



# Deployers Meeting

2021-11-17



# Agenda

- 3.x
  - What is New?
  - What is Gone?
  - Migrating to 3.x
- Beyond 3.x
- EOL of 2.x
- Help Wanted!



# What is New?

- WireGuard Support
- Improved Security Defaults
- New APIv3
- Simplify Architecture
- Native HA/Redundancy
- Limit number of (active) VPN connections per user

# WireGuard

- Both via Portal (QR code) and API(v3)
  - Much better performance
  - *Exclusively* UDP, so doesn't work everywhere...
- But... profiles can support OpenVPN, WireGuard *or* both
  - Example: expect bulk of users to use WireGuard, but allow for some OpenVPN connections over TCP



# OpenVPN

- Key Type from RSA → Ed25519\*
  - Much faster key generation
- TLSv1.3

\* Recently 2.x changed to ECDSA from RSA with introduction of APIv3 support

# APIv3\*

- OAuth 2.0 → 2.1
  - All OAuth 2.1 requirements already implemented in 2.x, except “refresh tokens” reuse.
- Much simpler API (3 calls instead of 5)
  - **/info**
  - **/connect**
  - **/disconnect**
- Supports both OpenVPN & WireGuard

\* APIv3 (without WireGuard support) also backported to 2.x in vpn-user-portal >= 2.4.0



# Architecture

- Combine various server components
  - Simplification
- Support external databases (not only SQLite)
  - PostgreSQL, MySQL/MariaDB
- Support other session storage mechanism (next file *files*)
  - memcached
- Introduce support for “Native” HA/Redundancy

# Deployment

- The *server* will support only modern Linux distributions:
  - Debian  $\geq 11$
  - Fedora  $\geq 34$
- We *may* consider Ubuntu at some point, but quality is a concern...
- CentOS/Rocky Linux will depend on the “EPEL situation”. Also the kernel does **not** support WireGuard
  - For QA we want to avoid depending on too many external repositories...



# What is Gone?

- Two Factor Support (TOTP)
  - Will depend on authentication source, e.g. SAML, LDAP, ...
  - *May* be introduced again for *local* user authentication
- **Deprecated:** RADIUS is not supported by PHP 8, so Debian 11 and Fedora 34 are the last OSes to support it... Avoid it!

# TODO

- Fix VPN usage statistics
- Make sure all (sys)logging is done properly
- VPN clients need to support IPv3 (and WireGuard)
  - macOS/iOS has Let's Connect! branded app that *almost* works
  - Some work on Android
  - No work done yet on Windows, Linux
- Update the (Server) Deployment Documentation
  - Will be done in v3 branch of the documentation repository in the coming weeks...



# When?

- Before the end of this year (2021)

# Migrating to 3.x

- **Recommended:** deploy a new Debian 11 server with 3.x server
- Alternative:
  - Upgrade your 2.x server to Debian 11 first
  - Follow upgrade instructions to 3.x
- **No upgrade scenario for CentOS / RHEL unfortunately :-)**
- Fedora will also be supported, and would be preferred, but requires a more “active” administrator installing updates regularly...



# Beyond 3.x

- Introduce *bulk API* for configuration downloads to easy configuration of *managed devices*
- WireGuard + TCP?
- Refactor VPN clients to use shared component for common (non-GUI) functionality



## 2.x EOL

- We plan to support 2.x at least until 2022-12-31
  - Possibly synchronize EOL date with CentOS 7 EOL (2024-06-30) if there is interest for this...



# Help Wanted!

- Please help us test the 3.x server installation
  - “HA” (memcached, other SQL server)
  - Multi-Node Installation
  - Installation instructions available soon for Fedora 34, 35
- Anyone with Microsoft Active Directory / Group Policy experience? Please speak up!



# Resources

- ROADMAP on <https://github.com/eduvpn/documentation>
- APIv3 on [https://github.com/eduvpn/documentation/blob/v2/API\\_V3.md](https://github.com/eduvpn/documentation/blob/v2/API_V3.md)