Xerox Print Environment Assessor (XPEA)

Implementation Guide

Xerox Print Environment Assessor
The software described in this implementation guide is furnished under a license agreement and may be used only in accordance with the terms of the agreement.

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Preface

Contacting Technical Support

If you have any questions or concerns when reviewing this document or during installation, please email XPEA.Technical.Support@Xerox.com

Who Should Read This

This document is intended for many audiences and answers a wide range of questions raised by many different groups and individuals including:

- Decision Makers
- Security Staff
- Network Staff
- System Administrators

Important Information

Throughout the document, critical information is highlighted as follows:

⚠ IMPORTANT

The print job **never** leaves the organization's network. The XPEA Client analyzes the print job internally and only gathers the print job attributes, or meta-data.

Other important information, such as Notes, are highlighted as follows:

Note
XPEA **does not** alter or change your existing print infrastructure.

Before You Install

To ensure a successful installation, please ensure that you have reviewed and understand the following sections of this document before installing the Xerox Print Environment Assessor:

- Planning Your Deployment
- Preparing Your Installation
- Installing XPEA

If you have any questions or concerns, please contact Technical Support before starting your installation.

Introduction to Xerox Print Environment Assessor

<div style="text-align: right">1</div>

XPEA empowers organizations to make the right decisions on their print infrastructure by better understanding all aspects of their current print environment. By gaining greater insight into how people print, when they print, what they print and where they print, XPEA will allow you to make the appropriate decisions to effectively align your print assets to meet your organization's requirements. In turn, these decisions will allow you to maximize your print assets while lowering the cost of print within your organization.

Implemented as a hosted service, XPEA can be rapidly deployed as a print server only offering, or deployed to the user's desktop in direct IP environments.

How can you benefit from an XPEA installation?

- Capture print meta-data without disturbing the user
- Identify **color print jobs** by hybrid color tier: Useful Color, Everyday Color, Expressive Color
- Identify **monochrome print jobs** by hybrid color tier, and answer the "what if" question
- Discover local devices hidden on your network
- Learn device usage patterns by time of day, coverage, application

What's more, XPEA is simple

- Deploys in minutes
- No additional hardware or software
- Requires no I.T. infrastructure changes
- Does not alter the existing print infrastructure
- No single point of failure

XPEA Product Overview

Delivered as a hosted service, there are two components that make up XPEA – the XPEA Client communicates over the Internet via highly secure SSL to the XPEA Application Server.
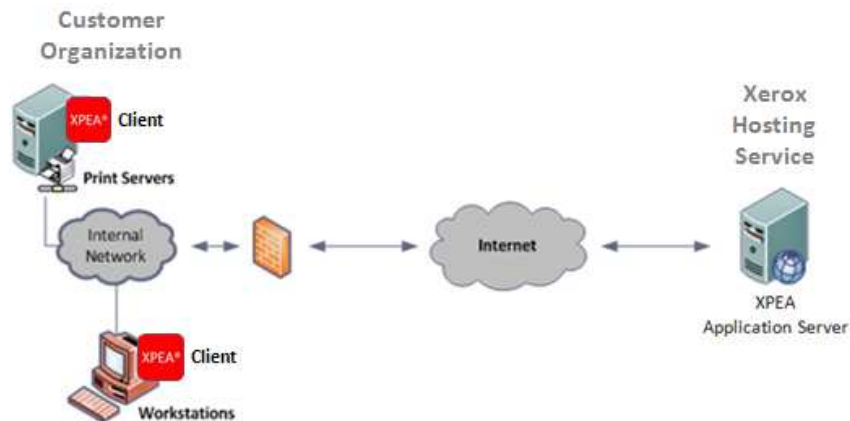
Figure 1 XPEA Architecture

XPEA Client

The Client is deployed in the organization to track print activity. When an employee prints, the Client tracks the print and analyzes it determining the number of pages, pages printed in color, the hybrid color tier that each page falls in, application, printer used, duplex selection, and more.

⚠ **IMPORTANT**

The print job **never** leaves the organization's network. The XPEA Client analyzes the print job internally and only gathers the print job attributes, or meta-data.

XPEA Application Server

The Application Server is hosted by Xerox. It is responsible for delivering the administration portal as well as storing the meta-data about each print job. This architecture allows for the fast deployment of XPEA into your organization.

XPEA Application Server Availability

The Application Server is hosted in a secure facility that offers high network availability. In the unlikely event that there is a network outage or the Application Server is not available for a period of time during maintenance windows, this will have no impact on your organization's ability to print. XPEA will continue to operate within your organization's environment, securely caching the print meta-data that is captured during the network outage. Once the network

connectivity is restored, the XPEA Client will transmit the cached information to the XPEA Application Server.

⚠ **IMPORTANT**

The availability of the XPEA Application Server in no way affects your organization's ability to print. For example, if the Xerox hosting service is not available, print will continue within your organization.

Ease of Installation

XPEA is as easy to deploy as any standard software. The installation literally takes only a few minutes. XPEA is delivered through a standard MSI package and can easily be bundled into an SMS package or other push technology and rolled out to the enterprise. Once installed, XPEA does not require a reboot and only requires 25 MB of disk space. In addition, XPEA will only generate on average 50 KB of network traffic per user per day.

Administration Requirements

Delivered as a turnkey solution, XPEA does not require any administration to get started. Once deployed, unless there is a need to change a system parameter or request a report, no administration is required. XPEA automatically detects and tracks print activity with every workstation and print server to which installed. In addition, it will auto-discover newly added printers and start tracking print to these printers immediately.

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Functionality and Security

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Overview

XPEA Client

The XPEA Client, which is installed within your organization to track printing, runs as a Windows Service. It can run as a Network Service or as a special service account, defined by your organization. The Client communicates via web services over the Internet with the XPEA Application Server.

XPEA Application Server

The XPEA Application Server is hosted by Xerox and enables organizations to rapidly deploy the Xerox Print Environment Assessor. The Application Server performs two tasks: it stores meta-data about the print job and acts as the organization's central administration portal.
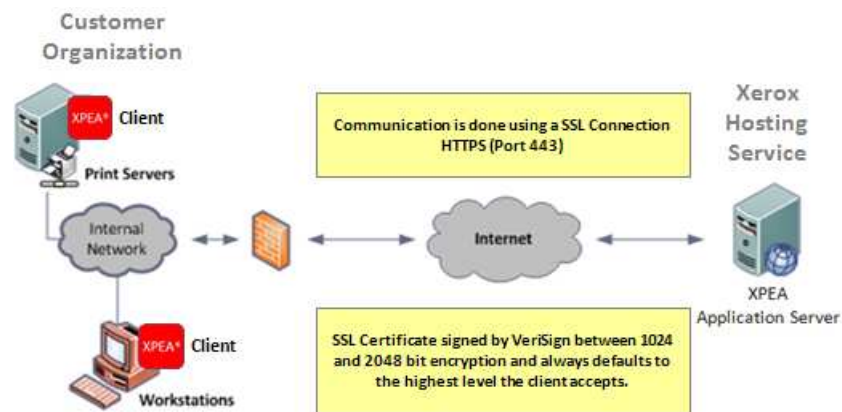
Figure 2 XPEA Client to XPEA Application Server Communication

Communication between your organization and the XPEA Application Server uses Secure Sockets Layer on port 443. In addition, the keys used for SSL are issued by VeriSign. XPEA always stores and transports your data in encrypted format using the Advanced Encryption Standard (AES) as approved by the U.S. and other governments.

If your organization employs a proxy server you can configure the XPEA Client during installation to use the proxy gateway.

Apart from the Internet access requirement over SSL, there are no other network requirements.

Port Requirements

External Ports

Each installation of the XPEA Client communicates with the Xerox-hosted XPEA Application Server over secure HTTP (HTTPS).

Internal Ports

XPEA uses ports for inter-process communication. During installation, the default port range is 49218 to 49219. These ports can be reassigned during install to suit your site requirements.

XPEA User Account

XPEA runs as a service on the workstation. It can either run under the Network Service account or you can assign a domain account. If you use a proxy server at your organization it is highly recommended you use a Domain Service Account.

When XPEA is installed using a Domain Service Account, the account must have at a minimum the ability to contact the Internet through the proxy server.

For more detailed information on user accounts, see the "Domain Service Account" section of the "Preparing Your Installation" section.

Proxy Information

If your organization employs a proxy server, you can configure XPEA to use the proxy server during install.

IMPORTANT

When using a proxy server it is highly recommended you use a Domain Service Account for XPEA.

Firewall Information

Depending on how your organization has configured its firewalls, you may need to create some firewall rules to enable a few XPEA processes to access the Internet. The following processes require HTTPS outbound access to the Internet:

• prprn.exe

Note

All traffic between the Client and Application Server is initiated by the Client.
At no time will the Application Server attempt to communicate with the Client in an unsolicited manner.

Data Storage

XPEA ensures the safe storage of your organization's data. Print job meta-data that is processed by the XPEA Client is stored locally and then transmitted to the XPEA Application Server. Data cached on workstations and print servers, prior to transmission, is encrypted. In addition, Xerox utilizes a state-of-the-art data center which includes:

• Mechanical and human security measures

• Biometric authorization protocols

• Video surveillance

• Hardware-based firewall protection

Finally, all backed up data is held in an encrypted format.

System Network Management Protocol (SNMP)

If SNMP in enabled within your organization, XPEA can issue SNMP queries to keep up-to-date asset information for your organizations networked printers. If SNMP is not enabled in your organization, XPEA will continue to function normally.

XPEA conducts simple SNMP queries. It does not request SNMP subscriptions to a printer asset. In addition, the SNMP query is targeted at the specific printer and does not require a SNMP scan of the organization's network.

Windows Management Interface (WMI)

If WMI is enabled within your organization, XPEA will use WMI to query locally attached printers for the purposes of tracking asset information. If WMI is not enabled in your organization, XPEA will continue to function normally.

XPEA conducts simple WMI queries only on the machine it is installed on. It does not issue WMI queries to other machines.

Planning Your Deployment

<div style="text-align: right">3</div>

Setting Assessment Goals

Before deploying XPEA you need to think about what you are trying to assess. Your assessment goals will dictate which deployment options you must consider.

- Are you simply trying to gain a better understanding of how the ColorQube™ will benefit your organization?
- Are you trying to assess all organizational print or is the assessment limited to a floor, a department or a building?
- Does the organization use print servers? Should they be included in the assessment?
- Does the organization perform Direct IP printing to network printers?
- Are locally attached printers part of the assessment?
- Does the organization use Citrix application servers? Is print from Citrix-hosted applications of sufficient volume to be included in the assessment?

Deployment Options

XPEA offers three deployment options. These options include:

1. Print Server Only
2. Print Server and Workstation
3. Workstation Only (Direct IP printing environments)

In addition, you can deploy XPEA to:

- Citrix or Terminal Servers
- Print Clusters

The deployment option you select will be dependent on your organization's print environment and print assessment goals. See the next section, Deployment Scenarios, to learn more about the deployment options for your organization.

Note

The software that is installed on the Print Server is the same software installed on the Workstation, Citrix, Terminal Server and Print Clusters.

Print Server Only

In this deployment, XPEA is installed on one or more print servers. If your organization prints mostly through print servers this will be the most efficient way to track the greatest volume of print. A server-only deployment can be achieved in less than a day and you will be tracking print immediately.

Installation to print servers does not preclude a future installation to workstations. You can start tracking print to servers today and roll out to workstations at any time without needing to change XPEA in any way. While deployment to print servers is very fast, the downside is you cannot track local printers or print through direct IP.

Print Clusters

The organization may have pooled their print servers into one or more print clusters. You can install XPEA on print clusters that are set up in "active/passive" configuration. To learn more, please consult the Install to Print Clusters section later in this document. There is a separate print cluster install package available at the download link to the software.

Print Server and Workstation

In this deployment, XPEA is installed on one or more print servers and also on some or all of the organization's workstations. If your organization prints to print servers but also permits workstations to print to local printers or Direct IP printers this will be the most efficient way to track the organization's print.

Workstation Only (Direct IP Environments)

In this deployment, XPEA is installed on the organization's workstations. If your organization does not use print servers this will be the only way to track print activity.

Citrix and Terminal Server

In addition to the above deployment scenarios you can install XPEA on Citrix servers or Microsoft Terminal Servers. If the organization routinely uses Citrix or Terminal Server to host applications it would be prudent to install XPEA on them to ensure print is tracked. XPEA is highly optimized for running on Citrix or Terminal Server; only one XPEA Service is started per server and is shared with all user sessions.

Note:
XPEA has been optimized for installation on Citrix and Terminal Server.

Deployment Scenarios Overview

As XPEA can be deployed in several different ways, this section outlines a few scenarios to help you decide on deployment strategy best for your organization.

Server-only Deployment

XPEA is installed on one or more print servers.

Advantages

- Appropriate for organizations that have central print servers
- Very easy deployment – few target machines
- Start tracking enterprise print within minutes of installation

Disadvantages

- Print through Direct IP and local printers is not tracked
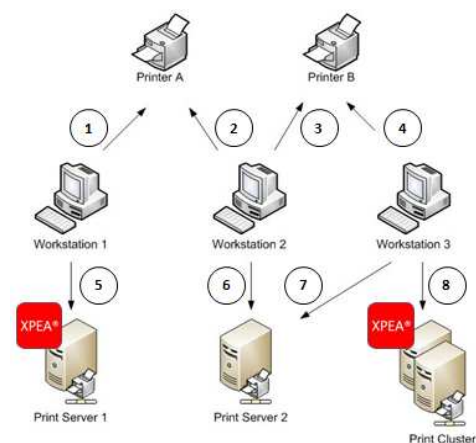
Figure 3 – Print Server Deployment

In the Print-Server-only deployment above, XPEA is installed on Print Server 1 and the Print Cluster:

1-4. Print to local devices is not captured.

5. A user prints from Workstation 1 to Print Server 1 – the print job is captured by XPEA on Print Server 1.

6. A user prints from Workstation 2 to Print Server 2 – the print job will NOT be captured.

7. A user prints from Workstation 3 to Print Server 2 – the print job will NOT be captured.

8. A user prints from Workstation 3 to Print Cluster – the print job is captured by XPEA on the Print Cluster.

This example illustrates a few key points:

- Print jobs are captured on print servers that have XPEA installed on them
- Print is not captured on print servers that do not have XPEA installed
- If an organization wishes to get an accurate indication of the number of print jobs that happen within their organization, they must install on all the print servers

Workstation Only (Direct IP Environments)

XPEA is installed on workstations in the organization.

Advantages

- Track print to locally attached printers
- Track Direct IP printing from a workstation
- Can accurately track which application printed the document

Disadvantages

- Print to network printers hosted on print servers will not be tracked

Print Server and Workstation Deployment

XPEA is installed on Print Servers and Workstations.

Advantages

- Appropriate for organizations that have a mix of central print servers, locally-attached printers and/or direct IP printing from the desktop

Citrix/Terminal Server Deployment

XPEA is installed on Citrix or Terminal Server.

Advantages

- Print to a user's session printers will be tracked even if XPEA has not been installed on the user's workstation
- Print to Citrix/Terminal Server's local and Direct IP printers will be tracked

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Preparing Your Installation

System Requirements

The following are the system requirements for both the print server and workstations:

Operating System

- Microsoft Windows 2000 Professional (SP4 or later) or
- Microsoft Windows XP Professional (SP2 or later) or
- Microsoft Windows Server 2003 (32-bit and 64-bit) or
- Microsoft Windows Vista (32-bit and 64-bit) or
- Microsoft Windows 2008 Server (32-bit and 64-bit)

System Software

- Microsoft Windows .NET Framework (2.0 or later)

Disk Space

- 25 MB

Internet and Firewall

- Internet access over SSL*
- Name resolution between XPEA-monitored print servers and workstations*
- Port 49218 to 49219 or alternative ports opened internally for communication between XPEA monitored print server and workstations*

  *This is the recommended default configuration when installing XPEA on print servers and workstations. Other configurations as also supported. Please contact Technical Support for additional information.

Directory

- All workstation user logins must be to an Active Directory domain within the organization

  Note
  The same software is installed on both the workstations and print server.

Platforms Supported

Along with the basic Windows Operating Systems, XPEA also supports the following platforms:

- Print Clusters (Active/Passive)**
- Terminal Server
- Citrix

** At this time, XPEA does not support Active/Active Print Clusters.

Proxy Server

If your organization uses a proxy server it is highly recommended the XPEA service run as a Domain Service Account that has access to the Internet through the proxy. While XPEA can run as the Network Service account, depending on how your organization has configured its proxy, the Network Service account may not have sufficient authorization to navigate the organization's proxy server.

⚠ **IMPORTANT**

If you use a proxy server you should install XPEA to run as a Domain Service Account.

Some proxy servers can restrict traffic as to which processes are allowed to communicate to the Internet and to which IP addresses they can contact. If your organization implements these proxy server settings you can apply the following:

- Process name: prprn.exe
  - Allow access to port 443
  - Allow access to printelligence.preosoftware.com

Support Note

XPEA supports Windows Integrated Authentication with Proxy Servers. XPEA does not support basic authentication with Proxy Servers.

Domain Service Account

If a Domain Service account is used for XPEA it must be able to communicate to the hosted XPEA Application Server over port 443 (SSL).

⚠ **IMPORTANT**

Be sure to set up the Domain Service Account PRIOR to starting your installation. Altering the account information after the fact is difficult and time consuming if you have installed XPEA on all your workstations.

Securing the Domain Service Account

The Domain Service Account should be secured in accordance with your security policies for Service Accounts, or Microsoft's Service Account Guidelines available at:

http://www.microsoft.com/downloads/details.aspx?FamilyID=ebd325fe-84de-4b9a-af49-babd696025c9&displaylang=en

If your organization does not currently have security policies in place for locking down service accounts, Xerox recommends at a minimum that you apply the following settings:

User Account

- Set Password to Never Expire
- Use complexity requirements (Minimum Password Length 8 with Special Characters)

Group Policy

- Deny logon locally (User Rights Assignments)
- Disable Shut Down the System (User Rights Assignments)
- Account Lockout Policy (3 Invalid attempts lock the account for 10 minutes)
- Requires Logon as a Service (User Rights Assignments)
- Deny Logon through Terminal Services (User Rights Assignments)
- Disable Allow Logon Locally (User Rights Assignments)
- You may want to continue locking down this group policy, as long as items in 1.1 are not affected
- Set options to Enforcement (no override). Takes precedence over any GPO linked to child containers
- Set Block inheritance flag
- Create account as an OU controlled subtree
- Enable auditing on controlled subtree
- Use AdminSDHolder function – this compares the privilege level every hour and ensures they have not been altered.

Network Service Account

XPEA can be installed to run under the Network Service account. The advantages of using the Network Service account are:

• It is a built-in account defined on your workstations and servers

• It has sufficient privileges to run XPEA

Disadvantages include:

• Depending on your organization, the Network Service account may not have permission to pass through the proxy server.

Suggestion

If a Domain Service Account is available – use it. Only use the Network Service account if you are sure there is no requirement to navigate through a proxy server.

Impact on Workstations and Servers

XPEA does not interfere or change your existing print environment and has minimal impact on both your workstations and print servers.

Note

XPEA **does not** alter or change your existing print infrastructure.

Other installation notes about the XPEA install include:

• It uses a standard MSI package when deploying to the desktop

• The install package is the same for workstations and print servers

• Standard industry install procedures are used, including a completely automated uninstall should it be necessary

• XPEA can be installed and/or uninstalled without the need to reboot the workstations or print servers

• XPEA can be silently installed in many different ways including SMS or any other network management technology that can use an MSI

• The application footprint is only 7 MB

• We do not install a custom print driver. You use the same print drivers you have already installed

• When you add a new printer or driver, XPEA will automatically start monitoring it. You do not have to take any additional action for the printer or driver to be monitored by XPEA.

• We do not change any of your existing print drivers, print processors or port monitors. You can be sure the print environment you have today will be the same environment after installing XPEA.

• We do not install a new print spooler. You continue to use the Windows print spooler.

Planning Checklist for Installation

The XPEA install takes only minutes to complete. Before starting however, you will need some basic information about your organization's environment.

Below is a pre-installation checklist of the information you will require before starting your installation. For additional information on each item, see the Installing XPEA for more information.

Pre-Installation Checklist

Item	Comment
Registration Information	The Company Name and Registration Key provided by email.
Port Assignments	A minimum of two internal ports are required for these XPEA sessions to communicate. Defaults are provided during install.
Proxy Information	If your organization uses a proxy server you will need to confirm the proxy information during install.
Domain Service Account Information	If your organization uses dedicated service accounts to run Windows Services.
Internet Access	XPEA requires internet access to communicate with the hosted XPEA Application Server. Internet access will be tested during install.

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Installing XPEA

> ⚠ **IMPORTANT**

Contact Technical Support if you have any questions **prior** to starting any install.

This section outlines the installation information for installing to workstations, print servers, print clusters, Terminal Server and Citrix. In addition, unattended installation information is provided.

> **Note**
>
> The same software package is used for installation onto workstations, print servers, print clusters, Terminal Server and Citrix.

Installing to Workstations and Print Servers

This section highlights all the screens that are displayed during interactive installation after you have double-clicked or launched the XPEA setup program:

Screen 1: Welcome Screen

Click **Next**.

Screen 2: License Agreement

Read the License Agreement and if you accept the terms and conditions, select Accept.

Click **Next**.

Screen 3: Registration Information

Enter the Company Name and Registration Key information for your organization.

Click **Next**.

Suggestion

You may copy and paste the registration information into the registration dialog from the Xerox registration e-mail you received with your installation package. Note that the Company Name is case sensitive.

Security Notice

Ensure that your Registration Information is stored securely within your organization and it is distributed ONLY to the individuals that require it.

If you enter the Company Name and/or Registration Key information incorrectly, the installer will present the following message:

Click **OK** and reenter your Company Name and Registration Key information.

Screen 4: Destination Folder

Select the location you wish to install XPEA.
Click **Next**.

⚠ **IMPORTANT**

If you use a proxy server in your organization you must select This Account and enter domain account credentials that have access through your proxy.

Screen 5: Proxy Server

Select if your organization has a proxy server or not.

Click **Next**.

Screen 5a: Proxy Server

If you selected to use a proxy the installer will attempt to discover your proxy settings. These correspond to the proxy server settings configured for your browser. Confirm they are correct.
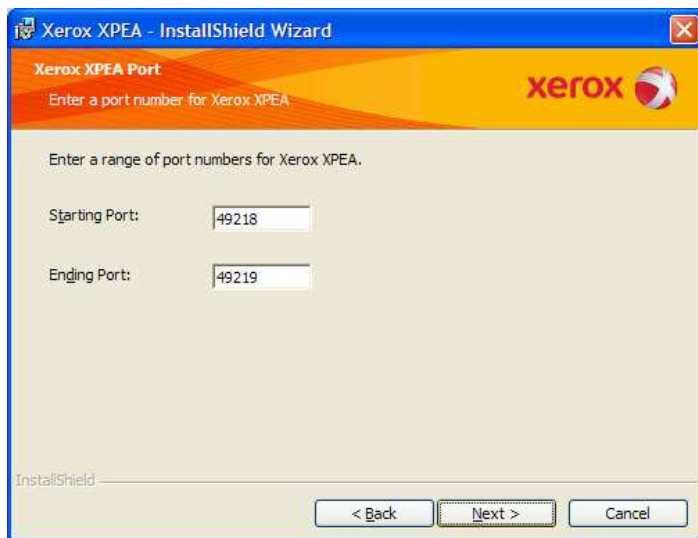
Click **Next**.

Installing XPEA

Screen 6: Logon Information

Select the account you wish to run the XPEA Service under.

> Note
>
> For more information on user accounts, see the Domain Service Account section in the Preparing Your Installation section of this document.

Click **Next**.

Screen 7: XPEA Port

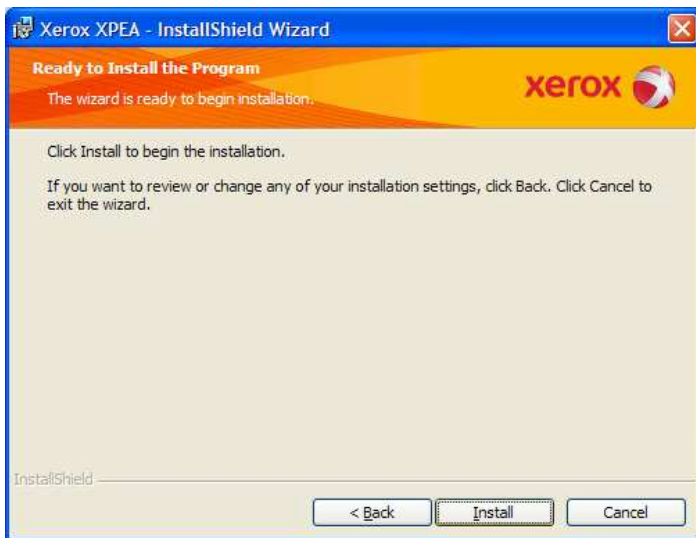Select the port range that XPEA can use to communicate with computers on the local network. The suggested port range is acceptable in most organizations.

> Note
>
> These ports are used to facilitate communication between the print server and Client.

Click **Next**.

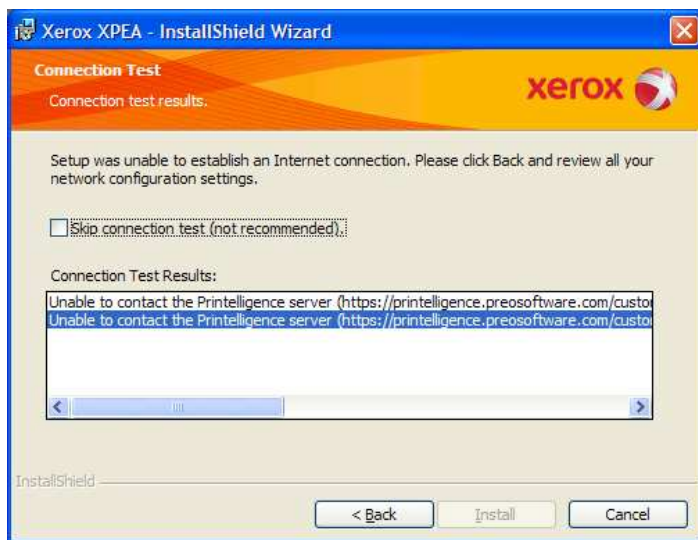**Screen 8: Ready to Install the Program**

Click **Install**.

Screen 9: Attempting to Connect

XPEA attempts to connect to the XPEA hosted application.

Installing XPEA

Screen 9a: Connect Test Failed

If the connection test fails, you can chose to:

    a.   Skip the connection test by clicking on the "Skip connection" and then Click **Install**.

    b.   Click **Back** and try again

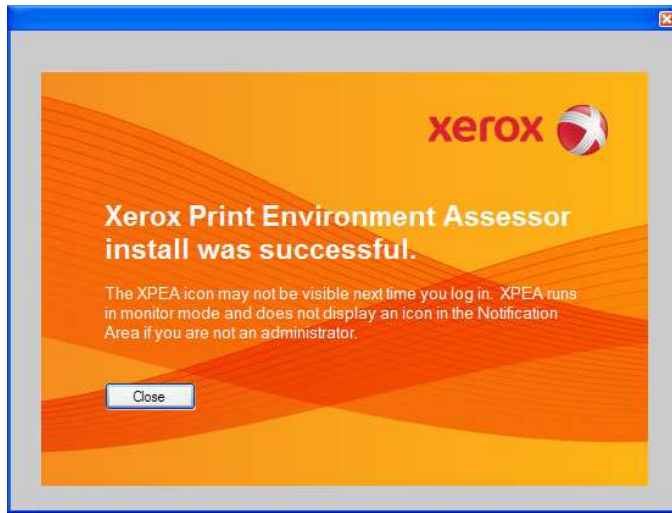In the event of a connection test failure:

1. Verify that your connection to the Internet is active
2. Verify that you specified the correct proxy settings
3. If you are using a proxy server in your organization ensure you have selected an account with sufficient privileges to navigate the Internet through the proxy server

Screen 10: Install Complete

Click **Finish**.

Successful Install

Click **Close**.

At this point, XPEA is running and will start to track print.

Ensuring XPEA is Running

When XPEA is installed, it is not installed into the Windows Start Menu. In addition, when XPEA runs, it runs as a service and for all users, with the exception of an XPEA administrator, the user will not see anything visible on their Windows desktop.

If you wish to see if XPEA is running, you will need to check either the Task Manager or the Services Panel. These are the only methods for non-administrators to detect if XPEA is running.

Unattended Installation

Administrative Installation Point

The recommended method to deploy XPEA to a large number of workstations in an organization is to use an administrative installation point. An administrative installation point is a customized version of an application setup package created on a network server.

You can use deployment tools such as Microsoft System Management Server (SMS) or Group Policy Object (GPO) software installation to deploy an application from an administrative installation point.

To deploy using a login script or similar method, first create the administrative installation point, and then use a login script to launch setup from the installation point in silent mode. (See the section titled Silent Mode for more information).

Command Line Syntax

To create an administrative installation point, run Setup with the **/a** option. Specify custom settings with the **/v** option. The general syntax is as follows:

```
XPEASetup_3.1.exe /a /v"<Custom Settings>"
```

There must not be any space character between the **/v** and the double quote character. The double quote must be ASCII code decimal 34. Custom settings are described in the next section.

Custom Settings

Custom settings consist of predefined properties set to custom values. The syntax is as follows:

```
PROPERTY=value
```

When a property value contains space characters, the start and end of the value must be delimited using a **\"** sequence. For example:

```
PROPERTY=\"This value contains spaces\"
```

You can define properties in any order on the command line, as long as they are *all* placed within the pair of double quote characters following the **/v** option. Multiple property-value pairs must be separated by a space character, for example:

```
PROPERTY1=value1 PROPERTY2=value2
```

⚠️ **IMPORTANT**

Each property is listed here on its own line, for readability only. Remember that when property-value pairs occur in a command line, they must be separated by a space character.

Registration Information

```
PR_REGISTRATION_NAME=\"Your Company Name\"
    PR_REGISTRATION_KEY=PR11-2222-3333-4444
```

> ⚠ **IMPORTANT**
>
> The \" delimiters are required if your company name contains spaces.

Domain service account

```
PR_RUN_AS_LOCALSYSTEM=0

IS_NET_API_LOGON_USERNAME=DOMAIN\username

IS_NET_API_LOGON_PASSWORD=password
```

Port range

```
PR_PORT_START=49218
    PR_PORT_END=49219
```

The default port range is shown above. These values will be used if no port range is specified.

Proxy Configurations

```
PR_PROXY_SET=1
```

Followed by one or more of the following:

1. To enable the "automatically detect settings" option:

   ```
   PR_PROXY_AUTODETECT=1
   ```

2. Or alternatively to specify an automatic configuration script:

   ```
   PR_PROXY_SCRIPT_ENABLED=1
       PR_PROXY_SCRIPT=http://share/proxy1.pac
   ```

3. Specify a proxy server:

   ```
   PR_PROXY_SERVER_ENABLED=1

   PR_PROXY_SERVER=proxysrv:8080
   ```

To enable "bypass proxy for local addresses" option (if applicable):

```
PR_PROXY_BYPASS=1
```

Sample Command Line

Here is a sample command line. You can copy and paste into a text editor with line wrap disabled. In this sample, XPEA Setup is run in administrative install mode, passing in the registration information, domain service account, and proxy. Custom values are in **bold** text.

> ⚠ **IMPORTANT**
>
> Line breaks below are for readability only – replace with a space character. Or you may copy-and-paste the entire wrapped line of text. When pasted into a plain text editor, the text should appear on a single line. If not, edit the line so that it does not wrap.

```
XPEASetup_3.1.exe /a /v"PR_REGISTRATION_NAME=\"My Company Name\"
    PR_REGISTRATION_KEY=PR11-2222-3333-4444 PR_RUN_AS_LOCALSYSTEM=0
    IS_NET_API_LOGON_USERNAME=DOMAIN\username
    IS_NET_API_LOGON_PASSWORD=password PR_PROXY_SET=1
    PR_PROXY_SERVER_ENABLED=1 PR_PROXY_SERVER=proxyserver:8080"
```

It is important to use the delimiters properly or the command line will not work. In the above example, note how double quotes are used with the **/v** option. Specifically, note that XPEA custom settings are enclosed in a pair of double quotes. The first double quote appears immediately after the **/v** option, and the terminating double quote appears at the end of the command line. Within the list of custom settings, any custom setting values that contain a space character (such as the company name in the above example) are enclosed by a pair of **\"** delimiters.

Network Location

When Setup starts it will prompt for a network location to create the administrative installation point (or "server image" of the product). Enter an appropriate network location and then click Install.
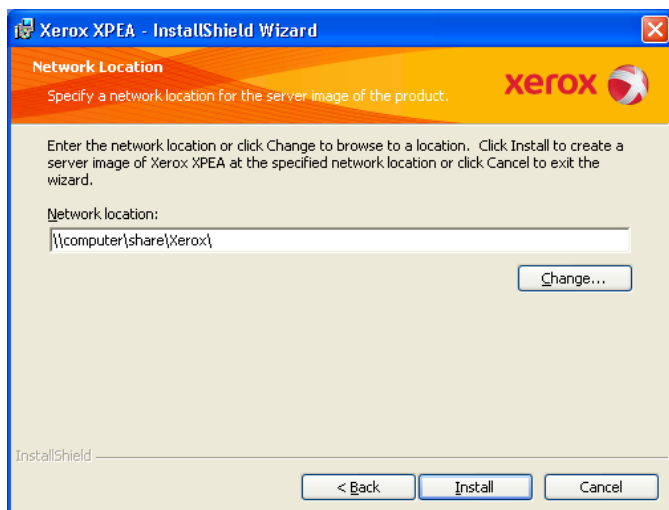
Network Location
Enter the network location for the administrative installation point.

Note: Specify the network share as a UNC path. (Do not use a mapped drive, unless you are sure that the drive is mapped consistently across all computers where you intend to deploy XPEA).

When the setup program completes, the administrative installation point is created in the specified share path. The share path will contain the Xerox Print Environment Assessor MSI file, and extracted application files and folders, as follows:

\\computer\share\Xerox
      📁 program files
      📁 Windows
      🗐 Xerox Print Environment Assessor.msi

⚠️ **IMPORTANT NOTES**

- Do not rename the MSI file.

- Test the installation on a single workstation first.
  Once the test is completed successfully, repeat the installer test on a print server, a terminal server, and a Citrix server, as applicable.

- Ensuring XPEA is running (see page 5-8 of the XPEA Implementation Guide)

  - When XPEA is installed, a program icon is not created in the Windows Start Menu. In addition, when XPEA runs, it runs as a service for all users. With the exception of an XPEA administrator, the user will not see anything on their Windows desktop indicating that XPEA is running.

  - If you wish to see if XPEA is running, check either the Task Manager for prprn.exe and prprncs.exe processes, or check the Services console to verify both corresponding XPEA Services are running (started). These are the only methods for non-administrators to detect if XPEA is running.

- Before rolling out to all target machines, it is recommended to verify that all test machine installs are registered properly and print is being captured correctly in XPEA reporting.

Running Setup Manually

Before using a deployment tool to roll out XPEA throughout your organization, it is strongly recommended to run the installation manually to verify that it works correctly.

Run Setup manually using MSIEXEC (the Windows Installer command line program). Use the /i option, followed by the full path to the Xerox XPEA MSI file, enclosed in double quotes. An optional space character may be used after the /i option, for readability. For example:

```
msiexec /i "\\computer\share\Xerox\Xerox Print Environment
    Assessor.msi"
```

The example command line above will launch Setup in interactive mode. You will see the full sequence of installer dialogs, pre-populated with whatever custom settings you defined when creating the administrative installation point. For example, if you specified the product registration information (company name and registration key) when creating the administrative installation point, then the Registration Information dialog will automatically contain your company name and registration key when you run Setup.

When you have successfully tested the MSI package, you are ready to deploy XPEA. If you use a deployment tool such as SMS, Group Policy, or similar, you may proceed to add the administrative installation point in your deployment package. If you do not use a deployment tool, the following section describes how to run the MSI package manually, in silent mode.

Silent Mode

The installation can be launched in silent mode by specifying the **/quiet** option on the MSIEXEC command line. The application will be installed silently, without any installer UI displayed.

Use the **/noreboot** option to suppress any system restart that the installer might request, should it encounter a locked file that it cannot update. (If this option is used and a locked file is found, then that file will be replaced automatically the next time the system is manually restarted). For example:

```
msiexec /i "\\computer\share\Xerox\Xerox Print Environment
    Assessor.msi" /quiet /norestart
```

Installer Logging

An installer log file can be generated, to help troubleshoot any installation problems that may occur. This is especially important for a silent install, which does not display any UI feedback. Logging can be enabled with the **/l** option on the MSIEXEC command line.

Logging Option Syntax

```
        /l*v! <LogFile>
    * - Log all information
    v - Verbose output
    ! - Flush each line to the log
```

<LogFile> is a full path to a log file. If it contains space characters, then enclose the entire path in double quotes. Make sure the path exists and that you have write permission to that directory.

In this example, Setup is run from an administrative installation point on a network share, in quiet mode, with verbose logging enabled:

```
msiexec /i "\\computer\share\Xerox\Xerox Print Environment
    Assessor.msi" /quiet /norestart /l*v! "C:\TEMP\msilog.txt"
```

XPEA - Automated Uninstall

Automated uninstall with no UI, reboot(s) suppressed
msiexec /x <ProductCode> /qn REBOOT=ReallySuppress

XPEA Product Code
Version 3.1.0.x : {5FD0C0AC-4966-4D41-9342-EBEDAD8788DA}

Version 3.1.1.x and later : {6DBA1760-7F30-4760-A61E-B8AB268266E3}

(Note, this product code may change in future releases)

For further reference, see Standard Installer Command-Line Options.

http://msdn.microsoft.com/en-us/library/aa372024(VS.85).aspx

Installing to Print Clusters

Important Installation Note

When installing on Print Clusters, it is imperative that you follow the following steps:

1.   Install XPEA on the Passive Node
2.   Run the Print Cluster installer on the Passive Node
3.   Install XPEA on the Active Node
4.   Run the Print Cluster installer on the Active Node

This section outlines the steps to follow when installing XPEA into a Print Cluster environment.

Download the print cluster install package.

! **IMPORTANT**

Always install on the **Passive** node first and then the Active node.

Installing XPEA

Screen 1: Welcome Screen

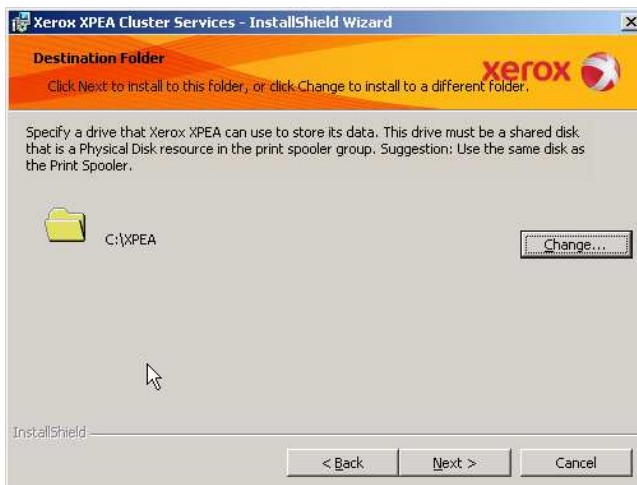Click **Next**.

Screen 2: Choose Cluster Node

Select the type of cluster node you are installing on.

⚠️ **IMPORTANT**

The installer does not detect the node type. Ensure you make the proper selection.
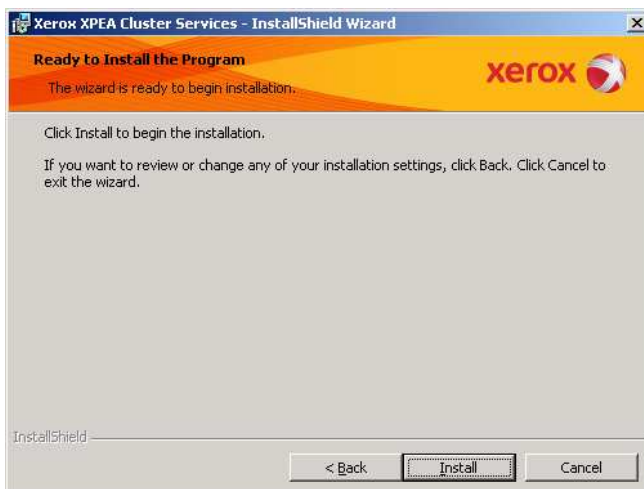
Click **Next**.

Screen 3: Destination Folder

Select a location for XPEA Cluster Service to store its data files.

⚠ IMPORTANT

The drive **must** be a shared disk that is a Physical Disk resource in the print spooler group.

Click **Next**.

Screen 4: Ready to Install

Click **Install**.

Installing XPEA

Screen 5: Install Complete

Click **Finish**.

Installing on Citrix Server or Terminal Server

XPEA has no special requirements for installation on Citrix Server or Microsoft Terminal Server.

Installation Procedure

- Ensure you are logged into the Terminal Server at the console or through a remote session.
- Start the XPEA installer and complete the installation as noted above in "Installing to Workstations and Print Servers."

Impact on User Sessions

There is no impact on user sessions as the XPEA Service is shared between all user sessions.

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