



# Overview for IT Professionals

**INERA, AN ATYPON COMPANY**

19 Flett Road  
Belmont, MA 02478  
+617 932 1932  
[www.inera.com](http://www.inera.com)



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# eXtyles Overview

## What is eXtyles?

eXtyles is an add-in to Microsoft Word that is used by publishers worldwide to aid in editorial preparation of publications and conversion of Word files to XML. It is compatible with Word 2007, 2010, 2013, and 2016. It works within 32-bit Office only because Microsoft disabled most add-ins with 64-bit office.

eXtyles has been developed with a mix of Visual Basic, C++, Perl, and Omnimark , and is delivered as a set of EXE and DLL files, and accompanying data files in text or XML format.<sup>1</sup> All EXE and DLL files are digitally signed with a certificate from Symantec so that eXtyles can be installed within Word at a high level of trust. Installation is completed via a digitally signed InstallShield installer, and the installer process sets up an additional Symantec security certificate (owned by Inera) in the registry for eXtyles, along with the signature on the DLL and EXE files.

eXtyles updates are provided through either a completely new installer (generally about once per year under our maintenance program), or on an as-needed basis with individual patch files for specific components or data files. Most of our customers have an IT administrator who takes care of running the installer or installing patch files because administrator permissions are required. eXtyles does not provide for auto-updating over the web, except for the eXtyles journal database, in part to avoid any security concerns or issues.

The only cases when eXtyles accesses anything outside of the local PC are to:

- Query the PubMed and CrossRef databases for the purposes of linking bibliographic references
- Verify URLs found in the Word document
- To download a zip file with text and XML data files to update the eXtyles journal database

The queries are made via HTTP calls to these services. PubMed is a service run by the US Government. CrossRef is run by a not-for-profit that is a collective of most of the world's scientific and scholarly publishers. For PubMed and Crossref, eXtyles makes a web service call with a small bit of data, and the returned information is an XML record that is parsed and used by eXtyles. For URL verification, eXtyles makes a HEAD call to the URL to check the return code.

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<sup>1</sup> Prior to January 2019, eXtyles connected to Word using a set of VBA macros. In January 2019, Inera started to ship eXtyles as a COM add-in, so macros are no longer used.

## Where does it install to?

Because eXtyles is an add-in to Word, which itself requires a local installation, the entire eXtyles application resides on the local client system. eXtyles is a 32-bit application, and so default installation takes place in **c:\Program Files (x86)\eXtyles** on a 64-bit Windows system, or **c:\Program Files\eXtyles** on a 32-bit Windows system.

During normal operation, eXtyles needs read and execute privileges in the local install directory within the Program Files directory, but does not need write privileges in the install directory. eXtyles does need read/write/create privileges within the designated system TEMP directory. The default TEMP directory for eXtyles is: **C:\Users\[USER]\AppData\Local\EXTYLES** where [USER] is the logged in user name

## What version is eXtyles? Or, what's a build number?

Inera develops eXtyles using Agile practices and Test Driven Development. Because Inera uses these methodologies, eXtyles is available to our customers on a continuous release cycle — on almost any day, Inera can release a customized update of eXtyles to any customer that is solid, stable, and incorporates all of the latest features (and bug fixes!).

To achieve this goal, Inera rebuilds and tests eXtyles every weeknight using the latest code that has been certified for release. Automated testing is done on the nightly build to reconfirm the integrity of eXtyles. The automated testing covers virtually every feature of eXtyles and takes more than 80 machine-hours to complete.

In this environment, traditional software "version numbers" like 1.0.1 or "5.3.6" are not meaningful. While eXtyles is occasionally given an updated version number to celebrate major new feature releases (eXtyles is currently at version 6.0.0), the daily "Build" numbers are much more meaningful to understand exactly what release you have and what features it contains.

Each night, before the new "Build" is created, a master "Build Number" is incremented. eXtyles started with build number 1 in December 2000, and as of December 26, 2018, eXtyles is at Build 4151. That means Inera has run the build process more than four thousand times since eXtyles was first developed nineteen years ago.

Every eXtyles installer includes the numerical ID of the nightly "build" – or build number – from which the installer was created.

It is important to be aware of the build number of your current eXtyles installation. When you contact eXtyles support, we may ask for your current build number so we know what bug fixes or features are included in your installation. It can also be helpful when we are trying to reproduce problematic behavior.

The build number is included in the file name of the downloaded zip folder that contains your installer. You can also find your build number by clicking About button on the eXtyles ribbon.

## What about viruses?

Inera takes the threat of viruses very seriously. All PCs at Inera since Inera's founding have been protected with anti-virus software. For the last 14 years, we have been using NOD 32, as we find it's the best combination of high reliability with no adverse effect on PC performance. All systems at Inera are set up to auto-update so that the NOD 32 database is kept constantly up-to-date.

Buids of eXtyles are done on a well-isolated PC to further reduce the risk of virus infection. The build PC is actually required to have current anti-virus software under the contractual terms of one of our customers. Because of Inera's security precautions, you can rest assured that deliveries of eXtyles will be virus-free

# Installation Requirements

## General requirements and recommendations

The eXtyles software and hardware requirements and recommendations are as follows:

- Microsoft Windows (32- or 64- bit): 7, 8, 8.1, or 10
- Microsoft Word for Windows (32-bit version only): 2007, 2010, 2013, or 2016
- 1024 × 768 screen resolution (minimum)
- 2.5 GHz Intel Core i5 dual-core CPU equivalent or faster  
(recommended: systems less than four years old)
- 8 GB RAM (minimum; Inera recommends twice the minimum Microsoft specification for any combination of Windows and Word)
- 1 GB free HD space to install
- Internet access for PubMed/CrossRef matching/uploads and URL validation

If you are purchasing new hardware, please keep in mind the following recommendations:

- Raw CPU speed is the most important factor for eXtyles. Get the fastest CPU you reasonably can. Adding multiple CPUs or more than two cores doesn't add any speed if eXtyles is the only process you're running because eXtyles is not multi-threaded
- Make sure you have a "reasonable" amount of RAM. You don't need to go overboard, but you also don't want bare-bones. We usually recommend double what Microsoft recommends for the combination of Windows and Office on the given OS. Again, you may need more if other processes also run on the system
- We recommend a Solid State Drive rather than a hard drive these days because reliability has improved through the years, and we do see a performance difference running eXtyles.

Up-to-date installation requirements and recommendations can also be found on our [Support site](#).<sup>2</sup>

Note: eXtyles supports 64-bit Windows, but does not support 64-bit Microsoft Office.

## Verifying your installation

After installing eXtyles on a computer, it is important to verify that eXtyles is working as expected. Microsoft Word settings, Windows settings, anti-virus software configurations, and other installation mishaps can silently interfere with your eXtyles installation, and the amount of interference can change as Microsoft updates are continually pushed into your system. For this reason, we recommend confirming that eXtyles and all of its components have been successfully loaded after every installation.

Inera has developed a generic test that will help you confirm that eXtyles is installed and running correctly. The instructions are written for IT professionals and other users who are not yet familiar with the eXtyles interface or its functions. The test instructions, **eXtyles Installation Verification.doc**, can be downloaded from the [Inera Additional Guides page](#).<sup>3</sup>

## 64-bit Office woes

32-bit applications, including eXtyles, are not compatible with 64-bit versions of Office. You can find technical details about this limitation in the Microsoft articles, [Compatibility Between the 32-bit and 64-bit Versions of Office 2010](#)<sup>4</sup> and [64-bit Editions of Office 2013](#).<sup>5</sup>

2 <https://support.extyles.com/solution/articles/1000178066-extyles-installation-software-and-hardware-requirements>

3 [http://www.inera.com/support/additional\\_guides](http://www.inera.com/support/additional_guides)

4 <https://msdn.microsoft.com/en-us/library/ee691831%28office.14%29.aspx>

5 [https://technet.microsoft.com/library/ee681792\(v=office.15\).aspx](https://technet.microsoft.com/library/ee681792(v=office.15).aspx)

Note the Microsoft recommendation:

**"We recommend the 32-bit version of Office, because it is more compatible with most other applications, especially third-party add-ins."**

It's unlikely that most organizations need the additional capacity within Word that is provided by moving to the 64-bit version. When there are users within an organization who need to do CPU-intensive spreadsheet or database work, it's actually possible to install the 64-bit versions of Excel and Access in parallel with the 32-bit versions of Word and Outlook. This approach can satisfy the needs of all users in an organization, and provide additional capabilities of products like eXtyles within your publishing team.

## Word 2013/2016: Slow application performance

Recently, an eXtyles customer reported to our support team that eXtyles Cleanup seemed to take considerably more time to process long documents in Word 2013, compared with processing the same document in Word 2010. Tests by Inera support staff confirmed that Cleanup does indeed take longer in Word 2013.

Concerned that the Cleanup code might need to be optimized to improve performance in Word 2013, we investigated the timing difference in more detail to try to identify the particular Cleanup option that was causing the process to run more slowly.

We were quite surprised to discover that almost all Cleanup options took longer to run in Word 2013 than in Word 2010. The difference in timings varied from approximately 50% longer to twice as long in the newer version of Word.

A cursory search on the Internet reveals that we are not alone. We found several forum posts complaining of poor performance of add-ins not only in Word 2013, but also in Excel 2013 and other Office 2013 applications compared with earlier Office versions. Visual Basic, the language used by many Office applications to access information in Office documents, is used to perform most Cleanup functions and a few other eXtyles operations.

Of particular concern to the eXtyles support team was an experience **reported in an Office forum**.<sup>6</sup> A developer opened a support case with Microsoft because his application was taking between five and eight times as long to run in Word 2013 compared with Word 2010. He reported that "Microsoft have acknowledged shortcomings in the performance of Word 2013" to the extent that they had waived the usual fee for Microsoft developer support, and the Microsoft support engineer had reported the problem to the Word development team. Although this experience was posted in May 2013, it appears

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6 <https://social.msdn.microsoft.com/Forums/office/en-US/e2e04c42-0844-4e04-bcc6-851809a64da6/what-is-broken-in-word-2013-vba?forum=worddev>



that Microsoft has not taken steps in the intervening two years to address the Visual Basic performance issues in Word 2013.

Fortunately most eXtyles functions rely only minimally on Visual Basic, so the largest impact is in the eXtyles Activation and Cleanup functions; there is a much smaller impact on Auto-Redact, Advanced Processes, and Export. However, the problem remains and has not been addressed in Office 2016, so you will need to live with this slower performance in eXtyles Cleanup functions when you upgrade.

## Is eXtyles compatible with Office 365?

Short answer: Yes, provided you have licensed and installed a version of Office 365 that includes the full Office Desktop Suite

Longer answer: Office 365 a suite of products from Microsoft that introduced a new software "rental" model rather than the traditional perpetual license model. So the name "Office 365" refers to a licensing model rather than a specific version of Microsoft Office. Office 365 has been available since Word 2010, and can refer to Word 2010, 2013, or 2016. Most versions of Office 365 include the full Office Desktop Suite, including Microsoft Word.

eXtyles works as a Word add-in to the Office Desktop Suite. eXtyles fully supports Office 365 when you have purchased a version of Office 365 that includes the full Office desktop (e.g. Office 365 Business, Office 365 Business Premium, Office 365 Home), and when you have installed the full Office desktop on a traditional Windows laptop or desktop PC. eXtyles does not support mobile versions of Office running on a tablet or smartphone.

## MathType

eXtyles makes use of a third-party application called MathType to produce MathML and image files of equations in a Word document. Developed by Design Science, MathType is a Word add-in that provides a full-featured interactive equation editor. In fact, the built-in Microsoft Equation Edit 3.0 feature of Word is a subset of MathType licensed by Microsoft from Design Science (now Wiris). However Equation Edit 3.0 lacks features required by eXtyles.<sup>7</sup>

eXtyles detects installations of MathType, and makes direct calls to the MathType engine when exporting equations to XML. These calls may generate MathML, TeX, and/or .eps or .gif files of the equations. Both the file pointers for the image files and the MathML are included in the eXtyles-generated XML.

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<sup>7</sup> Microsoft completely removed Equation Edit 3.0 from the Office Suite during 2018 due to security problems with the application. Current Office users must download the free version of MathType, or license MathType for full functionality

For organizations that wish to produce MathML and/or image files for their equations, MathType is a required addition to eXtyles. **MathType**<sup>8</sup> can be purchased directly from Wiris; **site licenses**<sup>9</sup> are available by request.

For more detailed information about Word, Math, and XML, we recommend reviewing this paper from the JATS-Con 2016 proceedings: **Wrangling Math from Microsoft Word into JATS XML Workflows**.

# Common Installation Problems

## eXtyles is installed, but is not showing up in Word

If the eXtyles installation finishes with no errors, and you have an eXtyles folder in Program Files or Program Files (x86) but eXtyles does not show up in Word, please check the following items:

### Is an eXtyles file listed as a Disabled Item?

Occasionally, the eXtyles menu fails to appear after installation because of Word's macro security setting. Note that when this problem occurs, users have typically installed eXtyles successfully once or twice before. This problem can also occur if Word crashes (silently or not).

To re-enable these files in Word 2007 and newer:

1. Navigate to File > Options > Add-ins > Manage, select Disabled Items, and click OK.
2. Select "eXtylesInterface.dll" if listed under Word's list of Disabled Items, and click Enable.
3. Restart Word.

### Has the eXtyles Loader Been Disabled?

The eXtyles COM architecture loads based on a registry setting. Open Windows RegEdit to the key:

**HKEY\_LOCAL\_MACHINE\SOFTWARE\Microsoft\Office\Word\Addins\eXtylesInterface.Loader**  
(for 32-bit Windows)

**HKEY\_LOCAL\_MACHINE\SOFTWARE\WOW6432Node\Microsoft\Office\Word\Addins\**  
**eXtylesInterface.Loader** (for 64-bit Windows)

and find the key `LoadBehavior`. If this key is set to any value other than "3", reset it to "3".

8 <http://www.wiris.com/store>

9 <http://www.wiris.com/en/contact>

## Have you tried turning it off and on again?

Occasionally, rebooting the machine may reload files to their correct location, refresh a corrupted file, or resolve an issue in other mysterious ways.

## Error message in Word: your license has expired

**When using eXtyles activated with a softkey, not a hardware key:** please make sure you typed the serial number correctly during installation.

**When using eXtyles activated with a hardware key:** please note that the HASP key must be plugged into the machine that is using eXtyles during eXtyles processing. The red light on the key should be lit. If you are running Windows on a virtual machine, make sure the VM recognizes the HASP key.

If you installed your HASP drivers prior to December 2018, we posted an update in that month that you need to download and install for newer Windows updates. The latest drivers can be retrieved from [http://www.extyles.com/drivers/HASP\\_drivers\\_latest.zip](http://www.extyles.com/drivers/HASP_drivers_latest.zip)

Note: If your organization has multiple keys, you cannot install with one key and then swap another one in — the install process remembers which key has been used during install.

These and other common issues are covered on the [Inera Installation Support page](#)<sup>10</sup>.

## InstallShield Error

InstallShield is used to manage the installation and uninstallation of eXtyles. Occasionally, particularly during the installation of an eXtyles update, certain InstallShield components prevent you from successfully installing a new version eXtyles. Solutions for common InstallShield errors are listed below:

### iKernel.exe could not be installed

The warning message may say:

The InstallShield Engine (iKernel.exe) could not be installed. iKernel.exe could not be copied to 'C:\Program Files\Common Files\InstallShield\Engine\6\Intel 32'  
Make sure that you have the appropriate privileges to copy files to this folder.

There are several possible reasons that the InstallShield Engine could not be installed.

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<sup>10</sup> <https://support.extyles.com/a/solutions/folders/1000213844>

## 1. Admin privileges are required

Even if you are logged in as an administrator, you may need to explicitly install eXtyles as an Administrator. To do this, right-click the eXtyles executable file (e.g., eXtyles for Your Organization.exe) and select "Run as Administrator." The eXtyles installation process should run normally.

## 2. IKernel.exe is still running

Sometimes iKernel.exe failed to close properly after the last installation or uninstallation of eXtyles. Check if a copy of iKernel.exe is running, and if so, end the task. To do this:

1. Press CTRL + ALT + DELETE
2. Select Task Manager
3. Select the Processes tab
4. Look for IKernel.exe in the list of processes. If it is running, select it, and click End Process.
5. Select Yes to the Task Manager Warning dialog.

## An error -5006 occurred while running the setup.

The warning message may say:

An error (-5006: 0x800700b7) has occurred while running the setup. Please make sure you have finished any previous setup and closed other applications. If the error still occurs, please contact your vendor: Inera Inc.

We have seen cases where major commercial virus scanners interfered with the installation process. If you are seeing this warning, try disabling your virus scanner (or making the settings less aggressive) and then try installing again.

## Interference from Anti-virus Software

Some anti-virus software can prevent eXtyles from installing or running correctly. Even though all components of eXtyles include a trusted digital signature, some security programs will deem core eXtyles components "malicious" and place them in quarantine. The absence of these components results in a fatal error when the user opens Word or runs an eXtyles Advanced Process. When this happens, the two most common errors messages that the user sees are:

- "compile error in hidden module o12\_eXtylesRibbon"
- "omnivm.exe has stopped working"

Anti-virus software may put the entire eXtyles directory in quarantine, put one or more core eXtyles components in quarantine, or remove core components without listing them in quarantine at all. Therefore, it is important to review both the quarantine list and the eXtyles directory for listed core components.

The .exe and .dll files required by eXtyles that might be subject to quarantine by anti-virus software are listed below. Be sure each file exists in the eXtyles directory and is **not** listed on your anti-virus software's quarantine list.

Directory (assumes 64-bit Windows)	Type	File
C:\Program Files (x86)\eXtyles\	EXE	APIKeyStore.exe
C:\Program Files (x86)\eXtyles\	EXE	CopyKey.exe
C:\Program Files (x86)\eXtyles\	EXE	eXdiagnoseEXE.exe
C:\Program Files (x86)\eXtyles\	EXE	eXDownloader.exe
C:\Program Files (x86)\eXtyles\	EXE	omnivm.exe
C:\Program Files (x86)\eXtyles\OMServer\	EXE	CitMatchCore.exe
C:\Program Files (x86)\eXtyles\OMServer\	EXE	h2v.exe
C:\Program Files (x86)\eXtyles\OMServer\	EXE	Inera-Citation-Driver.exe
C:\Program Files (x86)\eXtyles\OMServer\	EXE	Inera-Equations-Convert.exe
C:\Program Files (x86)\eXtyles\OMServer\	EXE	Inera-Graphics-Export.exe
C:\Program Files (x86)\eXtyles\OMServer\	EXE	Inera-N4L.exe
C:\Program Files (x86)\eXtyles\OMServer\	EXE	Inera-Net-Deposit.exe
C:\Program Files (x86)\eXtyles\OMServer\	EXE	LibXSLT.exe
C:\Program Files (x86)\eXtyles\OMServer\	EXE	msxsl.exe
C:\Program Files (x86)\eXtyles\OMServer\	EXE	PerlExportProcessWrapper.exe
C:\Program Files (x86)\eXtyles\OMServer\	EXE	StyleMapper.exe
C:\Program Files (x86)\eXtyles\OMServer\	EXE	Xerces.exe
C:\Program Files (x86)\eXtyles\Perl\	EXE	PERL.EXE
C:\Program Files (x86)\eXtyles\RXP\	EXE	RXP.exe
C:\Program Files (x86)\eXtyles\	DLL	Attributes.dll
C:\Program Files (x86)\eXtyles\	DLL	CitStyles.dll
C:\Program Files (x86)\eXtyles\	DLL	CoreParser.dll
C:\Program Files (x86)\eXtyles\	DLL	DocInfo.dll
C:\Program Files (x86)\eXtyles\	DLL	Events.dll
C:\Program Files (x86)\eXtyles\	DLL	eXdiagnoseDLL.dll
C:\Program Files (x86)\eXtyles\	DLL	ExtendDLL.dll
C:\Program Files (x86)\eXtyles\	DLL	ExtendRestDLL.dll
C:\Program Files (x86)\eXtyles\	DLL	eXtylesInterface.dll
C:\Program Files (x86)\eXtyles\	DLL	IMFXML.dll
C:\Program Files (x86)\eXtyles\	DLL	IneraStats.dll

C:\Program Files (x86)\eXtyle\	DLL	Keystone.dll
C:\Program Files (x86)\eXtyle\	DLL	LaunchApp.dll
C:\Program Files (x86)\eXtyle\	DLL	MemFile.dll
C:\Program Files (x86)\eXtyle\	DLL	parstyle.dll
C:\Program Files (x86)\eXtyle\	DLL	PathGen.dll
C:\Program Files (x86)\eXtyle\	DLL	RevParser.dll
C:\Program Files (x86)\eXtyle\	DLL	RulesManagement.dll
C:\Program Files (x86)\eXtyle\	DLL	TabLoad.dll
C:\Program Files (x86)\eXtyle\OMServer\	DLL	ombcd.dll
C:\Program Files (x86)\eXtyle\OMServer\	DLL	omfsys.dll
C:\Program Files (x86)\eXtyle\OMServer\	DLL	omioprot.dll
C:\Program Files (x86)\eXtyle\OMServer\	DLL	omtcp.dll
C:\Program Files (x86)\eXtyle\OMServer\	DLL	omutil.dll
C:\Program Files (x86)\eXtyle\OMServer\	DLL	perl510.dll
C:\Program Files (x86)\eXtyle\OMServer\	DLL	Xerces.dll
C:\Program Files (x86)\eXtyle\OMServer\	DLL	xerces-c_2_3_0.dll
C:\Program Files (x86)\eXtyle\OMServer\	DLL	XprocLib.dll
C:\Program Files (x86)\eXtyle\Perl\	DLL	PERL56.DLL
C:\Program Files (x86)\eXtyle\PerlCode\	EXE	DatabaseLinking.exe
C:\Program Files (x86)\eXtyle\PerlCode\	EXE	StdValid.exe

To avoid interference from your anti-virus software, add eXtyle to your anti-virus software's exclusion list. This should prevent the software from putting eXtyle components in quarantine.

Note: Some eXtyle installations may not have all files listed above, dependent on the specific eXtyle features your organization has licensed.

## Uninstalling eXtyle

Before installing a new build of eXtyle, be sure to uninstall the previous build using Word's Add/Remove Programs tool, accessible through the Control Panel. After successfully uninstalling eXtyle, check in **c:\Program Files x86** (or **c:\Program Files** if you are running 32-bit Windows) to make sure all eXtyle files have been removed. If the eXtyle directory or any eXtyle files remain, delete them.

# Uninstalling eXtyles by hand

On 64-bit Windows:

1. Delete the directory C:\Program Files (x86)\eXtyles; or, if you can't delete it, make sure it's empty.
2. Using regedit, find these registry keys and delete them and all their contents:
  - HKEY\_LOCAL\_MACHINE\SOFTWARE\WoW6432Node\Inera
  - HKEY\_CLASSES\_ROOT\Inky

On 32-bit Windows:

1. Delete the directory C:\Program Files\eXtyles; or, if you can't delete it, make sure it's empty.
2. Using regedit, find these registry keys and delete them and all their contents:
  - HKEY\_LOCAL\_MACHINE\SOFTWARE\Inera
  - HKEY\_CLASSES\_ROOT\Inky

You may also need to follow these steps:

1. Open the directory C:\Program Files (x86)\InstallShield Installation Information in Windows Explorer (or C:\Program Files\InstallShield Installation Information on a 32-bit Windows system).

Note: You may need to set Windows Explorer to view hidden directories to find this directory

2. Open a Windows Search within this directory for files named setup.ini that contain the text "eXtyles".
3. When the setup.ini file containing this text is found, delete the directory in which it is located. For example, if the setup.ini file in the folder C:\Program Files (x86)\InstallShield Installation Information\{E0DB3600-1FB2-11D5-9EC3-0000861CFC58} contains "eXtyles", delete the entire folder {E0DB3600-1FB2-11D5-9EC3-0000861CFC58}.

## Cached files

The Temp folder in a user's **AppData\Local\eXtyles** directory can sometimes cache eXtyles files and cause problems for new installations. Check for eXtyles folders and files there and delete them if they exist. The next time you run eXtyles, and necessary temp files will be recreated.

Note: eXtyles creates optimized versions of some data files in the Temp folder at AppData\Local\eXtyles that improve eXtyles performance. As such, we do recommend not setting up your system to routinely purge files from this directory.

# Applying Patches

Updates to your organization's eXtyles build may be provided on an as-needed basis with individual patch files for specific components or data files. These files are compressed in a Zip file and sent via email. Once unzipped, the patch files should be copied into the directory (or directories) indicated in the accompanying email. If a version of the file(s) already exist, the new patch files should replace them (i.e. when prompted, select Copy and Replace).

Some complicated patch files may be structured within the Zip file so that the entire folder can be copied over the eXtyles directory, which allows you to quickly and easily merge the sub-folders and copy over the previous files.

# Hardware Keys

## Downloading and Installing the HASP Drivers

Some customers have a hardware key, in the form of a small USB device, inserted into a USB port on the computer before installing eXtyles. The first time you install eXtyles on this specific computer, you must first install the HASP drivers for the key, as follows:

1. Download the HASP drivers from [http://www.extyles.com/drivers/HASP\\_drivers\\_latest.zip](http://www.extyles.com/drivers/HASP_drivers_latest.zip).
2. Attach your hardware key from Inera to a USB port on the PC.
3. Unzip the downloaded drivers from step 1; inside the resulting folder **Sentinel\_HASP\_Run-time\_setup**, double-click the file **HASPUserSetup.exe**.
4. Reboot your PC (at this point, a red light should be glowing on the end of the hardware key). You can now install eXtyles as instructed.

Be sure the HASP USB drive is inserted and lit up before opening Word and eXtyles.



## No Remote Connections with Remote Desktop

eXtyles systems with hardware keys for activation cannot be directly accessed with Remote Desktop. Accessing servers with Windows Remote Desktop does not allow a session to see a USB key mounted on a server. If you try to access a keyed version of eXtyles with Remote Desktop, it will fail to run.

The hardware key's driver specifically disallows recognition of the key during remote-desktop sessions to prevent an application from having an arbitrary number of instances launched by remote users. Furthermore, it is also an extension of the general limitation of having a server's USB hardware available to remote users. With the exception of printers, most USB devices are not available to remote users without the installation of additional utilities.

One workaround for using the hardware under the Windows Server 2003/2008 operating system as a remote user is to have the remote session shadow a console session at the server. This is described in the Microsoft knowledge base article, **How to Connect to and Shadow the Console Session with Windows Server 2003 Terminal Services**.<sup>11</sup> We have tested this process at Inera on Windows Server 2003 and found that the key was fully accessible. Under Windows Server 2008, there are other issues with console access that are documented in the Microsoft article, **Changes to remote administration in Windows Server 2008**.<sup>12</sup> In Windows 2008 Server, to access session 0 it may be necessary to write your application as Windows Service or to access directly via the managed iLO/DRAC interface.

## Unattended Installations

The eXtyles installer is delivered as an .exe file. Normally the installation and uninstallation process is run manually. It is possible, with the instructions below, to run a silent or unattended installation and uninstallation of eXtyles.

An auto-scripted installation or uninstallation of eXtyles requires a custom setup.iss based on the GUID of your organization's installer. Please contact eXtyles support for this custom setup.iss file, and run the file per the instructions, below.

Unattended uninstallations of eXtyles are a little more complicated because Inera cannot deliver an unsetup.iss file that is ready to use. Instead, the file unsetup.iss file must be created within your organization's local environment to enable a silent uninstall. Please contact eXtyles support for instructions on how to create this custom file, and run the file per the instructions, below.

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11 <http://support.microsoft.com/kb/278845/>

12 <http://support.microsoft.com/kb/947723>

## Installation

To install eXtyles unattended:

1. Download and unzip the eXtyles installer from the URL posted by Inera. Save the installer (eXtylesXXXXYYYY.exe; where XXXX is your organization's acronym and YYYY is the build number) to your working directory.
2. After receiving the modified setup.iss from Inera, save it to your working directory (the same as above).
3. Run the following command:

```
"c:\ZZZZ\eXtylesXXXXYYYY.exe" -a /s /f1"c:\ZZZZ\setup.iss" /f2"c:\ZZZZ\setup.log"
```

where ZZZZ is your working directory and XXXX is your organization's acronym. Note that (1) all three paths must be full paths (no partial paths are allowed); (2) setup.iss is a modified version sent by the eXtyles support team; and (3) there is no space after "/f1" or "/f2" in the command line.

The setup.log file is created upon successful execution of the install.

## Uninstallation

To create an unsetup.iss file:

1. Run the following command:

```
"C:\Program Files (x86)\InstallShield Installation Information\{12345678-ABCD-1234-ABCD-123456ABCD}\setup.exe" -a /r /f1"c:\ZZZZ\unsetup.iss" /f2"c:\ZZZZ\setup.log"
```

where ZZZZ is your working directory and the alpha-numeric string in curly brackets is your organization's GUID (sent by Inera). Note that (1) all three paths must be full paths (no partial paths are allowed); and (2) the root directory is C:\Program Files\ if you are running 32-bit Windows.

This command records a custom version of unsetup.iss, unique to your local environment.

To uninstall eXtyles unattended:

1. Run the following command:

```
"C:\Program Files\InstallShield Installation Information\
{12345678-ABCD-1234-ABCD-123456ABCD}\setup.exe" -a /s /f1"c:\
ZZZZ\unsetup.iss" /f2"c:\ZZZZ\setup.log"
```

where ZZZZ is your working directory and the alpha-numeric string in curly brackets is your organization's GUID (sent by Inera). Note that (1) all three paths must be full paths (no partial paths are allowed); and (2) the root directory is C:\Program Files x86\ if you are running 64-bit Windows.

This command uses the recorded unsetup.iss from step 1 to uninstall eXtyles silently.

Note: Those who are eagle-eyed will note the only difference between the unsetup.iss creation and playback command lines is "/r" for "record", and "/s" for uninstall

The setup.log file is created upon successful execution of the uninstall.

## eXtyles Support and Glance

Glance is a third-party service that Inera uses to screen-share with eXtyles users. Looking at the user's screen to observe an issue - and sometimes controlling the screen to explore and resolve the problem - helps the support team help you much more quickly and painlessly.

The first time you attempt to connect to Inera's Glance account, you will be asked to download Glance software to enable the screenshare. You can learn more about Glance on their [Support page](#)<sup>13</sup>.

Should it be necessary to view the screen of one of your users, we are also happy to work with applications such as GoToMeeting, Zoom, or WebEx.

## Proxy Servers, Firewalls, Security, and Internet-Dependent Modules

### Proxy Servers

Several eXtyles modules query databases and other sources external to eXtyles and the machine on which it is installed. Some organizations include proxy servers in their network, which affects how these eXtyles processes connect to the Internet.

13 <http://www.glance.net/site/support/support.asp?>

eXtyles takes advantage of Wininet functionality to automatically detect and use your organization's proxy server(s) during the following Internet-reliant processes:

- PubMed Reference Checking and Correction
- CrossRef Reference Checking and Correction
- NCBI Database Linking
- URL Checking
- Standards Linking and Checking

## Network exceptions for user agents

If your network protocols are more restrictive, you may need to set up a network exception for the user agent used by eXtyles to allow certain Internet-dependent modules to run. The user agent used by eXtyles is **eXtyles WinINet 1.0**.

## Internet-Dependent Modules

If your organization uses a firewall, you may have to enable access to the URLs which are used by the following modules:

### CrossRef

eXtyles queries CrossRef with this base IP address: <https://208.254.38.80>

```
https://208.254.38.80/servlet/query?usr=XXXX&pwd=YYYY&type=q&format=unixref&q-
data=%3C%3Fxml%20version%20%3D%20%221.0%22%20encoding%3D%22UTF-8%22%3F%3E%0A%3C-
query_batch%20version%3D%222.0%22%0Axmlns%20%3D%20%22http%3A%2F%2Fwww.crossref.
org%2Fqschema%2F2.0%22%0Axmlns:xsi%3D%22http%3A%2F%2Fwww.w3.org%2F2001%2FXMLSchema-in-
stance%22%0A%3E%0A%09%3Chead%3E%0A%09%09%3Cdoi_batch_id%3EeXtyles%20Request%20
395428203%3C%2Fdoi_batch_id%3E%0A%09%3C%2Fhead%3E%0A%09%3Cbody%3E%0A%09%09%3C-
query%20key%3D%22Q1_jrn%22%20enable-multiple-hits%3D%22false%22%20expanded-re-
sults%3D%22false%22%3E%0A%09%09%09%3Cyear%3E1996%3C%2Fyear%3E%0A%09%09%09%3Car-
ticle_title%3EGeneral%20score%20tests%20for%20associations%20of%20genetic%20
markers%20with%20disease%20using%20cases%20and%20their%20parents.%3C%2Far-
ticle_title%3E%0A%09%09%09%3Cjournal_title%3EGenet.%20Epidemiol.%3C%2Fjournal_ti-
tle%3E%0A%09%09%09%3Cvolume%3E13%3C%2Fvolume%3E%0A%09%09%09%3Cissue%3E5%3C%2Fis-
sue%3E%0A%09%09%09%3Cfirst_page%3E423%3C%2Ffirst_page%3E%0A%09%09%09%3Cau-
thor%3ESchaid%3C%2Fauthor%3E%0A%09%09%3C%2Fquery%3E%0A%09%3C%2Fbody%3E%0A%3C%2Fque-
ry_batch%3E%0A
```

Note that in the above example, the username (usr) and password (pwd) are XXXX and YYYY respectively. You would enter your organization's CrossRef credentials in place of these variables. These credentials are hardwired into your organization's CrossRef Checking or Correction module, and can be found in **XXXLinkRefsCrossRef.xar**, located in the **eXtyles\XXX\Data\** directory (where XXX is your organization acronym). Your CrossRef credentials can be found in the following two lines of that file:

```
-d gstLRP_ServiceLogin      XXXX
-d gstLRP_ServicePassword   YYYY
```

If you paste this URL into a browser, the browser will show a full XML record for DOI 10.1002/(SICI)1098-2272(1996)13:5<>1.0.CO;2-9. However eXtyles does not query through a browser — it is a direct HTTP call from the eXtyles software. The firewall must therefore be configured to allow queries that come from an application other than a browser.

Access to the base URL shown above must be open for the user of eXtyles. eXtyles uses port 80 for these queries, so this port must also be open. eXtyles can also be reconfigured to use an alternate port through a proxy server.

We currently use an IP address, 208.254.38.80, rather than crossref.org to avoid delays in DNS lookups.

## PubMed

eXtyles queries PubMed with this URL:

```
https://eutils.ncbi.nlm.nih.gov/entrez/eutils/
```

A fully formed query looks like this:

```
https://eutils.ncbi.nlm.nih.gov/entrez/eutils/esearch.fcgi?term=SCIENCE%5BTA%5D+AND+1728%5BPG%5D+AND+318%5BVI%5D+AND+2007%5BDP%5D&retmax=3&db=pubmed&email=eXtyles-support%40inera.com&tool=eXtyles
```

If you paste this line above into a browser you should get back a result with an ID of 18079386. eXtyles uses port 80 for these queries. There is no IP address because of the fully formed URL.

As of December 1, 2018, PubMed requires an API Key when queries run faster than 3 queries/second. eXtyles has a nominal query rate of approximately 7 queries/second, thus requiring these keys. You can learn more about how to setup these keys on our [Support page](#)<sup>14</sup>.

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<sup>14</sup> <https://support.extyles.com/support/solutions/articles/11000064881-why-is-pubmed-linking-taking-so-long-to-complete->

If you run PubMed Linking or Correction, or NCBI Database Linking and receive an error 429, you have not correctly setup these keys and you need to do so.

## Admin training? Admin privileges

If you or your eXtyles user has had Administrator Training and plans to implement configuration changes to eXtyles in-house, be sure that your user account(s) has full administrator privileges.

eXtyles Administrators should carefully review Inera's guidelines for modifying and managing in-house configuration changes: **Managing Your eXtyles Configuration: Best Practices for Inera Integration**<sup>15</sup>

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15 <http://www.inera.com/documentation/eXtyles-Admin-Files-Best-Practices.pdf>

