eXtyles Overview for IT Professionals

VB.NET

Contents

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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. Your eXtyles build is compatible with Word 2013 and later, or Office 365, and can be used with either 32-bit or 64-bit Microsoft Office.

eXtyles has been developed with a mix of VB.NET, C++, Perl, and Omnimark, and is delivered as a set of EXE and DLL files, and accompanying data files in text or XML format.[1] All EXE and DLL files are digitally signed with a certificate from Digicert so that eXtyles will install in Word with a high level of trust. Installation is completed via a digitally signed InstallShield installer, and the installer process sets up an additional Digicert security certificate (owned by Inera) in the registry for eXtyles, along with the signature on the DLL and EXE files.

eXtyles requires .NET Framework version 4.7.2 or later; if an earlier version is found, the installer will attempt to download the required version from Microsoft; installation will fail if VB.NET cannot be updated to a suitable version.

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
- Download a zip file with text and XML data files to update the eXtyles journal database

The queries are made via HTTPS 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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[1] Inera previously shipped eXtyles as a COM add-in. As of December 2022, eXtyles ships as a VSTO add-in.

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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. Depending on the bitness of the Windows and Office installations, default installation takes place in C:\Program Files (x86)\eXtyles on a 64-bit Windows system with 32-bit Office, or C:\Program Files\eXtyles on a 32-bit Windows/32-bit Office or 64-bit Windows/64-bit Office 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 to any customer a customized update of eXtyles 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 7.0.0), 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 November 28, 2022, eXtyles is at build 5126. That means Inera has run the build process more than five thousand times since eXtyles was first developed 22 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 the About button on the eXtyles ribbon.

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What about viruses?

Inera takes the threat of viruses very seriously. All PCs at Inera since Inera's founding have been protected with antivirus 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.

Builds 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 antivirus 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 Word for Windows: 2016, Microsoft (Office) 365*
- Microsoft Windows: 10, 11
- 1024 × 768 screen resolution (minimum)
- Intel Core i5-9 (9th Gen), Intel Xeon (2nd Gen), or equivalent or faster (we recommend systems less than four years old)
- 8 GB RAM minimum; we recommend 16 GB Ram, or twice the minimum Microsoft specification for any combination of Windows and Word)
- 500 MBytes free HD space to install

*Office must be installed locally on the machine on which you're working. eXtyles can not be used with Word in a Web browser. See the following section, "Is eXtyles compatible with Office 365?"

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.

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

Note: eXtyles supports both 32-bit and 64-bit Windows and 32-bit and 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, antivirus 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 [eXtyles User Guide](#).[3]

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 is 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 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

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

[3] http://www.inera.com/support/additional_guides

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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.[4]

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.

For organizations that wish to produce MathML and/or image files for their equations, MathType is a required addition to eXtyles. [MathType](#)[5] can be purchased directly from Wiris; [site licenses](#)[6] 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 Word has disabled it. 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 2016 and newer:

1. Select the FIle Ribbon, and then select "Options" from the left hand galley menu. A Word Options dialog will appear.
2. In the left hand galley menu of the dialog select "Add Ins"
3. This will present a "Manage" drop down in the lower portion of the dialog box. In the drop down list select "Disabled Items", and click "Go…".
4. If "eXtyles_VBNET" is listed under Word's list of Disabled Items, click Enable.
5. If not, navigate back to the "Word Options" dialog , the "Manage" drop down and select COM Add-ins.
6. If "eXtyles_VBNET" is unchecked, check it and exit Word Options.

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[4] Microsoft completely removed Equation Edit 3.0 from the Office Suite during 2018 due to security problems

[5] http://www.wiris.com/store

[6] http://www.wiris.com/en/contact

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7. Restart Word.

Has the eXtyles Been Disabled?

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

`HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Office\Word\Addins\Inera.eXtyles_VBNET`

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

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. You can uninstall and re-install, ensuring that the key value is correct. Alternatively you can check the key value in the registry:

- 64-bit Windows:
  Computer\HKEY_LOCAL_MACHINE\SOFTWARE\WOW6432Node\Inera\eXtyles\Install
- 32-bit Windows:
  Computer\HKEY_LOCAL_MACHINE\SOFTWARE\Inera\eXtyles\Install

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 https://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.[7]

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

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[7] https://support.extyles.com/a/solutions/folders/1000213844

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you from successfully installing a new version of 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.

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.

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 Antivirus Software

Some antivirus 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 most common error message that the user sees is:

- "omnivm.exe has stopped working"

Antivirus 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 antivirus software are listed below. Be sure each file exists in the eXtyles directory and is not listed on your antivirus software's quarantine list.

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

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C:\Program Files\eXtyles\	DLL	eXdiagnoseDLL.dll
C:\Program Files\eXtyles\	DLL	eXtyles_VBNET.dll
C:\Program Files\eXtyles\	DLL	IMFXML_VBNET.dll
C:\Program Files\eXtyles\	DLL	Keystone.dll
C:\Program Files\eXtyles\	DLL	LaunchApp.dll
C:\Program Files\eXtyles\	DLL	MemFile.dll
C:\Program Files\eXtyles\	DLL	Microsoft.Office.Tools.Common.v4.0.Utilities.dll
C:\Program Files\eXtyles\	DLL	PathGen.dll
C:\Program Files\eXtyles\	DLL	RevParser.dll
C:\Program Files\eXtyles\	DLL	TabLoad.dll
C:\Program Files\eXtyles\OMServer\	DLL	iconv.dll
C:\Program Files\eXtyles\OMServer\	DLL	IKVM.OpenJDK.Charsets.dll
C:\Program Files\eXtyles\OMServer\	DLL	IKVM.OpenJDK.Core.dll
C:\Program Files\eXtyles\OMServer\	DLL	IKVM.OpenJDK.Security.dll
C:\Program Files\eXtyles\OMServer\	DLL	IKVM.OpenJDK.Text.dll
C:\Program Files\eXtyles\OMServer\	DLL	IKVM.OpenJDK.Util.dll
C:\Program Files\eXtyles\OMServer\	DLL	IKVM.OpenJDK.XML.API.dll
C:\Program Files\eXtyles\OMServer\	DLL	IKVM.Runtime.dll
C:\Program Files\eXtyles\OMServer\	DLL	ombcd.dll
C:\Program Files\eXtyles\OMServer\	DLL	omfsys.dll
C:\Program Files\eXtyles\OMServer\	DLL	omioprot.dll
C:\Program Files\eXtyles\OMServer\	DLL	omtcp.dll
C:\Program Files\eXtyles\OMServer\	DLL	omutil.dll
C:\Program Files\eXtyles\OMServer\	DLL	perl510.dll
C:\Program Files\eXtyles\OMServer\	DLL	saxon9he.dll
C:\Program Files\eXtyles\OMServer\	DLL	saxon9he-api.dll
C:\Program Files\eXtyles\OMServer\	DLL	Xerces.dll
C:\Program Files\eXtyles\OMServer\	DLL	xerces-c_2_3_0.dll
C:\Program Files\eXtyles\OMServer\	DLL	XprocLib.dll
C:\Program Files\eXtyles\Perl\	DLL	PERL56.DLL
C:\Program Files\eXtyles\PerlCode\	EXE	AutostyleRM.exe
C:\Program Files\eXtyles\PerlCode\	EXE	DatabaseLinking.exe
C:\Program Files\eXtyles\PerlCode\	EXE	StdValid.exe
C:\Program Files\eXtyles\PerlCode\	EXE	TermCheck.exe

To avoid interference from your antivirus software, add eXtyles to your antivirus software's exclusion list. This should prevent the software from putting eXtyles components in quarantine.

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

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Uninstalling eXtyles

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

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, any 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 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:
   https://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
4. Sentinel_HASP_Run-time_ setup, double-click the file HASPUserSetup.exe.

5. 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.
6. Be sure the HASP USB drive is inserted and lit up before opening Word and eXtyles.

HASP Drivers and Windows 11

If you are using Windows 11 and need to install HASP drivers to use eXtyles you will need to follow these steps.

1. Download the Legacy Drivers from Thales's website.
2. In File Explorer, right click on **Sentinel_LDK_Run-time_cmd_line.zip** and select **extract all…** .
   Accept the default directory.
3. Open a Command Prompt
   a. Select Start Menu > Windows System > Command Prompt
      or
   b. In the "Tray" of Windows in the Search Box, type **cmd** and <return>
4. Change the directory to the extracted location of **haspdinst.exe**
   This is most likely to be in this directory:

   ```
   C:\Users\{username}\Downloads\Sentinel_LDK_Run-
   time_cmd_line\Sentinel_LDK_Run-time_cmd_line
   ```

   Note the nested, duplicate directory name!
   The change directory command will look like this:

   ```
   C:\Users\{username}> cd Downloads\Sentinel_LDK_Run-
   time_cmd_line\Sentinel_LDK_Run-time_cmd_line
   ```

   Type and run the following command at the prompt:

   ```
   C:\Users\...\...Run-time_cmd_line> haspdinst.exe -i -fi -kp -fss -v
   -ld
   ```
5. Proceed to install eXtyles per the documentation.

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.

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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.

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.

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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.

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, YYYY is the build number, 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 the modified version of setup 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\InstallShield Installation Information\{12345678-
ABCD-1234-ABCD-123456ABCD}\setup.exe" -a /r /f1"c:\ZZZZ\unsetup.iss"
/f2"c:\ZZZZ\setup.log"
```

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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\ unless you are running 32-bit Office with 64-bit Windows, in which case it is C:\Program Files (x86)\.

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.

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.

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

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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=unixre
f&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:%2F%2Fwww.crossref.
org%2Fqschema%2F2.0%22%0Axmlns:xsi%3D%22http:%2F%2Fwww.w3.org%2F2001%2FXMLSche
ma-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%2
0
markers%20with%20disease%20using%20cases%20and%20their%20parents.%3C%2Far-
ticle_title%3E%0A%09%09%09%3Cjournal_title%3EGenet.%20Epidemiol.%3C%2Fjourn
al_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%2
Fque- 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 ZZZLinkRefsCrossref.xar, located in the eXtyles\ZZZ\Data\ directory (where ZZZ is your organization acronym). Your Crossref credentials can be found in the following two lines of that file:

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<pre>
        -d gstLRP_ServiceLogin   XXXX
        -d gstLRP_ServicePassword   YYYY
</pre>

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+A ND+1728%5BPG%5D+AND+318%5BVI%5D+AND+2007%5BDP%5D&retmax=3&db=p ubmed&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 set up these keys on our Support page.[8]

If you run PubMed Linking or Correction, or NCBI Database Linking and receive an error 429, you have not correctly set up 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[9]

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[8] https://support.extyles.com/support/solutions/articles/11000064881-why-is-pubmed-linking-taking-so-long-to-complete-

[9] https://www.inera.com/wp-content/uploads/eXtyles-Admin-Files-Best-Practices.pdf

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