

IBM Aspera proceeding of the Installation and Configuration

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Aspera Times

ASPERA Installation Process for Windows OS

This document is related to how installation and configuration **ASPERA** in the server or client etc. Especially in below side represents manual content.

Contents

1. Introduction ASPERA

1.1 Key words

2. IBM Aspera High-Speed Transfer Server

2.1 Desktop Server (GUI)

2.2 Aspera Console (CLI)

3. IBM Aspera High-Speed Transfer Client

3.1 Desktop Client(GUI)

3.2 Aspera Console (CLI)

4. IBM Aspera Web

5. IBM Aspera Cloud

1. Introduction ASPERA

ASPERA high-speed transfers begin when an Aspera client authenticates to an Aspera server and requests a transfer. If the client user has authorization, then transfer tools are launched on the client and server and the transfer proceeds.

For example, an IBM **ASPERA** Desktop Client user connects to an IBM Aspera High-Speed Transfer Server and initiates a transfer. Figure-1 represents client and server desktop application. When the process of Aspera is totally installation free, but Aspera license is a payment. Indeed, installation of the Aspera related to several steps and process.



Figure-1. Desktop: Client-Server connection.

There are type of Aspera IBM for device level as Server, client etc. Table-1. Aspera IBM related list and using link. Likewise, this document is collapse every matter of Aspera specification for installation and configuration.

Table-1. Aspera related list and using link

Title (View of Aspera)	OS type (AIX, MAC, Windows, Linux, Linux Deb, Solaris)	Link (Download from Aspera)
Aspera Server	6 types of OS supported	https://downloads.asperasoft.com/en/downloads/4
Aspera Client	6 types of OS supported	https://downloads.asperasoft.com/en/downloads/2
Aspera Console	2 types Windows & Linux	https://downloads.asperasoft.com/en/downloads/3
Aspera cli Client	3 types Windows, Linux, MAC	https://downloads.asperasoft.com/en/downloads/62
Aspera Web	2 types Windows & MAC	https://demo.asperasoft.com/aspera/user/
Aspera Cloud	Mobile & Computer	https://downloads.asperasoft.com/en/downloads/61 https://www.ibm.com/cloud/aspera
	https://www.ibm.com/partnerworld/mem/pat/pat_sw_software.html	

What is the Server?

The Aspera server receives transfer requests from Aspera clients, determines if the user has permission to access the server and authorization to the target area of the file system (**source or destination with read or write access**), and participates in transfers. The server can be:

- an on-premises installation of **HST Server, IBM Aspera High-Speed Transfer Endpoint** (which permits one client connection),
- a HST Server installed as part of IBM Aspera Faspex, or
- an HST Server deployed in object storage as an IBM Aspera On Demand instance, an IBM Aspera on Cloud transfer service node, or an IBM Aspera Transfer Cluster Manager node.

What is the Client?

The Aspera client is the program that requests a transfer with the Aspera server. Aspera applications that can act as clients include:

- Desktop Client,
- IBM Aspera Drive,
- IBM Aspera Connect,
- IBM Aspera Command-Line Interface,
- HST Server and HST Endpoint

What is FASP?

At the heart of your Aspera ecosystem are the FASP transfer engines Ascp and Ascp 4. Ascp maximizes data transport over any network and is particularly suited to large files. It is a powerful command-line tool and also drives transfers started in the GUI.

Ascp 4 is another command-line transfer tool that is optimized for both large files and transfers of thousands to millions of small files, handling large amounts of file metadata as part of the high-speed transfer.

Both Ascp and Ascp 4 are installed and enabled with your installation of HST Server, HST Endpoint, and Desktop Client.

The Aspera Transfer Server

Your Aspera transfer server is a powerful, customizable hub for your high speed transfer activity. Configuration settings allow you to control which clients have access for uploading or downloading data, how much bandwidth their transfers can use, the priority of those transfers, and how data is secured during and after transfer. The transfer queue can be managed on the fly, enabling you to adjust as priorities change. You can also monitor transfers and receive email notifications when transfer sessions or individual file transfers start and stop.

The Aspera Client Transfer Tools

Your installation includes the following transfer tools, some of which require an additional license for activation.

The Aspera Client GUI

The Aspera desktop GUI offers a simple, intuitive way to create connections with Aspera servers, and to start and manage your high-speed transfers. The transfer job queue shows real-time progress and allows on-the-fly reordering and bandwidth control.

1.1 Key words

Aspera, Aspera Desktop, Aspera Web, Cloud, FASP, TCP, UDP, Firewall.

IBM Aspera High-Speed Transfer Server

Server requires access through specific ports and additional software for successfully integration. Before installing Aspera Server in your computer, you should prepare several configurations and installations in your system.

The preparation of system configuration and installation those specific sceneries:

[Java] The installation process of Java for IBM Aspera desktop (GUI) is optional case. In case of Web Aspera, it should be mandatory into Java (JRE, JDK). When windows already installed Java version, no need to install again, or you should just check updated version.

[[Windows features](#)] System configuration and installation for windows provides features and preceding specific character.

Click **Control Panel > Programs > Turn Windows features on or off**.

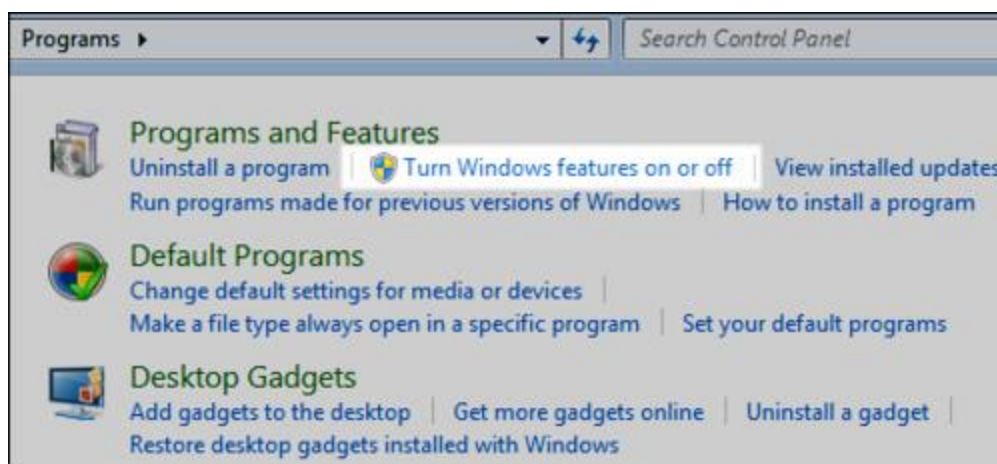


Figure-2. Turn Windows features on or off

In **Turn Windows Features On or off**, select the following features and click **OK**:

- a. Select Internet Information Services and expand the file tree.
- b. Expand Web Management Tools and select IIS 6 Management Compatibility. Expand IIS 6 Management Compatibility and select all IIS 6 components. (Required)
- c. Expand World Wide Web Services and Application Development Features then select ASP and ASP.NET. If you are running Windows 8, select either .NET 3.5 or .NET 4.5. ISAPI Extension and ISAPI Filters are automatically being selected.
- d. Expand Common HTTP Features under World Wide Web Services and select Static Content.
- e. Expand Security under World Wide Web Services and select Basic Authentication.

The Figure-3 includes already completed condition, windows feature on (left side) and already successfully installed Java (JDK, JRE). Finally, captured picture represents Windows Features.

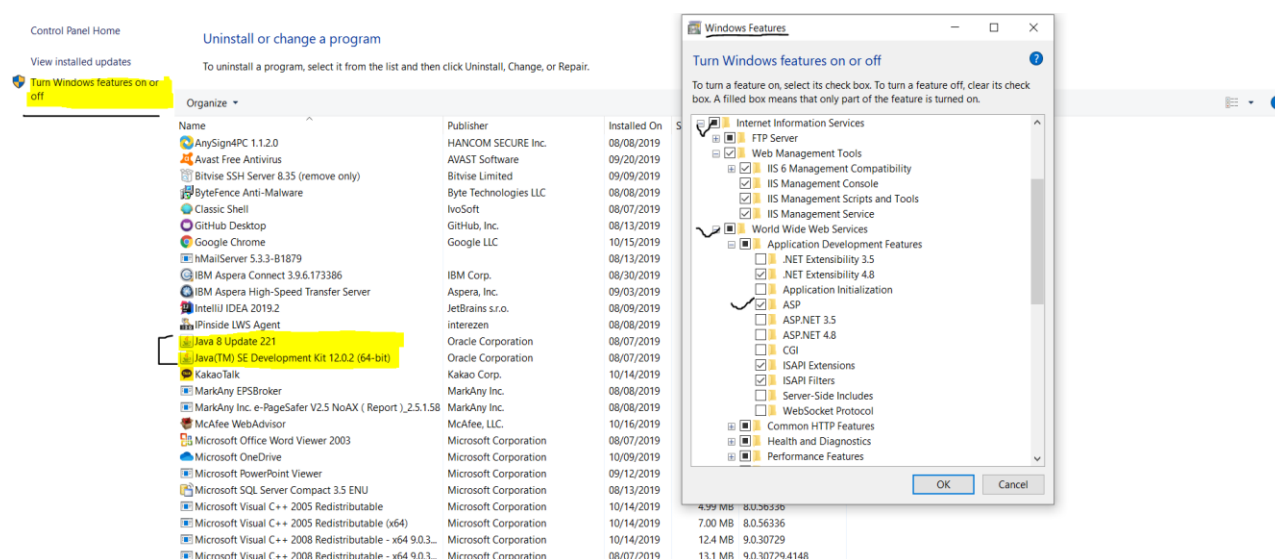


Figure-3. Windows Features Turn on or off [Internet Information Services]

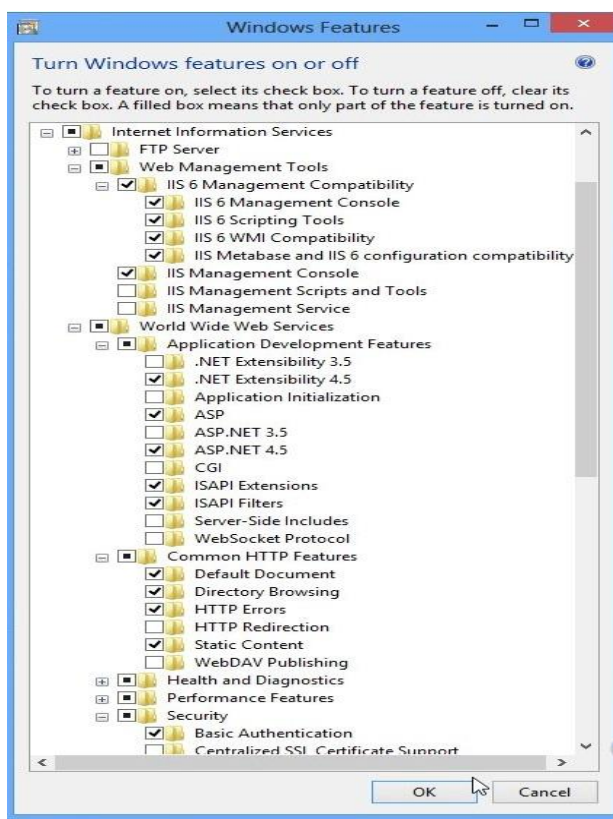


Figure-4. Windows Features checking list

Figure-4 shows a window features for configuration your server computer. Click OK once all selections have been made, represented Figure-5. Your computer may take a few minutes to configure it. Verify installation was successful by opening Control Panel > System and Security > Administrative Tools. You should see the following features:

1. Internet Information Services (IIS) 6.0 Manager
2. Internet Information Services (IIS) Manager









Name	Date modified	Type	Size
 Bitvise SSH Server Control Panel	09/09/2019 4:38 PM	Shortcut	2 KB
 Component Services	03/19/2019 1:45 PM	Shortcut	2 KB
 Computer Management	03/19/2019 1:45 PM	Shortcut	2 KB
 Defragment and Optimize Drives	03/19/2019 1:45 PM	Shortcut	2 KB
 Disk Cleanup	03/19/2019 1:45 PM	Shortcut	2 KB
 Event Viewer	03/19/2019 1:45 PM	Shortcut	2 KB
 Internet Information Services (IIS) 6.0 Manager	03/19/2019 1:46 PM	Shortcut	2 KB
 Internet Information Services (IIS) Manager	03/19/2019 1:46 PM	Shortcut	2 KB

Figure-5. Internet Information Service (IIS) 6.0 Manager [* e.g. Windows 10]

Configuring the Firewall

The Server requires access through specific ports. If you cannot establish the connection, review your local corporate firewall settings and remove the port restrictions accordingly. Table-2 represents all port number and SSH security connection list.

Table-2.Local Firewall and port number

Protocol (Inbound outbound)	Port Number& SSH	
Legacy TCP	22	inbound SSH connections
Inbound TCP	33001	inbound SSH connections
Inbound UDP	33001	inbound SSH connections
Inbound TCP Outbound UDP	8080 8443	inbound SSH connections
Inbound TCP	80 443	HST Server web UI, for HTTP and/or HTTPS web access
Local firewall TCP	33001	SSH and FASP transfer ports
Local firewall UDP	33001- 33010	SSH and FASP transfer ports

Click Control Panel > Windows Defender Firewall in represents Figure-6.(cmd open >wf.msc)

Adjust your computer's settings

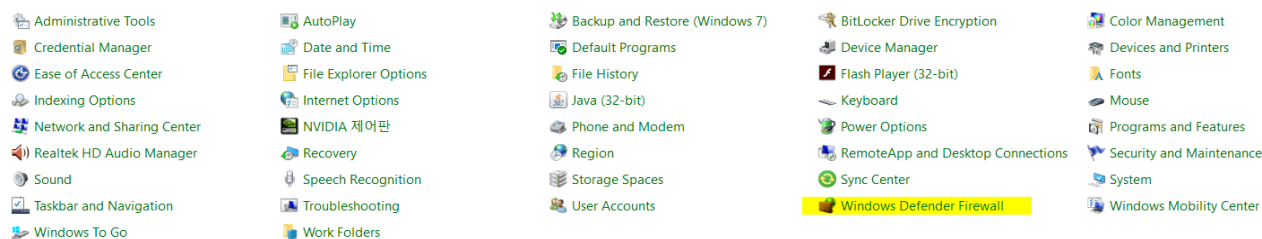


Figure-6. Windows Defender Firewall [e.g. Windows 10]

Click Advanced Setting in Firewall menu (left side) and open this menu represents Figure-7.

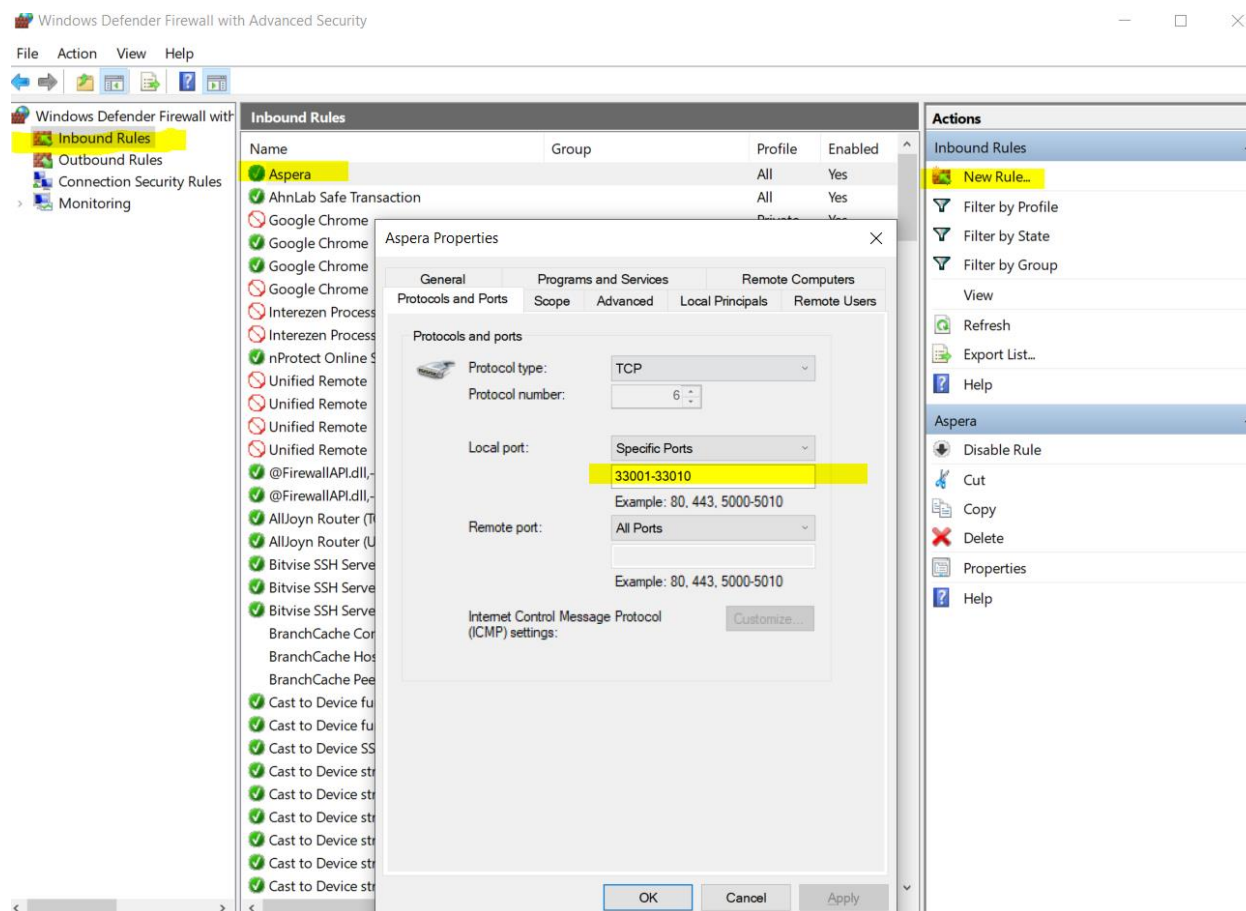


Figure-7. Inbound Rules and Outbound Rules Port number. (addednew rules)

When you add new rule and click ok, after that you should approval all changing points.

Important: Aspera strongly recommends running the SSH server on a non-default port (allowing inbound SSH connections on TCP/33001, and disallowing inbound connections on TCP/22) to ensure that your server remains secure from SSH port scan attacks. For instructions on how to change SSH port, Securing Your SSH Server[\[link\]](#).

If you have a legacy customer base that uses TCP/22 then you can allow inbound connections on both ports. See Securing Your SSH Server for instructions ([more valuable information](#)).

The firewall on the server side must allow the open TCP port to reach HST Server. No servers are listening on UDP ports. When a transfer is initiated by an Aspera client, the client opens an SSH session to the SSH server on the designated TCP port and negotiates the UDP port for the data transfer.

- **Inbound UDP/33001 (or a range, if required, see below):** The port for FASP transfers, which use UDP/33001 by default, although the server may also choose to run FASP transfers on another port.
- **Inbound and outbound TCP/8080 and TCP 8443 (or other TCP ports set for HTTP/HTTPS fallback):** The ports for the HTTP fallback. If only HTTP or HTTPS is used, you need to open only that port. For more information on configuring HTTP fallback ports, see Configuring HTTP and HTTPS Fallback ([more valuable information](#)).
- **Inbound TCP/80 and TCP/443:** The ports for the HST Server web UI, for HTTP and/or HTTPS web access. If only HTTP or HTTPS is used, you only need to open that port.
- **Local firewall:** If you have a local firewall on your server (like Windows Firewall), verify that it is not blocking your SSH and FASP transfer ports (such as TCP/UDP 33001). If you are using Vlinks, you will need to allow the Vlink UDP port (55001, by default) for multicast traffic. For additional information on setting up Vlinks, see Controlling Bandwidth Usage with Virtual Links ([GUI](#)).

When a range of UDP ports is required: For Aspera servers that have multiple concurrent clients, the Windows operating system does not allow the Aspera FASP protocol to reuse the same UDP port for multiple connections. Thus, if you have multiple concurrent clients and your Aspera server runs on Windows, then you must allow inbound connections on a range of UDP ports, where the range of ports is equal to the maximum number of concurrent FASP transfers expected. These UDP ports

should be opened incrementally from the base port, which is UDP/33001, by default. For example, to allow 10 concurrent FASP transfers, allow inbound traffic from UDP/33001 to UDP/33010.

Securing Your SSH Server

Keeping your data secure is critically important. Aspera strongly recommends taking additional steps to set up and configure your SSH server to protect against common attacks.

These steps include the following:

- Changing the TCP port.
- Configuring transfer server authentication.

Aspera also recommends restricting user access to the server, as described in the user setup instructions later in this guide.

Changing and Securing the TCP Port

SSH servers, including the OpenSSH suite included with your product, listen for incoming connections on TCP Port 22 by default. As such, Port 22 is subject to numerous unauthorized login attempts by hackers who attempt to access unsecured servers. An effective deterrent is to close Port 22 and run the service on a seemingly random port above 1024 (and up to 65535).

To standardize the port for use in Aspera transfers, Aspera recommends setting the TCP port to 33001 and closing TCP/22.

Prerequisites:

- Before changing the default port for SSH connections, verify with your network administrators that TCP/33001 is open.
- Before closing port TCP/22, notify users of the change.

Notifying Users - How to Specify TCP/33001

Aspera recognizes that disabling the default SSH connection port (TCP/22) might affect your clients. When you change the port, ensure that you advise your users on how to configure the new port number, from the GUI (if available and used) and from the command line.

Most important for SSH in the changing to TCP/33001

The following steps require Administrator privileges.

1. Open the SSH configuration file.

```
C:\Program Files\Aspera\Enterprise Server\etc\sshd_config
```

2. Add the TCP/33001 SSH port and close TCP/22.

Comment out the line for "Port 22" and add a line for "Port 33001":

```
#Port 22
Port 33001
```

Note: If you are using the HST Server web UI, you must also update the SshPort value in the <WEB...> section of aspera.conf. For details, see [Configuring your Web UI Settings\(web data\)](#).

Once this setting takes effect:

- Aspera clients must set the transfer port to 33001 in the GUI or specify **-P 33001** for command line transfers.
- Server administrators should use `ssh -p 33001` to access the server through SSH.

3. **Disable non-admin SSH tunneling.**

These instructions require that OpenSSH 4.4 or newer is installed on your system in order to use the Match directive. Match allows you to selectively override certain configuration options when specific criteria (based on user, group, hostname, or address) are met.

Open your SSH Server configuration file, `sshd_config`, with a text editor. Add the following lines to the end of the file (or modify them if they already exist):

```
AllowTcpForwarding no
Match Group Administrators
AllowTcpForwarding yes
```

Depending on your `sshd_config` file, you might have additional instances of `AllowTCPForwarding` that are set to the default Yes. Review your `sshd_config` file for other instances and disable if necessary.

4. **Update authentication methods**

Public key authentication can prevent brute-force SSH attacks if all password-based authentication methods are disabled. For this reason, Aspera recommends disabling password authentication in the `sshd_config` file and enabling private/public key authentication.

To configure authentication methods, add or uncomment `PubkeyAuthentication yes` and comment out `PasswordAuthentication yes`.

```
PubkeyAuthentication yes
#PasswordAuthentication yes
PasswordAuthentication no
```

Note: If you choose to leave password authentication enabled, be sure to advise account creators to use strong passwords and set PermitEmptyPasswords to "no".

```
PermitEmptyPasswords no
```

5. Restart the SSH server to apply new settings.

Restarting your SSH server does not affect currently connected users. Click **Start > Control Panel > Administrative Tools > Services**. Locate the OpenSSH Service and click **Restart**.

6. Review your logs periodically for attacks.

You can view the state of active TCP connections by running the **netstat** command:

```
>netstat -an -p tcp
```

NOTE: when you use linux or MAC OS for configuration of SSH key, that address includes connection key. home/username/.ssh/

>ssh-keygen

Client should send to *.pub file to server (/ssh address)

Requirements

System requirements of Server computer

- Product-specific Aspera license file or entitlement.
- Windows 64-bit: Windows 7 with service pack 1, 8.1, 10, or Windows Server 2008 R2 with service pack 2, 2012 R2, 2016
- For usage in an Active Directory environment you must have access to a domain administrator account to install the product.
- Access to run WMI.
- For Pre- and Post-Processing (Prepost) you must install [Active Perl](#) to enable Perl scripts.
- Screen resolution 1024 x 768 or higher

To use the Node API:

- The line 127.0.0.1 localhost must appear in the hosts file:

C:\Windows\system32\drivers\etc\hosts

- To run node-to-node transfers, the remote node must have version 3.7.4 or later. Earlier versions use an SSH key type that is no longer accepted by servers as of version 3.7.4.

To support the HST Server web UI:

- Active Server Pages (ASP) must be enabled.
- Internet Information Service (IIS) version 6, or version 7 with IIS 6 Compatibility Component installed.

The Server web UI supports the following web browsers:

- **Windows:** Chrome 64-71, Microsoft Edge 41-44, Internet Explorer 11, Firefox 58-64, Firefox ESR 52-60
- **MACOS:** Chrome 64-71, Firefox 58-64, Safari 11-12, Firefox ESR 52-60
- **Linux:** Chrome 64-71, Firefox 58-64, Firefox ESR 52-60

2.1 Desktop Server (GUI)

The main software installation and configuration are included this part of the document. Let's begin download software specific link and configuration (<https://downloads.asperasoft.com/>).

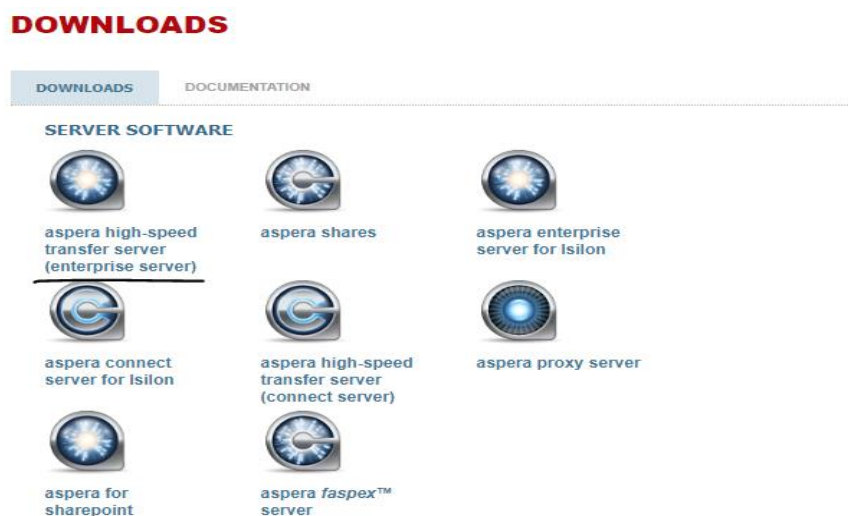


Figure-8. Download Aspera High-Speed Transfer Server (enterprise server)

In addition, Aspera Server supported six type of OSs and their versions. Figure-9 represents Aspera high-speed transfer server (enterprise server) and type of OSs. This document mianly focus on Windows OS and and small part integration MAC, Linux OS.

DOWNLOADS



Figure-9. OS view and Direct download [limited direct download]

Underline of components in Figure-9 when selected Windows, version, Direct download, HTML Guide. Even OS has various Aspera Server versions, and it might be limited download directly. When you launch download and use HTML or PDF guide for understating structure.

NOTICE: When Aspera server downloaded several times (more than 3 times), the system cannot approval again download link. Mostly recomanded after downloading files then you should use other sever computer. Reusiablity of Aspera Server is major factor in the proceeding.

The second method of Aspera Server for downloading you should use this link. Especially, this link needs to drug and drop on the browser, and required after click login and passord for agreement in IBM Aspera. https://www.ibm.com/partnerworld/mem/pat/pat_sw_software.html

There are two kind of login as individual from IBM, and organization login from IBM. What you have and use freely and easily. Initailizing login represents Figure-10 and after completed password step. The system permitted for use Aspera components. IBM-Aspera provides seven lanugage for using IBM product like Aspera. In that case, agreement of customer and IBM company represents Korean lanugae. (Figure-11 system information for download drive and agreement value).

Log in to IBM

Logging in as kolonpartner [Not you?](#)

Password

[Forgot password?](#)

☐ Remember me [i](#)

Log in

Don't have an account? [Create an IBMid](#)

Figure-10. Log in to IBM [use IBM id]

기술 자원 >

다운로드 및 드라이버

소프트웨어 다운로드

조기 코드, 샘플, 평가판 및 베타판

드라이버 및 수정사항

바로 가기에 페이지 추가

내 프로필

partner kolon

→ 내 프로필 업데이트

내 바로 가기

IBM에 문의

→ 사이트 맵

소프트웨어 다운로드

→ [IBM Software Access Catalog](#)
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조기 코드, 샘플, 평가판 및 베타판

→ [AlphaWorks](#)
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→ [소프트웨어 시험판 및 베타판](#)
정보를 얻고 코드를 다운로드하여 제품을 시험적으로 사용해 보거나, 점프스타트를 받아 베타 코드로 작업하십시오.

드라이버 및 수정사항

BladeCenter Foundation for Cloud Refresh3(BCFC Ref3)

↓ SCU 도구 (ZIP, 14.9MB)

↓ 구성 전환 (ZIP, 17KB)

↓ DNS 파일 (ZIP, 3.27KB)

→ [드라이버 및 수정사항 다운로드](#)
소프트웨어, 하드웨어와 시스템에 대한 드라이버 및 수정사항을 검색하십시오.

→ [Fix Central](#)
시스템의 소프트웨어, 하드웨어와 운영 체제에 대한 수정사항 및 업데이트를 찾으십시오.

Figure-11. Download drive agreement

Aspera download has related link in the IBM software access catalog even proceeding process. Each link has several specific function and componential modules. Figure-11 shows underline software access link for download files. After successfully click that link, Figure-12 represents in your browser.

IBM 파트너월드 > Software Access Catalog >

Software Access Catalog

IBM Software Access Catalog에서 구매를 시작하기 전에 귀하는 본 부칙의 조항을 맨 아래까지 읽은 후 동의해야 합니다.
IBM 파트너월드 계약
파트너월드 소프트웨어 사용 부칙

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해당 프로그램에서 프로그램을 다운로드, 설치, 복사, 액세스 또는 사용하는 경우, 귀하는 상기 계약 조항, 라이선스 정보 및 본 부칙 조항을 승인한 것으로 간주됩니다.

본 부칙과 관련한 추가적인 세부사항은 파트너월드 웹 사이트에 명시됩니다.

1.0 사용 범위

귀하는 본 조항에 명시된 용도에 한해 각 프로그램의 상업적으로 적절한 수의 사본/PVU(Processor Value Unit)(본 부칙에서 달리 명시하지 않은 경우)를 설치하여 사용할 수 있습니다. 상업적으로 합리적인 수의 사본/PVU의 수는 귀사의 파트너월드 국가 기업집단 프로파일에 등록 및 관련되어 있고 본 부칙에 정의된 바와 같이 승인된 사용으로 프로그램을 사용하는 실제 직원 수를 지원하는 데 필요한 수 이하이어야 합니다. 그러나, 귀하가 작성할 수 있는 특정 프로그램의 최대 사본/PVU 수는 부속명세에 명시되어 있습니다.

본 부칙 하에 사용이 허가된 프로그램은 현재 Software Access Catalog에서 사용 가능한 이러한 프로그램으로 국한됩니다. 귀하는 사용 중인 프로그램이 여전히 Software Access Catalog에서 사용 가능한 지 확인하기 위해 분기별로 Software Access Catalog를 확인할 것을 동의하며, 그렇지 않은 경우 제 3절(사용의 해지)에 정의된 바와 같이, 프로그램의 사용을 중지할 것을 동의합니다.

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Figure-12. Software Access Catalog agreement

Last part of access catalog in your browser and just click agreement button

위의 조항에 추가하여, IBM Rational Application Developer (RAD) for WebSphere 소프트웨어 프로그램은, 본 부칙의 '개발 및 테스트' 조항에서 설명한 바와 같이, IBM 제품과 호환 가능한 상업적으로 사용가능한 애플리케이션 소프트웨어를 개발할 목적으로 귀하에 의해 사용될 수 있습니다.

귀하의 국가 기업집단 내에 설치할 수 있는 각 Rational 프로그램에 대한 사본의 최대 수는 귀하의 파트너월드 멤버십 레벨과 귀하가 "Ready for Rational"로 검증된 솔루션을 보유하고 있는지에 따라 다릅니다.

- 등록 레벨 - 4부
- 실버 레벨 또는 "Ready for Rational"로 검증된 솔루션을 보유한 등록 레벨 - 10부
- 골드 레벨 - 20부
- 플래티넘 레벨 - 40부

허가받은 사용자만이 다수 Rational 프로그램을 사용할 수 있습니다(등록된 허가받은 사용자만 사용 가능). 특정 Rational 프로그램에는 최초 라이선스 기간이 경과하면 새 라이선스를 취득해야 프로그램을 계속 사용할 수 있는 작동 중지 제어 장치가 포함되어 있습니다.

PWSWUAS-06 KO 10-2016

동의합니다.

취소

Figure-13. Software Access Catalog agreement last part

Next page of the access catalog searching part

What's new


The IBM Resilient Incident Response Platform is now available for download

IBM Resilient Incident Response Platform unlocks the value and power of your security tools and integrates them into a single response hub. It can guide your analysts through the response process by dynamically enriching incidents with threat intelligence and internal data, automating time-consuming tasks, and providing agile SOPs that map to real-time details of the attack.

Note that license keys for this product can be requested using the Resilient License Keys link located in the left-nav menu of this page.

Search options

Find by search text

Product name: 

IBM Aspera High-Speed Transfer Server (Connect Server) V3.9 Multiplatform Multilingual eAssembly
 IBM Aspera High-Speed Transfer Server (Enterprise Server) V3.9 Multiplatform Multilingual eAssembly
 IBM Aspera High-Speed Transfer Server V3.7.4 Multiplatform Multilingual eAssembly
 IBM Aspera High-Speed Transfer Server V3.9 Multiplatform Multilingual eAssembly

Figure-14. Search options for download

Find by search text results

eAssemblies (1)	Images (38)
<div> <input type="button" value="Expand all"/> <input type="button" value="Collapse All"/> <input checked="" type="button" value="Download Director"/> <input type="button" value="HTTP"/> </div> <p>Cloud (1 eAssembly: 6 Images)</p> <p>IBM Aspera High-Speed Transfer Server (Enterprise Server) V3.9 Multiplatform Multilingual eAssembly (CJ31SML)</p> <p>Size: 6 Images (4,041.5MB) Date posted: 23 Mar 2018</p> <p><input type="checkbox"/> Select All (or use check boxes below to select image(s) to download)</p> <p><input type="checkbox"/> IBM Aspera Embedded Client Add-on V3.9.1 Multiplatform English (CNY4GEN) - View details</p> <p>Size: 40MB Date posted: 27 Dec 2018 License agreement Download estimate → eAssembly</p> <p><input type="checkbox"/> IBM Aspera Enterprise Server V3.8.1 Multiplatform (Linux, Windows, Mac OS, Solaris, Sparc, AIX) Multilingual (CNV4MML) - View details</p> <p>Size: 1,218MB Date posted: 15 Aug 2018 License agreement Download estimate → eAssembly</p> <p><input type="checkbox"/> IBM Aspera Connect Server, Enterprise Server, Point-to-Point, and Client V3.8.1 Release Notes English (CNV1XEN) - View details</p> <p>Size: 0.5MB Date posted: 15 Aug 2018 License agreement Download estimate → eAssembly</p> <p><input type="checkbox"/> IBM Aspera Point-to-Point Client V3.8.1 Multiplatform (Linux, Windows, Mac OS, Solaris, Sparc, AIX) Multilingual (CNV4NML) - View details</p> <p>Size: 833MB Date posted: 15 Aug 2018 License agreement Download estimate → eAssembly</p> <p><input type="checkbox"/> IBM Aspera Client V3.8.1 Multiplatform Multilingual (CNV1WML) - View details</p> <p>Size: 686MB Date posted: 15 Aug 2018 License agreement Download estimate → eAssembly</p> <p><input type="checkbox"/> IBM Aspera High-Speed Transfer Server (Connect Server) V3.9.1 Multiplatform Multilingual (CNY4LML) - View details</p> <p>Size: 1,264MB Date posted: 27 Dec 2018 License agreement Download estimate → eAssembly</p> <p>By clicking the "I agree" button, you agree that (1) you have had the opportunity to read and understand the above license agreement(s) and multi-product package terms, if any, and (2) terms of the license agreement(s) govern this transaction. If you do not agree with the terms of the agreement(s), you will be unable to download the software.</p> <p><input checked="" type="radio"/> I agree <input type="radio"/> I do not agree</p> <p><input type="button" value="Download now"/></p>	

Figure-14. Search options for download

Figure-14 represents all catalogsof download (OS and other components) and after agreement then click button download now. Figure-15 shows such all files which you selected before.

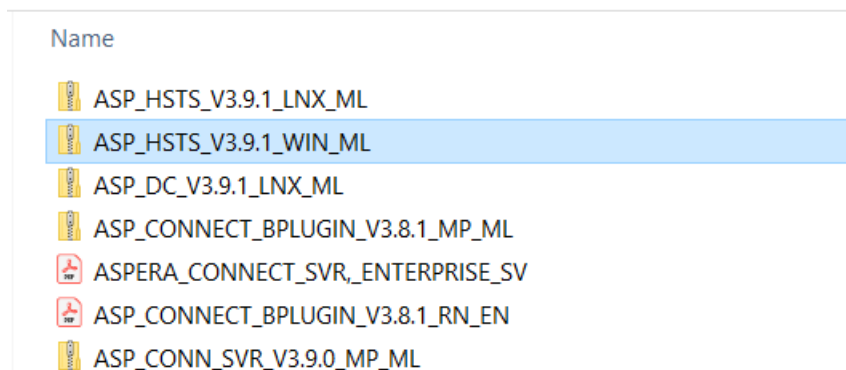


Figure-15.Downloaded files [all files selected]

Figure-15 engages zip files and documentation for installment. When choose zip file windows Aspera as ASP_HSTS_V3.9.1_WIN_ML. Unzipped file and continue to processing.

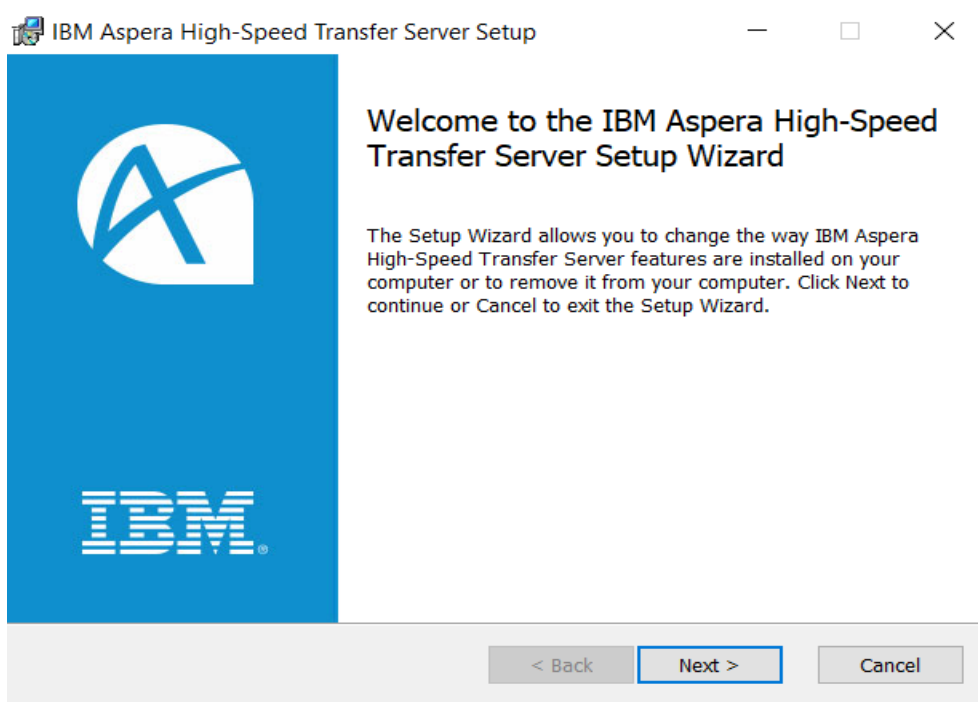


Figure-16.Aspera Transfer Server Setup

Just simple step is clicking next button shows Figure-16. After successfully proceeding you should decide installment rule.

Underline of the Change button in the Figure-17 and give important values.

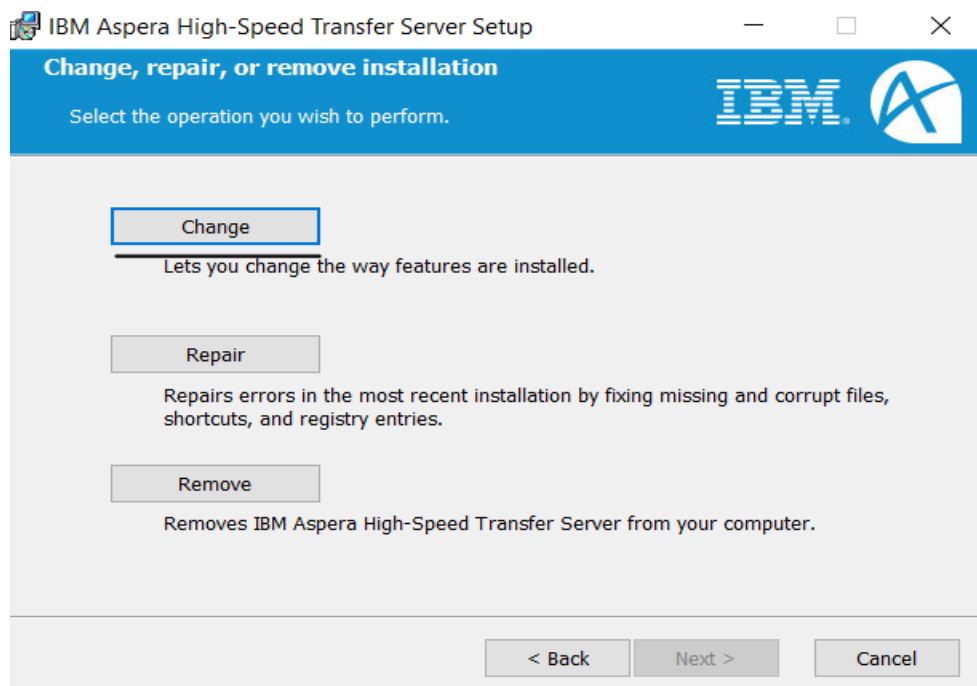


Figure-17. IBM Aspera setup installment rule

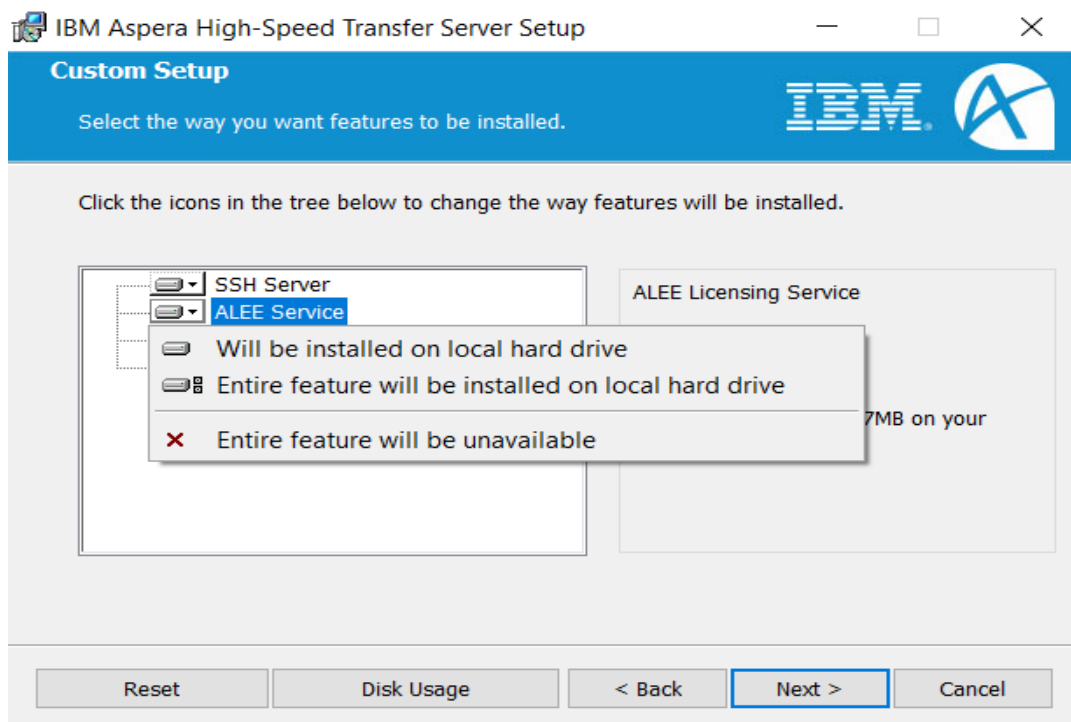


Figure-18. IBM Aspera setup installment rule [activated all services]

After clicking change button Figure-18 represents for installment, which the way features will be installed for using Aspera software. Final step will be two column menu and using different data sending and downloading. Figure-19 shows main page for using Aspera data.

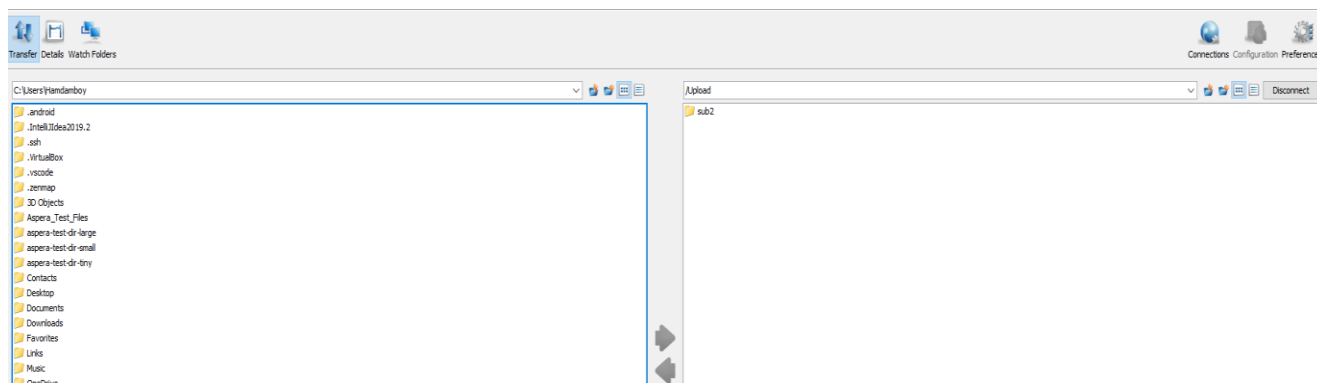


Figure-19.IBM Aspera main page

In the Figure-19, the left side local Server folder and right side demo server file. Mainly, there is not fixed specific computer in the server. Figure-20 shows fixed already Aspera Demo Server underline information (host, user, Authentication, and target directory).

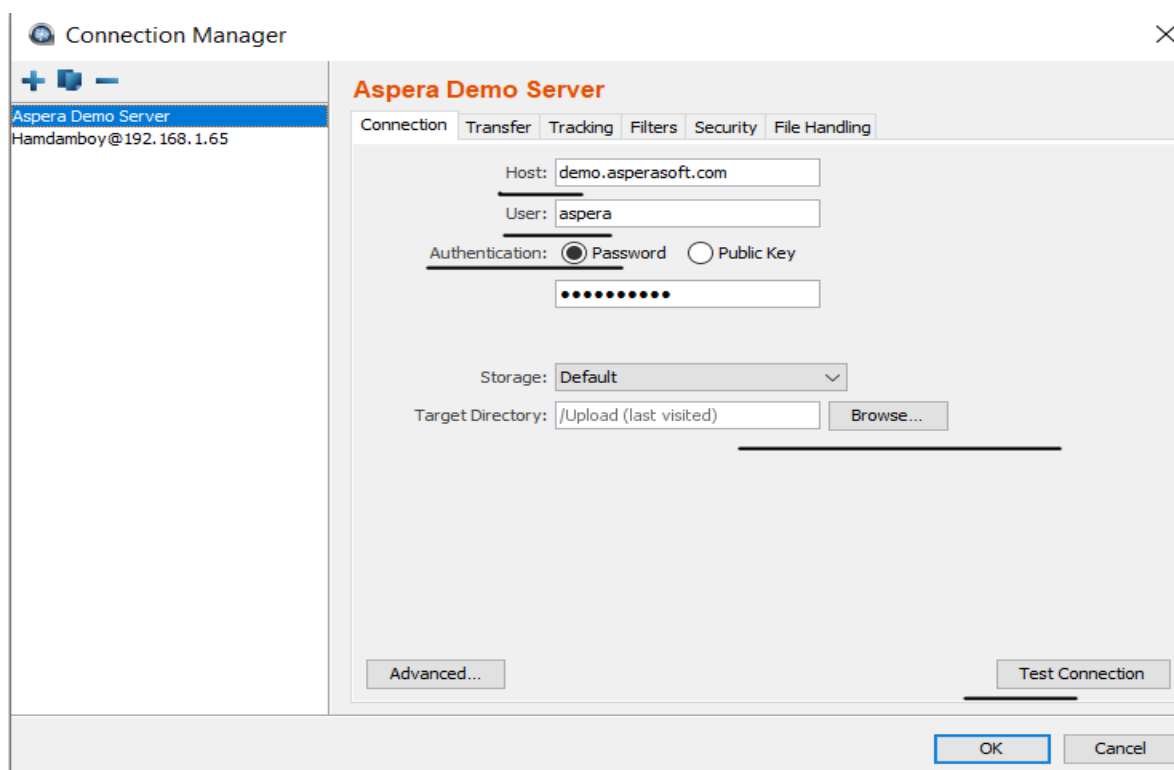


Figure-20.Connection Manager Page

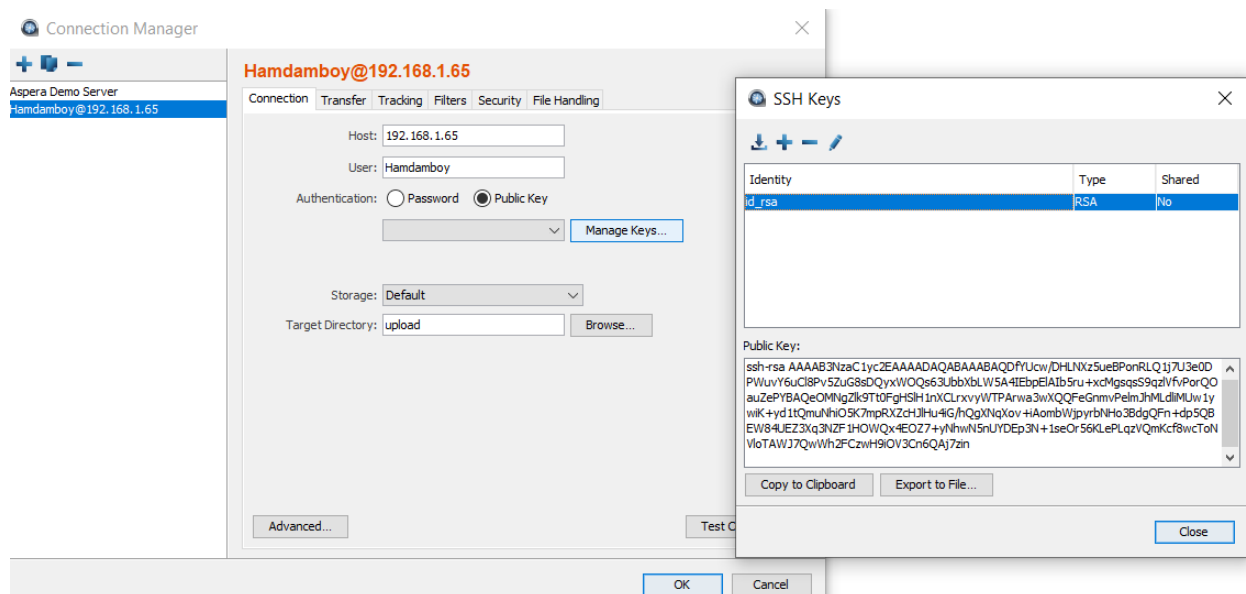


Figure-21.SSH Keys identification

As before mentioned, authentication rule will be two methods: the first is password and second is SSH keys. In addition, SSH key may come from client Aspera computer. Public key sends to server computer. When you feel difficulty using SSH keys, you should simply use password.

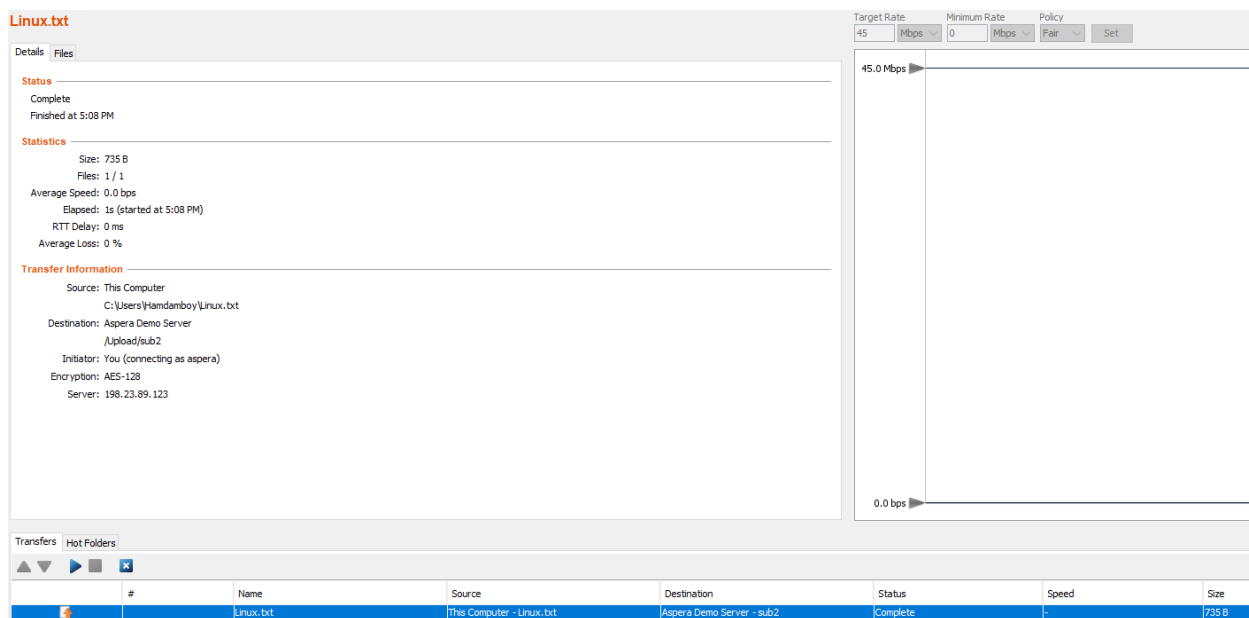


Figure-22.Example: Document file send to demo server and complete process

Figure-22 shows example sending data demo server. The bottom side (Transfers) shown by completed process. When using file size so small and proceeding not shown speed. In case of big data, Aspera represents actual speed and bandwidth using how many throughputs.

When we could not use demo Aspera regularly and add new server information. Especially, Host name which your server computer (administrator name) and users (especially IP address). Next step is authentication using password. Storage directory can use default folder.

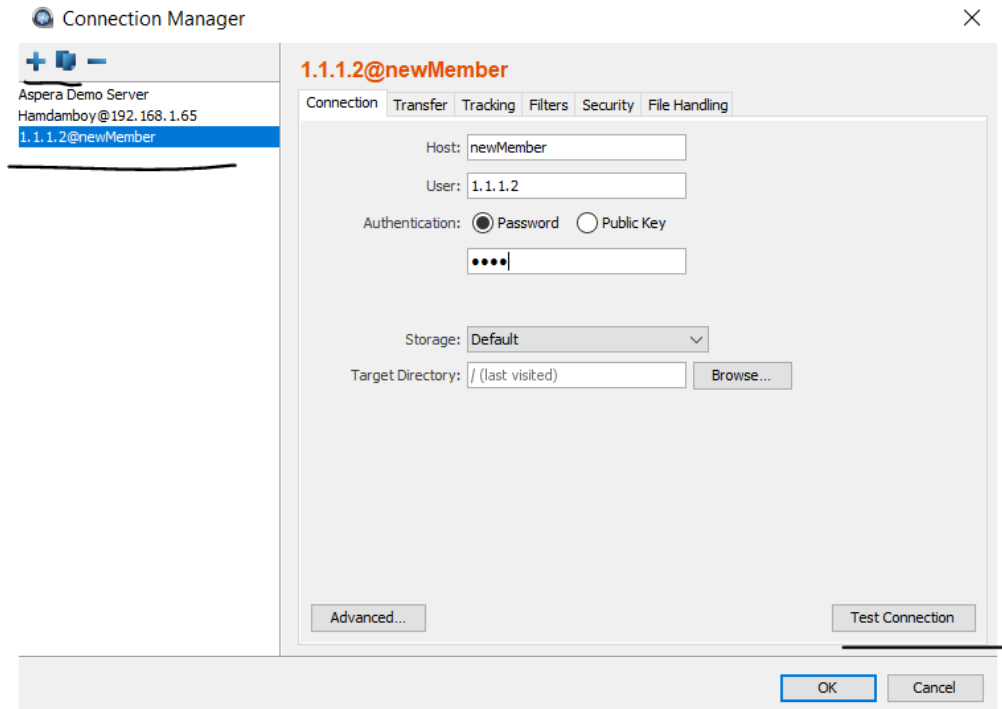


Figure-23. Configure new server information

Essential factor about license Aspera integrated only server side and several client computers. Regarding license integrated several factors which network bandwidth.

2.2 Aspera Console (CLI)

IBM Aspera supported server and client based on common line interface (CLI) and this part of the document provides Aspera cli specification. There is link which integrated download Aspera cli file (<https://downloads.asperasoft.com/en/downloads/62>) in case of download similar history of the Aspera Server. Figure-24 represents Aspera cli and underline software file. There is no any difficult for download. After successful download, you may use several compact files in the (Aspera cli). After installing some of file, Aspera cli (ascp) is nicely supported.



Figure-24.Download software Aspera cli

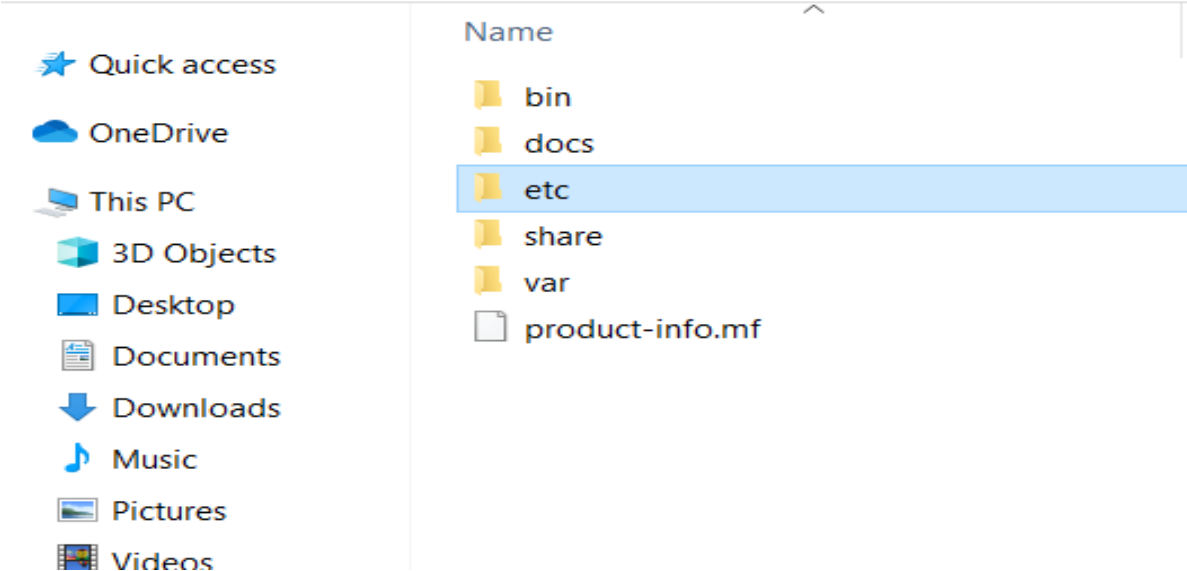
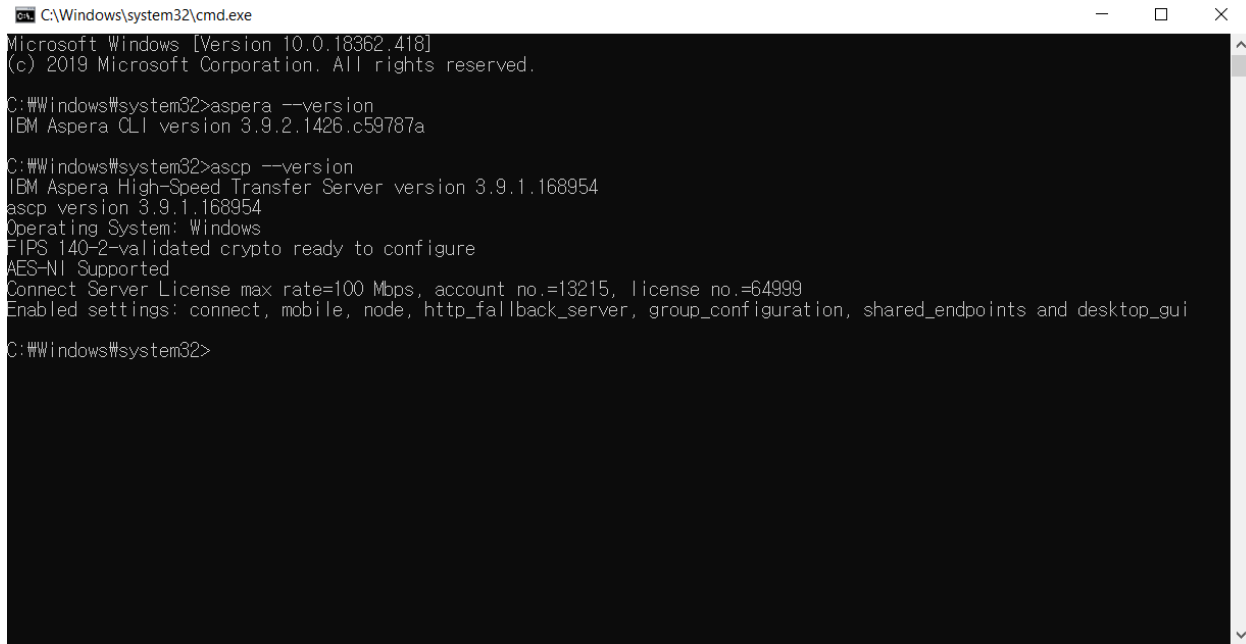


Figure-25.Aspera cli files after download



```

C:\Windows\system32\cmd.exe
Microsoft Windows [Version 10.0.18362.418]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Windows\system32>aspera --version
IBM Aspera CLI version 3.9.2.1426.c59787a

C:\Windows\system32>ascp --version
IBM Aspera High-Speed Transfer Server version 3.9.1.168954
ascp version 3.9.1.168954
Operating System: Windows
FIPS 140-2-validated crypto ready to configure
AES-NI Supported
Connect Server License max rate=100 Mbps, account no.=13215, license no.=64999
Enabled settings: connect, mobile, node, http_fallback_server, group_configuration, shared_endpoints and desktop_gui

C:\Windows\system32>

```

Figure-26. Aspera cli and Aspera version checking [Windows 10]

You check your system `aspera-version` and `ascp --version` if all installation and configuration are correct you may get this notification. Figure-26 shows example in the version control.

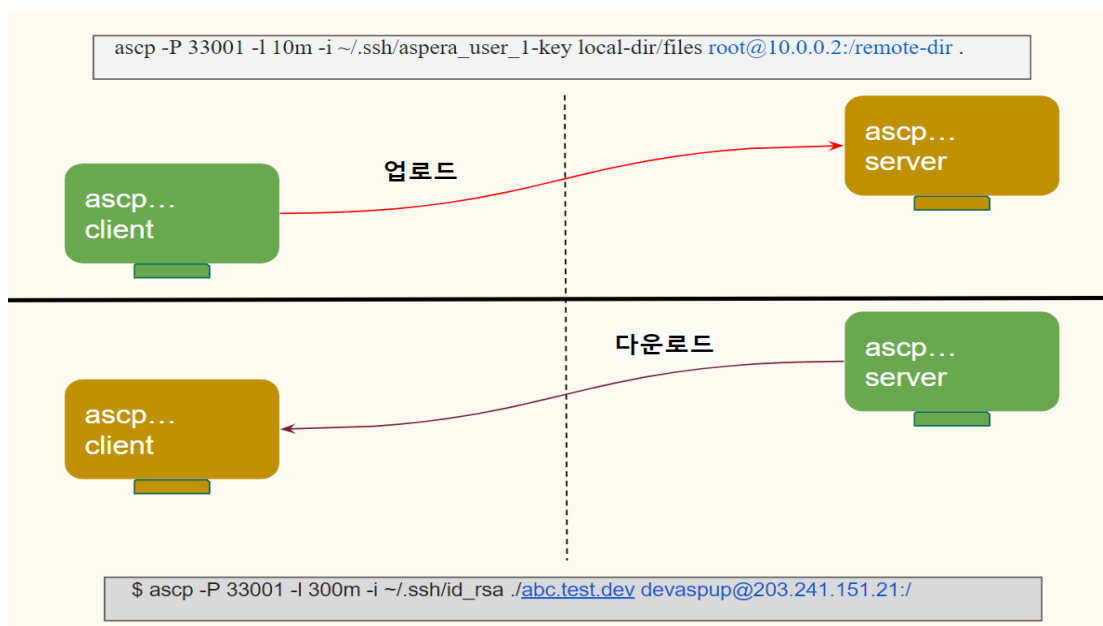


Figure-27. Simple architecture of Aspera cli (downloads and uploads)

Specific requirement is using Aspera Server and other related operation system as before mentioned. Aspera cli is mainly using shell script (or bash) in shown Figure-27. This architecture is using shell script and using ascp command. In additionally information for shell script and Aspera cli, shell execution environment is OS (Redhat, CentOS, Linux or MAC) and shell type (bash). Moreover, ascp execution environment is .ssh key location, and ascp options. Key elements are source ip address (and/or port, speed), source file location, destinationIP address (and/or port, speed) and destination directory (dir) location.

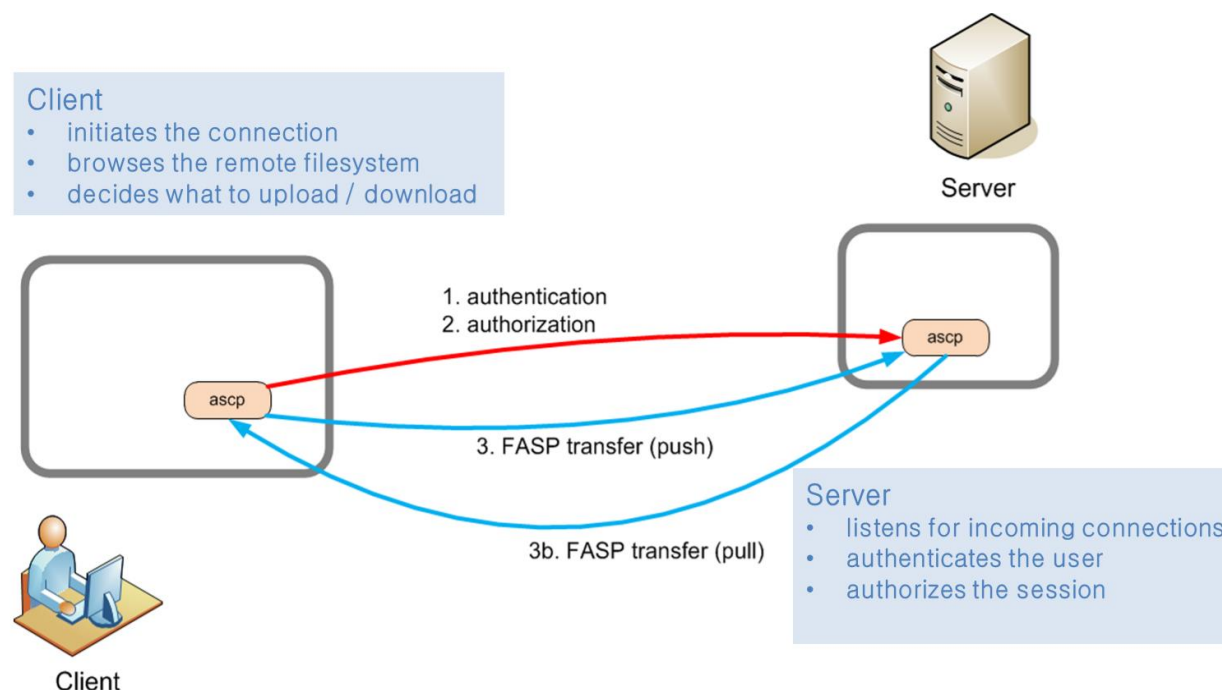


Figure-28.Simple architecture of Aspera cli (three step command)

More detail architectural command is using three functional elements represents by Figure-28. Important and the valuable information has been included this link (<https://downloads.asperasoft.com/>).

Especially, CLI command will do these:(1) external-side executable, (2) either file or dir can send by Aspera CLI command, (3) user-dependent configuration will be pre-defined, (4) save transaction record to Server computer. Figure -29 shown part of shell script request before downloading or uploading data for system information as before mentioned.

```

GNU nano 3.2                                uploadCli.sh

/ bin/bash

#####
#
# @author: Hamdamboy
# #Team: PM. C. C.
# #Company: Sevenbasket & Samsung
# %Date: 2019.09.27-2019.09.30
# #Produt: Aspera CLI (IBM)
# #Version: v1.
# #Contact: k.urunov@sevenbasket.com
#
# CLI Aspera project with related to SmartFTP in Samasung,.
# Especially, files uploading and downloading in the aspera
# JavaAPI (inside SMARTFTP)
#
# Uploading client to server (aspera)
#
#
#
#
#####

# DATE
echo "-----"
echo 'MAKE SURE YOUR STEPS ARE ALL INCLUDED manual (look at: cliaspera.ppt)'
echo "*****"
### OS type
#29
echo -n "Select number (1. Linux 2. MAC 3. Windows) in your system_client : "
read OS

```

Figure-29.Shell script required before use ascp(using resource Samsung project)

Commands when ascp using cli represents Table-3.

Table-3. The aspera program offers the following commands

aoc	Interact with the Aspera on Cloud application.
ats	Interact with the Aspera on Cloud transfer service.
faspex	Interact with the Faspex application.
help	View the help information for a command.
node	Interact with a <i>node</i> transfer server.
shares	Interact with the Shares application.
--version	Print the version number of this program.

3. IBM Aspera High-Speed Transfer Client

IBM Aspera client can manage data downloading or uploading from Aspera Server. Structural architecture is same as Figure-1. As before defined server side of the Aspera, this part of the document can describe client side of the Aspera.

Aspera high-speed transfers begin when an Aspera client authenticates to an Aspera server and requests a transfer. If the client user has authorization, then transfer tools are launched on the client and server and the transfer proceeds.

3.1 Desktop Client(GUI)

Important role of the Aspera is high speed exchanging data. There is several type of Aspera Client product, such as Aspera client, Aspera cargo, etc. Figure-30 represents those all Aspera client elements. This link is attaching <https://downloads.asperasoft.com/en/downloads/2>. Figure-30 represents Aspera client underline component.



Figure-30. Aspera Client downloads process

When the clicks Aspera client button, you may next step in Figure-31. Especially, there is direct download example for Windows 10.

Underline components are activated same time, and then successful downloaded. In case of several times, that should be limited also similar as Aspera server.

DOWNLOADS



Figure-31. Aspera Client downloads process

When process is completed, the Figure-32 Aspera Client files appeared.

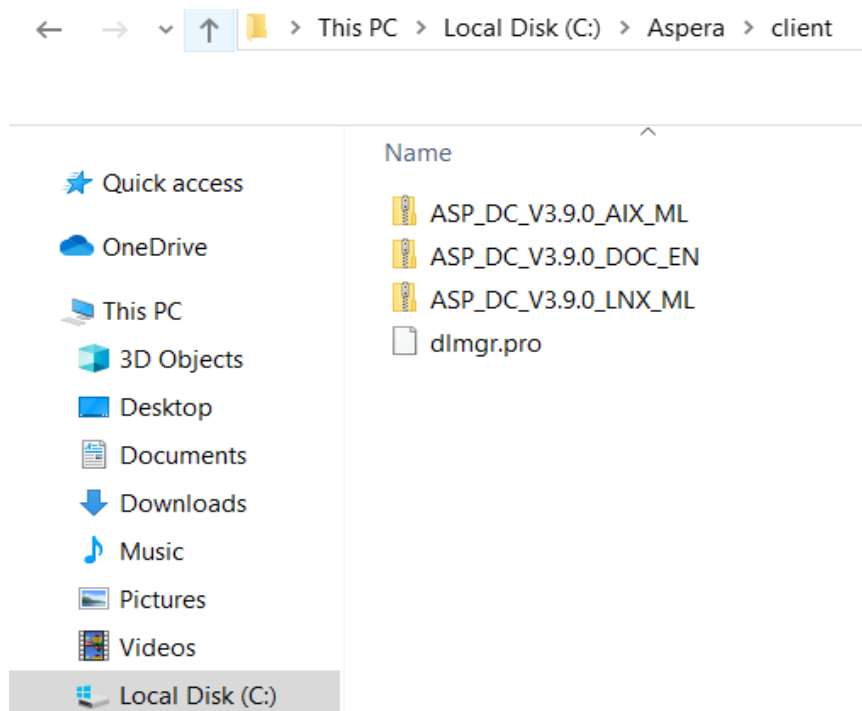



Figure-32. Aspera Client downloads files

By the way, downloading Aspera client product you may use this way as before mentioned on Aspera server. Just click this link https://www.ibm.com/partnerworld/mem/pat/pat_sw_software.html. After clicking this link, you may input login and password value (same steps are finding Aspera server). Figure-33 Aspera client find part, you just type product name (IBM Aspera Client).

Find by search text results

Find by search text criteria

Product name: 

Type all or part of a product name and click Search or click one of the pop-up suggestions. You can select additional filters below.

[Show filter options](#) | [Hide filter options](#)

Find by search text results

eAssemblies (12)	Images (62)
<div>Expand all</div> <div>Collapse All</div> <div>Download Director</div> <div>HTTP</div>	
<p>— Cloud (12 eAssemblies: 31 Images)</p> <ul style="list-style-type: none"> + IBM Aspera Desktop Client V3.7.4 Multiplatform Multilingual eAssembly (CJ5XGML) <ul style="list-style-type: none"> Size: 4 Images (586MB) Date posted: 6 Aug 2019 + IBM Aspera Desktop Client V3.8 Multiplatform Multilingual eAssembly (CJ2Z6ML) <ul style="list-style-type: none"> Size: 2 Images (686.5MB) Date posted: 23 Mar 2018 + IBM Aspera Desktop Client V3.8.0 Multiplatform Multilingual eAssembly (CJ5XFML) <ul style="list-style-type: none"> Size: 4 Images (586MB) Date posted: 6 Aug 2019 + IBM Aspera Desktop Client V3.8.1 Multiplatform Multilingual eAssembly (CJ5XEML) <ul style="list-style-type: none"> Size: 6 Images (690MB) Date posted: 6 Aug 2019 + IBM Aspera Desktop Client V3.9 Multiplatform Multilingual eAssembly (CJ3VIML) <ul style="list-style-type: none"> Size: 2 Images (1,049.5MB) Date posted: 28 Sep 2018 + IBM Aspera Desktop Client V3.9.0 Multiplatform Multilingual eAssembly (CJ5XDML) <ul style="list-style-type: none"> Size: 3 Images (375MB) Date posted: 6 Aug 2019 + IBM Aspera Desktop Client V3.9.1 Multiplatform Multilingual eAssembly (CJ5XCML) <ul style="list-style-type: none"> Size: 5 Images (919MB) Date posted: 6 Aug 2019 + IBM Aspera Embedded Client Add-on V3.7.4 Multiplatform English eAssembly (CJ5XLEN) <ul style="list-style-type: none"> Size: 1 Images (39MB) Date posted: 21 Aug 2019 + IBM Aspera Embedded Client Add-on V3.8.0 Multiplatform English eAssembly (CJ5XKEN) <ul style="list-style-type: none"> Size: 1 Images (38MB) Date posted: 6 Aug 2019 	

Figure-33. Aspera Client Finding part

There are several different components and versions as well.

— **IBM Aspera Desktop Client V3.9.1 Multiplatform Multilingual eAssembly (CJ5XCML)**

Size 5 Images (919MB)
Date posted 6 Aug 2019

☐ Select All (or use check boxes below to select image(s) to download)

☐ IBM Aspera Desktop Client V3.9.1 Documentation Multiplatform English (CC2Z4EN) - [View details](#)

Size 6MB
Date posted 6 Aug 2019
[License agreement](#) [Download estimate](#) → eAssembly

☐ IBM Aspera Desktop Client V3.9.1 Linux Multilingual (CC2Z5ML) - [View details](#)

Size 320MB
Date posted 6 Aug 2019
[License agreement](#) [Download estimate](#) → eAssembly

☐ IBM Aspera Desktop Client V3.9.1 PPC Linux Multilingual (CC2Z6ML) - [View details](#)

Size 314MB
Date posted 6 Aug 2019
[License agreement](#) [Download estimate](#) → eAssembly

☐ IBM Aspera Desktop Client V3.9.1 Windows Multilingual (CC2Z7ML) - [View details](#)

Size 144MB
Date posted 6 Aug 2019
[License agreement](#) [Download estimate](#) → eAssembly

☐ IBM Aspera Desktop Client V3.9.1 Mac OS Multilingual (CC2Z8ML) - [View details](#)

Size 135MB
Date posted 6 Aug 2019
[License agreement](#) [Download estimate](#) → eAssembly

Figure-34. Aspera Desktop Client selected

☒ IBM Aspera Desktop Client V3.9.1 Windows Multilingual (CC2Z7ML) - [View details](#)

Size 144MB
Date posted 6 Aug 2019
[License agreement](#) [Download estimate](#) → eAssembly

☐ IBM Aspera Desktop Client V3.9.1 Mac OS Multilingual (CC2Z8ML) - [View details](#)

Size 135MB
Date posted 6 Aug 2019
[License agreement](#) [Download estimate](#) → eAssembly

+ IBM Aspera Embedded Client Add-on V3.7.4 Multiplatform English eAssembly (CJ5XLEN)

Size 1 Images (39MB)
Date posted 21 Aug 2019

+ IBM Aspera Embedded Client Add-on V3.8.0 Multiplatform English eAssembly (CJ5XKEN)

Size 1 Images (38MB)
Date posted 6 Aug 2019

+ IBM Aspera Embedded Client Add-on V3.8.1 Multiplatform English eAssembly (CJ5XJEN)

Size 1 Images (97MB)
Date posted 6 Aug 2019

+ IBM Aspera Embedded Client Add-on V3.9.0 Multiplatform English eAssembly (CJ5XIEN)

Size 1 Images (24MB)
Date posted 21 Aug 2019

+ IBM Aspera Embedded Client Add-on V3.9.1 Multiplatform English eAssembly (CJ5XHEN)

Size 1 Images (40MB)
Date posted 6 Aug 2019

By clicking the "I agree" button, you agree that (1) you have had the opportunity to read and understand the above license agreement(s) and multi-product package terms, if any, and (2) terms of the license agreement(s) govern this transaction. If you do not agree with the terms of the agreement(s), you will be unable to download the software.

☒ I agree ☐ I do not agree

[Download now](#)

Figure-35. Aspera Desktop Client selected and agreement (click download)

In addition, Aspera client is not required license.

3.1 Aspera Console (CLI)

Aspera Console (CLI) is using common line the same as Aspera server. Figure-36 Aspera cli download components which underlined.

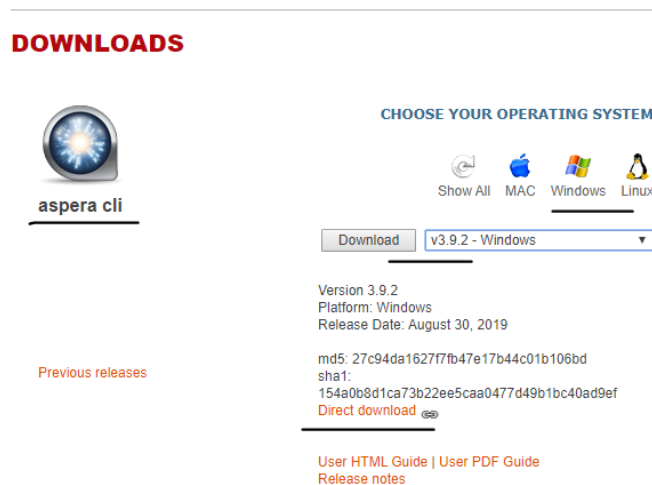


Figure-36. Aspera CLI download

The Aspera program is a client application that allows you to interact with Aspera on Cloud, Aspera Faspex, and Aspera Shares transfer servers from the command line. The client provides the same data-transfer functionality as Aspera on Cloud, Faspex and Shares, in convenient commands that allow you to automate operations.

For example, with the Aspera client, you can automate the following:

- Listing the contents of your Aspera on Cloud workspace, Faspex inbox, or Shares share.
- Uploading to and downloading from your Shares server.
- Sending Faspex packages using files from your local directories.
- Sending files from remote storage sources, such as clusters or S3.
- Downloading packages that are sent to you, to a local storage location.

Figure-37 represents downloaded file. Especially, no major differences from server Aspera Cli. All steps are same. Just integrate licence is important.

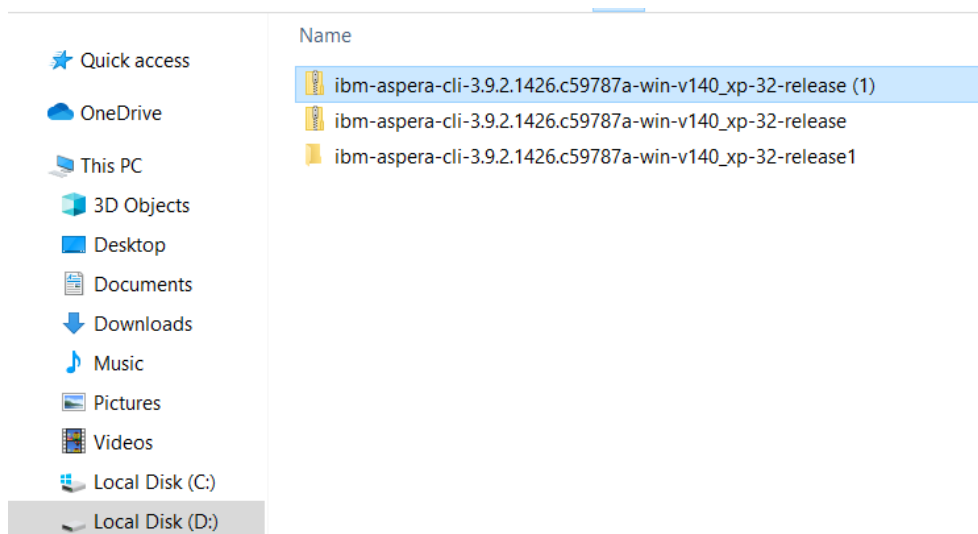
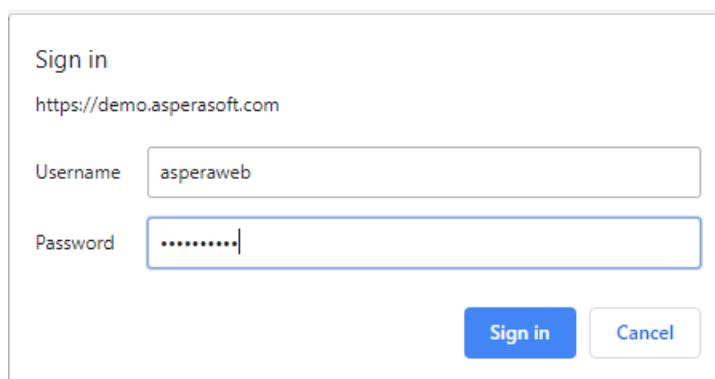


Figure-37. Aspera CLI download file (same as before mention)

Certificates: All **Aspera** client operations perform certificate validation. The included **certs** directory (or your own certificate authority keys) must be located either in the parent directory of the **Aspera** executable, or in a location that you specify through the **-b** command-line argument. If a transfer server does not have a valid certificate to allow the operation, you must specify the **--insecure** option.

4. IBM Aspera Web

IBM Aspera provides web module for using transfer data. This link can support demo web version for testing <https://demo.asperasoft.com/aspera/user/>. After that you should type login and password part Username (asperaweb) and Password(demoaspera) in shown Figure-38.



Sign in

<https://demo.asperasoft.com>

Username

Password

Figure-38. Web Aspera authorization part (Demo)

When the successfully join the web site you might use demo web Aspera. But problem is not supported plugin for using Aspera in your browser. In that case, we should download plugin and configure that. Figure-39 downloaded Aspera plugin and connects files in your browser supported ease.

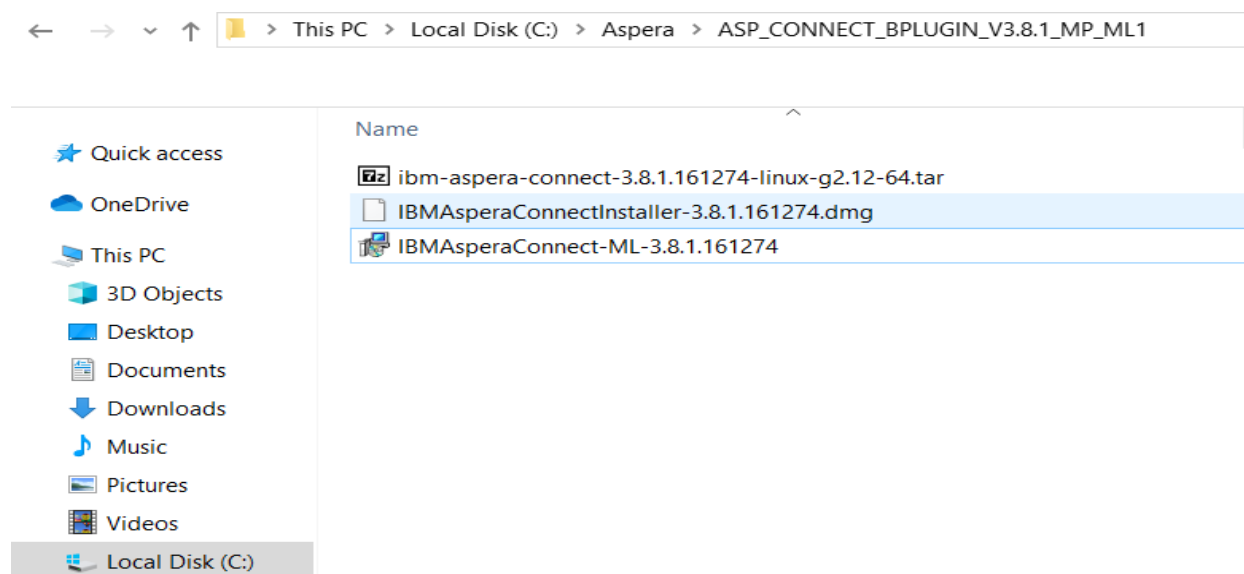


Figure-39. Aspera downloaded connect file

Simple steps are doing install plugin and connect server in your computer by shown Figure-40.

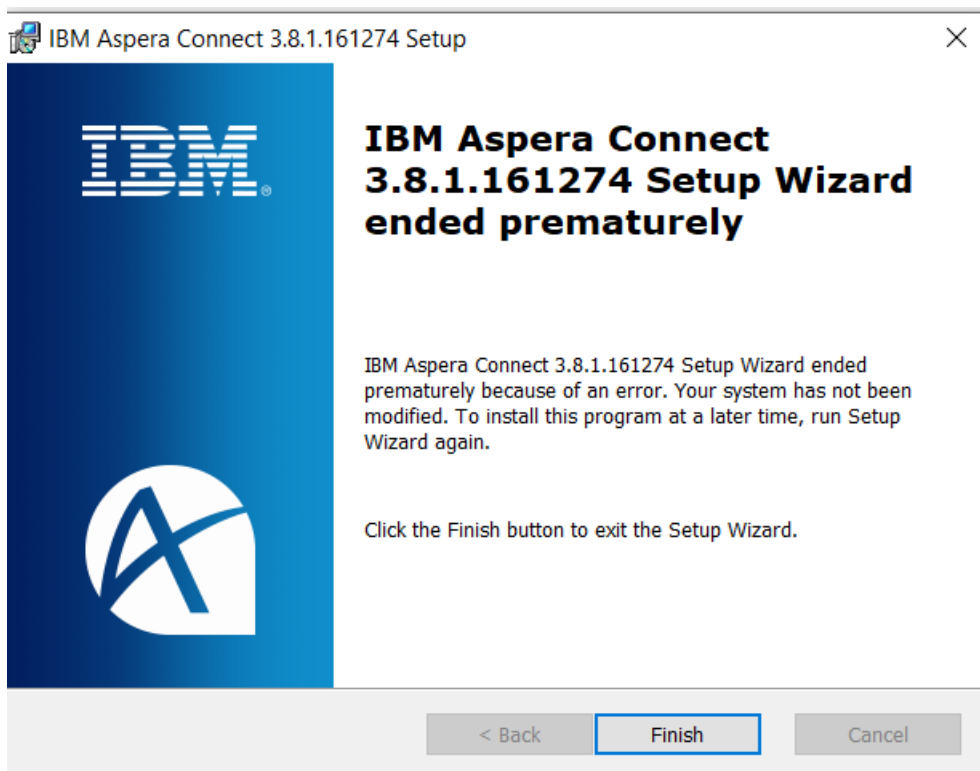


Figure-40.IBM Aspera Connect

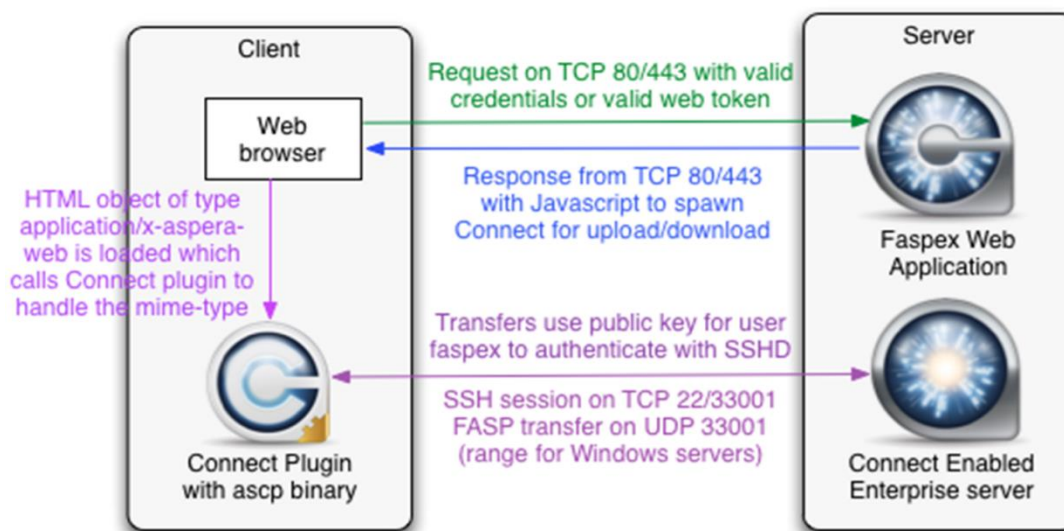


Figure-41.IBM AsperaWeb Client to Server architecture

<https://demo.asperasoft.com/aspera/user/>

ID :asperaweb

PW: demoaspera

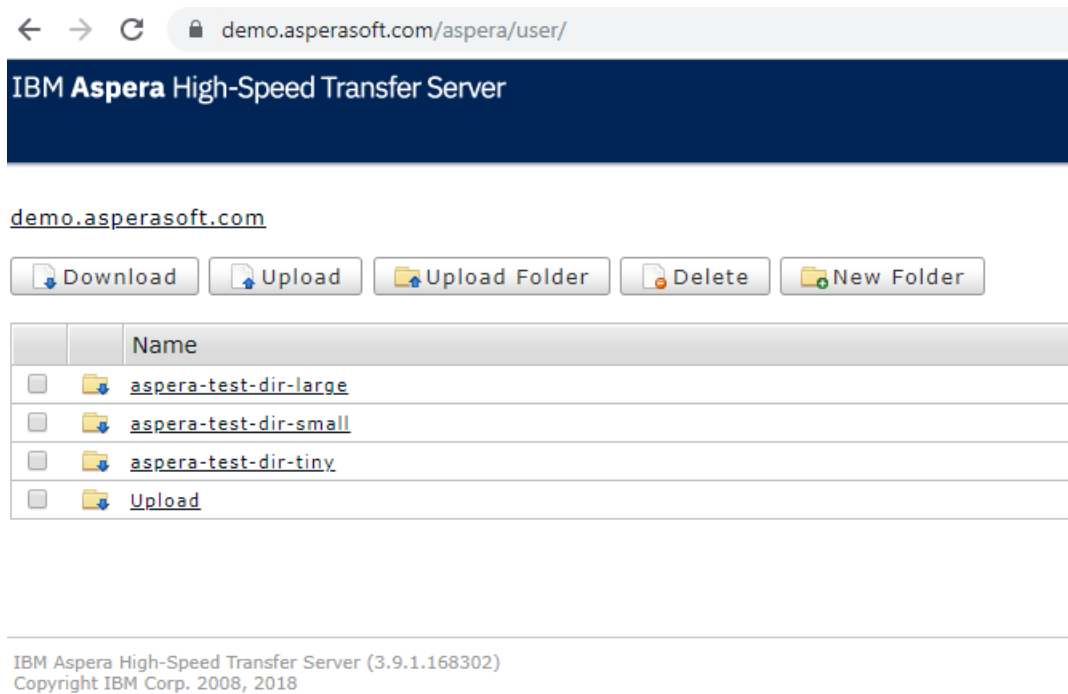


Figure-42. IBM Aspera Web environment

Aspera web environment represents Figure-42.

