

BILPDMANAGER Server

Black Ice Software

**MSI Installation Guide for
Network Administrators**

04042025-R327

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Introduction

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

The BiLPDManager Server MSI installer can either be installed using command line parameters or using Group Policy settings.

With the Group Policy Settings the BiLPDManager Server'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.

Caution: Before proceeding to install BiLPDManager Server MSI all other BiLPDManager Server version must be uninstalled from the computers where the MSI will be installed.

Requirement

.NET framework 4.0

Command Line Installation

[Installing the BiLPDManager on VDI](#)

[Installing the BiLPDManager on Citrix VDI](#)

[Registering through a Proxy server](#)

[Available Parameters of the MSI install](#)

[How to install the BiLPDManager Server silently](#)

[How to update BiLPDManager Server](#)

[Parameters that Unavailable for the MSI Installer with Update for the BiLPDManager Server](#)

[How to uninstall the BiLPDManager Server silently](#)

[Examples for Command Line installation](#)

[Quick Reference Guide for Windows MSI installers](#)

Installing the BiLPDManager on VDI

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

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

The Interactive or MSI BiLPDManager 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 BiLPDManager on Citrix VDI

Installing the BiLPDManager 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**.

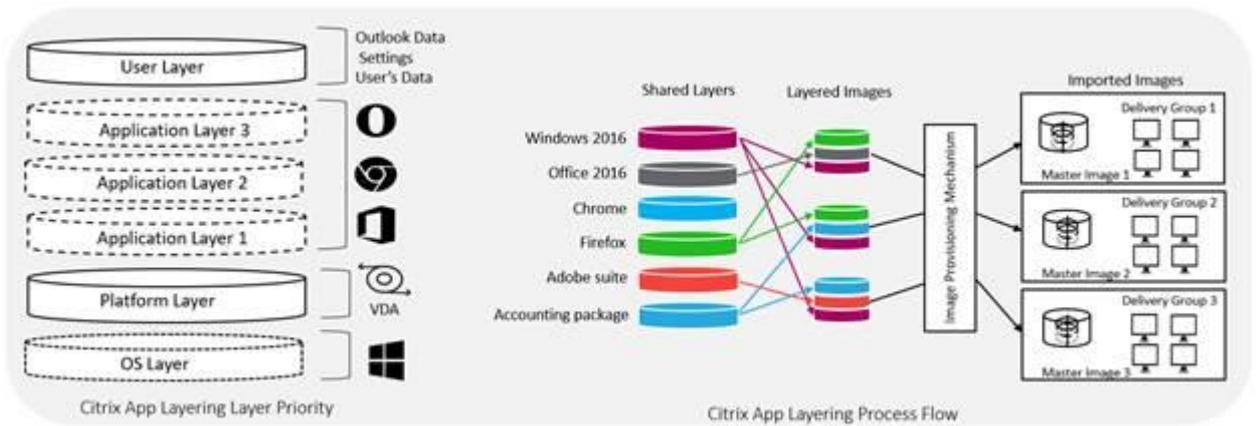
The BiLPDManager should be **installed** and activated/registered on the **OS layer**, otherwise the BiLPDManager will deactivate as soon as the desktop is delivered to users.

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

For the available installation parameters and examples, please see:

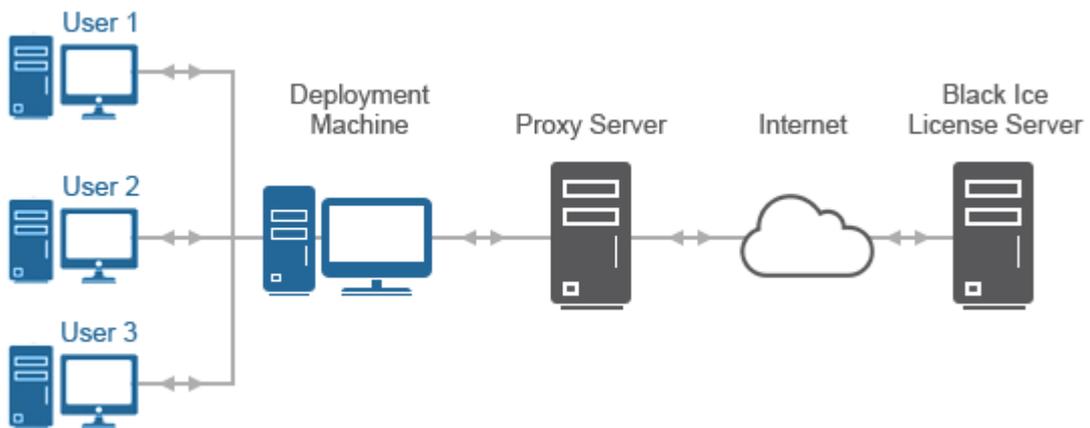
[Available Parameters of the MSI install](#)
[Examples for Command Line installation](#)

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

BiLPDManager Server 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 "BiLPDManagerServer.msi " /q TARGETDIR="C:\Black  
Ice\BiLPDManager Server" CREGNUM=XXXXXX-XXXXXXXX-XXXXXXXXXX
```

Parameters	Meaning
/i Can be used for updating the BiLPDManager.	Installs the product. Command line only
/x	Uninstalls the product. Command line only
(optional) /q Can be used for updating the BiLPDManager.	Silent installation that displays no user interface. Command line only
(optional) /l* log.txt (<i>lowercase "L"</i>) Can be used for updating the BiLPDManager.	<p>Logs the MSI system calls to install the product to the "C:\temp\log.txt" file. Command line only</p> <p>For more information about the /l (<i>lowercase "L"</i>) parameter, please refer to the Quick Reference Guide for Windows MSI installers section.</p>
(optional) ALLUSERS=1	<p>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> <p>If ALLUSERS=1 performs a per-machine installation.</p> <p>If ALLUSERS is not set, the installer does a per-user installation.</p>
(optional) REGNUM=	<p>Serial number received during purchase. Use REGNUM parameter for automatically registering the product for every user on the computer. Note: The REGNUM parameter is registering the product for every user on the computer.</p>

<p>(optional) TARGETDIR=</p>	<p>Set target installation directory.</p> <p>If this value is not specified, the product will be installed to “\Program Files\Black Ice Software LLC\BiLPDManager Server”</p>
<p>(optional) TRANSFORMS=</p> <p>Can be used for updating the BiLPDManager.</p>	<p>Install BiLPDManager Server with a transformation file.</p>
<p>(optional) LICSER=</p> <p>Can be used for updating the BiLPDManager.</p>	<p>License server domain name.</p> <p>"licenseserver.blackice.com"</p>
<p>(optional) CPORT=0 (default) Port number (0, 65536)</p> <p>Can be used for updating the BiLPDManager.</p>	<p>Client port is out going port to connect to the Black Ice License server. Default and Recommended port parameter value is 0.</p> <p>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.</p> <p>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.</p>
<p>(optional) SPORT=1</p> <p>Can be used for updating the BiLPDManager.</p>	<p>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.</p> <p>Alternatively, the following TCP/IP ports can be used for the registration: 80, 3500, 15000</p> <p>NOTE: For using alternative TCP/IP ports (80, 3500, 15000) for the registration set the SSL parameter to 0.</p>
<p>(optional) AUTOSTART= 0 does not start BiLPDManager Server when the Windows starts (default) 1 starts BiLPDManager Server when the Windows starts</p>	<p>Start BiLPDManager when the User logs into Windows.</p>

(optional) SYSTEM=1	Running the BiLPDService under local SYSTEM account (Does not require USERNAME and USERPASSWORD parameters)
(required) USERNAME=	User must be an Administrator to install and run BiLPDService. For example: .\\Administrator myDomain\\Administrator
(required) USERPASSWORD=	The password for the specified username.
(optional) BITRACE= 0 disables the Trace log (default) 1 enables the Trace log Can be used for updating the BiLPDManager.	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 BiLPDManager Server MSI trace log section.
(optional) SSL= 1 enable the SSL (default) 0 disable the SSL Can be used for updating the BiLPDManager.	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.
(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 BiLPDManager.	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

	<p>name and password parameter, with the PTYPE=1.</p> <p>If you need authentication for the Proxy Server connection, please use the PTYPE=2 (HTTP proxy) or PTYPE=3 (SOCKS proxy) options.</p> <p>The PTYPE=2 – Using HTTP proxy settings (Required parameter: PIP, PPORT, Optional parameter: PUSER, PPW)</p> <p>The PTYPE=3 – Using SOCKS proxy settings (Required parameter: PIP, PPORT, Optional parameter: PUSER, PPW)</p> <p>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.</p>
<p>(optional) PIP= Can be used for updating the BiLPDManager.</p>	<p>The proxy server host name or IP address</p> <p>NOTE: The PIP parameter is required, if the server using HTTP (PTYPE=2) or SOCKS (PTYPE=3) proxy settings.</p>
<p>(optional) PPORT= Can be used for updating the BiLPDManager.</p>	<p>The proxy server port number. The installation uses the specified port to reach the Proxy server.</p> <p>NOTE: The PPORT parameter is required, if the server using HTTP (PTYPE=2) or SOCKS (PTYPE=3) proxy settings.</p>
<p>(optional) PUSER= Can be used for updating the BiLPDManager.</p>	<p>User name for proxy servers which require authentication.</p> <p>NOTE: The PUSER parameter is optional, if the server using HTTP (PTYPE=2) or SOCKS (PTYPE=3) proxy settings.</p> <p>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.</p>
<p>(optional) PPW= Can be used for updating the BiLPDManager.</p>	<p>User password for proxy servers which require authentication.</p> <p>NOTE: The PPW parameter is optional, if the server using HTTP (PTYPE=2) or SOCKS (PTYPE=3) proxy settings.</p>

(optional) FORCEU=	<p>Possible values:</p> <p>1: Force uninstallation of the BiLPDManager, even if it was 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.</p> <p>0 (default): The uninstaller will notify the user of the occurring errors during the uninstallation.</p>
(optional) FORCECHECK= 0: Disabled (default) 1: Enabled.	<p>The FORCECHECK parameter can be used during the uninstallation. This parameter uninstalls the BiLPDManager 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.</p>
(optional) NOSERIAL= 0: Disabled (default). 1: Enabled.	<p>The BiLPDManager can be installed without registration with NOSERIAL=1 parameter. The BiLPDManager cannot be used until BiLPDManager is registered/activated for evaluation or with a license key by the Administrator after the installation.</p>

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 "BiLPDManagerServer.msi" /q TARGETDIR="C:\Black Ice\BiLPDManager Server" REGNUM=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 BiLPDManager Server MSI Installer attempts to reach the Black Ice License Server three times during the registration to avoid momentary internet connection issues.*

NOTE: If REGNUM parameter is not used, the BiLPDManager Server registers automatically as demo during the installation.

How to install the BiLPDManager Server silently

To install the MSI installer silently, please open the Command Prompt as Administrator.

BiLPDManager can be installed using the following command:

```
msiexec /i "<<PATH>>\BiLPDManager.msi" /q TARGETDIR="C:\Black Ice\BiLPDManager"  
REGNUM=XXXXX-XXXXXXXX-XXXXXXXXXX
```

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

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.

How to update BiLPDManager Server

One can update Upgrade the BiLPDManager without uninstalling and reinstalling the BiLPDManager.

The upgrade process will keep the Users current configuration of the BiLPDManager.
The BiLPDManager Update does NOT require system restart.

BiLPDManager MSI can be updated by using the following command:

```
msiexec /i "<<PATH>>\BiLPDManagerServer.msi"
```

Parameters that Unavailable for the MSI Installer with Update for the BiLPDManager Server

Please make sure that following parameters are **not used for the BiLPDManager Update**. The following parameters will be ignored.

Parameters	Meaning
(optional) ALLUSERS=1	<p>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> <p>If ALLUSERS=1 performs a per-machine installation.</p> <p>If ALLUSERS is not set, the installer does a per-user installation.</p>
(optional) REGNUM=	<p>Serial number received during purchase. Use REGNUM parameter for automatically registering the product for every user on the computer. Note: The REGNUM parameter is registering the product for every user on the computer.</p>
(optional) TARGETDIR=	<p>Set target installation directory.</p> <p>If this value is not specified, the product will be installed to “\Program Files\Black Ice Software LLC\Black Ice BiLPDManager Server”</p>
(optional) AUTOSTART= 0 does not start BiLPDManager when the Windows starts (default) 1 starts BiLPDManager when the Windows starts	<p>Start BiLPDManager when the User logs into Windows.</p>
(optional) SYSTEM=1	<p>Running the BiLPDService under local SYSTEM account (Does not require USERNAME and USERPASSWORD parameters)</p>
(required) USERNAME=	<p>User must be an Administrator to install and run BiLPDService.</p> <p>For example: .\Administrator myDomain\Administrator</p>
(required) USERPASSWORD=	<p>The password for the specified username.</p>

How to uninstall the BiLPDManager Server silently

The **recommended** command to silently uninstall BiLPDManager Server:

```
MSIExec.exe /x {6E3E0D3A-BDE4-45AD-ACA1-03846A06A4E6} /q
```

Alternatively the BiLPDManager Server can be uninstalled by using the .msi file in the command:

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

You must use the BiLPDManagerServer.msi file which was used for the installation. For example if BiLPDManager Server MSI 2.11 is installed on the computer, you must use the same version 2.11 BiLPDManagerServer.msi file for the uninstallation.

Use this command before installing a newer versions or reinstalling previous versions. The abovecommand will work even if there was no prior BiLPDManager Server msi installation.

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 BiLPDManager Server as Demo, silently, the target directory is C:\Black Ice\BiLPDManager Server

```
msiexec.exe /i "<<PATH>>\BiLPDManagerServerSetup.msi" /q  
USERNAME=".\Administrator" USERPASSWORD="12345678"  
TARGETDIR="C:\Black Ice\BiLPDManager"
```

Example 2: Install and register BiLPDManager Server, silently, the target directory is C:\Black Ice\BiLPDManager Server

```
msiexec.exe /i "<<PATH>>\BiLPDManagerServerSetup.msi" /q  
USERNAME=".\Administrator" USERPASSWORD="12345678"  
TARGETDIR="C:\Black Ice\BiLPDManager" REGNUM=xxxxx-xxxxxxxx-xxxxxxxxxx
```

Example 3: Install and register BiLPDManager Server silently and generate log from the installation.

```
msiexec.exe /i "<<PATH>>\BiLPDManagerServerSetup.msi" /q /l* "log.txt"  
USERNAME=".\Administrator" USERPASSWORD="12345678" REGNUM=xxxxx-  
xxxxxxxx-xxxxxxxxxx
```

Example 4: Install and register BiLPDManager Server silently to the default target directory into the Program Files folder.

```
msiexec.exe /i "<<PATH>>\BiLPDManagerServerSetup.msi" /q  
USERNAME=".\\Administrator" USERPASSWORD="12345678" REGNUM=xxxxx-  
xxxxxxxx-xxxxxxxxxx
```

PowerShell Example (Terminal & Terminal (Admin)):

Example 4: Install and register BiLPDManager silently to the default target directory into the Program Files folder.

```
msiexec.exe /i "'<<PATH>>\BiLPDManagerServerSetup.msi'" /q  
USERNAME="'.\\Administrator'" USERPASSWORD="'12345678'" REGNUM=xxxxx-  
xxxxxxxx-xxxxxxxxxx
```

Example 5: Install BiLPDManager Server silently with a transformation file:

```
msiexec.exe /i "<<PATH>>\BiLPDManagerServerSetup.msi"  
USERNAME=".\\Administrator" USERPASSWORD="12345678"  
TRANSFORMS=BiLPDManager.mst /q
```

Example 6: Install and register BiLPDManager Server silently using a port 80 to contact the Black Ice License Server, without SSL authentication.

```
msiexec.exe /i "<<PATH>>\BiLPDManagerServerSetup.msi" /q  
USERNAME=".\\Administrator" USERPASSWORD="12345678" REGNUM=xxxxx-  
xxxxxxxx-xxxxxxxxxx LICSER=licenseserver.blackice.com CPORT=0 SPORT=80 SSL=0
```

Example 7: Install and register BiLPDManager Server 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>>\BiLPDManagerServerSetup.msi" /q  
USERNAME=".\\Administrator" USERPASSWORD="12345678" REGNUM=xxxxx-  
xxxxxxxx-xxxxxxxxxx BITRACE=1
```

Example 8: Install and register BiLPDManager Server silently, and contact the Black Ice License Server through an automatically discovered proxy server.

```
msiexec.exe /i "<<PATH>>\BiLPDManagerServerSetup.msi" /q  
USERNAME=".\\Administrator" USERPASSWORD="12345678" REGNUM=xxxxx-  
xxxxxxxx-xxxxxxxxxx PTYPE=1
```

Example 9: Install and register BiLPDManager silently, and start the BiLPDManager when the User logs into Windows.

```
msiexec.exe /i "<<PATH>>\BiLPDManagerServerSetup.msi" /q REGNUM=xxxxx-  
xxxxxxxx-xxxxxxxxxx AUTOSTART=1
```

Example 10: Install and register BiLPDManager silently, and install and run BiLPDService under LOCAL SYSTEM account.

If the BiLPDManager will be executed as service, one should not use the SYSTEM=1 parameter.

One can use this option SYSTEM=1 if you plan to deploy the BiLPDManager with SCCM and does not wish to use Administrator account in the deployment script.

```
msiexec.exe /i "<<PATH>>\BiLPDManagerServerSetup.msi" /q REGNUM=xxxxx-xxxxxxx-xxxxxxx SYSTEM=1
```

For using the BiLPDManager as a service, please click here for the [BiLPDManager user guide](#).

Example 11: Install BiLPDManager Server silently without registration. In this case, the BiLPDManager Server cannot be used until BiLPDManager Server is registered/activated for evaluation or with a license key by the Administrator after the installation.

```
msiexec.exe /i "<<PATH>>\BiLPDManagerServerSetup.msi" /q USERNAME=".\\Administrator" USERPASSWORD="12345678" NOSERIAL=1
```

Example 12: Install and register BiLPDManager Server silently, and contact the Black Ice License Server through a HTTP proxy server.

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

The **PPORT** parameter specifies the HTTP Proxy server port that BiLPDManager Server 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 13: Install and register BiLPDManager Server silently, and contact the Black Ice License Server through a SOCKS proxy server.

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

The **PPORT** parameter specifies the SOCKS Proxy server port that BiLPDManager Server 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 14: Silently uninstall BiLPDManager Server

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

Example 15: Silently uninstall BiLPDManager Server if the MSI installer location is unknown:

```
msiexec.exe /x {00C10A1C-9B89-4C4B-AD04-8F3C2917DA80} /q
```

Example 16: Force uninstallation of the BiLPDManager, even if it was 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>>\BiLPDManagerServerSetup.msi" /q FORCEU=1
```

Example 17: Uninstalls the BiLPDManager silently 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.

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

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.

Group Policy / Active Directory Installation

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

[How to use ORCA](#)

[How to set up a Group Policy Object for installing BiLPDManager Server MSI on domain computers automatically](#)

[How to upgrade existing installation of BiLPDManager using Group Policy Object](#)

[How to uninstall the BiLPDManager Server MSI from computers with the Group Policy Object](#)

How to create MST (transform file) for GPO deployment

With the help of transformation files (MST), one can customize the BiLPDManager Server 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>

How to use ORCA

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

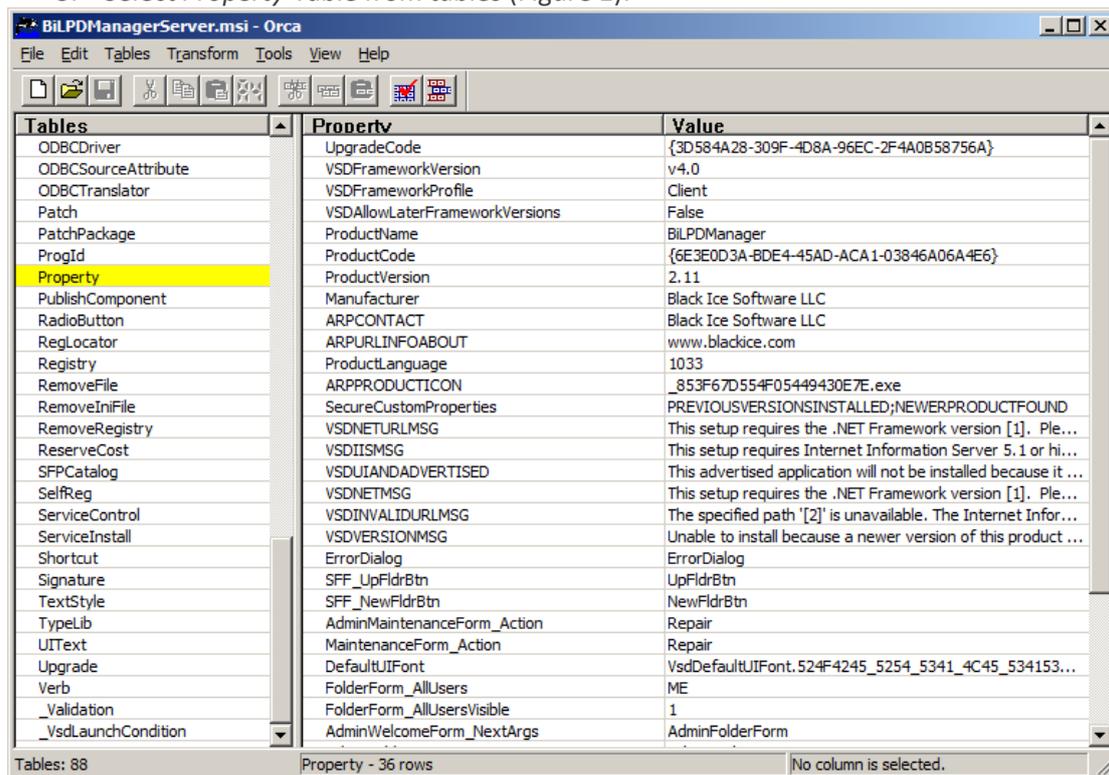


Figure 1

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 TARGETDIR, REGNUM.
6. Select Value and enter Property Value.
7. Click OK.
8. Save Transform by clicking *Transform\Generate Transform...* menu.

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

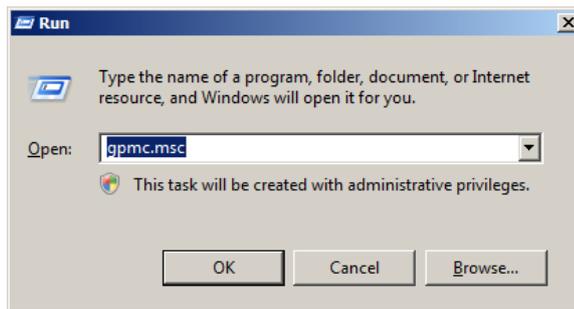
If installing the BiLPDManager Server from command line, the transformation file can be entered like this:

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

How to set up a Group Policy Object for installing BiLPDManager Server MSI on domain computers automatically

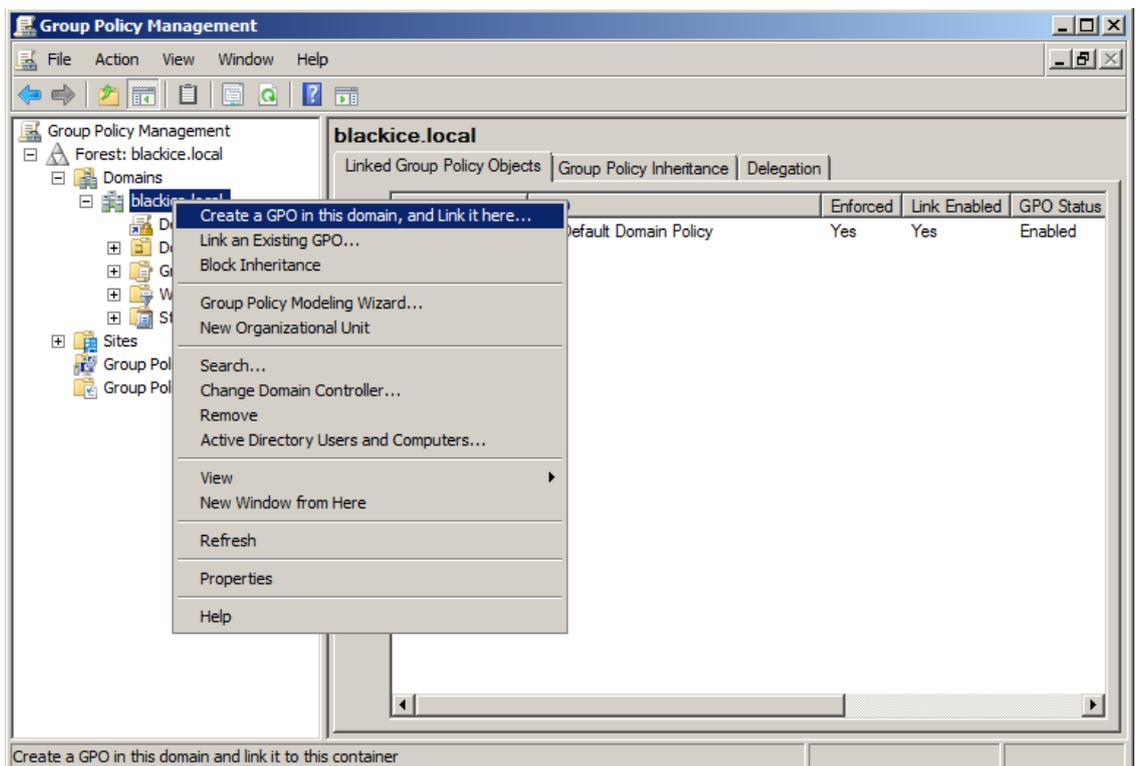
1. Copy the Install packages to a network share that **can be accessed from the computers** where the software needs to be installed.
2. To set up a *Group Policy Object*, start the *Group Policy Management console* on a Domain controller computer.

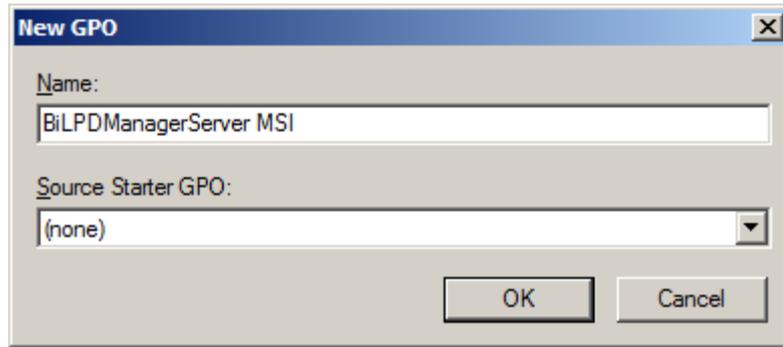
Run *gpmc.msc*



3. Create a new Group Policy

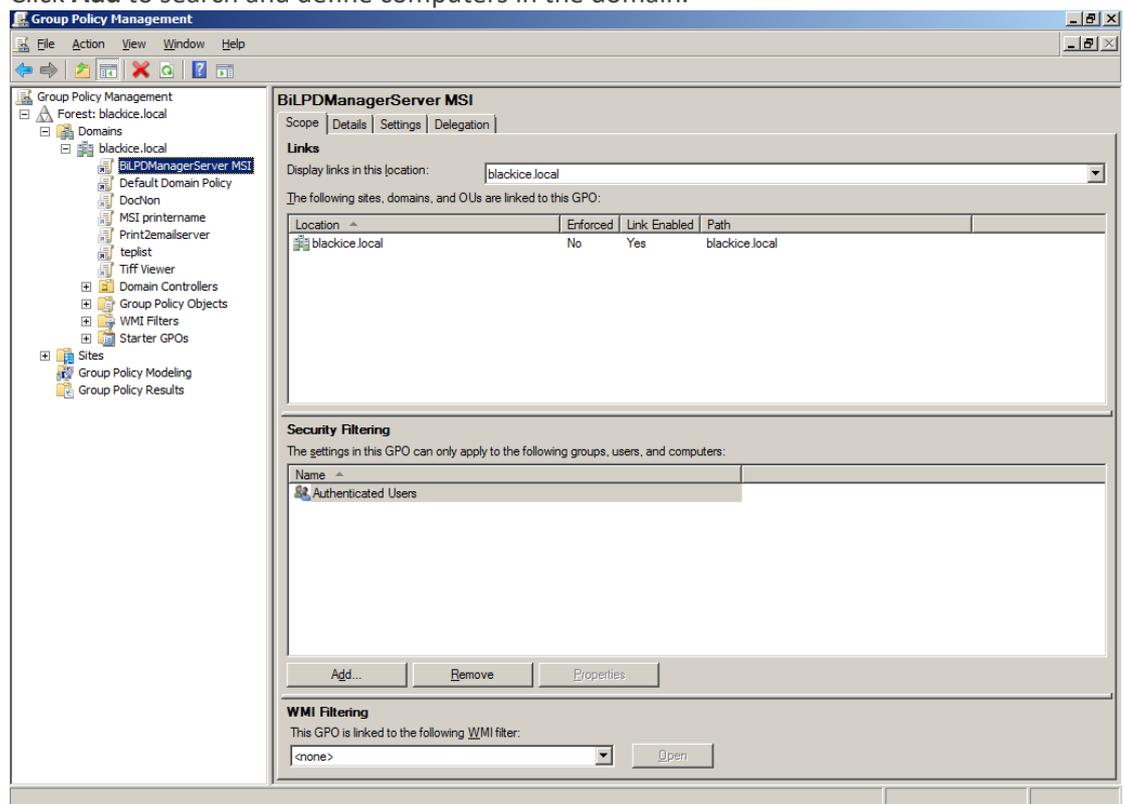
Left click on the desired Domain and select “*Create a GPO in this domain, and Link it here...*”. Define a new GPO by defining the name and press OK.



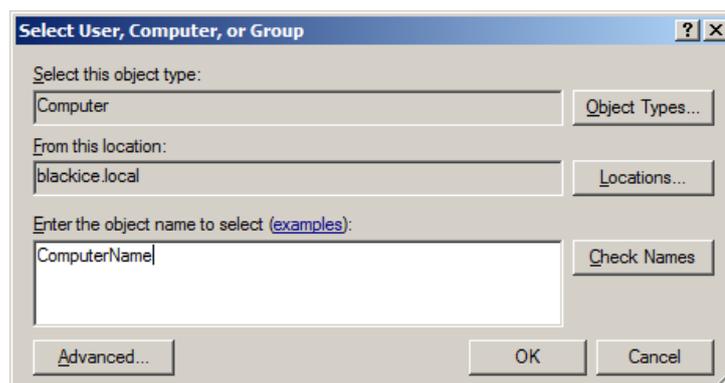


4. Define computers for the GPO.

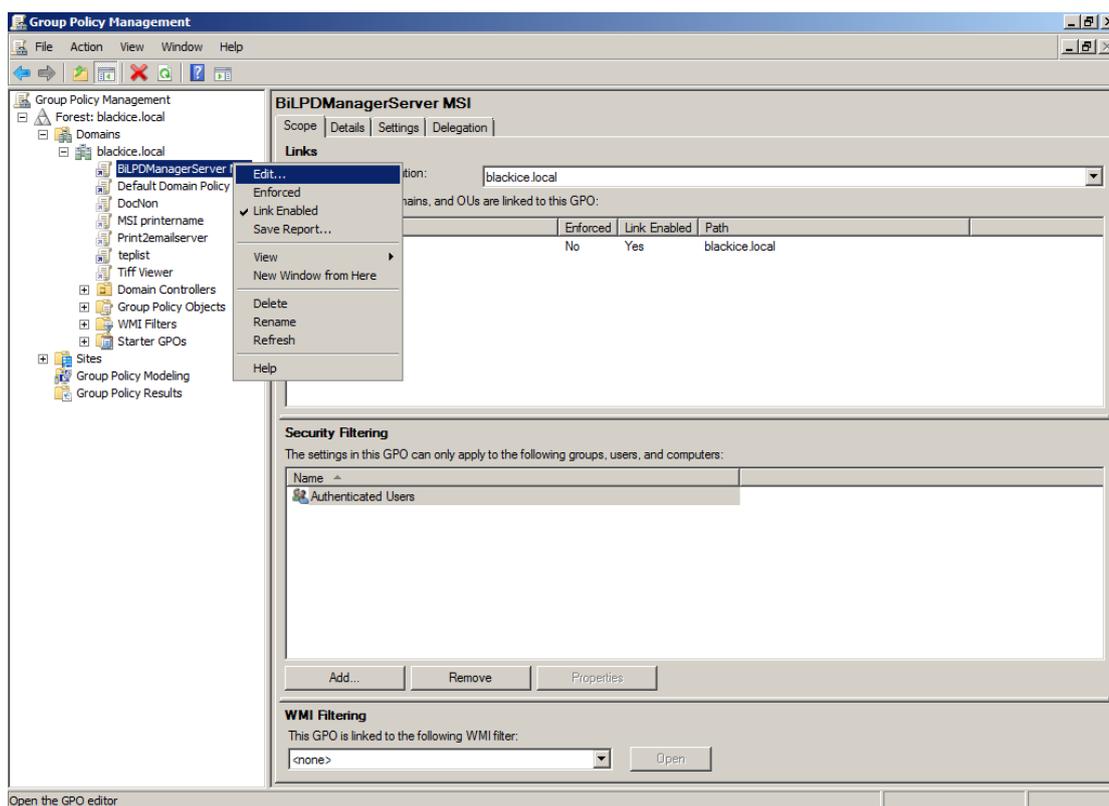
Remove the default Groups and Users from the **Security Filtering Options**. Click **Add** to search and define computers in the domain.



5. Add computers

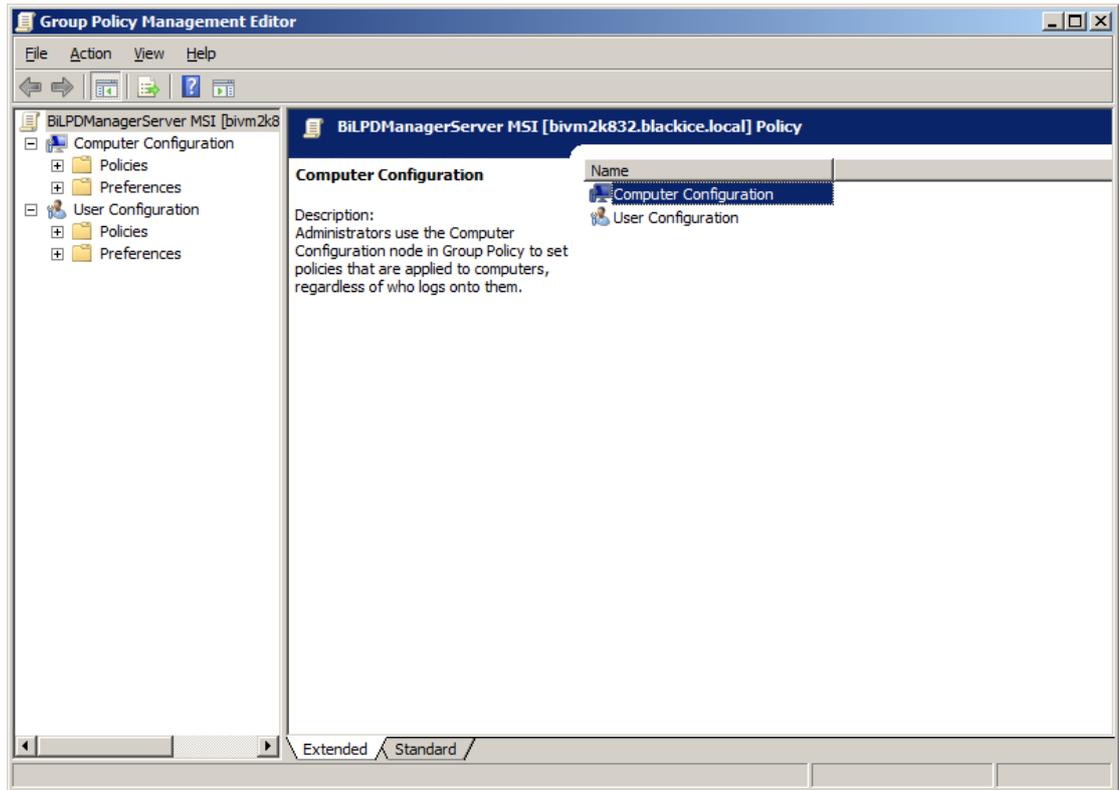


6. Edit Group Policy Object by left clicking on the GPO name and selecting **Edit**.



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**.

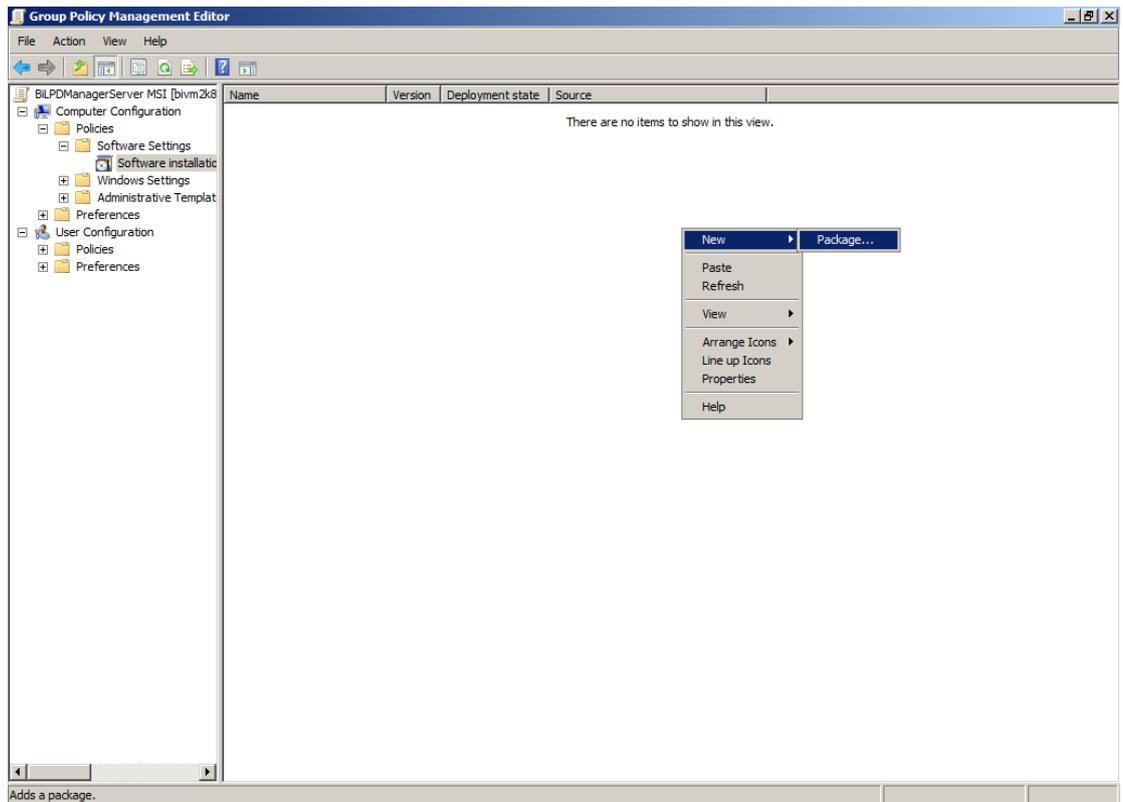


8. Prepare the mst configuration file with ORCA to be used with the install package.

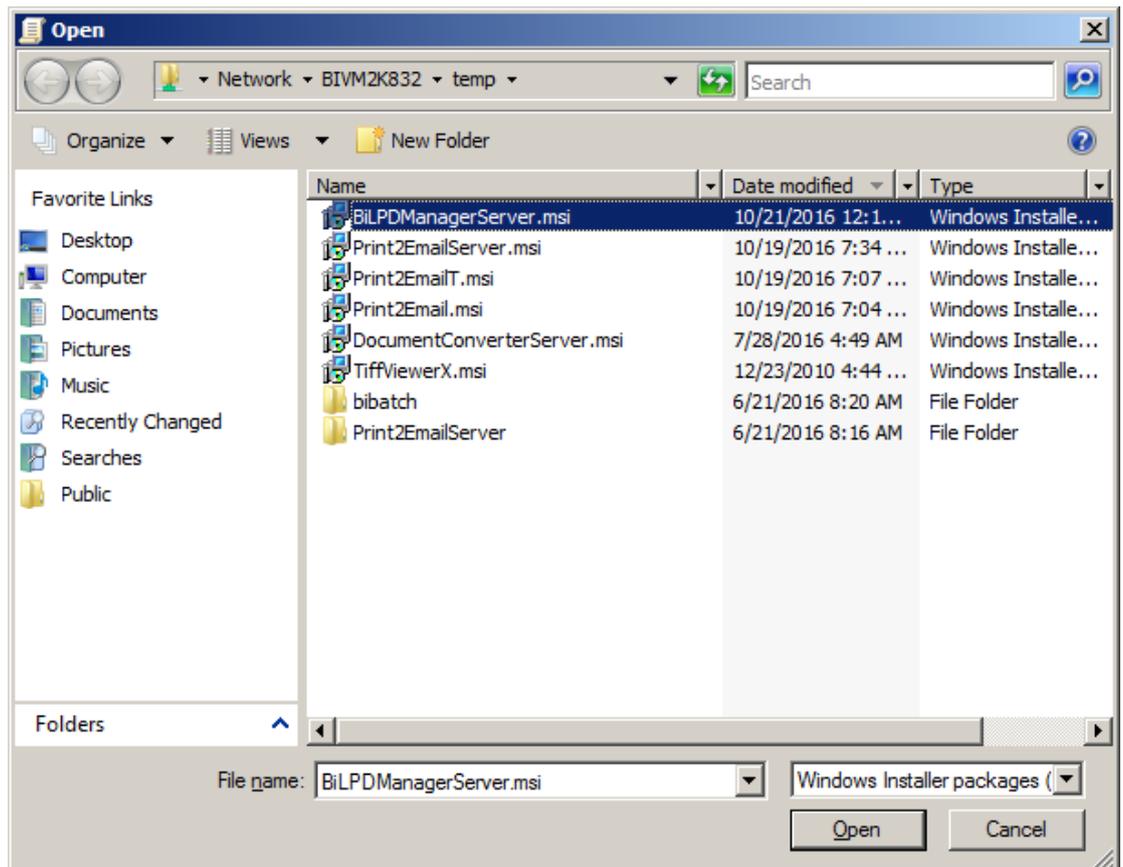
See the [How to create MST \(transform file\) for GPO deployment](#) section of this documentation.

9. Add the BiLPDManager Server MSI installer package.
Navigate to: **Computer Configuration \ Policies \ Software Settings \ Software installation**

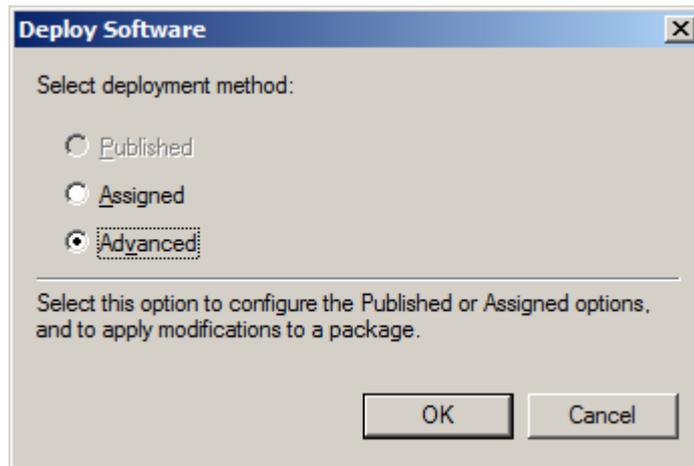
Left click on the right pane, select **New > Package**



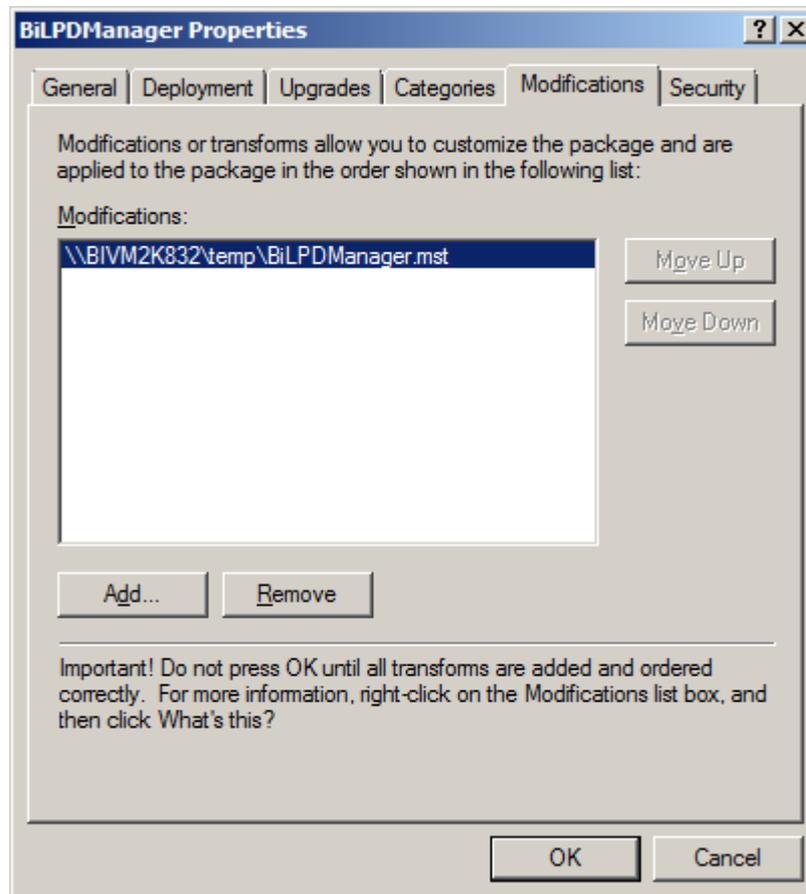
10. Copy the Install packages to a network share which is accessible from the computers where the software needs to be installed.



11. Select **Advanced** Software Deployment.

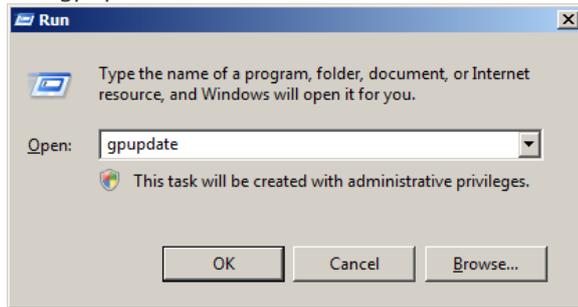


12. On the Modifications tab, please **add the previously created mst** file with the REGNUM and optionally the TARGETDIR or other properties. Click OK.



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

Run *gpupdate*

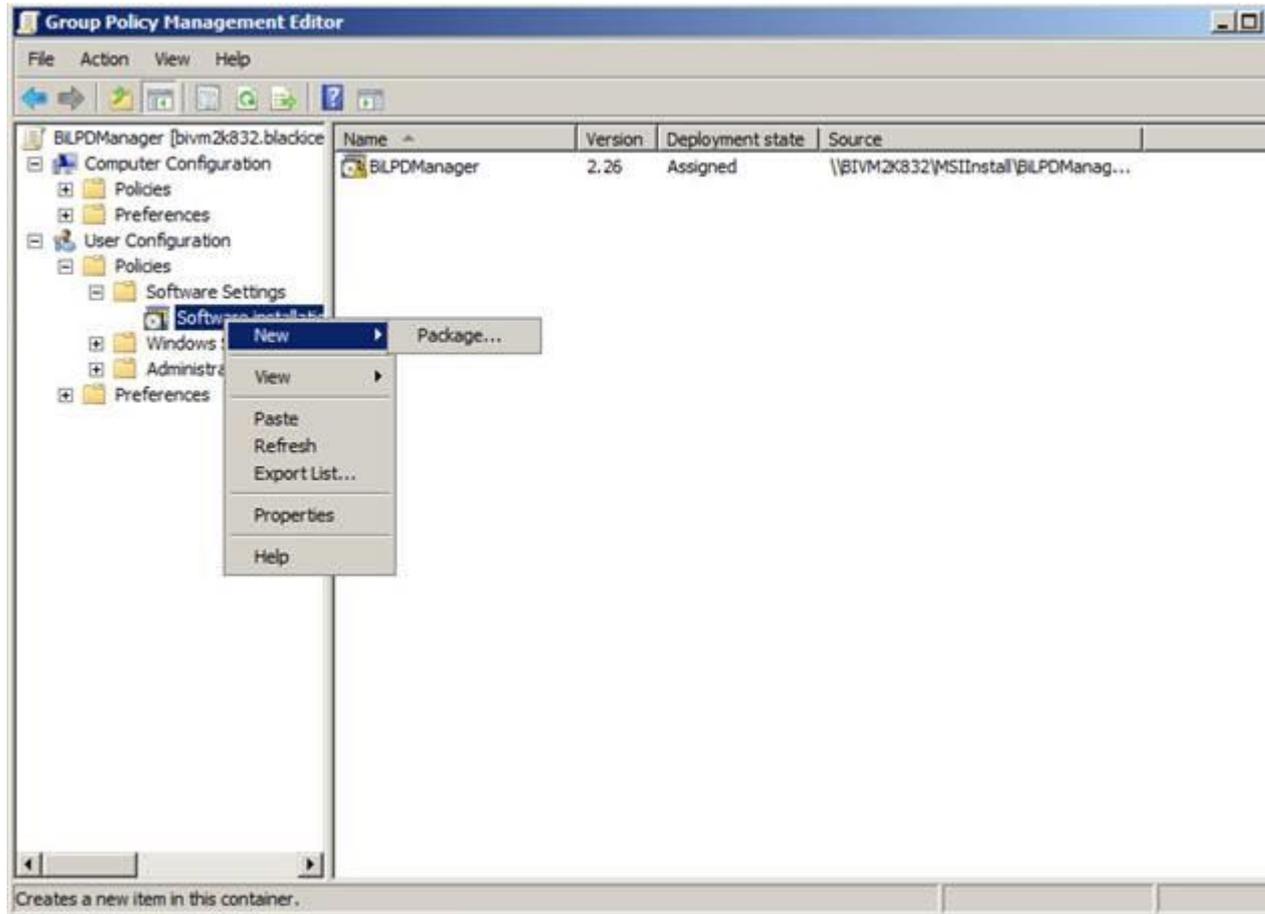


14. Restart the client computers to install the software.

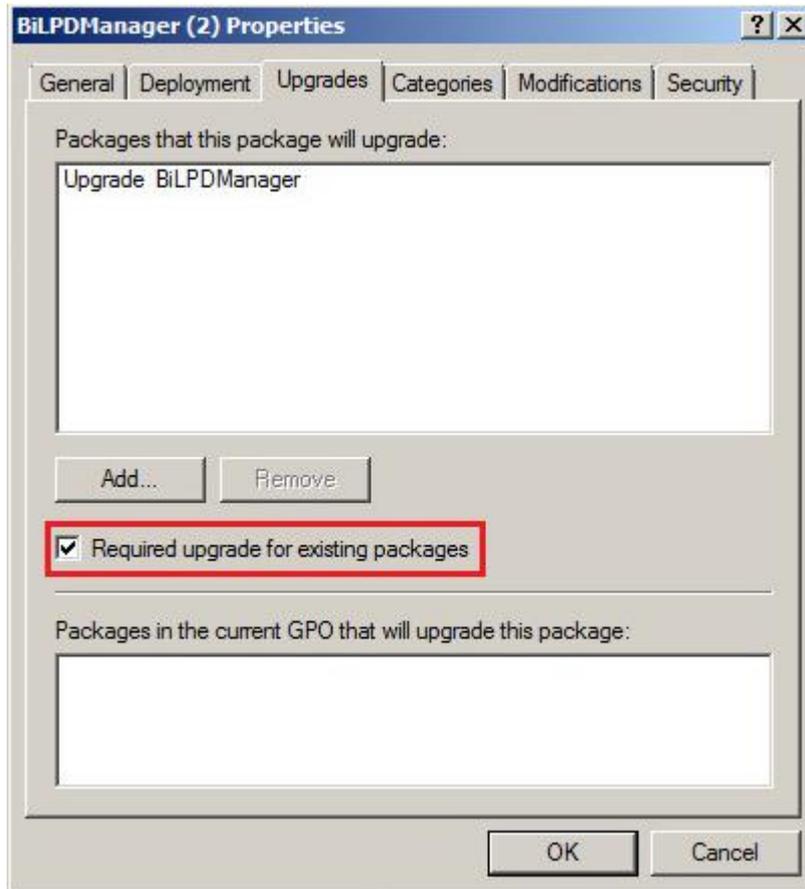
How to upgrade existing installation of BiLPDManager using Group Policy Object

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

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

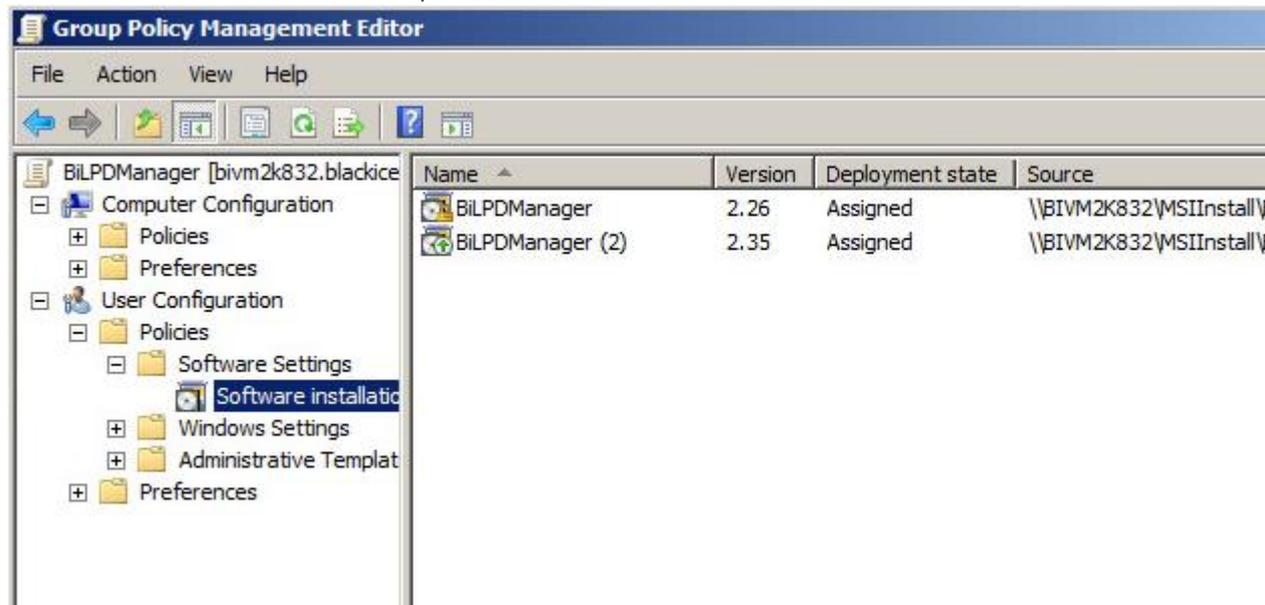


2. Right click in the open area, choose **New > Package...**
3. Navigate to the new version of the BiLPDManager MSI you want to use to upgrade your existing installations.
4. In the **Upgrades** tab select "**Required upgrade for existing packages**".



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

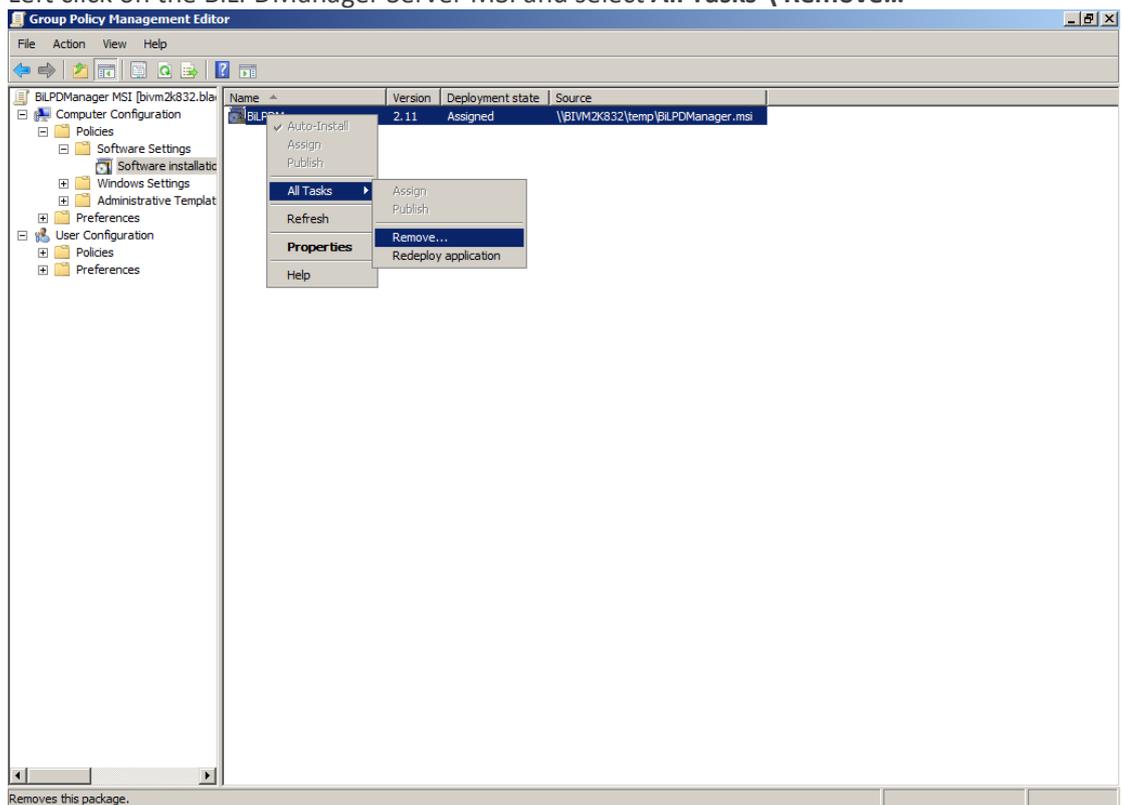
- When the Group Policy Object configuration is finished the Software installation window should look similar to the picture below:



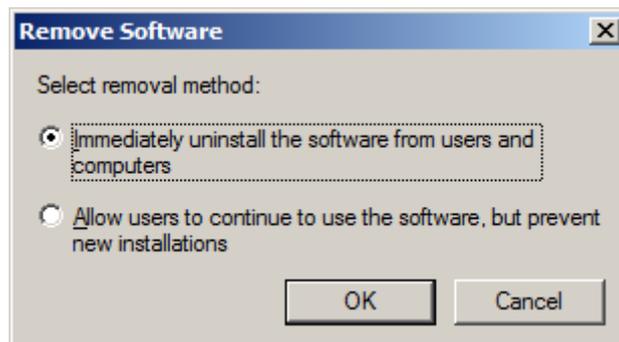
How to uninstall the BiLPDManager Server with MSI using GPO

1. Navigate to and Edit the previously created Group Policy Object by left clicking on the GPO name and selecting **Edit**.
2. Select the BiLPDManager Server MSI installer package.
Navigate to: **Computer Configuration \ Policies \ Software Settings \ Software installation**

Left click on the BiLPDManager Server 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.

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](#)

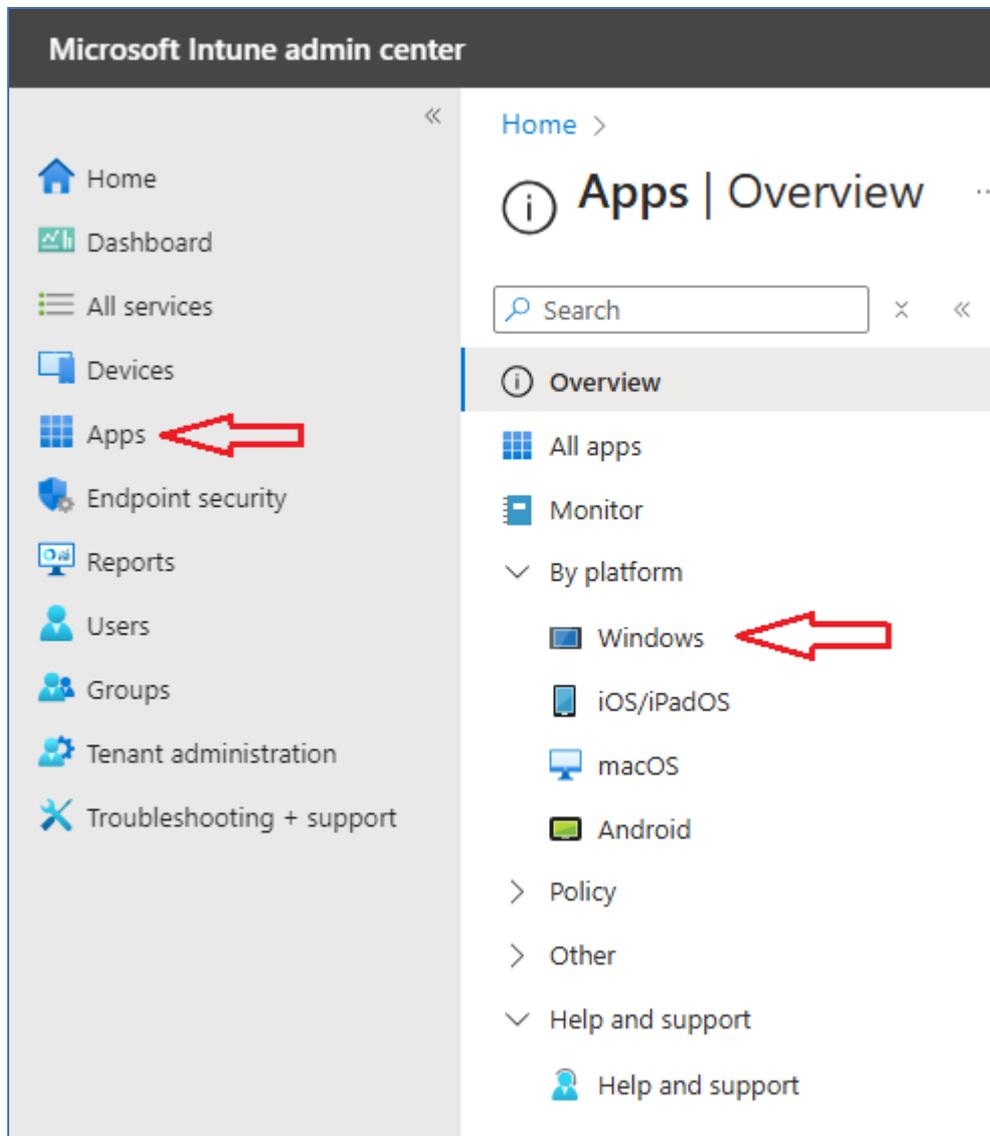
[Update/Upgrade a Printer Driver](#)

[Uninstall a Printer Driver](#)

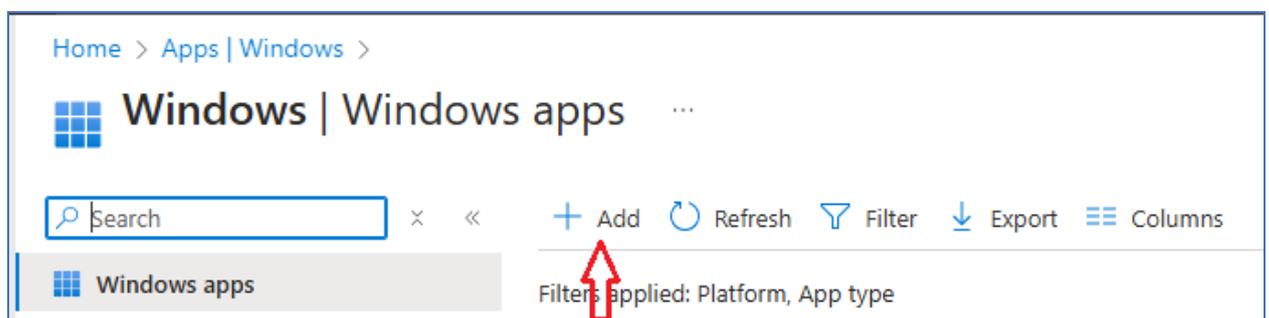
Install the MSI installer with the “Line-of-business app” option

Login to [Microsoft Intune admin center](#)

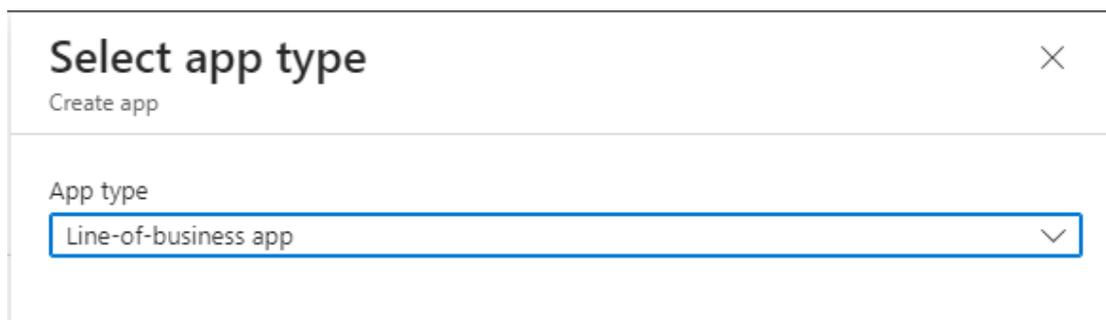
Navigate to the Apps -> Windows:



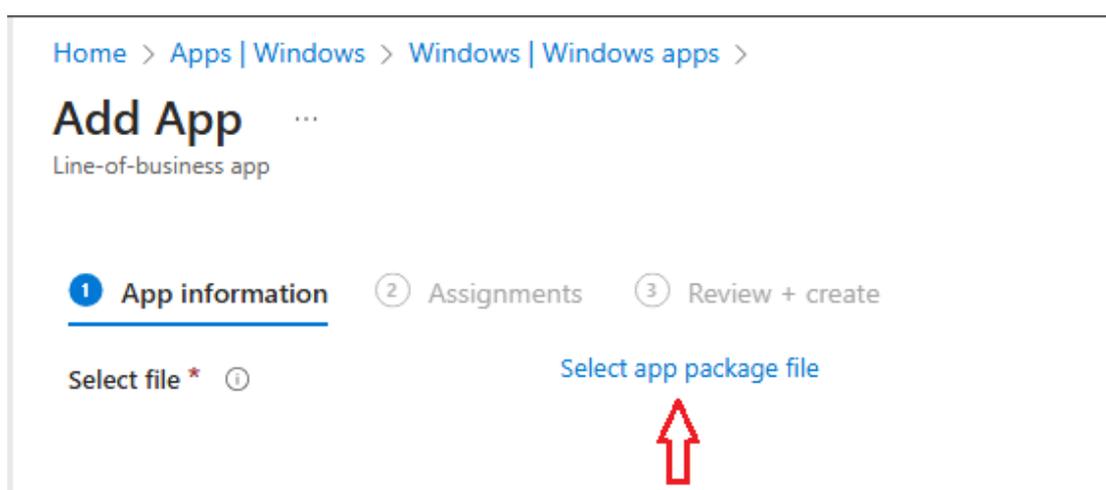
Click on **+Add** to add a new Intune application for deployment.



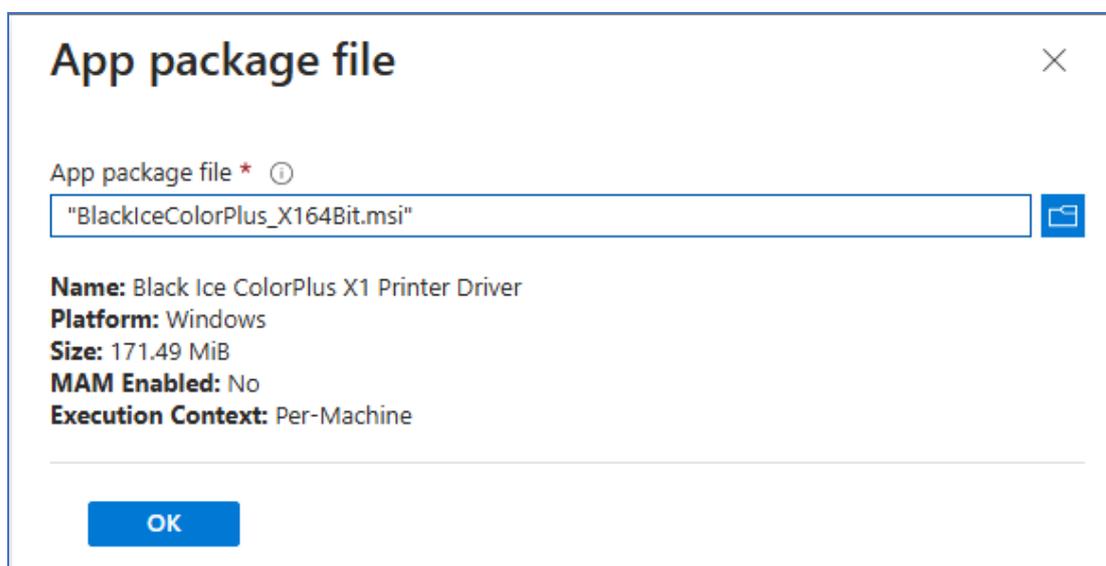
Select the **Line-of-Business app** - App Type drop-down menu from the Add app.



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 * ⓘ Black Ice ColorPlus X1 Printer Driver

[Edit Description](#)

Publisher * ⓘ Black Ice Software LLC

App install context ⓘ User Device

Ignore app version ⓘ Yes No

Command-line arguments `/q REGNUM="XXXXX-XXXXXXXX-XXXXXXXXXX"`

Category ⓘ 0 selected

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

Information URL ⓘ Enter a valid url

Privacy URL ⓘ Enter a valid url

Developer ⓘ

Owner ⓘ

Notes ⓘ

Logo ⓘ [Select image](#)

[Previous](#) [Next](#)

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	<input type="text" value="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			

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

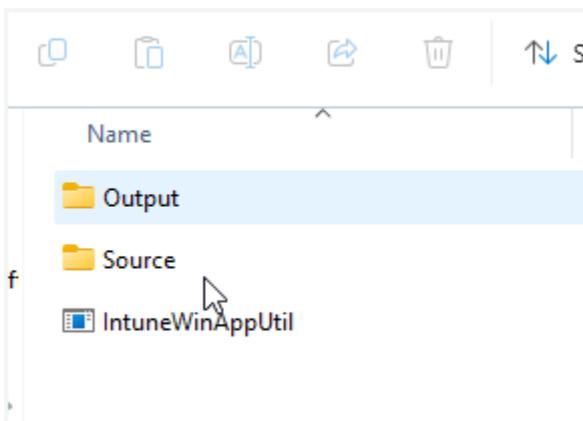
Install the MSI installer with the Windows app (Win32) option

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

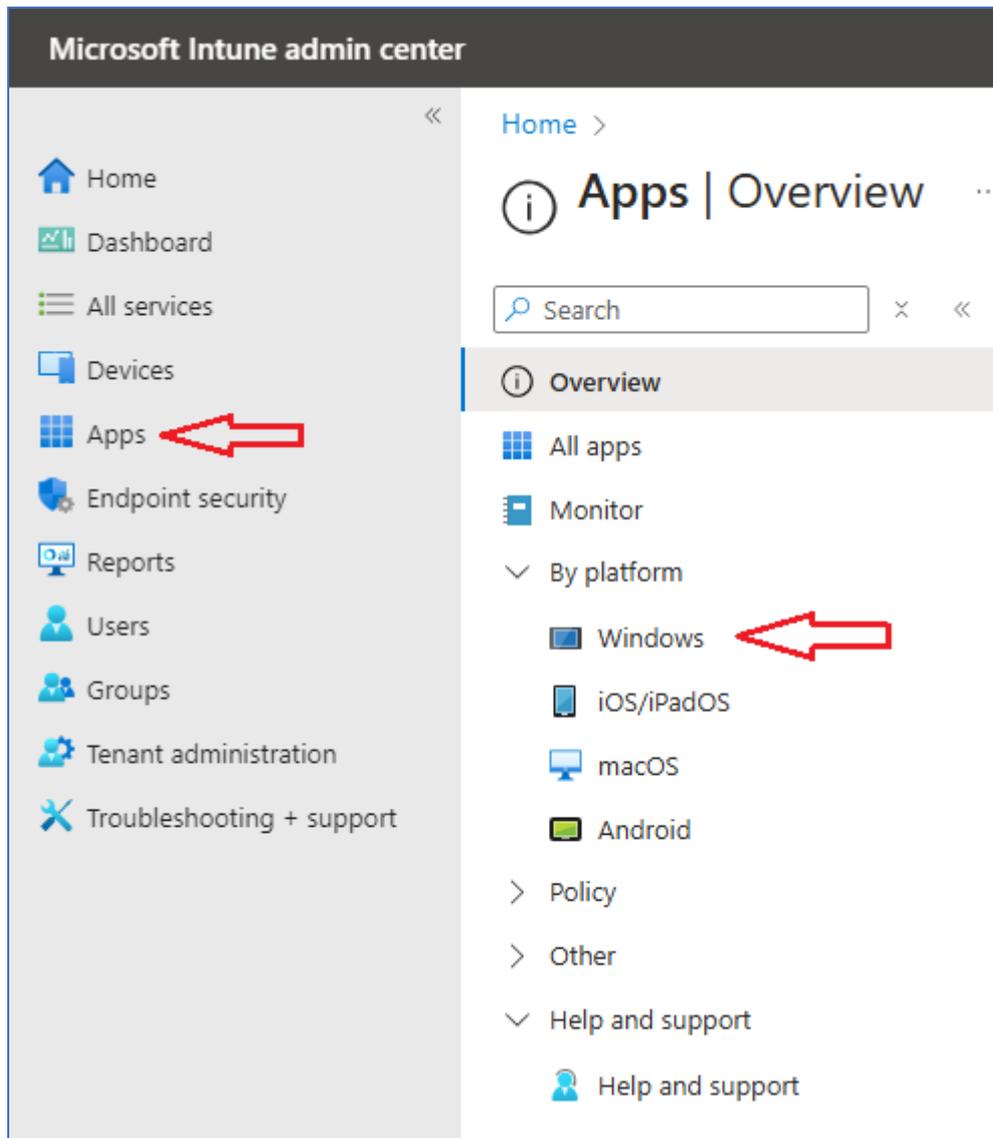
Organize Your Files: Create a dedicated folder, such as 'Microsoft Win32 Content Prep', and within it, establish Source and Output subfolders for better management of the original and converted files.



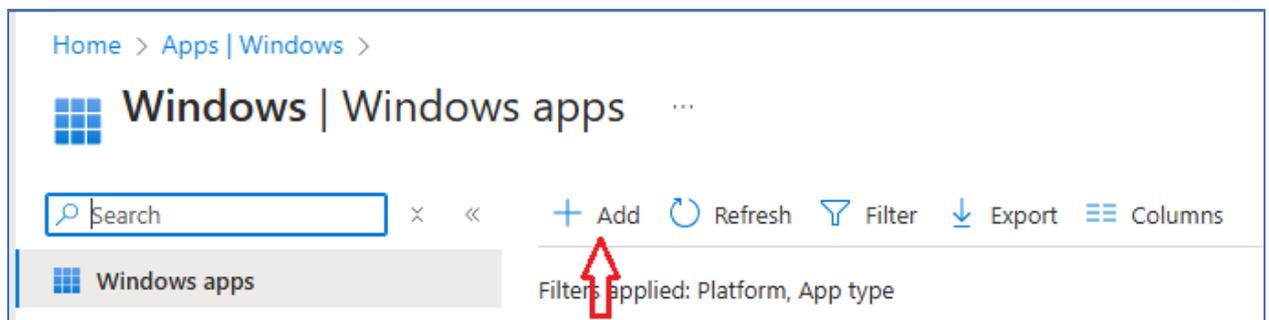
Run the **IntuneWinAppUtil** tool with the following parameters:
IntuneWinAppUtil.exe -c "C:\Microsoft Win32 Content Prep\Source" -s
"BlackIceColorPlus_X164Bit.msi" -o "C:\Microsoft Win32 Content Prep\Output"

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

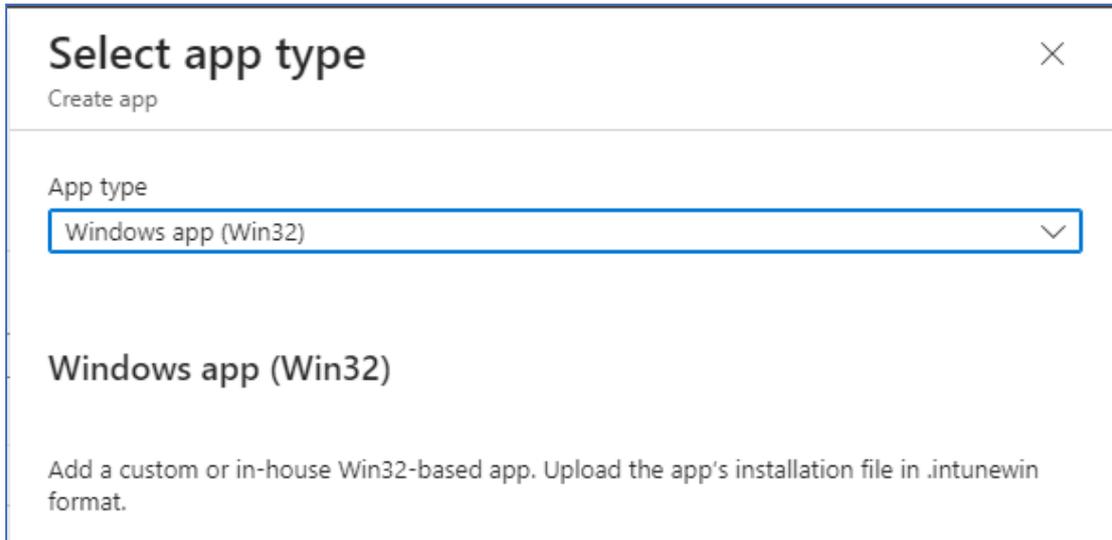
Login to [Microsoft Intune admin center](#)
Navigate to the Apps -> Windows:



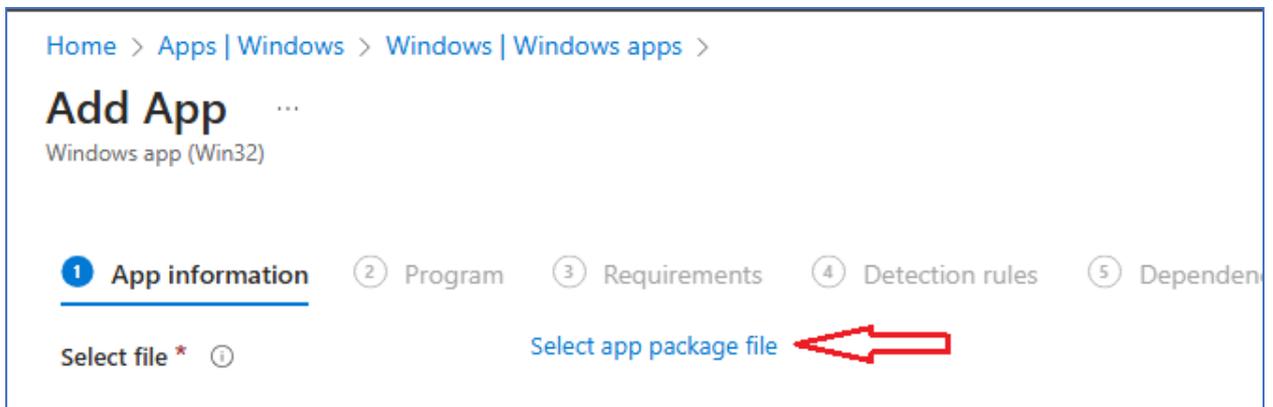
Click on **+Add** to add a new Intune application for deployment.



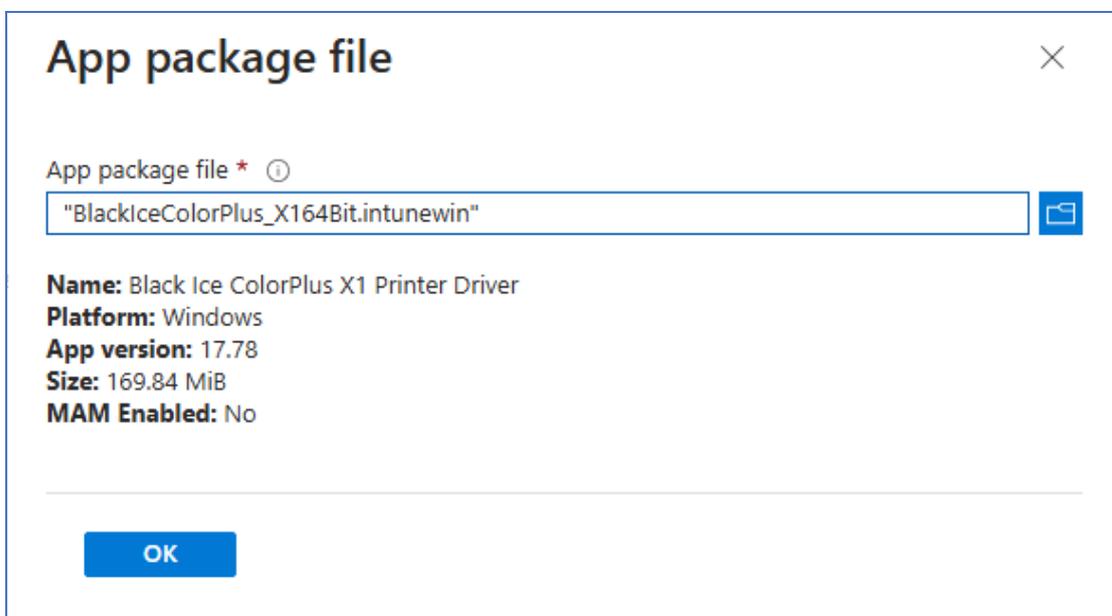
Select the **Line-of-Business app** - App Type drop-down menu from the Add app.



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.

Home > Apps | Windows > Windows | Windows apps >

Add App

Windows app (Win32)

1 App information 2 Program 3 Requirements 4 Detection rules 5 Dependencies 6 Supers

Select file *

Name *

Description *

[Edit Description](#)

Publisher * 

App Version

Category

Show this as a featured app in the Company Portal

Information URL

Privacy URL

Developer

Owner

Notes

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](#)

 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.

Required ⓘ

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

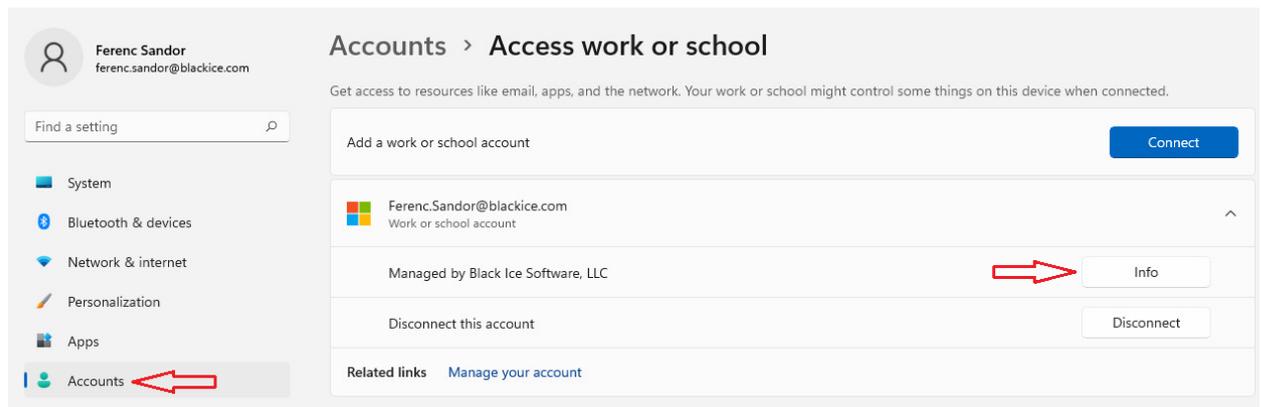
Once the application is deployed from Microsoft Intune, it can be synced to a device by following the below steps:

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.

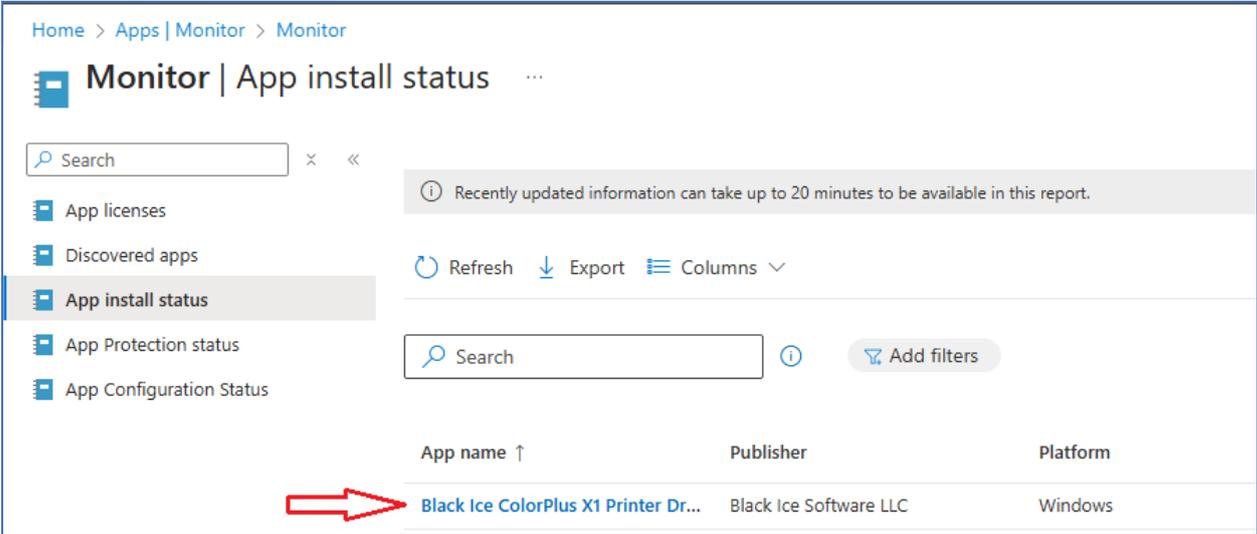
Optional: Restart your machine if the app does not appear on your device.

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. The left sidebar contains navigation options: 'App licenses', 'Discovered apps', 'App install status' (highlighted), 'App Protection status', and 'App Configuration Status'. A notification banner 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 and 'Add filters' button are located above the table. The table has columns for 'App name ↑', 'Publisher', and 'Platform'. A red arrow points to the first row of the table.

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

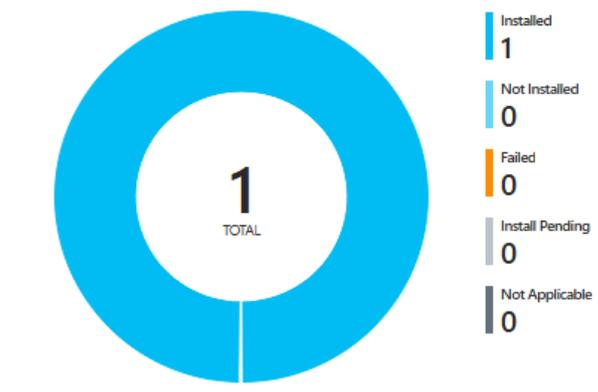
Overview

- 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

Device 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.

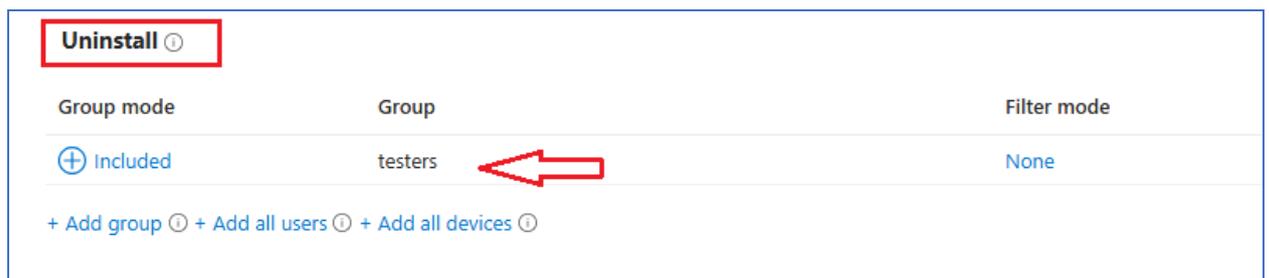
In the **Add group** pane, select **Uninstall**.

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

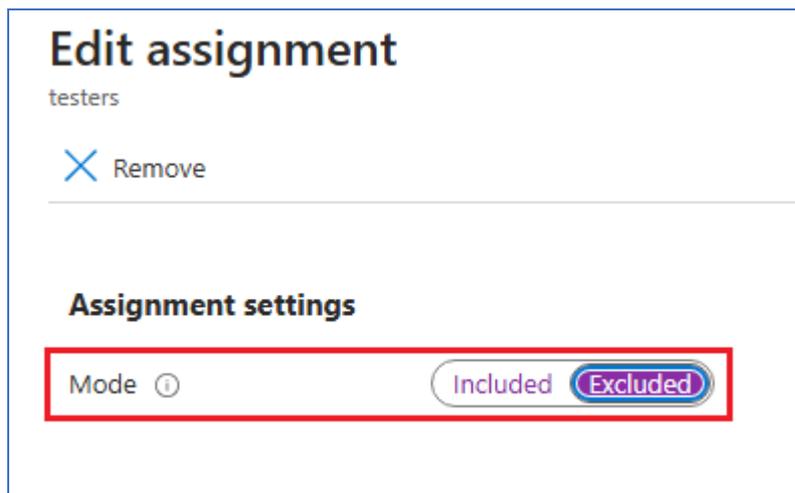
Select the groups that you want to apply the uninstall assignment.

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 BiLPDManager Server with SCCM

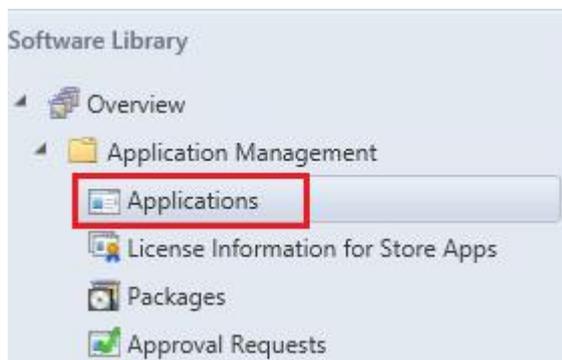
To deploy the BiLPDManager Server MSI installer with SCCM (System Center Configuration Manager), please follow the steps below how to create an Application package for BiLPDManager Server in SCCM.

Open the System Center Configuration Manager

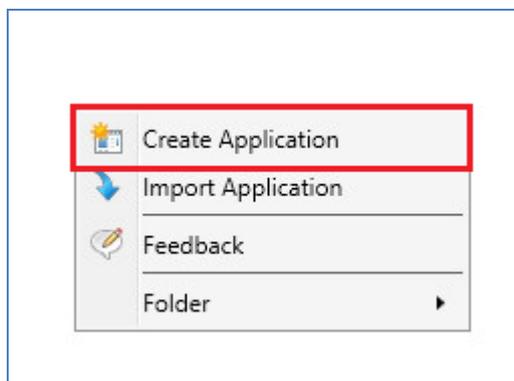
Navigate to Software Library



Select Applications



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

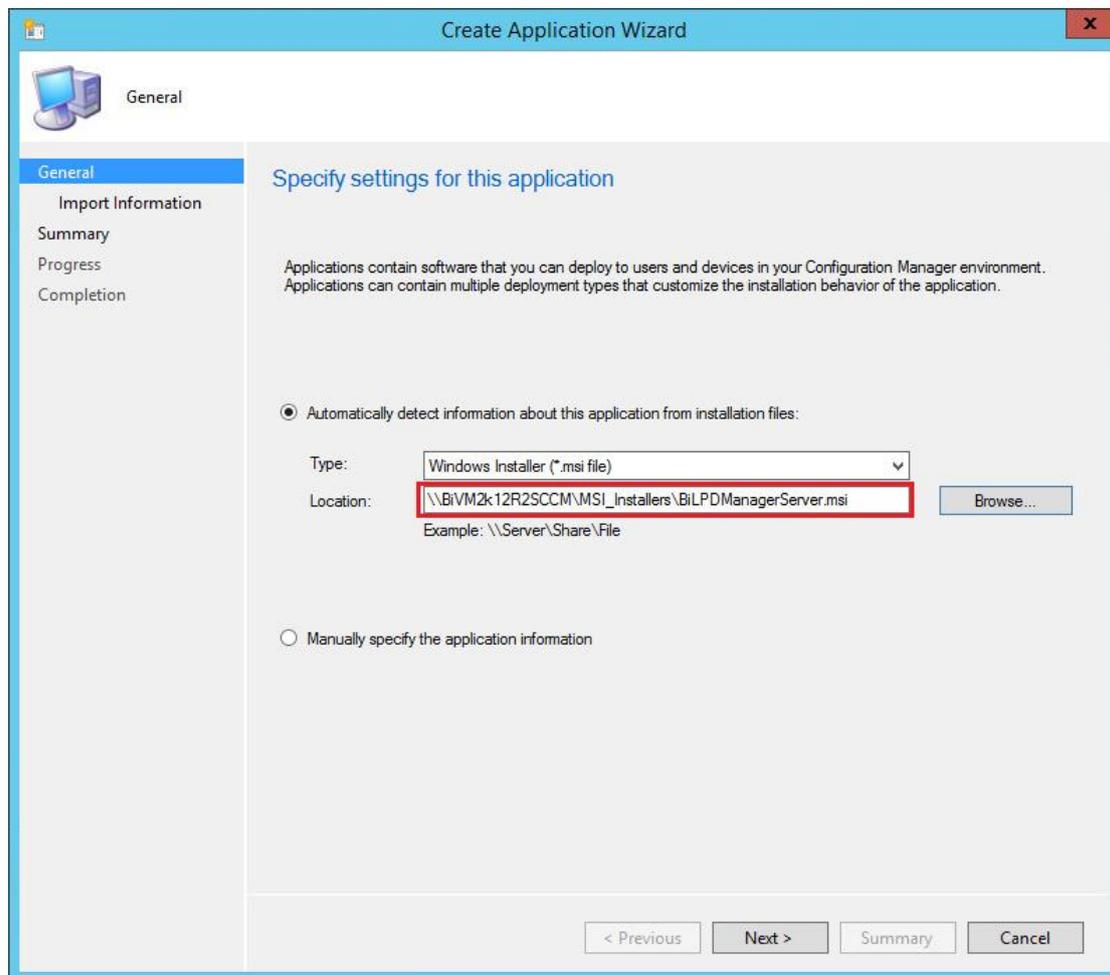


Add MSI installer file (Example:

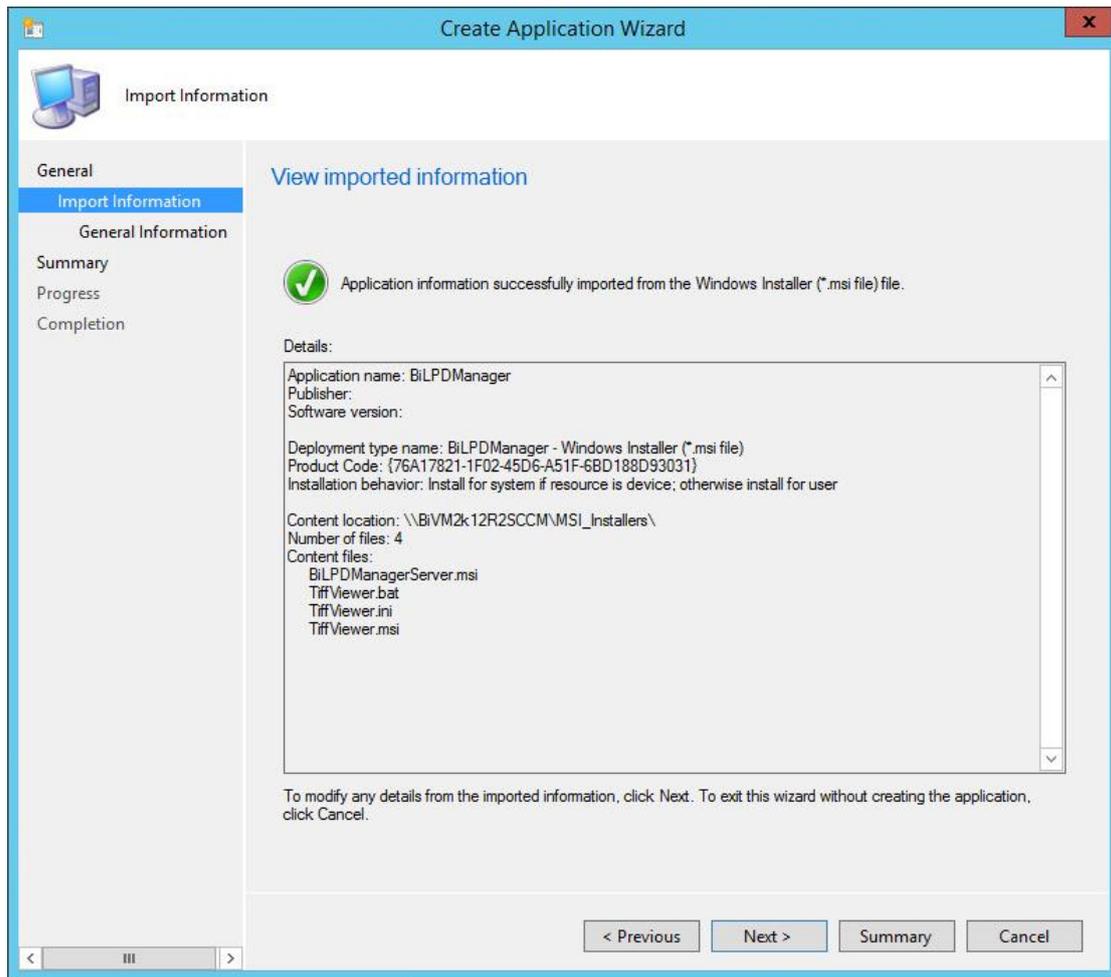
[\\BiVM2k12R2SCCM\MSI_Installers\BiLPDManagerServer.msi](#))

Type: Windows Installer (*.msi file)

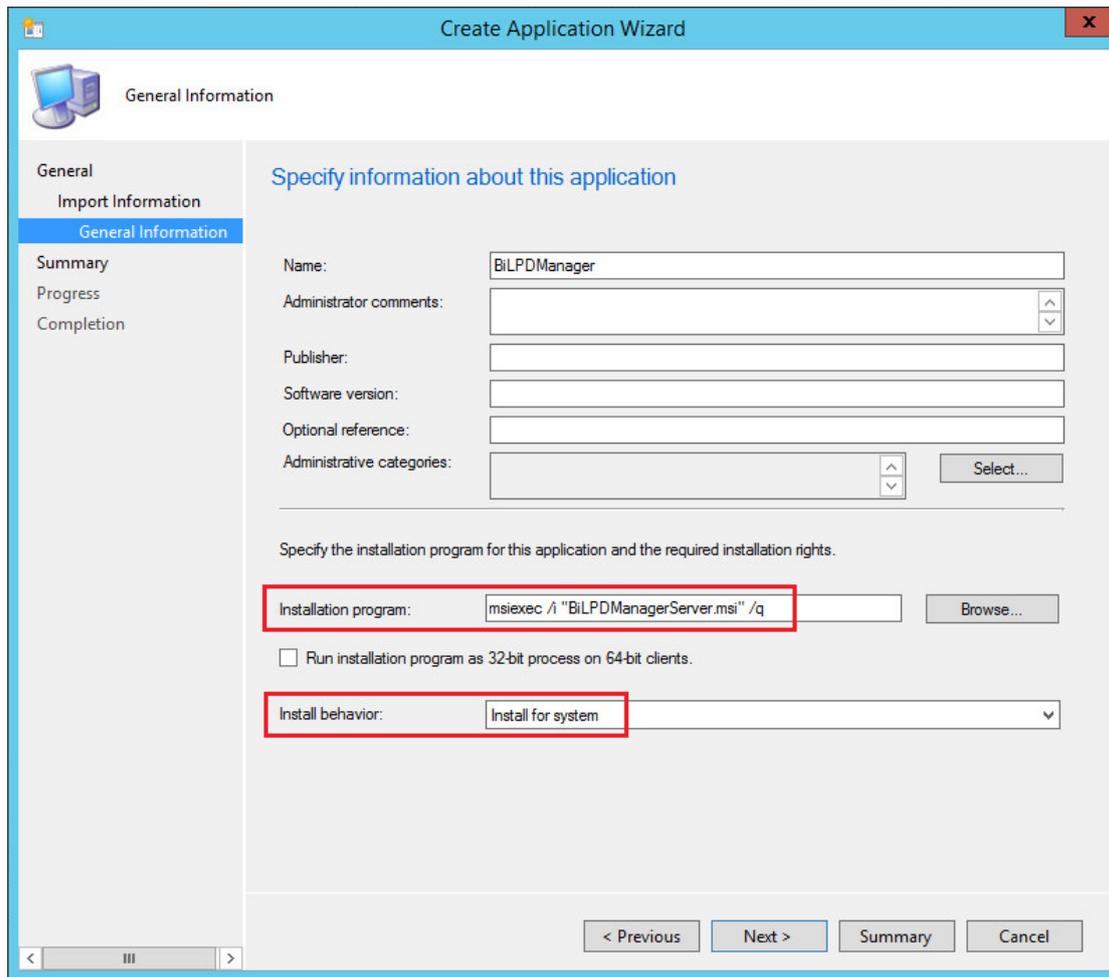
Note: The location file from shared directory on SCCM server.



Click **Next** button.



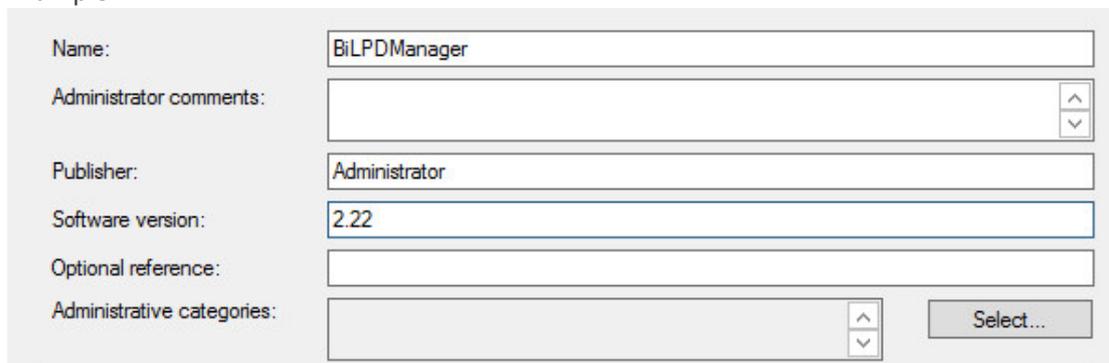
Click **Next** button.



Configure the following entries:

- Publisher
- Software version

Example:



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

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

Installation program:

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 " BiLPDManagerServer.msi" CUSTOMINI="%randomname%  
BiLPDManagerServer.ini" CREGNUM=xxxxx-xxxxxxxx-xxxxxxxx /q
```

Installation program:

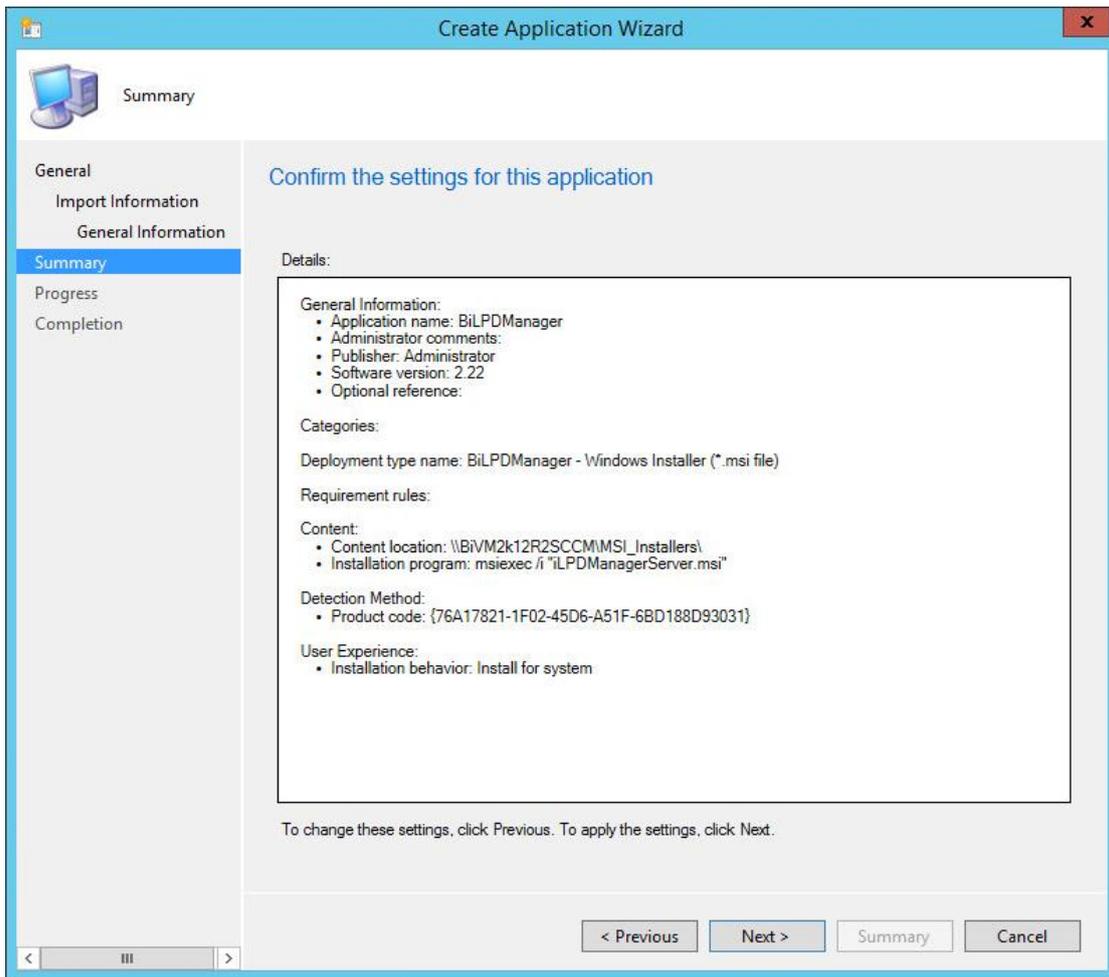
NOTE: The Installer behavior is **Install for system**.

Install behavior:

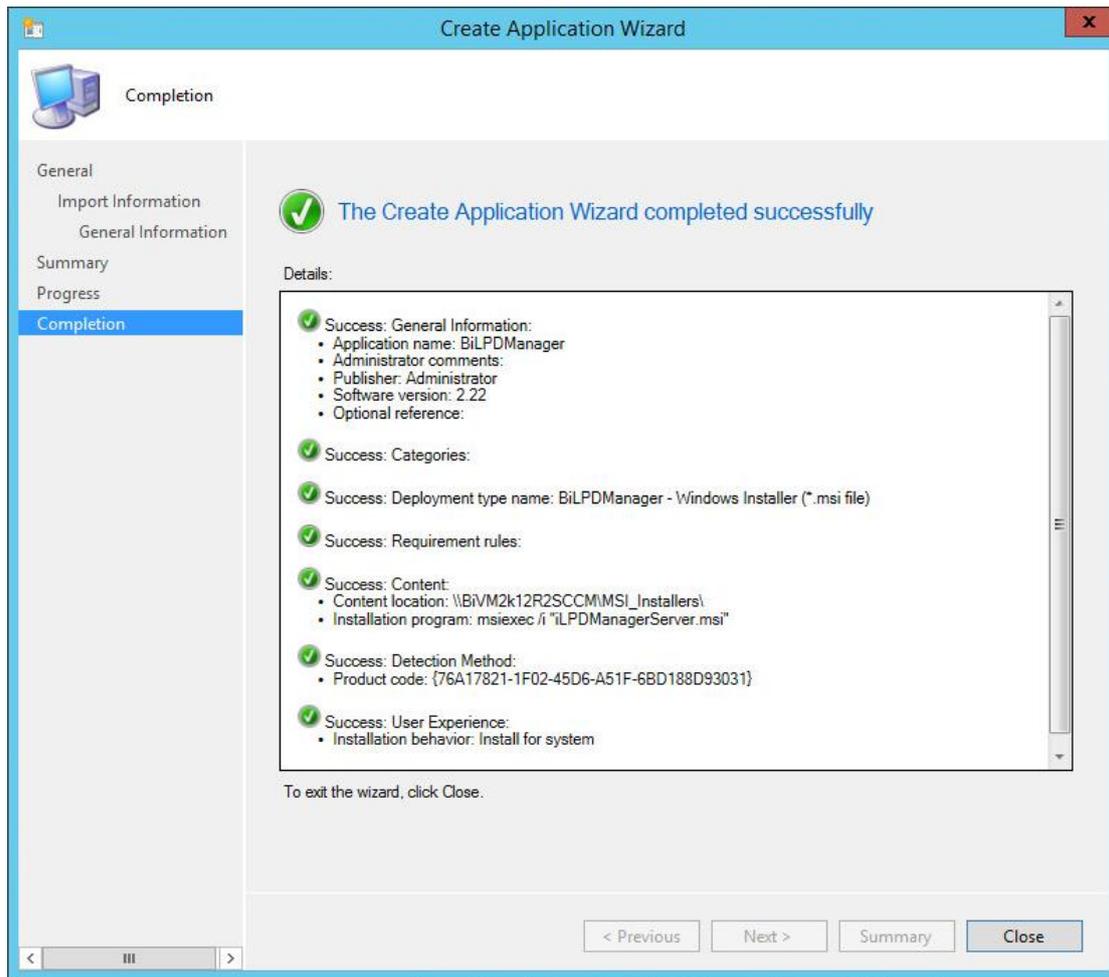
Check the **Run installation program as 32-bit process on 64-bit clients**.

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

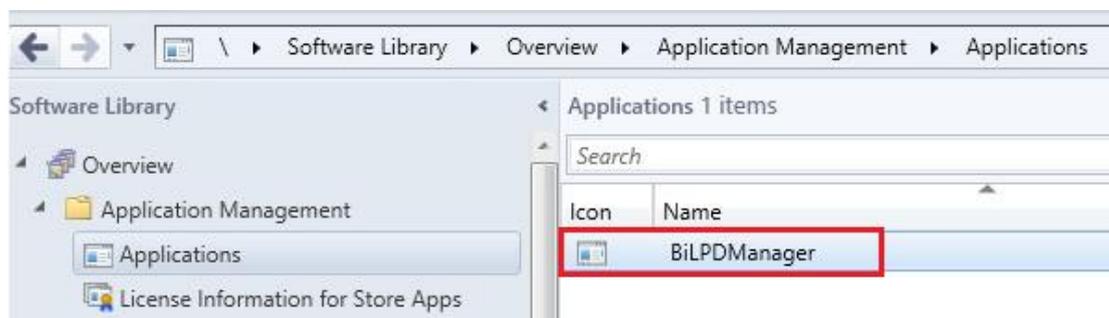
Click **Next** button.



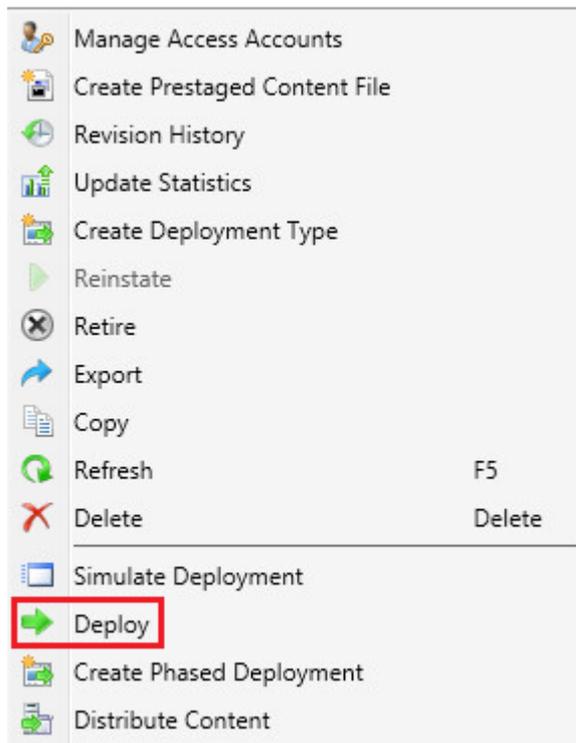
Click **Next** button.



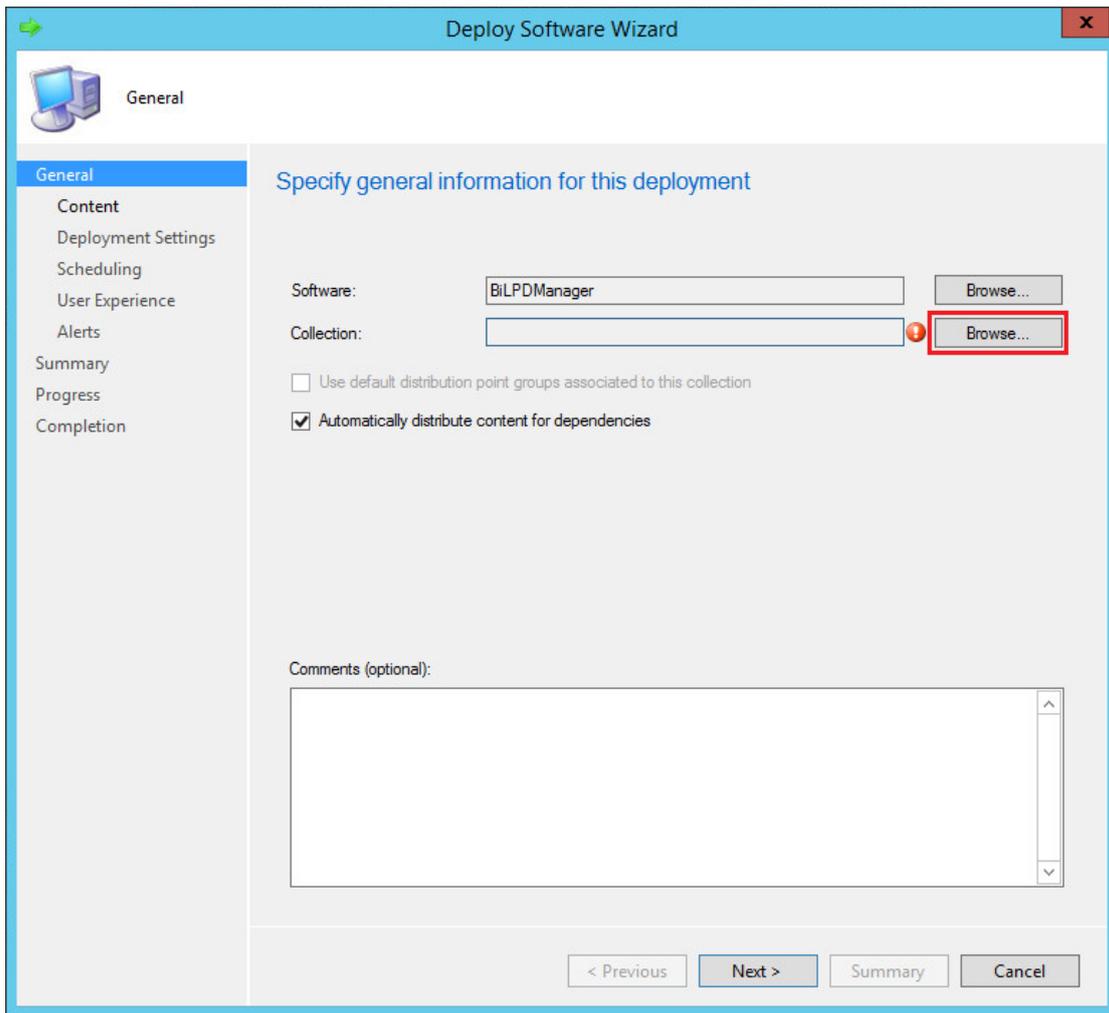
Click the **Close** button.
Finished the install package:



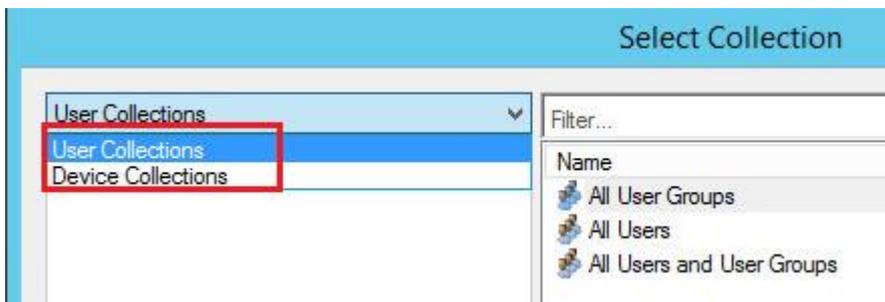
Install (**Deploy**) the Application to client(s)
Right click on Application (Example: Black Ice BiLPDManager Server)
Select the Deploy:



Click to Collection -> Browse... button.



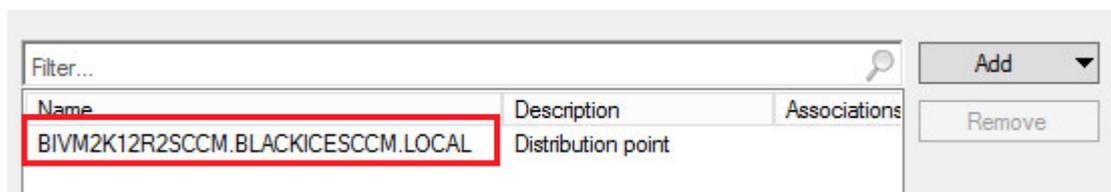
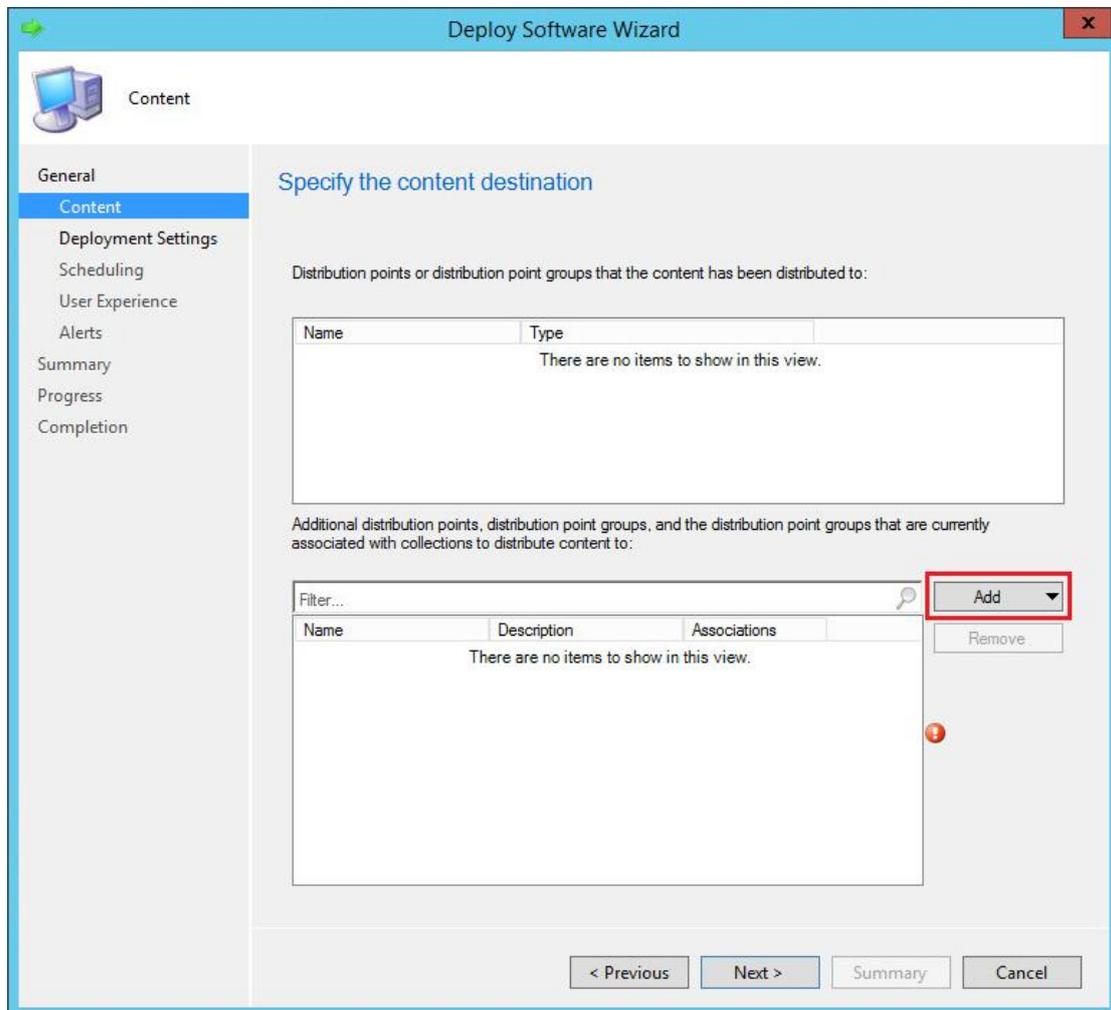
You can add Application to Users or Devices



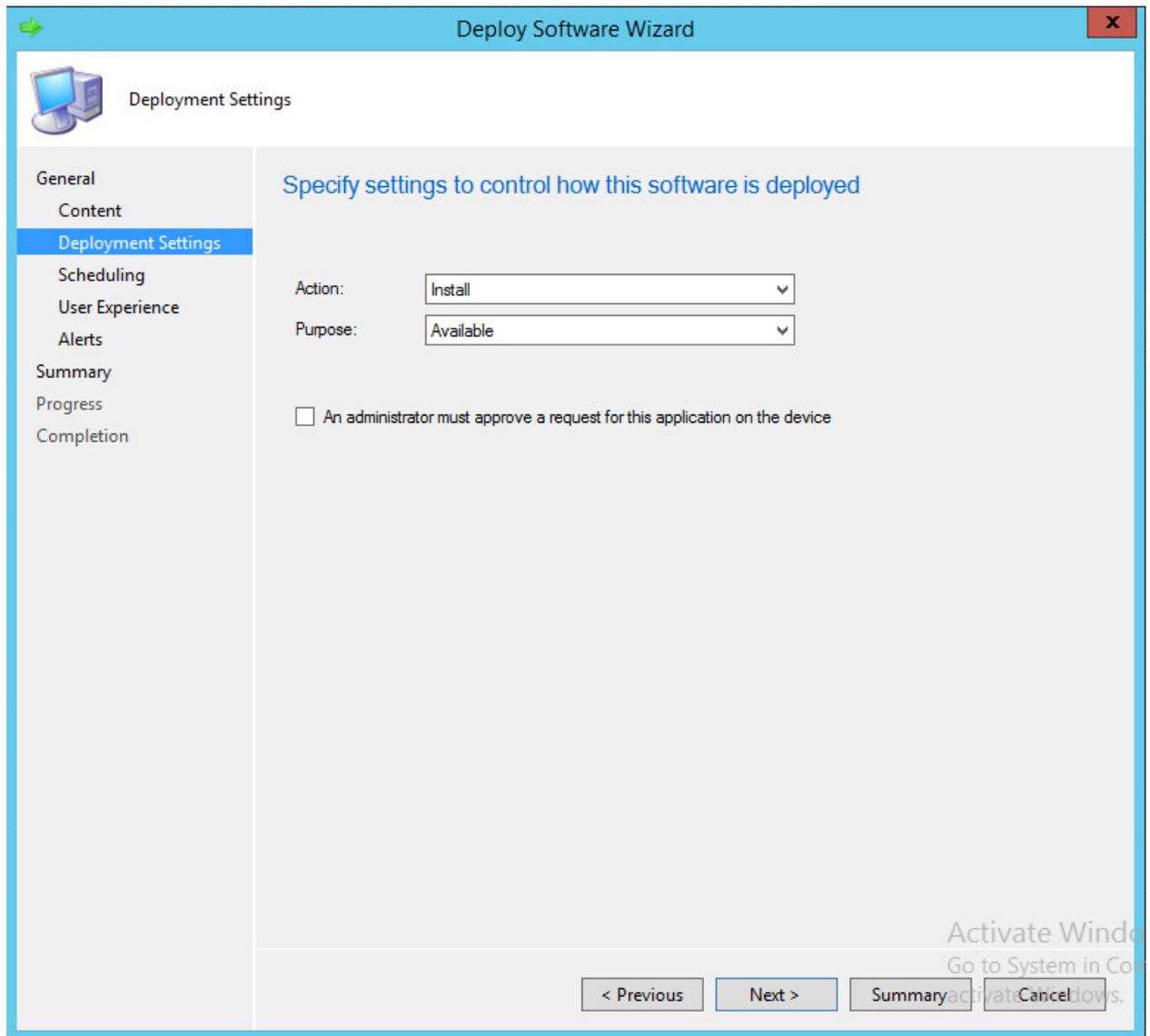
Install for Users, select the User Collections
Install for Computers, select the Device Collections

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

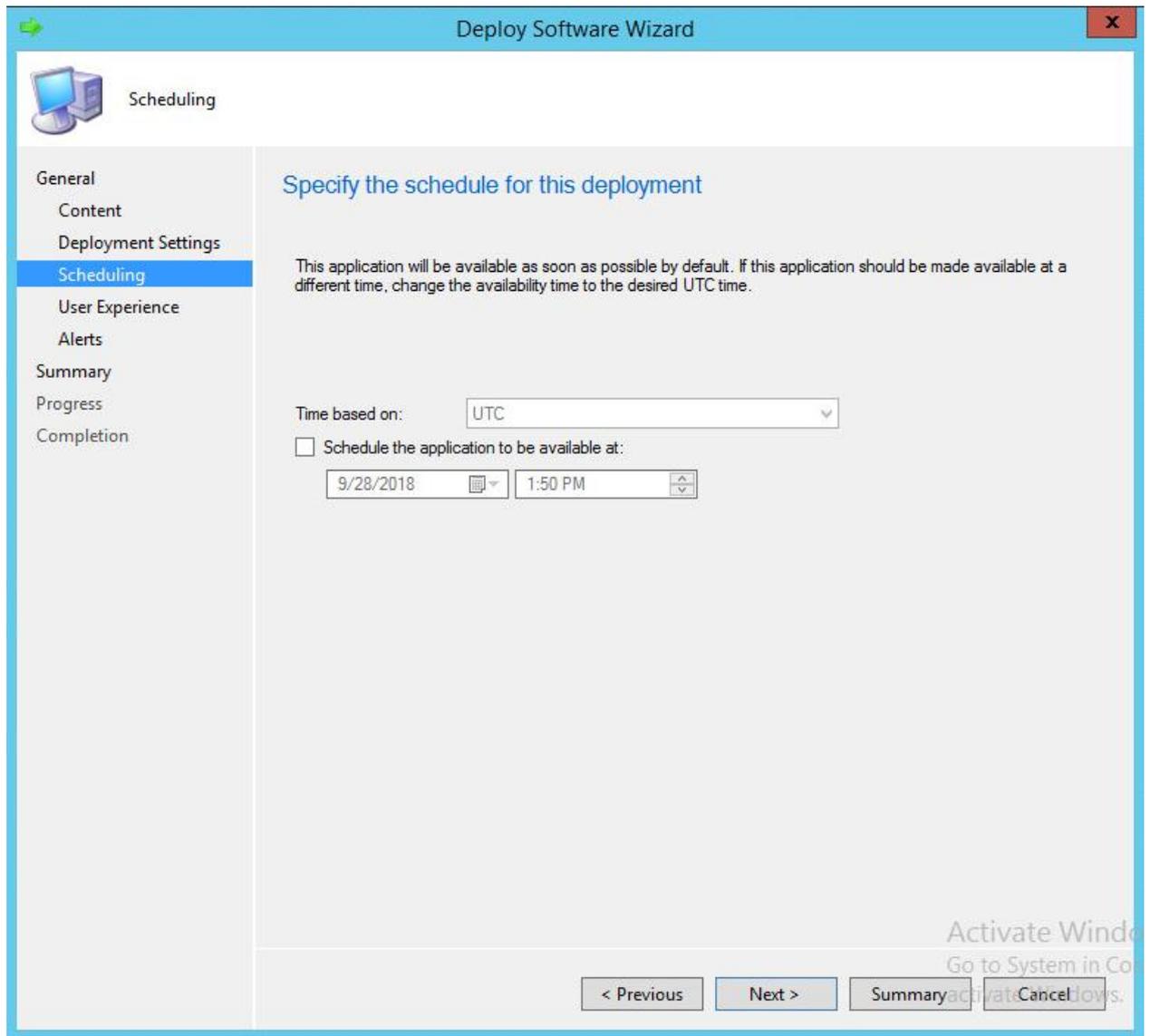
Click **Add** button and select the Distribution Point



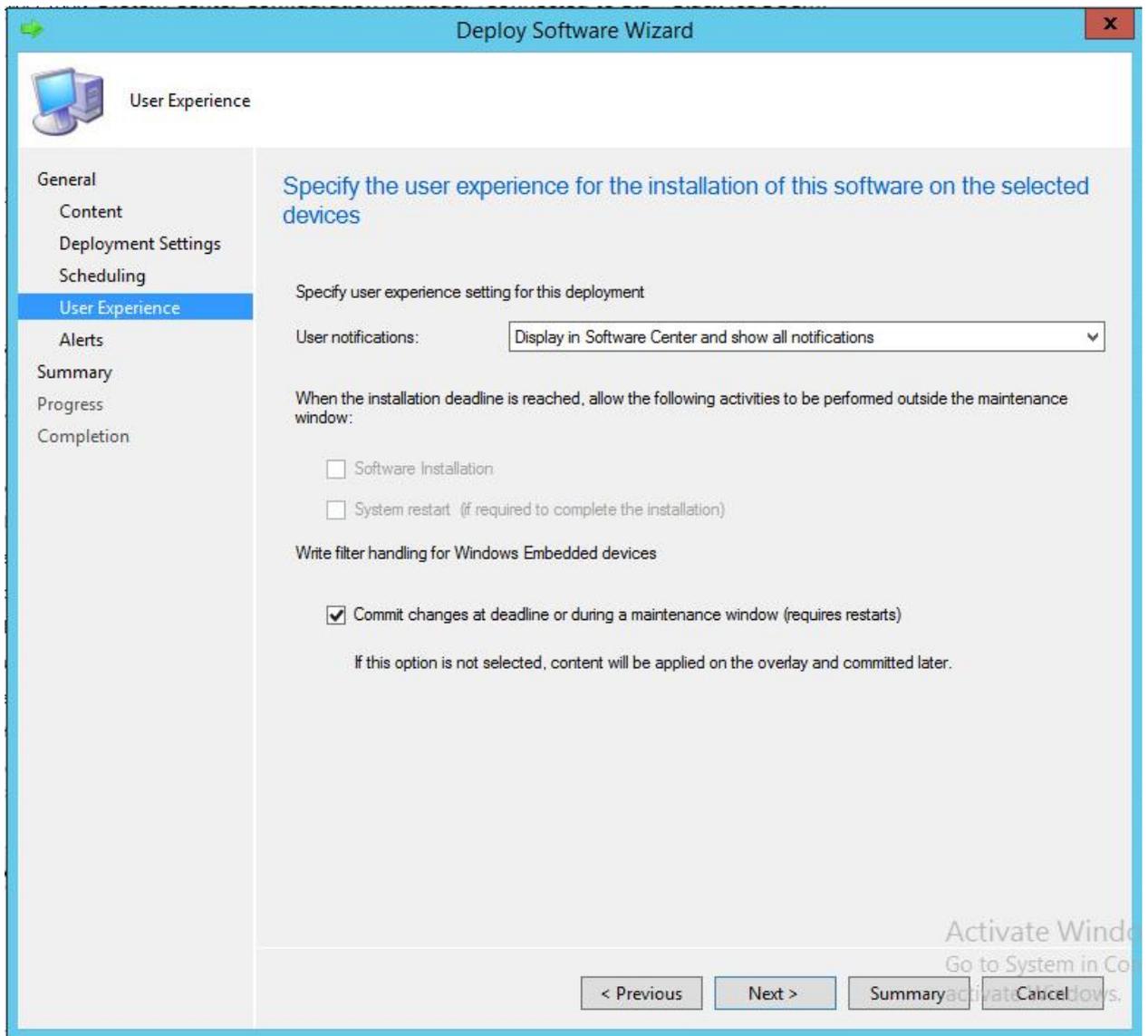
Click **Next** button.



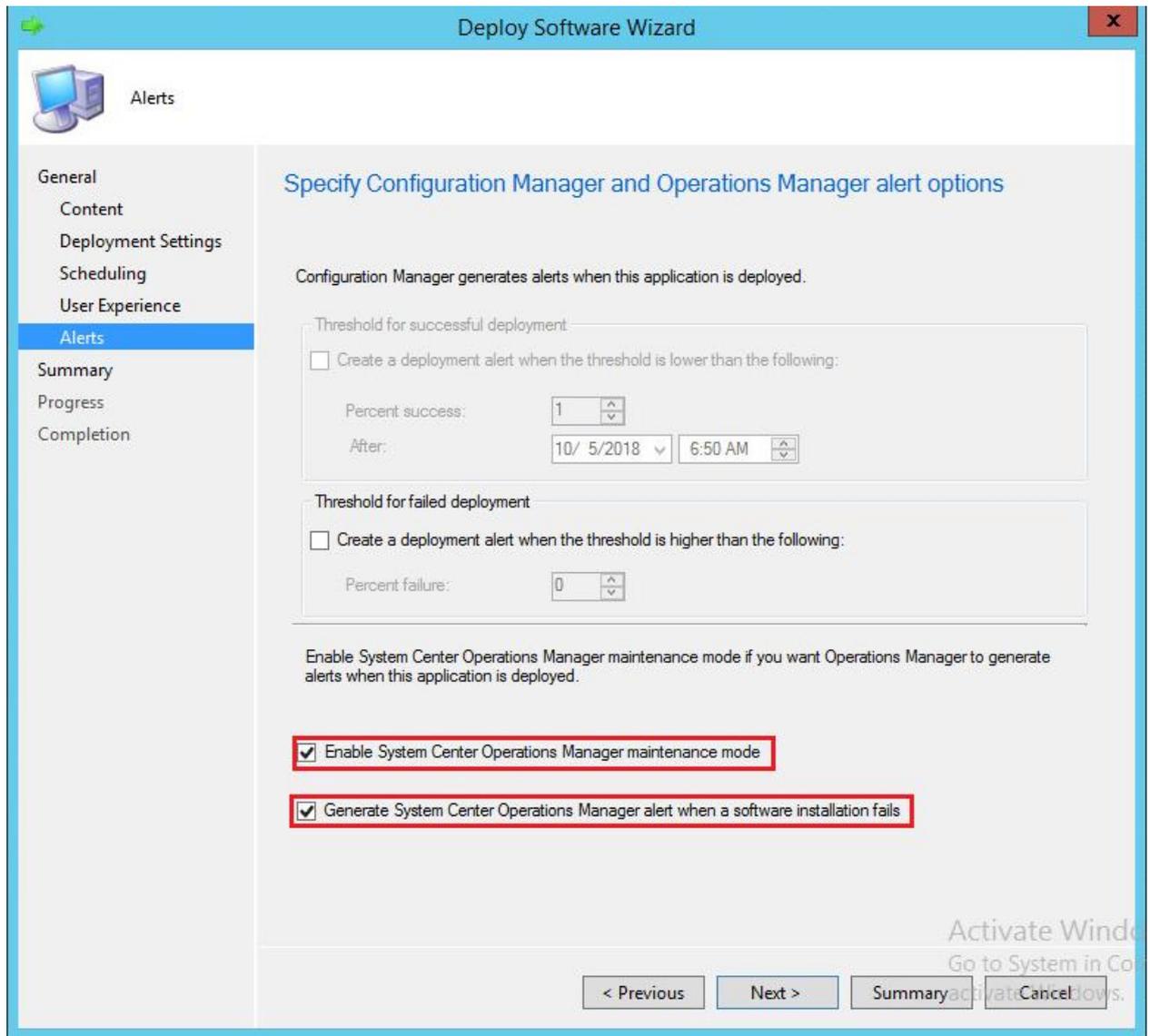
Use default settings and click **Next** button.
You can configure the installation time.



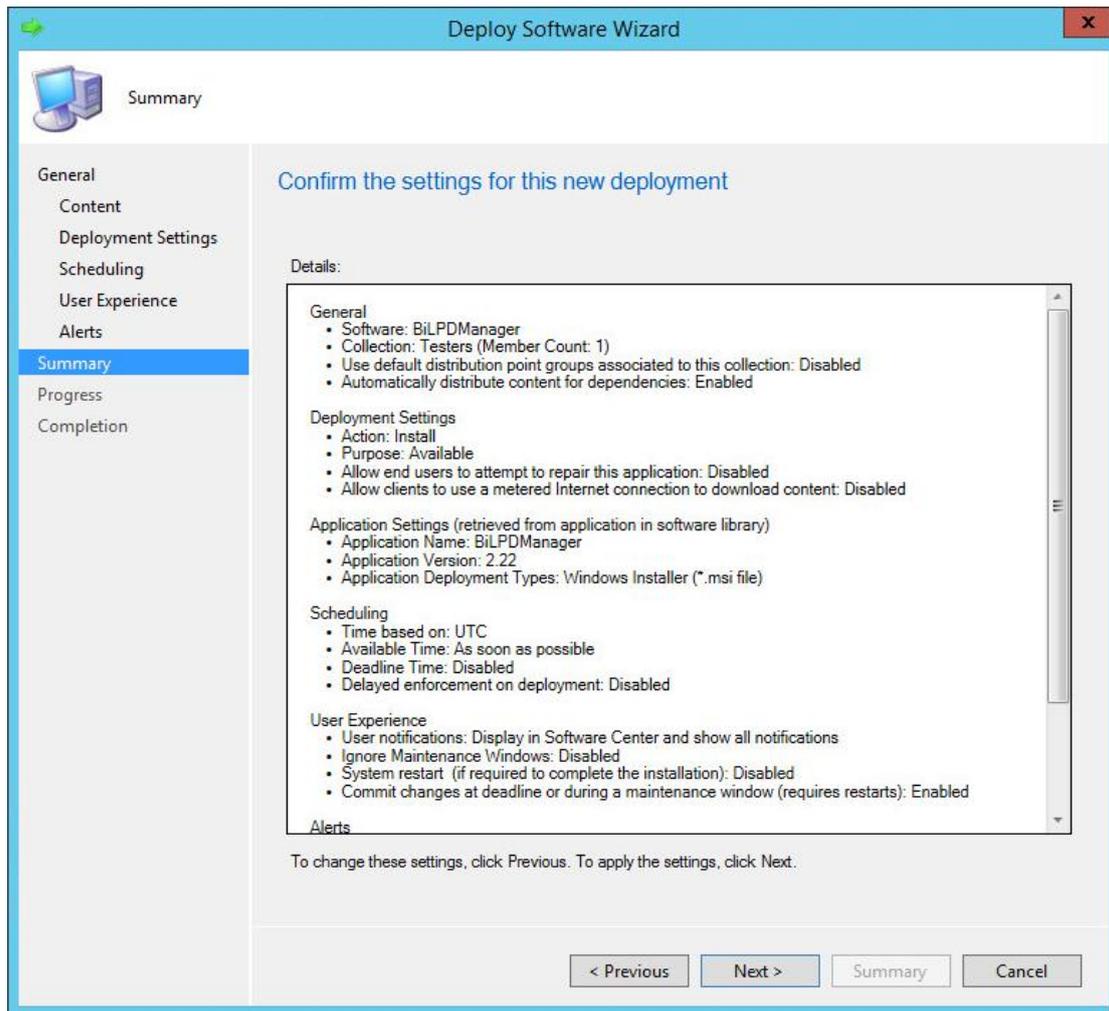
Click **Next** button.



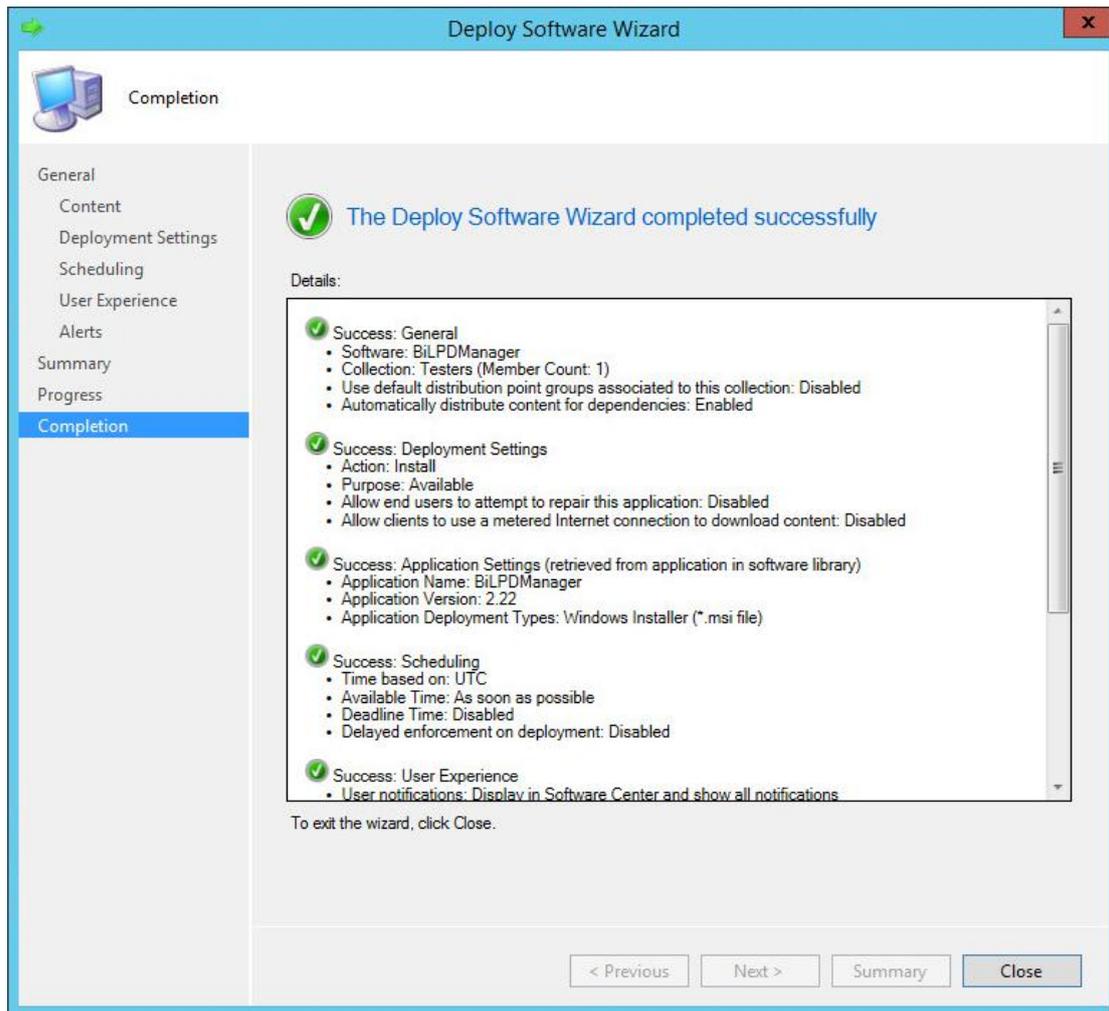
Click **Next** button.



Click **Next** button.



Click **Next** button.



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

Applications 1 items

Icon	Name	Deployment Types	Deployments	Status
	BiLPDManager	1	1	Active

BiLPDManager

Icon	Collection	Deployment Start Time	Purpose	Compliance %	Action
	Testers	11/23/2018 9:54 AM	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 Sta
- Site Server Status

Assets and Compliance

Software Library

Monitoring

Deployments 1 items

Icon	Software	Collection	Purpose
	BiLPDManager	Testers	Available

BiLPDManager Status to Testers

General

Software: BiLPDManager
 Collection: Testers
 Feature Type: Application
 Purpose: Available
 Date Created: 11/23/2018 1:54 AM
 Last Date Modified: 11/23/2018 1:54 AM

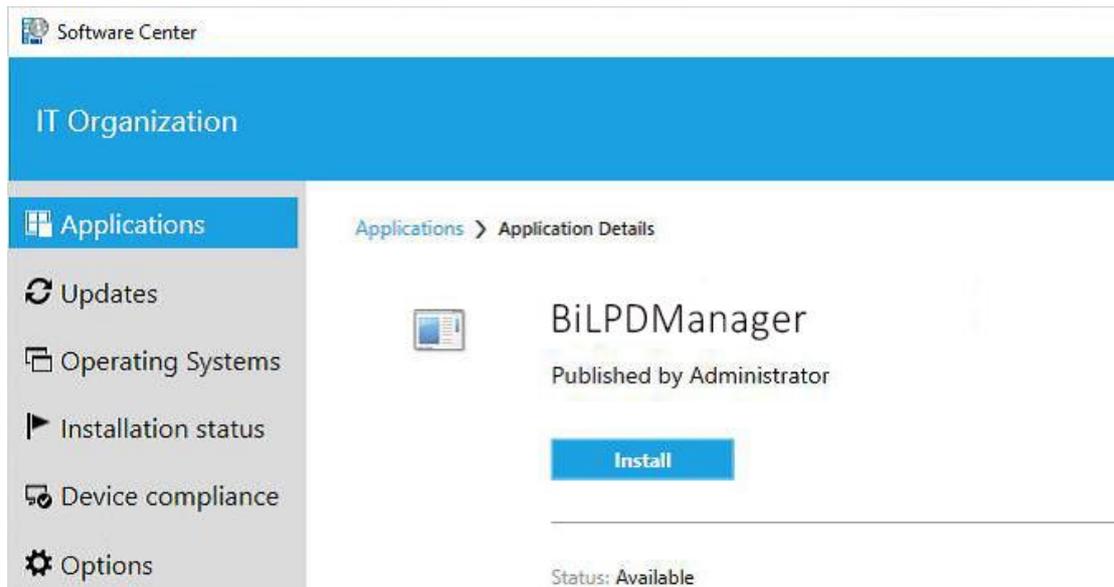
Completion Statistics

No Data (Last Update: Never)

- Success: 0
- In Progress: 0
- Error: 0
- Requirements No

Install the BiLPDManager Server MSI on client computers

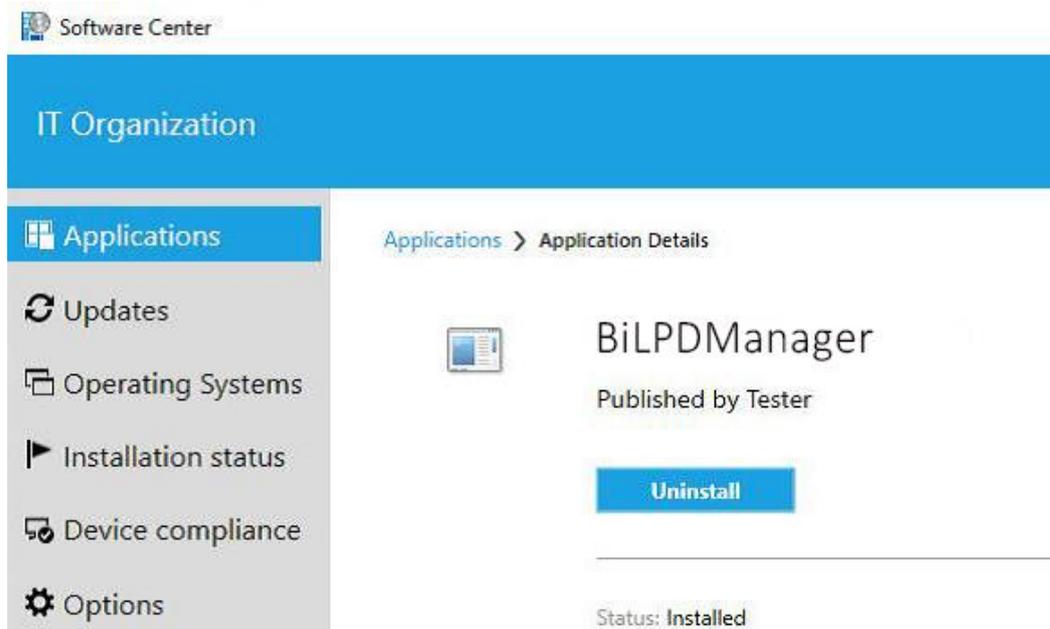
Open the **System Center** and select **Applications**.



Click **Install** button.

Uninstall the BiLPDManager Server MSI from client computer

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



Click **Uninstall** button.

Publishing BiLPDManager Server with Citrix XenApp

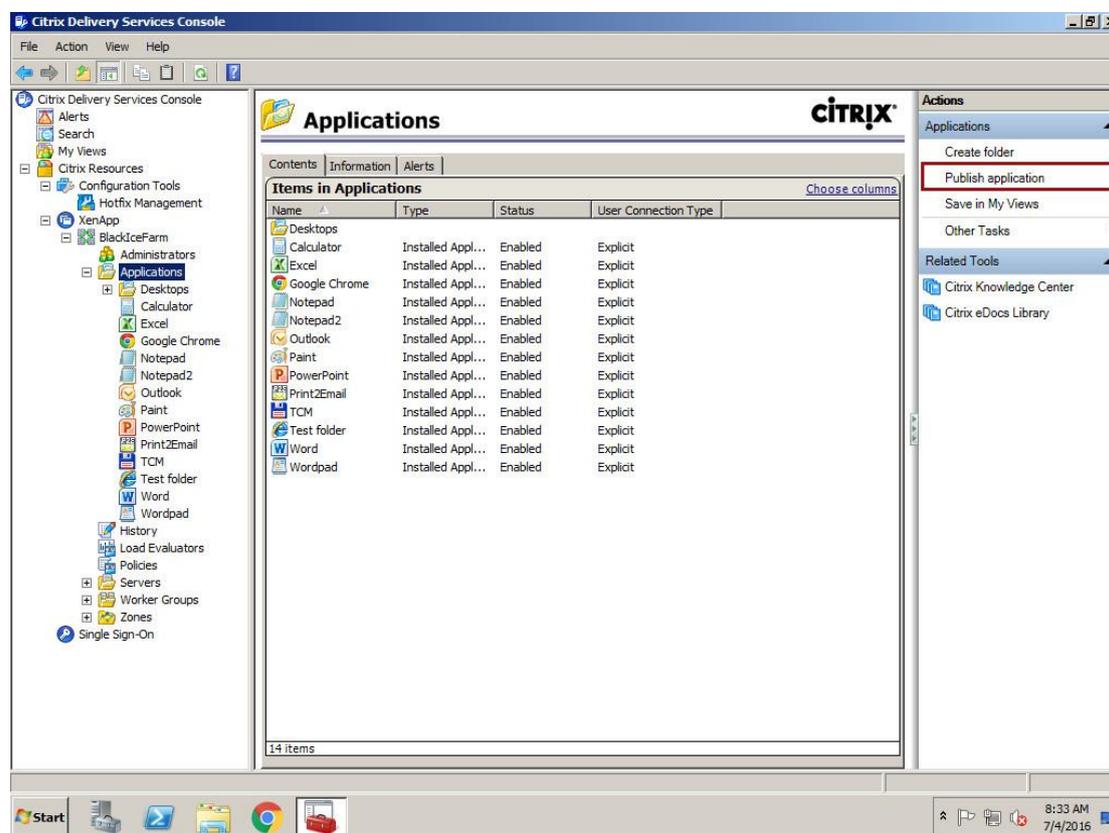
This page includes descriptions for how to publish the BiLPDManager Server from a Citrix XenApp environment.

[Publishing BiLPDManager Server from Citrix XenApp Server](#)

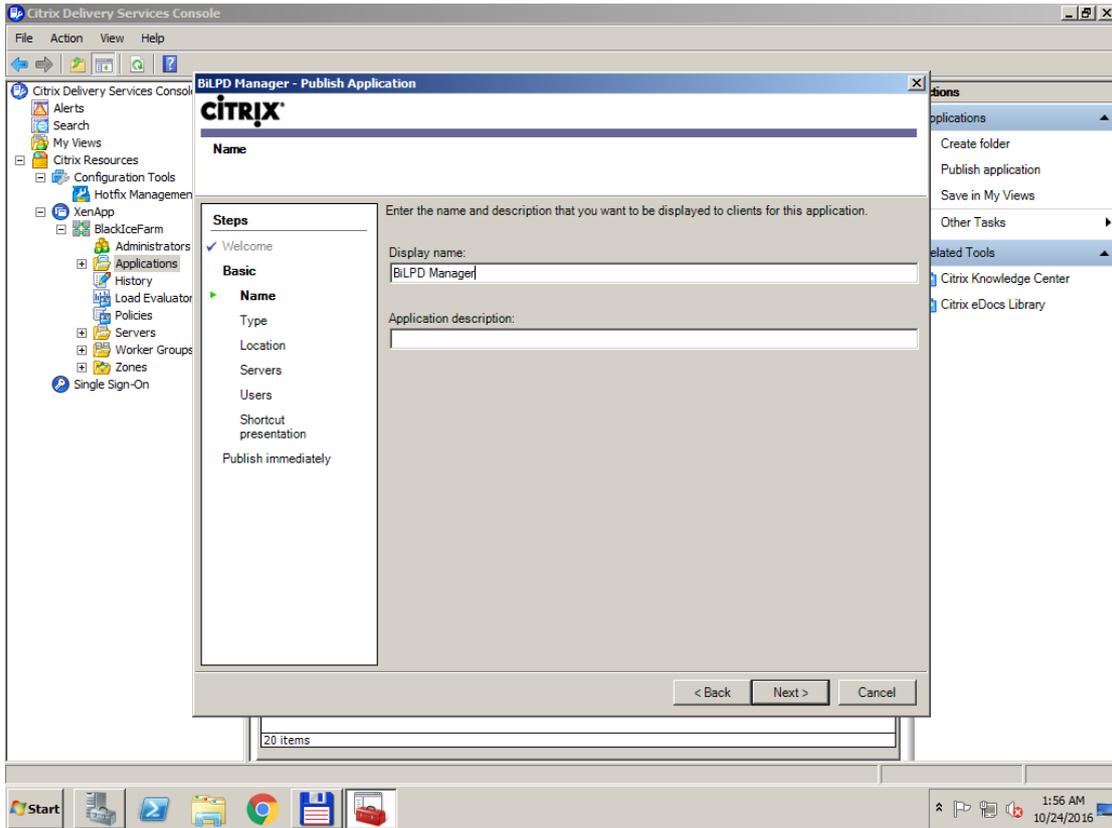
Publishing BiLPDManager Server from Citrix XenApp Server

In order to publish the BiLPDManager Server through Citrix XenApp, install BiLPDManager Server on the Citrix XenApp server, and open the Citrix Delivery Services Console.

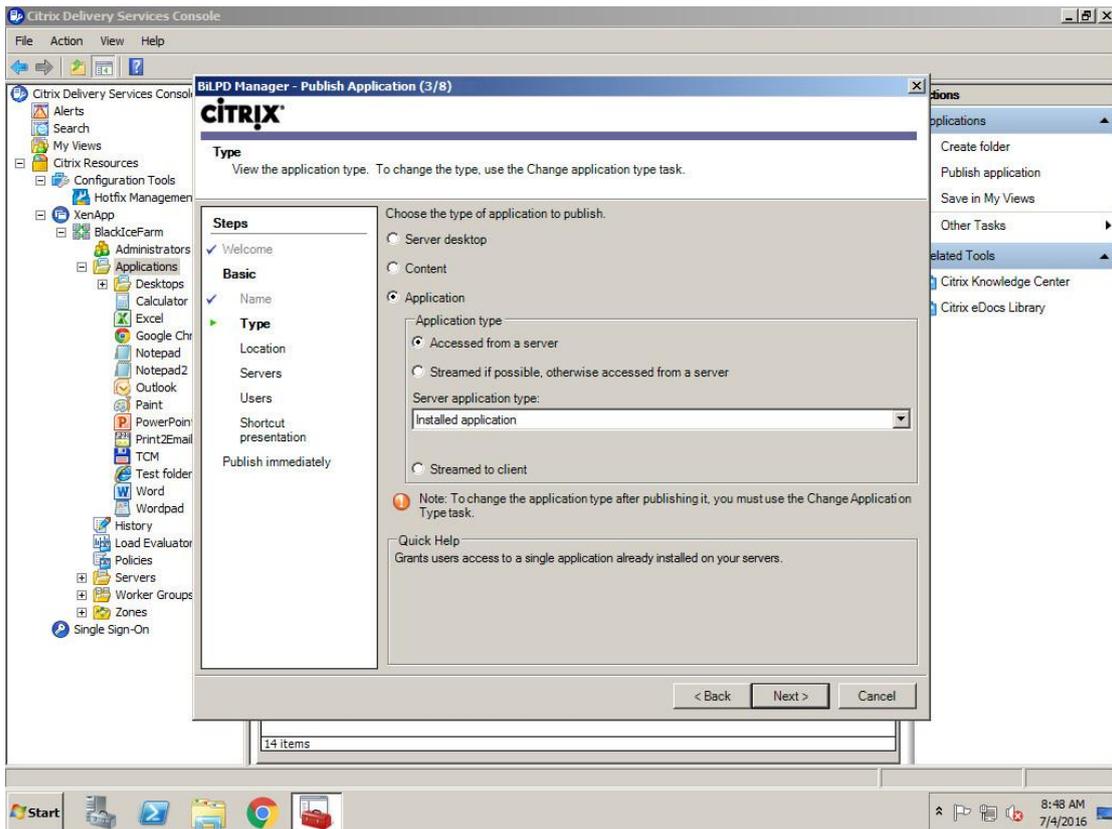
Navigate to the **Citrix Resources > XenApp > Your Farm > Applications** and click on **Publish Application** on the right side menu.



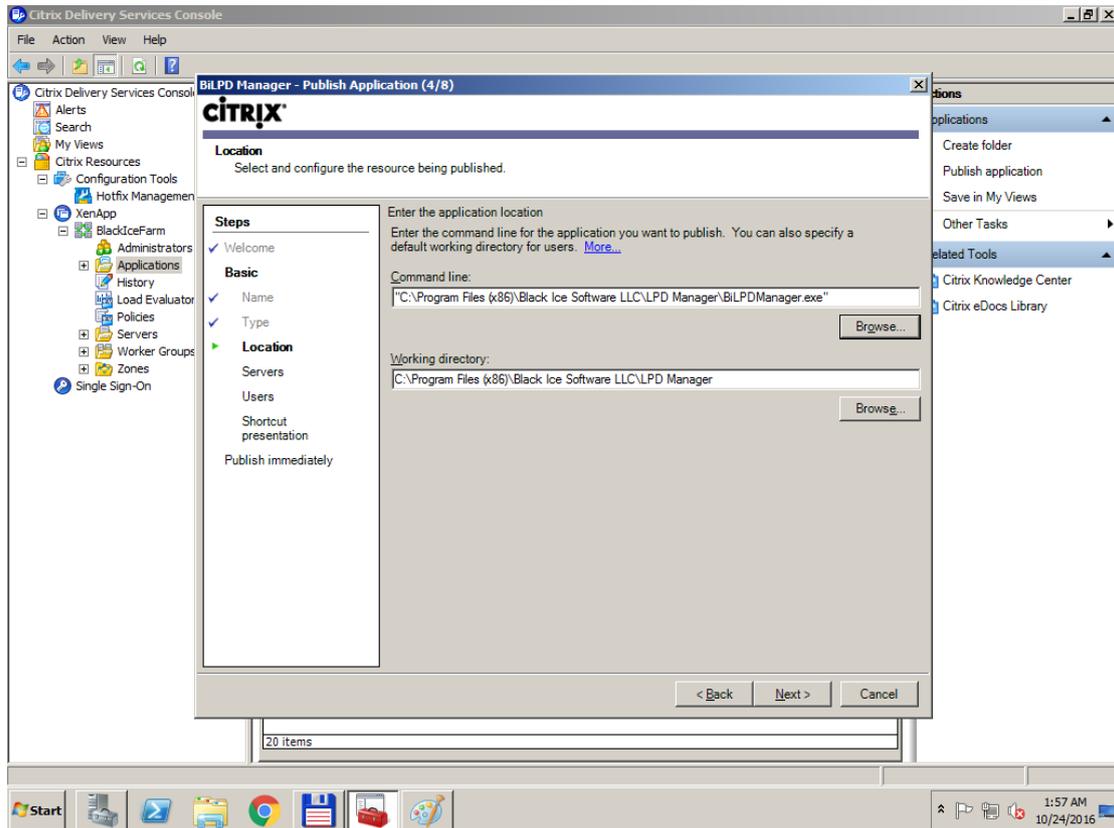
Go through on the Publish Application wizard of the Citrix XenApp. Enter the display name you would like to be displayed.



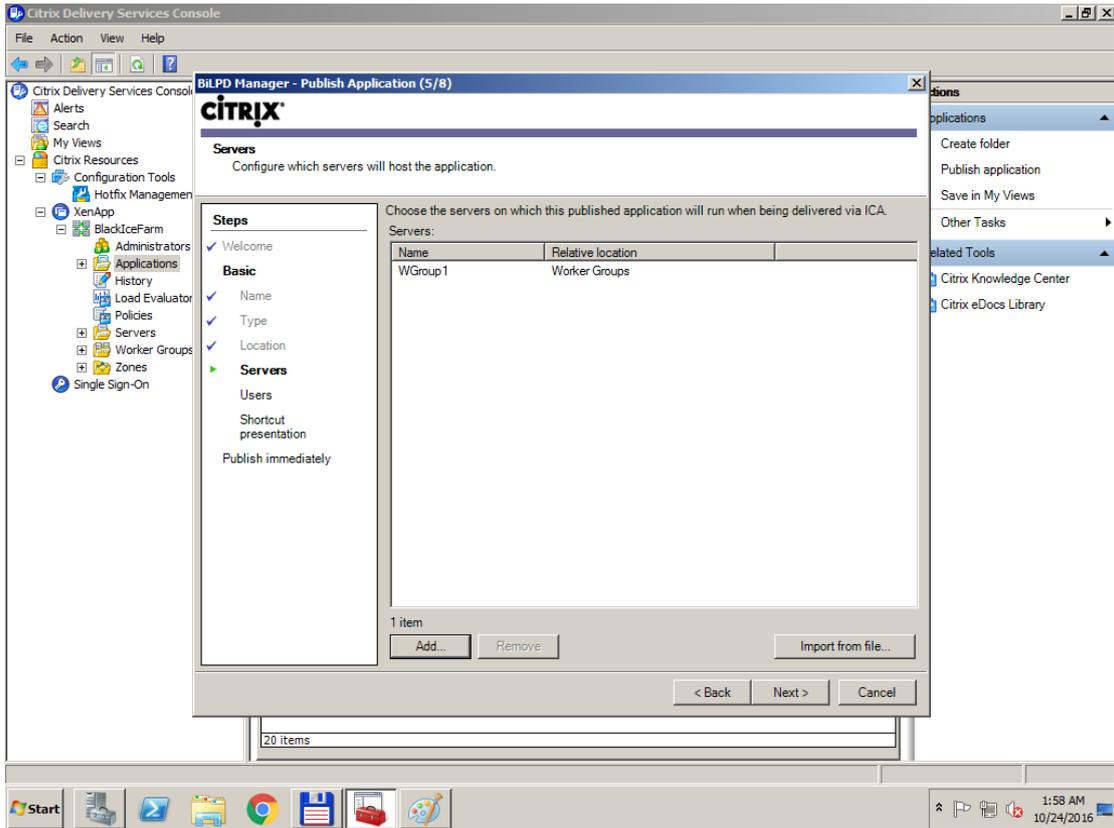
Select **Application > Accessed from a server**. This accessing method provides the most reliable functioning of the BiLPDManager Server, and to make sure that the registration on the client will work properly.



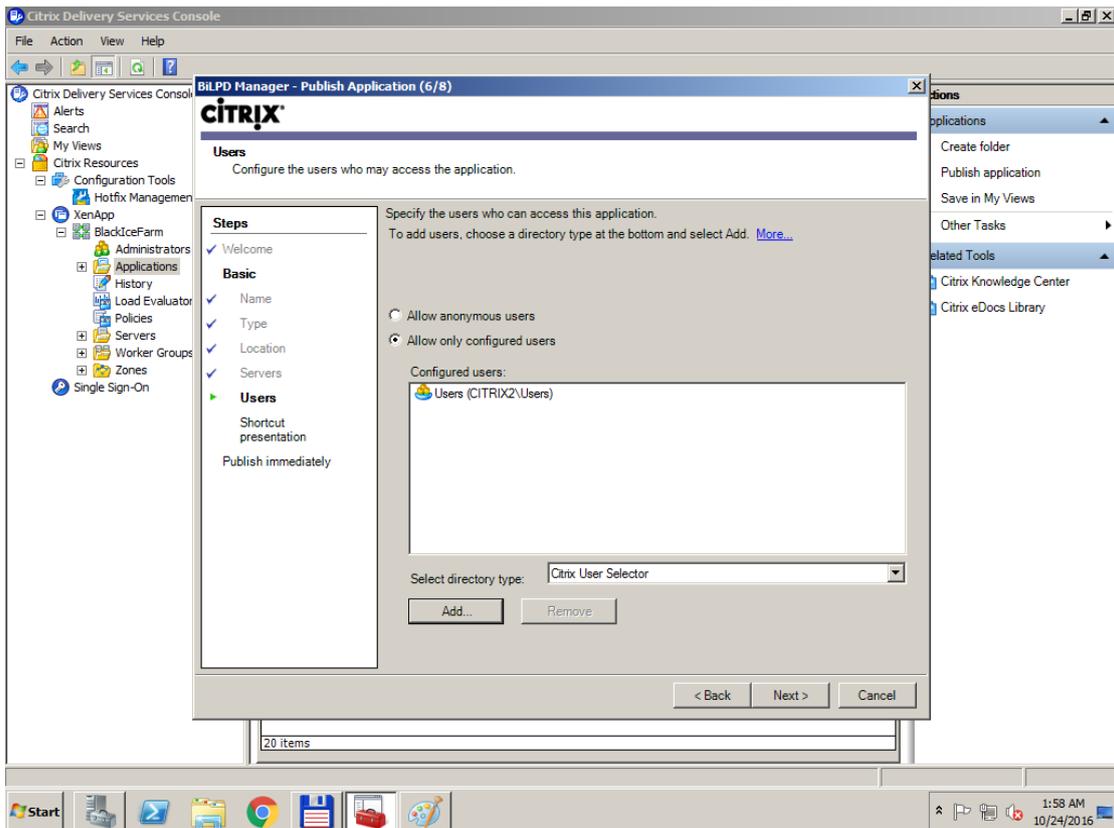
Browse the location of the BiLPDManager Server executable file. By default, it's the following: C:\Program Files (x86)\Black Ice Software LLC\BiLPDManager Server\BiLPDManagerServer.exe



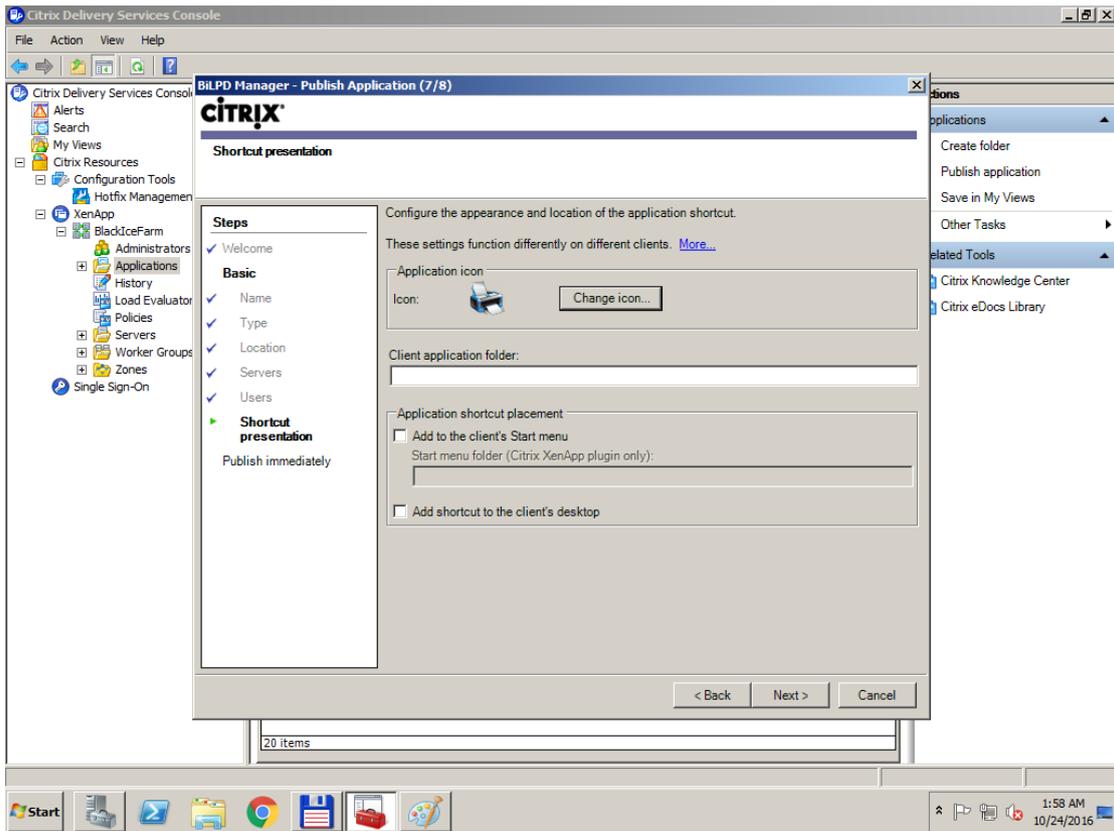
Choose the servers on which the BiLPDManager Server will run.



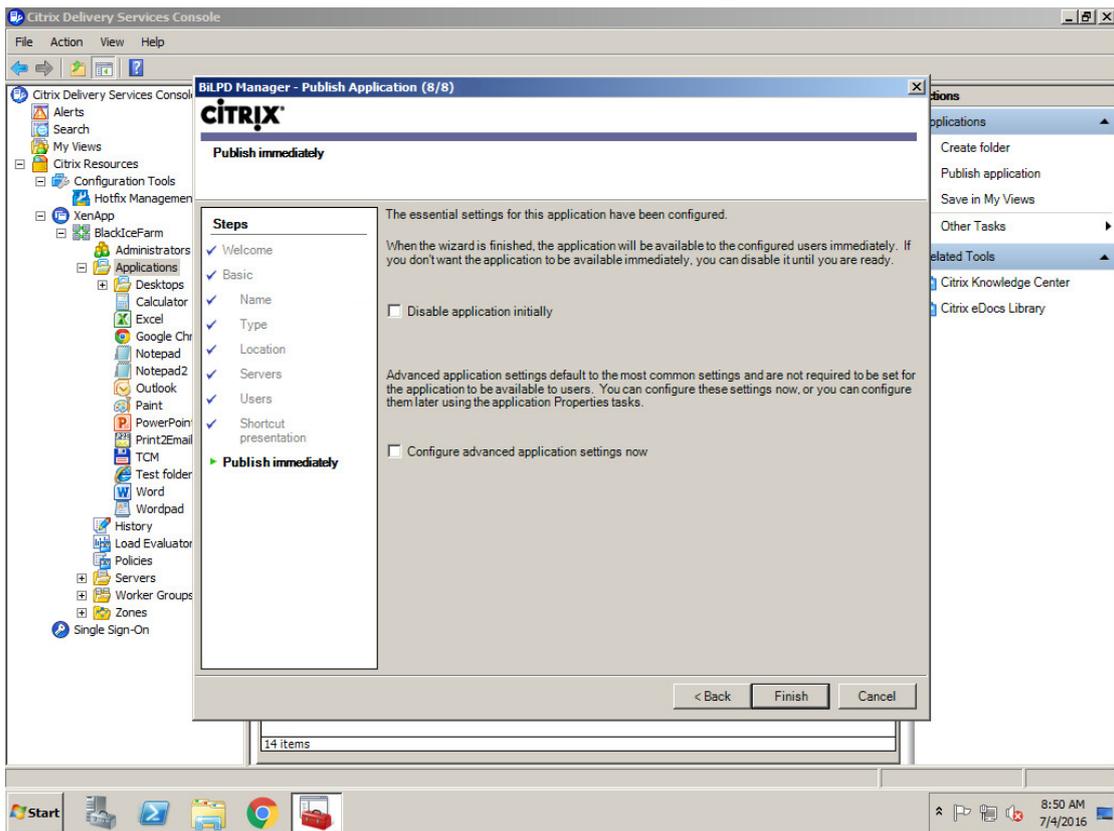
Specify the users who can access the BILPDManager Server.



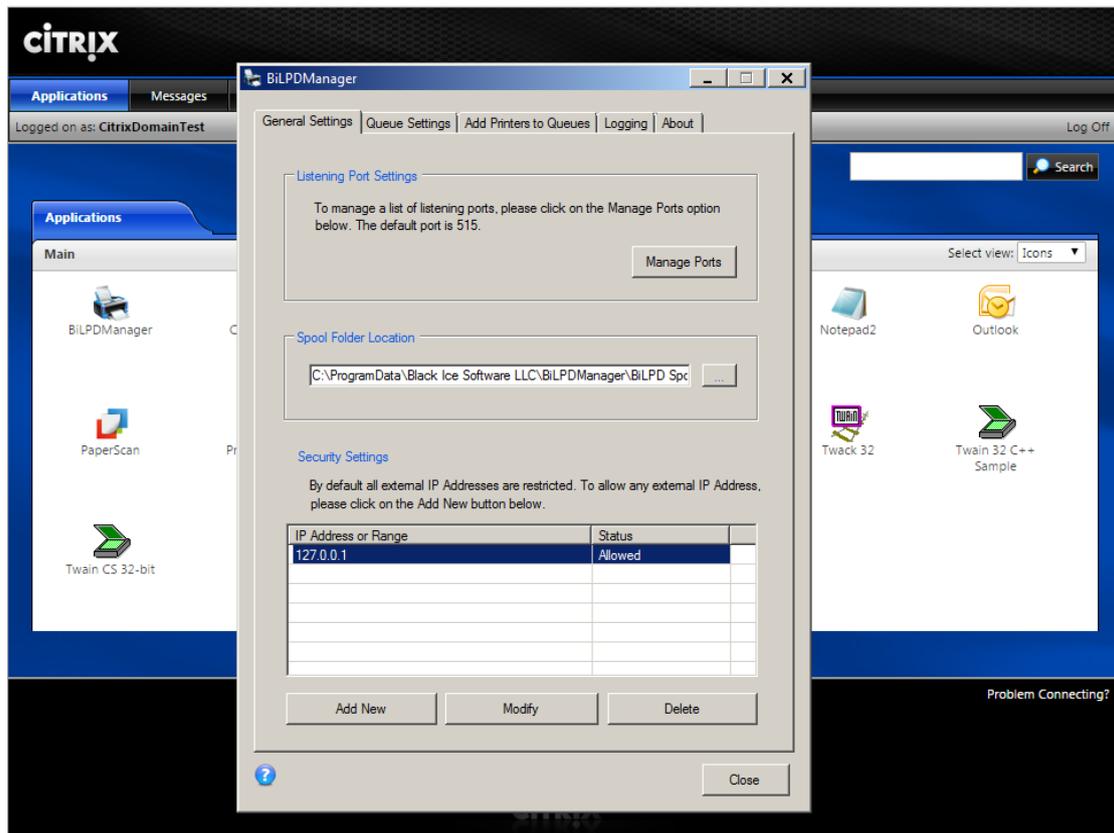
Customize the shortcut presentation if needed.



Finish publishing.



From now on, when accessing the Citrix XenApp Server from the client, the appropriate users will see the BiLPDManager Server application.



Licensing Error codes

The BiLPDManager Server MSI Installation automatically logs the Product Licensing registration process during the installation in the BiLPDServerMSIRegistrationDataLog.txt file located in the User's temp folder.

(for example: c:\Users\Administrator\temp\BiLPDServerMSIRegistrationDataLog.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.

BiLPDManager Server MSI 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 BiLPDServerMSITraceDataLog.txt file located in the User's temp folder (%TEMP%). The MSI installer log feature of /I* "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\BiLPDServerMSITraceDataLog.txt)

Enable Trace log

To enable the Trace log for the BiLPDManager Server 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 "BiLPDManager.msi" /q USERNAME=".Administrator"  
USERPASSWORD="12345678" TARGETDIR=C:\Temp BITRACE=1 CREGNUM=xxxxx-  
xxxxxxxx-xxxxxxxxxx
```

Example of the BiLPDManager Server MSI Trace log

Here is an example of the BI BiLPDManager Server MSI Trace log:

02/14/14 23:03:07: Install called
02/14/14 23:03:07: Install: Target directory: C:\Program Files (x86)\Black Ice Software LLC\BiLPDManager Server
02/14/14 23:03:07: Install: WritePlugInDatatoRegistry
02/14/14 23:03:07: WritePlugInDataToRegistry called
02/14/14 23:03:07: WritePlugInDataToRegistry: Check if Internet Explorer is installed
02/14/14 23:03:07: IsIEInstalled called

The BiLPDManager Server Trace log could contain the following lines

The Trace log function is going through on the following functions during the installation process and writes each event into the BiTVMSITraceDataLog.txt log file when the event is successfully finished.

Troubleshooting

[Common installation error codes](#)

[MSI Installation error - This installation package could not be opened.](#)

[BiLPDManager Server is not uninstalling on Windows 10 clients using GPO](#)

[Cannot uninstall BiLPDManager Server](#)

[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 or Volume ID 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.

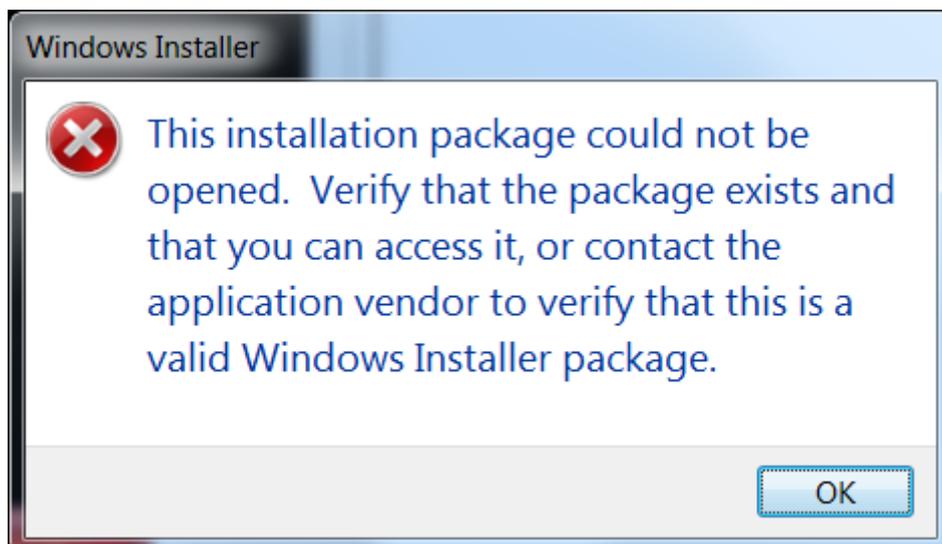
Description of the problem:

Running the MSI installer and display “This installation package could not be opened.”
msiexec /i "BiLPDManager.msi" **USERNAME=".\\Administrator"**
USERPASSWORD="12345678" REGNUM=XXXXX-XXXXXXXX-XXXXXXXXXX

NOTE: **BiLPDManager MSI Installation Guide.pdf:** BiLPDManager.msi
BiLPDManager Server MSI Installation Guide.pdf BiLPDManagerServer.msi

There are several causes of for the problem:

- MSI package is damaged.
- The MSIEXEC command is not executed in the same directory as the "BiLPDManagerServer.msi" file.
- The quotation mark is not standard quotation marks around the .msi file ("BiLPDManagerServer.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.

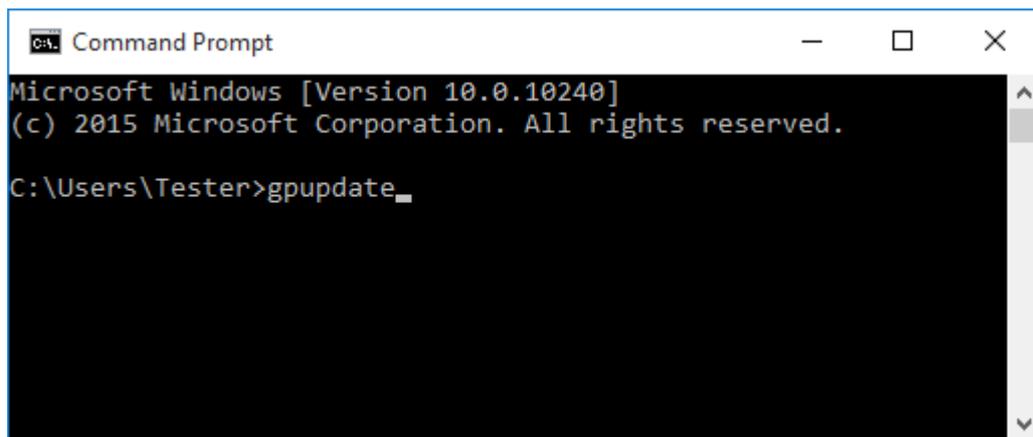


BiLPDManager Server is not uninstalling on Windows 10 clients using GPO

In certain cases on Windows 10 client computers, the Group Policy is not getting updated automatically. This issue can be caused by different time configuration on the client and on the domain controller computers.

In this case please run the **gpupdate** command on the client computer manually.

To run the command, open the command line, type **gpupdate** and press enter.

A screenshot of a Windows Command Prompt window. The title bar reads "Command Prompt". The window content shows the following text: "Microsoft Windows [Version 10.0.10240] (c) 2015 Microsoft Corporation. All rights reserved. C:\Users\Tester>gpupdate_". The cursor is positioned at the end of the command line.

```
Microsoft Windows [Version 10.0.10240]
(c) 2015 Microsoft Corporation. All rights reserved.

C:\Users\Tester>gpupdate_
```

Once the gpupdate finished successfully, restart the client computer.

Cannot uninstall BiLPDManager Server

If case the BiLPDManager Server MSI cannot be uninstalled due to any occurring error messages, or network connection problems, one can use the FORCEU=1 parameter to force the BiLPDManager Server to complete the uninstallation, remove every file and license, even if there are errors occurring during the uninstallation.

For example:

```
msiexec.exe /x "BiLPDManagerServer.msi" FORCEU=1
```

Caution: Upon network problems, this option could result that a transferable license will not be removed properly.

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: BiLPDManager Server -- Error 1714. The older version of BiLPDManager Server 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.

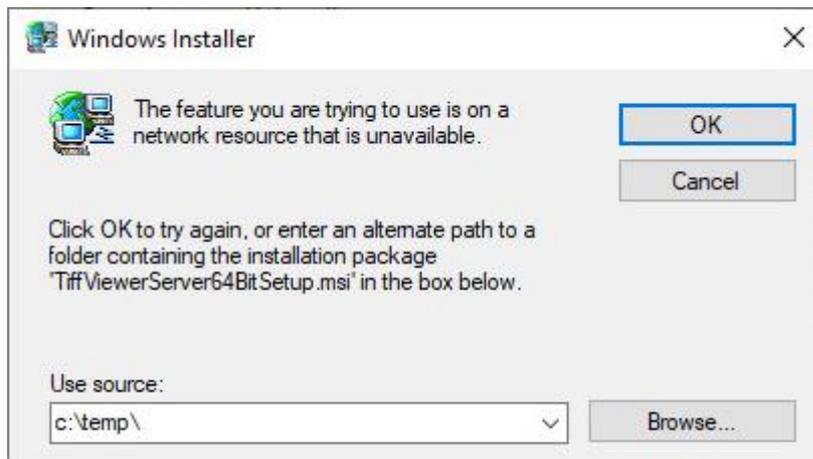
System Error 1612 indicates that Windows cannot find the original MSI installer used for installing the product either at the location used for installation or in the C:\Windows\Installer directory.

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.