

Девятая независимая
научно-практическая конференция
«Разработка ПО 2013»

23 - 25 октября, Москва



Система видеосвязи для невидимого интернета

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ВолГУ

Бессерверные технологии

- Прогноз: стремительный рост количества мини-компьютеров, подключенных к Интернету – миллиарды новых подключений.
- Концепция “умный дом”: необходимы системы видеонаблюдения, дистанционный контроль и управление.
- Требования: отказоустойчивость, масштабируемость.
- Решение: бессерверные технологии.

Сеть I2P - Invisible Internet Project

- Бессерверная.
- Оверлейная.
- Распределённая.
- Масштабируемая.
- Самоорганизующаяся.
- Отказоустойчивая.
- Кроссплатформенная (Java).
- Анонимная?
- С открытым исходным кодом.
- Public Domain – общественное достояние.

Адреса в I2P

Псевдо-доменное имя (Host name)

<http://name.i2p>

Base 64 Destination Key:

VnSWXZ~9x7gz2bWVW8fd85ID1-E5ZvLackuZmlhbOSh~nF~dqAaQSRwx
ZikRAItHhagCs~dMTQOe8oa5SEbti~7LyRD8jcpSbQkSltIxu32c0Rkvwfr8qPu~FvxrM
QB2R-dkMygRreDRfomQaeTFc1oIfdrPvP0XBl~r8SfOVkdQhT0RN-B0hFUeZEj35
POXxLJEewy3EIYzvj7UQNGrGiiuCVjL06qkh7j~mgC9IZP8N2DvCuJlwCn3cB5ms9-
mPwWzBB0HsTGt7yxKHB2hpUUJ0Dfj7C9I06y1jneXzWRq7NNtgZQqH8~82HTc
OG3IB6CyMNxPDJWtzzMI~f4achsNHkjgC8kjaTkMs1HWE7JQFtSjDLlulehZRATyxpjP
JuSvf7UUfksQbmfyImuc~NnT0f0KOtCO15YMveW~05bV4swET8CuqNT4j3Myyq11
rB5MGntaJrt3Jy5Mww1JGOMB6B7sHAvSZhLNE1N9iTCVlaXViqEGcMxJ
pl31j6wAAAA

Base 32 Address:

<http://zmw2cyw2vj7f6obx3msmdvdepdhnw2ctc4okza2zjxlukkdckhq.b32.i2p>

Адресная книга I2P

[HELP & FAQ](#)

[I2P SERVICES](#)

[Email Torrents Website](#)
[SecureMail Seedless](#)

[I2P INTERNALS](#)

[Tunnels Peers Profiles](#)
[NetDB Logs Graphs Stats](#)
[I2PTunnel Addressbook](#)

[GENERAL](#)

Local Identity: [show](#)
Version: 0.9.7.1-0
Uptime: 70 min

Network: OK

[I2P UPDATE](#)

Update Downloaded
Click Restart To Install
Version 0.9.8.1

[Restart](#)

[Shutdown](#)

[PEERS](#)

Active: 25 / 152
Fast: 24
High capacity: 111
Integrated: 523
Known: 665

[BANDWIDTH IN/OUT](#)

I2P ADDRESSBOOK

Address Books: [Private](#) | [Master](#) | [Router](#) | [Published](#) * [Subscriptions](#) * [Configuration](#) * [Overview](#)

Address book: published

Storage: D:\0000Bodrenko-net\BODRENKO-NETWORK\i2p\i2p\eebsite\docroot\hosts.txt

Address book contains 3,134 entries. Showing 1-50 of 3,134 | [51-100](#)

Filter: [a](#) [b](#) [c](#) [d](#) [e](#) [f](#) [g](#) [h](#) [i](#) [j](#) [k](#) [l](#) [m](#) [n](#) [o](#) [p](#) [q](#) [r](#) [s](#) [t](#) [u](#) [v](#) [w](#) [x](#) [y](#) [z](#) [0-9](#) [other](#) [all](#)

Search:

Search

	Name	Links	
<input type="checkbox"/>	0.5.forum.i2p	b32 details	<input type="text" value="9rhEy4dT9fM1cSOhDzfWRxCV2aen4Zp4eSthOf5f9gVK"/>
<input type="checkbox"/>	0.5life.i2p	b32 details	<input type="text" value="YuOMMchBq8C1GbM4cy-DLfYpW0DLTfeXkAVU93rXzsMU"/>
<input type="checkbox"/>	0.i2p	b32 details	<input type="text" value="bukW~CZzNzIG83o0DK0-YJOf19zDVZ5snAnmZhByfWkV"/>

Детали



I2P ADDRESSBOOK

Address Books: [Private](#) | [Master](#) | [Router](#) | [Published](#) * [Subscriptions](#) * [Configuration](#) * [Overview](#)

Address book: published

Storage: D:\0000Bodrenko-net\BODRENKO-NETWORK\i2p\i2p\eebsite\docroot\hosts.txt

Host Name	0.5.forum.i2p
Base 32 Address	3bnipzzu67cdq2rcygyxz52xhvy6ylokn4zfrk36ywn6pixmaoza.b32.i2p
Base 64 Hash	2FqH5zT3xDhqlsGxfPdXPXHsLcpvMlirfsWb56LsA7l=
Address Helper	link
Public Key	EIGamal 2048 bit
Signing Key	DSA 1024 bit
Certificate	None
Added Date	

HELP & FAQ

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Tunnels Peers [Profiles](#)
NetDB Logs Graphs Stats
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GENERAL

Local Identity: [show](#)
Version: 0.9.7.1-0
Uptime: 70 min

Network: OK

I2P UPDATE

Update Downloaded
Click Restart To Install
Version 0.9.8.1

PEERS

Active: 25 / 152
Fast: 24
High capacity: 111
Integrated: 523
Known: 665

BANDWIDTH IN/OUT

Туннели в I2P



HELP & FAQ

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I2PTunnel Addressbook

GENERAL

Local Identity: [show](#)
Version: 0.9.7.1-0
Uptime: 66 min

Network: OK

I2P UPDATE

Update Downloaded
Click Restart To Install
Version 0.9.8.1

[Restart](#) [Shutdown](#)

PEERS

Active: 21 / 99
Fast: 24
High capacity: 38
Integrated: 523
Known: 665

BANDWIDTH IN/OUT

I2P TUNNEL SUMMARY

EXPLORATORY TUNNELS (CONFIGURE)

In/Out	Expiry	Usage	Gateway	Participant	Endpoint
↓	5 min	129 KB	4PmY 29041797 O	41-1 3511512631 O	27398135
↓	3 min	248 KB	7YSW 3848550471 O	no~ 505444402 L	4012484865
↑	6 min	120 KB	3660355928	bZpv 2578165605 O	zR18 O
↑	939 ms	523 KB	927861222	mdQR 2541909929 O	1zOG O
↑	3 min	387 KB	37264672	s1Y7 3434833199 O	VjTp O

Lifetime bandwidth usage: 5,88 MB in, 10,24 MB out

CLIENT TUNNELS FOR I2P-BOTE (CONFIGURE)

In/Out	Expiry	Usage	Gateway	Participant	Endpoint
↓	5 min	85 KB	4b3i 3144620839 O	507a 2214098962 O	2204123139
↓	5 min	171 KB	zDG7 140905882 O	8n9J 641060441 O	574747495
↑	6 min	74 KB	2650849272	41-1 1101796209 O	bE6F N
↑	7 min	90 KB	1438127426	no~ 3673427929 L	ZIaf O

Lifetime bandwidth usage: 3,16 MB in, 4,41 MB out

CLIENT TUNNELS FOR I2P WEBSERVER (CONFIGURE)

In/Out	Expiry	Usage	Gateway	Participants	Endpoint
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Пирры



HELP & FAQ

I2P SERVICES

Email Torrents Website
SecureMail Seedless

I2P INTERNALS

Tunnels Peers Profiles
NetDB Logs Graphs Stats
I2PTunnel Addressbook

GENERAL

Local Identity: [show](#)
Version: 0.9.7.1-0
Uptime: 69 min

Network: OK

I2P UPDATE

Update Downloaded
Click Restart To Install
Version 0.9.8.1

[Restart](#) [Shutdown](#)

PEERS

Active: 17 / 193
Fast: 24
High capacity: 150
Integrated: 523
Known: 665

BANDWIDTH IN/OUT

I2P NETWORK PEER PROFILES

High Capacity | **Floodfill** | Banned | All

Showing 22 recent profiles. Hiding 128 older profiles. **Hiding 65 standard profiles.**

Peer	Groups (Caps)	Speed	Capacity	Integration	Status
-IXR	Fast, High Capacity, Integrated (NfR 0.9.7.1)	2 443,98	5,48	23,00	profile +-
-gzB	Fast, High Capacity (OR 0.9.8)	1 219,06	5,46	1,00	profile +-
41-1	Fast, High Capacity, Integrated (OfR 0.9.8.1)	801,57	11,76	32,00	profile +-
4r2M	Fast, High Capacity (LR 0.9.7.1)	0,00	8,95	0,00	profile +-
507a	Fast, High Capacity (OfR 0.9.7.1)	1 089,98	21,30	13,00	profile +-
8D7~	Fast, High Capacity, Integrated (OfR 0.9.5)	8 753,54	5,53	65,00	profile +-
8n9J	Fast, High Capacity, Integrated (OfR 0.9.7.1)	859,28	5,60	54,00	profile +-
09XV	Fast, High Capacity, Integrated (OfR 0.9.8)	1 398,87	6,35	43,00	profile +-
S1Y7	Fast, High Capacity (OR 0.9.8)	37,86	18,37	1,00	profile +-
aCvj	Fast, High Capacity (OR 0.9.8)	645,39	18,19	0,00	profile +-
ap3Q	Fast, High Capacity (LR 0.9.8)	0,00	6,47	0,00	profile +-
bE6F	Fast, High Capacity (NR 0.9.5)	1 279,23	14,94	0,00	profile +-
bZpv	Fast, High Capacity (OR 0.9.7.1)	8,63	9,02	0,00	profile +-
gdYT	Fast, High Capacity (OR 0.9.7)	0,00	6,55	0,00	profile +-
mdQR	Fast, High Capacity (OfR 0.9.7.1)	16,83	7,82	0,00	profile +-
no~	Fast, High Capacity (LR 0.9.8)	938,88	15,27	0,00	profile +-

Проблемы сети I2P

- Сложность настройки проекта I2P.
- Большое время для интеграции в сеть I2P.
- Низкая скорость работы сети I2P.
- Многие сайты I2P находятся в оффлайне.

Работа сайта в сети I2P

Файл сайта: index.html

Компьютер



Корневая папка: ... \i2p\leepsite\docroot\index.html

Сеть I2P



<http://3bnipzzu67cdq2rcygyxz52xhvy6ylokn4zfrk36ywn6pixmaoza.b32.i2p/index.html>

Интернет-браузер для сети I2P

Paste here i2p name Sample: eepsites.i2p

Paste here BASE-64 i2p Destination key:

Sample: jvsLWVLaJFWDE-K8ReYgJ6~E6.....yCAAAA

Enter unique address of I2P NETWORK:
Sample: http://uam6xw7jlldbcdk5wqdfmwnkcmh5a3s32vt.dk6bny5jxc6nsuva.b32.i2p or http://-eepsites.i2p

MODE: I2P NETWORK MODE

eepsites 

Samples **Filter Level** **Contact Info** **Login** Pwd:

[Check eepsite uptime!](#)
Verify favorite sites
Find reliable ones!
[Inproxy.Tino.i2p/](#)

[EMail Anonymously!](#)
Defy your boss - email it!
Send/Recv anon email
[HQ.Postman.i2p](#)

What are eepSites?
An eepSite is a website that is hosted anonymously - you can access it by setting your web browser to use the I2P proxy. Try our "How To" [Quick Start I2P Setup](#) to access anonymous eepSites now!

[I2P Network Statistics](#)
Tunnel Build Success
Cool Network Graphs!
[stats.i2p](#)

[Another Searcher!](#)
YACY Search Engine
I2P from I2P Only!
[yacysrch.i2p](#)

[Advanced Search](#) [Help](#)

Last 10 Searches	Last m:s	#	Your IP: Anonymous
PGP	4:41	577	50.x.x.180
Software	5:27	3241	Anonymous
Free	5:27	1040	Anonymous
search engine -renegade	15:52	399	Anonymous
video	22:44	587	37.x.x.97
tube	22:44	11	Anonymous
search engine	22:45	423	Anonymous
i2p site list	22:45	418	Anonymous
http://duck.i2p/bittorrent/	22:46	24	50.x.x.180
deep web	22:46	27	41.x.x.98

I2P + мини-компьютер

Роутер



Мини-компьютер с I2P
24/7



Развитие технологии

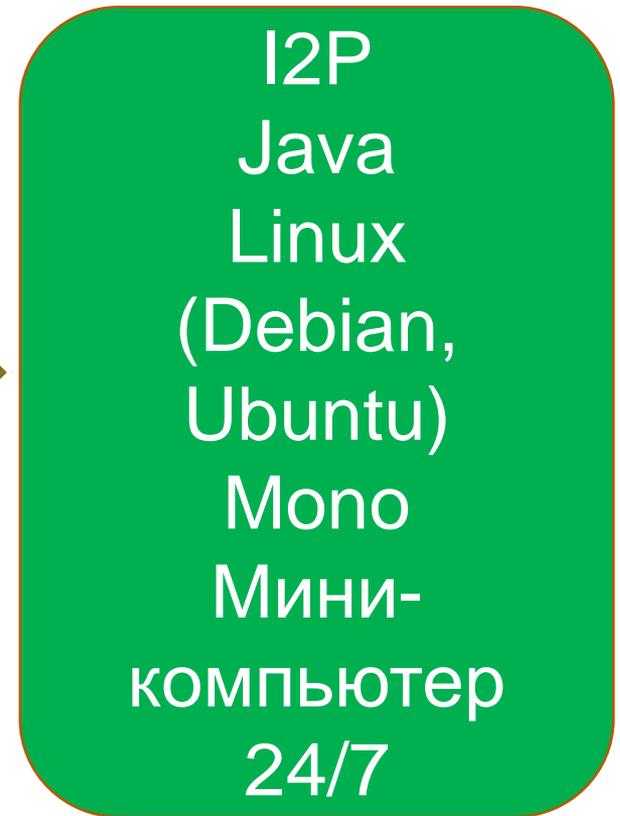
Сейчас:



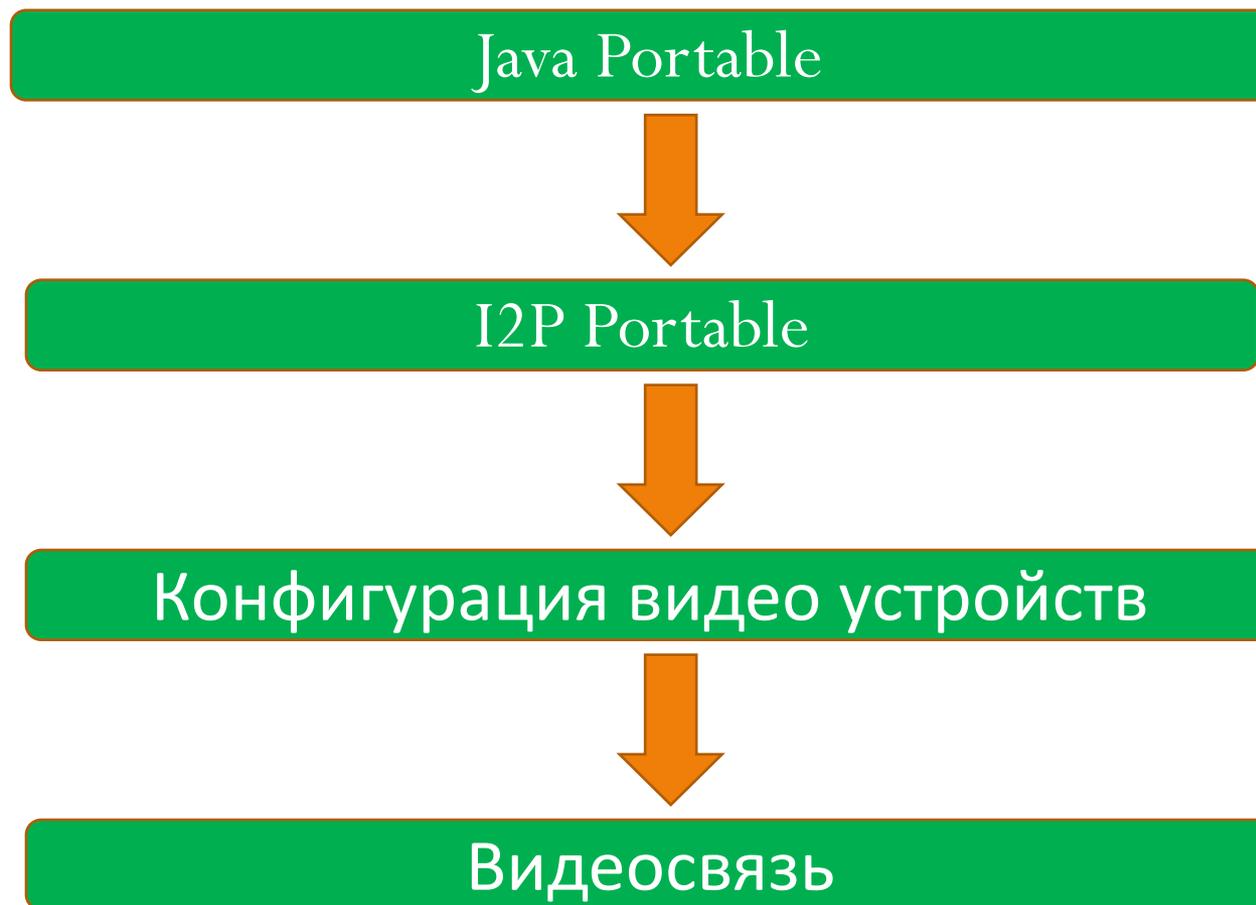
Уменьшение
стоимости
эксплуатации



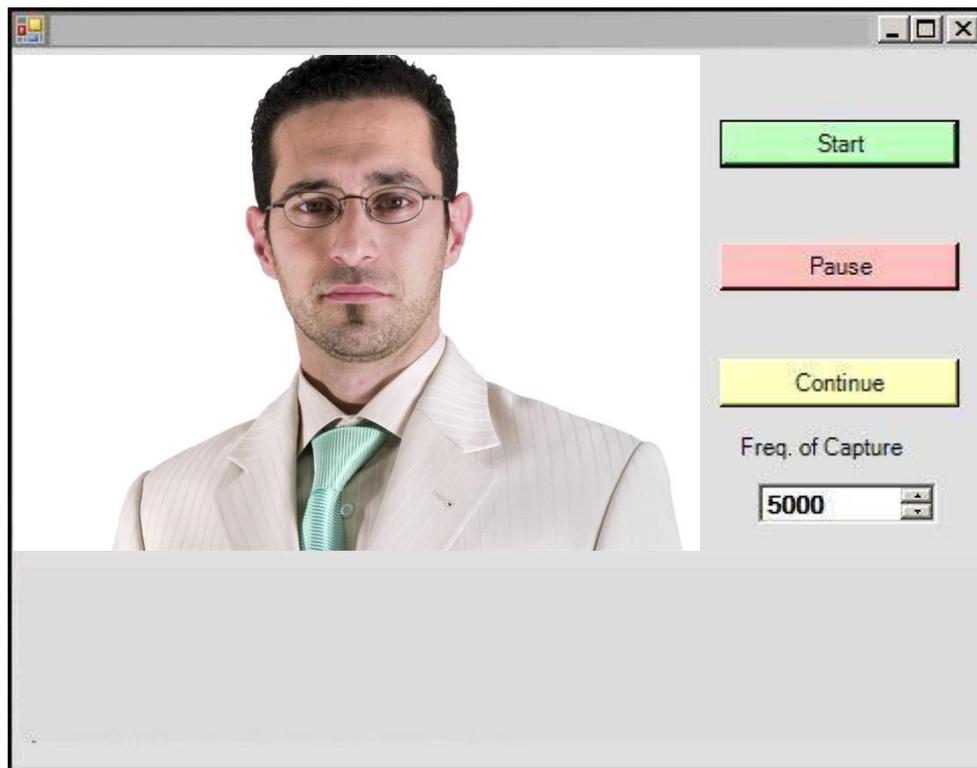
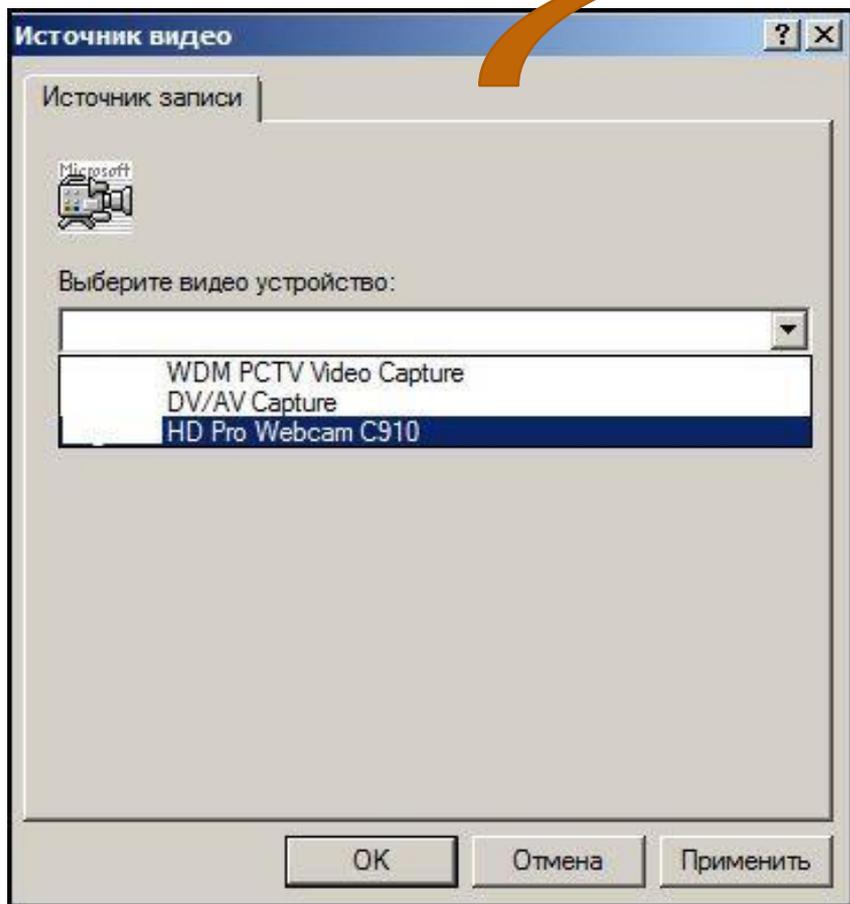
Перспектива:



Система видеосвязи в I2P



Конфигурация видео устройств



Видеосвязь в I2P

Delete your address and get NEW (not recommended)
It takes 5-10 minutes to get NEW address and register it!

START I2P
It takes 2-5 minutes!

SHUTDOWN I2P

MODE: I2P

INFORMATION/HELP

I2P NETWORK MODE

I2P Video Calling System

Enter unique address of I2P NETWORK which has been set!
Sample: <http://uam6xw7jlldbcdk5wqdfmwnkcmh5a3s32vtdk6bny5jxc6nsuva.b32.i2p>

60000 SET HERE
milliseconds per cadre

http://

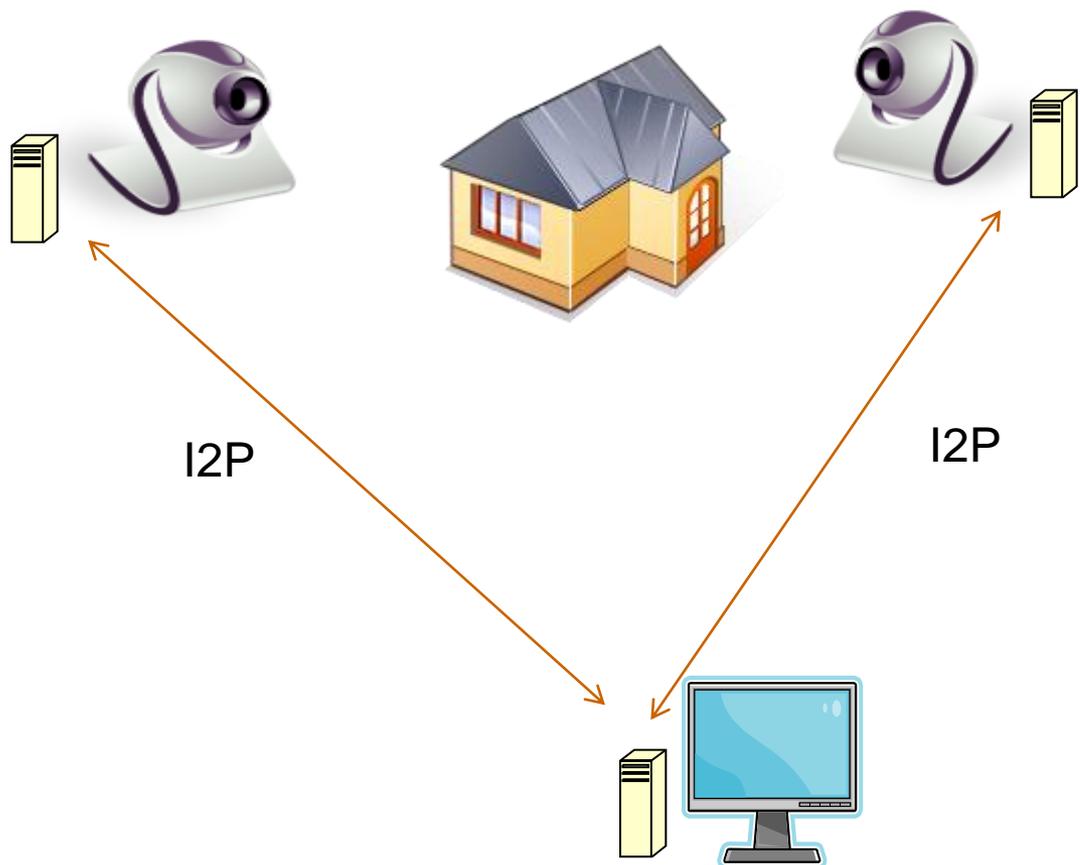
Your current b32.i2p address! Send it to another user by email, etc.



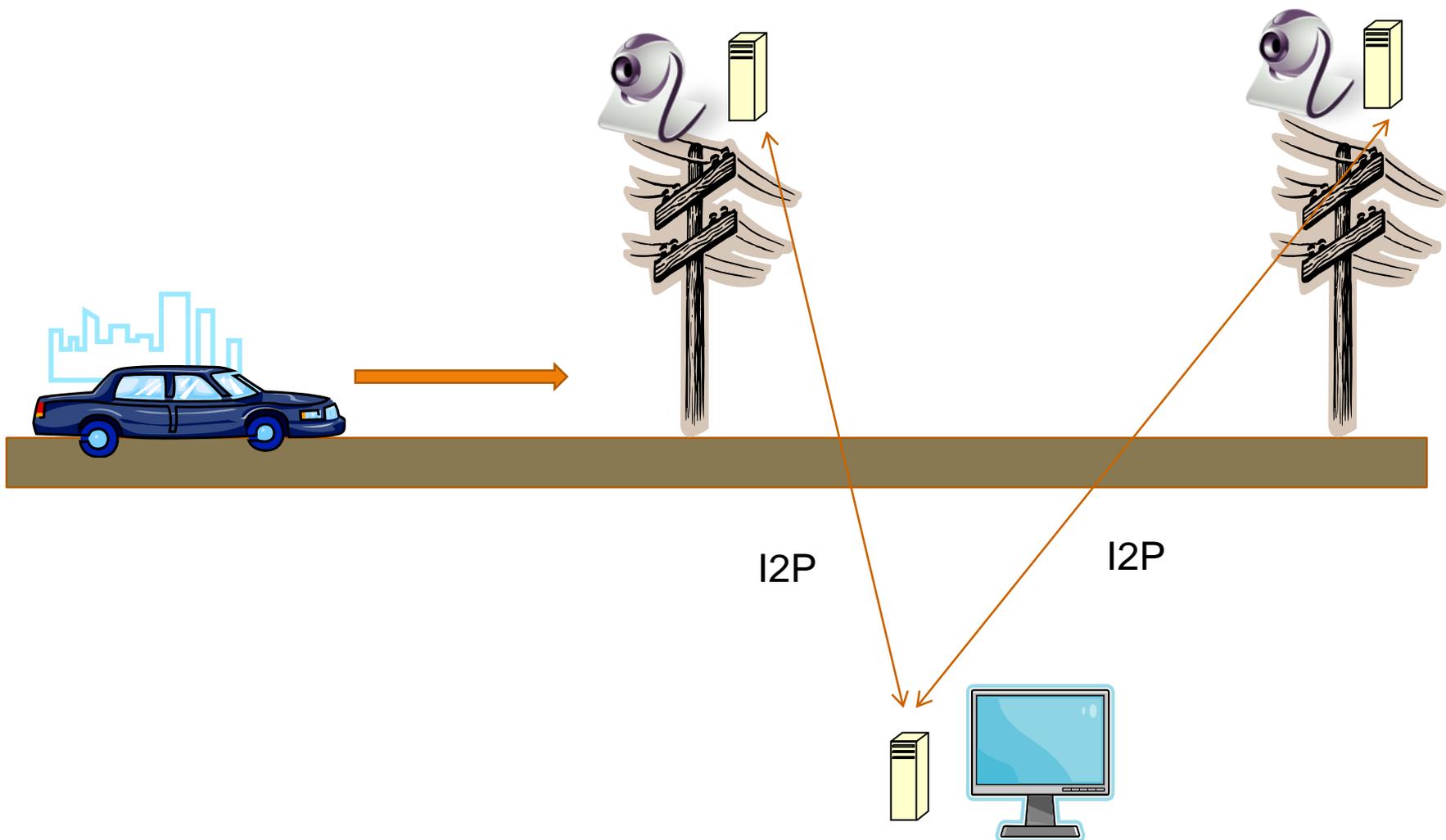
Передача видео



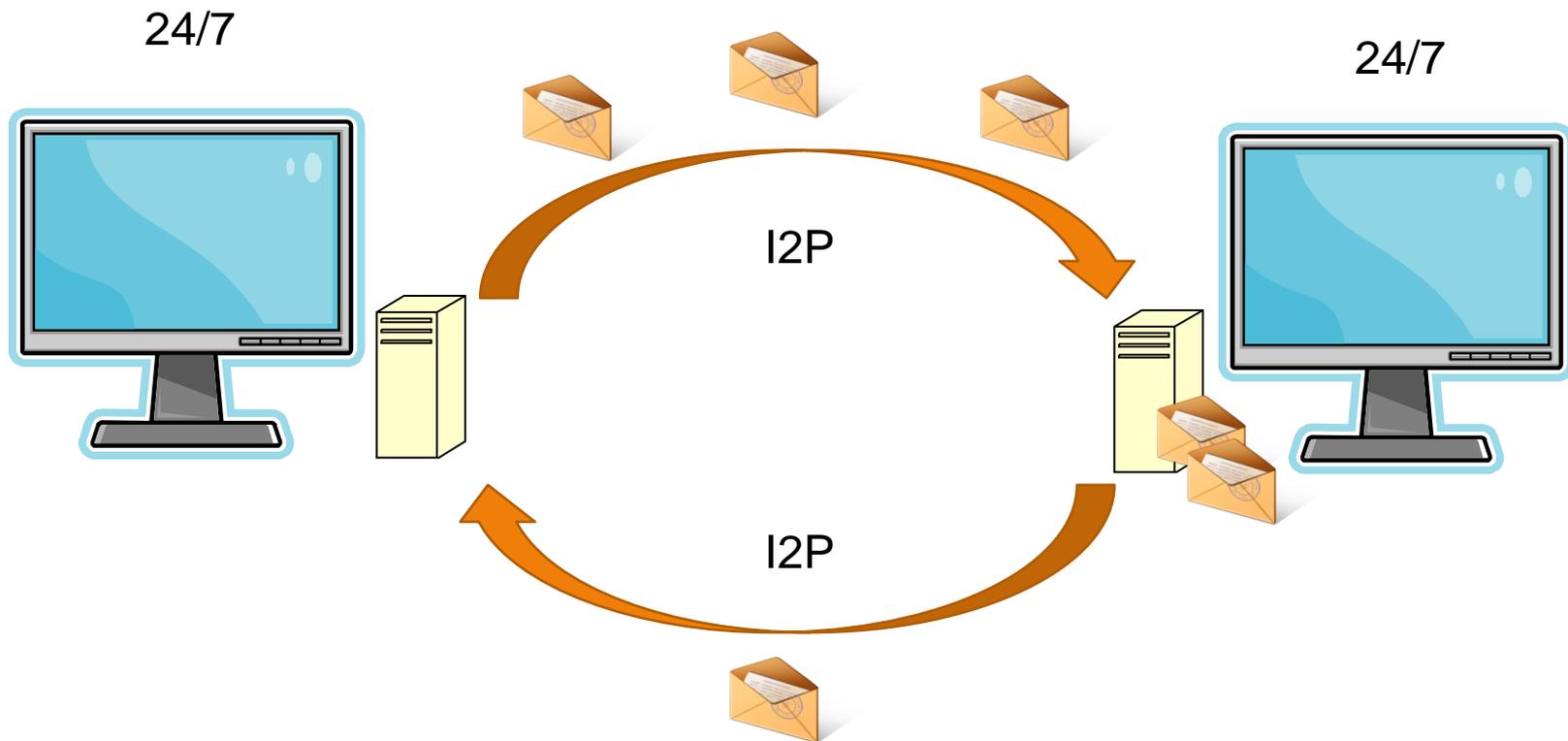
Бессерверные системы видеонаблюдения



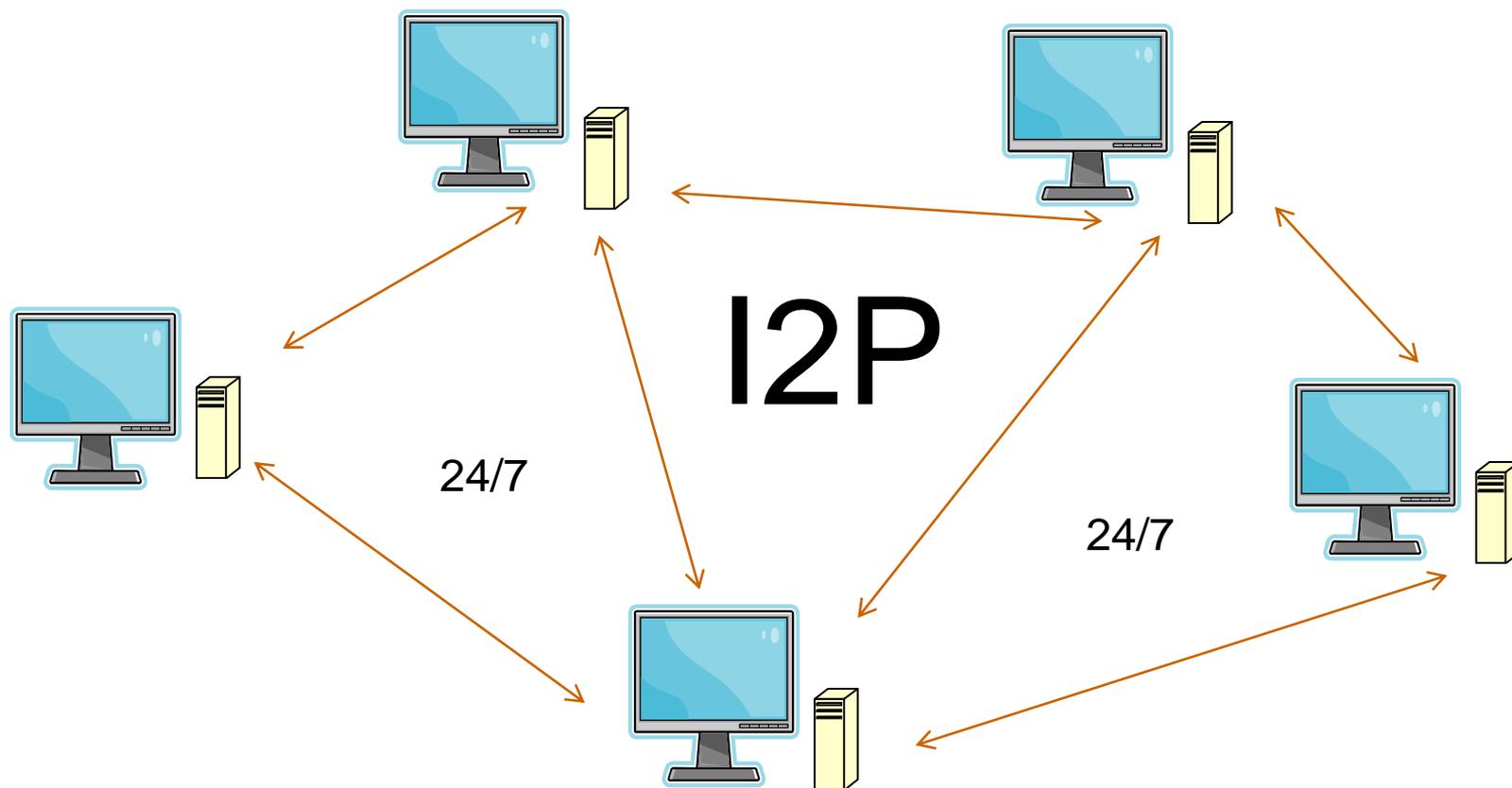
Бессерверное видеонаблюдение



Бессерверная электронная почта



Бессерверная VPN



Обмен данными

Компьютер 1

Компьютер 2

in1.html

in2.html

Обработка данных

Обработка данных

...\eepsite\docroot\out1.html

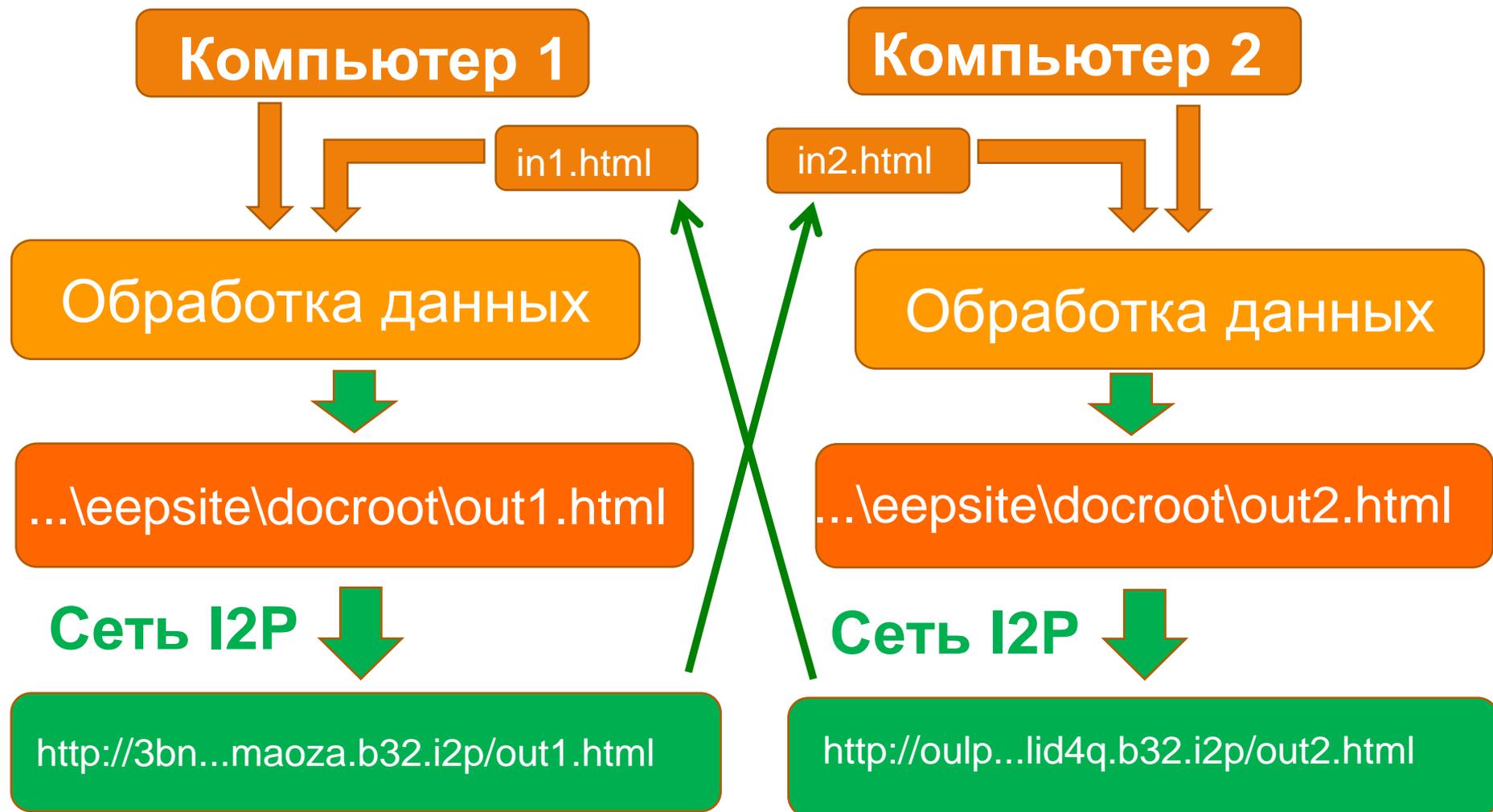
...\eepsite\docroot\out2.html

Сеть I2P

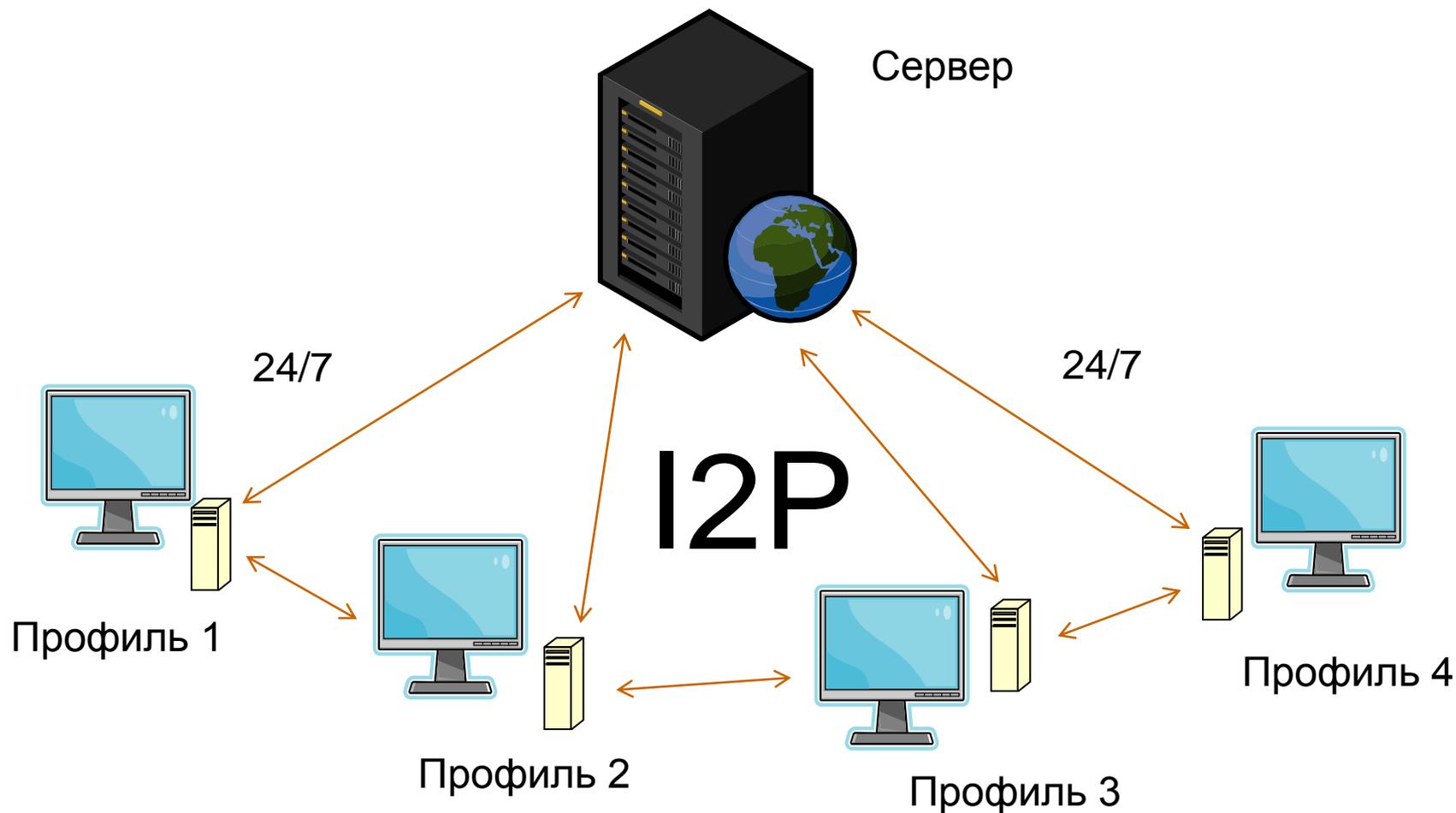
Сеть I2P

<http://3bn...maoza.b32.i2p/out1.html>

<http://oulp...lid4q.b32.i2p/out2.html>



Социальная сеть + бессерверные технологии



Развитие Интернета

Web, Web 2.0, Web 3.0 ... ?



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Спасибо за внимание!

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