EXABYTER

Product brochure

Most advanced file transfer solution for enterprise web systems

INNORIX

Limitless technology,
Driven by innovation

EXABYTER

Product brochure

Contents

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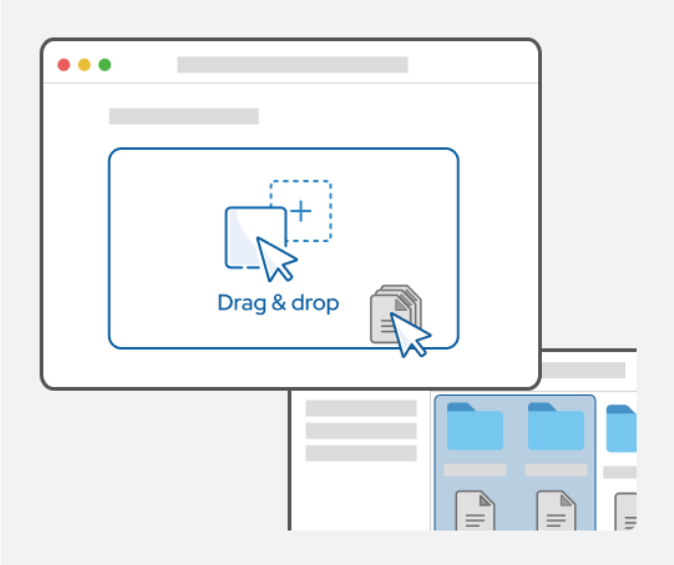
Transfer UI

Attach files & browse

Let’s forget about the old restrictions. Attach and explore any files and folders you need.

Multiple files and folder structures do not need to be compressed to transfer intact. You can drag and drop any files or folders you want to transfer into Exabyter and upload them to the servers.

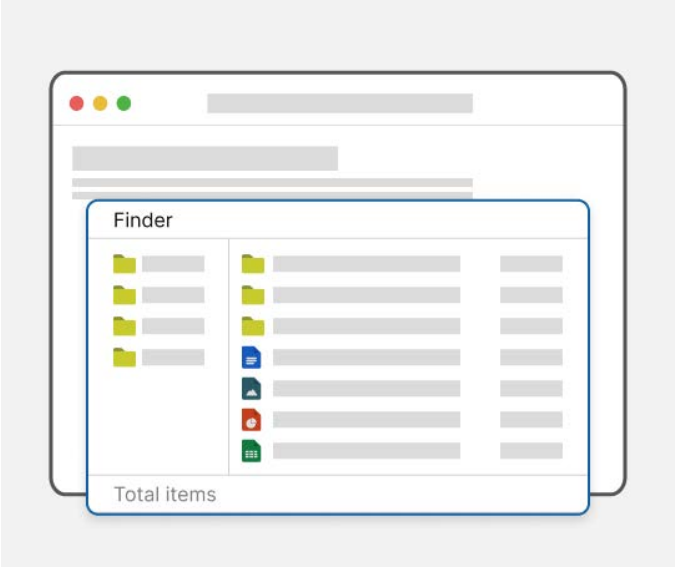
You can browse files and folders, and download only the items you want or download the entire items as they are.



Various file boxes

Various file boxes are prepared. Just choose the file box you want and use it right away.

File boxes can be optimized and used according to your purpose, from document files to media files such as images and videos, as well as large and mass folder structures.



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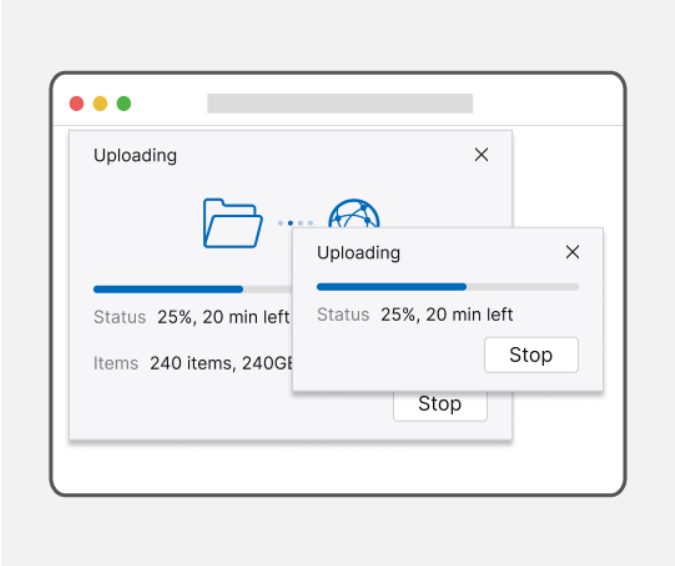
Transfer UI

File transfer status

Make the file transfer window simpler for small files, and more details for large files.

Depending on the file sizes and transfer time, an appropriate Exabyter transfer window will be automatically displayed. Developers can designate it to suit the purpose of the service, or users can select a file transfer window they want.

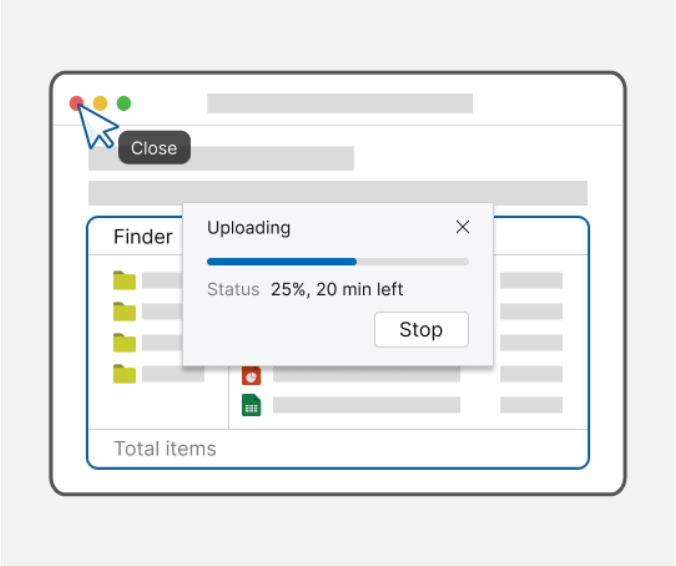


Independent file transfer

No need to wait for the transfer to complete. Leave the transfer to Exabyter and proceed to the next task.

Usually file download is handled as an independent process, allowing web pages to move freely. However, upload is different that you cannot navigate from one web page to another until the upload is complete.

Exabyter users can move to the web page and continue uploading or downloading the next files after clicking the upload button. Even if you close your web browser, the transfers of your uploads and downloads will continue.



Transfer UI

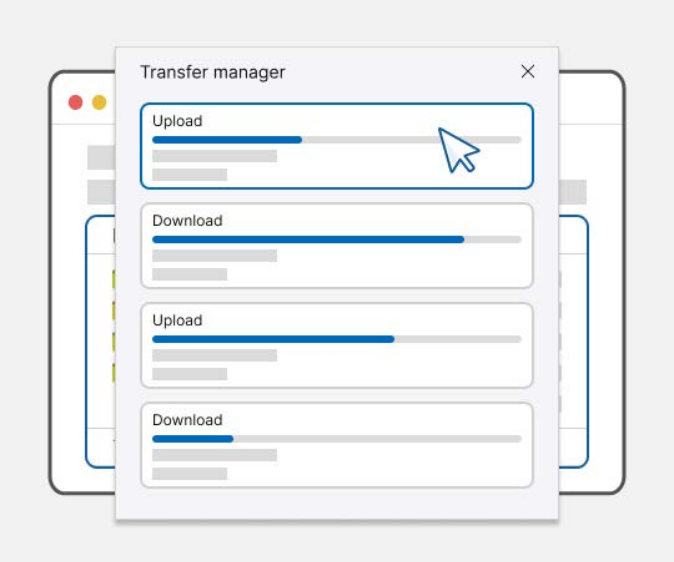
Manage file transfers

You can manage the file transfer status even after starting upload and download.

While uploading and downloading are in progress, you can pause the file transfers whenever you want and resume them when needed.

If you have multiple transfers, you can prioritize them for each transfer, and you can schedule stopped transfers to start automatically at a specified date and time. Exabyter provides the best convenience to users who repeatedly transfer large files in the web systems.

* Depending on the maximum value set by the operator for the restartable time of upload and download, the default is 7 days, and it can be set to unlimited.



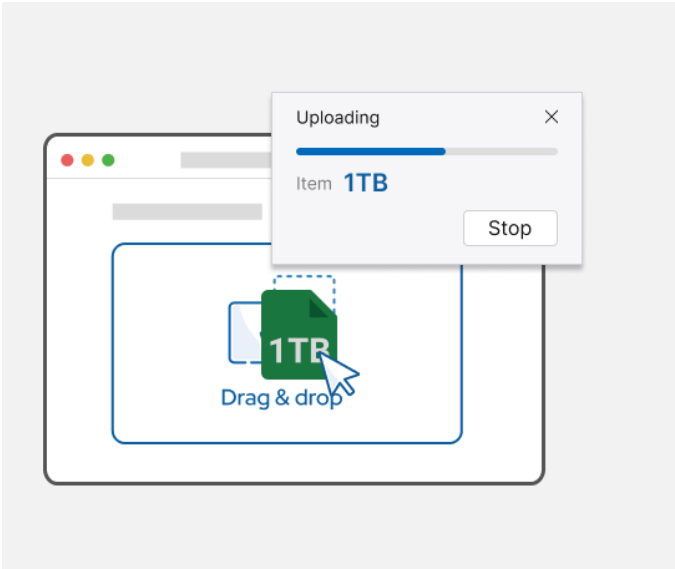
Transfer features

Transfer large files over 1TB

Yes, no file size limit anymore. Upload and download single file over 1TB at once.

The file sizes continue to increase, but standard web business systems and web browsers cannot perfectly support large files. There are always size limits.

Exabyter is designed to transfer large files and already being used by a lot of enterprises to transfer large files. From now on, upload and download large files without limiting the sizes.

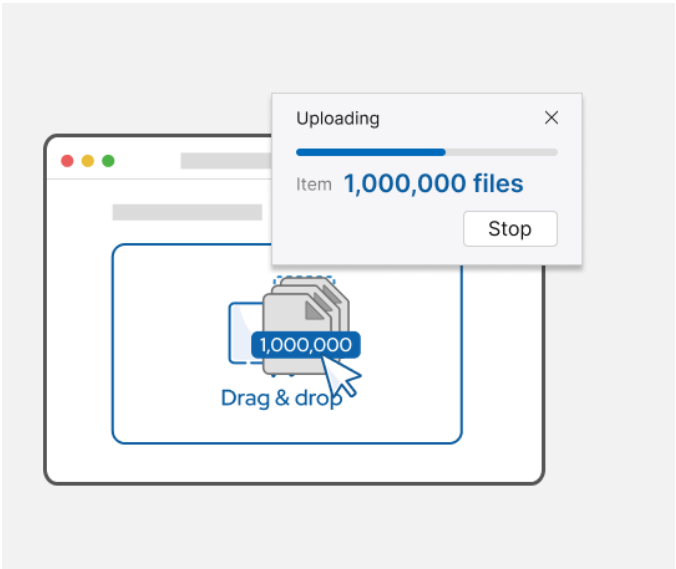


Transfer over a million large files

If you really need to transfer a lot of files at once, Exabyter is your only solution.

General applications cannot perfectly process 1,000 or even 100 files at once. If you need to transfer 1,000,000 files, it is a very difficult mission.

However, the mission is far too simple for Exabyter, which is specifically designed for the large file transfers. Exabyter is the only file transfer solution in the industry that can upload and download over a million files in the fastest and most complete way without losing a single file.



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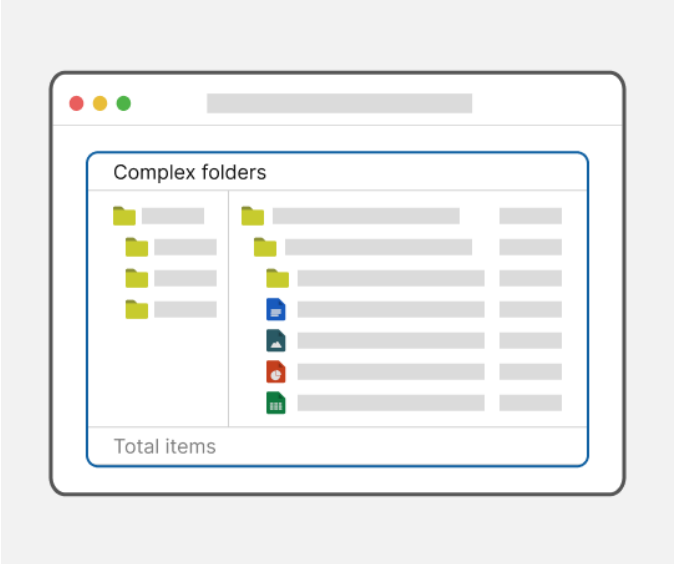
Transfer features

Transfer complex structure folders

Even complex structures including empty folders are no problem. Transfer entire folders and files.

Although many systems create and recognize files by folders, compression is no longer required to transfer the folder structure intact, including empty folders.

You can upload any folders and files you want to transfer to the server as they are, and download they as are.



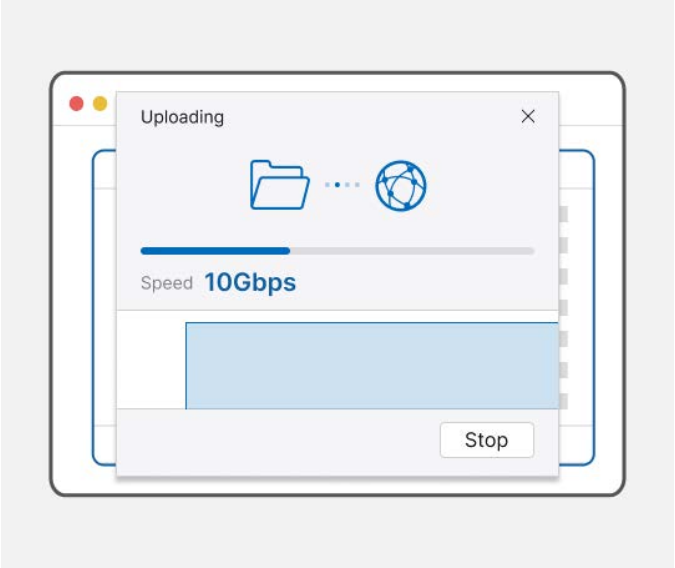
10Gbps high-speed transfers

If you want, Exabyter fully utilizes all available bandwidth for the fastest file transfers.

If you already have enough 10Gbps infrastructure to transfer large files on an urgency, but can't fully utilize that bandwidth, try Exabyte right away.

Exabyter can use all available bandwidth to enable file transfers at maximum speeds, both in well-infrastructured offices and in unstable low-bandwidth environments over long distances.

* Service operators can limit the maximum file transfer speeds to some user groups to prevent some users from occupying all bandwidth.



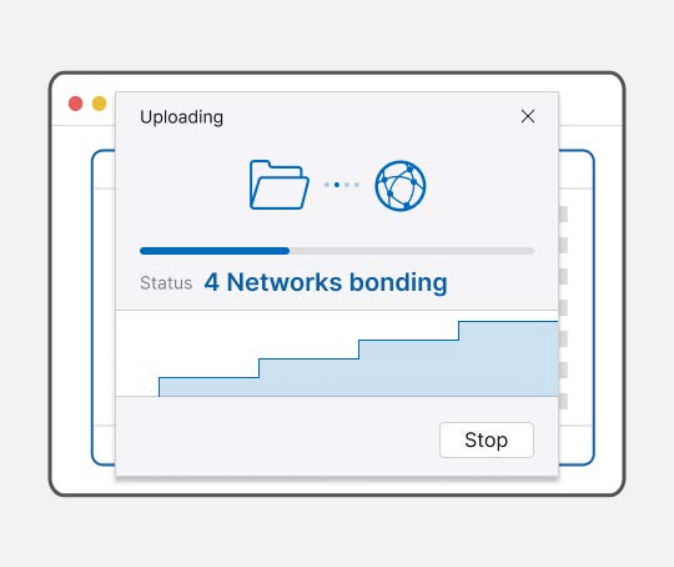
Transfer features

Multi-network bonding

Overcome the slow physical network speed limits to transfer files much faster.

If the speed of one network is unsatisfactory when transferring files over long distances, you can add another physical network to Exabyter for faster high-speed transfers.

Up to 4 different networks can be bonded to Exabyter to dramatically improve file upload and download speeds over long distances.



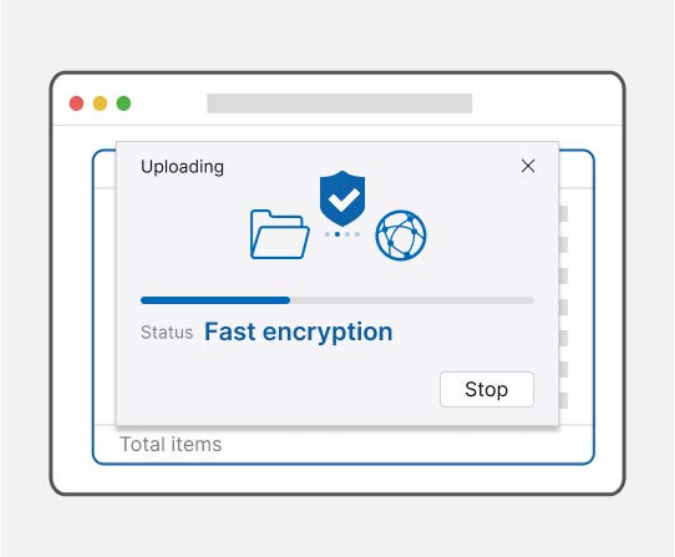
Fastest En/Decryption secure transfers

Why should secure transfer of large files be slower? High-speed secure transfers of large files are possible.

Encryption/decryption time is required in proportion to the file size and numbers to encrypt the files before transferring and decrypt them after transferring.

This processing time affects the overall transfer speeds and drastically slows down large file transfers.

Exabyter handles advanced encryption/decryption at high speeds to realize secure transfers without any speed delay for large and mass files.



Auto complete

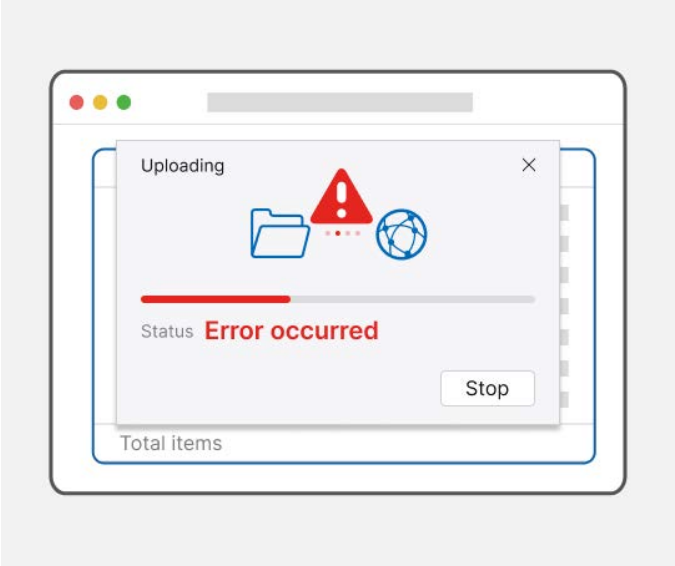
Respond automatically to any situations

Exabyter automatically responds to any situations during file transfers on your behalf.

What we want is to just select files, click a transfer button, and the file transfer will be completed without any problems and as quickly as possible.

However, in reality, various problems may occur during transferring files, and users may have to resume transfers each time or even restart transfers from the beginning.

Now, you just have to click the transfer button on Exabyter. After that, Exabyter automatically responds and completes the file transfers by itself.

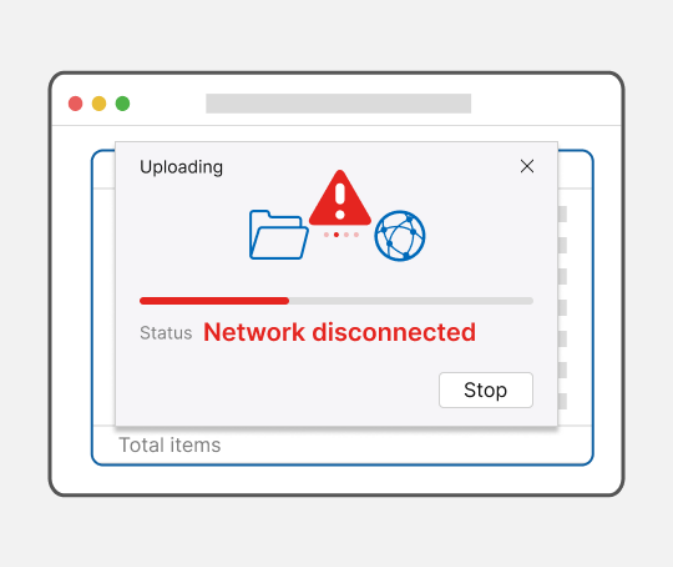


Stable transfers in unstable environments

Even in unstable networks that are disconnected repeatedly, we still have to complete the file transfers.

Even if the network at the site where you transfer files is unstable, you still have to upload and download files to the web systems.

Exabyter completes all the file transfers by itself without any user interventions even in very unstable situations where the networks are disconnected and connected repeatedly during file transfers.



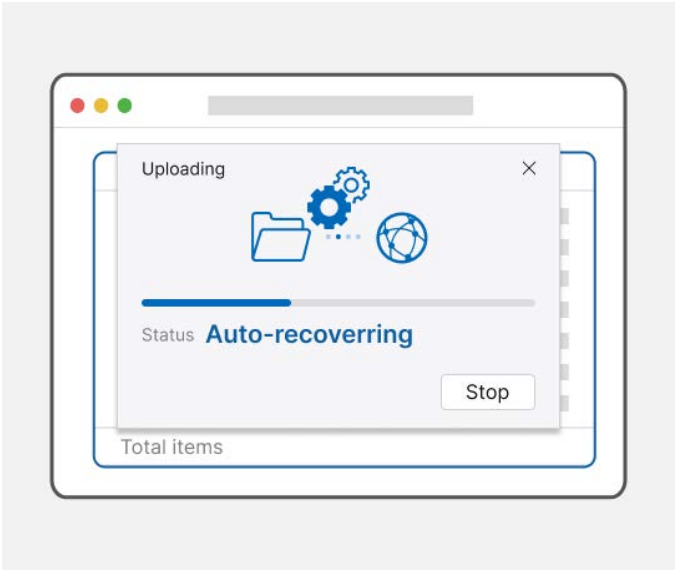
Auto complete

Integrity verification and automatic recovery

Not a single file is lost, and no tampering of a single block of the file is allowed.

Even if your file transfers are completed in some error situations, if a part of the file is tampered with, you should transfer the file again from the beginning. However, the retransfer does not guarantee a perfect transfer.

Exabyter monitors everything from naturally occurring tampering to malicious tampering in real time during file transfers, and retransmits only the block as soon as the block is found to ensure perfect file transfers.



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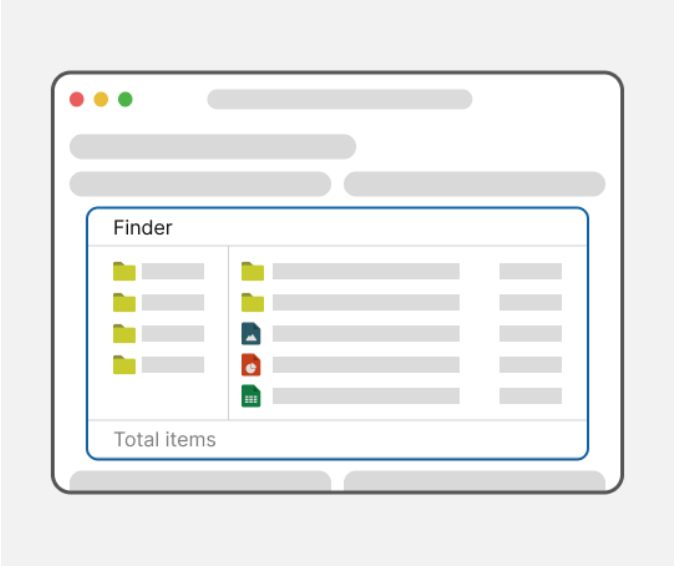
Technical structure

Embed in web pages

Yes, you can easily embed Exabyter into your web pages. Get the trial version of Exabyter now.

All you have to do is insert one of the file transfer UI codes prepared in Exabyter into your web pages.

You can choose file transfer UI suitable for the purpose of uploading and downloading, and further optimize the detailed UI to suit the purpose of file transfers.

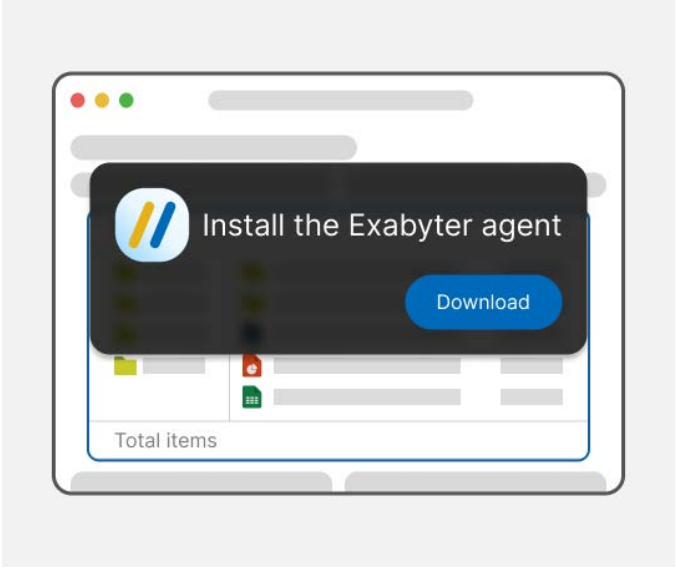


Exabyter agent

Of course, standard web technology alone is not enough. So, we prepared an Exabyter agent.

For the first time, users need to install the Exabyter agent. This agent provides powerful file transfer features and high performance that standard web technologies cannot provide.

Exabyter agent supports Windows, macOS, and Linux, and standard technology file transfer is provided through HTML5 on mobile and tablet.



Technical structure

Various developer APIs

Developers can develop optimized UI and file transfer logic with various Exabyter developer APIs.

Various information about all the files to be transferred can be provided through the developer API for various attachments and browses, from loading the file box to attaching, selecting, and removing files.

Meta data can be entered and updated in the database of the web servers when files are transferred through various developer APIs such as transfer start, error, and completion.

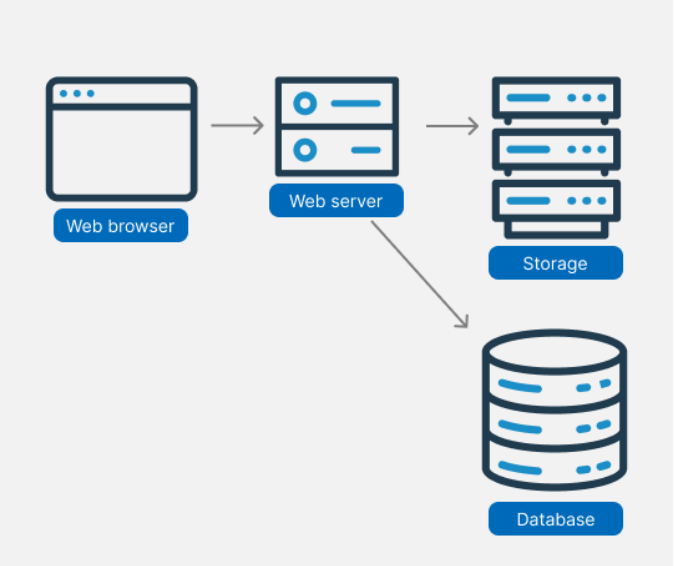
System structure

Using file systems

The file uploaded by users will be stored in the specified path through the web servers, and the meta data entered by the users are transferred to the database.

Through the virtual file and folder paths, users can browse the folders structure and download the files and folders.

* The users can always access files only through the virtual path provided through the web servers while sign in to the web systems and authenticated. The actual file and folder paths in the servers are not provided to users.



Technical structure

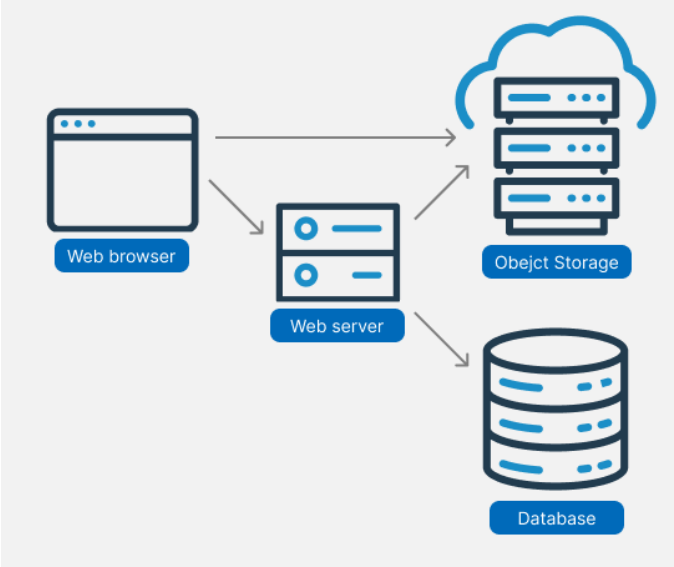
System structure

Using object storage

Files uploaded will be directly uploaded and stored in object storage, and metadata entered by users is transferred to the database.

Through the virtual file and folder paths in the object storage, users can browse folders and download the files or folders.

* Users always sign in to the web systems and access files and folders only through one-time authentication information that allows access to object storage through a separate authentication server while being authenticated. Credentials for developer access to object storage are not provided to users.



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Monitor & Track

Transfer monitor for all users

Now, in the web systems, you can monitor all file transfer statuses of all users in real time.

As an integrated file transfer monitoring system, operators can monitor real-time transfer speeds, statuses, error conditions, and the number of users and files as well as the throughput of all servers and regions.

INNORIX Monitor does not display obscure terms as difficult as system log level, that only some system engineers can understand. Monitor displays only meaningful information such as 1) The number of users 2) The number of current errors, cancelations, completions, and failures 3) Each server/region's transfer statuses, etc.

Manage all transfers of all users

If some users repeatedly attempt to violate the policy, the operator can terminate the transfer remotely.

Operator can monitor the file transfer status in real time on a user-by-user basis, and can check various information such as the file transfer speeds, the errors, the start and transferring time.

If necessary, operators can pause or resume the transfer of some specific users, change the priority or cancel the transfer itself.

Monitor & Track

Record/track of all transfers

Records all file transfer history and paths so that the operators can always track any transfer history.

Operators can easily track the transfer history of specific users and devices and can use full-range monitoring to track transfer history by device or user locations, as well as specific file transfer paths. Exabyter does not disturb the Operators when tracking with unnecessary and complicated interactions.

Operators can quickly track file transfer history and search for related information by user, filename, device, server, etc.

Large file transfers

Large and mass file transfers

Today, work environments of companies are integrated with web-based systems and the sizes of files that needed to be transferred have been continuously increasing. However, files are not being exchanged when needed because most companies still use previous temporary methods to transfer files.

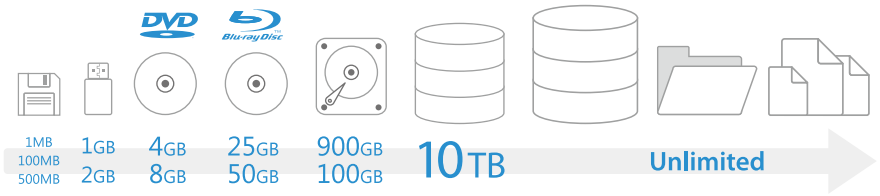
Exabyter automatically responds to and processes various file transfer issues that disturb file exchanges, making it possible to clearly eliminate repetitive efforts and the time wasted that users put into the transfer of files. Since Exabyter also provides the highest convenience for business file transfers, the productivity of the whole organization will be dramatically improved.

Exabyter does not require any change from users when improving file transfer issues. If users choose any files (document and large files, folders, etc.) in the existing web-based business system, Exabyter will transfer anything to anywhere in the fastest and most convenient way without any limitations.

Large file transfers

In a web-based business environment, standard file transfer methods are unsuitable for transferring large files. As a result, generally the size of file upload/download has to be small according to the server's environment. Even if the file size limit is unlocked, large files cannot be transferred normally.

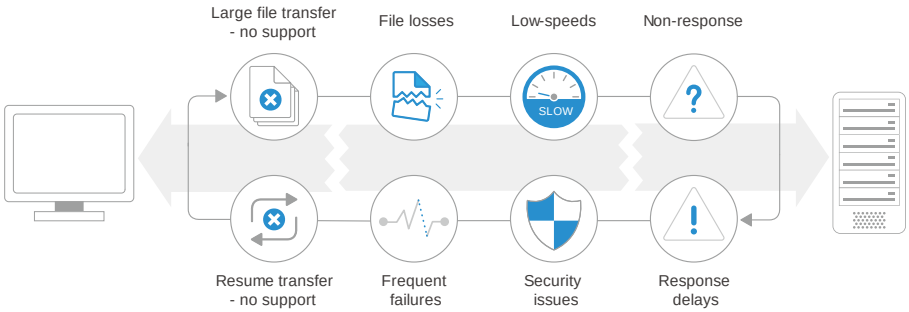
Exabyter enables large files to be transferred without changing any settings on the server-side in existing environments. With Exabyter, users can transfer files of all sizes without any limitations from small size Kbyte files to large-size 100GByte files as well as very large-size Tbyte files that are more than 10Tbyte in a single process.



Chronic transfer problems

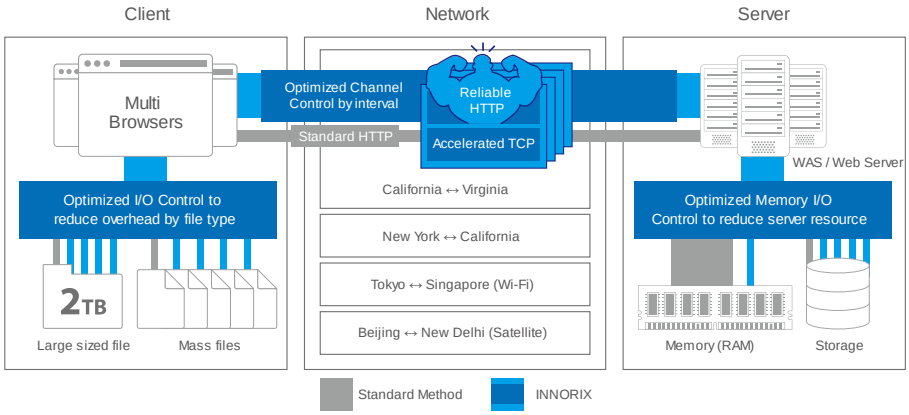
Though companies and organizations have high-performance servers, high-capacity storage, and network equipment, it is still not easy to transfer large files. Because of this, users have come to think of transfer failure as routine because other products have yet to offer a solution to these issues.

In the live operating environment, although large file transfers are completed, files are often lost or corrupted in the process, changing the size of the transferred file. When this occurs to mass files, it is a very serious problem. Most commonly, these frequent transfer failures occur due to unspecified reasons. The current transfer methods do not and cannot handle these errors. Additionally, the current transfer methods contribute to these problems and exacerbate the enormous loss of files mid transfer.

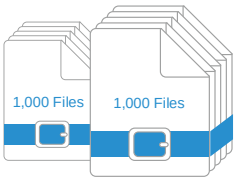


Overcome various transfer limits

Exabyter changed HTTPS which is being used in all web-based business systems to RHTTP (reliable HTTP), which is a proprietary technology that INNORIX developed so that Exabyter can transfer files in any network environment without any security threats. Exabyter is the only way in the industry to transfer large and mass files in all OSes such as Windows, Mac, Linux, UNIX, and embedded OS, etc.



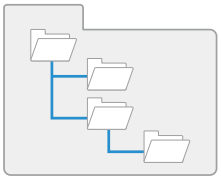
Mass file transfers



Generally, copying and processing mass files requires a lot more time than processing a single file of the same size. Most software restricts the maximum number of processes to maintain stability.

Exabyter has special UI architecture and I/O optimization technology, so if users choose mass files, Exabyter promptly displays all information and transfers mass files at high-speed without any delay. It is the most convenient way, to meet the needs of any type of industry for mass file transfers.

Folder transfers - structure and files



Generally, users are familiar with distinguishing and managing files by folders. Some software products also create and manage files by folders. However, before compressing, users cannot transfer folders in familiar systems like web systems. Exabyter supports folder transfers that are user-friendly. When users select folders, the folder structure and all files as well as the empty folders can be transferred intact.

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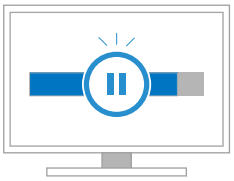
Resume upload/download



In rare cases, resuming a download is supported within the download function according to the kind of browsers/web-servers or situations, but this is not always guaranteed. If transfers fail, users always have to transfer files from scratch. So far, these inconveniences have not been improved.

However, Exabyter always can resume uploading/downloading files independently regardless of all conditions including the kind of server and environment. If users want, they can resume uploading and downloading from the point of interruption at any time, even in situations where the user cancels the file transfer, closes all browsers, logs out of the web business system, or even turns the PC off and turns it back on again.

Fast transfers

High-speed file transfers

The file transfer speeds of other methods are limited due to the geographical distance between the origin and destination, delays in the response of the standard protocol, and inefficient data exchange. Although companies have high-performance IT resources, due to non-hardware limitations, they cannot fully utilize these resources, such as high-performance mass storage/servers, high-capacity network equipment, and high-bandwidth networks.

Featuring Exabyter software-based transfer technology, these limitations can be easily overcome without network bandwidth expansion. This innovative technology can transfer all kinds of files at high-speed and also maximize the utilization efficiency of the company's IT resources.

Furthermore, additional features such as optimizing packets, intelligent compression, and transferring mass files at high-speed, along with various file transfer features, enable Exabyter to transfer files more quickly, even in unexpected environments that have not been predetermined.

High-speed file transfers

In existing standard transfer methods, UDP transfer loses a lot of data while transferring. Therefore, it unnecessarily uses too much bandwidth and requires opening many ports, resulting in threatened security. TCP transfer is very slow due to inefficient communication methods. Exabyter drastically improves these TCP low-speed problems and provides high-speed file transfer rates that are up to 30 times faster even in situations like low bandwidth, high latency, high loss, and other hostile environments.

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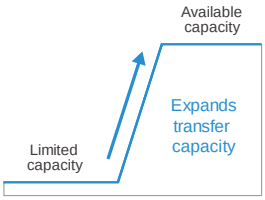
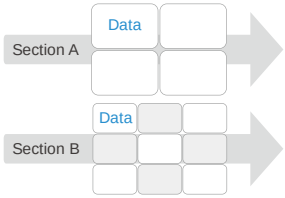
Expands the limited transfer capacity



File transfer speeds in existing transfer methods are greatly affected by the devices, Oses, types of software and browsers, network conditions, overload of servers, etc. For the existing maximum speed to be exceeded, Exabyter expands transfer capacity at the software level, making file transfer speed the fastest in any environment.

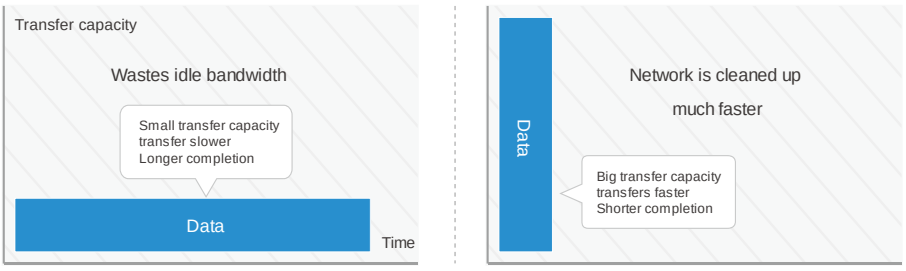
Optimizes transfers by interval



Exabyter analyzes various transfer environments (file sizes, transfer distances, network conditions, etc.) and automatically optimizes transfers. According to the transfer environment, Exabyter determines the most optimal data size and data arrangement, as well as exchanges data back and forth with the server in every environment, as a result of these actions, Exabyter can transfer files at the fastest speed possible in any transfer environment.

Most ideal transfer method

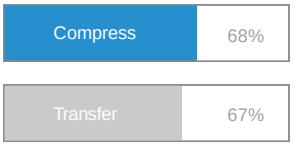
Other transfer methods can only utilize minimal capacity so that bandwidth is wasted. As a result, file transfers are always slower and take a longer time. In addition, they cause various transfer problems such as frequent transfer failure, etc. Exabyter can utilize optimal capacity to enable file transfers to be quickly completed and the network to be cleaned up much faster. Exabyter fundamentally resolves the issue of having too many files remaining in the network for a long period of time. Therefore, more files can be exchanged in the same network without changing any IT infrastructure.



Standard transfer method

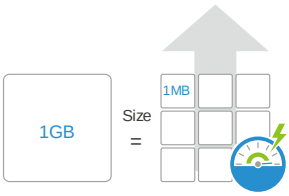
EXABYTER Transfer method

Increasing security threat situations



Security attacks have grown more sophisticated over time. Year by year, the number and scale of attacks have been increasing. Attack methods have also become more intelligent with the improvement of security solutions. Recently, due to organized domestic attacks as well as attacks from emerging countries, the overall threatened situations have been rapidly increasing.

High-speed transfer of mass files



Single 1GB file 1MB X 1,000 files

When transferring a single file using existing file transfer methods, a fixed processing time is required due to the overhead of disk I/O and networks. Even if each file size is small, when a large number of files are being transferred, the transfer speed will rapidly slow down, regardless of the total file size. Exabyter drastically improves these slowdown issues. Even if tens of thousands of files are transferred, Exabyter always transfers files at high speeds at the same rate as a single file without any speed delay.

Exabyter vs. HTTP/FTP

Standard HTTP is only a temporary measure to transfer small-sized files. For improved transfers, most companies that initially selected FTP are now trying to find new alternatives for file transfers due to the numerous problems associated with FTP, such as weak security, management burdens, slow speed, etc.

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Today, Exabyter provides these companies with the following advantages:

Comparison item	HTTP	FTP	Exabyter
Large file transfers	No	No	Yes
1,000,000 files transfers	No	No	Yes
High-speed file transfers	No	No	Yes
Reliable file transfers	No	No	Yes
Secure file transfers	No	No	Yes
Resume file transfers	No	No	Yes
User authentication	Integrates with web	Needs separate FTP App.	Integrates with web
Convenience for user	Inconvenient but user-friendly	Needs to learn FTP usage	Very convenient and user-friendly
Security policy	No impact	Needs to open ports	No impact
Time of implementation	A lot of time	A lot of time	Very short time
Operating costs	Normal	Highest	Lowest

Problems of existing transfer alternatives

1. Hardware WAN accelerators can only improve in-house web data speed and cannot improve file transfer speed. It takes a long time to accumulate redundant data and use the cached data.

2. Quality of service (QoS) equipment cannot improve the underlying speed issues because equal distribution through the restriction of bandwidth can enable the user's files to stay in the network for a longer time.

3. Network bandwidth expansion is an alternative solution. Even with its high fixed costs, transfer efficiency can only be minimally improved. Therefore, it is only mainly used for speed improvement in specific environments.

4. CDN services place servers in a specific area and can only provide download services of the cached data to users in that area.

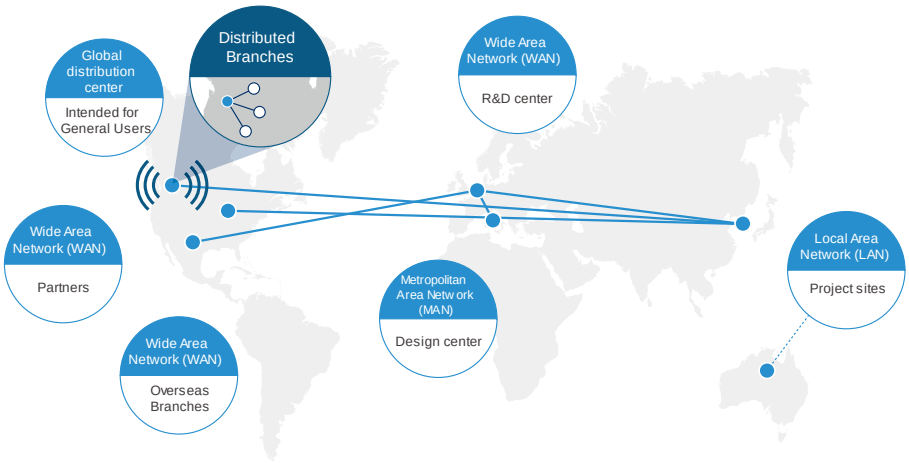
5. Traditional software-based transfer products lead to new security issues. They need to separately open ports and turn off the DDoS attack detection/prevention equipment because they use UDP. Even though these products demand the need for more expensive relay servers to handle the increase in traffic, they can only be used in a very limited user environment because users will not be able to transfer files when users have a slight difference in security and network environments.

Brand new Exabyter

1. No security threat
Exabyter uses the HTTP protocol that is already being used in all web-based business systems so that Exabyter can transfer files at high speeds with no security threats and no impact on the existing security policy.

2. Minimal costs
Exabyter is a pure software-based product that uses existing web/WAS servers without any additional hardware costs so that Exabyter can be implemented faster and offers lower costs compared to other alternatives.

3. High-speed transfers for all users
Unlike other products that can only be used in specific network conditions, Exabyter can dramatically improve file transfer speeds for all users in networks such as in-house networks, distributed branches, overseas business partners, as well as users in a vast range of environments, according to the company's needs.



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Reliable transfers

Flawless transfers

Speed, accuracy, and perfection are important requirements in all enterprise business environments. But in the current web-based business system, file transfer methods between web browsers and web servers are imperfect. As a result, these methods cannot perfectly meet the needs of companies. In the current environment, after a file transfer begins, all engineers can do is sit around and pray for the file to be completely transferred.

Generally, in typical business environments, when a file transfer is interrupted by unstable network conditions, server load, or other various reasons, the engineers have no choice but to start the transfer again from the beginning. When a transfer fails after many repeated attempts, the user has to start from the beginning or seek other alternatives. The user has no choice but to tolerate and accept inconveniences.

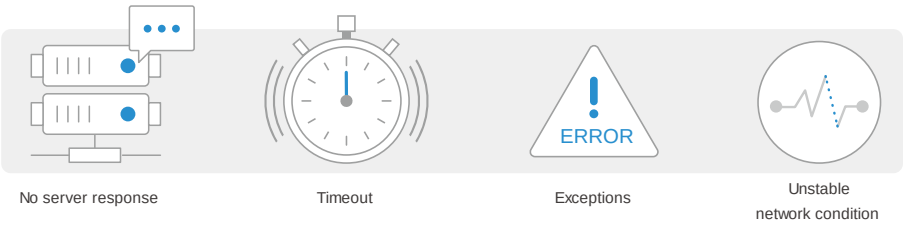
Exabyter fundamentally resolves all of these incomplete and inconvenient issues. While transferring, Exabyter responds automatically to a variety of exceptions that occur and assures a perfect transfer. Moreover, Exabyter provides security and integrity. Exabyter can perfectly meet the mission-critical needs of companies that are required in business environments.

Unstable issues in existing environment

Standard HTTP transfer methods only transfer files according to the initial response from the server. While transferring with this method, changes in network and server statuses are not taken into account, so the situation cannot be controlled once the transfer has started. Transfer failure and file losses can occur at any time.

Situations in which file transfers fail, occur countless times within a day and can sometimes happen repeatedly to the same users. Although the above situation has not taken place, current file transfer methods between web browsers and web servers have never assured a perfect transfer. Various security policies,

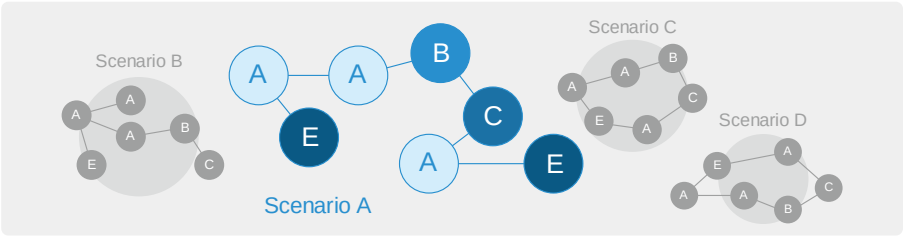
network environments and server types have added more pressure to these unstable situations.



Built-in scenarios to combat obstacles

When carrying out a perfect file transfer mission, if system engineers only rely on traditional methods, they have to use all kinds of server technologies and detailed monitors. Even if they find the causes of failure, it is very difficult to devise fundamental solutions that can respond to a variety of causes. It is also not easy to find a proper solution in general situations, such as transient network disconnections caused by unstable network conditions or response delays of servers.

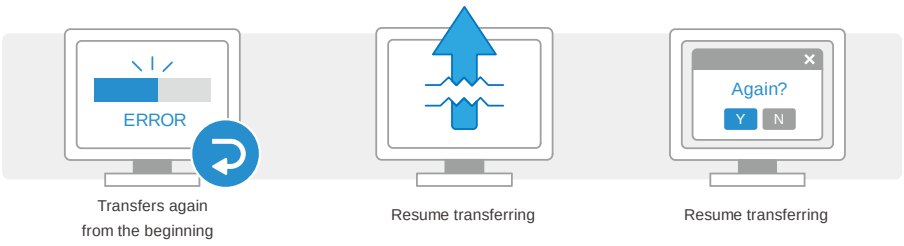
Exabyter has built-in scenarios that automatically respond to a variety of situations while transferring. After the transfer is started, even if problems occur, Exabyter automatically analyzes all situations and completes the file transfer on its own. Unless the network has been completely disconnected between the client and servers, or unless the servers have not been recovered, Exabyter automatically completes transfers without any user and administrator interventions.



Custom error handling

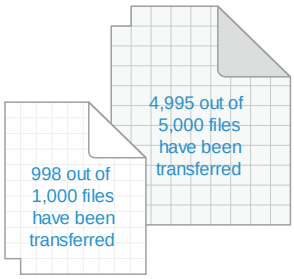
Exabyter can control the transfer after it has begun. In order to conduct reliable transfers, while uploading, after the metadata sent to the server is recorded in the DB and the transfer log is written to the log file, Exabyter finishes one single transfer transaction. While downloading, Exabyter can control and check the transfer status from the servers whether the transfer is completed or not.

If this one single transfer process is not completed, Exabyter will start to automatically resume the transfer without any user intervention. The developers can create appropriate messages depending on various situations such as DB and syntax errors, etc.



Flawless lossless transfers

In all business environments, flawless lossless transfer is a required feature that enables every single file to be transferred without any file loss. However, in existing transfer methods, lossless transfer is not taken into account, as a result, as more files are transferred, more files are lost.

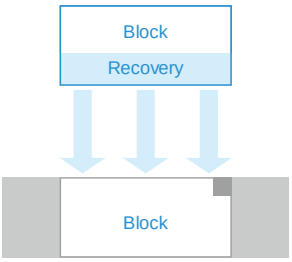


Most engineers do not want to accept this fact about file loss but it is an ongoing inherent problem in the live operating environment. When only a few files fail to transfer among the files being transferred, companies have to invest unthinkable time and costs to find the one failed file. Even if the transfer is restarted from scratch, unstable situations will remain and the same situations can happen.

Devices and servers cannot respond to all requests, and the loss of files often occurs due to various environmental constraints. With a flawless transfer structure, Exabyter can resolve these problems so that hundreds of thousands of files can be transferred without any file loss or additional delays.

Double integrity verification

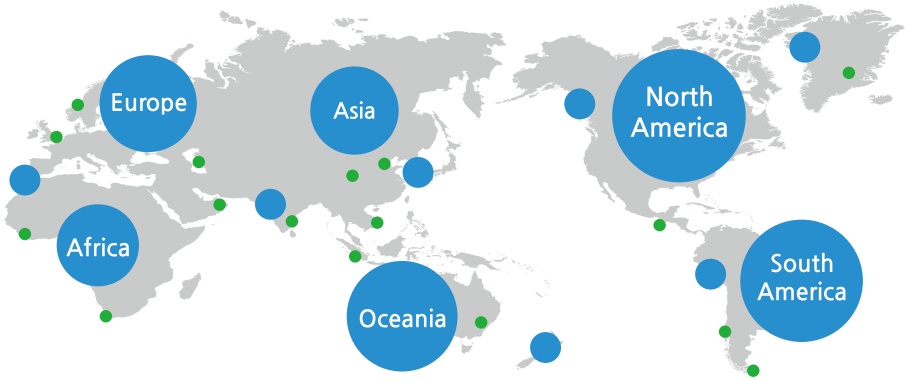
File alterations occur due to malicious attacks or inserting malignant codes into files while transferring. In order to prevent them, Exabyter verifies the integrity of the files twice (each block of a file and then the whole file again).



Even if an altered part of a file is detected, only the altered part will be automatically retransferred so that more accurate and reliable transfers occur. This guarantees safety and convenience.

File transfer test center

As a file transfer specialized company, INNORIX operates file transfer test centers for continuous monitoring and improvement of the quality of file transfers. INNORIX conducts UI tests in all network environments, all OSes and all browsers, and also runs file transfer tests in major cities of North America, Europe and Asia around the clock, 365 days a year.



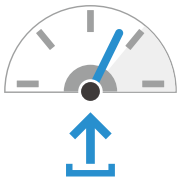
Verified reliability in various environments

Exabyter is the first large-sized file web-based upload and download product that has been released, and since then, has been the first to resolve various problems that occur while transferring large files in a vast range of global network environments. Exabyter, a ground-breaking large file transfer product in the industry, provides verified reliability.

Transfer policies

1. Transfer speed policy

Developers can limit the file upload and download speed per Kbyte so that they can set the same speed for all users or set different speeds (high, normal, or low) for different user groups.



2. Resume transferring policy

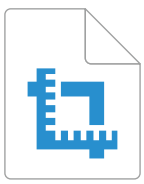
Developers can easily set the resume uploading and downloading policy among the 3 options: 1) Always overwrite 2) Always resume 3) Ask users.

3. Limit on size, type, number of files

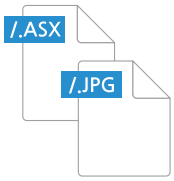
Developers can restrict attached files that exceed the designated size or number to prohibit users from selecting these files, depending on your company's service policy. Furthermore, developers can permit or restrict the selection of designated file types such as GIF, JSP, PNG, etc., in the open dialog.

4. Restrict image size (width, height)

When users attach image files, Exabyter can check the width and height of the image file and can permit or restrict the attachment of the file. Developers can easily set a minimum or maximum width and height as well as the size range.

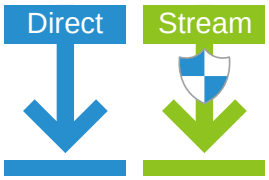


5. Restrictions to attaching files by MIME-type



Even though some service policies do not allow for the uploading of some file extensions such as .exe, .php, xls, etc., malicious users can change the file extension easily. In order to fundamentally block these attempts, Exabyter analyzes the MIME type of a file. If developers activate this feature and users attach files, Exabyter will extract the MIME type from the file's header; analyze it and permit or restrict the attachment of the file.

6. Direct/stream download

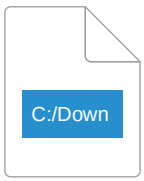


Exabyter provides two types of download methods

1) Direct download method: If the download files are in the path that the user can access with "http://", users can download files through the actual file path (URL) directly.

2) Stream download method: In order to download files, users connect only a gateway file like download.jsp.

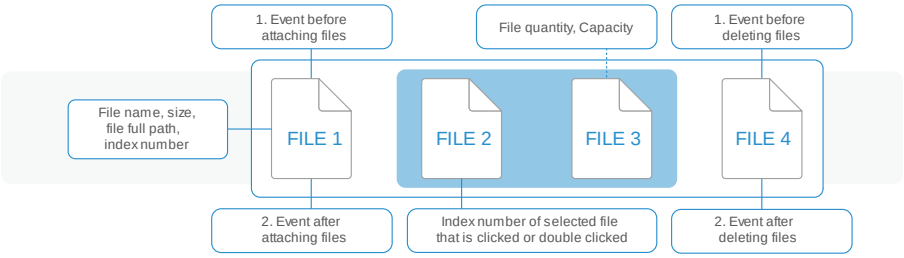
7. File save path setting



Generally, the file save path is selected by the user. Exabyter enables developers to set a recommended save path or a prescribed save path according to the purposes of the service. After setting the prescribed save path, when users click the [download] button, the download will start right away without asking the user for the save path.

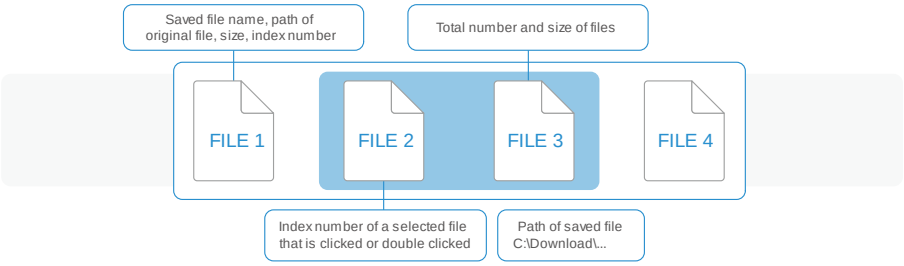
Situational upload events

With Exabyter APIs and situational events such as automated attachment and upload, developers can conveniently develop special usage UIs and link with third-party modules and so on.

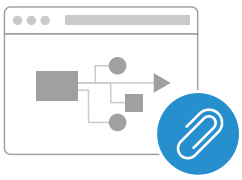


Situational download events

Developers can receive and utilize various information (download URLs, a save path that is selected by a user, total file size, total number of files, each file's name and size, etc.) and easily develop various download UIs. For example, when a user selects files, using the selected download file list, the download can be automatically started.

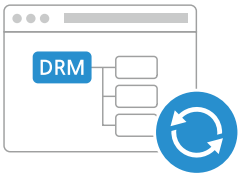


Allows attachment by link with third-party modules



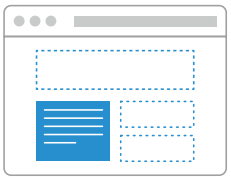
As the event before attaching the selected files, detailed information (file path, name, size, etc.) of the selected files can be sent to a third-party's verification module. According to the return values of the third-party's module, Exabyter can permit or reject file attachments and display messages to users.

DRM auto applied to selected files



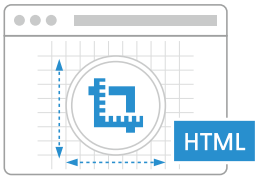
As the event before attaching the selected files, detailed information such as the file path and the name of the selected files can also be sent to a third-party's DRM module. In this process, DRM is applied to these files, the files that are attached by users will be replaced as DRM-applied files. These will then be automatically uploaded to servers.

Update various information in the UIs



With the 2 events that occur after files are attached or removed, developers can easily display and update the attachment information such as the entire file size, the entire number of files, etc. This allows developers to freely customize and implement UIs.

Various upload function buttons



Developers can freely implement various transfer buttons such as [upload], [download], [remove the selected file], [document files browse..], [folder browse..], etc. with HTML Tags such as input type=button.., img src.., a href.., div.. etc.

Restrictions to remove the attached file

2 events occur before and after deleting the attached files. The event before deleting the attached files is commonly used so that the user would not be able to delete the required attached files.

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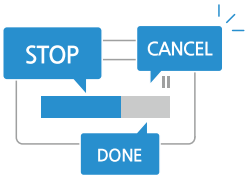
Customize click and double-click events

Developers can customize click and double-click events with various functions such as download, open, execute a file, as well as, show function menus, etc.

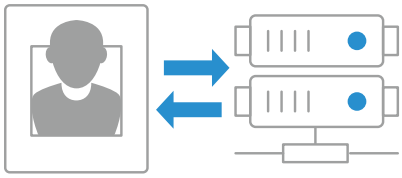
Situational transfer status events

Developers can create appropriate display messages for end users or can alternatively implement messages/processes according to various situational events like: the beginning and end of an up/download, network/server failure or cancelation by users, etc.



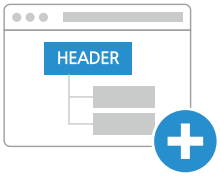
Supports user authentication

Exabyter automatically communicates with the server using the web browser's user authentication information. Without repeating the authentication process, only authenticated users are able to transfer files in their web business system through Exabyter while the server's security policy is maintained.



Implements custom POST header

Developers can implement the POST header and use it for various purposes. In order to distinguish specific user's files in the servers, files sent by the user can be composed of the same POST header. Also, developers can individually designate POST headers for each file, save them in different paths and utilize them for various uses.



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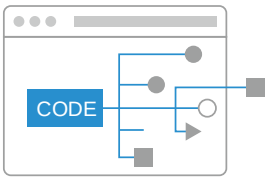
Returns error messages

As soon as various errors that occur during the development process are received, such as server-side syntax errors and HTTP response errors; Exabyter will classify the errors and display a message to assist the developer so that they can handle the issue with promptness.

Shorter code, more features

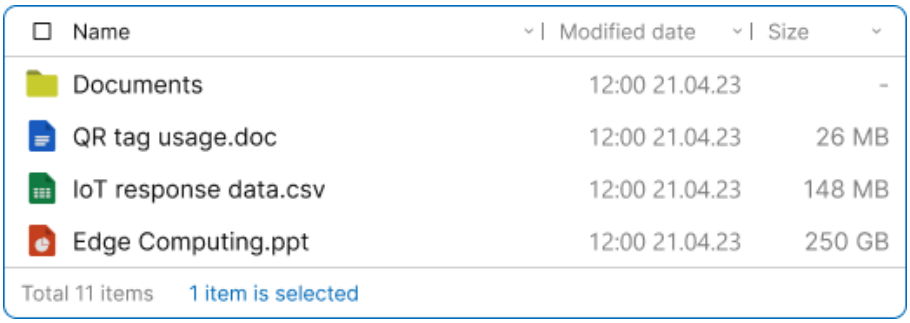
The latest version of Exabyter improves the inconvenience of writing and editing long codes that were necessary for actions like multiple attachment areas on a page, resuming transfers, modify mode, etc. various APIs have also been added and convenience for developers has also been innovatively upgraded.



Transfers UI

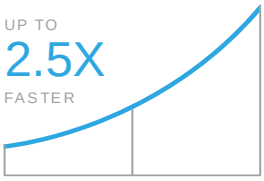
Upload and download file list controls

Exabyter satisfies both project managers and users because the recently released Exabyter provides: 1) Advanced file transfers 2) More powerful file transfer features 3) Faster response speeds. With full HTML UI, Exabyter now features a web page-like appearance and feel. Additionally, users can use the same file transfer UIs in any browser in multi-OSs.



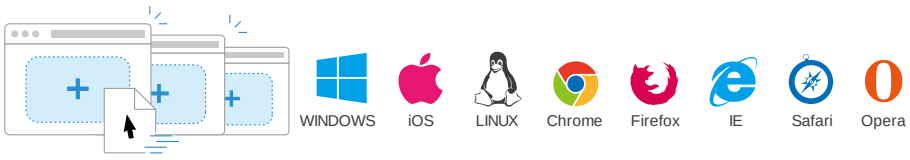
Faster response speed

Exabyter is now 2.5 times faster, ensuring immediate response to user action, while simultaneously providing exceptional handling to large file and mass file transfer. Should the user wish to cancel or alter an action in progress, Exabyter' rapid response speed enables precise user control.



Supports drag & drop

Regardless of client OSes and browsers, Exabyter supports drag & drop to attach multiple files and folders. When users drag files into the drop-zone, the green line turns the Exabyter list control box around, making it a more sophisticated UIs.



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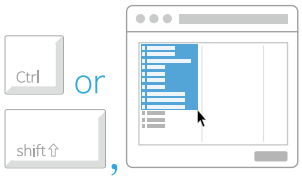
Easy to remove attached files

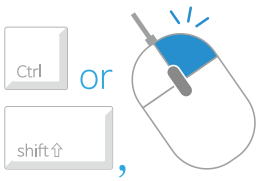
Exabyter provides various removal methods, enabling users to remove attached files using familiar methods. 1) Delete key 2) Context menu with mouse right button 3) Function menu when the mouse cursor is over an item.

Select multiple files & type filters in the open dialog



Users can select multiple files in the file-open dialog window by dragging the mouse or using the keyboard's shift or ctrl key. Once file types (doc, ppt, jpg, etc.) are designated, only these files will be displayed; making it more convenient for selecting files in the file open dialog window.

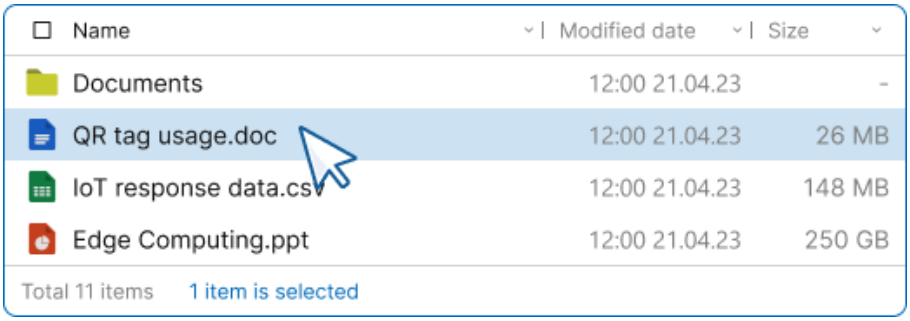
Keyboard and mouse right button



Users can easily select files and folders in the Exabyter list control using the ctrl or shift key. When users click the right button on the mouse, the Exabyter function menu appears. Using this menu, users can remove and upload attached files.

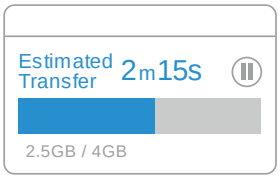
Change the order of the attached files

When users attach multiple files, the order of the files can differ from what the users want. In this case, should the user click and drag a file to another location in the Exabyter list control, the user can easily change the order of attached files by drag & drop.



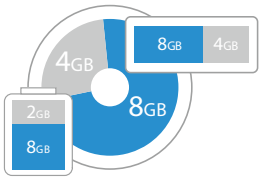
Estimated transfer time

When users attach files in the Exabyter list control, Exabyter displays an estimated transfer time, making it more convenient for transferring large files.



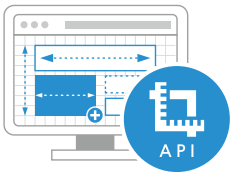
Various styles of file size information

Exabyter displays the number and sizes of attached files in the Exabyter list control through bar or donut graphs. If users select files on the list control, Exabyter displays the ratio of the size of selected files by a graph.



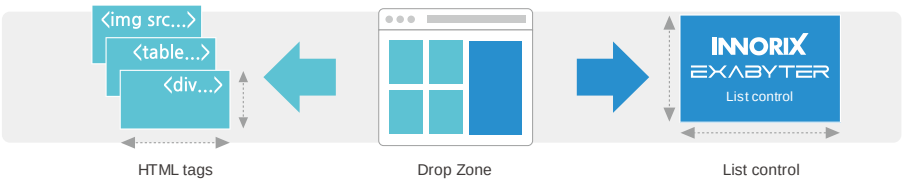
Implement various file attachment UIs

Even without using the Exabyter list control, with the Exabyter APIs, the developer can easily improve existing attachments and download UIs and easily implement more complicated UIs according to current trends and user preferences.



Flexible drop zone

Drop-zone is an area where users can drop files and folders on a webpage with the drag & drop feature. The drop-zone can be applied to Exabyter list control, 3rd party web-editors and various HTML tags such as img src.., table.., div.., etc.

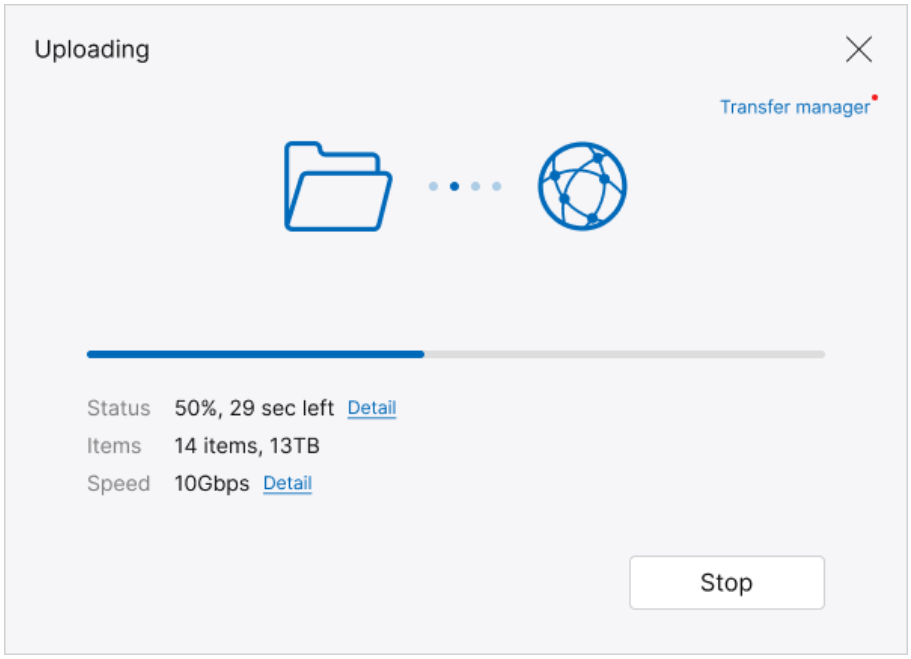


INNORIX

Elegant and sophisticated transfer window

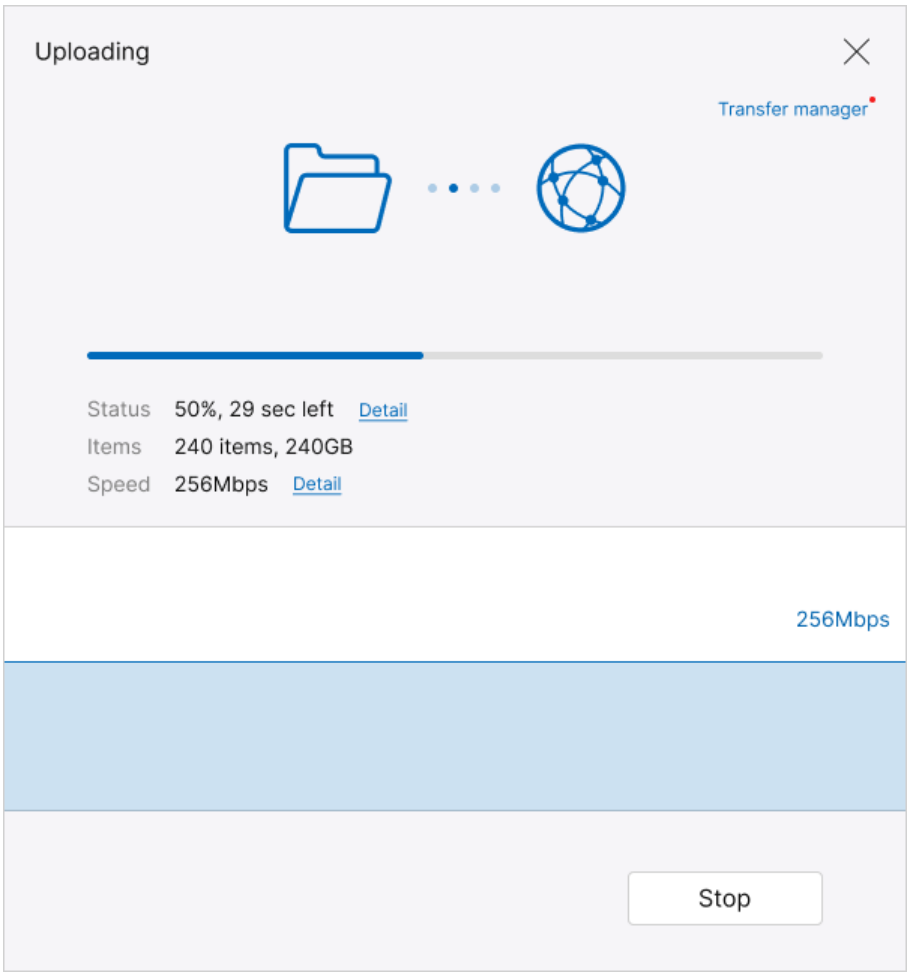
INNORIX is the first in the field to develop a multi-platform/browser file transfer technology. It is the best technology to control web browsers and is applied to the Exabyter transfer window.

Exabyter transfer window looks similar to a very simple HTML layer, users cannot feel any difference between the transfer windows and a web page. The transfer window is a frameless window that can move out of the web browser. Hence, when the user transfers large files, the transfer is not affected by any activity from a web page.



1. Check server/network status

During the process of transferring files, Exabyter constantly checks the communication status between a client and servers. According to the status, the file transfer window displays a light with either green, orange or red colors. When the file transfer fails due to an error, users typically have to wait without knowing the reason. With Exabyter, users can monitor the communication status and experience an advanced file transfer UI.



2. Status log

When users click the status icon, the file transfer window expands and displays the communication logs between a client and servers. The user can clearly check what is happening while transferring files.

3. Transfer speed graph

These days, users need products that not only complete basic functions and needs but also feature an intuitive and clean design. Recognizing the increasing importance of aesthetics, Exabyter's more sophisticated UI features a speed graph to meet user needs.

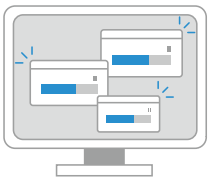
4. Pause and restart

If a transfer is interrupted due to failure or cancelation by the user while transferring files, with the resuming upload and download features, the user can resume their transfer anytime. Users are familiar with transfer control features, such as resume, pause and restart. However, web-based transfer methods do not support these features, forcing users to wait until the transfer is completed or failed. With the pause and restart feature, users can now control the transfer at any point after the file transfer has begun.

5. Silent mode transfer status window

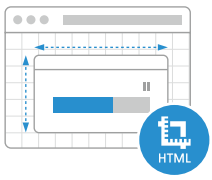
When users transfer files, the transfer window will appear, and in the case of small-sized file transfers, it will briefly appear for 1~2 seconds. However, Exabyter also offers a silent mode. When the transfer window is unnecessary, developers can activate this mode so that the transfer window will not be displayed.

6. Independent mode transfer status window



The transfer window can be run independently from the web browser and minimized to the system tray. Even if users close the web browser or move to different Exabyter, the file transfer will continue.

7. Custom transfer window



Exabyter transfer window was developed using HTML so that developers can customize the transfer window according to the purpose.

8. Notification of uncompleted transfers

If there is an uncompleted transfer, when the user logs into their business system, Exabyter displays a popup window that asks whether the user wants to continue the transfer or not. In order to resume the transfer, the user does not have to repeat the transfer process and choose the same files again.

Monitor & history

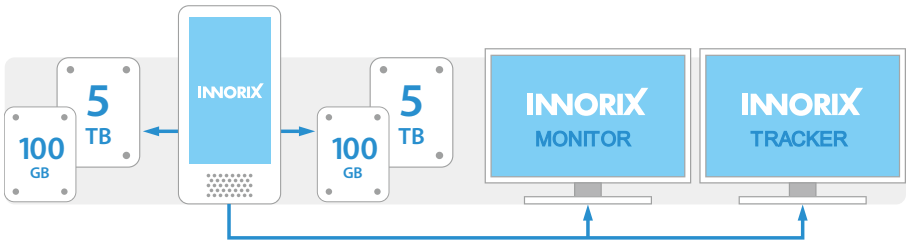
File transfer monitor and tracker

All organizations require transparency about situations where sensitive business files are being transferred. The ability to monitor and track history is essential for all transfer flows and the status of files. This includes situations that would include monitoring overseas branches and partners as well as in-house files and transactions.

However, there is no solution to monitor file transfer statuses in real-time. With traditional network or server monitoring tools, companies cannot properly grasp file transfer statuses. In addition, the file transfer paths and history are not recorded at all. As a result, it is a difficult mission for companies to grasp the information of what file is transferred, who transferred the file, and where the file is going.

Integration with file transfer products

INNORIX Platform products: Exabyter and Exacoola support all kinds of file transfers for users, servers, devices, and branches. Exabyter Monitor is integrated with the INNORIX Platform so that it enables administrators to monitor transfer statuses in real-time. In addition, Exabyter Tracker records all history and enables administrators to track the history.

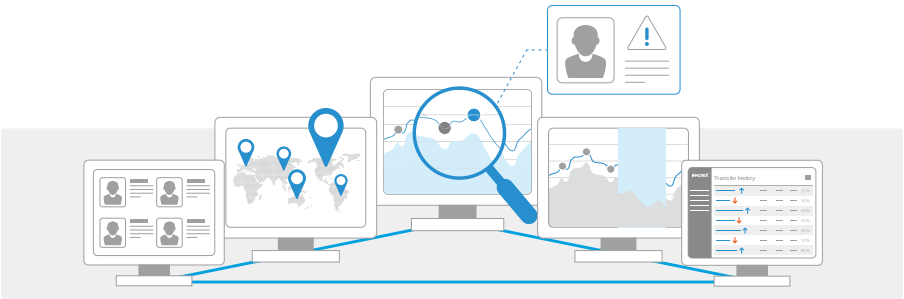


Real-time file transfer status monitor

Exabyter Monitor enables administrators to monitor the transfer statuses of all files in-house and externally in real-time. As an integrated file transfer monitoring system, administrators can monitor real-time transfer speeds, statuses, error conditions, and the number of users and files as well as the throughput of all servers and regions. Exabyter Monitor does not display obscure terms as difficult as system log level, that only some system engineers can understand. Monitor displays only meaningful information such as 1) The number of users 2) The number of current errors, cancelations, completions, and failures 3) Each server/region's transfer statuses, etc.

Transfer history recorder and tracker

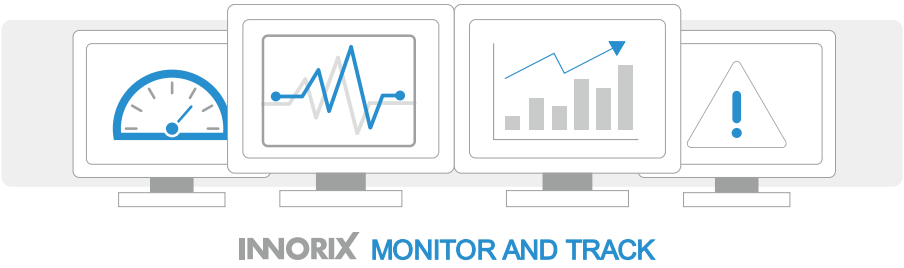
Exabyter Tracker records transfer history in detail. Administrators can easily track the transfer history of specific users and devices and can use full-range monitoring to track transfer history by device or user locations, as well as specific file transfer paths. Exabyter Tracker does not disturb the administrator when tracking with unnecessary and complicated interactions. Administrators can quickly track file transfer history and search for related information by user, filename, device, server, etc.



INNORIX

Real-time file transfer monitor

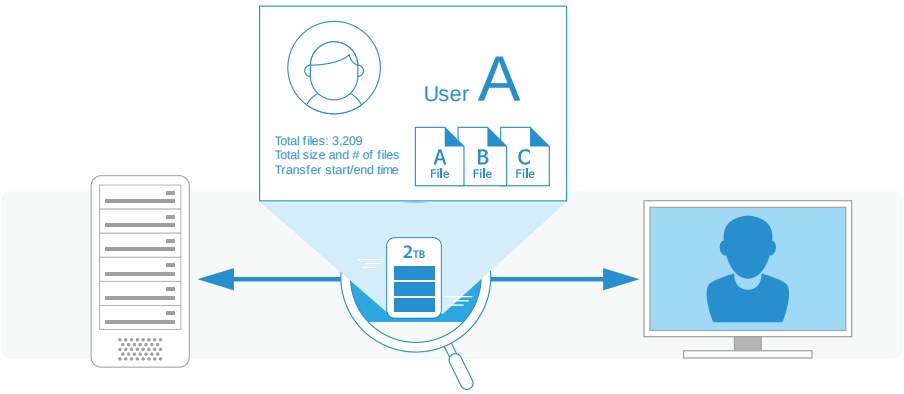
Exabyter Monitor enables administrators to monitor real-time in-house and external transfer states of all files that are transferred in the INNORIX Platform. Administrators can monitor transfer speeds, status, and error conditions as well as all servers and region throughput.



Clear visibility of file transfer statuses

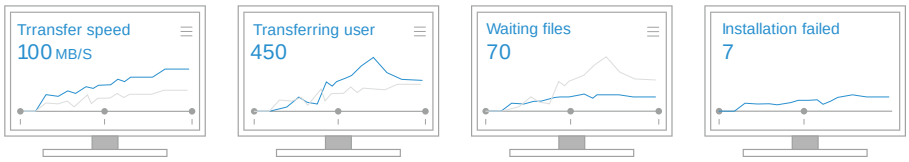
Although a lot of files are transferred every day, with traditional network or server monitoring tools, companies cannot monitor file transfer statuses. It is also difficult to properly grasp file transfer statuses. After disruptive failures occur in a business, engineers try to analyze a lot of system logs. However, this method is very challenging. As a result, the reality is that companies only check the will of the engineers and their resolve to solve the problem.

In order to overcome this reality, many companies fully agree that a file transfer monitor is needed. They are experiencing the new advantages of clear visibility of file transfer statuses that Exabyter Monitor features.



Overall monitoring of transfer states

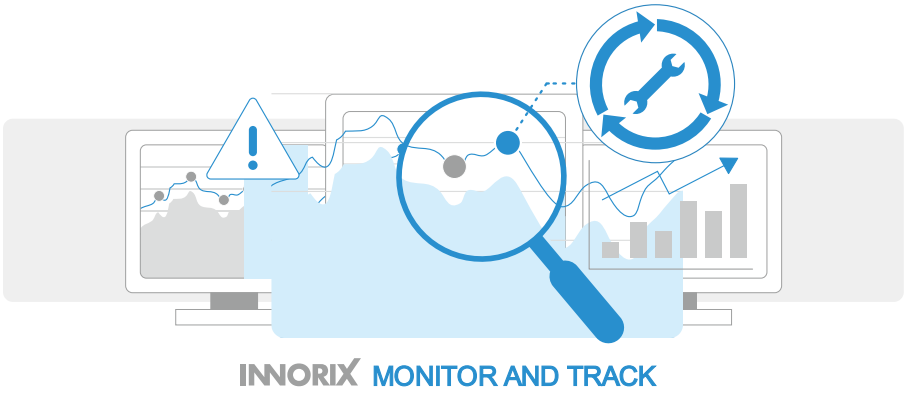
In order for administrators to check overall transfer states, Exabyter Monitor displays through a real-time graph 1) The average transfer speed 2) The number of users who are transferring files 3) The number of files that are waiting to be transferred 4) Variations of the increase or decrease of errors/cancelations/completions. Even though unexpected situations can happen suddenly, such as the number of transfer errors increasing and/or the transfer speed decreasing due to increasing throughput by increasing users, administrators can easily graph variations of the transfers' quality.



Response ability before failures

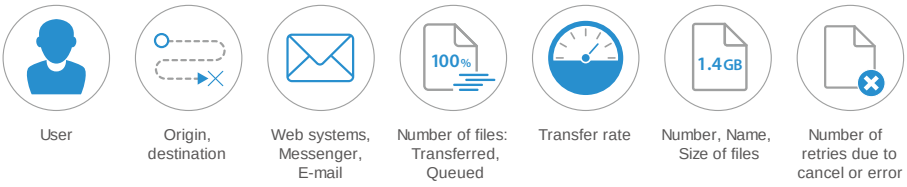
Exabyter Monitor's real-time file transfer monitor is very different from traditional methods. With traditional methods, after the voice of the customer (VOC) heavily increases, companies belatedly analyze system logs and search for the reason and solution. Featuring Exabyter Monitor's monitoring, when transfer errors and failures occur, administrators can see this information in real-time. With Exabyter Monitor, companies can deal with transfer errors and failures before partial complications spread to all users, enabling companies to change their current complication response system to an entirely new system.

Depending on drastic changes in various information (transfer speed, throughput, the number of users and response time, etc.) administrators can secure the ability to predict and respond to failures in advance. Additionally, this information enables companies to improve the predictability of infrastructure expansion in response to a sharp increase in users and throughput.



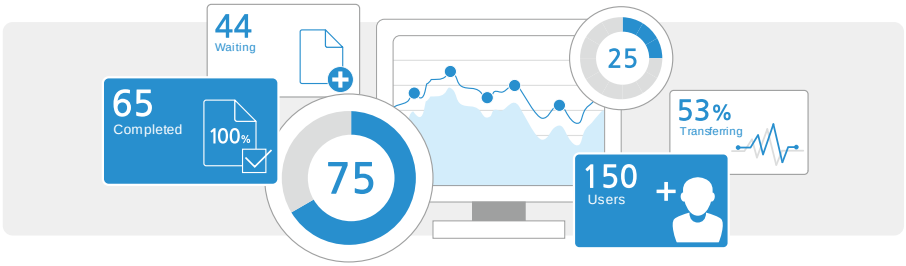
Detailed file transfer status

Exabyter Monitor displays a text-based status with very detailed transfer statuses of each file that is being transferred in real-time. For example 1) Information of users who are transferring files 2) Where the files are going to 3) The number of files in each transfer transaction 4) The size of files 5) Transfer rate 6) The number of errors or cancelations etc.



Visual file transfer status

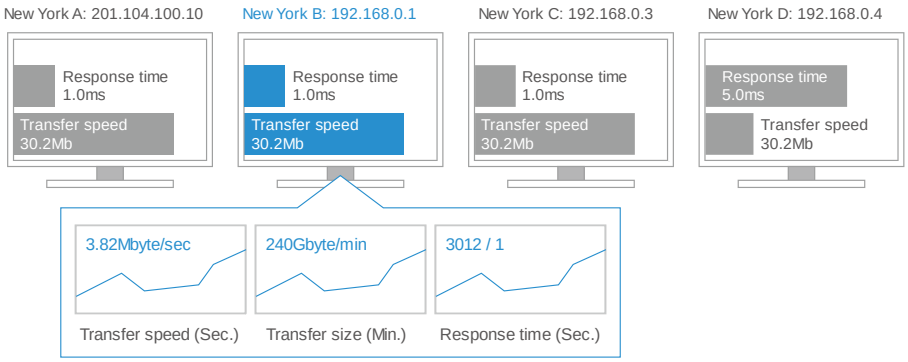
The text-based status is visually transformed and shows the transfer flows of files that are being transferred with various color blocks. The blocks indicate: secure transfer status, cancelations by users and retries, etc. If administrators do not read the text-based status, they can still grasp the overall transfer flows and statuses of each transfer transaction.



Transfer performance monitor of all servers

In live operating environments, although a lot of loads are not located in servers and networks, files cannot be smoothly transferred. When files are transferred using servers (clients to web servers, servers to servers, devices to servers, etc.), a file transfer performance monitor of servers is very important for the quality of service.

Exabyter Monitor provides performance information for all servers such as response times, transfer speeds, connection conditions, etc. When an administrator clicks a server icon in the Exabyter Monitor control panel, the administrator can see more detailed information about what the server is currently processing, such as 1) The number of users who are transferring 2) The number of files that are being transferred 3) Transfer speeds 4) Errors, etc. Featuring this information, administrators can monitor the performance of all servers from the file transfer's point of view.

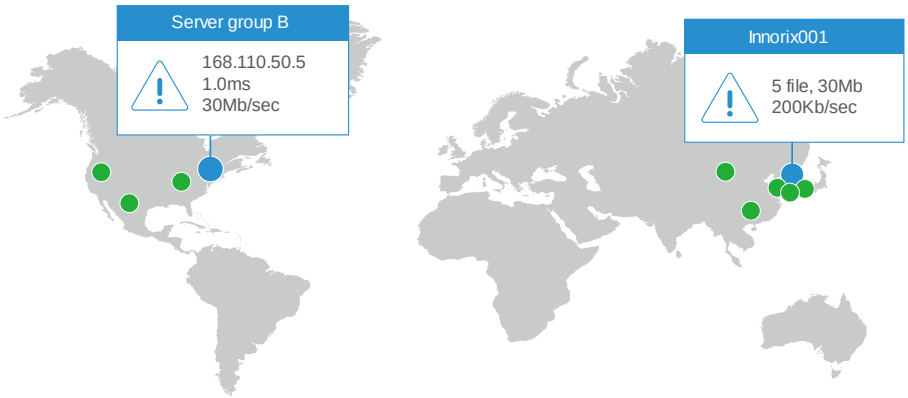


Grasp unreported issues with location-based statuses

Using IP-based location data, Exabyter Monitor visually displays the locations of both users and servers on a map interface. When administrators click a user icon or a server icon in the Exabyter Monitor control panel, administrators can easily check for more detailed information about the server, such as transfer speeds, transfer rates, response times, etc.

If some users who are in a specific region have transfer problems, this information may not be immediately delivered to

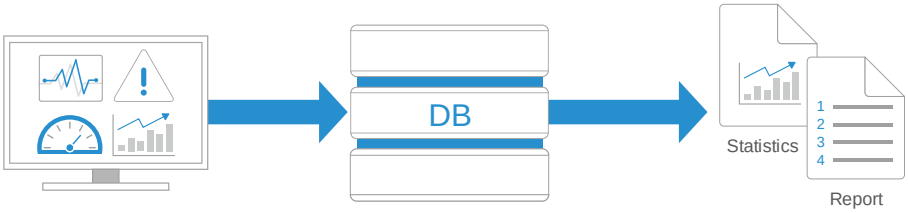
service operators due to the time difference and general awareness of users. In most cases, users will repeatedly try to transfer files until the situation improves but in this situation, there will be negative effects on the service, user loyalty, and the delay of business.



Failure information in integrated statistics

Negative effects on business processes that are caused by file transfer failures are immediate primary damages. If this failure information is not integrated and recorded when the failures occur, then companies cannot learn from the previous failures for the future, these are secondary damages. Companies will be exposed to primary and secondary damages continuously.

The information that Exabyter Monitor provides in real-time is stored in Exabyter Monitor DB. Administrators can easily find this information whenever they need it. With Exabyter Monitor, companies do not have to depend on inefficient and incomplete system logs anymore, and they can easily find hidden and elusive problems. As a result, companies can be rid of speculative and post-response environments by continuously improving file transfer quality, business efficiency, and user satisfaction are improved.



High performance for huge amounts of traffic

The Exabyter Monitor high-performance engine is designed to monitor huge data in real-time with a single system. Exabyter Monitor is developed with optimized technology for Big Data processing, costs can be significantly reduced and performance will be maximized.

Depending on a company's monitor range extension needs, Exabyter Monitor performance is infinitely expanded, producing high performance in all areas from web-based file transfers to mass files for industrial-specific purposes.

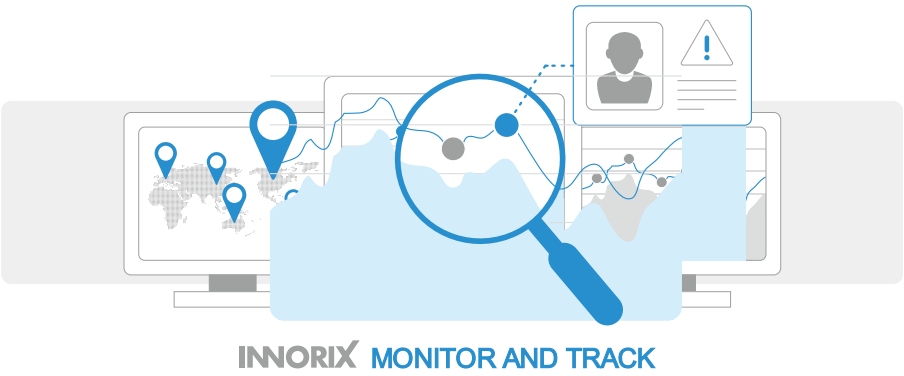
Notifies by 24H pattern surveillance

If administrators are away for a while or monitoring other information, featuring real-time notifications, they can easily monitor failure conditions at all times. As soon as Exabyter Monitor senses failure patterns that the administrators set in advance, the administrators will receive a notification email. As a result, they can secure enough response time to prevent the spread of complications. Even if complications occur, administrators can substantially reduce the response time.

Records and tracks transfer history

Exabyter Tracker records the transfer history in detail that the

INNORIX Platform transfers. Administrators can easily search for users' specific transfer history and can use full-range monitoring to track transfer history by department or user location, as well as specific file transfer paths and even an individual user's file transfer history.



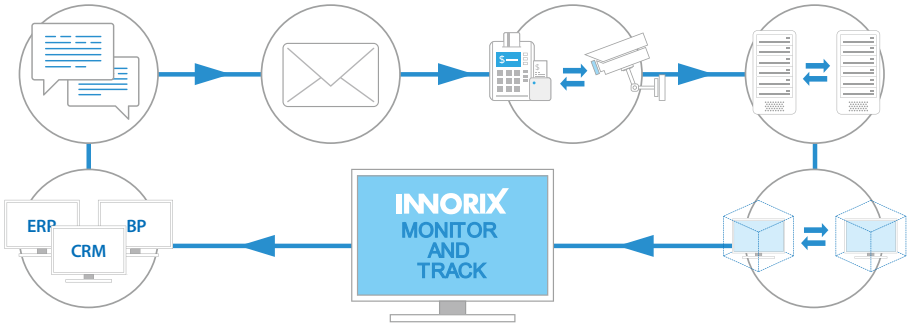
Collect and record complete data for tracking

A lot of files are transferred in-house and externally. However, the history of file transfers is not integrated into records and has not been satisfactory from the beginning. Although there is transfer history data, that will be only a simple log. As a result, it is a difficult mission for companies to grasp the information of what file is transferred, who transferred the file and where the file is going to.

In order to compose this kind of tracking system, administrators do not have to have discussions with several teams and analyze obscure logs in person; moreover, they do not have to have concerns about performance problems for the future. Exabyter Tracker can record and track enormous transfer history for all systems, clearly resolving this difficult issue.

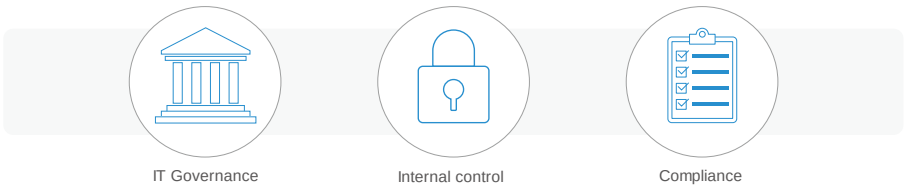
Records and tracks history from all platforms

There are all different kinds of file transfer platforms such as web business systems, messenger, email, devices, virtual OSes, servers, etc. If only some histories in specific areas are recorded, the histories are incomplete and tracking the transfer history is impossible. For this reason, companies need to record all transfer history on all platforms. However, it is difficult because recording methods and the information that is recorded are different depending upon the transfer methods and platforms. As a result, in order to track file transfer history, administrators have to go through many different systems but this method is also incomplete because all systems have different formats and record time at different intervals thus, this method is merely deductive reasoning-based tracking.



Follows government and industry compliance

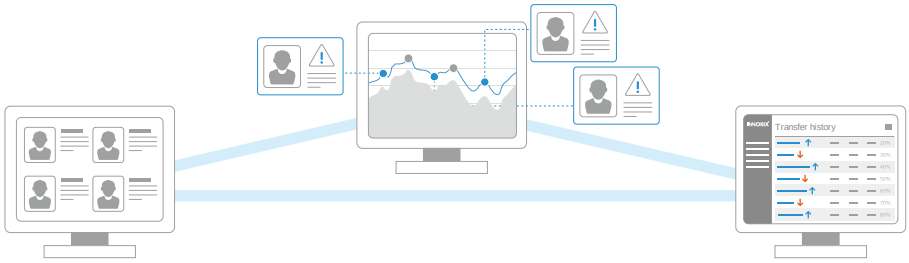
There are more than 10,000 compliance laws in the U.S. that require data retention. Compliance laws have been changing at a rapid pace, these laws have made it more complicated than ever for organizations to keep track of. IT governance, compliance, and internal controls are already very important issues worldwide. Recording, monitoring and tracking of transfer history are the only countermeasure for more perfect internal control. In an increasingly complicated business environment, Exabyter Tracker removes future IT risk and enables organizations to secure a consensus about IT risk.



INNORIX

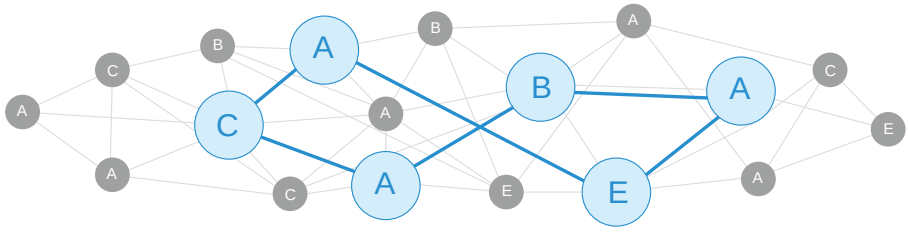
Optimized structure for fast tracking

Exabyter Tracker was designed with an innovative information link structure for administrators to promptly track transfer history. When administrators start tracking, they can choose various start points such as transfer transaction, file name, user's name, department, or location. After that, Exabyter Tracker sequentially shows various information 1) Files that were transferred by the user 2) Transfer transactions that include the file 3) Users who transferred the file, etc. This structure allows administrators to track a vast amount of information in a short time.



Quick tracking for finding complex relationships

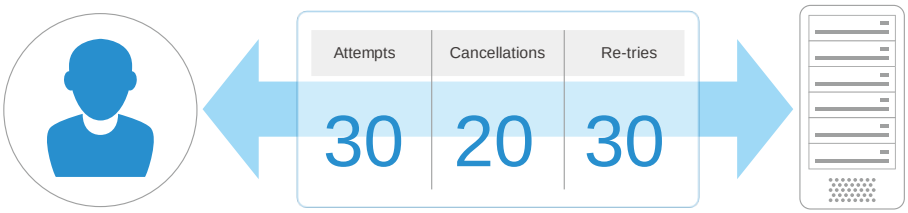
In order for administrators to significantly reduce tracking time and clearly grasp complicated information that has a complex relationship with other history. Exabyter Tracker features the marking function which allows administrators to mark information that they find. This feature prevents confusion and is convenient for administrators who have to track a lot of users and files in a short time. After marking, with related tags, administrators can quickly find the marked information.



INNORIX

Tracks cancelations, errors and tries

Exabyter Tracker can track various transfer information such as completed transfers, cancelations by users, interruptions by an error, etc. Even if users try to transfer files that are not allowed under permissions, this information will be recorded. Administrators can track the history and the number of tries by users and it enables non-repudiation of the try.



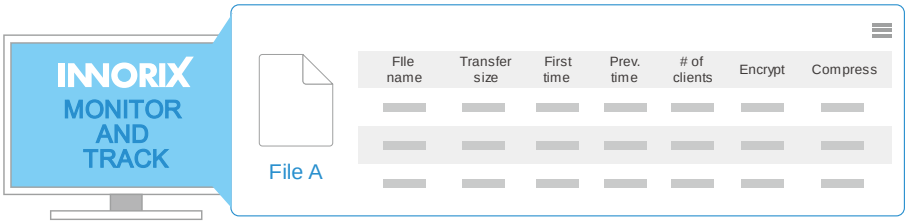
Tracks a specific user's file transfer history

As it is known, 80% of information leakage is caused by former and current employees. Users are the biggest threat to information asset protection. Exabyter Tracker provides significant transfer information for each user. Administrators can analyze and easily compare the number of transferred files, the file sizes and total transfer time, etc. with other users. Moreover, administrators can easily search for a specific user's very detailed file transfer history that shows all file names and sizes, transfer start and end times as well as transfer statuses.

Tracks history by department and/or location

As the geographical distribution of businesses increases, the origin and destination information of file transfers can be smartly utilized. Even if a user's department information is changed, administrators do not have to go through

cumbersome processes to update new department information in the DB because Exabyter Tracker automatically receives new department information from business systems. As a result, if there is frequently changing department information, the reliability of history can be ensured. Additionally, using IP-based location data, administrators can track and search for file transfer history by country and region name.



High-performance tracking engine

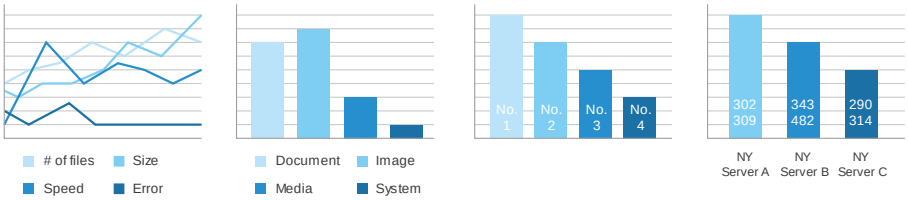
INNORIX, a Big Data and file transfer specialty company, is an expert in the field of mass file transfers. INNORIX specializes in observing and evaluating transfer traffic, making them more knowledgeable than standard IT professionals. If vast transfer histories are recorded for a few years, there will be an enormous amount of data, so much that a general structure engine will not be able to process it. The Exabyter Tracker high-performance search engine is designed with Big Data processing-based technology, reducing total costs and maximizing tracking performance.

File transfer report for various interests

Generally, a file transfer report cannot be easily drawn because the history is not clearly recorded in the first place. Even if the history is recorded, in order to make a meaningful report, companies have to invest a lot of manpower, costs and time to analyze obscure information. The Exabyter Tracker engine

analyzes the accumulated file transfer history and automatically makes and provides a meaningful report about file transfer transactions when specified by administrators (weekly, monthly, quarterly, etc.).

With the Exabyter Tracker file transfer report, administrators can easily grasp the company's transfer situation by observing variations of information such as traffic, speed, failure, etc. that occur during a specific period of time. In addition, the Exabyter Tracker file transfer report provides meaningful information such as 1) Statistics about file type and the number of files 2) Transferred file ranking 3) Each server's throughput, transferred file size, and the number of files for IT decision maker, operating team and various interests.



EXABYTER

Most advanced file transfer solution for enterprise web systems

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