

Intuitive Use of Desktop Sharing Functionality with the Ninja SIP Softclient

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Abstract

The best available technology to create and to join a Desktop Sharing Session requires one user to create a session identifier and password. These credentials subsequently need to be sent to all participants of a Desktop Sharing Session. Desktop Sharing Sessions are consequently difficult to plan and users have a tough time to create a session ad-hoc.

A new and entirely intuitive method to start and to join Desktop Sharing Sessions is presented in this paper. This new method can even be used ad-hoc. The Ninja SIP Softclient from Global IP Telecommunications carries out the entire procedure that otherwise the participants of a Desktop Sharing Session would need to execute manually. The result is unprecedented ergonomomy in managing modern Unified Communications Technologies.

Key words: Ninja, SIP, VoIP, voice over internet protocol, unified communications, UC, desktop sharing, Fastviewer, session, identifier, credentials, password, client, server.

1. Introduction

One of the key features of Unified Communications is the possibility to share information that is displayed on the computer screens of two or more users while being in a telephone conversation with each other.

This allows for remote collaboration on a person's computer desktop through a computer software that emulates a graphical terminal.

Desktop Sharing allows for

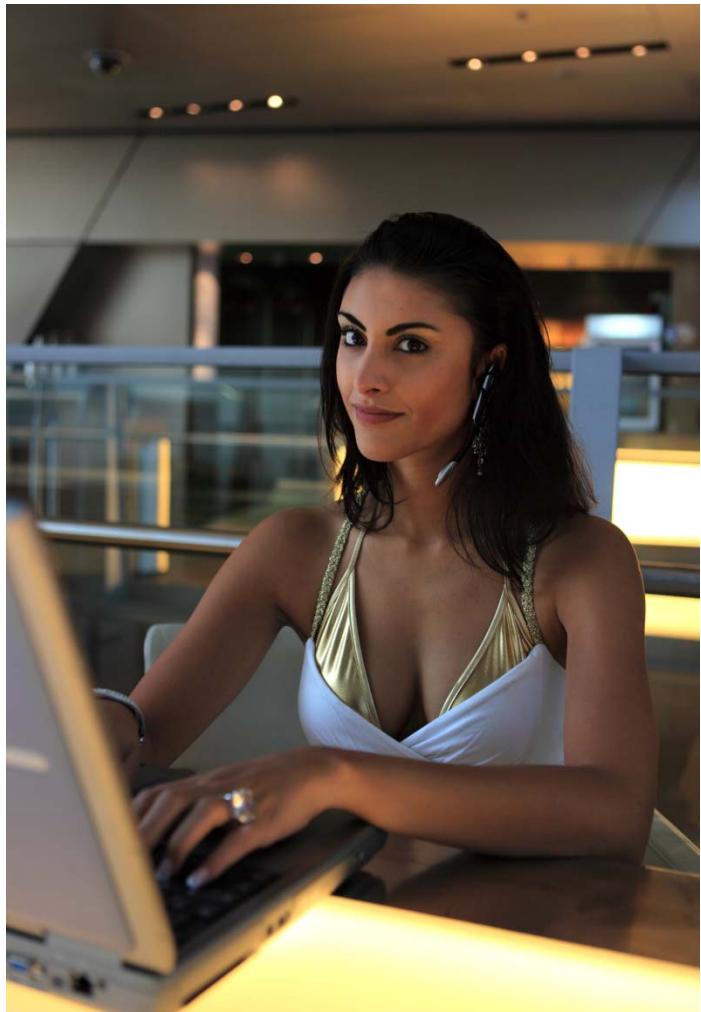
- Online Meetings
- Web Conferencing
- Product Demos
- Online Presentations
- Remote Support
- Webinars

taking place almost anywhere.

All these advantages have lead to widespread use in all kinds of industries.

Desktop Sharing is, except for remote administration of computers, in any case used in conjunction with a telephone.

IP Telephony is being quickly adopted by businesses of any size to reduce travel expenses and to improve the overall quality of internal, as well as external communication.



Softclients (also known as softphones) take advantage of high-speed hardware, audio hardware delivering crystal-clear sound, a high-definition display as well as headsets allowing for hands-free use. The entire hardware is usually already in place.

When using Desktop Sharing on a business trip, for web conferencing or remote support, it is certainly advantageous if the telephone is already in place on the laptop computer. No additional devices are needed and hands-free communication is possible via an already existing internet connection.

Finally a solution is needed that enables designated participants of a web meeting (a desktop sharing session) to create a session without having to read through extensive manuals, e-mails containing invitations and without the need to have a tech-savvy secretary who has everything under control. The e-mail below is typical for the current state of technology:

From: POOR SECRETARY WHO IS FORCED TO SEND INVITATIONS
[mailto:poor_secretary@democorporation.com]
Sent: Thursday, April 1, 2010 15:50
To: Boss, Very Big, Mr.
Subject: Meeting: Freakin' Web Conference
Importance: High

Hi ,

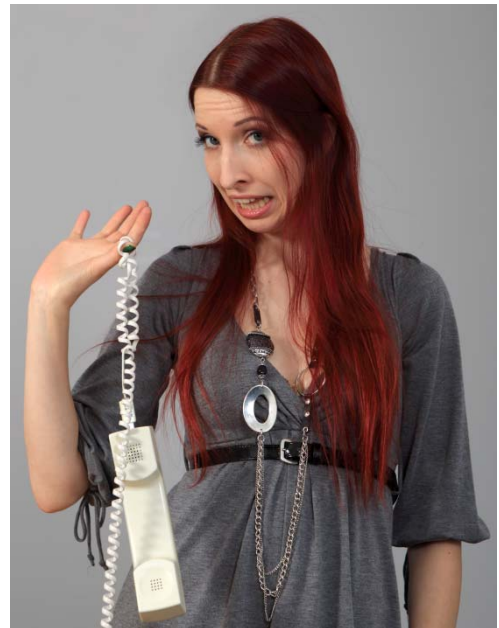
You are invited to join a meeting on the Web, using our old-fashioned Web Conference Software from XYZ. Details for your meeting, which is currently in progress, follow. With this information, joining is supposed to be easy:

MEETING DETAILS

Meeting Number: 0815 4711 911
Meeting Password: please_dont_make_typo
Meeting Host: POOR SECRETARY

Join Instructions for old-fashioned Web Conference:

1. Go to http://find_out_how_that_thing_works.your_software_provider.com/
2. Enter the required fields.
3. Indicate that you have read the Privacy Policy.
4. Click on "Proceed".



2. Desktop-Sharing Solution powered by Ninja

Ninja Pro (CTI) [1] or Ninja Call Enterprise [2] are professional SIP (Session Initiation Protocol) telephones for Windows PCs. Ninja [1], [2] is widely used in call centres, in offices and home offices all over the world.



Features in addition to standard ones like audio/video, 6 lines and transfer include:

- TAPI (32Bit) Support for: Windows 2000/Win2003/XP/VISTA/Windows7
- Outlook CTI AddIn (Outlook 2000,2002,XP,2003,2007, 2010 (ready)
- Exchange, Business Contact Manager compatibility
- Reverse lookup with MS Outlook - Outlook / Exchange / Business Contact Manager
- PHandler CTI: Ninja Pro (CTI) [1] is easy to connect with web browser based CRM software.
- Encrypted telephony [SRTP/TLS/AES encryption]
- Busy Lamp Field (BLF, Direct Station Selection)
- Presencing (Simple Presence)
- Support for Bluetooth- and DECT headsets that enable users to make calls from up to 30m distance

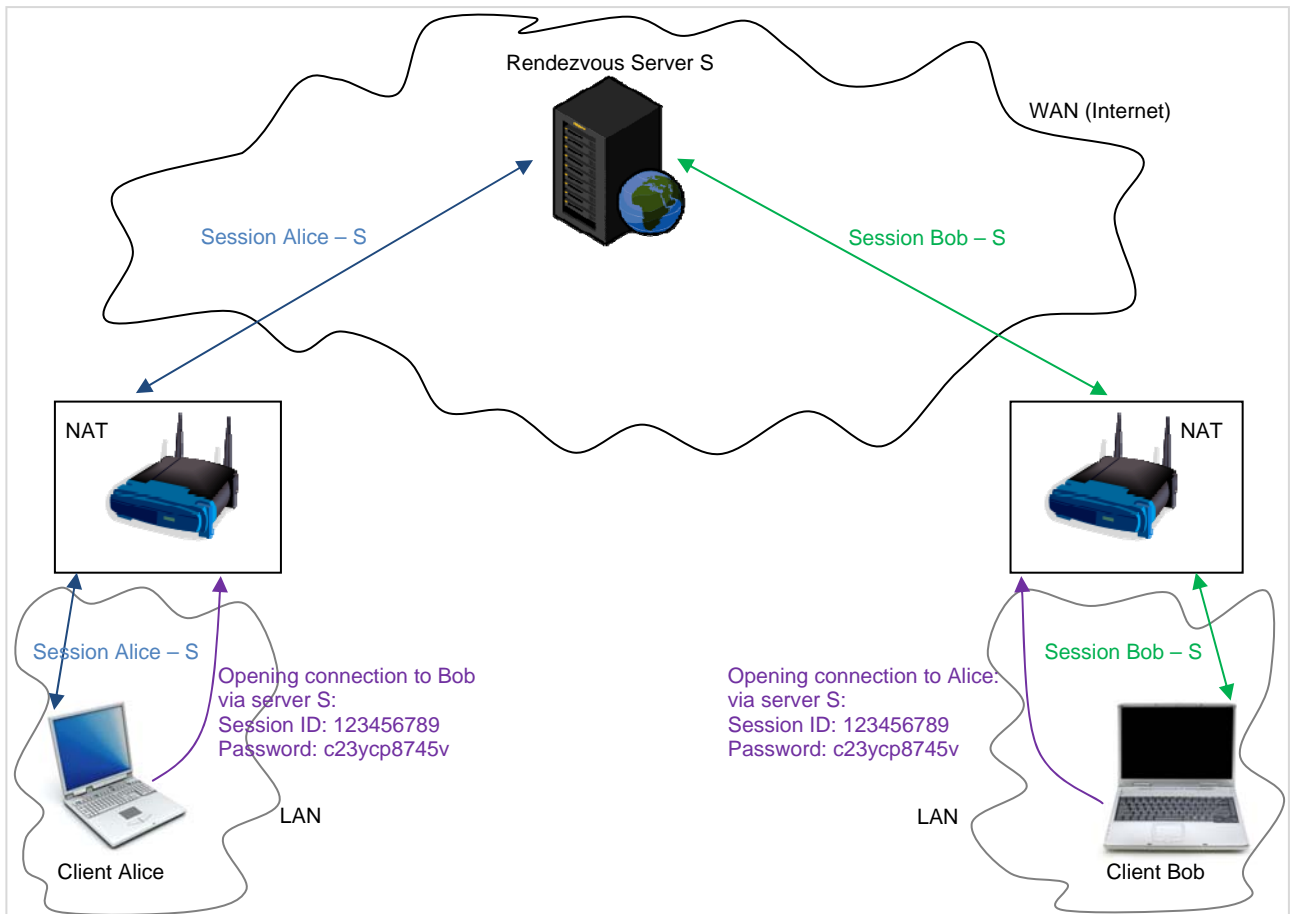
Fastviewer [3] is a Desktop Sharing Tool allowing for effective communication and optimum flow of information in today's business world. Fastviewer [3] enables for making conferences without travel expenses and loss of valuable time to reach meeting locations.



Fastviewer [3] overcomes the shortcoming of traditional remote administration tools for servers (this is for what desktop sharing was actually invented) - the inability to work outside of a single NAT environment. NAT stands for Network Address Translation. All computers in a LAN (Local Area Network) share the same IP address – the one of the network router that connects a LAN to the internet. Network routers typically feature NAT functionality to be able to route data packets from the internet to the correct endpoint in a LAN. Fastviewer [3] connects two remote endpoints residing in different Local Area Networks via a rendezvous server.

In the example below Alice opens a connection to Bob through the NAT in front of Alice's LAN via the Rendezvous Server S. Bob does exactly the same. As both Alice and Bob communicate with a server that is dedicated to relaying a number of Desktop Sharing Sessions and as a request from inside each LAN is

being answered by Server S, both NATs are guaranteed to be open. This mechanism works perfectly in any environment.



All that is still missing is a method to retrieve the credentials of a Desktop Sharing Session.

Ninja [1] [2] is the solution:

If all participants of a telephone conversation are equipped with a professional SIP Softclient that supports Desktop Sharing Session Initiation, the already existing data connection between the SIP Softclients via the SIP server is used to exchange the Desktop Sharing Session Credentials.

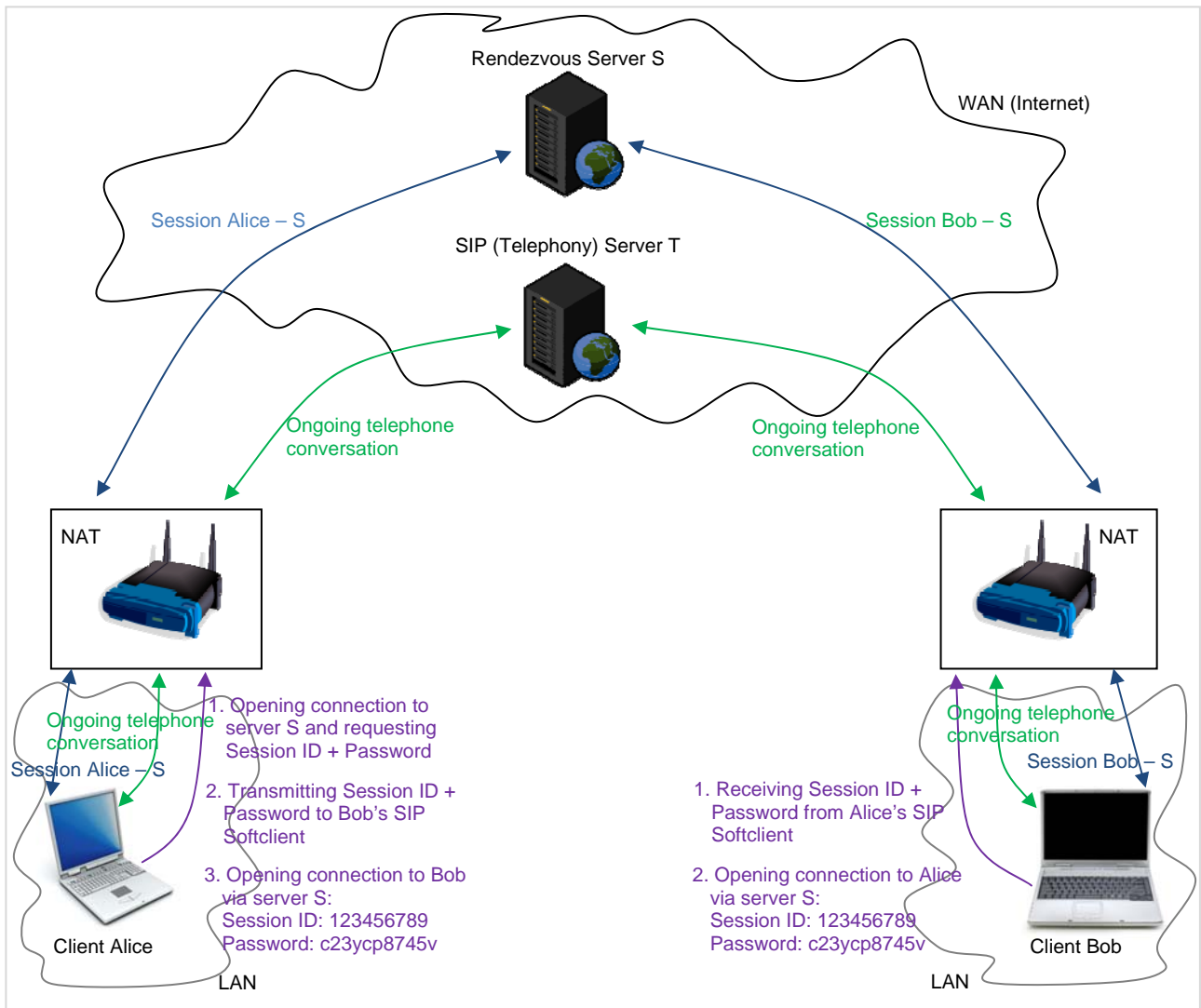
The Session Initiation Protocol (SIP, RFC 3261) allows for the transport of almost any kind of information through Session Initiation Protocol (SIP)-Specific Event Notification (RFC 3265).

Here's an example SIP data packet for Desktop Sharing Session Initiation:

```
INFO sip:200@ alice-phone.example.com:5060 SIP/2.0
Via: SIP/2.0/UDP 87.169.81.208:2465;branch=z8hG1bK077c2a33;rport
To: "Michael Best"<sip:120@ alice-phone.example.com:5060>;tag=243fc263
From: <sip:200@alice-phone.example.com >;tag=48221f3a66802340
Call-ID: MWRhNzU3ODA3MTAACyWODljMzkyOTewYWU1MjVlZGQ.
CSeq: 134 INFO
Max-Forwards: 70
Content-Type: text/plain
Content-Length: 63

<?xml version="1.0" encoding="utf-8"?><DesktopSharing CDD="fw456f43"/>
```

The figure below shows the actual network topology. During an ongoing telephone conversation, Alice's Unified Communication Software requests a new ID for a Desktop Sharing Session. This data is subsequently transmitted via the already established telephony session to all participants. All clients simply join the Desktop Sharing Session without the need for any major interaction with any user.

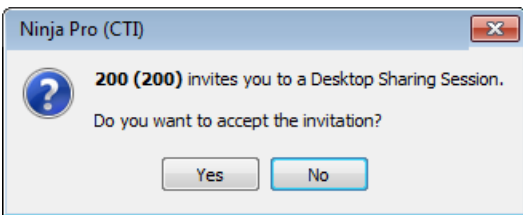
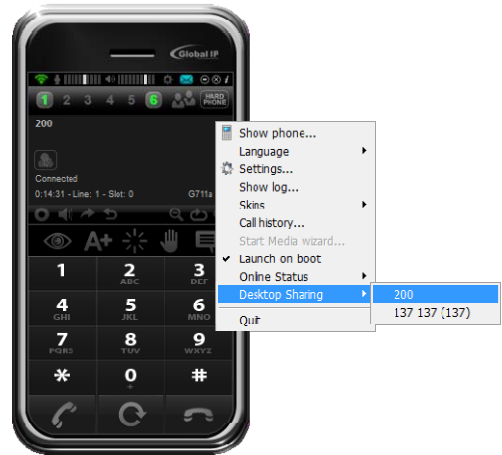


2.1 Intuitive Initiation of Desktop Sharing Sessions with the Ninja SIP Softclient

Ninja Pro (CTI) [1] and Ninja Call Enterprise [2] feature a novel and ground-breaking innovation for the establishment of peer-to-peer collaboration sessions like Web Conferencing (Desktop Sharing):

During a telephone conversation, the users may want to start a Web Conference. The user who wants to share his desktop with his dialog partner simply clicks at the right mouse button in the Ninja User Interface, selects “Desktop Sharing” and his own telephone number.

On the monitor screen of the dialog partner instantaneously appears a window containing a short question: “Do you want to accept the invitation?”



If the dialog partner clicks at “Yes”, he’ll subsequently share the session on the computer of the user who has sent the invitation.

That’s all. The two telephones establish the session. Users don’t need to know about Session IDs, credentials and how to handle all that.

The session ID is still created and exchanged between all participants of a Desktop Sharing Session. Ninja although handles all this automatically.



2.2 Feature-Rich Desktop Sharing with Fastviewer

The Fastviewer [3] servers are located in highly protected data centres and are certified by TÜV SÜD, one of the best known certification bodies in Germany. Fastviewer [3] Desktop Sharing supports https and data is encrypted with 256 bit AES.

Multiscreen functionality

You need more space to work and you just cannot imagine your life without your 2-monitor desktop. Large desktops are supported.

Monitor choice

During a presentation or when watching a desktop sharing session, size of the desktop area can be restricted to one monitor only.

Colored mouse pointer

Your communication partner receives feedback about the position of your mouse pointer through the colour of your mouse pointer.

White board

Important aspects of a presentation can be highlighted through this virtual flipchart. Finally, you can save the result as a bitmap file.

True colour mode

Lossless display in full colour mode with 16 million colors.

URL push

Useful in a vivid discussion: you probably know a web page matching exactly the topic. Simply send the URL directly to all participants.

Chat

Built-in for continuing a communication even without an ongoing phone conversation.

File repository (asynchronous data transfer)

Here it is possible to save required documents to the built-in file repository and to specify which participant(s) have access.

3. Where to purchase the Intuitively Usable Ninja / Fastviewer Desktop Sharing Solution

Ninja can be purchased at www.globaliptel.com or from our dealers. Furthermore you can purchase company licenses from Fastviewer [3] at www.fastviewer.com.

References:

- [1] Global IP Telecommunications website, The Ninja Pro (CTI) SIP Softclient, 2009-2010, <http://www.globaliptel.com/eng/content/Content/Ninja/CTI.html>
- [2] Global IP Telecommunications website, The Ninja Call Enterprise SIP Softclient, 2008-2010, <http://www.globaliptel.com/eng/content/Content/Ninja/call-enterprise.html>
- [3] Fastviewer website, 2010, <http://www.fastviewer.com>

For more information: <http://www.globaliptel.com>

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