

Netviewer

Whitepaper

Netviewer one2one

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July 2005

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1. At a glance

1.1 Description

Netviewer allows you to transfer screen contents from any PC to another in real-time. Thus it becomes possible for two people in different locations to see the same desktop.

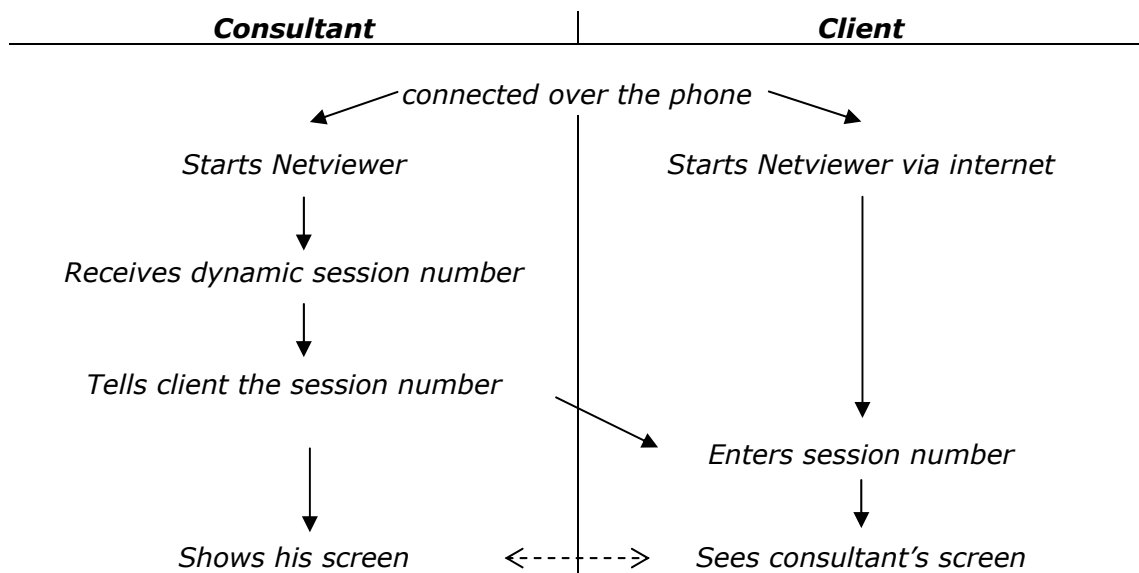
While talking to your customer over the phone you can show one another documents or applications regardless of your respective geographical location.

The direction of transmission can be switched with a click of the mouse. This gives you the choice of jointly viewing either your screen content or that of your partner.

The sharing of screen contents is not limited to websites. Any kind of application can be viewed and worked on jointly, if desired.

No installation or configuration is necessary on either the consultant's or on the customer's side. To establish a Netviewer connection your customer only needs a computer with internet access and any browser. This enables you to establish a visual connection with any internet user within seconds. After closing the connection, your customer's system is in the same state as it was before.

The following illustration displays the sequence of a Netviewer session.



1.2 Areas of application

Netviewer can be used for a wide range of applications: from virtual sales presentations, online sales consulting and joint work on documents, to remote maintenance of software support. Some examples:

Sales

Most of the time required for sales appointments is taken up by travelling to and from the customer. Netviewer saves time and money. The sales person and the customer sit at their respective workstations, talk to each other via telephone and are able to visually communicate as if they were seated together in a conference room in front of a projector connected to the sales person's notebook.

Software support

Netviewer makes software support much more effective. A customer calls the hotline and the technician is then able to guide him immediately and precisely through installation routines or help menus. There are no more questions like "Where are you now?" or "What do you see?", as the consultant can see that online.

Online sales

It is a commonly known fact that online-shops suffer from the problem of giving adequate advice to their customers. With Netviewer the internet becomes a virtual sales counter; for example, a digital camera vendor can show his customer where to find accessories on his website, such as a charger, leather bag or additional lenses. At the same time he can verbally answer the typical sales-talk questions over the phone.

Business to business

Netviewer is becoming a general tool in everyday business life, as much as telephone, fax or e-mail. Contracts, calculations, protocols or any kind of plan can be jointly processed. Constructional drawings, drafts or even radiographs can be explained or discussed together. If desired, edited documents, text and graphics can be exchanged.

1.3 Features

Let the customer see your screen

After starting the software on the internet, the customer sees the consultant's screen after just a few seconds. This is the standard situation after the session has been established. The customer is in the "watch mode" and the consultant in "show mode". The customer sees the consultant's screen but cannot make any changes.

Pointer

With the help of a pointer the customer can direct the consultant to certain places on the screen. No remote control rights are required in order to use the pointer function.

Zoom function

In the standard setting, the screen content transferred from the session partner is shown in full within the Netviewer window. This can cause the content to be displayed in a reduced size. This function can be switched on or off at any time with a right-click on the Netviewer symbol in the task bar.

Allow remote control

However the consultant can grant remote control rights: the mouse and keyboard can be used, for example, to jointly work on documents. Remote control can be disabled immediately with the F12 key. This allows the consultant to retain control over his own PC.

Change direction of view

The direction of view can be changed with just one click. Once he has accepted the change of direction the customer is then in "show mode" and the consultant is able to see his screen. Of course it is possible to switch back again at any time.

Operating the customer's computer via remote control

The customer can also allow his computer to be remotely controlled so that you cannot only see his screen, but also work on it. These rights can be revoked at any time by pressing the F12 key. And he always retains control of his own PC.

Select applications to be seen

This option allows the show-mode user to determine which of the active applications the viewer sees. Only visible and open applications are accessible via remote control (if rights have been granted). The Select button is available during each session.

File transfer and clipboard support (optional)

During a Netviewer session in which remote control rights have been granted, the watch-mode user can initiate the transfer files to and from the screen of the show mode user by using the "Drag & Drop". A warning message appears before data is transferred. If the transfer of data is accepted in the dialogue box, the progress of file transfer can be seen on both sides. Thus the show mode user has complete control over his or her PC and is able to interrupt the transfer by pressing the F12 key at any time. Pieces of text can be transferred by using the clipboard function via "Copy & Paste".

Shut down the connection

Both customer and consultant can abort the Netviewer session any time. One click on the exit button or the cross on the upper right edge of the screen will close the session.

2. User-friendly operation

2.1 No training necessary

Working with Netviewer is intuitive and is normally possible without instruction. This applies both to the client and the consultant. The whole application works with no more than five buttons.

A short briefing is required for the consultant. Customers can easily use the software without any prior experience. The required information is easily provided by the consultant.

2.2 No installation

Netviewer can be executed directly from the internet. And because no installation is required and the size of the program is only about 300 kb, there is no need to distribute installation media such as a CD-ROM or floppy disk. There is no need to reboot the computer at any time. After a Netviewer session the computer is left in the same state as before the visual connection was made; no modifications are made to the computer.

2.3 No configuration

Complicated configurations before using Netviewer software are a thing of the past, i.e. there are no modifications necessary, neither on the customer's nor on the consultant's side.

2.4 No settings

The required settings are found and carried out automatically when a session is initiated.

The colour depth is dynamically adapted to the available bandwidth.

Thus there is less data to transfer and the screen is drawn faster. The colour depth is reduced automatically if there are a number of modifications. It is increased if there are no or only few modifications made. This means that there is no need to accept a loss of quality in the display of graphics.

3. Safety

3.1 Session number

The connection between the client and the consultant is not established until a session number is entered. This ensures that no unidentified third person can connect to the consultant. Transmission of the connection number to and from the connection server is already encoded.

3.2 Consultant identification (consultant ID)

Right after establishing the connection the customer can see who he is connected to in the title bar of his Netviewer window. This can be either the name of the consultant himself or the company name. If the direction of view is changed to the customer, the dialog box used to give consent for the change in direction explicitly displays the consultant ID once more. This visualisation provides the customer an additional option for identifying the consultant apart from the telephone.

3.3 F12 key

Any remote control rights that have been granted to a customer can be revoked at any time simply by pressing the F12 key. The session partner is then immediately returned to "watch mode". The only thing posing a security risk are the improper actions of a Netviewer user. Unwanted access to protected data can take place only if he gives his (ill-intentioned) partner remote control rights and watches his PC being manipulated without taking action.

3.4 Select visible applications

The person showing his screen can determine which of the active applications the customer is able to see and which are hidden. Hidden applications are shown in black and cannot be used by his partner, even with remote control rights.

3.5 Consent for screen viewing

If the direction of view is switched so that the consultant sees the customer's screen, then the customer has to consent to the switch. A window opens indicating that the direction of view is about to be changed. The other partner in a session is only able to view the contents of a customer's screen if the customer confirms the operation with "OK". The customer can select which applications to transmit beforehand.

3.6 Allow remote control

Remote control rights are granted exclusively by the person whose computer is about to be remotely controlled, i.e. for the computer that is to be jointly worked on. These rights will only be granted if confirmed by clicking "remote on".

3.7 128-bit encoding

The data of a Netviewer session is encoded when transmitted (Blowfish algorithm with 128 bits). This corresponds to SSL encoding.

3.8 Safety certificate

Furthermore, the Fraunhofer Institute for Secure Information Technology (SIT), located in Darmstadt, Germany, has tested Netviewer and confirmed that it is secure.

Netviewer software comes with a presigned safety certificate from VeriSign Commercial Software Publishers CA, the worldwide leader in this sector. Thus any potential tampering with the software by third parties becomes immediately apparent.

4. Technical specifications / features

4.1 Procedure

Establish a Netviewer connection as follows:

- (1) Consultant and customer talk to each other by phone.
- (2) The consultant starts his software which automatically logs onto the Netviewer server. The Netviewer server is located at an internet provider. This ensures high availability and performance. Its only function is to establish the Netviewer sessions.
- (3) The customer starts his program on the internet (300 KB) with a single click. The consultant tells him the session number for this session via telephone.
- (4) After the session number has been entered the customer's software automatically contacts the Netviewer server.
- (5) The Netviewer server establishes the session between the customer's and the consultant's computer through the communication server.

4.2 Client software

Nothing has to be installed on the customer's side at any time. The client software can be started by clicking a button on a website. The client only needs a computer with internet access. It is not a problem if he is located behind a firewall, since Netviewer works via port 80 with HTTP or via TCP. Netviewer is also able to establish a connection over a proxy server. This means that anyone who is able to access the internet via his company's network is also able to use Netviewer.

To employ Netviewer in your business you will receive not only the consultant software but the client software as well.

Ideally, you place the "Start Netviewer" button on your own website. One click on the button starts the client software. No files are saved to the customer's computer. It is enough to click "start program from it's current location" (when using internet Explorer). The program will then be downloaded temporarily and executed immediately. It is then located in the browser cache and will be removed – depending on the configuration – after a certain period of time or when it is manually deleted. No DLLs are installed. The system settings are not changed. After the program has been shut down the computer is the same as it was before the session.

System requirements on the customer's side:

- A computer with Windows 95, Windows 98, Windows ME, Windows NT4, Windows 2000, Windows 2003 or Windows XP.
- Browser (we recommend MS Internet Explorer)
- Internet access (may also be via a proxy or from behind a firewall)

If the customer is located behind a firewall or a proxy, then Netviewer automatically uses the HTTP protocol instead of the generally used TCP protocol. Thus virtually all connections between the client and the consultant can be established. Experience shows that Netviewer works in 98% of all system environments. In some instances performance restrictions can occur behind firewalls.

4.3 Consultant software

The consultant software does not have to be installed or configured. It is simply saved in a suitable directory within the local network or on the hard disk of the computer. Ideally a link is established on the desktop. The size of the consultant software is slightly larger than the client software (approx. 311 Kb).

When the consultant software is started the consultant is asked to enter the valid password which you will be supplied with. This ensures that no unauthorized person can use Netviewer. The password may be explicitly saved with a tick in the dialogue box. Corresponding entries will be made in the registry.

By default, no changes need to be made to the consultant's firewall. The consultant only has to be able to access the Web.

System requirements on the consultant's side for normal operation:

- A computer with Windows 95, Windows 98, Windows ME, Windows NT4, Windows 2000, Windows 2003 or Windows XP.
- Browser (we recommend MS Internet Explorer)
- Internet access (may also be via a proxy or from behind a firewall)

If the client is located behind a firewall or a proxy, then Netviewer automatically uses the port 80 and the HTTP protocol.

4.4 The Netviewer server

The Netviewer server has two components.

The connection server

In order to establish a session the Netviewer software uses a special service provided by several connection servers. This service informs only the customer's computer of the communications server's web address (URL). The entire data exchange throughout a session then flows via this communications server.

The connection server is provided free of charge by Netviewer GmbH for all Netviewer customers. The connection servers are located in secure data processing centres at various internet providers in Germany and the USA. This ensures high availability for the connection server service.

The communications server

By default Netviewer runs in communication server mode, i.e. all traffic is routed through a communication server. For this to work seamlessly, Netviewer operates several of these servers also located at secure data processing centres in Germany and the USA.

No conference data are stored on the communication servers operated and made available by Netviewer. Only connection-specific data such as conference time and the number of bytes transferred are logged. The servers are provided as a free service. It is possible to license a Netviewer server and operate it yourself. This combines the roles of the intermediary and the communication server.

4.5 Operating your own Netviewer server

For certain network or company constellations, it may be advantageous to operate an in-house Netviewer server located at your company. You can then locate a server complying with individual needs, and company or security guidelines within the company's network or data processing centre.

Access to the Netviewer server with the consultant program can be accelerated by "short paths" and by defining appropriate network rules. The benefit is optimised Netviewer-session performance and stability.

An administrator or responsible person within your company can inspect the log files to analyse and evaluate the utilisation of the software.

Access to the server can be controlled with the implementation of a variety of firewall rules. The use of special moderator and participant programs that refer exclusively to the in-house server ensures that data are exchanged only over this server. No third parties are involved in the communication. Other aspects of convenience and security are provided by the option to define passwords and identifiers independently and to charge Netviewer sessions to either internal or external clients (e.g. according to duration) on the basis of the centrally stored log information.

Please contact us for further details or if you are interested in licensing a Netviewer server.

4.6 one2meet version

In addition to the "standard" Netviewer application (one2one), you can also obtain a special version of Netviewer. Netviewer one2meet makes it possible to transmit the contents of your screen to several other screens at the same time. Thus you can make presentations or provide training with several customers in parallel and thereby save time on individual processing of each customer or user. The moderator is able to grant remote control access rights in turn to individual participants. The moderator can also pass on his pointer rights to others.

4.7 Remote versions

Remote PCs can be quickly accessed by using Netviewer remote admin or Netviewer remote2office. Netviewer remote admin makes it possible to manage PCs all over the world from your own workstation, or to provide support to users.

Netviewer remote2office offers optimal support to anyone working from home or while travelling and requiring access to data on a company PC.

4.8 Transfer rate / required bandwidth

The transfer rate (amount of transferred images per second) is heavily dependant on several factors, among others the available bandwidth.

As a rule of thumb, the better the internet connection (bandwidth) the faster the screen is drawn.

With a standard ISDN connection the setup of the first image takes about three seconds. Further images are transferred much faster, so that the screen content can be transmitted in virtual real-time.

5. Contact

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