

SIEMENS

Ingenuity for life



FastViewer

Whitepaper / Siemens Industry Technical Support

<https://support.industry.siemens.com/cs/ww/en/view/106665159>

Siemens
Industry
Online
Support



This entry is from the Siemens Industry Online Support. The general terms of use (http://www.siemens.com/terms_of_use) apply.

Security information

Siemens provides products and solutions with industrial security functions that support the secure operation of plants, systems, machines and networks. In order to protect plants, systems, machines and networks against cyber threats, it is necessary to implement – and continuously maintain – a holistic, state-of-the-art industrial security concept. Siemens' products and solutions only form one element of such a concept.

Customer is responsible to prevent unauthorized access to its plants, systems, machines and networks. Systems, machines and components should only be connected to the enterprise network or the internet if and to the extent necessary and with appropriate security measures (e.g. use of firewalls and network segmentation) in place.

Additionally, Siemens' guidance on appropriate security measures should be taken into account. For more information about industrial security, please visit <http://www.siemens.com/industrialsecurity>.

Siemens' products and solutions undergo continuous development to make them more secure. Siemens strongly recommends to apply product updates as soon as available and to always use the latest product versions. Use of product versions that are no longer supported, and failure to apply latest updates may increase customer's exposure to cyber threats.

To stay informed about product updates, subscribe to the Siemens Industrial Security RSS Feed under <http://www.siemens.com/industrialsecurity>.

Table of content

1	Introduction	4
2	System Requirements for Operating the FastViewer	5
2.1	Operating System Requirements	5
2.2	Requirements for Automatic Session Participation	5
2.3	Requirements for Establishing the Connection	5
3	Information on IT Security	6
3.1	What is the Encryption Process and How Secure is the Data when Using FastViewer?.....	6
3.2	What Happens to the Data Which Runs over the FastViewer Server Systems?	7
3.3	How Can You Prove that the Remote Support Solution is Safe?	7
3.4	Which Data is Stored and How is the Data Handled?	7
4	Establishment of Connection with Technical Support	8
5	Troubleshooting Connection Problems	9
5.1	Cause: Java Runtime	9
5.1.1	Check the Java Version	11
5.1.2	Check Whether Java is Enabled	12
5.1.3	Java Still Does Not Work.....	12
5.2	Cause: Enabled Ports	13
5.3	Cause: Firewall.....	13
5.4	Cause: Proxy Servers	14
5.5	Cause: Virus Scanner	14
6	Session Situations.....	15
6.1	What Happens When the Technical Support Operator Leaves the Session?.....	15
6.2	What Happens When You Leave the Session?	15
6.3	What Happens When a Third Party Leaves the Session?.....	15
7	Important Hints about Using Remote Support	16
8	Additional Documents.....	17
9	History.....	18

1 Introduction

Technical Support uses the FastViewer program in the Instant Meeting version as a teleservice application. This makes it possible to transfer the screen of a user to the Technical Support operator via the internet and vice versa. It is therefore possible to transfer content visually. The FastViewer is used for ad hoc Remote Support in Desktop Assistance service. This means that a connection is established with the user for direct, uncomplicated and completely comprehensible tackling of a problem. In addition, the FastViewer does not need to be installed and leaves no traces.

2 System Requirements for Operating the FastViewer

This chapter gives you an overview of the system requirements for the FastViewer. Before using the FastViewer please make sure that these requirements are met on your system. These requirements enable smooth functioning of the FastViewer.

2.1 Operating System Requirements

Table 2-1

Windows Client	Mobile App iOS/Android
Windows XP/Vista/7/8/10	iOS 10.0 or higher
Windows Server 2003/2008/2012	Android 4.1 or higher

2.2 Requirements for Automatic Session Participation

You need Java Runtime V1.6 or higher for automatic session participation via a link.

No Java? No problem! If you do not have Java installed on the system, please refer to section [5.1.3](#).

2.3 Requirements for Establishing the Connection

For establishing the connection you need an active internet connection which might involve additional costs. Theoretically it is possible to run a session with a data transfer rate of 28.8 kbit/s. However, for the sake of performance we recommend a download of at least 2048 kbit/s and an upload of 192 kbit/s.

3 Information on IT Security

3.1 What is the Encryption Process and How Secure is the Data when Using FastViewer?

Your trust is very important to us. This is why we provide more information below on the FastViewer security mechanism.

1. Initially the master module (done by the Technical Support operator) gets a list of active available FastViewer communication servers from multiple redundant web servers via Port 80 (HTTP).
2. The master module finds the fastest communication server which is then used for the current session. This then ensures 100% fail-safe performance. There are currently more than 50 communication servers employed in 4 computer centers around the world for the FastViewer GmbH company.
The FastViewer in Technical Support is set to establish connections to European servers.
3. The master module now connects to the selected FastViewer communication server. This is done via Port 5000 (TCP), Port 443 (HTTPS) or Port 80 (HTTP) or via a proxy server if available. The session number is taken via this connection. This is usually transmitted to the session partner by telephone or e-mail.
4. The session partner now enters the received session number in the client module (you do this) or there is automatic connection via the received session link (the client module does this automatically). The client module also gets the list of active available FastViewer communication servers. The client module connects to the FastViewer communication server via Port 5000 (TCP), Port 443 (HTTPS) or Port 80 (HTTP) or via a proxy server if available.
5. Now the master module and client module negotiate a 256-bit AES code (using the Rjindael algorithm). This ensures that monitoring cannot take place on the FastViewer communication server nor at any other point of the connection and that continued communication is done exclusively via the 256-bit AES encrypted connection. The FastViewer communication server CANNOT decrypt the data because it is not at any time in possession of the 256-bit AES code! (See also the TÜV certificate.)
6. Then the screen is transferred in the desired direction. Each session partner can interrupt any remote control at any time with the F12 button or immediately disconnect the connection with a mouse click.

3.2 What Happens to the Data Which Runs over the FastViewer Server Systems?

The data is not recorded or processed. The information is encrypted through a 256-bit AES code negotiated by the session partners in such a way that it is impossible to restore the data on the servers.

For this reason, we recommend to exchange confidential information via the communication ways (audio connection) and not via a telephone connection.

3.3 How Can You Prove that the Remote Support Solution is Safe?

The FastViewer GmbH company is the first provider to be certified by the "TÜV Sud" agency in the Desktop Sharing sector. This certificate certifies that the remote solution is safe in compliance with DIN ISO/IEC 25051:2006 (Functionality) and PPP 13011:2008 (Data security). This certificate is available at the following link:

TÜV certificate for data security and functionality

- <https://fastviewer.com/en/service/downloads/>

We recommend referring to the additional information on the topic of security at the link below. Please note, however, that some of the named functions are not implemented and that there might therefore be differences:

Results of a security analysis made by the Fraunhofer AISEC and Fraunhofer ESK

- <https://fastviewer.com/en/service/downloads/>

3.4 Which Data is Stored and How is the Data Handled?

No customer-specific data is stored!

The following data is stored in a connection log for each session conducted:

- Session number
- Date/time of establishment and end of connection
- Runtime/duration of session
- User name of the Technical Support operator
- Computer name of the Technical Support operator
- Internal IP address of the Technical Support operator

This data is processed for internal evaluation.

4 Establishment of Connection with Technical Support

1. The Technical Support operator is on the telephone to you or has sent you an e-mail and would like to conduct a remote session with you. Or you would like a remote session to show Technical Support something and you have already downloaded the client module. In this case go straight to Point 6.
2. The connection is established in Technical Support, usually via an e-mail which you receive from the Technical Support operator. This e-mail includes a link to the automatic session participation. All you have to do is click the link.
The system opens the browser or the mobile application, which you have installed previously on your smart phone or tablet, and automatically establishes a connection to the session concerned. A session number is already included in the link so that you do not have to enter it again.
3. The first time you use the FastViewer on a computer it might happen that you have to enter a name and then click the green arrow.
Java Runtime starts in the browser. Acknowledge this by clicking "Run".
Alternatively an application download is triggered (FastClient_i_Session_number.exe) if Java cannot be run correctly. Here you click "Run". If a connection is not established, refer to the following chapter [5](#).
4. Carefully read the important tips shown there and confirm with "Accept", otherwise no connection will be established and Remote Support will be aborted.
5. After clicking "Accept" you are connected to the Technical Support operator and receive a request to enable all applications or selected applications for screen transfer. After enabling the applications the Technical Support can share your screen.
6. If you have already downloaded the client module, the Technical Support operator gives you the session number by telephone. Enter the session number and click "Connect". You are then in the session with the Technical Support operator (see section [5.1.3](#)).

5 Troubleshooting Connection Problems

It might happen that it is not possible to establish a connection. There can be several reasons for this. The most frequent cause of connection problems **during** automatic establishment of a connection is Java Runtime.

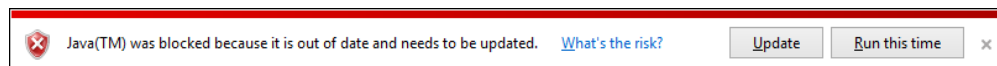
Other causes for unsuccessful establishment of a connection include enabled ports, firewalls, proxy servers and virus scanners. Below is an overview of possible remedies.

5.1 Cause: Java Runtime

It might happen that during automatic session participation the web browser displays a message regarding an out-of-date Java version or that Java is blocked. Below are examples taken from the Internet Explorer and Chrome.

Internet Explorer

Figure 5-1 Message regarding blocked Java in the Internet Explorer



This message is replaced automatically by another message as shown below.

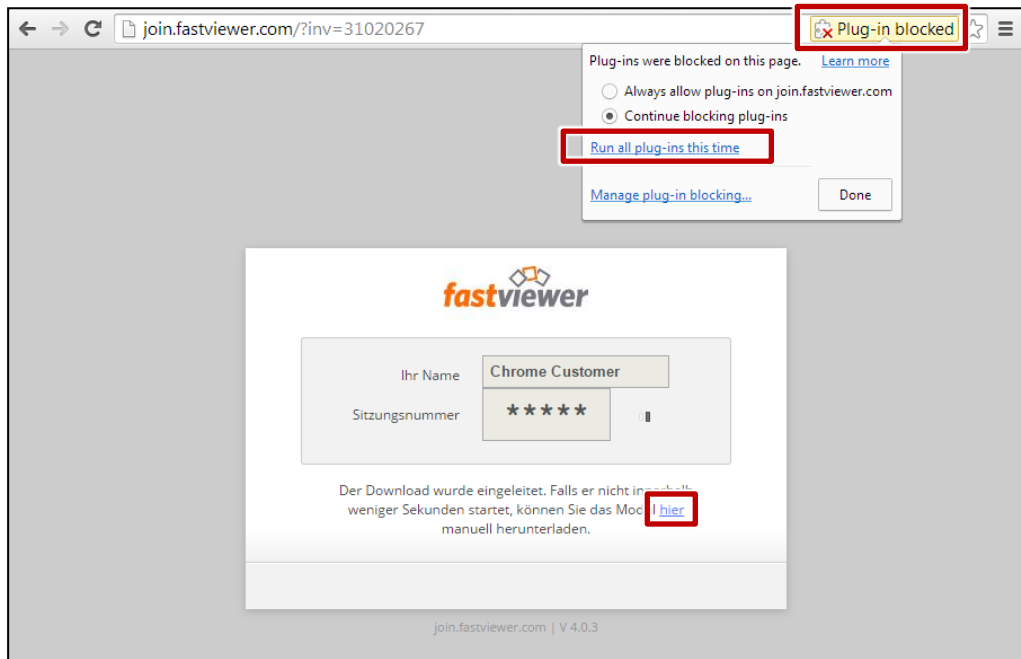
Figure 5-2 Message regarding starting of the alternative application in the Internet Explorer



This message informs you that an alternative application of the client module is to be run or saved. This alternative application does not use Java and is generated specially for this session (identifiable by the figures before .exe). Therefore you can click "Run" to join the session automatically.

Chrome

Figure 5-3 Message regarding blocked Java in the Chrome browser



In the address line Chrome shows a message informing you that a plug-in has been blocked. Click this message and you are presented with a list of options. Here you click "Run all plug-ins this time" to run automatic session participation.

If nothing happens after a few seconds, click "here" to start downloading of the alternative application.

5.1.1 Check the Java Version

You need at least Java Runtime V1.6 for automatic establishment of the FastViewer connection.

Please make sure that you always have the latest version of Java Runtime installed on your system.

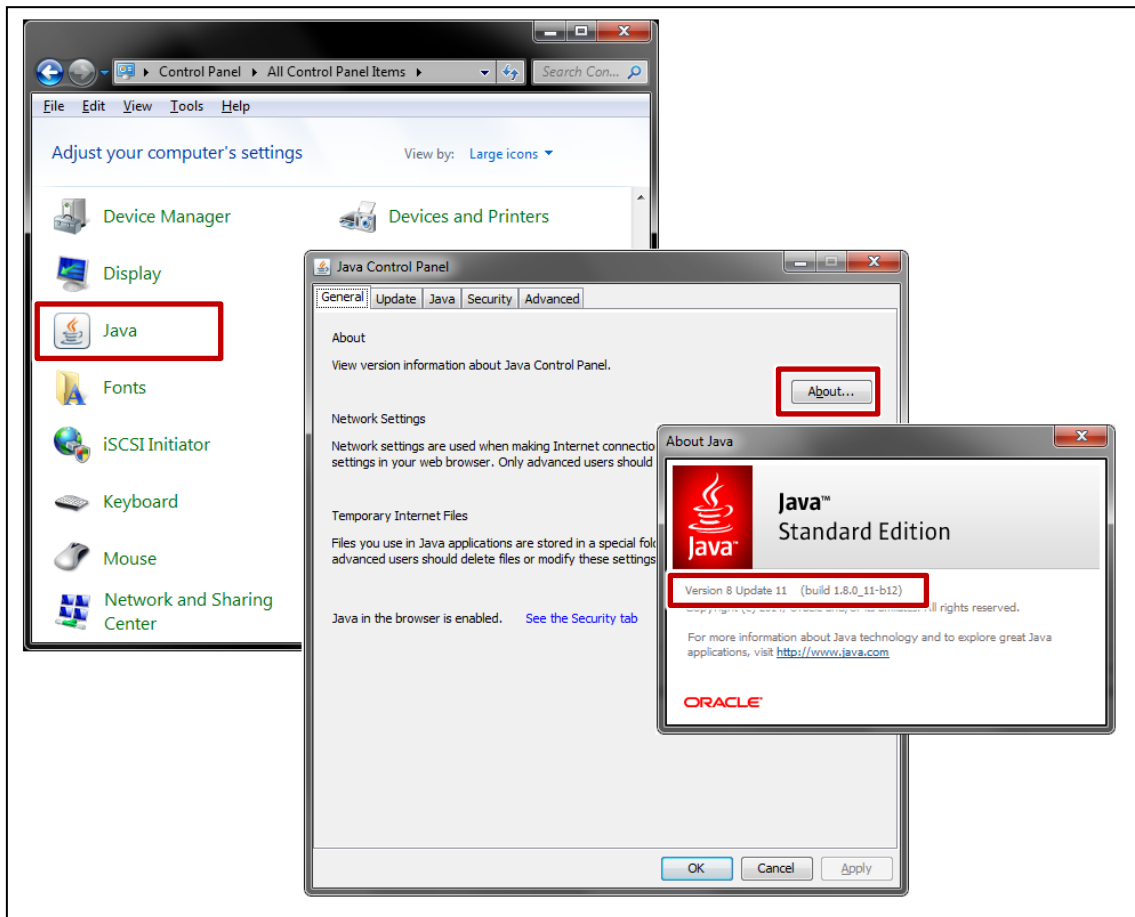
The current version of Java Runtime is available at this link:
<https://www.java.com/en/download/>

Note

It is imperative to check the compatibility with other software products or the specifications of your IT department with regard to Java.

Via the Windows Control Panel in the Java Control Panel you can check which version of Java Runtime is installed.

Figure 5-4 Checking the Java version in the Java Control Panel



5.1.2 Check Whether Java is Enabled

Check that Java is enabled in the browser settings. Instructions for this are available at this link: https://www.java.com/en/download/help/enable_browser.xml

5.1.3 Java Still Does Not Work

Java is required only for automatic establishment of a connection, which is designed to make things easier for you. If automatic establishment of a connection is not possible, proceed as follows.

1. Download the client module from the following online entry: <https://support.industry.siemens.com/cs/ww/en/view/106665159>
2. Start the client module and enter your name in the corresponding field.
3. The Technical Support operator will then give you the session number separately by telephone. If you have already received an e-mail, the session number is there.
4. Enter the session number in the corresponding field.
5. Then click "Start Session" to establish the connection.

Figure 5-5 Manual session participation via the client module

SIEMENS

Session ID:

Your name:

Start Session

Please enter the session number to initiate the connection to your session partner.

3.20.0034

5.2 Cause: Enabled Ports

General

If you can surf normally in the internet, it should also be possible to establish a connection to the FastViewer communication servers.

In order to be able to establish a connection you need to enable the following outgoing ports.

- **Port 80 (HTTP) - required**
This is for the initial communication with the FastViewer update servers. These are needed for the modules to be able to call the available FastViewer communication servers and establish a connection.
- **Port 443 (HTTPS) - optional**
This improves the performance and can be enabled optionally.
- **Port 5000 - recommended**
This port gives you the best performance for a FastViewer connection. This is why we recommend that you enable this port. If you can communicate via Port 5000, you do not need the HTTP overhead and this provides a faster connection than via HTTP (Port 80).

Background

The FastViewer connection is established as follows.

1. FastViewer connects first via Port 80 (HTTP) with the update server which has a list of all the available communication servers.
2. Then an attempt is made via Port 5000 to establish a connection to the fastest available communication server.
If no connection can be established via Port 5000, an attempt is made to set up a connection via Port 443 (HTTPS).
If this fails, a connection is established via Port 80 (HTTP).

5.3 Cause: Firewall

The communication servers provided by FastViewer GmbH must be reachable. You can check this by entering this address in your web browser:

<http://update2.fastviewer.com/serversv3.txt>

If you cannot call the page because it is blocked by a firewall, you must enable it specifically. We advise you to do this using the "Wildcard" of *.fastviewer.com.

If you cannot enter a wildcard in the firewall, please get in touch with us. We will then provide you a list of all the enabled FastViewer communication servers.

5.4 Cause: Proxy Servers

FastViewer always reads the connection information from the web browser defined as default. If you are using a proxy server, please check whether it is stored in your default web browser and that it is correct. If you are not using a proxy server, make sure that this option is disabled in the browser.

5.5 Cause: Virus Scanner

If you still cannot establish a connection, please check your local virus scanner. It might happen that it is blocking the FastViewer. In this case, enter the relevant module (FastClient.exe) in the exceptions.

6 Session Situations

This chapter gives you an overview of what happens in certain situations during an active remote session. We will not deal with the establishment of the connection. For this please refer to the link to the video in chapter [8 "Additional Documents"](#).

6.1 What Happens When the Technical Support Operator Leaves the Session?

Scenario: You are in a remote session with the Technical Support operator. The Technical Support operator then leaves the session.

Result: Your session is also closed.

As soon as the Technical Support operator who initiated the session leaves it, your connection is also disconnected. This also happens when there are multiple participants in the session.

6.2 What Happens When You Leave the Session?

Scenario: You are in a remote session with the Technical Support operator. Then you leave the session (because you have to restart your computer, for example).

Result: Your session closes. However, the session of the Technical Support operator remains open. In this way you can re-join the session with the same session number.

6.3 What Happens When a Third Party Leaves the Session?

Scenario: You are in a remote session with a colleague (third party) and the Technical Support operator. Then your colleague leaves the session.

Result: The session continues as normal between you and the Technical Support operator. Any enablements made by your colleague close.

7 Important Hints about Using Remote Support

It is essential to have Internet access on the computer in order to realize the remote support discussed with you. The visual display of your computer will be transferred to our personnel using the remote support software.

It may become necessary that the operating of the computer will be handed over to our personnel.

THEREFORE PLEASE ENSURE BEFOREHAND THAT THE PLANT IS IN A SECURE CONDITION BEFORE RELEASING CONTROL AND THAT DANGER TO PEOPLE AND ALL EQUIPMENT IS EXCLUDED!

You remain responsible for the security of your plant.

You are encouraged to ensure that our personnel cannot view business secrets or access such data during the performance of the remote access. Where it cannot be avoided that our personnel view or access such data during the performance of the remote access, you are obligated to notify us in good time prior to the performance of the remote access.

There is the functionality that third parties participating in the remote session if the session number is forwarded by you or by us. If you do not agree with it, please inform our employee at the beginning of the meeting about this. You also have the option to terminate the remote session at any time by clicking the STOP-sign or the usual X in the top right corner of the application.

The remote session can be visually recorded to improve the quality of our products. There is no recording of the spoken word. If you do not want a visual recording of the remote session, you can notify our personnel at the beginning of your remote session.

FastViewer will be used as remote support software. The connection servers are FastViewer servers around the world. No further connection costs will arise and you only have to pay your Internet costs.

Please consider your duties to collaborate:

- You must be available and accessible during the remote session at all times.
- You must be in front of the computer during the remote session at all times.
- You must ensure the safety of human, machine and the environment.
- You have to report us important hints and information, to be considered by our personnel during the remote session and which appropriates situational relevance.

By establishing the connection to the FastViewer access server you give Siemens AG the permission to realize remote support and you confirm to consider the correspondent hints. The Siemens Industry Online Support terms of use apply (https://www.siemens.com/terms_of_use).

8 Additional Documents

An overview of all the downloads relevant to FastViewer (manual included) is available here:

- <https://fastviewer.com/en/service/downloads/>

An overview of the Technical Support services is available here:

- <https://support.industry.siemens.com/cs/ww/en/sc/4868>

A video about establishing a connection is available here:

- <https://support.industry.siemens.com/cs/ww/en/view/106665159>

9 History

Table 9-1

Version	Date	Change
V1.0	01/2015	First edition
V1.1	08/2016	Additions within chapter 3.2
V1.2	12/2017	Correcting chapter 2.1, Additions within chapter 7
V1.2.1	09/2020	Correcting chapter 2.1, correcting chapter 7, correcting chapter 8