Bluebeam Revu in a Citrix Environment

Version 2017

Table of Contents

Introduction

This guide contains information about configuring, using and licensing Bluebeam Revu in different Citrix virtual environments. Its focus is on issues unique to the virtual environment. Additional details about installing, configuring and licensing are contained in the Bluebeam Enterprise Administrators Guide.

Compatibility

Revu 2015, 2016 and 2017 are [certified Citrix Ready](#) for XenApp 6.5-7.6 and XenDesktop 7-7.6. Installing on Windows Server 2008 R2, 2012 and 2012 R2 is supported for Citrix environments.

The Revu.exe application is the only part of the Revu suite that is certified. Other parts of the Revu suite can be used, but are not officially supported.

When Revu is used as part of a published desktop, all features, such as PDF creation using the Bluebeam PDF printer and application plugins, operate and perform as they would when installed on a physical system. In a published application environment, additional steps must be taken to enable and manage processes outside of the Revu application, such as PDF creation via the PDF printer and Office plugins.

Please refer to the [Revu Compatibility](#) page for additional hardware and software requirements.

Note: Although some customers have successfully deployed and used Bluebeam Revu in other virtual environments, such as terminal services, VMware or Microsoft App-V, these use cases are not officially supported.

Installation & Licensing

Bluebeam offers the following licensing options. The choice of license and how the registration is completed depends on the type of virtual environment you are using. A brief description of the options is included below and you can you can read more about each option and how it's managed in the [Revu Enterprise Administrators Guide](#).

Perpetual license is a node-locked license registered to the individual machine.

[Enterprise license](#) is node-locked to the computer, but is released after the machine is inactive for 15-days. It communicates across the internet with the license server to indicate it's still active.

[Open license](#) is a cloud based floating license for Revu eXtreme. This option is a good choice for virtual application and non-persistent virtual desktop environments.

Note: The Perpetual and Enterprise licenses are per-user and not concurrent license. You need to purchase licenses for all users who might have access to Revu in order to maintain compliance with the [End User License Agreement](#).

The Enterprise and Open licenses require an active internet connection to allow communication with the Bluebeam license server.

Managing your Open and Enterprise Licenses

To help you manage your licenses, we've created the [Bluebeam Gateway](#). You can find detailed instructions for using this web portal in the [Bluebeam Gateway User Guide](#). Once you've created an account, you can perform various tasks such as license tracking and reporting, and revoking or reissuing licenses.

Persistent virtual desktops

If you're planning on installing Revu in a "persistent" virtual desktop environment, you'll be able to use any of the licensing models, and manage the license just as you would on a physical machine. A Perpetual license will need to be manually released when the desktop is de-commissioned.

Persistent virtual desktops created from a master image or template

When the persistent virtual desktops are created from a master image or template where Revu is already installed, the registration can be completed on the master using the Delayed Authorization option. This allows you to enter the serial number and product key when Revu is installed on the master, but the registration isn't completed until Revu is run the first time on a newly created desktop.

The Enterprise license can also be used for perpetual desktops. This license is also node-locked to the desktop, but the license is released after the desktop has been inactive for 15 days. The desktop communicates to the license server across the internet to notify that it's still active. This reduces license management because licenses from retired desktops are automatically returned to the license pool.

Open license is another good option. It requires the least maintenance because it's a floating check-out/check-in license that's released each time the software is closed.

Non-persistent virtual desktops

If the virtual desktops are not persistent, the Perpetual or Open licenses can be used.

The Perpetual node-lock license is registered on the server or master template image used to distribute all desktops. In this situation, Revu is only registered once and all users are essentially using the same seat of Revu. You have to ensure licenses are purchased for all users that *potentially access* a desktop containing Revu, or find a way to limit the number of users who can access those desktops.

The Open license is a good choice in this environment because the floating license is checked-in each time the software is closed, which self-manages access to Revu.

Enterprise license is usually not a good fit for these environments because a license will only be released after 15 days of inactivity.

Published Applications

Published applications are transient by nature. In this environment the Perpetual and Open licenses can be used.

The Perpetual node-lock license is registered on the server and Revu is only registered once. All users are essentially using the same seat of Revu. You have to ensure licenses are purchased for all users that *potentially access* Revu, or find a way to limit the number of users who can access the app.

The Open license is also a good choice for this environment because the license is checked out on use and you don't have to limit user's access to Revu.

Using Multiple Servers

When Revu is installed on multiple servers, it must be registered separately on each server. Cloning a registered server links the licenses of the master and clones. Thus, if one server is unregistered or revoked, that change is applied to all servers.

There are two ways to avoid this:

Install Revu as a trial by clicking the "Use as Trial" button in the "Bluebeam Registration" window at the end of the installation. If you are deploying using the MSI, omit the serial number and product key. Register Revu after cloning with a Bluebeam Administrator command line option. For details, see Migrating Multiple Revu Installations to a New License, which describes the process.

If you are installing using the MSI, include the "NoAuth" delayed authorization option. This lets you include the serial number and product key during the installation. However, the registration process is deferred until the first time Revu requires a license.

Frequent Server Reimaging

If the Citrix server is reimaged frequently, register Revu on the master image and then push out the registered server image. The license won't be affected (as in cloning), because the computer remains the same.

Files and Folders used by Revu

On a physical machine, Revu saves files in a number of locations that store customizations to the Revu interface, custom tools, and cached files to improve performance and reduce internet bandwidth. Studio Projects stores work-in-progress of checked out files.

In a Citrix environment, these settings should be stored in a user's folder on the server to provide a consistent environment for the user and so work will not be lost.

User Settings & Preferences (Reset Settings)

Profiles provide an easy way to store your favorite toolbars, menus and other display settings within Revu. The Revu and user created tools sets store tools and symbols that can be used quickly.

These, other configuration files, and the "Recents" list are stored in the following folder:

> *%AppData%\Bluebeam Software*
> *or*
> *C:\Users\<User Name>\AppData\Roaming\Bluebeam Software*

Custom tool sets for your environment can also be stored in a central location so they can be accessed by all users. See the Revu Enterprise Administrators Guide for more information.

Resetting the Revu settings
The Revu settings can be reset back to the defaults. Revu will restore the original profiles and tool sets the next time it starts.

- In a virtual desktop, the user's settings can be returned to the default using the Revu tab in the Bluebeam Administrator.

- This can be done with in a virtual app environment by deleting or renaming the folder *%AppData%\ Bluebeam Software\Revu*. Custom tool sets and profiles can be backed up by copying them before they are deleted.

Log and Temporary Files

Revu log and temporary files are written to a folder in the TEMP folder:

> *%TEMP%\Bluebeam Software*
> *or*
>
> *C:\Users\<user_name>\AppData\Local\Temp\Bluebeam Software*

Exporting from Revu to external formats, like Word and Excel, writes temporary files to:

> *%TEMP%*

These files are temporary and are removed after the file is created.

Recovery Files

Revu creates recovery files in the folder *%TEMP%\Bluebeam Software\Revu*. Files in this folder allow unsaved work to be recovered if Revu closes unexpectantly. This folder should be maintained in the user's folder on the server to enable crash recovery.

Sets Cached Files

Revu creates cached files for Sets thumbnails in the folder *%TEMP%\Bluebeam Software\Revu*. These files help improve performance and reduce network traffic when working with sets that include a large number of files.

Cached Files for Bluebeam Studio:

Revu stores both active and cached files for Bluebeam Studio Sessions and Projects in the local environment. These files need to be stored in a persistent location in the user's environment so they will be available between Revu sessions.

Sessions stores pending updates for files being worked on in off-line mode. The markup information is uploaded to Studio the next time the user connects to Studio.

Projects stores locally saved changes for checked-out files. The changes to these files are uploaded to Studio when the file is checked-in or the server copy is updated.

Cached files are stored to improve performance in Sessions and Projects and to reduce the amount of network bandwidth Revu uses as it accesses Studio. A locally cached file will be used if it's up to date, instead of re-downloading the file.

> **Note:** *These cached files should not be removed until confirming that the user doesn't have any Sessions with pending offline changes or checked-out Project files.*

Studio Sessions and Projects store files in the following location:

%LocalAppData%\Bluebeam

Example: *C:\Users\<user name>\AppData\Local\Bluebeam*

Using the Bluebeam PDF printer and plugins

The Bluebeam PDF printer and plugins for Office can be used to create PDF files using the information below.

> **Note:** *Neither the Bluebeam PDF printer nor the Office plugins are certified or officially supported; however, there are some users who are successfully using them in these environments.*

The Bluebeam PDF printer and plugins create temporary files during the creation process. The user must have permissions to these locations so PDFs can be created.

Bluebeam PDF printer:

> *%AllUsersProfile%\ Bluebeam Software\Print Jobs*
>   or
> *C:\Users\All Users\Bluebeam Software\Print Jobs*

Office plugins create files in the above folder and:

> *%TEMP%\Bluebeam Software*

Published Desktop

When running Revu as part of a published desktop, all features such as PDF creation and application plugins operate and behave in the same way as when installed on a physical system. Click here for Printer Troubleshooting.

Published Application

When running in a Citrix published application environment, the Revu application (Revu.exe) is the only application in the Revu suite that is certified. Additional steps need to be taken to enable and manage processes outside of the Revu application, such as PDF creation via the Bluebeam PDF printer and Office plugins.

> **Note:** *The CAD plugins are not supported in a published application environment.*

Office and Outlook Plugins

The plugins for Word, Excel, PowerPoint and Outlook can be used in a published app environment if Office and Revu are both installed on the same server. However, they are not officially supported.

Microsoft Outlook

- The Outlook plugin for all versions does not require any additional configuration to run in the published app.

Microsoft Office

- Word and Excel with Revu 2015.5 and above do not require any additional configuration to run as a published application.

- Word and Excel with Revu 2015.1 and previous and PowerPoint with all versions requires the print monitor, BBPrint.exe, to be available. See Enabling the PDF Printer section below for details on how to enable the printer and plugins.

The Bluebeam PDF printer and some versions of the Office plugins (see above) rely on the Print Monitor (BBPrint.exe), which is a separate application that's always running in the background when Revu is installed on a desktop system. In a published app environment, the BBPrint.exe application must be running as the user and available to the application the PDF is being created from using the printer or plugin.

An instance of BBPrint can be started with the application by using a script to launch BBPrint and the application together, or BBPrint can be started using a login script.

Starting BBPrint with the published application

One way is to start this process with a script when a user launches a published application. For example, point the command line for the published application (in this example, PowerPoint) to a .bat file containing commands to launch BBPrint.exe and the application. Below are examples that show starting different versions PowerPoint with BBPrint.exe:

Revu 2017 and PowerPoint 2016:

```
start "PrintMon" "C:\Program Files\Bluebeam Software\Bluebeam Revu\2017\Revu
\BBPrint.exe"

start "PowerPoint" "C:\Program Files\Microsoft Office\Office16\PowerPnt.exe"
```

Revu 2016 and PowerPoint 2013:

```
start "PrintMon" "C:\Program Files\Common Files\Bluebeam Software\Bluebeam
Revu\2016\Brewery\V45\Printer Support\BBPrint.exe"

start "PowerPoint" "C:\Program Files\Microsoft Office\Office15\PowerPnt.exe"
```

Revu 2015 and PowerPoint 2010

```
start "PrintMon" "C:\Program Files\Common Files\Bluebeam Software\Bluebeam
Revu\Brewery\V45\Printer Support\BBPrint.exe"

start "PowerPoint" "C:\Program Files\Microsoft Office\Office14\PowerPnt.exe"
```

> *Note: The location of your Office applications may vary depending on where they are installed and if Office 32-bit or 64-bit is used. Revu and Office must be installed on the same server.*

Starting BBPrint in a Login Script

Another option is to start BBPrint.exe as part of a user's login script so that BBPrint, Bluebeam PDF printer and plugins are always available.

Because there are numerous ways to configure and manage a server, there is no single way that will work for everyone. These suggestions are meant to educate server administrators about how the printer and plugins work so you can implement the best solution for your environment.

> *Note:* In a published application environment, there will be instances of BBPrint.exe running for each logged in user.

Disabling Office Plugins for Non-Bluebeam Users

If there are some Citrix users that should not have access to the Office plugins, they can be disabled globally for those users to prevent them from loading the plugins. Blocking a user's read access to the following registry keys will stop the plugins from loading.

Revu 2017

Office 32-bit

Word: HKEY_LOCAL_MACHINE\SOFTWARE\Classes\WOW6432Node\CLSID\{A60EF190-192B-42CE-A5B3-40935DD42017}\ InprocServer32

Excel: HKEY_LOCAL_MACHINE\SOFTWARE\Classes\WOW6432Node\CLSID\{B5352C6B-5F84-4A81-A7F5-C63A83692017}\InprocServer32

PowerPoint: HKEY_LOCAL_MACHINE\SOFTWARE\Classes\WOW6432Node\CLSID\{26CE225D-AA52-4337-B8D4-3089C0312017}\InprocServer32

Outlook: HKEY_LOCAL_MACHINE\SOFTWARE\Classes\WOW6432Node\CLSID\{D00818B2-EB9F-4D2C-8F53-75413C9B2017}\InprocServer32

Office 64-bit

Word: HKEY_LOCAL_MACHINE\SOFTWARE\Classes\CLSID\{A60EF190-192B-42CE-A5B3-40935DD42017}\ InprocServer32

Excel: HKEY_LOCAL_MACHINE\SOFTWARE\Classes\CLSID\{B5352C6B-5F84-4A81-A7F5-C63A83692017}\InprocServer32

PowerPoint: HKEY_LOCAL_MACHINE\SOFTWARE\Classes\CLSID\{26CE225D-AA52-4337-B8D4-3089C0312017}\InprocServer32

Outlook: HKEY_LOCAL_MACHINE\SOFTWARE\Classes\CLSID\{D00818B2-EB9F-4D2C-8F53-75413C9B2017}\InprocServer32

Revu 2016

Office 32-bit

Word: HKEY_LOCAL_MACHINE\SOFTWARE\Classes\Wow6432Node\CLSID\{A60EF190-192B-42CE-A5B3-40935DD4C985}\InprocServer32

Excel: HKEY_LOCAL_MACHINE\SOFTWARE\Classes\Wow6432Node\CLSID\{B5352C6B-5F84-4A81-A7F5-C63A8369C615}\InprocServer32

PowerPoint: HKEY_LOCAL_MACHINE\SOFTWARE\Classes\Wow6432Node\CLSID\{26CE225D-AA52-4337-B8D4-3089C0314D98}\InprocServer32

Outlook: HKEY_LOCAL_MACHINE\SOFTWARE\Classes\Wow6432Node\CLSID\{D00818B2-EB9F-4D2C-8F53-75413C9B038A}\InprocServer32

Office 64-bit

Word: HKEY_LOCAL_MACHINE\SOFTWARE\Classes\CLSID\{A60EF190-192B-42CE-A5B3-40935DD4C985}\InprocServer32

Excel: HKEY_LOCAL_MACHINE\SOFTWARE\Classes\CLSID\{B5352C6B-5F84-4A81-A7F5-C63A8369C615}\InprocServer32

PowerPoint: HKEY_LOCAL_MACHINE\SOFTWARE\Classes\CLSID\{26CE225D-AA52-4337-B8D4-3089C0314D98}\InprocServer32

Outlook: HKEY_LOCAL_MACHINE\SOFTWARE\Classes\CLSID\{D00818B2-EB9F-4D2C-8F53-75413C9B038A}\InprocServer32

Revu 2015

Office 32-bit

Word: HKEY_LOCAL_MACHINE\SOFTWARE\Classes\Wow6432Node\CLSID\{EF34A109-477C-4CDB-A798-64ECB82FCE7D}\InprocServer32

Excel: HKEY_LOCAL_MACHINE\SOFTWARE\Classes\Wow6432Node\CLSID\{71F21DCD-B447-4962-B66C-FA2C97735E4B}\InprocServer32

PowerPoint: HKEY_LOCAL_MACHINE\SOFTWARE\Classes\Wow6432Node\CLSID\{E3A98429-1AA6-4CB4-BA87-C302D1D65801}\InprocServer32

Outlook: HKEY_LOCAL_MACHINE\SOFTWARE\Classes\Wow6432Node\CLSID\{50368F3B-E970-4ADB-A67D-D8E13D3A15CD}\InprocServer32

Office 64-bit

Word: HKEY_LOCAL_MACHINE\SOFTWARE\Classes\CLSID\{EF34A109-477C-4CDB-A798-64ECB82FCE7D}\InprocServer32

Excel: HKEY_LOCAL_MACHINE\SOFTWARE\Classes\CLSID\{71F21DCD-B447-4962-B66C-FA2C97735E4B}\InprocServer32

PowerPoint: HKEY_LOCAL_MACHINE\SOFTWARE\Classes\CLSID\{E3A98429-1AA6-4CB4-BA87-C302D1D65801}\InprocServer32

Outlook: HKEY_LOCAL_MACHINE\SOFTWARE\Classes\CLSID\{50368F3B-E970-4ADB-A67D-D8E13D3A15CD}\InprocServer32