Настройка сетевых соединений

Документ содержит описание настройки VPN соединений для тестирования сервиса при подключениях через сеть Интернет. Промышленные подключения доступны только через выделенные каналы передачи данных.

1.1. Настройка VPN соединения с MOEX на базе Windows XP

Для настройки VPN соединения необходимо выполнить следующее:

- 1. Убедитесь, что Internet подключен;
- 2. Нажмите Start, перейдите в Control Panel;

	👺 Control Panel			
	Eile Edit View Favorites Tool:	Help		A.
	🕝 Back 👻 🕤 🕈 🏂 🔎 Si	arch 😥 Folders 🛛 🎹 🖌 📋	📔 🍤 🗙 🥵 Folder Sync	
	Address 🔂 Control Panel			💌 🔁 Go
		Name 🔺	Comments	
	See Also 🏾 🕆	🐻 Add or Remove Programs	Install or remove pr	
	Mindeur Undako	🎲 Administrative Tools	Configure administr	
	windows opdate	🍓 Automatic Updates	Set up Windows to	
	Help and Support	Configuration Manager	View or Edit Configu	
		ADate and Time	Set the date, time,	
		💁 Display	Change the appear	
		Folder Options	Customize the displ	
		C Fonts	Add, change, and	
		Same Controllers	Add, remove, and c	
		🚑 Indexing Options	Change how Windo	
		Internet Options	Configure your Inte	
		a Keyboard	Customize your key	
		🥘 Mail	Microsoft Outlook P	
		Moase	Customize your mo	
		Network Connections	Connects to other c	
		Phone and Modern Options	Configure your tele	
		Power Options	Configure energy-s	
		Sa Printers and Faxes	Shows installed prin	
		📑 Program Download Monitor	Manages downloadi	
		C QuickTime	Configures QuickTi	
		() Realtek HD Sound Effect Manager	Realtek HD Audio C	
		Regional and Language Options	Customize settings	
		Remote Control	Configures remote	
		Run Advertised Programs	Runs advertised pr	-1
3. B Control Panel, двойной щелчок на Network Connections	Connects to other computers, networks,	and the Internet.		

	Setwork Connections			- 🗆 ×
	<u>File Edit View Favorites I</u> c	ols Adva <u>n</u> ced <u>H</u> elp		.
	🌀 Back 🝷 🕥 - 🏂 🔎	Search 😥 Folders 🛛 🎹 🖌 📋	📔 🍤 🗙 😽 Folder Syr	nc
	Address 🔇 Network Connections		-	🕑 🕞 Go
		▲ Name	Туре	Status
	Network Tasks 🛛 🕆	LAN or High-Speed Internet		
	Create a new connection Change Windows Firewall settings	🕹 Local Area Connection	LAN or High-Speed Inter	Connected
	See Also 🏾 🕆			
	 Network Troubleshooter 	_		
	Other Places *			
	🚱 Control Panel			
	S My Network Places	- (I		F
4. Выберите <i>Create a new connection</i> в <i>Network Tasks</i> :	2 objects			1.

5. В открывшемся помощнике Network Connection Wizard, нажмите Next:



6. Выберите Connect to the network at my workplace и нажмите Next:

New Connection W	lizard
------------------	--------

Network Connection Type What do you want to do?



C Connect to the Internet Connect to the Internet so you can browse the Web and read email.

Connect to the network at my workplace Connect to a business network (using dial-up or VPN) so you can work from home,

a field office, or another location.

C Set up an advanced connection

Connect directly to another computer using your serial, parallel, or infrared port, or set up this computer so that other computers can connect to it.

< <u>B</u> ack	<u>N</u> ext>	Cancel



7. Выберите Virtual Private Network connection и нажмите Next:

8. Введите название в поле *Company Name* (e.g. MOEX VPN Connection), и нажмите Next:

w connection wizard			
Connection Name Specify a name for this connection to yo	our workplace.		S
Type a name for this connection in the fo	llowing box.		
Company N <u>a</u> me			
MICEX VPN Connection			
For example, you could type the name of will connect to.	your workplace or the	name of a server you	i

9. Выберите Do not dial the initial connection, и нажмите Next:

Public N	etwork	re the public ne	twork is connecte	d first	E
WIIIO	JWS Call Make su	re the public he	WOIN IS CONNECCE	u hist.	A.
Windonetwo	ows can automati irk, before establi	cally dial the inil shing the virtual	ial connection to t connection.	he Internet or othe	r public
œ	Do not dial the i	nitial connectio	n]		
С	Automatically di	al this initial con	nection:		
					Ŧ
			10		
			< Back	Next>	Cancel

10. Введите IP адрес <адрес VPN сервера>, и нажмите Next:

New	Connec	tion '	Wizard	

VPN Server Selection What is the name or address of the VPN server?



Type the host name or Internet Protocol (IP) address of the computer to which you are connecting.

Host name or IP address (for example, microsoft.com or 157.54.0.1):

Ne	ew Connection Wizard
	Connection Availability You can make the new connection available to any user or only to yourself.
	A connection that is created for your use only is saved in your user account and is not available unless you are logged on. Create this connection for:
11. Выберите <i>My use only</i> и нажмите <i>Next</i> :	< <u>B</u> ack <u>N</u> ext > Cancel

Completing the New Connection Wizard You have successfully completed the steps needed to create the following connection: MICEX VPN Connection
The connection will be saved in the Network Connections folder.
To create the connection and close this wizard, click Finish.

12. Нажмите Finish, создание нового соединения завершено:

User name:	1
191	

- 13. Не заполняете поля User name и Passwod, нажмите Properties.
- 14. Перейдите на закладку Security, выберите Advanced (custom settings) и нажмите Settings...:

	Jupical (recommended settings) /alidate my identity as follows:
 1 1	Automatically use my Windows logon name and password (and domain if any) Require data encryption (disconnect if none)
•	Advanced (custom settings) Using these settings requires a knowledge <u>S</u> ettings
	I <u>P</u> Sec Settings

15. В выпадающем списке Data encryption выберите Optional encryption (connect even if no encryption) и нажмите OK:

ional e	ncryption (connect even if no encryption)	
gon se	ecurity	
Use	Extensible Authentication Protocol (EAP)	
		Ψ.
	Properties	
Allow	these protocols	
	Inencrypted password (PAP)	
	Shiva Password Authentication Protocol (SPAP)	
	Challenge Handshake Authentication Protocol (CHAP)	
	Microsoft CHAP (MS-CHAP)	
J	Allow older MS-CHAP version for Windows 95 serve	rs
I ک	djcrosoft CHAP Version 2 (MS-CHAP v2)	
Γį	or MS-CHAP based protocols, automatically use my Windows logon name and password (and domain if any)	

16. На закладке Networking в выпадающем списке Type of VPN выберите PPTP VPN и нажмите OK:

MICEX VPN Connecti	ion Properties	?
General Options Sec	urity Networking Advanc	ed]
Type of VPN:		
PPTP VPN		•
		<u>S</u> ettings
This connection uses t	he following items:	
Internet Protoco	ol (TCP/IP)	
File and Printer	Sharing for Microsoft Netwo	rks
□ 📑 File and Printer ☑ 📑 QoS Packet Sc □ 🖾 Client for Micro:	Sharing for Microsoft Netwo cheduler soft Networks	rks
☐ ₽ File and Printer ☑ ₽ QoS Packet So ☐ ₽ Client for Micros	Sharing for Microsoft Netwo cheduler soft Networks	ks
□ 📮 File and Printer ☑ 📮 QoS Packet Sc □ 🛄 Client for Micros	Sharing for Microsoft Netwo cheduler soft Networks	rks
Pile and Printer File and Printer Q Q OS Packet Sc Client for Micros Install	Sharing for Microsoft Networ cheduler soft Networks	P <u>r</u> operties
■ File and Printer ■ QoS Packet Sc ■ Client for Micros Install Description Transmission Control wide area network p across diverse interce	Sharing for Microsoft Networ cheduler soft Networks <u>Uninstall</u> I Protocol/Internet Protocol. ⁷ rotocol that provides communiconnected networks.	rks P <u>r</u> operties
■ File and Printer ■ QoS Packet Sc ■ Client for Micros Install Install Description Transmission Control wide area network practors diverse intercommented across dintercommented across diverse intercommented	Sharing for Microsoft Networ cheduler soft Networks <u>Uninstall</u> I Protocol/Internet Protocol. ⁷ rotocol that provides commu connected networks.	rks Properties

1.2. Настройка VPN соединения с MOEX на базе Windows 7

- 1. Убедитесь, что Internet подключен.
- 2. Откройте *Control Panel→Network and Internet→Network and Share Center* и выберите *Set up a new connection or network*:



3. Выберите Connect to a workplace и нажмите OK:





4. Выберите No, create a new connection и нажмите Next

5. Нажмите Use my Internet Connection (VPN):

🚱 🔚 Connect to a Workplace	
How do you want to connect?	
Use my Internet connection (VPN) Connect using a virtual private network (VPN) connection through the Internet.	
🔊 — 🎱 — 🕪	
Dial directly Connect directly to a phone number without going through the Internet.	
ing ing ing ing	
What is a VPN connection?	
	Cancel

6. Введите <agpec VPN cepвepa> в поле Internet address, введите MOEX VPN Connection в поле Destination name, выберите Don't connect now; just set it up so I can connect later и нажмите Next:

🕝 🗽 Connect to a Workp	lace	
Type the Internet a	ddress to connect to	
Your network administra	ator can give you this address.	
Internet address:		j
D <u>e</u> stination name:	MICEX VPN Connection]
Use a <u>s</u> mart card () <u>A</u> llow other peop This option allov <u>V</u> <u>D</u> on't connect ne	ole to use this connection vs anyone with access to this computer to use this connection. ow; just set it up so I can connect later	
	Ne	xt Cancel

7. Оставьте следующее окно без изменений и нажмите Next:

	ice	
Type your user nam	e and password	
<u>U</u> ser name:		
Password:		
	Show characters	
	Remember this password	
<u>D</u> omain (optional):		
		<u>Create</u> Cancel

		O	Connect to a Workplace	
		Th	e connection is ready to use	
			i i i	
			Connect now	
			N	
8.	Нажмите Close:			Close

9. Откройте Control Panel→Network and Internet→Network and Share Center и нажмите Change adapter setting:





10. Откройте Properties для только что созданного соединения:

11. На закладке Security выберите в выпадающем списке Type of VPN - Point to Point Tunneling Protocol (PPTP), выберите в выпадающем списке Data encryption - Optional encryption (connect even if no encryption) и нажмите OK:

	y Networking Sharing
Type of VPN:	
Point to Point Tunneling F	Protocol (PPTP)
Data encryption:	Advanced settings
Optional encryption (conn	ect even if no encryption)
Authentication	
O Use Extensible Authe	ntication Protocol (EAP)
	Ŧ
<u> 7</u>	Properties
Allow these protocols	· · · · · · · · · · · · · · · · · · ·
Allow these protocols	
Allow these protocols	
Allow these protocols Unencrypted pass	word (PAP)
 Allow these protocols Unencrypted pass Challenge Handsh 	word (PAP) iake Authentication Protocol (CHAP)
 Allow these protocols Unencrypted pass Challenge Handsh Microsoft CHAP V 	word (PAP) nake Authentication Protocol (CHAP) ersion 2 (MS-CHAP v2)
Allow these protocols	

1.3. Настройка VPN соединения с MOEX на базе OpenSUSE

- 1. Убедитесь, что Internet подключен;
- 2. Установите *pptp* клиент, используя следующие команды:

sudo zypper install pptp

3. Выполните следующую команду:

sudo /usr/sbin/pptp-command setup

4. Введите '4' и нажмите enter:

1.) Manage CHAP secrets
2.) Manage PAP secrets
3.) List PPTP Tunnels
4.) Add a NEW PPTP Tunnel 5.)
Delete a PPTP Tunnel
6.) Configure resolv.conf
7.) Select a default tunnel
8.) Quit
?: 4 + <enter>

5. Введите '1' и нажмите enter:

Add a NEW PPTP Tunnel.

1.) Other
Which configuration would you like to use?: 1 + <enter>

6. Введите 'MOEX vpn connection' и нажмите enter:

Tunnel Name: MOEX_vpn_connection + <enter> 7. Введите <адрес VPN сервера> и нажмите enter:

Server IP: <agpec VPN cepsepa> + <enter>

8. Введите 'del default' и нажмите enter:

route: del default + <enter>

9. BBEAUTE 'add default gw 1.1.1.1 TUNNEL_DEV' И НАЖМИТЕ enter route: add default gw 1.1.1.1 TUNNEL DEV

10. Просто нажмите enter:

route: <enter>

11. Введите 'test' и нажмите enter:

Local Name: test

12. Оставьте значения по умолчанию и нажмите enter: Remote Name [PPTP]: <enter>

13. Если все было сделано правильно, вы должно увидеть:

```
Adding MOEX_vpn_connection - <agpec VPN cepsepa> - test - PPTP
Added tunnel MOEX vpn connection
```

- 14. Введите '8' и нажмите enter чтобы выйти из помощника по установке.
- 15. Теперь необходимо сделать несколько изменений в только что созданном файле конфигурации. Для начала необходимо открыть его, выполнив команду:

sudo vim /etc/ppp/peers/MOEX vpn connection

16. Необходимые изменения отмечены красным:

```
#
# PPTP Tunnel configuration for tunnel MOEX_vpn_connection
# Server IP: <aдрес VPN cepвepa>
# Route: route del default
# Route: route add default gw 1.1.1.1 TUNNEL_DEV
#
noauth
#
# Tags for CHAP secret selection
# name test
remotename PPTP
#
# Include the main PPTP configuration file
#
# file /etc/ppp/options.pptp
```

17. Пожалуйста, не забудьте сохранить файл перед закрытием. На этом все. Теперь необходимо установить VPN соединение, выполнив команду: sudo /usr/sbin/pptp-command start MOEX_vpn_connection

На экране должно появиться примерно следующее:

Using interface ppp0 Connect: ppp0 <--> /dev/pts/1 local IP address 1.1.1.19 remote IP address 1.1.1.1 Script ?? finished (pid 30023), status = 0x0 Script /etc/ppp/ip-up finished (pid 30032), status = 0x0 Route: add -net 0.0.0.0 gw 1.1.1.1 added Route: add -net 1.1.1.0 netmask 255.255.255.0 gw 1.1.1.1 added All routes added. Tunnel MOEX_vpn_connection is active on ppp0. IP Address: 1.1.1.19

18. Чтобы остановить соединение, нужно выполнить следующую команду:

sudo /usr/sbin/pptp-command stop

19. Важно: После того, как VPN соединение будет закрыто необходимо восстановить правила маршрутизации. Иначе следующие попытки установить VPN соединение будут безуспешными.

1.4.Часто возникающие вопросы и методы их решения

- 1. VPN соединение установлено, но приложение не получает UDP пакеты (Windows 7)
 - 1.1 Посмотрите на состояние вашего VPN соединения, и проверьте, что количество «Полученных» байт возрастает. Если это не так, обратитесь в службу поддержки МОЕХ.

1.2 Проверьте настойки firewall. Временно отключите firewall. Если после этого все «заработает», включите firewall и добавьте следующие настройки:

- ✓ Откройте Windows Firewall→Advanced настройки;
- ✓ Выберите Inbound Rules и в меню справа выберите New Rule:





- ✓ Оставьте окно без изменений и нажмите Next:
- ✓ В следующем окне необходимо указать путь к программе:



✓ Оставьте следующие окна без изменений:

🔐 New Inbound Rule Wiza	rd 💽
Action	
Specify the action to be taken	when a connection matches the conditions specified in the rule.
Steps:	
Rule Type	What action should be taken when a connection matches the specified conditions?
Program Action	Allow the connection
 Program Action Profile Name 	This includes connections that are protected with IPsec as well as those are not. Image: Connection of it is secure This includes only connections that have been authenticated by using IPsec. Connections will be secured using the settings in IPsec properties and rules in the Connection Security Rule node. Customize Image: Connection Image: Connection
	< <u>B</u> ack Cancel

Mew Inbound Rule Wiz	zard
Profile	
Specify the profiles for which	this rule applies.
Steps:	
Rule Type	When does this rule apply?
Program	
Action	☑ Domain
Profile	Applies when a computer is connected to its corporate domain.
Name	 Private Applies when a computer is connected to a private network location. Public Applies when a computer is connected to a public network location.
	Leam more about profiles < Back

✓ Укажите имя создаваемого правила. Е.g. MyApplicationRule. Нажмите *Finish*.

Mew Inbound Rule Wizard		×
Name		
Specify the name and description of	f this rule.	
Steps:		
Rule Type		
Program		
Action		
Profile	Name:	
Name		
	Description (optional):	