🏠   Using VPN connections   Using a WireGuard VPN connection

Using a WireGuard VPN connection

WireGuard is a modern VPN solution designed to establish secure and high-performance tunnels between remote devices and networks. It is used for secure remote access to equipment, servers, and services, including digital signage and automation systems that work in conjunction with cloud platforms such as **IT-Screen.**

The WireGuard VPN connection uses cryptography to ensure the confidentiality, integrity, and authentication of transmitted data. The connection is established on a point-to-point or client-server basis using key pairs, eliminating the need to transmit logins and passwords.

WireGuard is characterized by simple configuration, high speed, and minimal overhead, making it convenient for use in distributed infrastructures, including those with limited communication channels. The connection can be permanently active or established on demand, providing stable and secure access to remote devices regardless of their physical location.

Using WireGuard allows you to:

- protect data exchange when working through public and corporate networks;

- ensure remote administration of devices and services;

- isolate internal networks and restrict access to critical components;

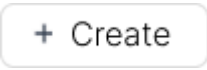- simplify the integration of local equipment with cloud services.

Setting up a VPN on your device

The process of setting up a VPN connection includes the following steps:

1. Creating and configuring a VPN profile for each device.
2. Installing the VPN client application on the device and connecting the profile.
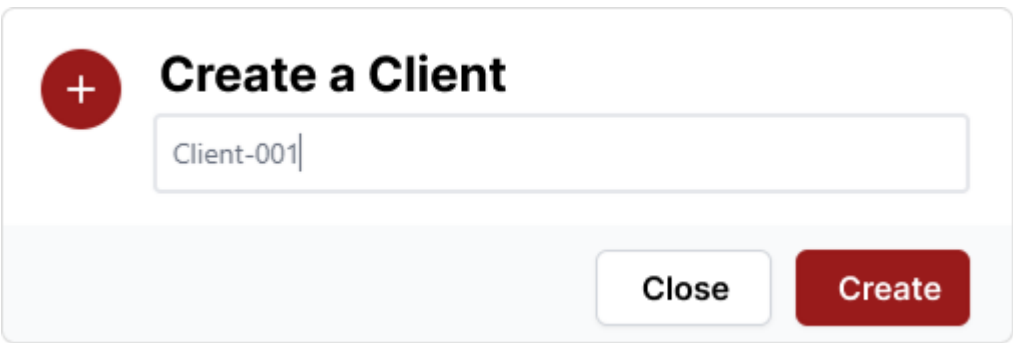3. Registering the device on the IT-Screen network.

Creating and configuring a VPN profile for each device

For centralized creation and management of VPN profiles, a secure administrator panel WireGuard is used, accessible from the Internet. Passwords are only transferred in person and are not permitted to be transmitted over open communication channels.

1. In the WireGuard admin panel, click the ⬚ + Create button.

Clients	↻ Restore	🖴 Backup copy	+ Create
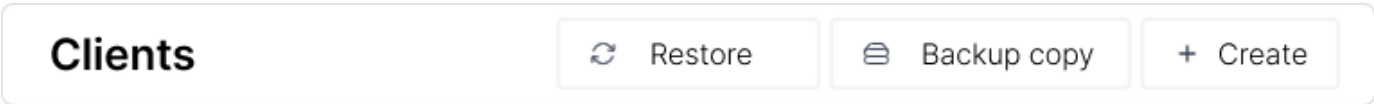
2. Enter a unique name for the configuration file and click the **Create** button.

➕ Create a Client

Client-001|

[Close] [Create]

3. The configuration file you receive must be transferred to the WireGuard client application in one of the following ways:

- using a QR code;
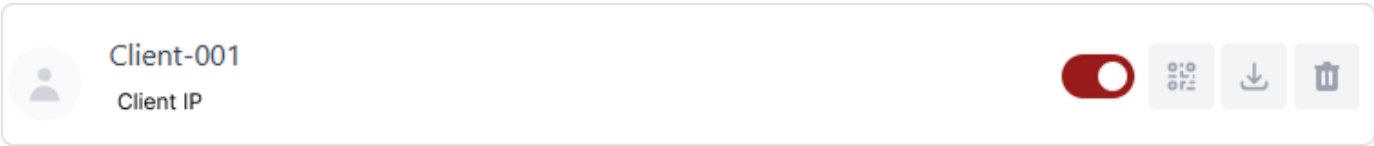- by uploading the configuration file (for example, Client-001.conf).

👤 **Client-001**
Client IP   🔴 ⬛ ⬇ 🗑

Table 1. Configuration file toolbar

Tool	Description
▦	QR code for transferring configuration
⬇	Download configuration file

Tool	Description
🗑	Delete configuration file

The WireGuard configuration file consists of logical sections. Each parameter has a strictly defined purpose. Unknown or extra configuration lines are ignored.

[Interface] — local VPN interface (client) settings

[Peer] — remote side (VPN server) settings

> ⚠ **CAUTION**
>
> A unique configuration profile file must be created for each device in the VPN network. Using the same profile for different devices is prohibited.

```
[Interface]
PrivateKey = gI6EdUSYvn8ugXOt8QQD6Yc+JyiZxIhp3GInSWRfWGE=
Address = 10.192.122.3/24
DNS = 192.168.9.69

[Peer]
PublicKey = xTIBA5rboUvnH4htodjb6e697QjLERt1NAB4mZqp8Dg=
PresharedKey = TrMvSoP4jYQlY6RIzBgbssQqY3vxI2Pi+y71lOWWXX0=
AllowedIPs = 10.192.0.0/24,192.168.9.0/23
PersistentKeepalive = 0
Endpoint = 192.95.5.69:51835
```

> ⓘ **INFORMATION**
>
> All private keys and IP addresses given in the example are for demonstration purposes only, have been generated randomly, and are not used in any existing systems.

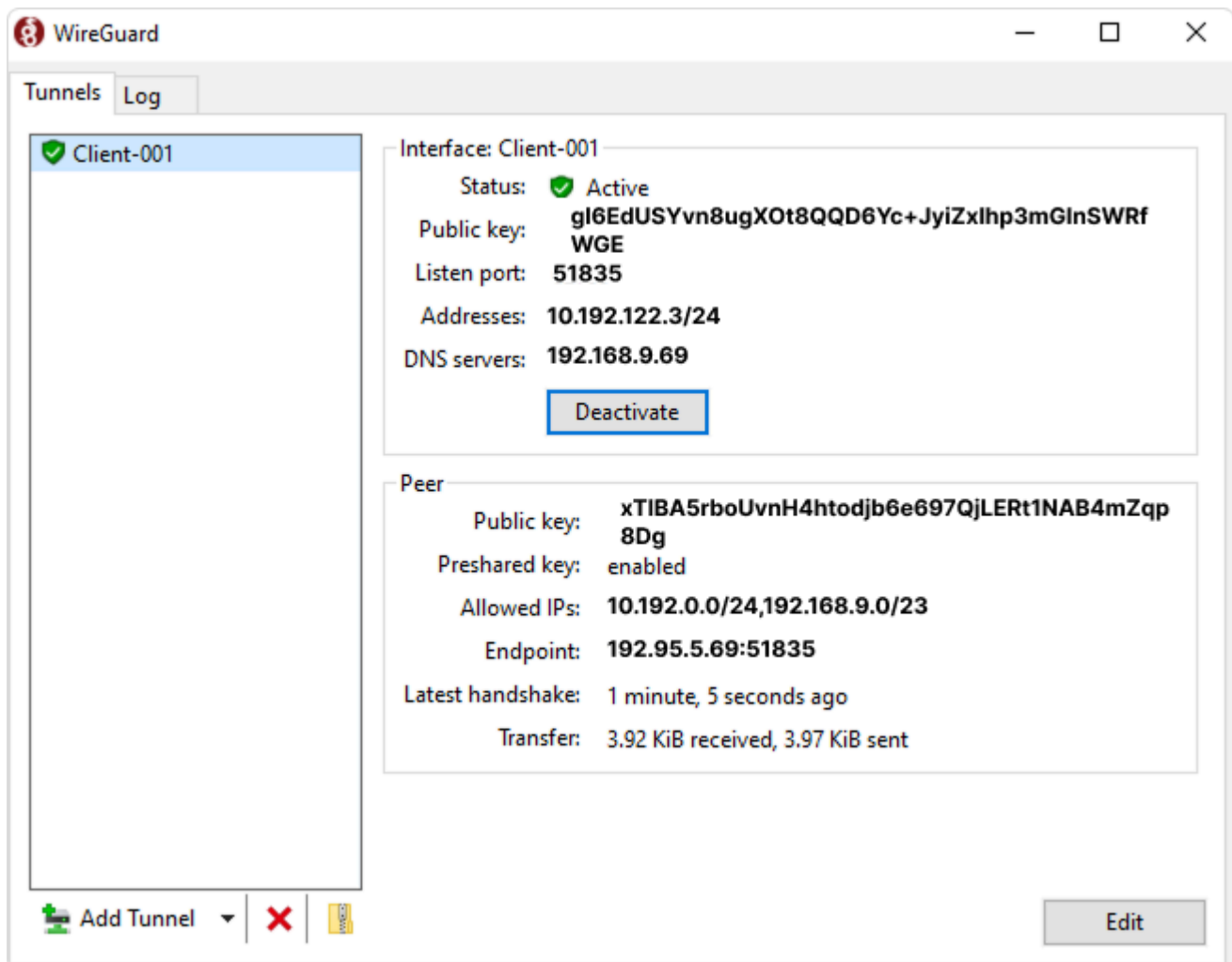# Installing the WireGuard client application for Windows or Android

1. Download the WireGuard client application from official sources:

- WireGuard for Windows

- [WireGuard for Android](#)

2. Install the client software on the device.

3. Click [⚙ Add tunnel ▾] and upload the configuration file.

> **(!) INFORMATION**
>
> All private keys and IP addresses given in the example are for demonstration purposes only, have been generated randomly, and are not used in any existing systems.

4. When installing on an Android device, go to the device settings and enable the VPN switch (permanent VPN or Always-on VPN) in the "VPN" section.
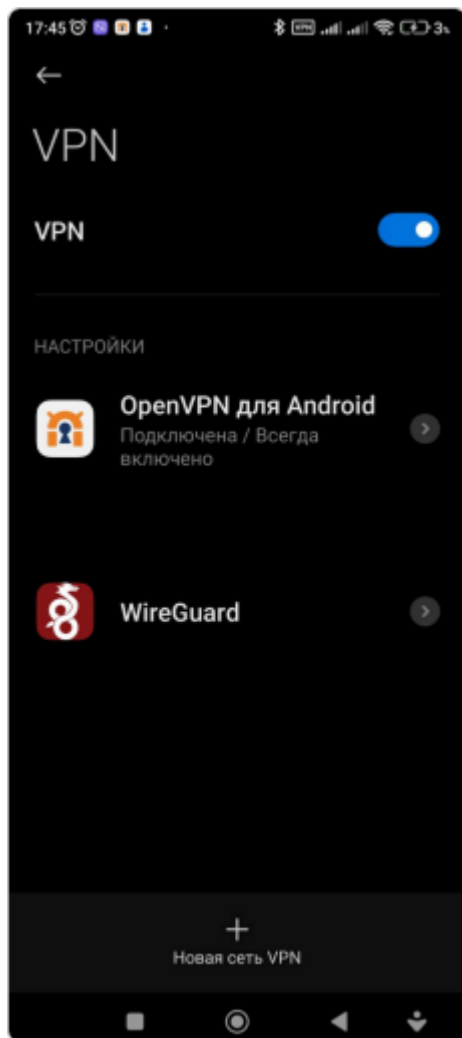
Additional information and extended documentation are available on the official website WireGuard.

Tags:　VPN　　WireGuard