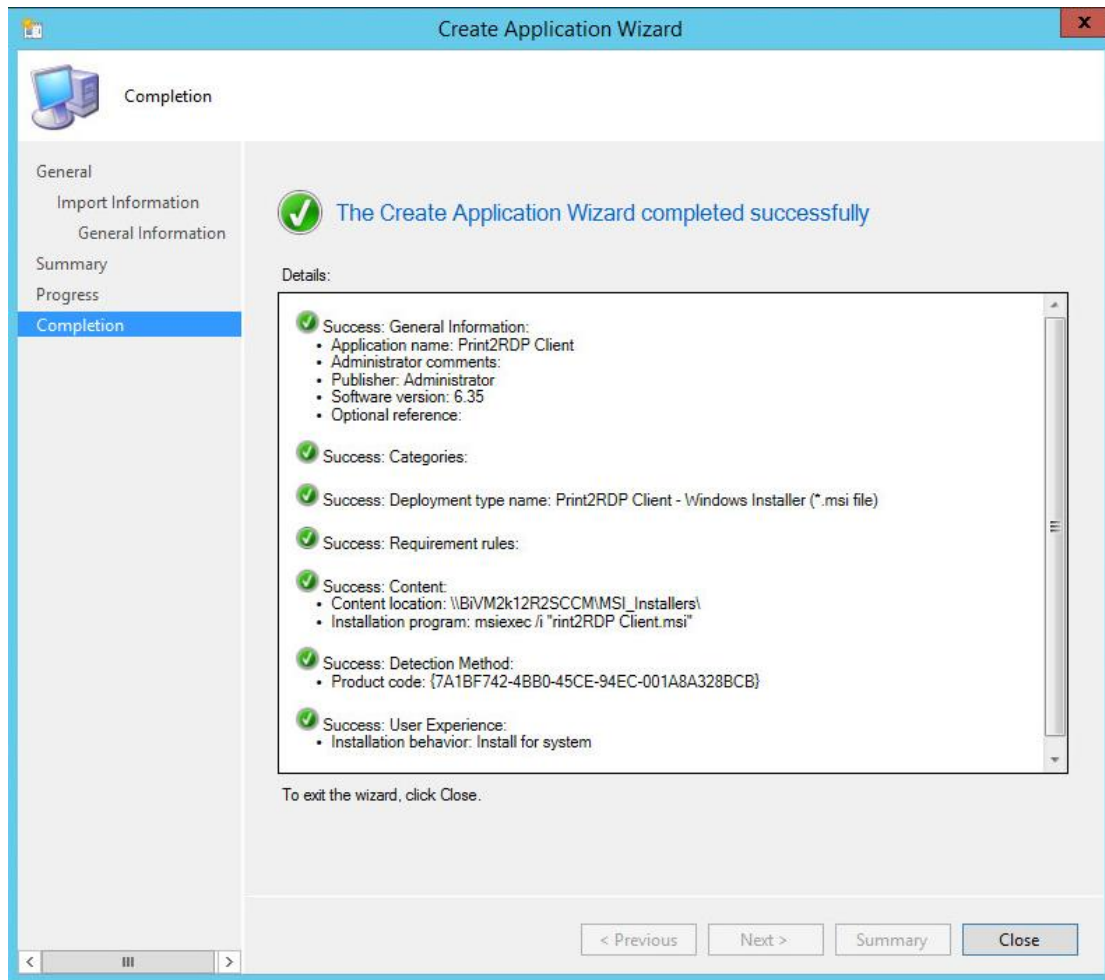
Check the **Run installation program as 32-bit process on 64-bit clients**.



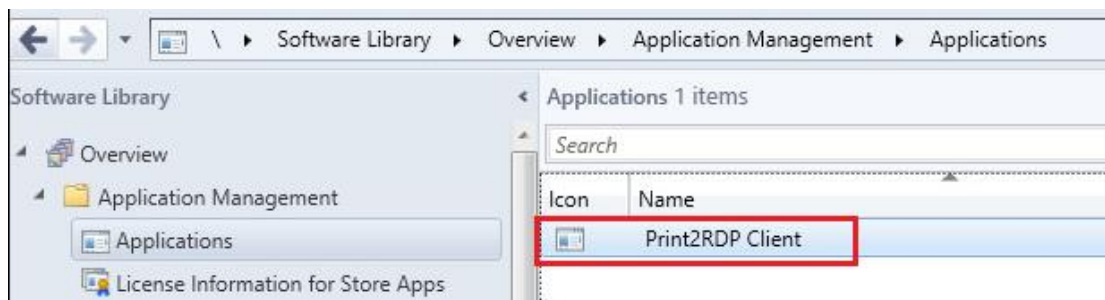
Click **Next** button.



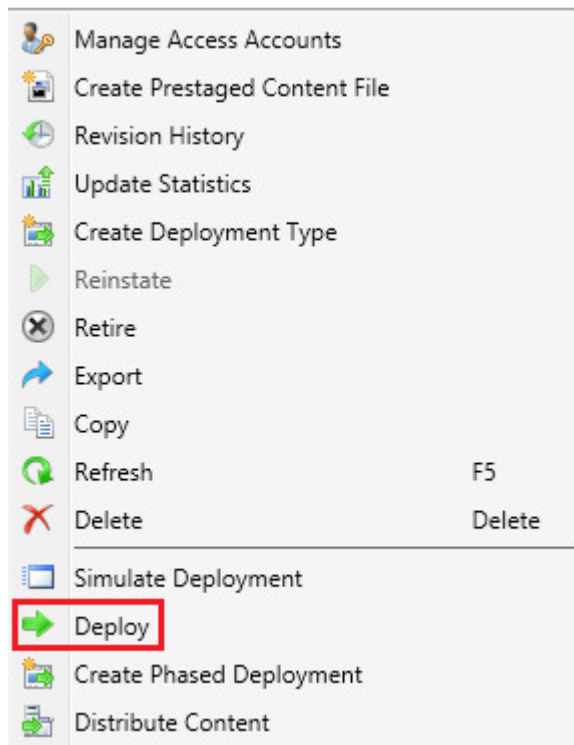
Click **Next** button.



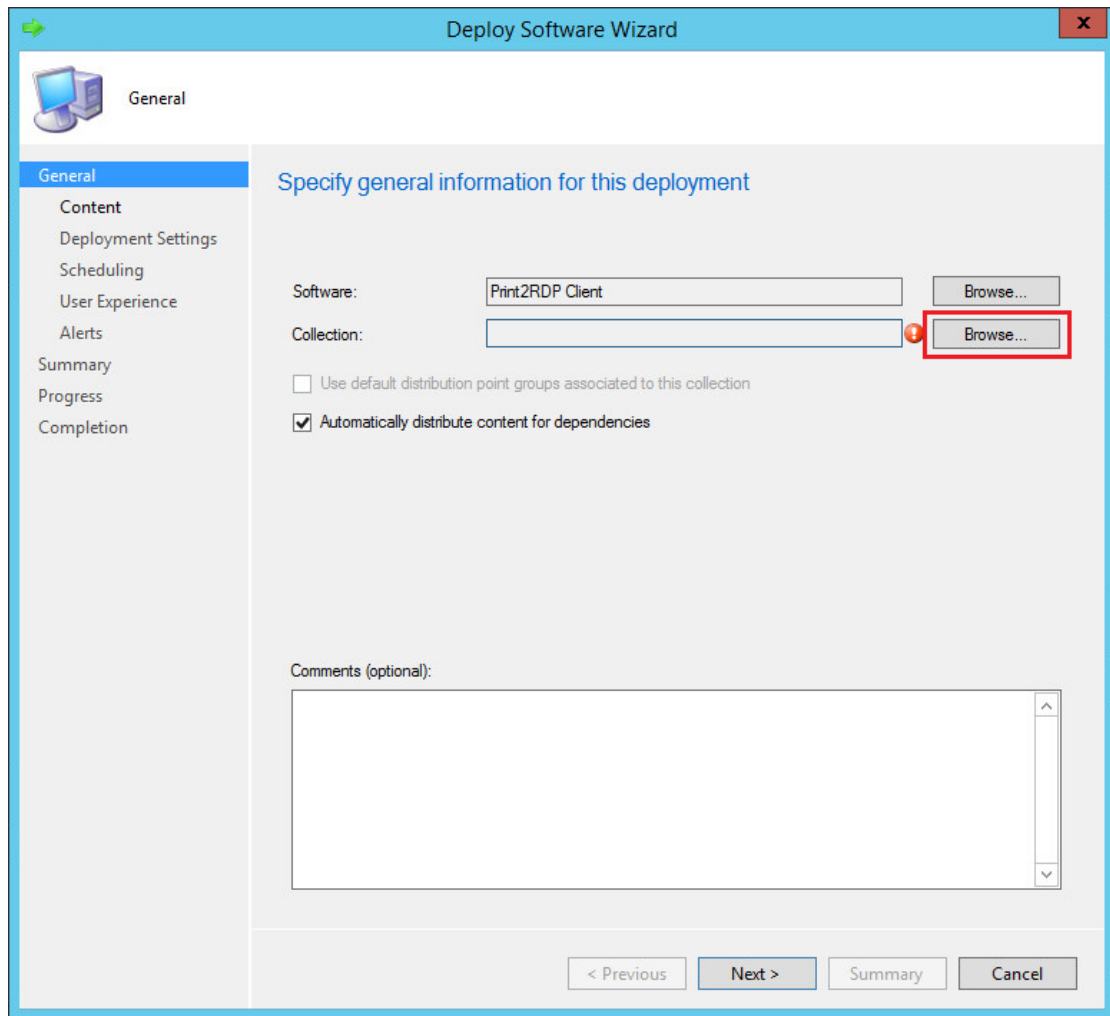
Click the **Close** button.
Finished the install package:



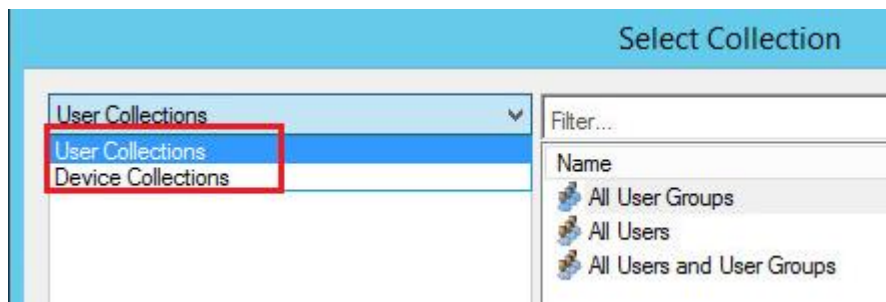
Install (**Deploy**) the Application to client(s)
Right click on Application (Example: Print2Desktop Client)
Select the Deploy:



Click to Collection -> Browse... button.



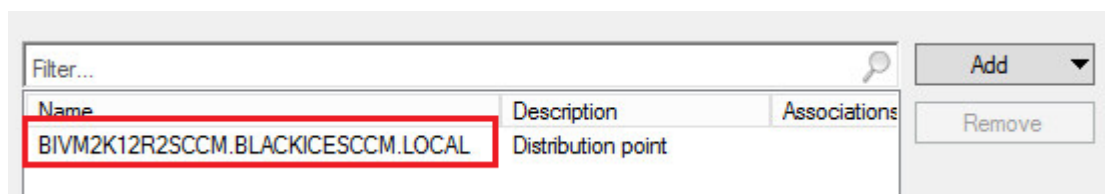
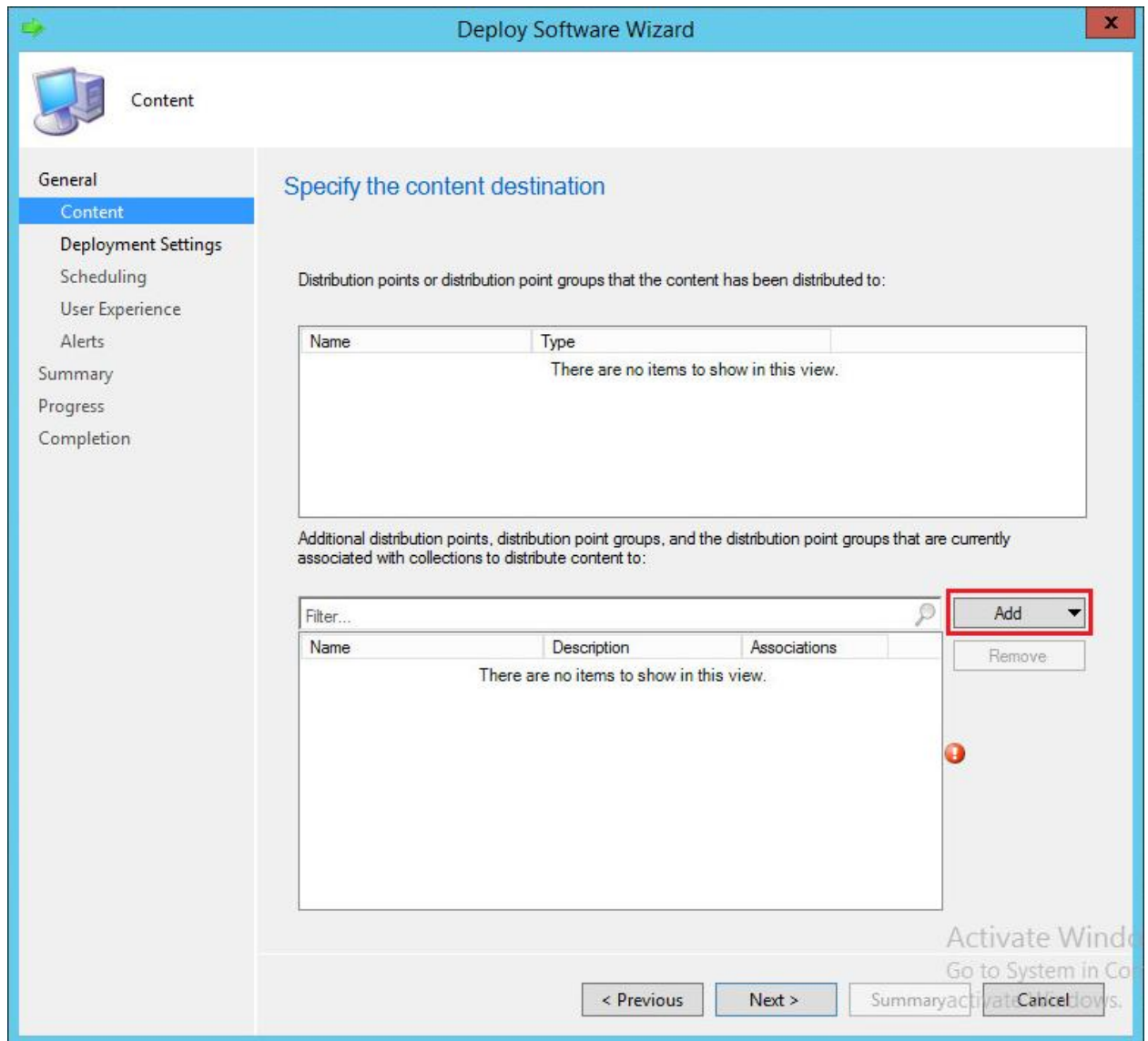
You can add Application to Users or Devices



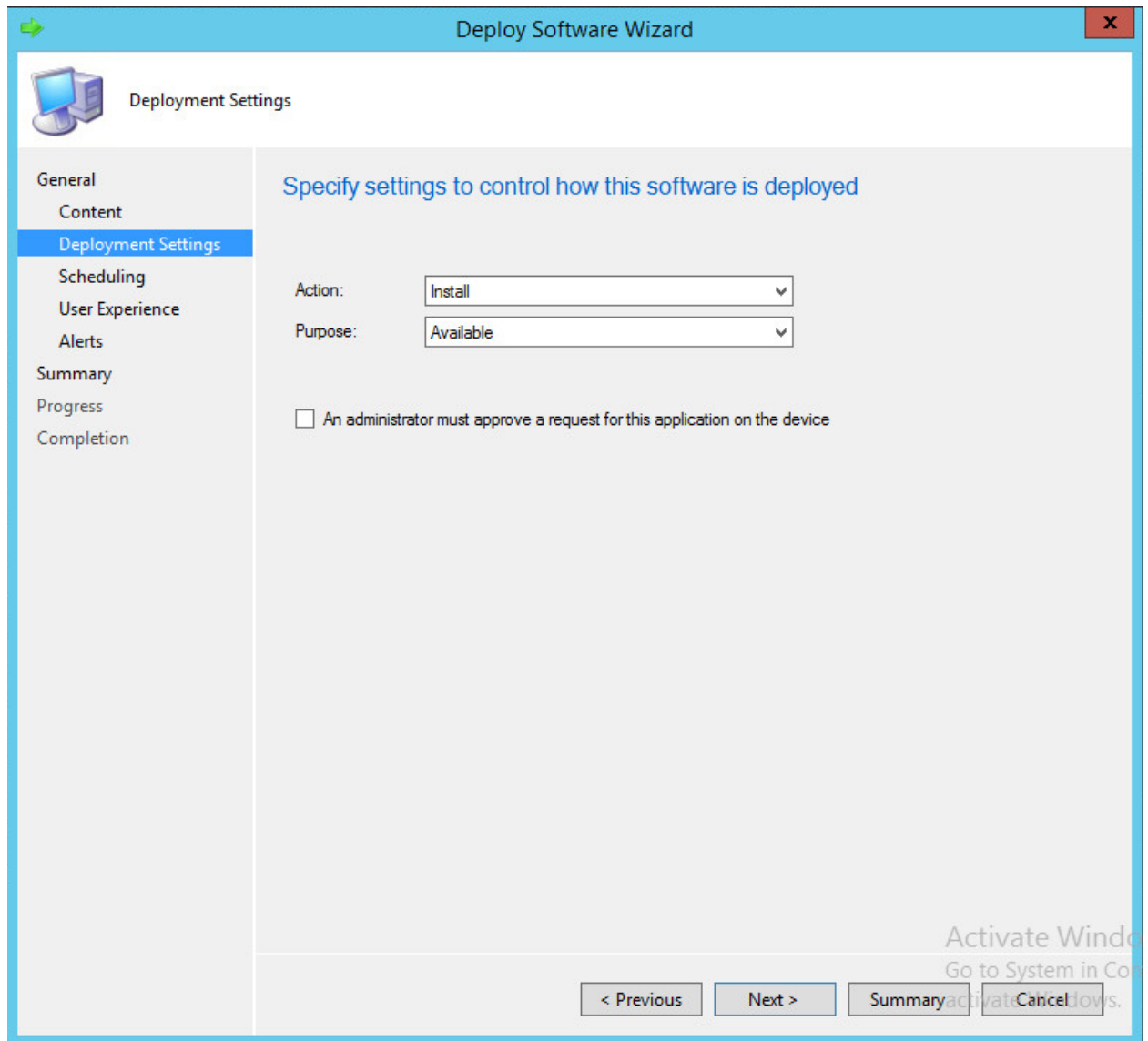
Install for Users, select the User Collections
Install for Computers, select the Device Collections

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

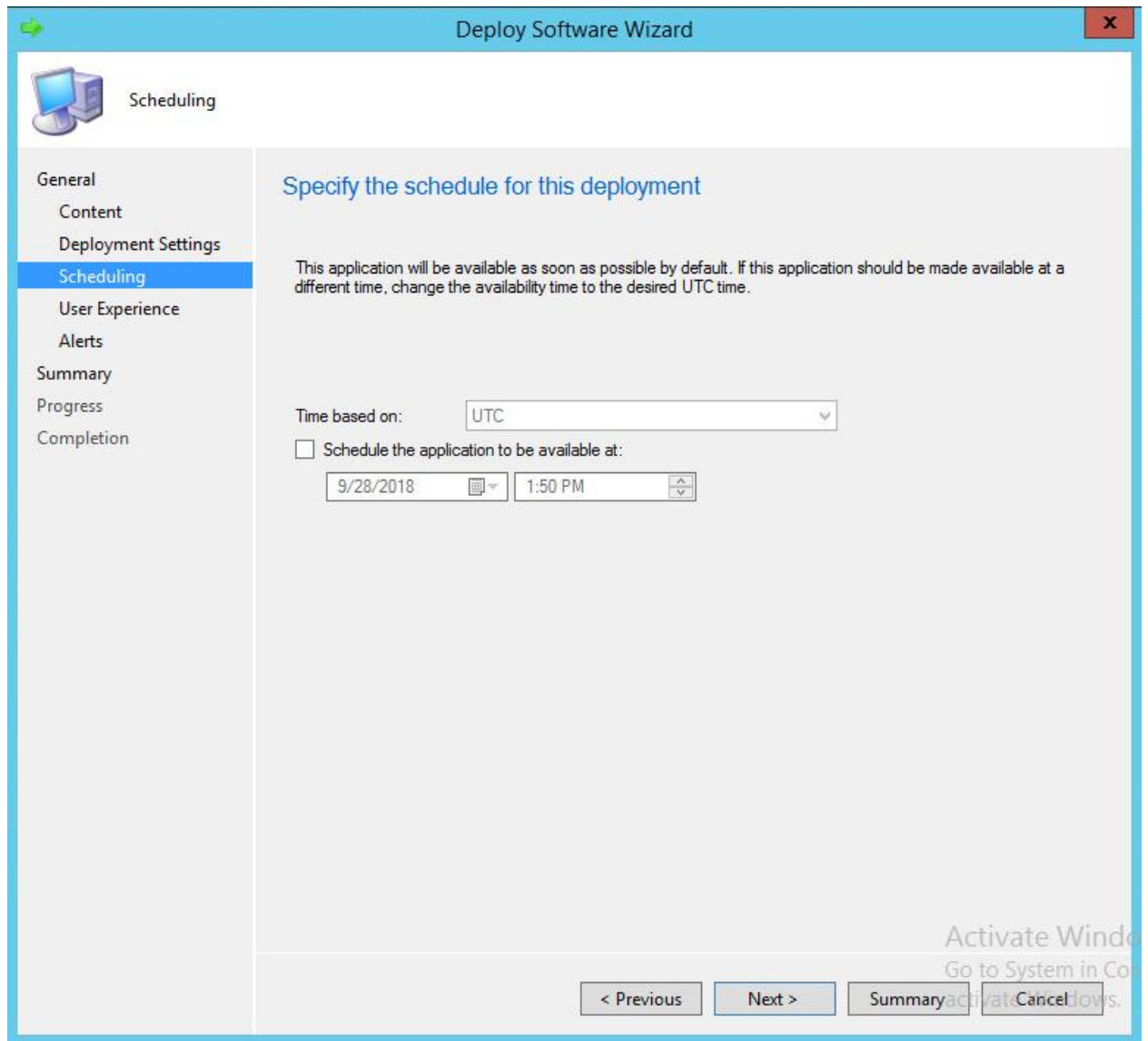
Click **Add** button and select the Distribution Point



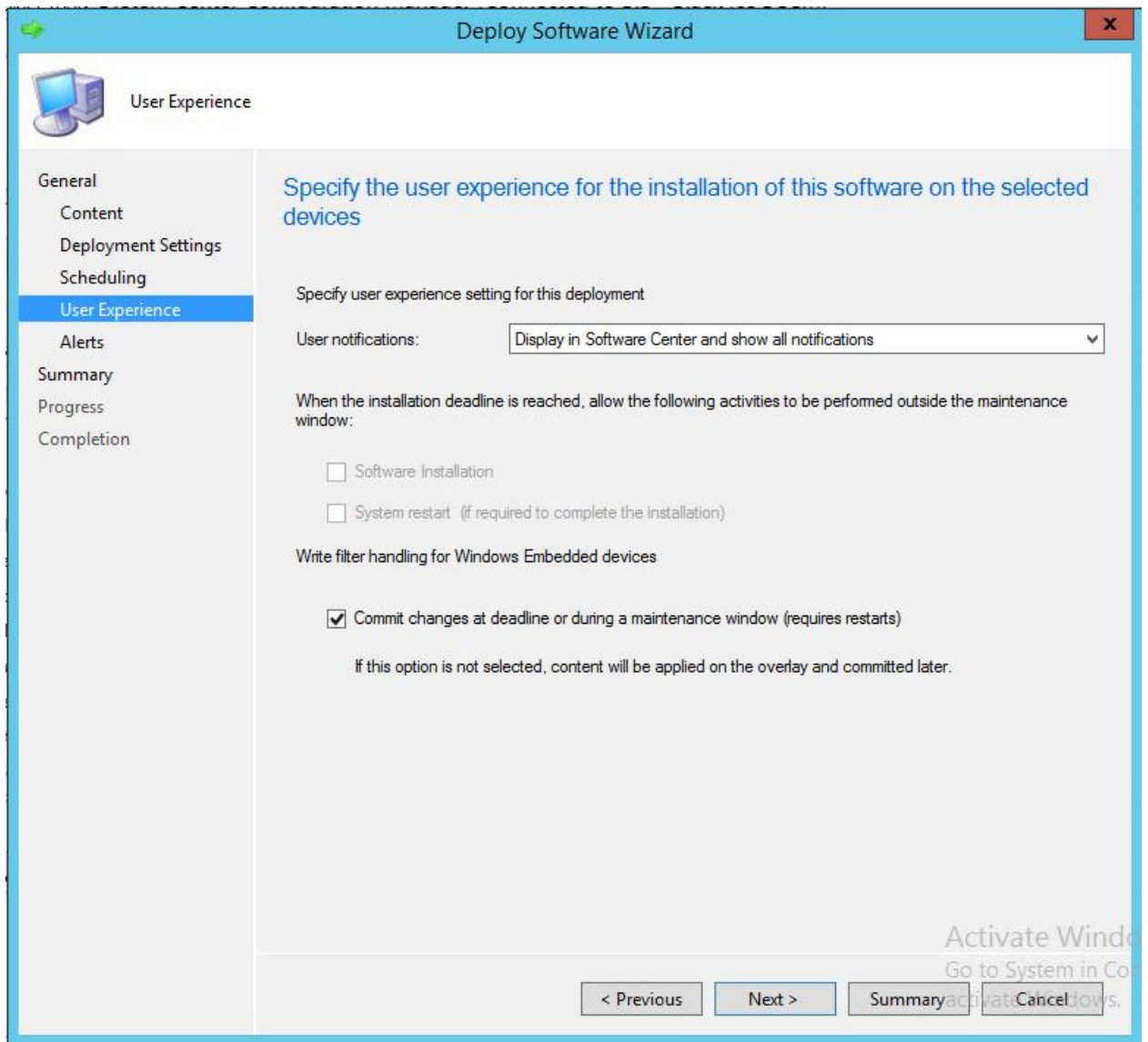
Click **Next** button.



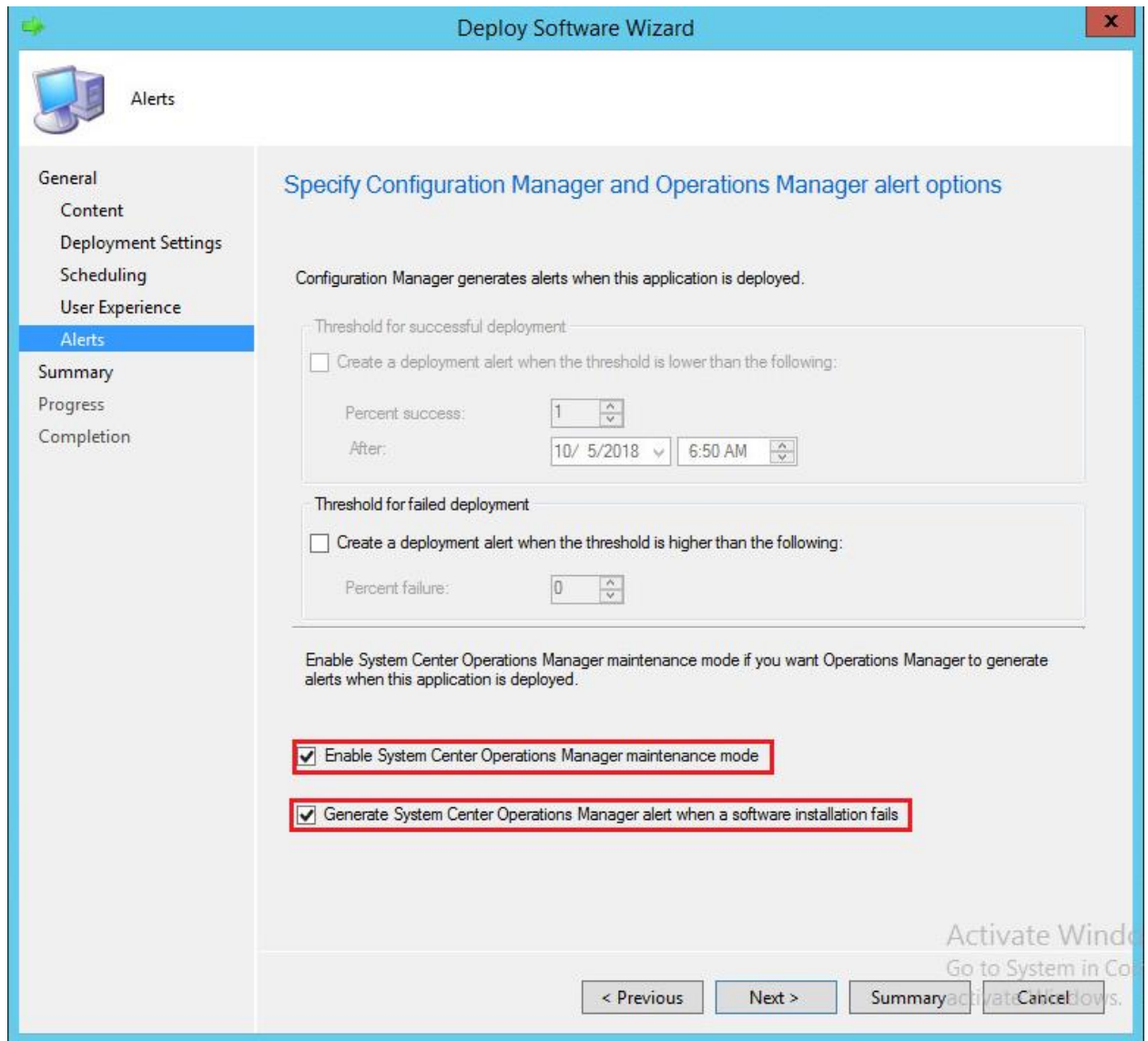
Use default settings and click **Next** button.
You can configure the installation time.



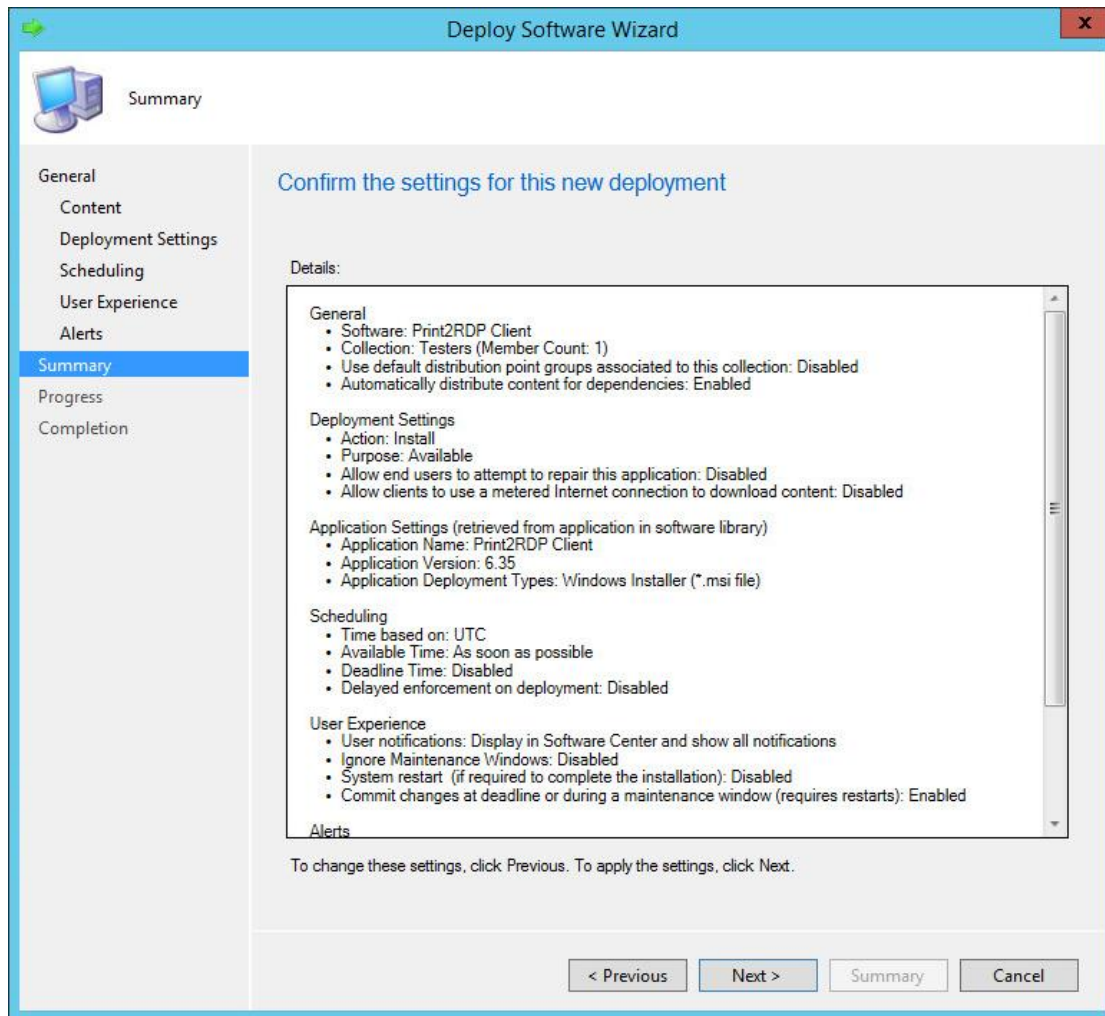
Click **Next** button.



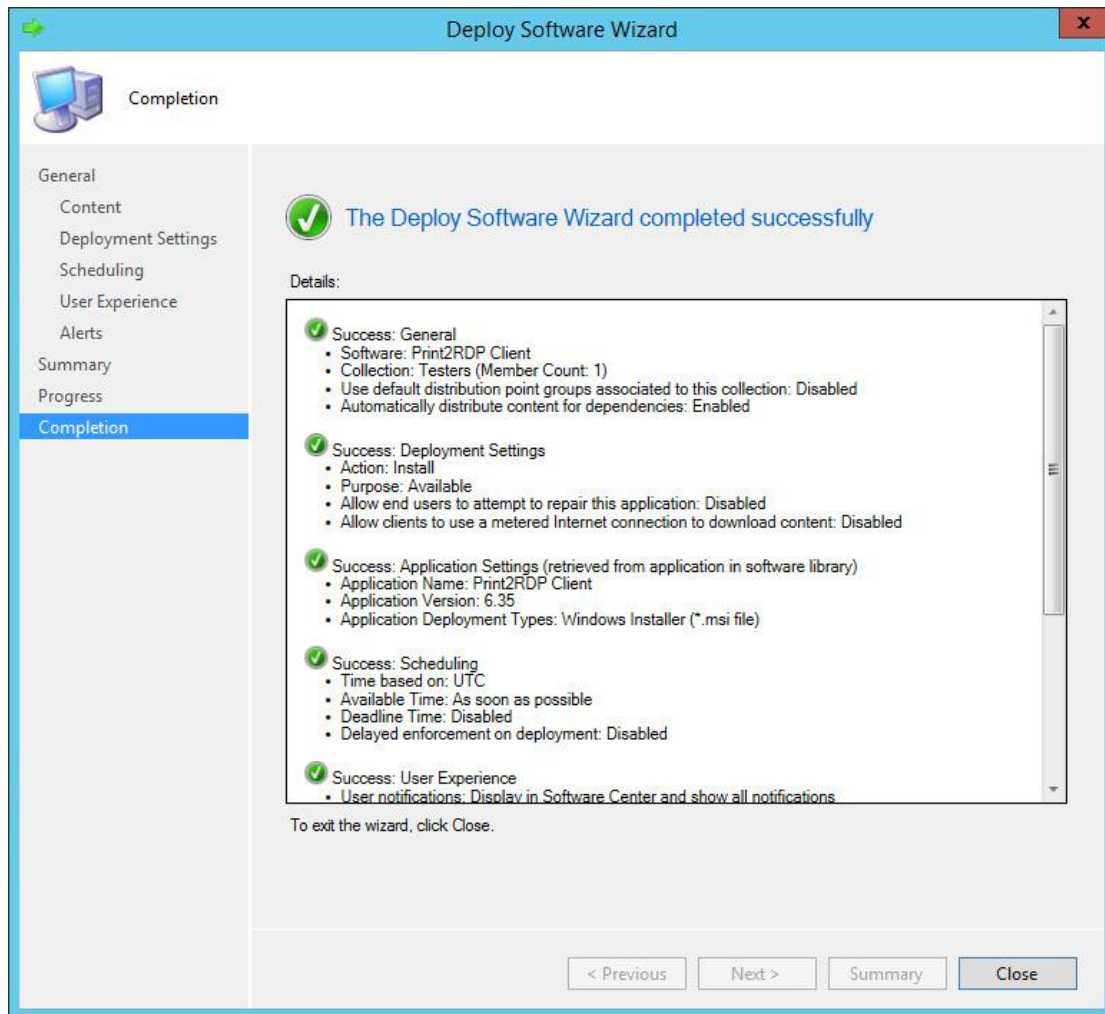
Click **Next** button.



Click **Next** button.



Click **Next** button.



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

Applications 1 items

Icon	Name	Deployment Types	Deployments	Status
	Print2RDP Client	1	1	Active

Print2RDP Client

Icon	Collection	Deployment Start Time	Purpose	Compliance %	Action
	Testers	11/22/2018 4:34 PM	Available	0.0	Install

Summary	Deployment Types	Deployments	Phased Deployments
---------	------------------	-------------	--------------------

Check Installation.

Select the Monitoring -> Overview -> Deployments

Monitoring

- Overview
- Alerts
- Queries
- Reporting
- Site Hierarchy
- System Status
- Deployments
- Client Operations
- Script Status
- Client Status
- Database Replication
- Distribution Status
- Software Update Point Synchronization Stz
- Site Server Status

Assets and Compliance

Software Library

Monitoring

Deployments 1 items

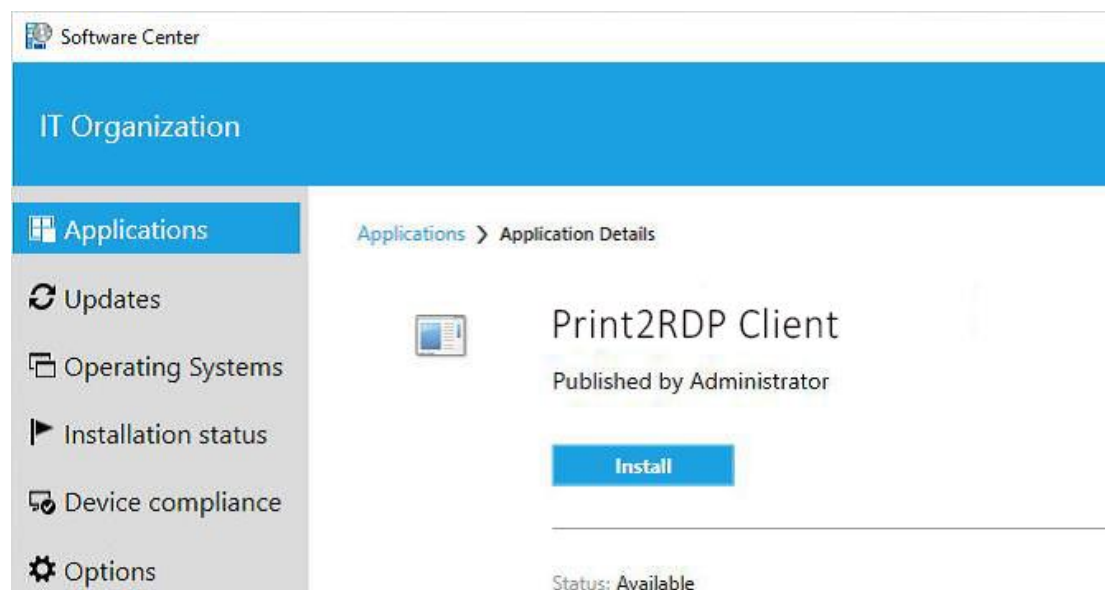
Icon	Software	Collection	Purpose
	Print2RDP Client	Testers	Available

Print2RDP Client Status to Testers

General		Completion Statistics
Software:	Print2RDP Client	<p>No Data (Last Update: Never)</p>
Collection:	Testers	
Feature Type:	Application	
Purpose:	Available	
Date Created:	11/22/2018 8:34 AM	
Last Date Modified:	11/22/2018 8:34 AM	

Install the Print2Desktop Client MSI on client computers

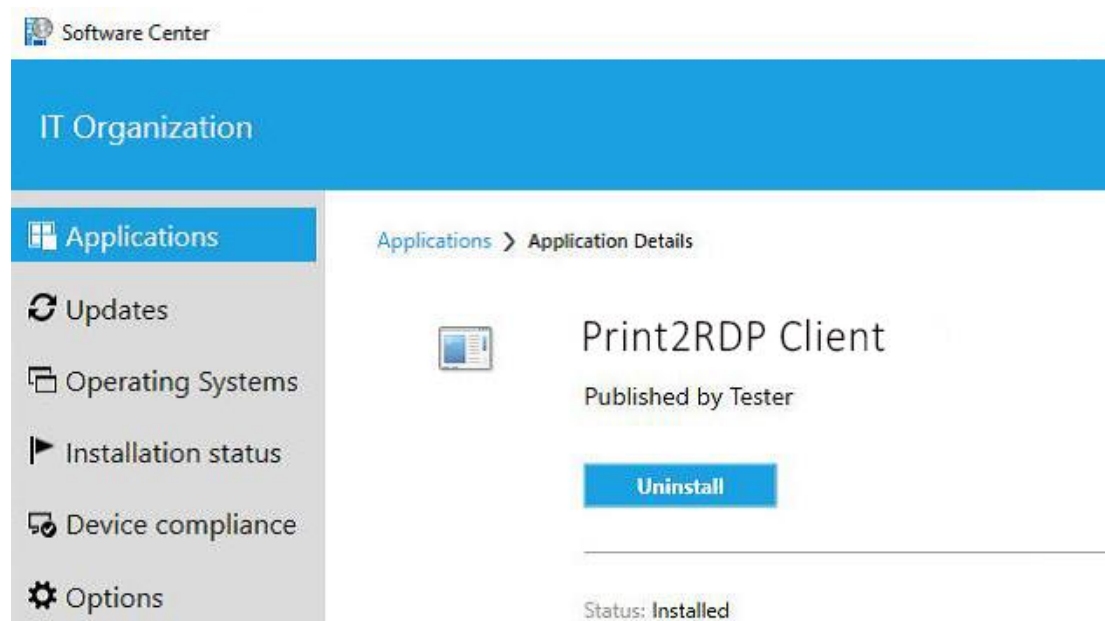
Open the **System Center** and select **Applications**.



Click **Install** button.

Uninstall the Print2Desktop Client MSI from client computer

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



Click **Uninstall** button.

How to uninstall silently the Print2Desktop client

You can uninstall the Print2Desktop client silently like this:

```
msiexec.exe /x "Print2Desktop_Client.msi" /q
```

Troubleshooting

[System Error 1612 when uninstalling or updating using the MSI installer](#)

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: Print2Desktop Client -- Error 1714. The older version of Print2Desktop Client 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.

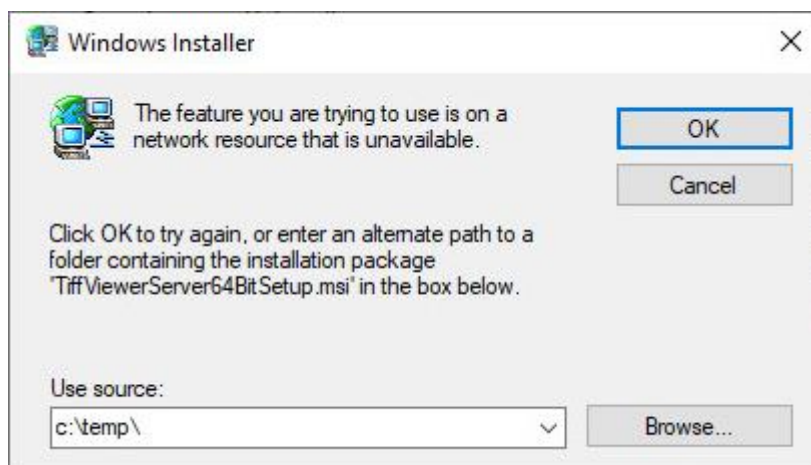
System Error 1612 indicates that Windows cannot find the original MSI installer used for installing the product either at the location used for installation or in the C:\Windows\Installer directory.

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.