IBM **Aspera Connect User Guide 3.9.9**

Windows

Revision:440 Generated:03/09/2020 18:25

Contents

Introduction

IBM Aspera Connect is an install-on-demand application that facilitates high-speed uploads and downloads with an Aspera transfer server.

Connect is compatible with most standard Web browsers. It integrates all of Aspera's high-performance transport technology in a small, easy-to-use package that provides unequaled control over transfer parameters. Connect includes the following features:

Feature	Description
FASP file transport	High-performance transport technology.
Browser interface	Uploads and downloads are launched transparently by a Web browser.
Flexible transfer types	Easily transfer single files, multiple files, or entire directories.
Transfer retry and resume	Automatically retries and resumes partial and failed transfers.
Browser-independent transfer	The Web browser can be closed once transfer operations have begun.
Transfer monitor	A built-in transfer monitor for visual rate control and monitoring.
HTTP fallback	HTTP fallback mode for highly restrictive network environments.
Proxy support	HTTP fallback and FASP proxy settings.
Content protection	Password-protect files that are being transferred and stored on the remote server.
Queueing	Allow a fixed number of concurrent transfers, and place the rest in a queue.

Drag-and-Drop Support

When used with IBM Aspera Faspex and some third-party web applications, Connect supports the drag-and-drop feature for specifying which files and folders to transfer; however, this feature is not available for certain browsers. The following table shows which browsers support the drag-and-drop feature in this release of Connect:

Browser	Drag-and-Drop of Files	Drag-and-Drop of Folders
Firefox	Supported	Supported
Chrome	Supported	Supported
Internet Explorer*	Supported	Not supported
Edge	Not supported	Not supported

* Drag-and-drop capability is limited with Internet Explorer because of how it records drop events.

Setting Up Connect

Installation

The procedure for installing IBM Aspera Connect requires enabling a browser extension for Connect in addition to installing the Connect application itself.

There are two ways to install Connect on your system:

- Guided Installation: The most common way of installing Connect. If Connect is not installed or needs upgrading when you try to upload or download files from an Aspera web app, such as Aspera Faspex or Aspera Shares, you are prompted to install Connect and guided through the process.
- Manual Installation: For system-wide (multi-user) installations, and a fallback method for users with non-typical web apps. You first install the Connect web extension for your browser (with the exception of Internet Explorer). You then install the Connect application by running a desktop installer you download from the Aspera website.

System Requirements: For information on supported operating systems and browsers, see the release notes for this version of IBM Aspera Connect.

Important:

- You cannot install Connect under the **Guest** account.
- Before performing a system-wide installation (all users of the machine), uninstall any per-user installations. *Aspera does not support local and system-wide installations of Connect on the same system.* For uninstallation instructions, see Uninstalling on page 27.
- Connect works better when your browser's local storage is enabled; however, it is not a requirement.

Guided Installation

If you do not have Connect installed and you attempt to transfer packages or files using an Aspera web application (such as Faspex or Shares), the Connect Welcome screen appears and prompts you to install Connect:
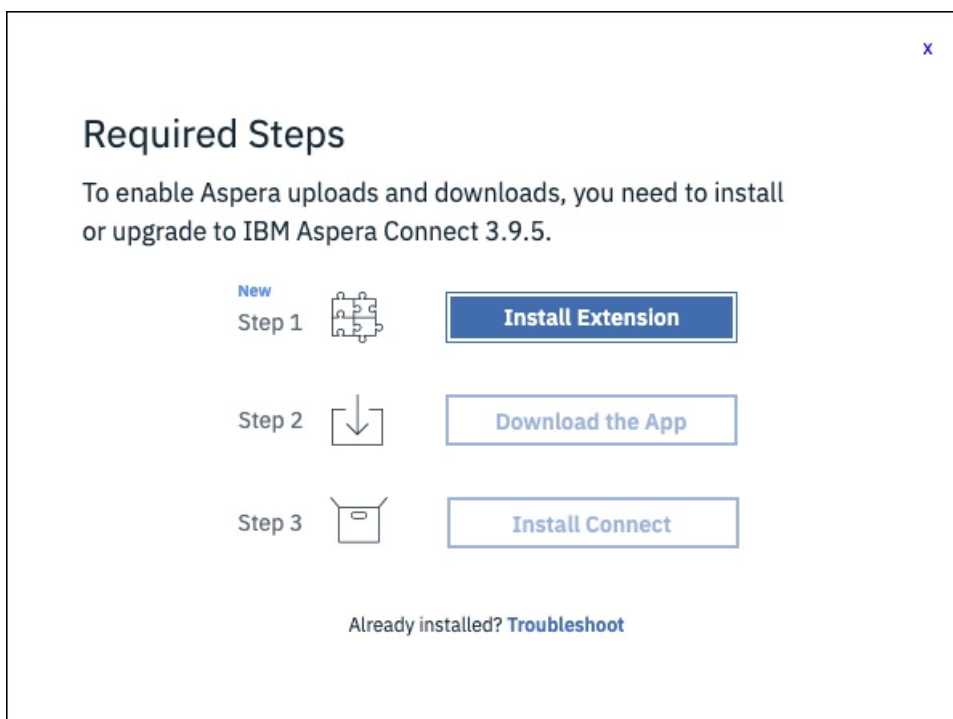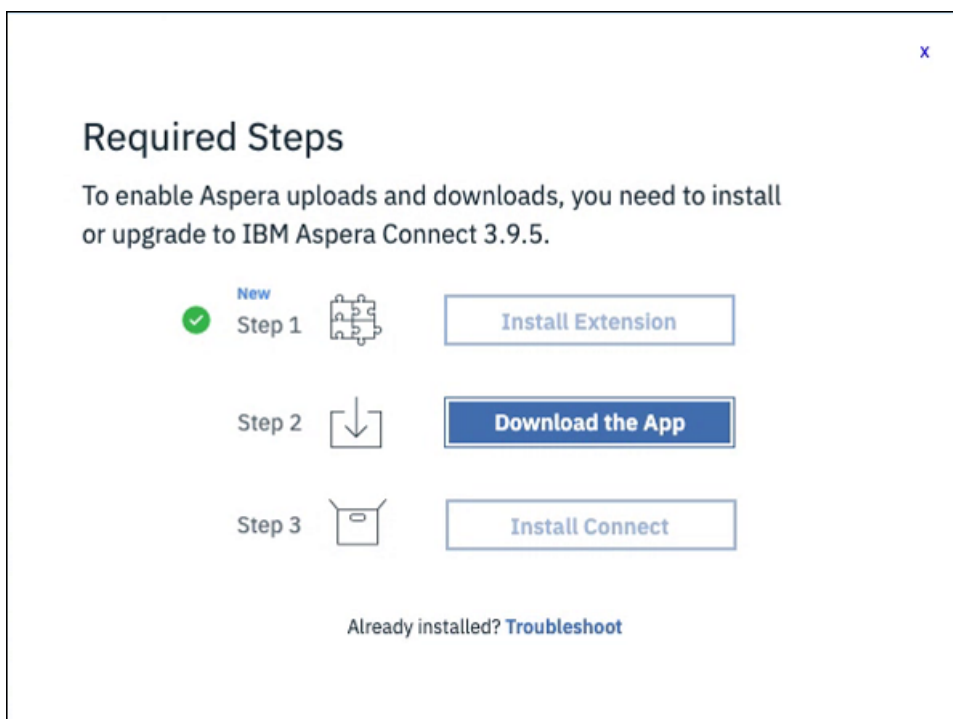

Depending on your browser/platform combination, the screens shown in these instructions may vary.

1. To begin, click **Install Extension**.

   Your browser's page for the Connect extension opens. See the instructions for your browser in Adding the Connect Browser Extension on page 7 to install the Connect extension. If successful, you'll see the message confirming the extension has been added.
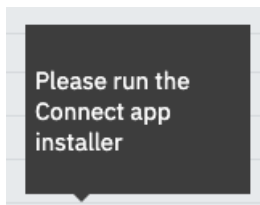2. The welcome screen now prompts you to download the Connect application:

Required Steps

To enable Aspera uploads and downloads, you need to install or upgrade to IBM Aspera Connect 3.9.5.

New
✓ Step 1   Install Extension

Step 2   **Download the App**

Step 3   Install Connect

Already installed? **Troubleshoot**

Click **Download the App**. The following message appears as the installer (.exe, .dmg, or .rpm, depending on your OS) is downloaded to your `Downloads` folder.

Please wait.
Downloading the
Connect app
installer...
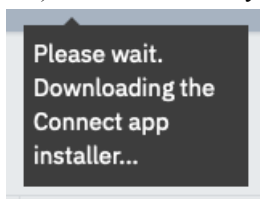
Once the installer has been downloaded, the following message appears:

Please run the
Connect app
installer

3. The welcome screen now prompts you to install the Connect application:

To install the Connect application, locate the installer app you just downloaded, open it, and click **Start**.

Once the Connect application has been installed, refresh your browser.

Manual Installation

Step 1. Install the Connect extension for your browser.

For instructions about obtaining the Connect extension for your browser, see Adding the Connect Browser Extension on page 7.

Step 2. Download and run the Connect application installer.

You can download the Connect installer directly from http://downloads.asperasoft.com/connect/. Once downloaded, run the installer and follow the Setup screens. You will need to accept the terms and conditions, and confirm whether to install Connect for you only (Typical) or for all users of this machine (Custom).

Adding the Connect Browser Extension

For supported web browsers, this section explains how to obtain and add the IBM Aspera Connect extension to the browser you will use. The Connect extensions are specific to the browser; the procedure for adding an extension to a browser is the same regardless of which OS platform that browser is running on. With a guided install, clicking **Install Extension** opens the extension link for the browser you are using. With a manual install, be sure to download the extension for the browser you intend to use with Connect.
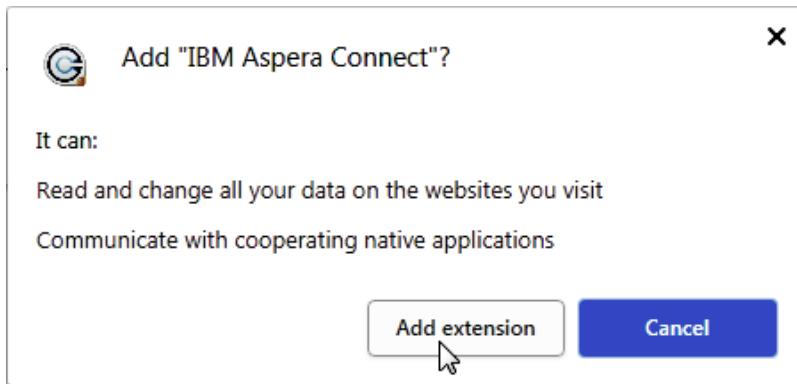
<u>Chrome</u>

To obtain and install the Connect extension for Chrome, follow the procedure below:

1. Click **Install Extension** (guided install method), or open the IBM Aspera Connect page on the Chrome Web Store (manual install method). The following page opens:
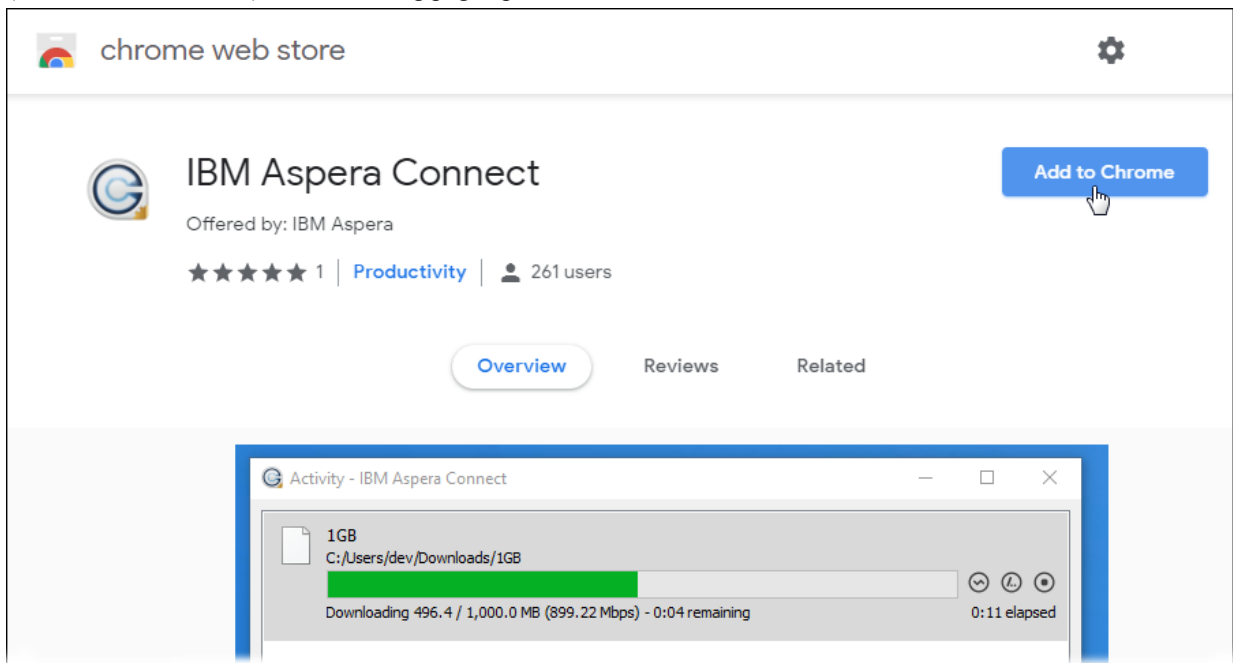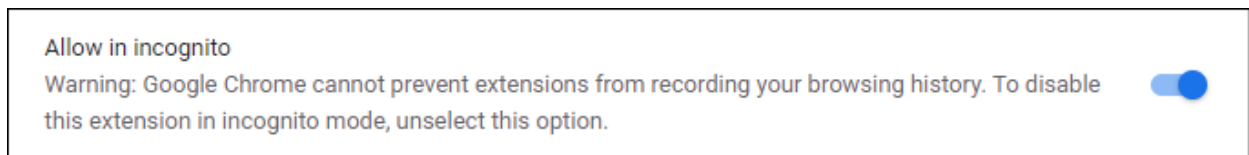

2. Click **Add to Chrome**. The **Add "IBM Aspera Connect"?** popup appears.
3. Click **Add extension**.

If successful, you'll see the message "IBM Aspera Connect has been added to Chrome".

Note: By default, the Connect extension is disabled in Chrome's incognito mode. To enable the Connect extension, right-click the small Connect icon in the upper-right corner of your browser page. Then open **Manage extensions** and scroll down to the heading **Allow in incognito**. Then set the switch to ON as shown below. Note that the Connect extension does not record browser history.
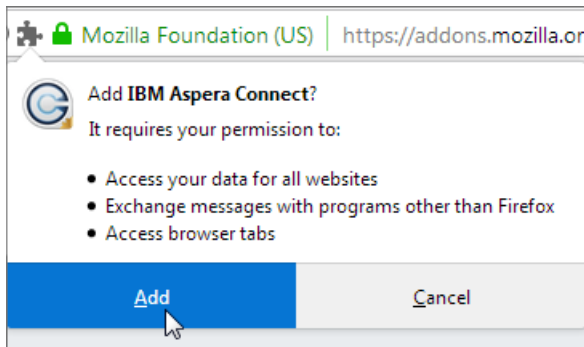

Firefox

To obtain and install the Connect extension for Firefox follow the procedure below:

1. Click **Add extension** (guided install method), or open the IBM Aspera Connect page on the Firefox Add-Ons page (manual install method). The following page opens:
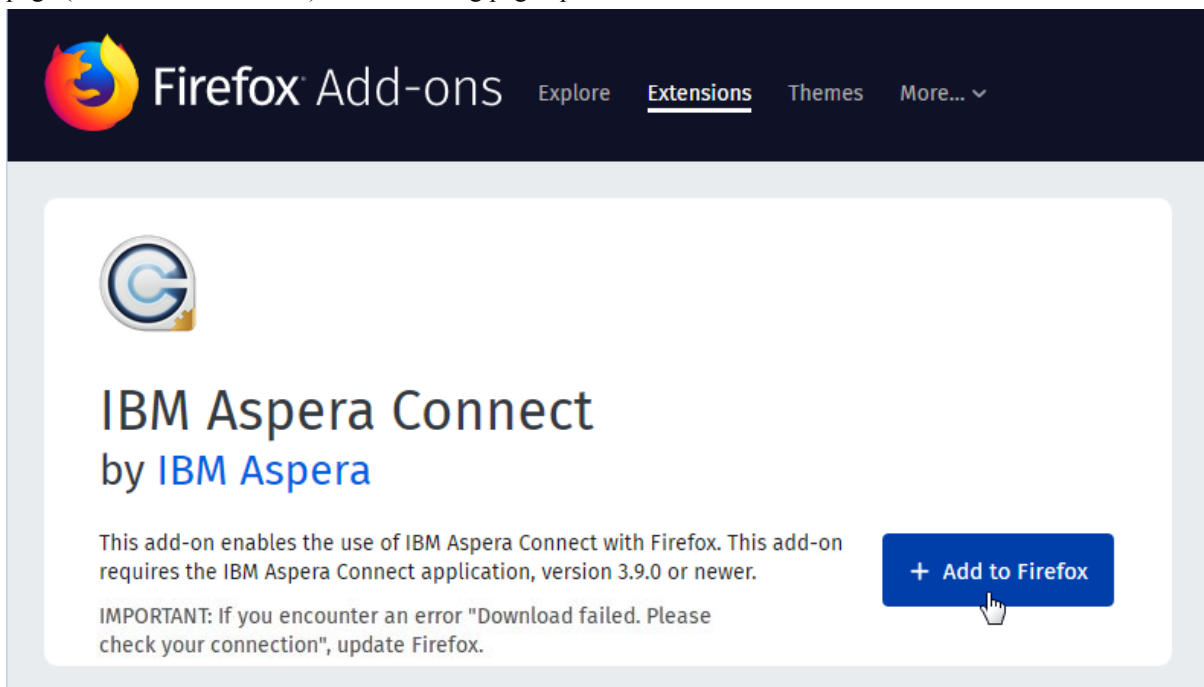
2. Click **+ Add to Firefox**. The **Add IBM Aspera Connect?** popup appears.

3. Click **Add**.

   If successful, you'll see the message "IBM Aspera Connect has been added to Firefox".

Internet Explorer

Microsoft Internet Explorer does not use a browser extension.

Microsoft Edge

To obtain and install the Connect extension for Microsoft Edge, follow the procedure below:

1. Click **Install Extension** (guided install method). Or, open the IBM Aspera Connect for Edge page on the Microsoft Store (manual install method). The following page opens:
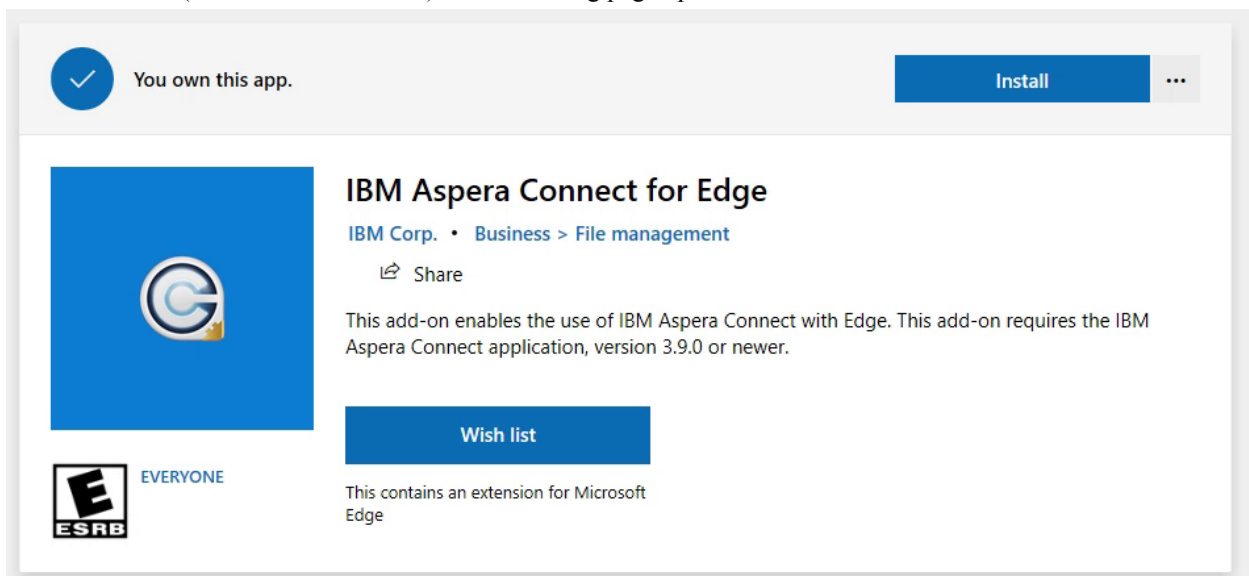
   (If you are prompted to sign in, doing so is not required. You can dismiss the **Sign in** window.)

2. Click **Install**.

   If the message below appears, clicking **Refresh the page** usually resolves it.

A popup appears indicating the extension is installed.

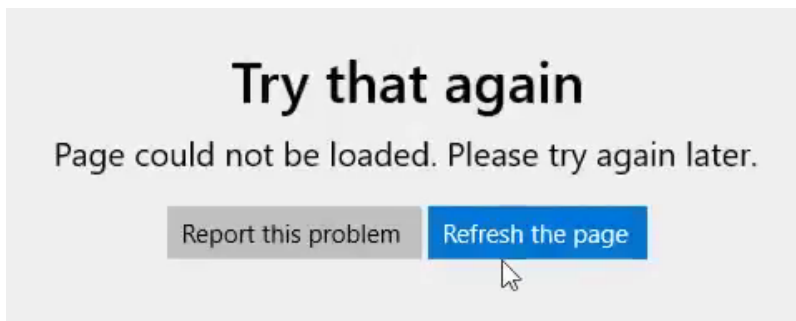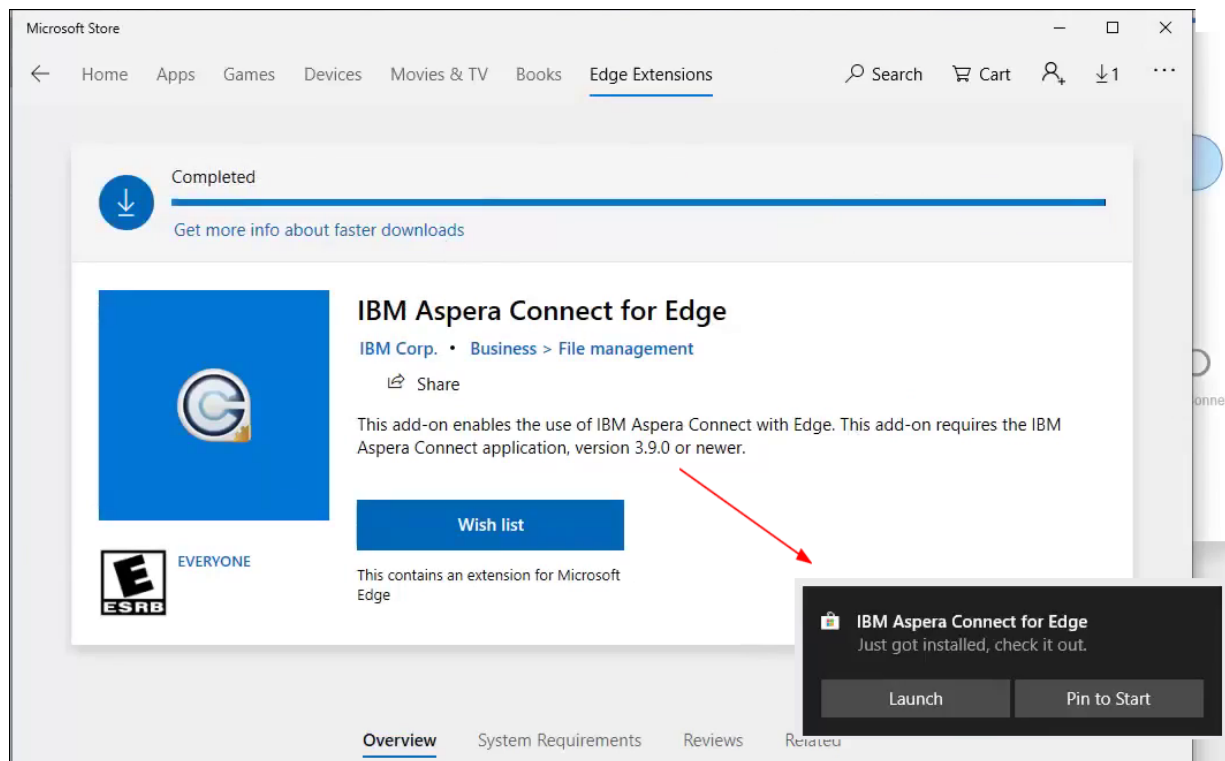**3.** Click **Launch**. This returns you to the browser, and the following popup appears:
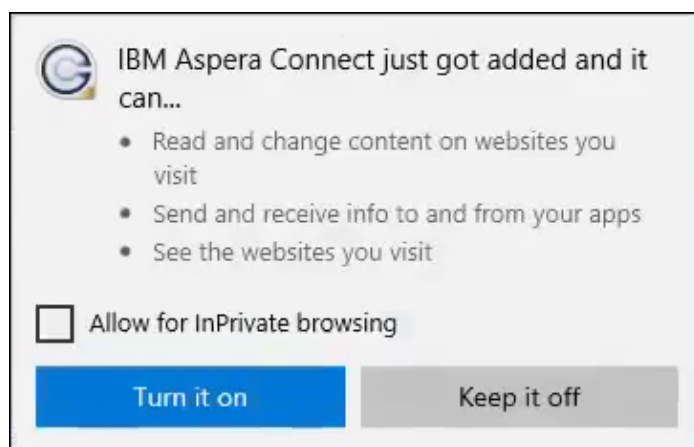
If clicking **Launch** opens an empty window, return to the browser and the above popup should appear.

4. Click **Turn it on**.

Note: If the Connect extension for Edge is disabled, and you try to use a web app, the launch bar asks you to install the extension. Clicking **Install Extension** opens the Microsoft app store and shows a Launch button—however, the Launch button will *not* enable the extension. Enable the extension in the settings for Edge.

After Installation

Once Connect is installed, you can launch it from the following location:

Start > All Programs > Aspera > **Aspera Connect**

On Windows 10, **>** **> Aspera >** **Aspera Connect**.

> **Tip:** Aspera provides a web-based diagnostic tool that can be helpful in identifying connection issues. You can access the IBM Aspera Connect Diagnostic Tool here:
>
> ```
> https://test-connect.asperasoft.com/
> ```

Network Environment

Connect typically requires some configuration steps in order to function in your network environment. Configuration settings also allow you to limit transfer rates and use an HTTP proxy.

If you need to configure any network proxies or override network speeds, you can do so through Connect's **Network** option. Before modifying Connect's network configuration, review the network requirements below, which describe ports that may need to be open on your network (such as ports 22 and 33001).

Network Requirements

Your SSH outbound connection may differ based on your organization's network practices. Although TCP/33001 is the default setting, consult your IT department for questions related to which SSH ports are open for file transfer. Also see the help documentation for your particular operating system, for specific instructions on configuring your firewall. If your client host is behind a firewall that does not allow outbound connections, you will need to allow the following:

- Outbound connections for SSH, which is TCP/33001 by default, although the server side may run SSH on another port. Check with your IT department for which SSH ports are open for file transfers.
- Outbound connections for FASP transfers, which is UDP/33001 by default, although the server side may run FASP transfers on one or more other ports. Check with your IT department for which SSH ports are open for FASP transfers.

Limit Transfer Rates

Important: Set values in these fields only if you need to limit the bandwidth that Connect uses. For example, your office may have limited bandwidth to share among its users. **Exception:** For the SaaS products Files and Aspera on Cloud, use this field to set the *default transfer speed*.

Launch Connect as follows:

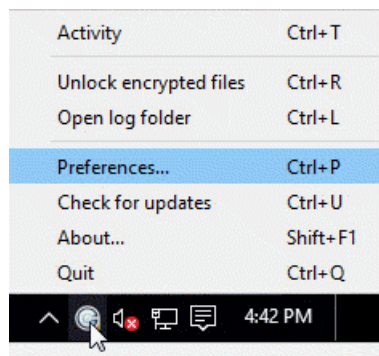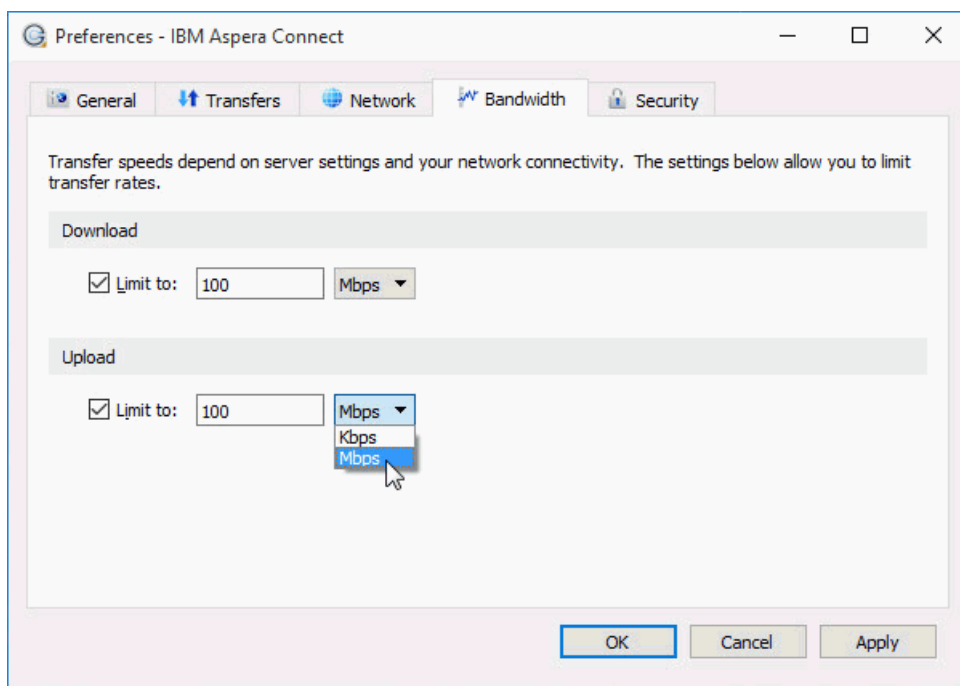**Start > All Programs > Aspera >** Ⓖ**Aspera Connect**

On Windows 10, 🪟 > ▤ > **Aspera >** Ⓖ**Aspera Connect**.

Open Preferences:

From the system tray: Right-click Ⓖ **> Preferences**

You can limit Connect transfer rates from the **Bandwidth** tab:

You can limit the download and upload transfer rates by enabling the respective checkboxes and entering a rate in either Mbps or Kbps. Note that setting a maximum speed doesn't guarantee your transfers will ever achieve that speed. Actual performance depends on the following factors:

- Your network's bandwidth: Available bandwidth on your network may limit your transfer rate, even if you enter larger numbers into these fields.
- Your Aspera server transfer settings: Settings on your server may limit your transfer rate even if your network bandwidth and the numbers you enter are larger.

HTTP Proxy

HTTP fallback serves as a secondary transfer method when the Internet connectivity required for Aspera accelerated transfers (UDP port 33001, by default) is unavailable. If UDP connectivity is lost or cannot be established, if you have configured an HTTP proxy, the transfer continues over the HTTP protocol based on this proxy configuration.

Note: Although the HTTP proxy is used primarily for the HTTP fallback feature, it can be used for all HTTP-related activities performed by Connect. However, it cannot be used for FASP transfers.

To configure and enable an HTTP proxy server, open **Preferences > Network** in Connect and look for the HTTP Proxy section.
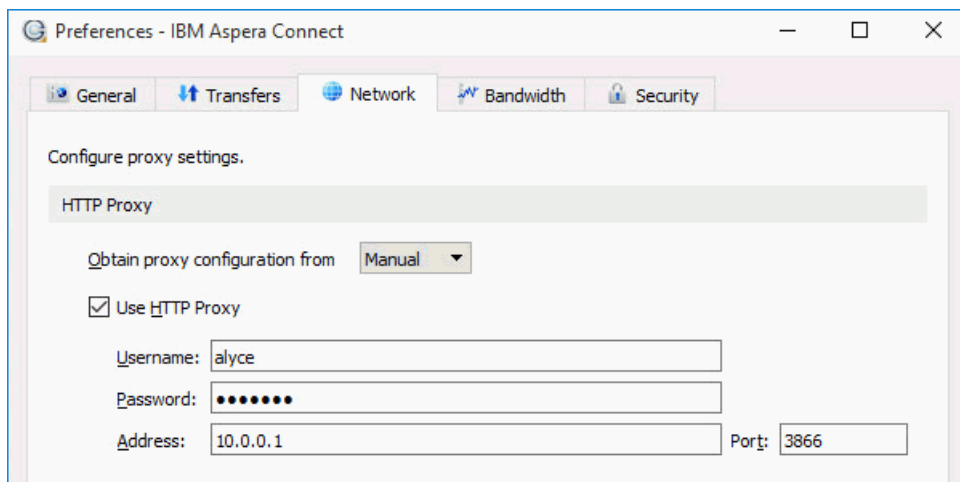
To configure the HTTP proxy, select one of the following configuration methods from the drop-down list:

- **System** – to have Connect use the HTTP proxy settings that are configured for your operating system.
- **Manual** – to enter your HTTP proxy settings manually. (This may require the assistance of your system administrator.)

  These settings include username and password authentication credentials, as well as the host name, IP address, and port number.

  Note that the Use HTTP Proxy checkbox and fields are enabled only if you select **Manual**.

FASP Proxy

When FASP proxy is enabled, Aspera passes the DNAT or DNATS (secure) username, password, server address, and port to `ascp`.

To set up a FASP proxy, do the following:

1. Go to **Preferences > Network** in Connect and locate the FASP Proxy section in the lower half of the dialog.
2. Select the following checkboxes:

   - **Use FASP Proxy (DNAT)**
   - **Secure (DNATS)**
3. Enter your proxy server username, password, address, and port number.

Note: If you enable FASP proxy, you may need to add `local.connectme.us` as a proxy exception in order for Connect to function.

Basic Configuration

The Connect Preferences dialog allows you to configure logging behavior and various options for file transfers, such as transfer queuing, file download location, and the allowed number transfer retries.

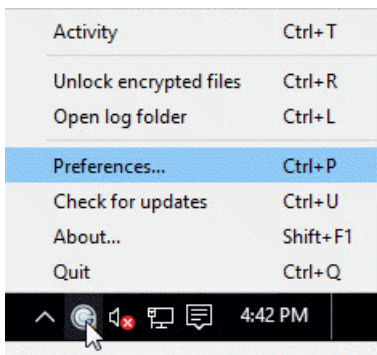To change the application's default settings, launch Connect as follows:

Start > All Programs > Aspera > **Aspera Connect**

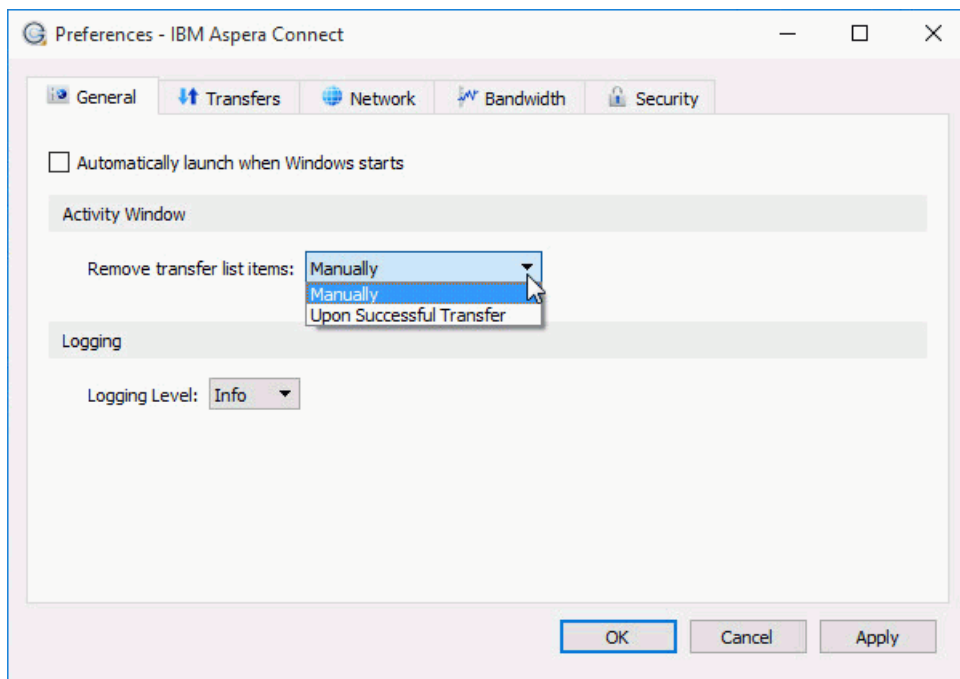On Windows 10, **>** **> Aspera >** **Aspera Connect**.

Open Preferences:

From the system tray: Right-click **> Preferences**

General Preferences

Connect's general application behavior can be configured in the **General** tab.

Under the **General** tab, you can modify the following settings:

- Specify whether to launch Connect whenever the user logs in to the system.
- Specify how to remove transfer sessions from the Activity window: manually, or automatically on successful transfers.
- Specify the level of detail to be logged for transfers:
    - **Info** – Default. Displays general messages about requests, `ascp` spawn options, and transfer status changes.
    - **Debug** – Verbose. Displays validation and FASP management messages, and passes `-D` to `ascp`.
    - **Trace** – Extra verbose. Passes `-DD` to `ascp`. Used only for diagnosing problems.
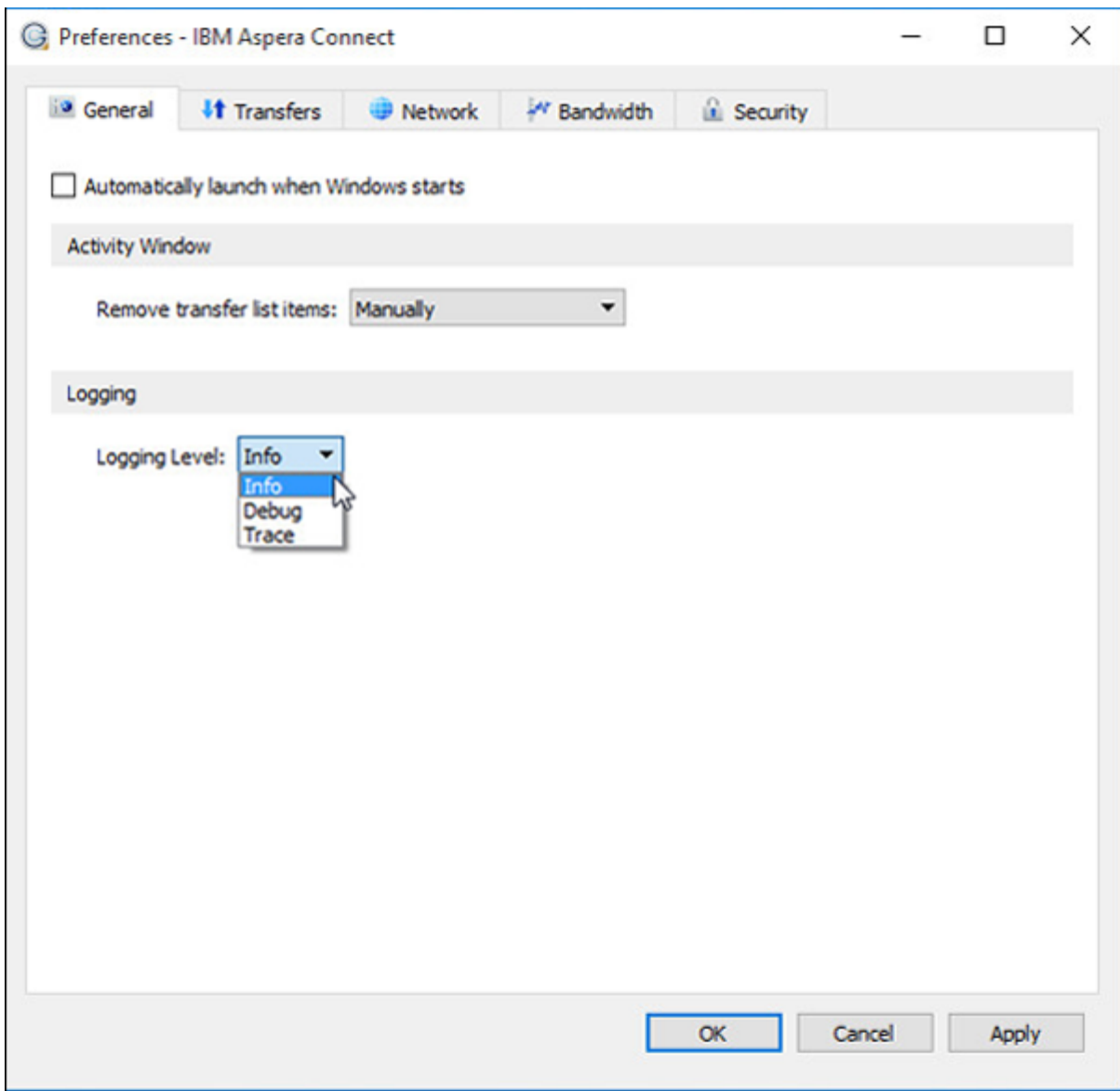
The logging feature is typically used for troubleshooting and when contacting Aspera Support.

Transfer Preferences

Connect's transfer behavior can be configured under **Preferences > Transfers**.
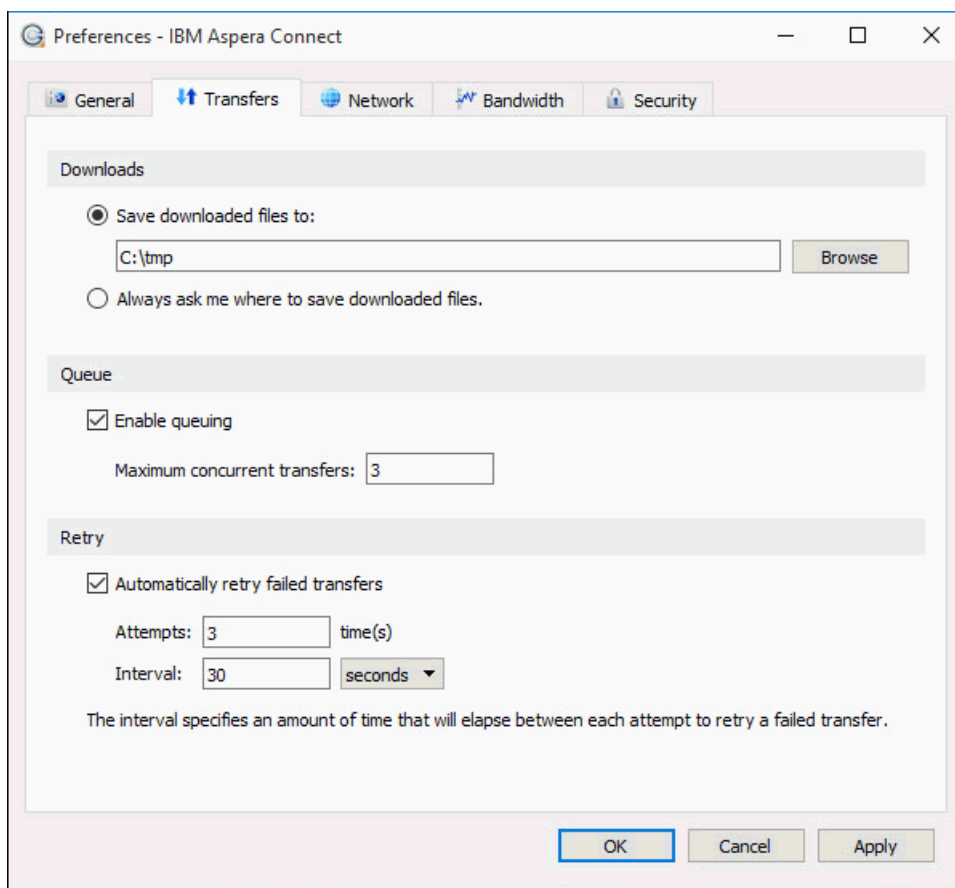
Downloads

By default, Connect downloads files to the current user's `Downloads` folder. To change this setting, adjust the following settings:

- **Save downloaded files to** – Specify the path to the location where downloaded files should be saved.
- **Always ask me where to save downloaded files** – Choose this option to select a location for each download.

Queue

- **Enable queuing** – Enable or disable the queuing of transfers.
- **Maximum concurrent transfers** –This allows a specified number of transfers to run concurrently and places the remainder in a queue.

Retry

You can set a retry rule if a transfer fails. Set the retry rule as follows:

- **Automatically retry failed transfers** – enable or disable.
- **Attempts** – specify the number of times Connect should attempt to retry a failed transfer.
- **Interval** – specify the amount of time that Connect should wait before retrying a transfer (in seconds, minutes, or hours).

Security Configuration

Connect security facilities allow you to specify restricted and trusted hosts, encrypt content, and manage authentication credentials.

features the following capabilities for minimizing security risks when uploading or downloading files:

- You can add Aspera servers as **Trusted Hosts** to avoid the recurring security prompt, or add servers to the **Restricted Hosts** list to require confirmation every time you attempt to initiate a transfer with that host.
- You have the option of saving your authentication credentials when you connect to a server, as well as removing them from the **Passwords** tab.
- **Content protection** is a feature that allows uploaded files to be encrypted during a transfer for the purpose of protecting them while stored on a remote server. The uploader sets a password while uploading the file, and the password is required to decrypt the protected file.

The settings above can be configured in the Connect **Preferences** dialog. To open it, first launch Connect:

**Start > All Programs > Aspera >** **Aspera Connect**

On Windows 10, **>** **> Aspera >** **Aspera Connect**.

Then, from the system tray, right-click **> Preferences**
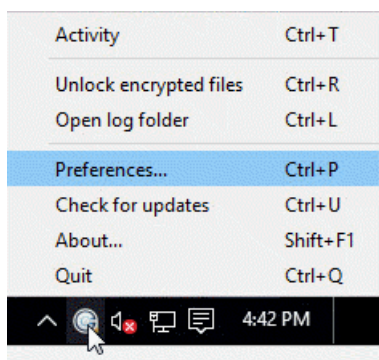
Managing Hosts

When a transfer is initiated and the **Use my choice for all transfers with this host** option is enabled in the confirmation dialog, the server that you are allowing or denying will be added to the **Trusted Hosts** or **Restricted Hosts** list, respectively. To view, add or remove additional trusted hosts, go to **Security > Trusted Hosts**. Enter the host's address in the specified text field and click **Add**.
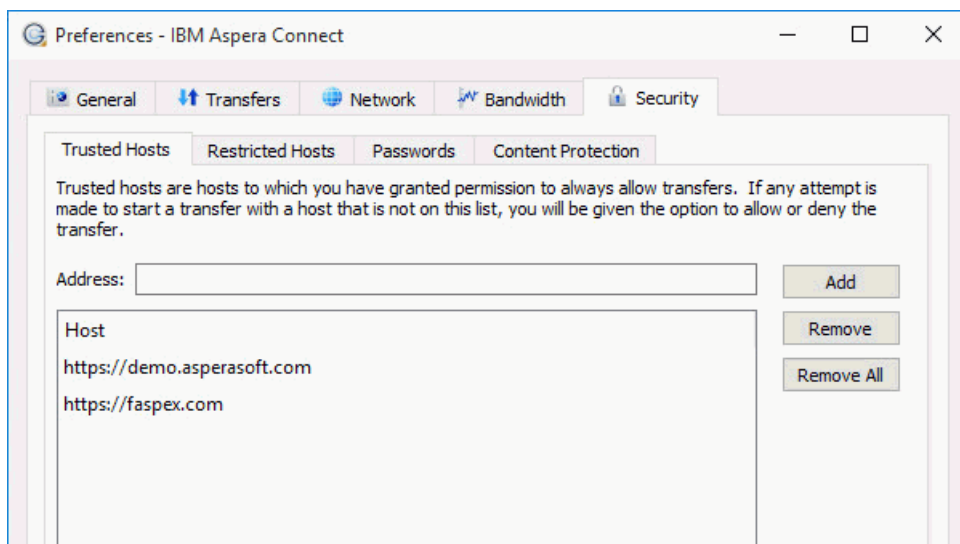

To view, add or remove restricted hosts, go to **Security > Restricted Hosts**. Here, enter the host's address in the specified text field and click **Add**.
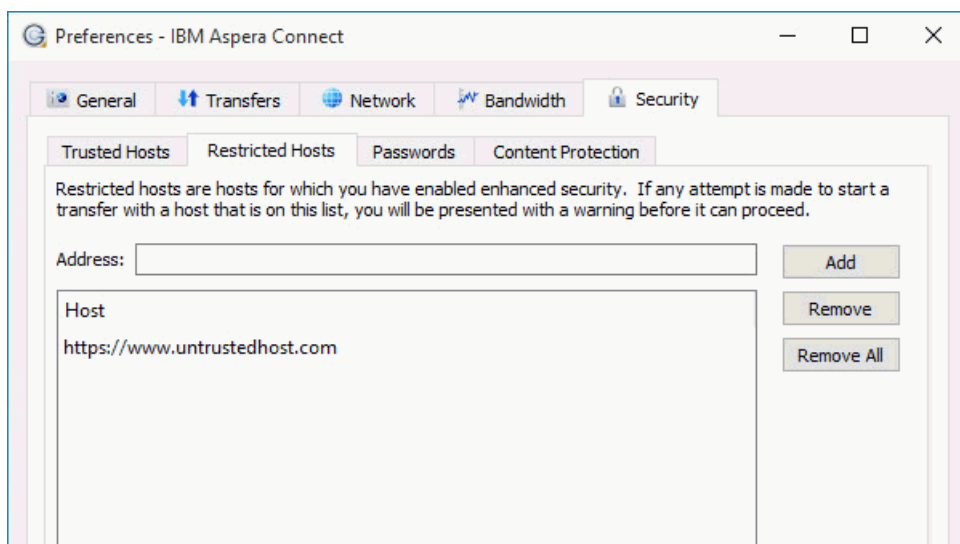
Important: By adding a host to the restricted list, you will be required to provide confirmation every time you attempt to initiate a transfer with that host.

To view, add, or remove saved password information for a host, go to **Security > Passwords**. Here, you can remove saved login credentials; however, you cannot add credentials to this list directly. Whenever you attempt a transfer with a server where your credentials are not saved, you are prompted with an authentication dialog and offered a **Remember this password** checkbox. Marking the checkbox causes your login credentials to be saved and appear in this tab.
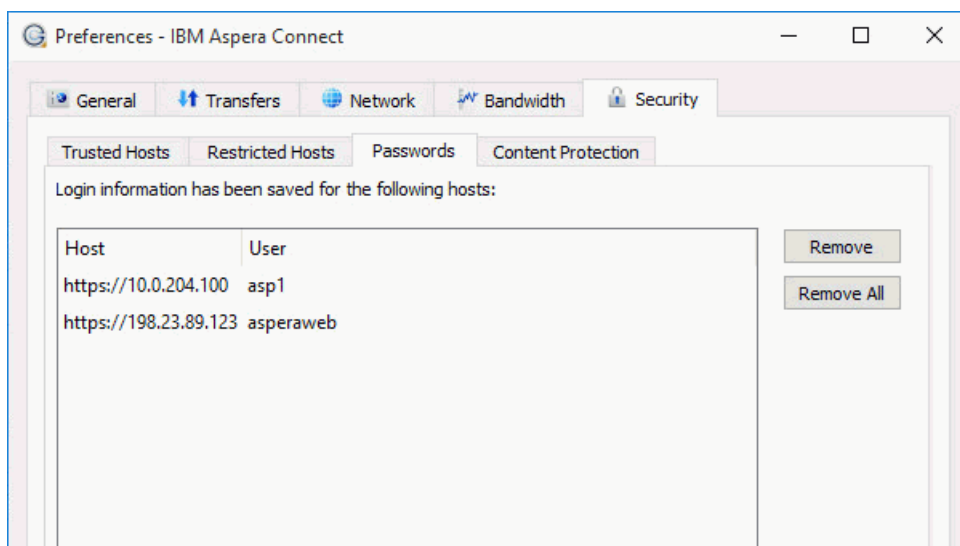
Content Protection

To specify hosts to which you want all uploads to be encrypted, open the **Content Protection** tab under **Security**. In the Address field enter the Aspera server address and click **Add**. The server is then added to the list.
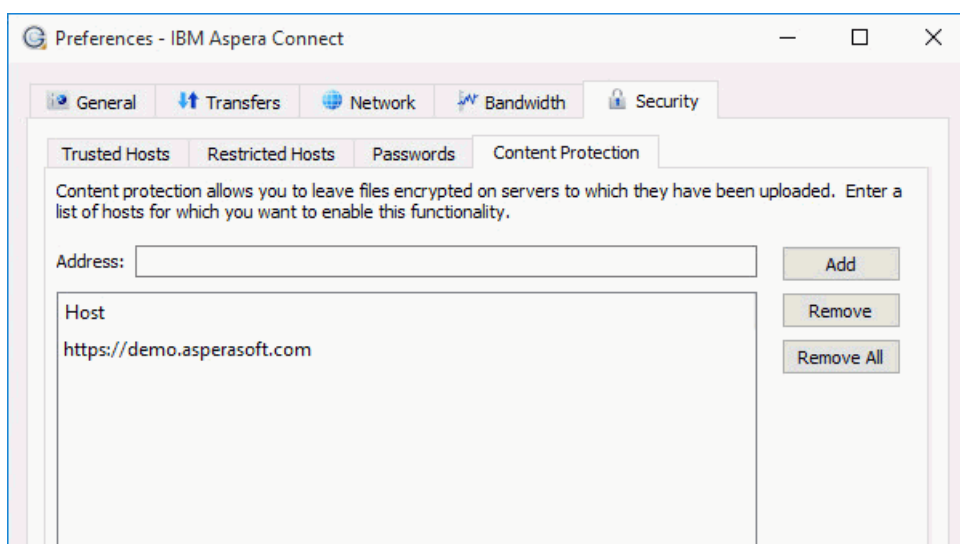
When uploading files to a server on the list, or one that is configured as a content-protected host, you are prompted for a passphrase to encrypt the files. You can also choose not to encrypt files if the server allows it.

For details on encryption and decryption, see File Encryption.

Connect Functionality

Initiating a Transfer

You can use Connect with the Aspera demo server to test basic transfer functionality and also familiarize yourself with how to initiate uploads and downloads.

The steps below describe how to initiate a file transfer, and shows how to perform a download from Aspera's demo server.

Important: In order for Connect to function correctly, your browser *must have cookies enabled*. For instructions on verifying this setting, see the help documentation for your browser.

1. Open your web browser and log in to Aspera's demo transfer server at http://demo.asperasoft.com/aspera/user.

   Enter the following credentials when prompted:

   • **User:** asperaweb
   • **Password:** demoaspera

   Note: Internet Explorer 11 Security Settings: When you open or using Internet Explorer 11, an information bar appears and asks whether to run the Connect add-on. Click **Allow** to proceed.
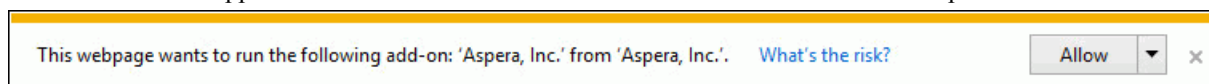
2. In , open the folder `aspera-test-dir-large`.

   To select a file or folder you want to download, click the checkbox next to it. You can also click multiple boxes to select more than one file or folder to download at a time. Once you've made your selections, click the **Download** button.
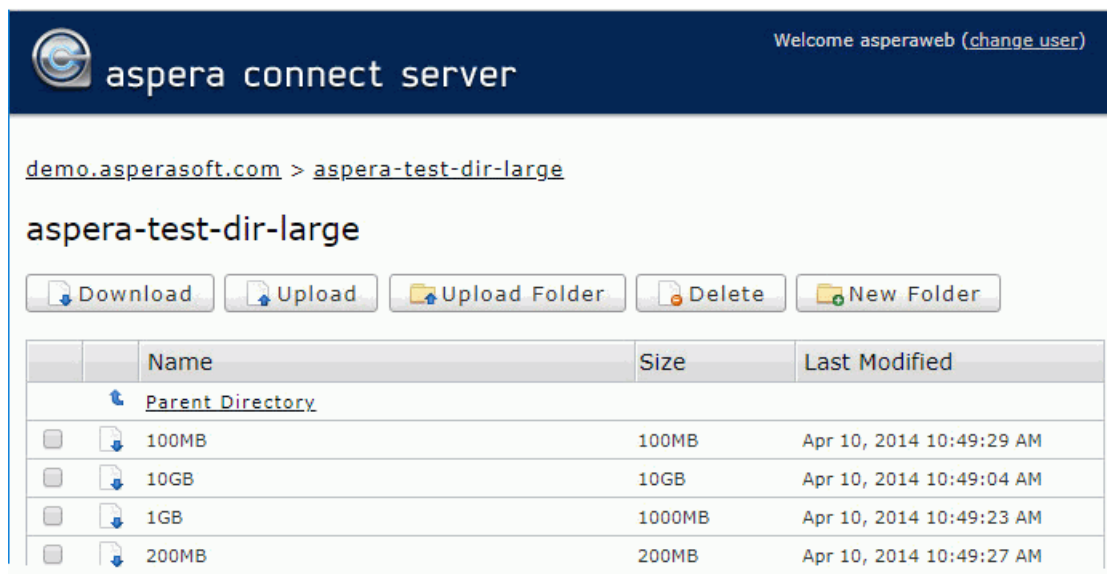
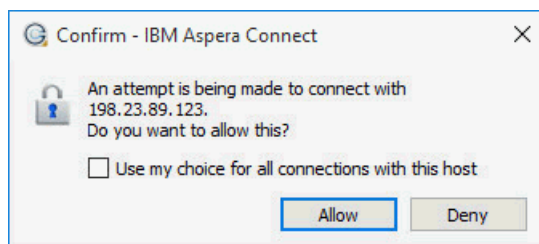3. Confirm the download.

A dialog appears asking you to confirm whether the transfer should proceed. Select **Allow** to begin. To skip this dialog in the future, enable the checkbox **Use my choice for all connections with this host**.

4. Enter credentials to authenticate the transfer.

The following dialog appears asking for a username and password. Fill in the server account name and password.

Note: If the server OS is Windows and the you are using a domain account, all characters in the domain name must be uppercase.
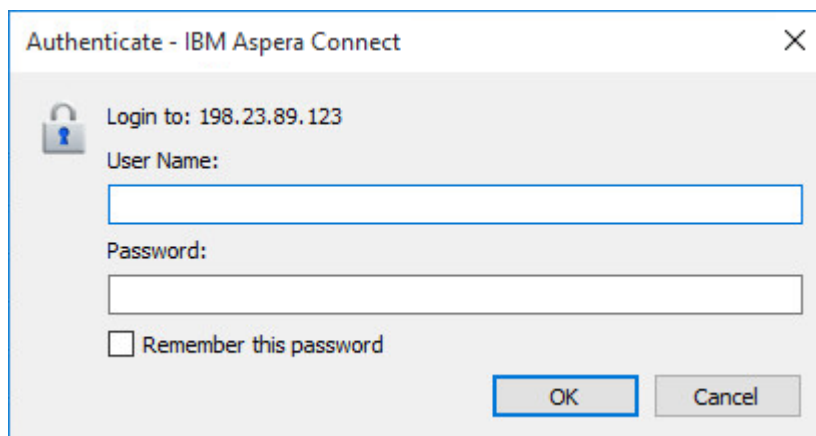
You can also use the Aspera demo server to upload files. When you log in to the server, open the `Upload` folder. Click the **Upload** button to select files from your system to upload to the demo server. You can use the checkboxes to select multiple files to upload at once. To select folders to upload, click **Upload Folder**.

Note: When uploading, do not transfer files whose names contain the following characters:

```
/    \    "    :    '    ?    >    <    &    *    |
```

Once you confirm that the configuration settings are correct and that Connect is working properly, you can begin transferring with your organization's Aspera server. To get started, simply point your browser to your server's host name. For example, if the server is running IBM Aspera Connect Server:

```
http://server_host_name/aspera/user
```

Note that the URL format of the address can be different, depending on your server product.

The Activity Window

In the Activity window, you can view and manage all transfer sessions. From here you can stop a transfer, resume it, retry a failed transfer, and open the location containing the content.
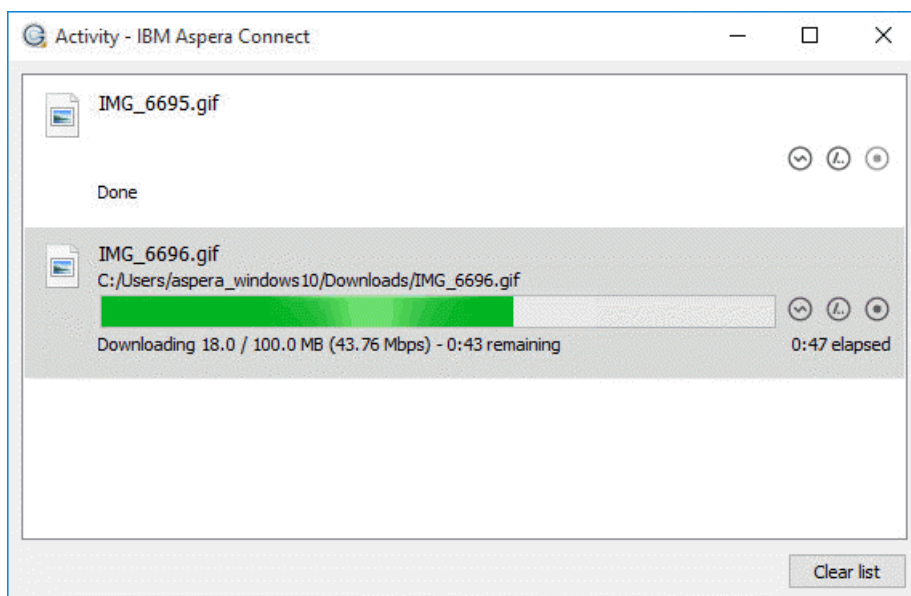
The Activity window contains the following controls:

- ⊙ Open the Transfer Monitor. For more information on this feature, see Monitoring Transfers.
- ⊘ Open the folder on your computer that contains this content.
- ⊙ Stop the transfer.
- ⊙ Resume a stopped transfer, or retry a failed transfer.

When the queuing option is enabled, the number of concurrent transfers is limited. The additional transfers are queued in the Activity window and initiated when a transfer is finished. You can manually start a queued transfer by clicking the ⊙ button. You can also right-click on a started or stopped transfer to access various controls. The example below shows the right-click options for a stopped transfer.
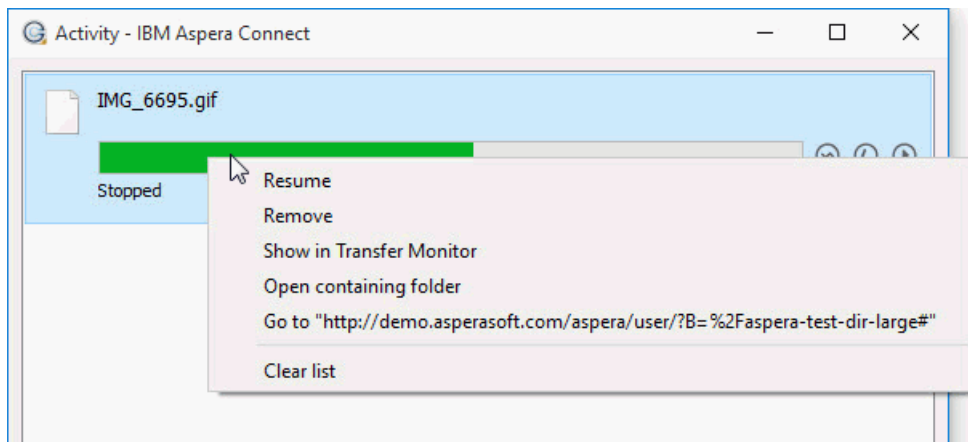
Monitoring Transfers

From the Transfer Monitor window, Connect lets you monitor transfer progress. The Transfer Monitor provides a graphical interface to adjust file transfer speed, adjust the minimum transfer rate, and set rate policy—all while the transfer is in progress.

To monitor a transfer session shown in the Activity window, click the ⊙ icon shown with the session. The Transfer Monitor opens:
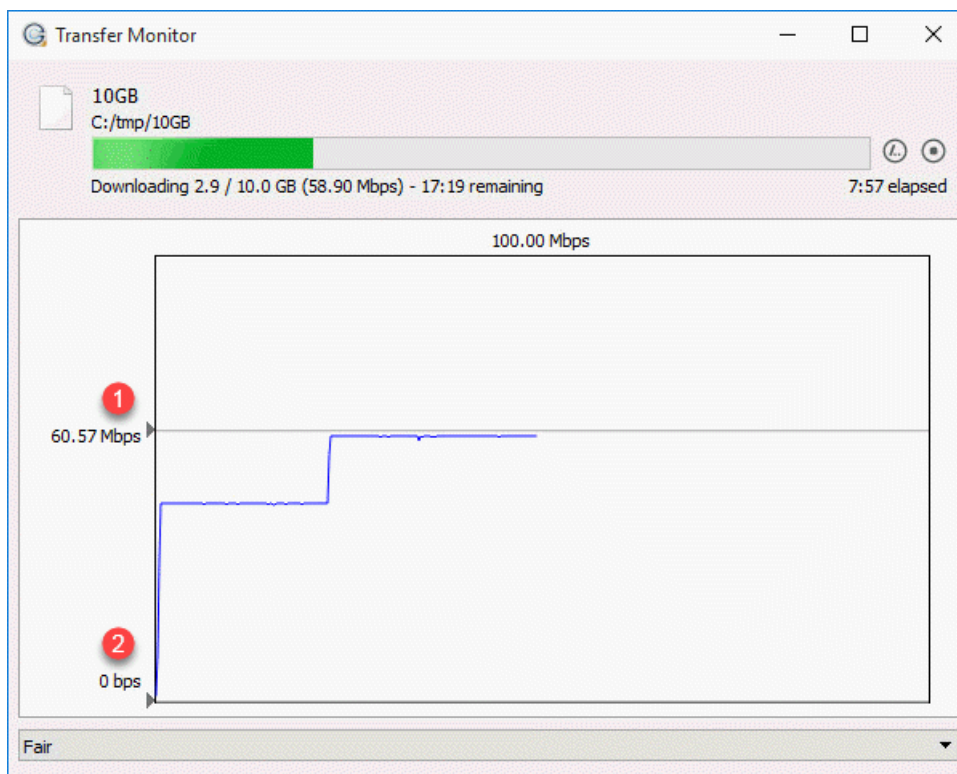

The following controls are available in this window:

- ⓛ Open the folder on your computer that contains this content.
- ⊙ Stop the transfer.
- ⊙ Resume a stopped transfer, or retry a failed transfer.

If you have sufficient server privileges and your transfer server is configured to allow it, you can adjust or set your desired transfer rate, minimum transfer rate, and rate policy. However, actual performance is subject to the available bandwidth on your network as well as the transfer settings on your server:

- Target transfer rate – To adjust the transfer rate, locate and select the upper slider ❶ on the left side of the graph and move it up or down to change the desired rate. Note that the actual rate depends on several factors.

- Minimum transfer rate – To set the minimum transfer speed, locate and select the bottom slider ❷ on the left side of the graph and move it up or down to set the desired rate. The actual minimum rate depends on several factors.

- Transfer policy – Select the transfer policy from the drop-down list at the bottom of the window. Note that your specified rate policy may be subject to external limitations:

Fixed

> The transfer transmits data at a rate equal to the target rate, although this may impact the performance of other traffic present on the network.

High

> The transfer rate is adjusted to use the available bandwidth up to the maximum rate.

Fair

> The transfer attempts to transmit data at a rate equal to the target rate. If network conditions do not permit that, it transfers at a rate lower than the target rate, but no less than the minimum rate.

Low

> The transfer rate is less aggressive than Fair when sharing bandwidth with other network traffic. When congestion occurs, the transfer rate is decreased to the minimum rate, until other traffic retreats.

- Additional options – Right-clicking in the area above the graph opens the same menu as doing so in the Activity window, giving options such as stop or remove transfers, and open the transfer's containing folder.
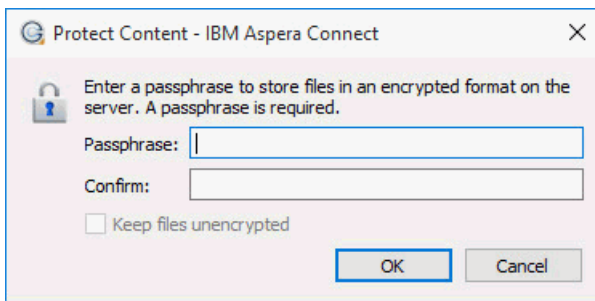
File Encryption

Connect provides a means to protect files with Aspera encryption when the files are uploaded to a content-protected server, and to decrypt those files when downloaded.

Whenever you upload files to a server configured as a content-protected host, Connect prompts you to create a passphrase to protect the files with Aspera encryption. When you download those files, access to the files' contents requires that you provide the passphrase to decrypt them. Files can be decrypted during the download transfer, or decrypted after the download is complete. Files can be decrypted from within Connect, or by using the utility IBM Aspera Crypt, which is included in the Connect installation.

Encrypting Files

Servers to which you want to upload encrypted files must be enabled for content protection. For more information, see Content Protection.

When uploading files to a content-protected server, you are prompted for a passphrase to encrypt the files. You can either enter the passphrase in the text field, or check **Keep files unencrypted** to proceed without using this feature (if allowed by the server). To start the transfer, click **OK**.
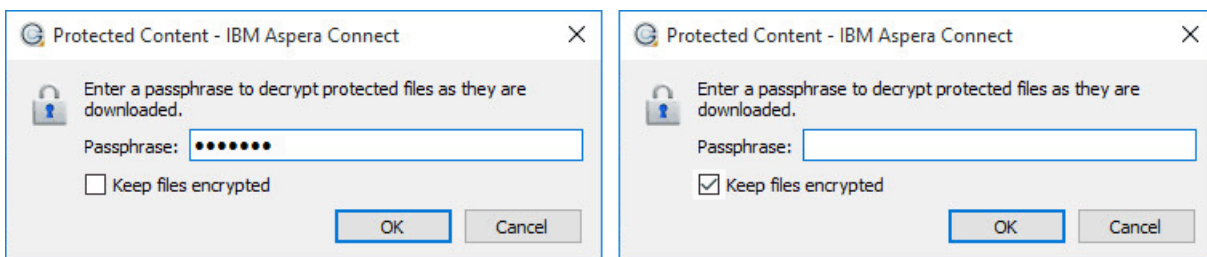
Once Aspera-encrypted files have been uploaded to your server, they can be identified by an additional file extension, `.aspera-env` (Aspera Security Envelope).
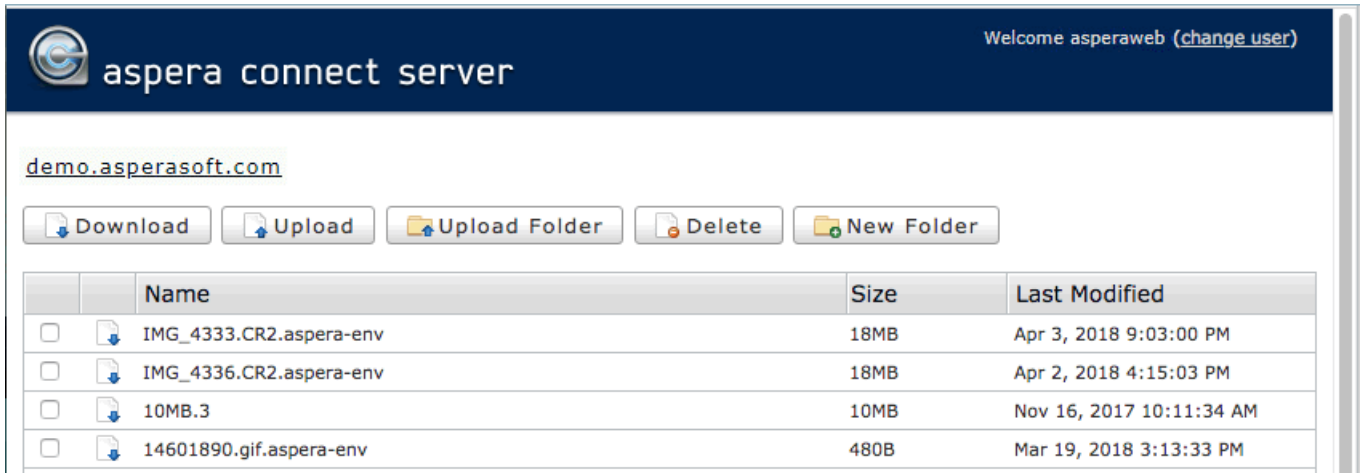
Decrypting Files During Download

When you use Connect to download a content-protected file, a window opens prompting you for a decryption passphrase:


You have two options:

- Enter the passphrase. In this case, Connect decrypts the files *during* the download. When the files arrive at their destination, they are no longer encrypted, and no further steps are necessary.
- Check the **Keep files encrypted** box. In this case, Connect transfers the files to the destination in the encrypted state. You don't need to enter a passphrase (if you do, it is ignored). With this option, the files retain the `.aspera-env` extension on your disk. You can decrypt the files any time after the download has completed.

To proceed with the download, click **OK**. The Connect Activity window appears and shows the progress of the transfer. When finished, the progress bar disappears, indicating the files are now at their destination.

Decrypting Files after Download

To decrypt downloaded files you have chosen to keep encrypted, run the IBM Aspera Crypt utility. You can launch Crypt using any of the following methods:
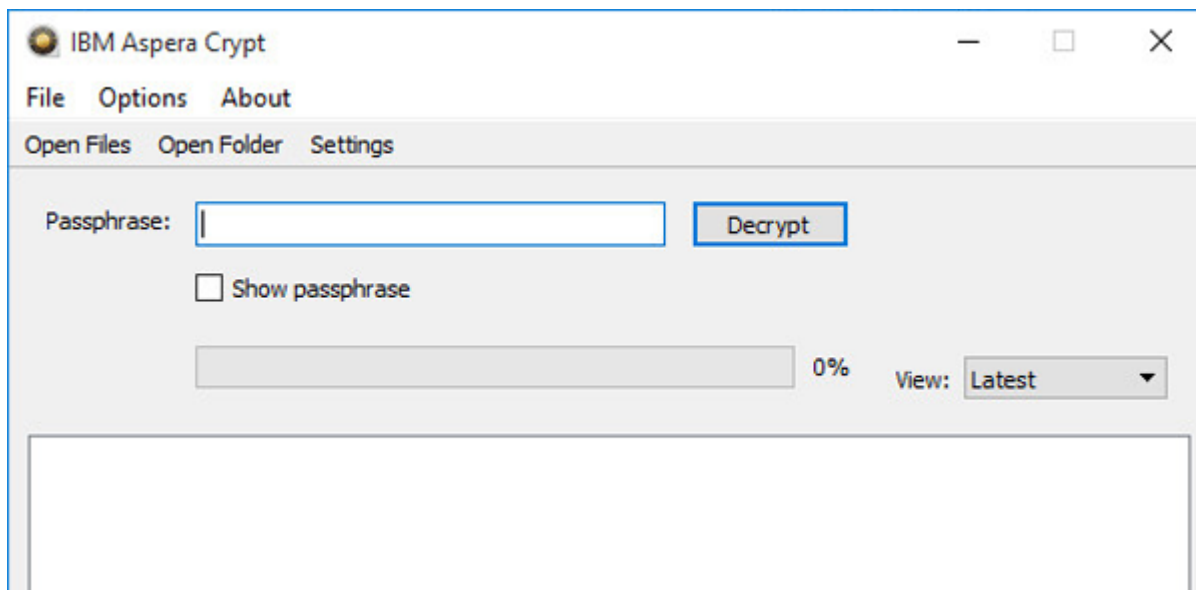
- From the Connect Activity window: Once the transfer is complete, the Connect Activity window displays the link **Unlock encrypted files**:
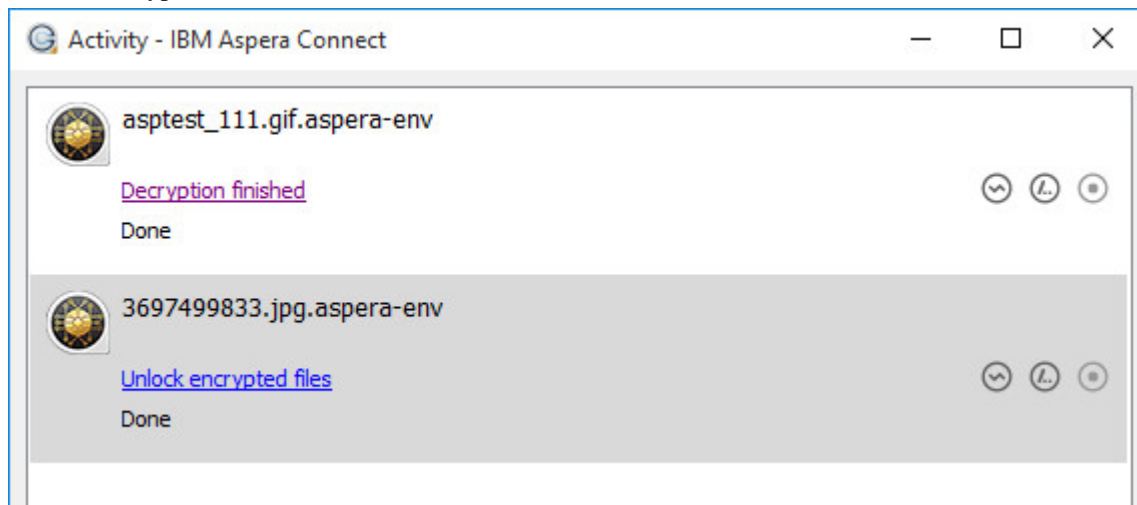
To launch Crypt, click **Unlock encrypted files**. This is the most convenient method for unlocking protected files once they've been transferred. Depending on your preferences settings, you can also decrypt your files from here later, as the transfer records remain in the Connect Activity window until you remove them by clicking **Clear List**. However, the files remain only if under the **Preferences > General** you chose to remove transfer list items **Manually** instead of automatically after transfer.

- By opening an Aspera-encrypted file: You can launch Crypt by opening an `.aspera-env` file from the context menu or by double-clicking the file.
- From the Connect application menu: To open the application menu, right-click the Connect icon in the Windows system tray. To launch Crypt, select **Unlock encrypted files**.

When you launch Crypt, the following window opens:

If you launched Crypt from the Connect Activity window or by opening an `aspera-env file`, Crypt decrypts the files that were selected. From the Crypt window, you can also select **Open Files** or **Open Folder** and browse for files or folders to decrypt. When your encrypted contents are loaded into Crypt, a status message appears at the bottom of the application, displaying the number of items ready for decryption.

To unlock protected content, fill in the encryption passphrase and click **Decrypt**. The files are unlocked and the results displayed in the window:
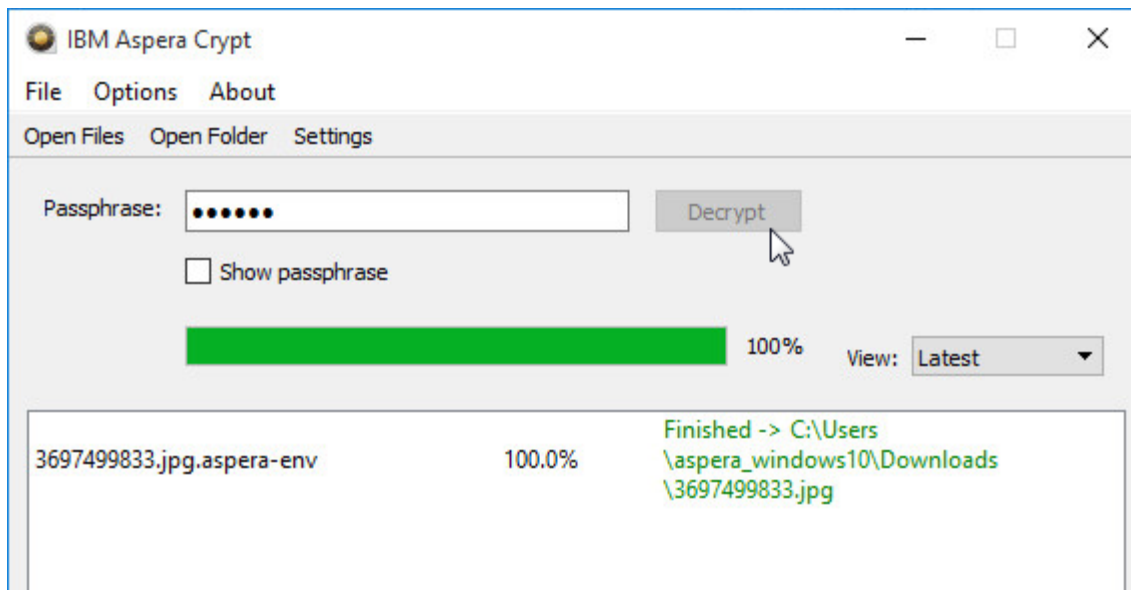
The decrypted files are placed in the same directory as the original encrypted files:
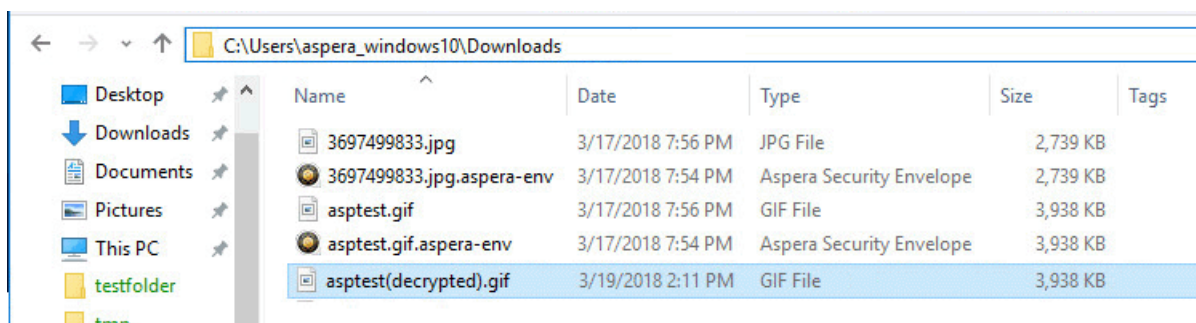
If you choose to decrypt a file and there is already an unencrypted file of the same name in that folder, the newly decrypted version appears in the Crypt window and the folder listing with "(decrypted)" added to the filename, as in the above example. However, note that if you decrypt the file yet again, the "(decrypted)" file is overwritten without notice.

Maintaining Your Connect Installation

Upgrading Connect

When a new version becomes available, Connect prompts you to confirm whether to upgrade.

Note: Before upgrading, ensure that you have no previous Connect installations on your system – either single-user or system-wide.

If Connect does not prompt you to upgrade (for example, because the system has no Internet access), you can obtain an upgrade from the Aspera download site. To download the latest version of Connect, go to http:// downloads.asperasoft.com/connect. Click **Download Now** and follow the on-screen instructions. This downloads the latest installer.

You are also prompted to upgrade with the following pop-up if you attempt a download and Connect is not found or otherwise unable to launch:

If Connect is not installed, or is out of date, you can download it from here by clicking **Download latest version**. If Connect s already installed, you can click **Troubleshoot** to open the IBM Aspera Connect Diagnostic Tool. You can also access the tool here:

```
https://test-connect.asperasoft.com/
```

Uninstalling

The Connect installation provides scripts for uninstalling Connect.

Uninstalling the Connect Application

Important: You must quit Connect before uninstalling it.

To uninstall Connect, quit both the Connect application and any open Web browsers. Additionally, ensure that no other users are logged into this machine. Then, go to the Windows **Control Panel** and—depending on the version of your Windows operating system—choose **Add/Remove Programs** or **Programs and Features**. Select **IBM Aspera Connect** and uninstall it.

Removing the Connect Browser Extension

For Chrome, Firefox, and Microsoft Edge, the browser extension is removed separately, as described below. Connect on Internet Explorer does not use a browser extension.

<u>Chrome</u>

To remove the extension from Chrome, click the three-dot icon in the upper right corner of the Chrome window.

Note: In certain circumstances, the default three-dot icon may not be visible while displaced by other icons. For example, a circular yellow/orange icon with an arrow indicates Chrome needs to be updated.

In the drop-down menu that opens, choose **More Tools > Extensions**:
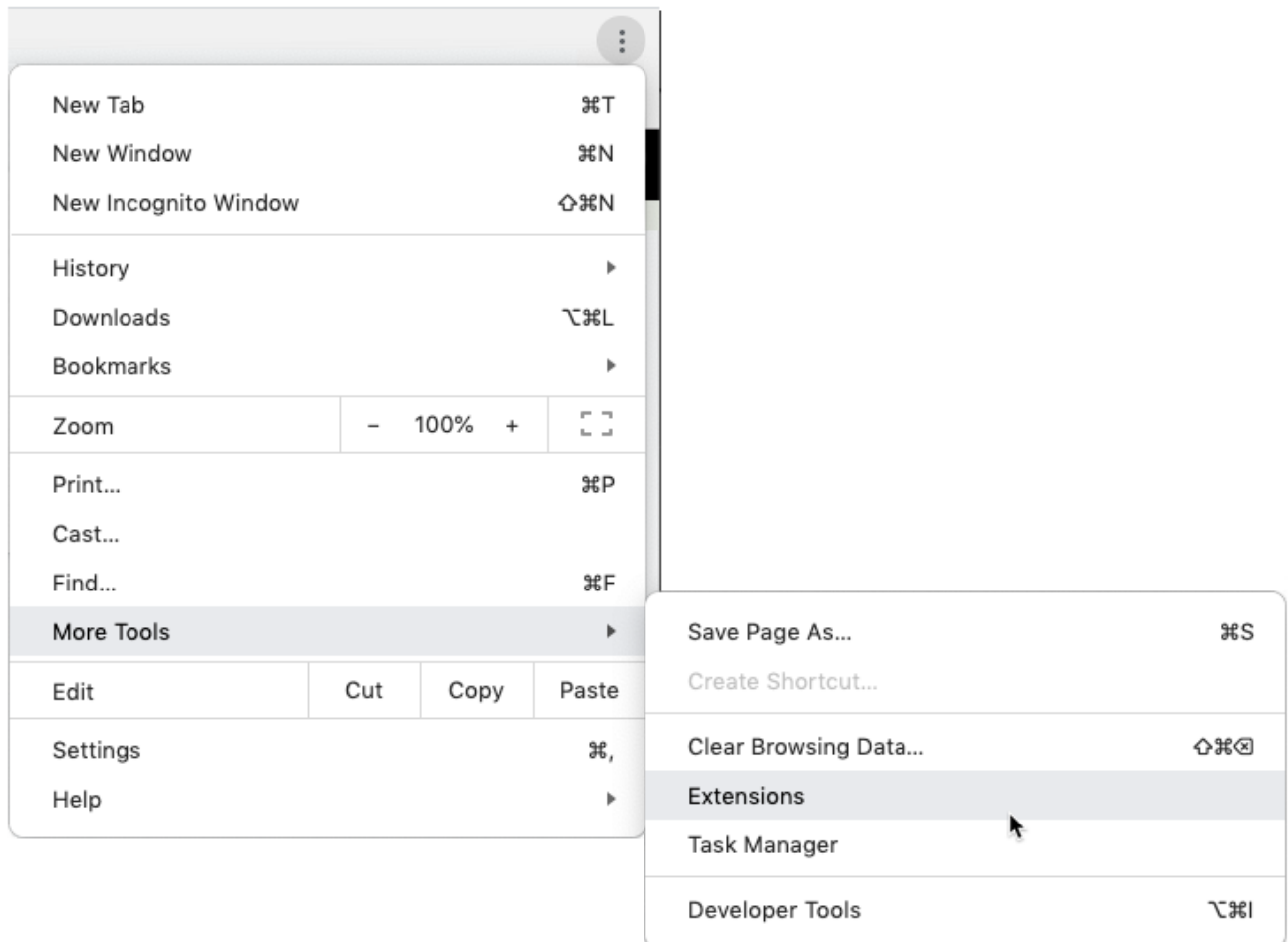
The **Extensions** tab opens. Look for the panel with the Connect extension and click **Remove**:
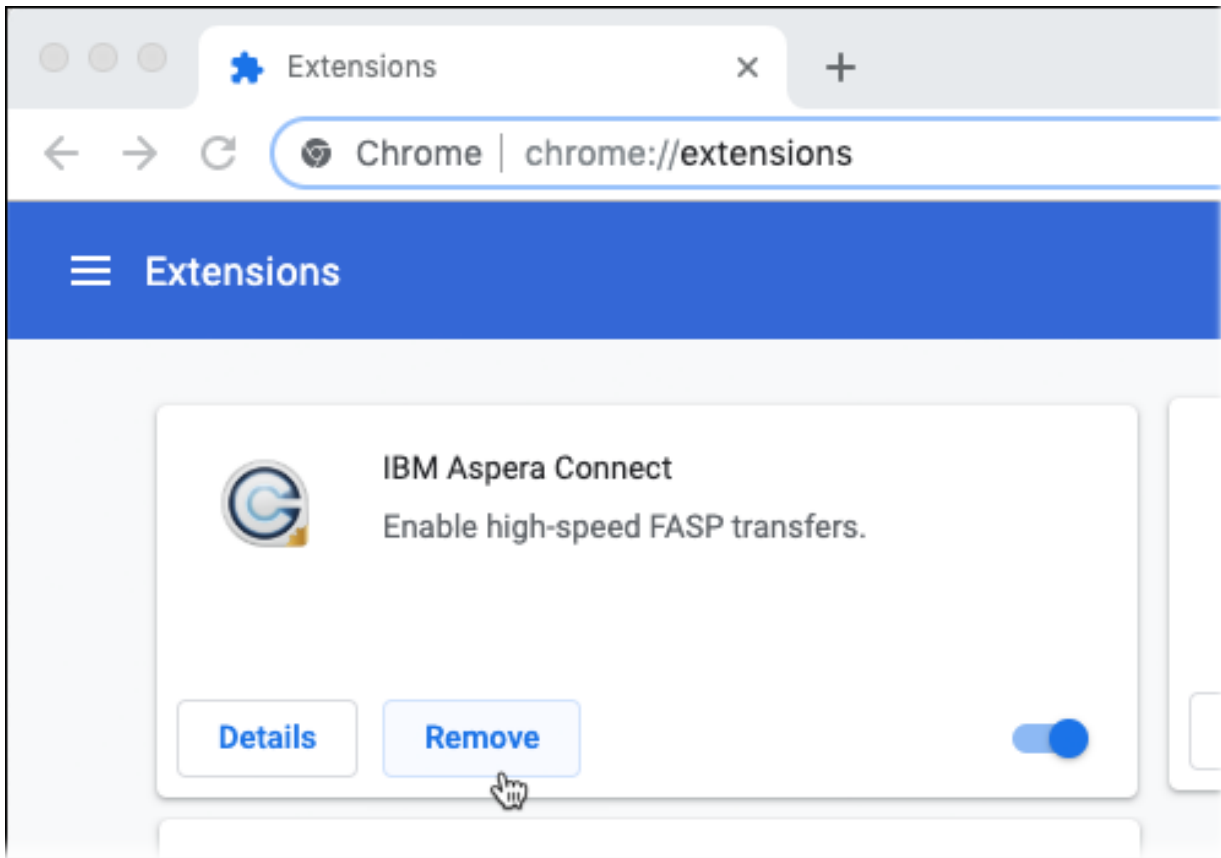
The Connect extension is now removed from Chrome.

<u>Firefox</u>

To remove the Connect extension for Firefox, open the three-bar icon in the upper right corner of the browser window, and click **Add-ons**:

The **Add-ons Manager** tab opens. Look for the panel with the Connect extension and click **Remove**:

The Connect extension is now removed from Firefox.

Internet Explorer

Microsoft Internet Explorer does not use a browser extension.

Microsoft Edge

To remove the Connect extension for Microsoft Edge, click the three-dot icon in the upper right corner of the Edge window. In the drop-down menu that opens, click **Extensions**:

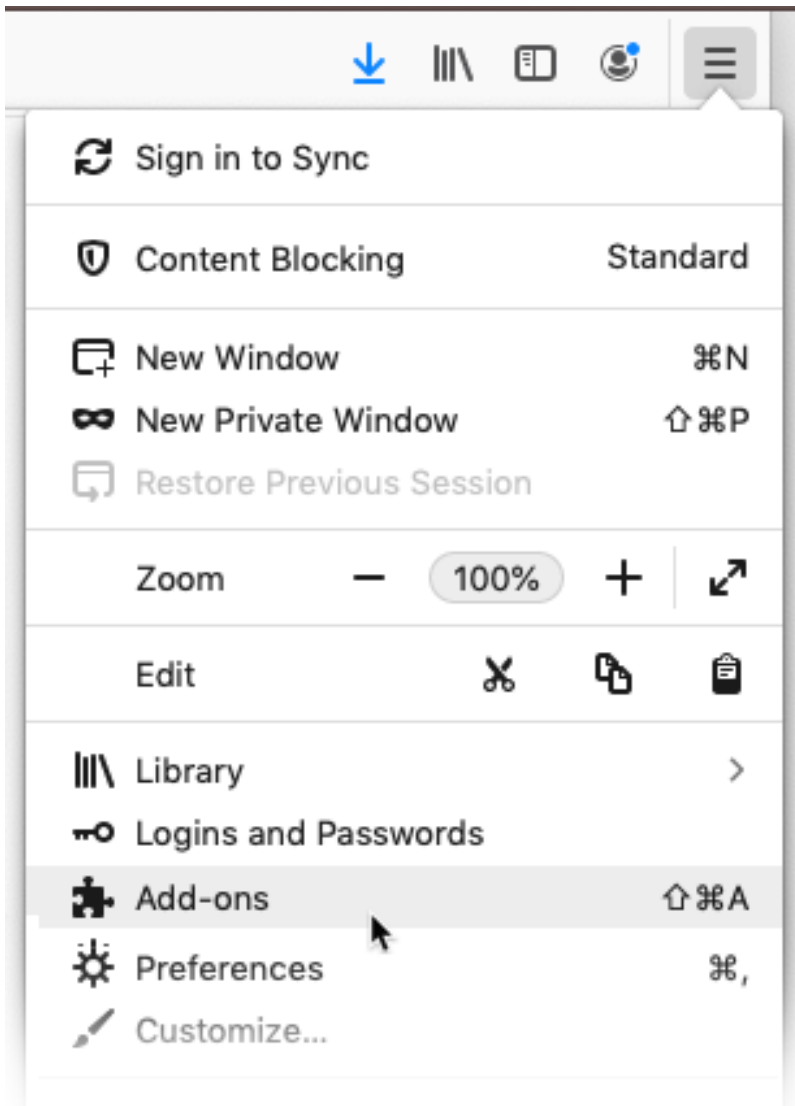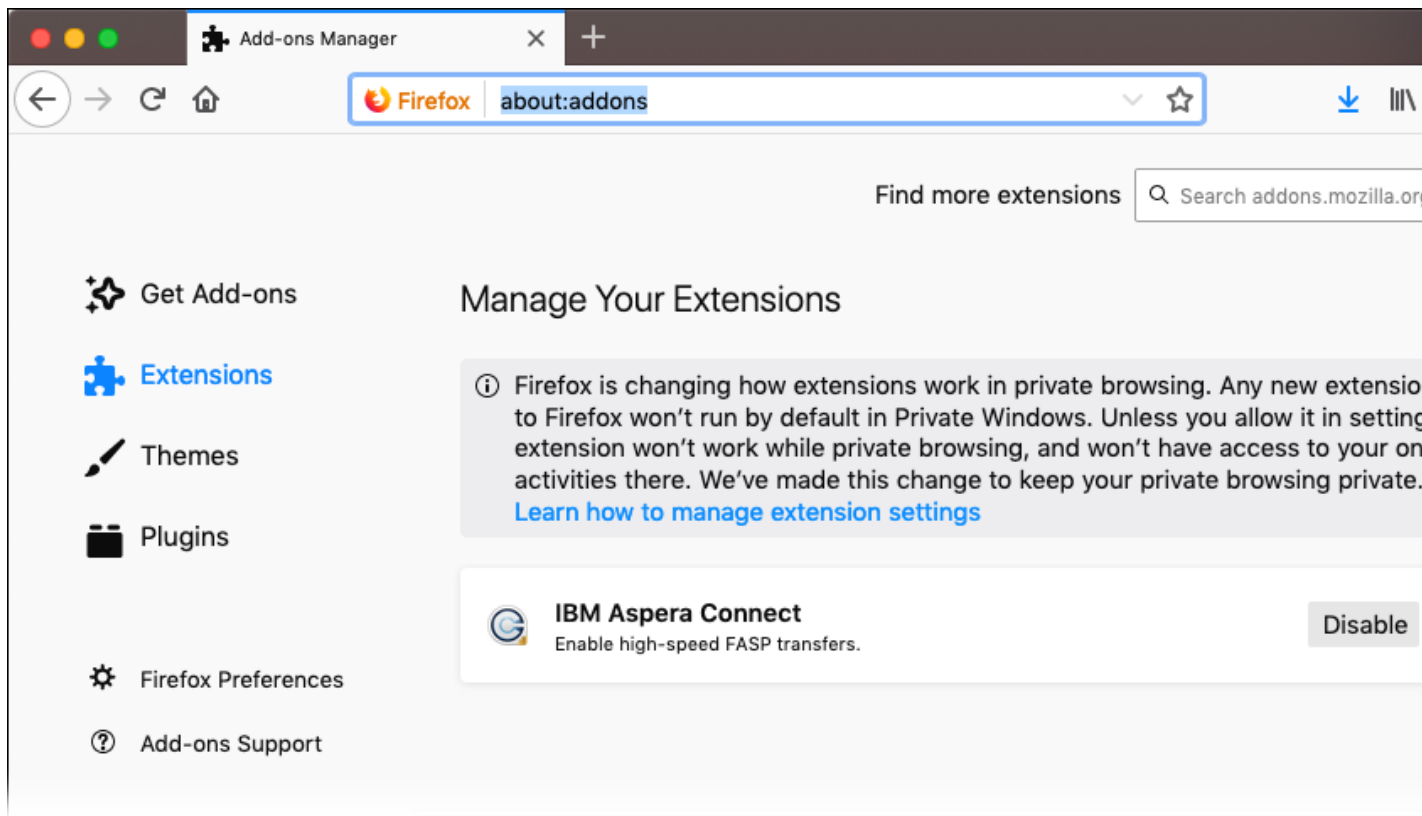The **Extensions** tab opens. Look for the panel with the Connect extension and click **Remove**:
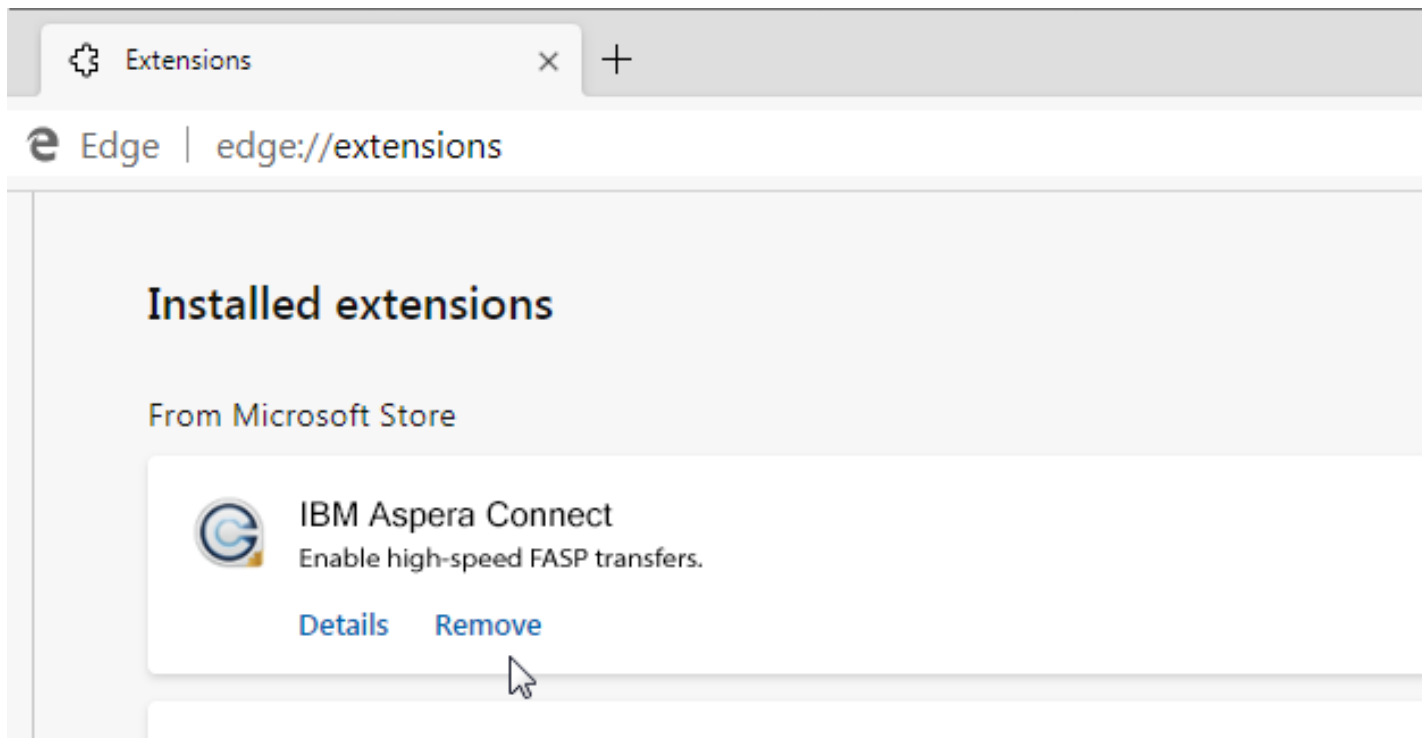
The Connect extension is now removed from Microsoft Edge.

File Cleanup

You can safely remove old Connect files from your system.

Log Files

Log files are found in the following location. Log files can be removed at any time.

```
C:\Users\username\AppData\Local\Aspera\Aspera Connect\var\log\
```

http.uri and process.pid Files

You can remove the **http.uri** and **process.pid** files in the following folder:

```
C:\Users\username\AppData\Roaming\Aspera\Aspera Connect\var\run\
```

Database File

If you previously installed Connect for all users (that is, system-wide), then when *uninstalling*, you will only be able to remove the Connect database for the current user. To remove the database file for all users, you must locate and remove the database file for each user account:

```
C:\Users\username\AppData\Local\Aspera\Aspera Connect\var
\asperaconnect.data
```

Note that when uninstalling earlier versions of Connect, the database file may instead be found in the following location:

```
C:\Users\username\.aspera\connect\connectdb.data
```

Miscellaneous Files and Folders

```
C:\Users\username\AppData\Local\Aspera\connect-cleanup.log
C:\Users\username\AppData\Roaming\Aspera\
```

Appendices

Log Files

You can access Connect log files from within Connect or from your file system.

Log Files

- `aspera-connect.log`
- `aspera-scp-transfer.log`
- `nativemessagehost.log`
- `ConnectInstall.log` – log file for the quick installer

Log File Location

Log files are located in the following location:

```
C:\Users\username\AppData\Local\Aspera\Aspera Connect\var\log\
```

However, the log file for the quick installer is located here:

```
C:\Users\username\AppData\Local\Temp\AsperaLog\ConnectInstall.log
```

You can also access the log folder from the Connect system tray: right-click ![G] > **Open log folder**

Activity	Ctrl+T
Unlock encrypted files	Ctrl+R
Open log folder	Ctrl+L
Preferences...	Ctrl+P
Check for updates	Ctrl+U
About...	Shift+F1
Quit	Ctrl+Q

For information on removing old log files, see File Cleanup.

Deploying Connect Extensions in Closed Environments

Locked-down or enterprise environments without access to the public internet generally require special steps to acquire and enable Connect web extensions. Depending on OS platform and browser, there are a number of methods for doing so.

Chrome

Method: Manual deployment Using Drag and Drop

1. Download the Connect extension CRX file from Google. To do so, right-click this link and select **Save Link As**:
   Connect extension for Chrome
2. Open `chrome://extensions`
3. Enable developer mode.
4. Drag-and-drop the CRX file into the `chrome://extensions` window to install.

Method: Background Deployment Using the Windows registry

Requires network access to the Chrome update URLs:

```
https://clients2.google.com/service/update2/crx
```

1. Download the Connect extension CRX file from Google. To do so, right-click this link and select **Save Link As**:
   Connect extension for Chrome
2. Create a `.reg` file containing the registry script below. Update the location of the CRX file. Make sure the location is accessible to all users. Backslashes must be escaped as shown in the example.
3. Merge the registry keys above. Detailed instructions are here:

```
https://www.techwalla.com/articles/how-to-merge-registry-files
```

```
Windows Registry Editor Version 5.00

[HKEY_LOCAL_MACHINE\SOFTWARE\Google\Chrome\Extensions
\kpoecbkildamnnchnlgoboipnblgikpn]
"update_url"="https://clients2.google.com/service/update2/crx"

[HKEY_LOCAL_MACHINE\SOFTWARE\WOW6432Node\Google\Chrome\Extensions
\kpoecbkildamnnchnlgoboipnblgikpn]
"update_url"="https://clients2.google.com/service/update2/crx"
```

4. Restart Chrome. Users must approve the new extension on startup.

Firefox

Method: Manual deployment

1. Download the Connect extension XPI file from Mozilla. To do so, right-click this link and select **Save Link As**:
   Connect extension for Mozilla
2. Open `about:addons`
3. From the menu, select **Install Add-on From File**.

Method: Background deployment via Windows registry

1. Obtain a copy of the Connect Firefox XPI file. See Method: Manual deployment above.
2. Create a .reg file containing the registry script below. Update the location of the XPI file. Make sure the location is accessible by all users. Backslashes must be escaped as shown in the example:
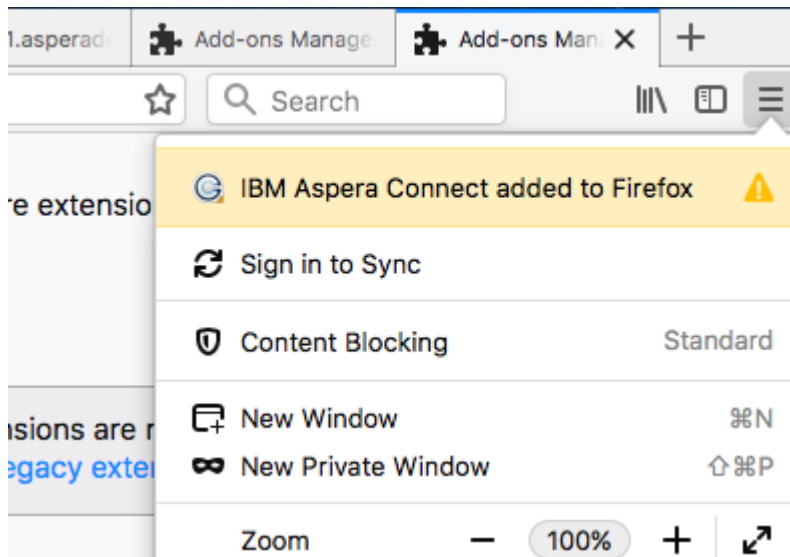
```
Windows Registry Editor Version 5.00

[HKEY_LOCAL_MACHINE\SOFTWARE\Mozilla\Firefox\Extensions]
"connect@aspera.ibm.com"="C:\\Users\\aspera\\Desktop\
\connect@aspera.ibm.com.xpi"

[HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Mozilla\Firefox\Extensions]
"connect@aspera.ibm.com"="C:\\Users\\aspera\\Desktop\
\connect@aspera.ibm.com.xpi"
```

3. Merge the registry keys above. Detailed instructions can be found here:

```
https://www.techwalla.com/articles/how-to-merge-registry-files
```

4. Restart Firefox.
5. Open the Firefox add-ons:

6. Enable the extension.

Background deployment using a roaming profile

1. Obtain a copy of the Connect Firefox XPI file. See Method: Manual deployment above.
2. Copy the xpi file to:

```
C:\Users\username\AppData\Roaming\Mozilla\Extensions\{ec8030f7-
c20a-464f-9b0e-13a3a9e97384}\
```

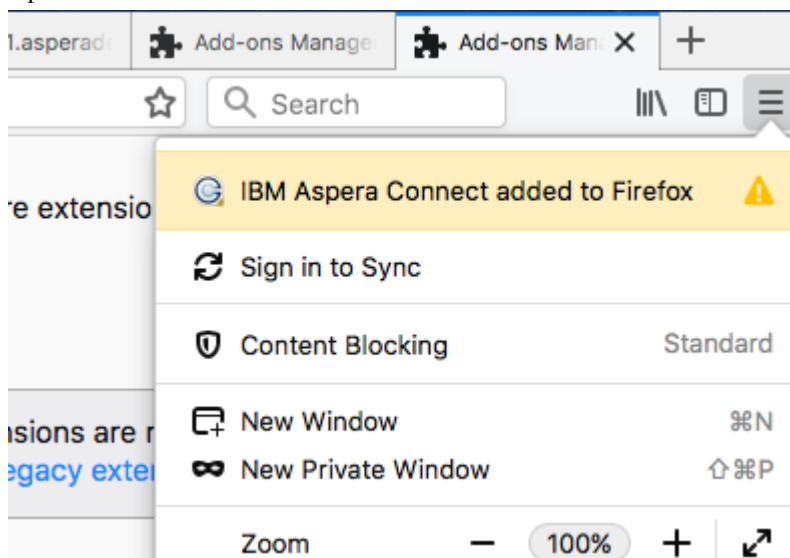3. Restart Firefox.
4. Open the Firefox add-ons:

5. Enable the extension.

Method: Background deployment via preference file

1. Obtain a copy of the Connect Firefox XPI file. See Method: Manual deployment above.

2. For user installs, modify the XPI_FILE variable to point to the XPI file. Run the following script:

```
#!/usr/bin/env bash
XPI_FILE=INSERT_XPI_PATH_HERE
EXT_ROOT="$HOME/Library/Application Support/Mozilla/Extensions/{ec8030f7-
c20a-464f-9b0e-13a3a9e97384}"
mkdir -p "$EXT_ROOT"
cp $XPI_FILE "$EXT_ROOT"
```

3. For machine-installs, modify the XPI_FILE variable to point to the XPI file. Run this script using `sudo`:

```
#!/usr/bin/env bash
XPI_FILE=INSERT_XPI_PATH_HERE
EXT_ROOT="/Library/Application Support/Mozilla/Extensions/{ec8030f7-
c20a-464f-9b0e-13a3a9e97384}"
mkdir -p "$EXT_ROOT"
cp $XPI_FILE "$EXT_ROOT"
```

4. Restart Firefox.
5. Open the Firefox add-ons:
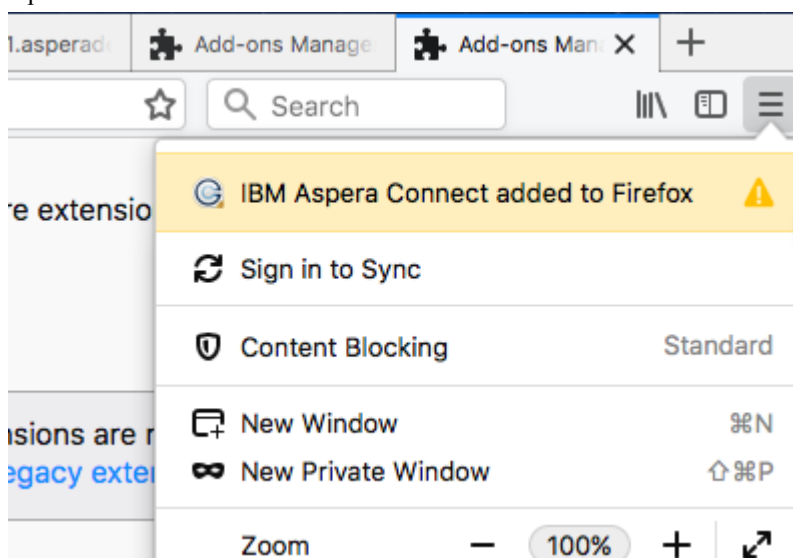
6. Enable the extension.

Method: Deploying Aspera Connect add-on with custom build of Firefox

See Mozilla documentation:

```
https://developer.mozilla.org/en-US/docs/Mozilla/Add-ons/WebExtensions/
Distribution_options/Add-ons_in_the_enterprise#Bundling_add-
ons_with_a_custom_Firefox
```

Whitelisting the Chrome Extension

By default, all Chrome extensions are whitelisted. However, if your organization blacklists all extensions by policy, you can override the blacklist and allow the Connect extension to be installed by adding it to the whitelist.

```
https://www.chromium.org/administrators/policy-
list-3#ExtensionInstallWhitelist
```

The instructional links below also include information on other extension-related policy settings that enable you to automatically install Chrome, force-install Chrome, and so on.

Note: These policies are intended strictly for configuring instances of Google Chrome internal to your organization. Use of these policies outside of your organization (for example, in a publicly distributed program) is considered malware and will likely be labeled as malware by Google and anti-virus vendors.

Provisioning Policy Using Chrome Policy Templates: Group Policy Editor

1. Download and install Chrome policy template .adm or .admx files and add the templates to your Group Policy editor. Detailed instructions can be found here:

   ```
   https://support.google.com/chrome/a/answer/187202?hl=en
   ```

2. Open your Group Policy editor and navigate to the Chrome extensions settings:

   Computer Configuration > Administrative Templates > Google > Google Chrome > Extensions

   On Windows 7 or 10: **Computer Configuration > Administrative Templates > Classic Administrative Templates > Google > Google Chrome**

3. Edit your Chrome extension policy settings. Detailed instructions can be found here:

   ```
   https://support.google.com/chrome/a/answer/7532015?hl=en
   ```

Provisioning Policy Using the Windows Registry

Note: The recommended way to configure policy on Windows is via GPO, although provisioning policy via registry is still supported for Windows instances that are joined to a Microsoft® Active Directory® domain.

Find the Windows registry location and set the value to the Connect extension ID:

```
Software\Policies\Google\Chrome\ExtensionInstallWhitelist\1 =
 "kpoecbkildamnnchnlgoboipnblgikpn"
```

Enabling FIPS

For FIPS capabilities, IBM Aspera provides a separate version of Connect. The installer is available on the IBM Aspera download site.

In Connect for Windows, FIPS (Federal Information Processing Standards) is disabled by default. FIPS is an encryption mode used by some US government entities. If you need to use the FIPS version of Connect, you should run the FIPS-enabled installer available from the Connect download page: https://downloads.asperasoft.com/en/downloads/8?list

Standard installer:	`IBMAsperaConnect-ML-3.9.9.177872.msi`
FIPS installer:	`IBMAsperaConnect-FIPS-ML-3.9.9.177868.msi`

You can configure the Connect guided installation to link to the FIPS version of Connect automatically. To do so, modify your application code to add a configuration value:

Before: `var asperaInstaller = newAW4.ConnectInstaller({});`
After: `var asperaInstaller = newAW4.ConnectInstaller({`**`useFips: true`**`});`

Troubleshooting

Error When Installing with a Non-Admin Account

You may encounter an error such as the following (or with similar wording) if you are not an Administrator when executing the MSI installer file.

```
The system administrator has set policies to prevent this installation.
```

These error messages are due to not having permissions to install an MSI package as a non-admin account. Other than logging in as an administrator to install Connect, you may also ask that your Administrator grant the group policy access for non-admin users to install applications.

The following example shows you how to grant group policy access for non-admins to install software on Windows 2016:
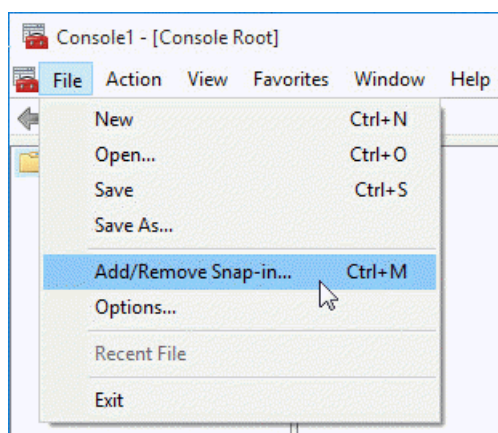
1. Launch the Microsoft Management Console (MMC).

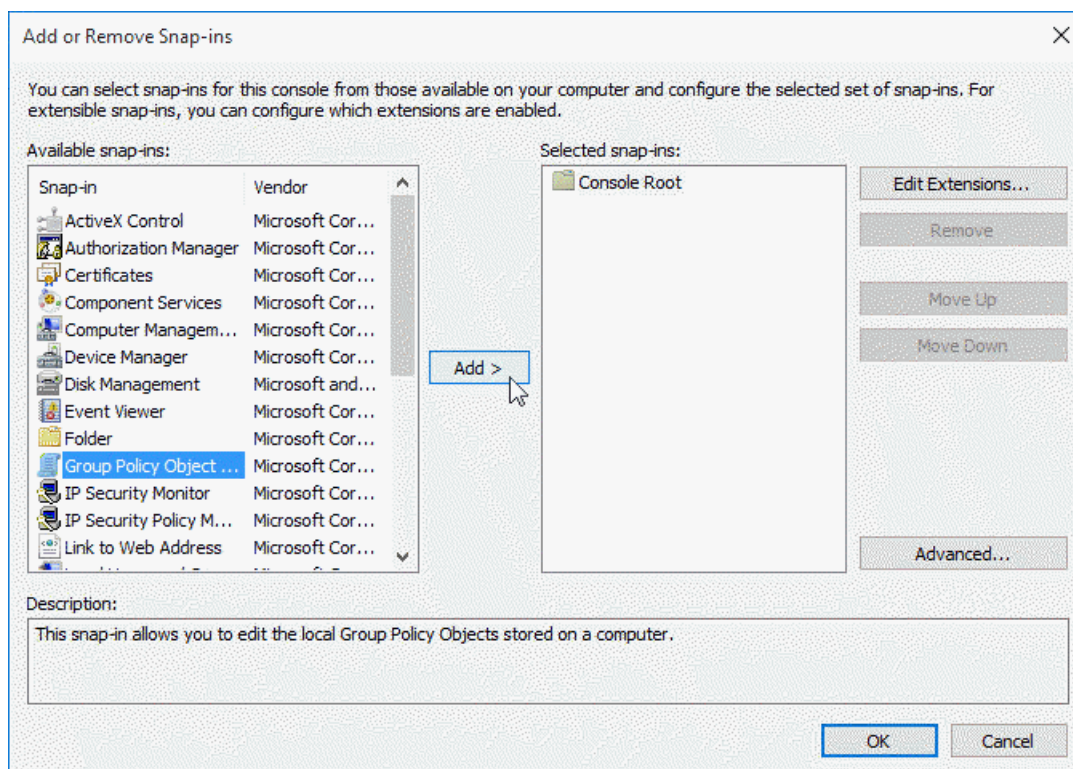   Go to **Start menu > Run**. Enter mmc and click **OK** to launch it.
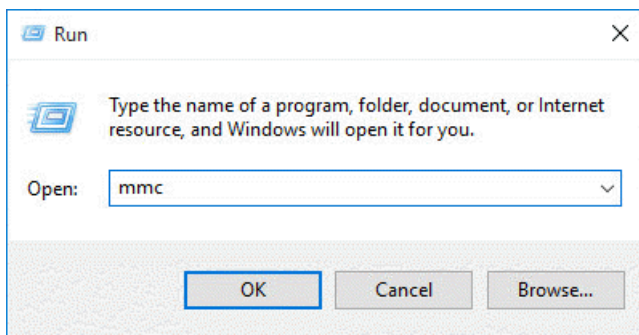

2. Add the Group Policy Object Editor Snap-in.

   a. In the MMC, go to the toolbar and select **File > Add/Remove Snap-in**:

   b. In the **Add or Remove Snap-ins** window, select the **Group Policy Object Editor** and click **Add**:

c. In the Select Group Policy Object window (wizard), under Group Policy Object, click **Browse** and select either **This Computer** or specify another computer. When done, click **OK** to return to the wizard window.

d. In the wizard window, click **Finish**. When you are returned to the **Add/Remove Snap-ins** window, click **OK** to save the changes.

3. Grant the Windows installation group policy.

a. In the MMC, navigate into **Console Root > Local Computer Policy > Computer Configuration > Administrative Templates > Windows Components** and locate **Windows Installer**:
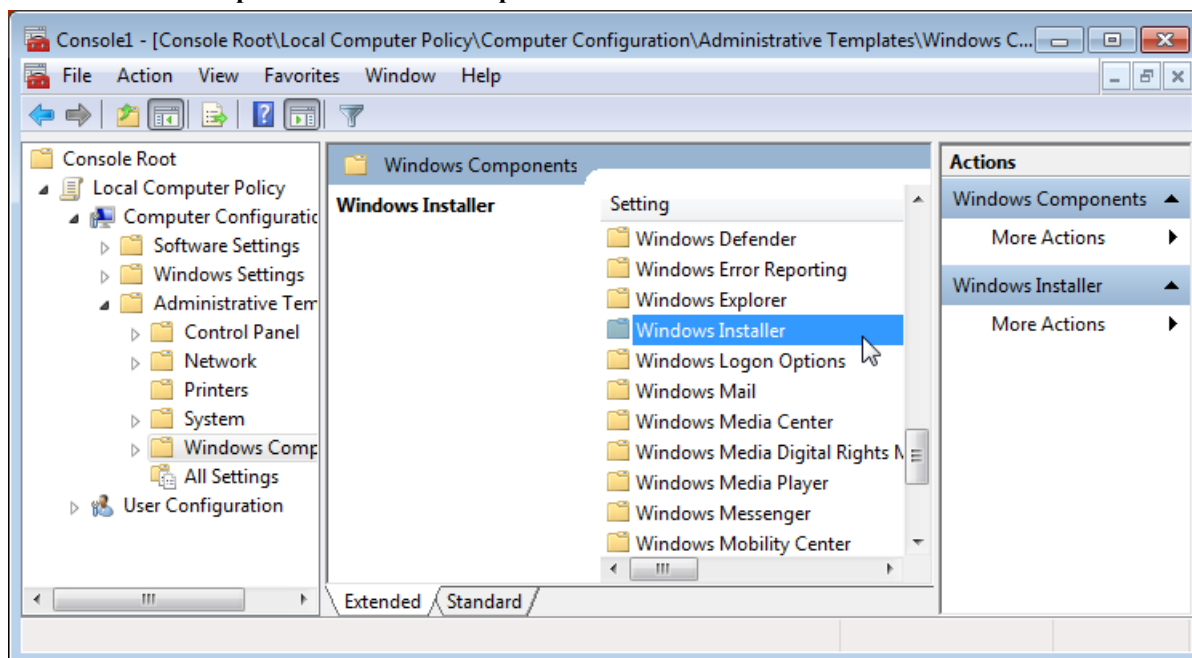
b. Double-click **Windows Installer**.

c. In the list that appears, locate **Turn off Windows Installer** and double-click it.

d. The Turn Off Windows Installer window opens.

e. Under the Turn off Windows Installer heading, select **Enabled**. In the Disable Windows Installer box, open the pull-down and select **Never**. When finished, click **OK**:
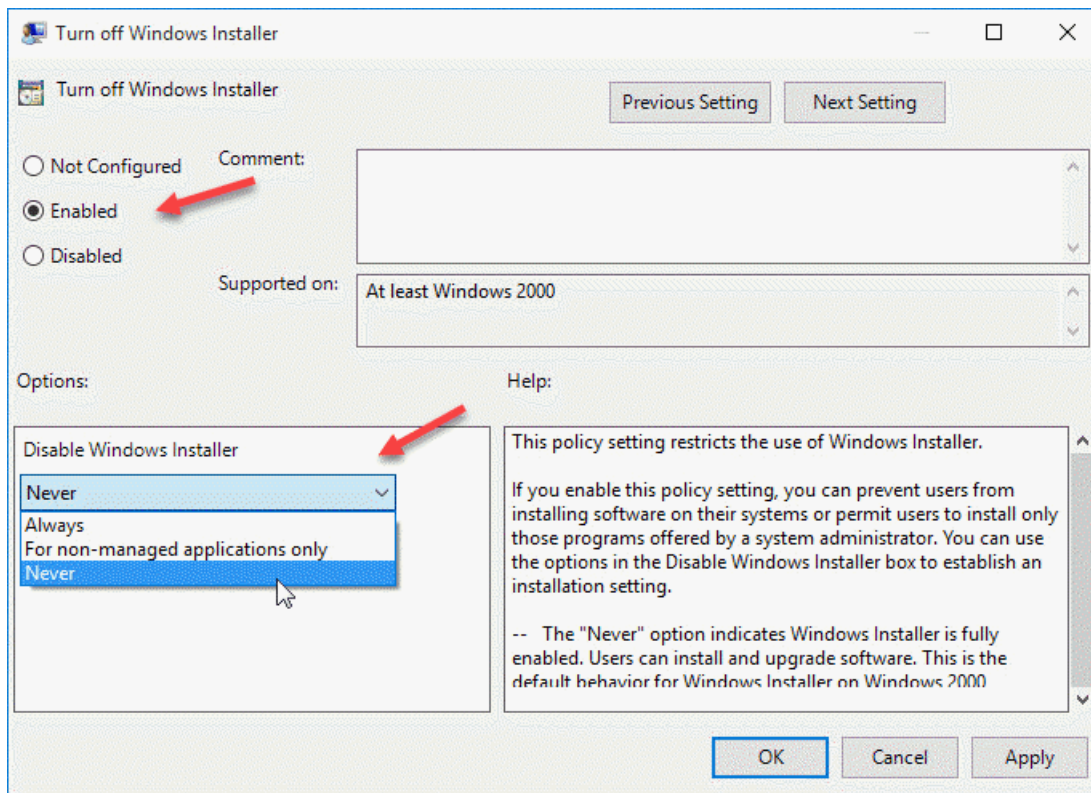
f. To close the MMC, click **File > Exit**.

g. When prompted to save console settings, click **Yes** to save the settings to a file. When prompted for a `.msc` filename, click **Save**.

h. Reboot the computer to apply the changes, or execute the following command at a command prompt:

```
> gpupdate /force
```

Connectivity Issues

SSH Connectivity Errors: "Timeout establishing connection"

If you receive the error "Timeout establishing connection," the TCP connection between Connect and the server is blocked (error codes 13, 15, or 40 in the log files). To determine the cause, open a Terminal or a Command prompt on the client machine (where Connect is installed). Use `telnet` to test the connection to the server:

```
> telnet server-ip-address 33001
```

where *server-ip-address* is the IP address of the Aspera server (ex. 10.0.1.1) on TCP port 33001 (or the configured TCP port, if other than 33001).

You will receive one of the following errors and can take the appropriate action:

- **"Connection refused":** The Aspera server is not running the SSHD service. Have your server administrator review the server's SSH service status.
- **"Timeout":** The client-side firewall is disallowing outbound TCP traffic. Ensure that the client-side firewall allows outbound TCP traffic on port 33001 (or the configured TCP port).

UDP Connectivity Errors: "Data transfer timeout"

If Connect appears to successfully connect to the server but:

- The transfer progress reads 0%.
- Files appear to be transferred to the destination but are 0 bytes.
- You eventually receive the error "Data transfer timeout."

UDP connectivity is blocked, likely by the firewall configuration (error codes 14, 15, and 18 in the log files). Ensure that the client-side firewall allows outbound traffic on the FASP UDP port (33001, by default) and the server firewall allows inbound traffic on UDP port 33001.

IBM Aspera Connect Diagnostic Tool

Aspera provides a web-based diagnostic tool that can be useful for identifying connection issues. You can access the tool here:

```
https://test-connect.asperasoft.com/
```

Transfer Issues

Connect Won't Transfer .partial Files

With the default configuration for Connect, if you try to transfer files that have a `.partial` extension, you'll notice these files are skipped. This is because the `.partial` extension has special meaning for Connect. For a file in transit, `.partial` is the default temporary extension for the partial file on the receiving end before its transfer is complete. When the file's transfer is finished, the extension is removed.

You can transfer the skipped files by changing the name of the filename extension that Connect uses. Choose a name that you don't expect will be used by files you transfer.

To make this change:

1. Locate the Connect `aspera.conf` file on the machine at the receiving end of the transfer. The `aspera.conf` file is included in the Connect installation. Open it with a text editor:

   ```
   C:\Users\username\AppData\Local\Programs\Aspera\Aspera Connect\etc
   \aspera.conf
   ```

2. Go to the line that begins with `<partial_file_suffix>`, and change `.partial` to a name your transfer files will not be using:

   ```xml
   <?xml version='1.0' encoding='UTF-8'?>
   <CONF version="2">

   <default>
       <file_system>
           <storage_rc>
               <adaptive>
                   true
               </adaptive>
           </storage_rc>
           <resume_suffix>.aspera-ckpt</resume_suffix>
           <partial_file_suffix>.partial</partial_file_suffix>
           <replace_illegal_chars>_</replace_illegal_chars>
       </file_system>
   </default>

   </CONF>
   ```

Note: Removing the `<partial_file_suffix>` entry or setting it to a null value will not necessarily solve the problem. Doing so means the file extension used for partial files becomes whatever is set in the `aspera.conf` for `ascp`, which by default is `.partial`.

3. Save your changes to the the Connect `aspera.conf` file. The changes will take effect with the next trtansfer.

Technical Support

Support Websites

For an overview of IBM Aspera Support services, visit https://www.ibm.com/products/aspera/support.

To view product announcements, webinars, and knowledgebase articles, as well as access the Aspera Support Community Forum, sign into the IBM Aspera Support site at https://www.ibm.com/mysupport/ using your IBMid (not your company Aspera credentials), or set up a new account.

Technical Support

You may contact Aspera support using the IBM Aspera Support Guide: https://www.ibm.com/support/home/pages/support-guide/?product=3712142

You may contact an Aspera support technician 24 hours a day, 7 days a week, through the following methods, with a guaranteed 4-hour response time.

Phone (North America)	+1 (510) 849-2386, option 2
Phone (Europe)	+44 (0) 207-993-6653 option 2
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