

OpenVPN4UCS

VPN wie es einfacher kaum sein kann!



HINT: ENGLISH version starts at slide 19!

Fahrplan

- Was ist VPN?
- OpenVPN / OpenVPN im UCS
- Designaspekte
- Funktionsumfang
- Topologien / Screenshots
- Preismodell / Dokumentation
- Ausblick auf die Entwicklung

Was ist VPN?

- Virtuelles privates Netzwerk
- Ziel: Wahrung von Vertraulichkeit, Integrität und Echtheit

- **Anbindung mobiler Anwender**
 - Sicherung zwischen Client und Server
 - Zusätzlicher Schutz bei Funkverbindungen

- **Standortvernetzung**
 - Anbindung einer Aussenstelle
 - Anbindung verschiedener Gebäudeteile

OpenVPN

- Werkzeug zur Erstellung eines virtuellen privaten Netzwerks
- Nutzung von SSL/TLS
- Port 443 oft verfügbar
- funktioniert auch in Proxy-Umgebungen
- auf allen relevanten Plattformen verfügbar
- Flexibilität ist ideal für Anbindung mobiler Anwender
- Standortvernetzung möglich

OpenVPN im UCS

- Erweiterung des zentralen Identity-Managements am UCS
- nahtlose Integration in die Server- und Benutzerkonfiguration
- kein zusätzliches Kennwort für Benutzer nötig

- sehr geringer administrativer Aufwand
- Verwendung der Zertifikatskette vom UCS
- Einsatz vertrauter UI-Elemente statt Konsole

Designaspekte

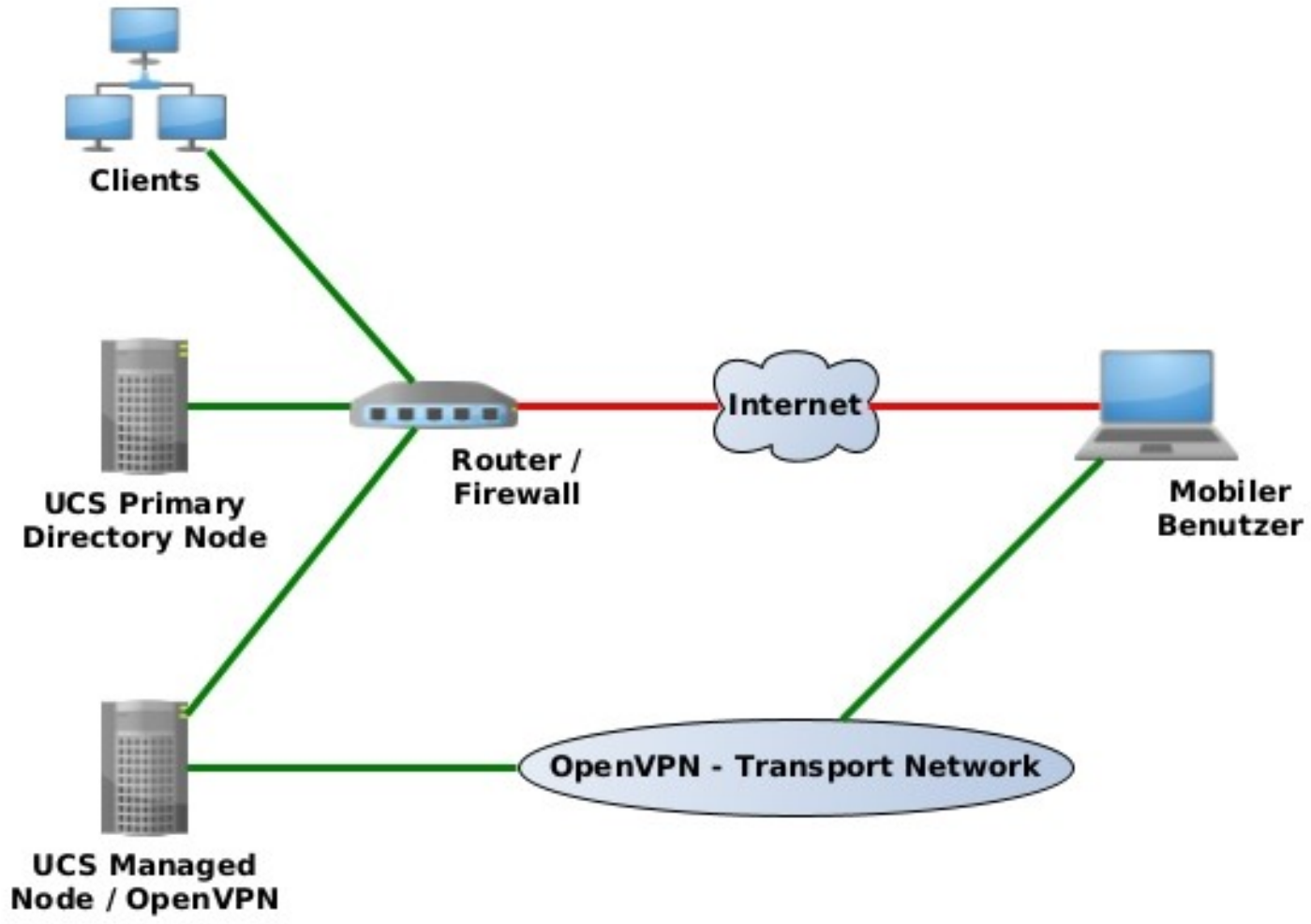
- ein Klick (!) zur Erzeugung benötigter Client-Komponenten
- Bedienung über Univention Management Console / Overview
- keine Kommandozeile erforderlich
- Keep it simple [and] stupid.

Funktionsumfang

- OpenVPN Zugänge mit nur einem Klick erzeugen
- ready2go-Paket mit vollständiger Benutzerkonfiguration
- dynamische Re-Generierung des ready2go-Pakets bei Serveränderungen
- Unterstützung für Linux- und Windows-Clients out-of-the-box
- Verbindungsübersicht der verbundenen Benutzer
- Site-to-Site Standortvernetzung (Business Edition)
- IPv4 und IPv6 Unterstützung

Topologie – Benutzer-VPN

OpenVPN4UCS - Benutzer-VPN - Topologie (vereinfacht)



UMC – Server / Benutzer-VPN

Unvention Management Console - Chromium

Unvention Manager x

https://10.1.2.15/unvention-management-console/

Computers: ucs-master

OpenVPN4UCS

OpenVPN4UCS license key (required to activate commercial features)

User VPN

- OpenVPN server active
- 10.1.2.15
OpenVPN server address
- 1195
OpenVPN port
- 10.2.3.0
OpenVPN transfer network IPv4 (default: /24)
- 2001:db8:0:123::/64
OpenVPN transfer network IPv6
- OpenVPN duplicate
- OpenVPN fixed addresses

OpenVPN user IP address

+ New entry

Site-to-Site VPN

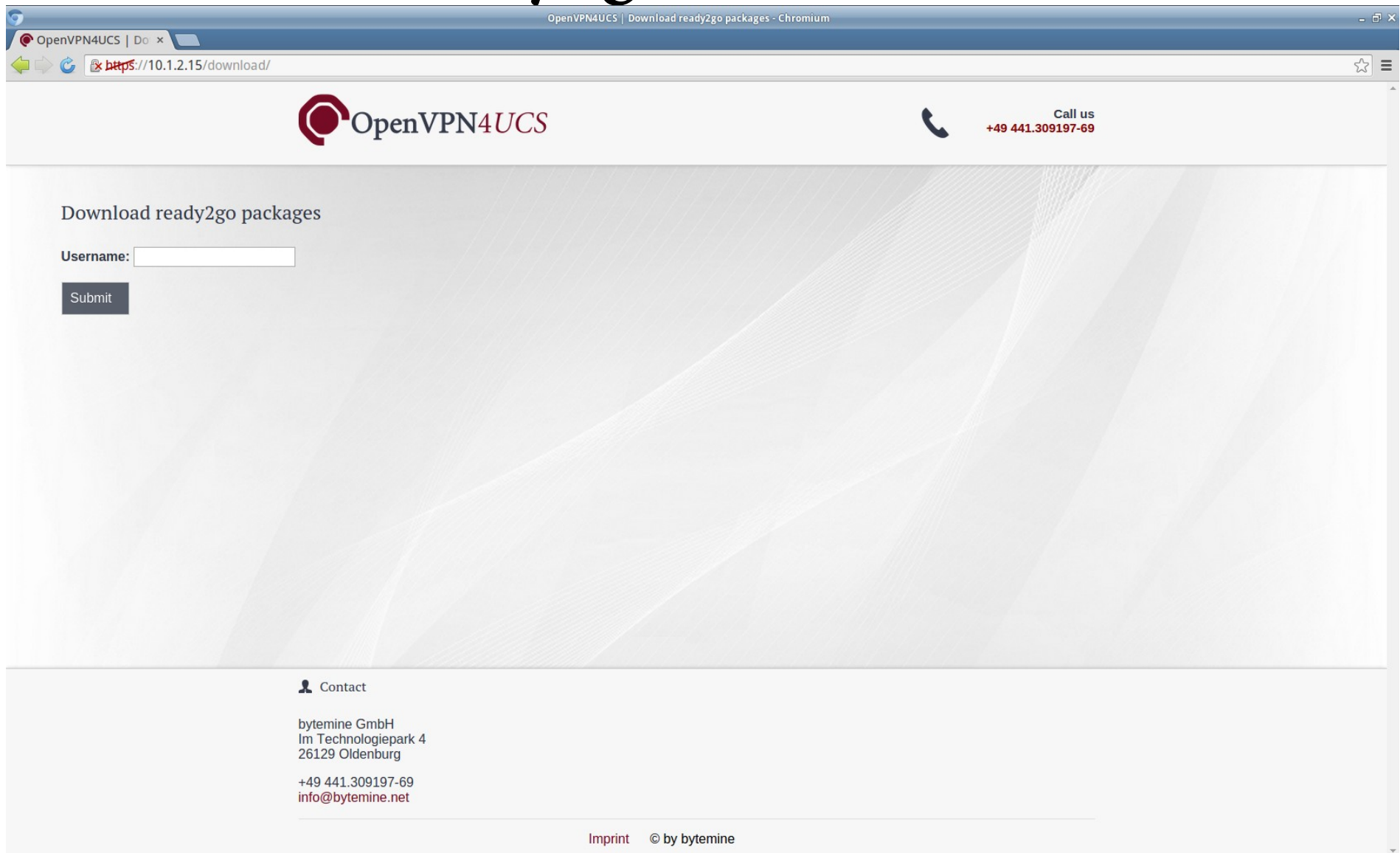
UMC – Benutzer

The screenshot shows the Univention Management Console (UMC) interface in a Chromium browser. The browser's address bar shows the URL `https://10.1.2.15/univention-management-console/`. The page title is "Univention Manager". The browser's tab bar shows "App Center" and "Users: user0001". The page header includes the "univention" logo, a refresh button, the URL `ucs-master.vpntesting.intranet`, the user "Administrator", and a "Module search" field.

The main content area has a yellow header bar with the text "Users: user0001" and a close button. Below this, there are two columns of settings:

- Left Column:** A list of settings categories: General, Groups, Account, Contact, [Advanced settings] (highlighted), [Options], and [Policies]. Below this list is the "Advanced settings" section, which includes the text "Type: User" and "Position: intranet.vpntesting/users".
- Right Column:** A list of settings categories: Mail, UMC preferences, Windows terminal server, and OpenVPN4UCS. Each category has a dropdown arrow to its right. Under "OpenVPN4UCS", there is a checked checkbox labeled "OpenVPN account".

ready2go Download



The screenshot shows a web browser window with the following elements:


- Browser Title Bar:** OpenVPN4UCS | Download ready2go packages - Chromium
- Address Bar:** <https://10.1.2.15/download/>
- Header:**
 - OpenVPN4UCS logo (a red circle with a white 'C' shape inside) and the text "OpenVPN4UCS".
 - Phone icon and "Call us +49 441.309197-69".
- Main Content Area:**
 - Section title: "Download ready2go packages".
 - Form: "Username:" followed by an empty text input field.
 - Submit button: A dark grey button with the text "Submit".
- Footer:**
 - Contact icon and "Contact".
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info@bytemine.net
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Verbindungsübersicht

OpenVPN4UCS | Connected Users - Chromium

OpenVPN4UCS | Co x

https://10.1.2.15/display_users/



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Connected users

Name	Connected	Type	Real Address	Virtual Addresses	Connected since	Connected for	Received	Sent	Disconnect
user0001.openvpn		v4 v6					0	0	
user0002.openvpn		v4 v6					0	0	
user0003.openvpn		v4 v6					0	0	
user0004.openvpn		v4 v6					0	0	
user0005.openvpn		v4 v6	10.1.2.14:36268	10.2.3.2	Thu Mar 12 18:25:05 2015	0:00:30	7687	10582	Disconnect
user0006.openvpn		v4 v6					0	0	
user0007.openvpn		v4 v6					0	0	

Contact

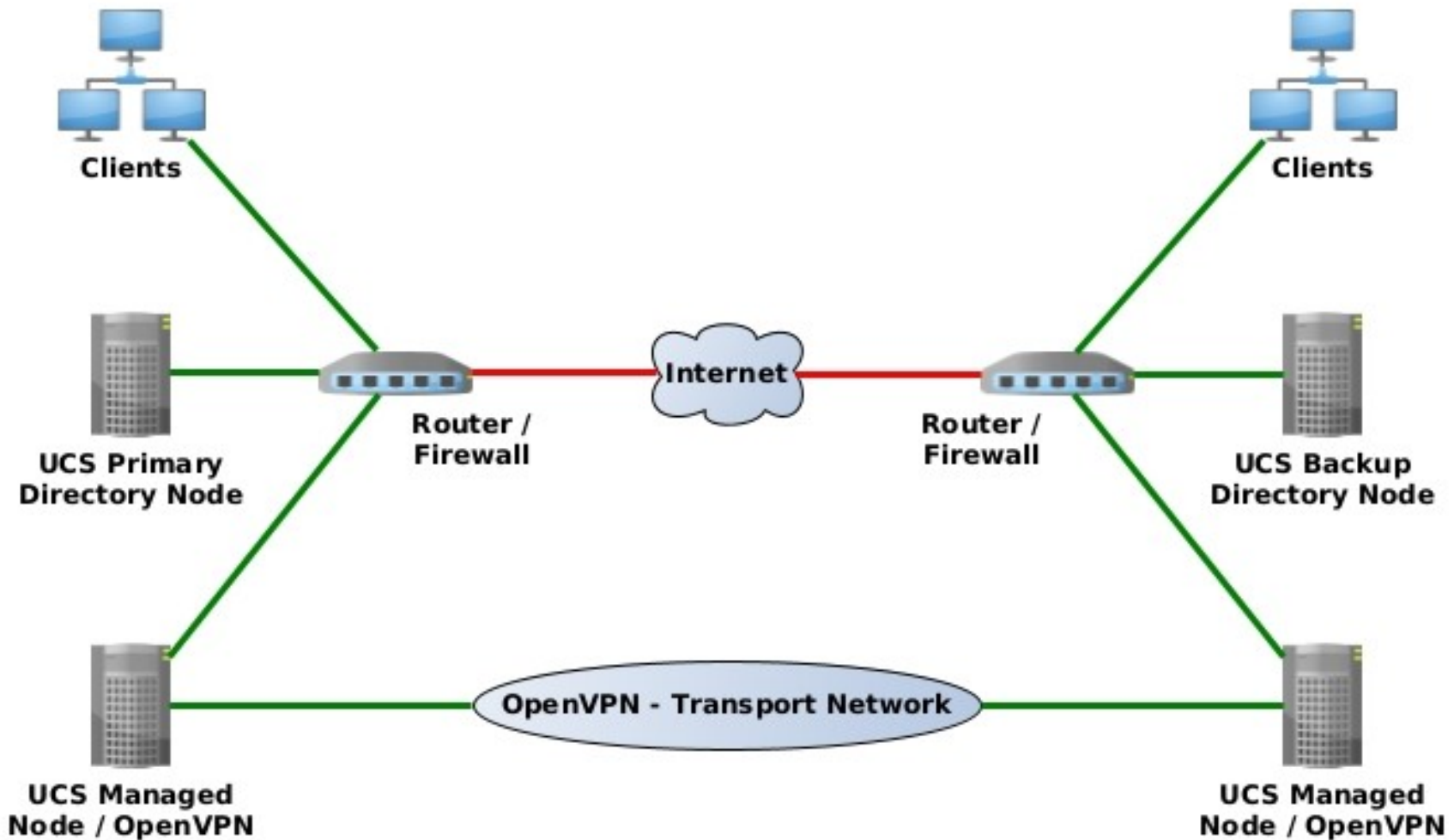
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Topology – Site-to-Site

OpenVPN4UCS - Site-to-Site VPN - Topologie (vereinfacht)



UMC – Server / Site-to-Site

Univention Management Console - Chromium

Univention Manager x

https://10.1.2.15/univention-management-console/

Computers: ucs-master

OpenVPN transfer network IPv6

- OpenVPN redirect gateway
- OpenVPN duplicate
- OpenVPN fixed addresses

OpenVPN user IP address

+ New entry

Site-to-Site VPN

- OpenVPN site-to-site active.

OpenVPN remote address

OpenVPN site-to-site port

OpenVPN internal local address

OpenVPN internal remote address

Defines the fixed IP for the remote endpoint, which is only used inside the virtual transfer network.

```
#
# 2048 bit OpenVPN static key
#
-----BEGIN OpenVPN Static key V1-----
4901e64b50953ec8f16388182746b7a0
fc9e723280e6fa1ddf8ecf1b4a794490
64e6980d7a6453ea693445d03758097d
```

UVMM

Preismodell / Dokumentation

Editionen / Features	Personal Use	Business
Benutzer-VPN	Ja	Ja
Standortvernetzung	Nein	Ja
Installationssupport	Nein	30 Tage per E-Mail
Benutzeranzahl Basis / Max	5 / 5	10 / xxx
Preis Basis	n/a	150,- EUR / Jahr
Erweiterung um 5 Benutzer	n/a	40,- EUR / Jahr
Kommentar	Entspricht Installation	Für professionelles Umfeld

Web: <https://www.bytemine.net/openvpn4ucs/>

Ausblick auf die Entwicklung

- Vorbereitungen für UCS 5.0 – App als Docker Container
- Schalter in der UMC, welcher Authentifizierung NUR per Zertifikat zulässt (Feature-Request)
- <IHR_INPUT>

Raum für Fragen

- Haben Sie Fragen?
- Feedback ist willkommen!

Vielen Dank für die Aufmerksamkeit!

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OpenVPN4UCS

VPN like it could not be easier!



travel guide

- What is VPN?
- OpenVPN / OpenVPN in UCS
- design aspekts
- feature set
- topologies / screenshots
- price model / documentation
- outlook on development

What is VPN?

- virtual private network
- goal: ensuring confidentiality, integrity and authenticity
- **connection of mobile users**
 - security between client and server
 - additional protection in case of radio connection
- **site-to-site connection**
 - connection a separate office f.e.
 - connection of different buildings on larger sites

OpenVPN

- toolkit to establish a virtual private networks
- usage of SSL/TLS
- port 443 likely available
- works as well in proxy environments
- available on all relevant platforms
- flexibility is ideal for the connection of mobile users
- site-to-site connection is possible

OpenVPN in UCS

- extension of the central identity management of UCS
- seamless integration in the configuration of servers and users
- no additional password required for users

- very low administration effort
- usage of the certificate chain inside UCS
- usage of well known UI elements instead of the console

design aspects

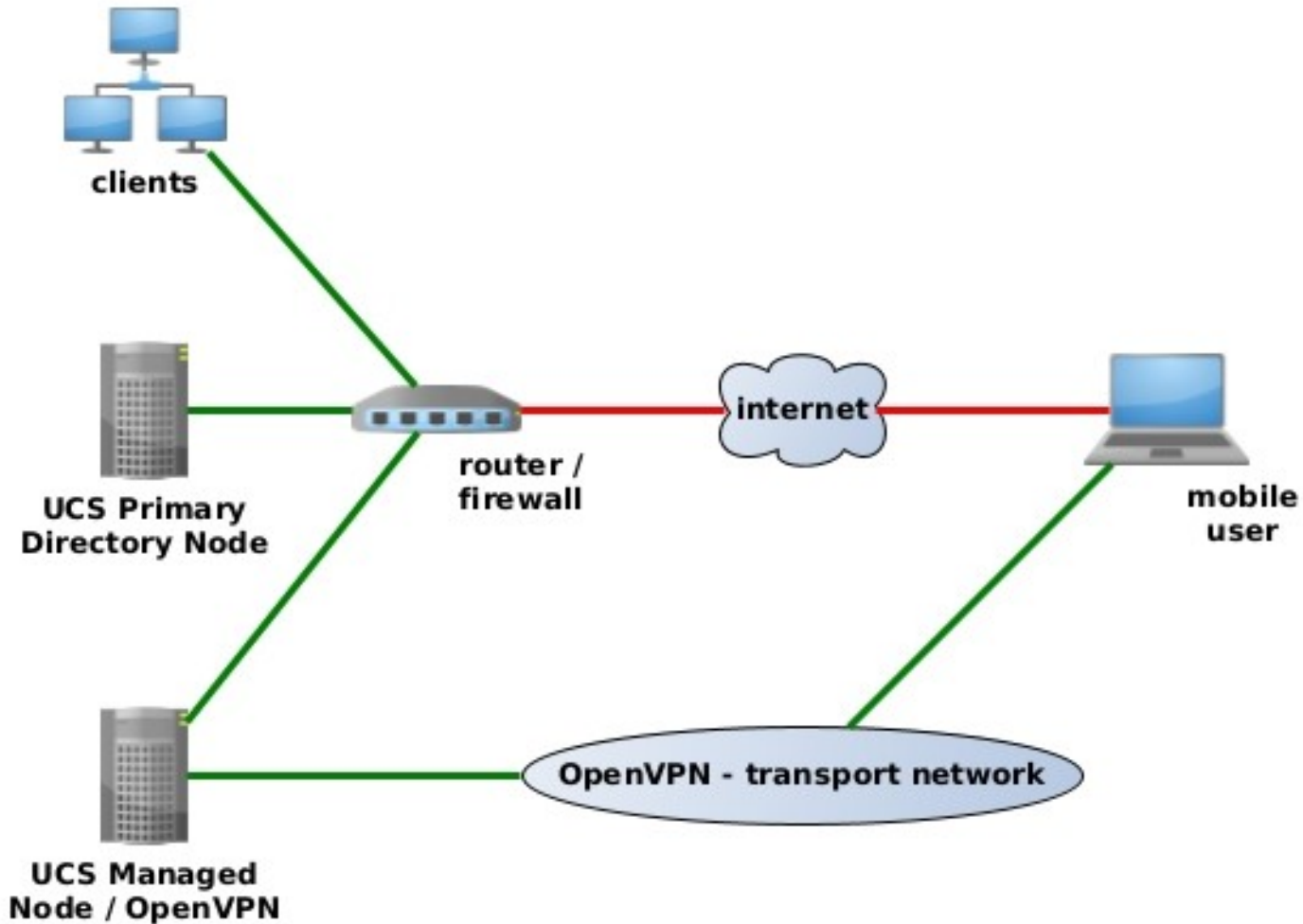
- one click (!) for generation of needed client components
- handling via Univention Management Console and overview
- no command line required
- Keep it simple [and] stupid.

feature set

- granting OpenVPN access with just one click
- ready2go package with complete user configuration
- dynamic recreation of the ready2go package after server changes
- support for Linux and Windows clients out of the box
- access overview of connected users
- site-to-site networking (business edition)
- support for IPv4 and IPv6

topology – user VPN

OpenVPN4UCS - user VPN - topology (simplified)



UMC – server / user VPN

The screenshot shows the Unvention Management Console (UMC) web interface in a Chromium browser. The browser's address bar shows the URL `https://10.1.2.15/unvention-management-console/`. The page title is "Unvention Management Console - Chromium".

The main content area is titled "Computers: ucs-master" and contains the following sections:

- OpenVPN4UCS**: A section with a license key input field. The text below the field reads: "OpenVPN4UCS license key (required to activate commercial features)".
- User VPN**: A section with several configuration options:
 - OpenVPN server active
 - OpenVPN server address: `10.1.2.15`
 - OpenVPN port: `1195`
 - OpenVPN transfer network IPv4 (default: /24): `10.2.3.0`
 - OpenVPN transfer network IPv6: `2001:db8:0:123::/64`. A tooltip is visible over this field with the text: "OpenVPN will use this as transfer network within the virtual private network."
 - OpenVPN duplicate
 - OpenVPN fixed addresses
 - OpenVPN user: [input field]
 - IP address: [input field]
- Site-to-Site VPN**: A section that is currently empty.

A "+ New entry" button is located below the User VPN configuration fields.

UMC – user

The screenshot shows the Univention Management Console (UMC) interface in a Chromium browser. The browser's address bar displays `https://10.1.2.15/univention-management-console/`. The page title is "Univention Manager". The navigation bar includes the "univention" logo, a home icon, the URL `ucs-master.vpntesting.intranet`, the user role "Administrator", and a "Module search" field.

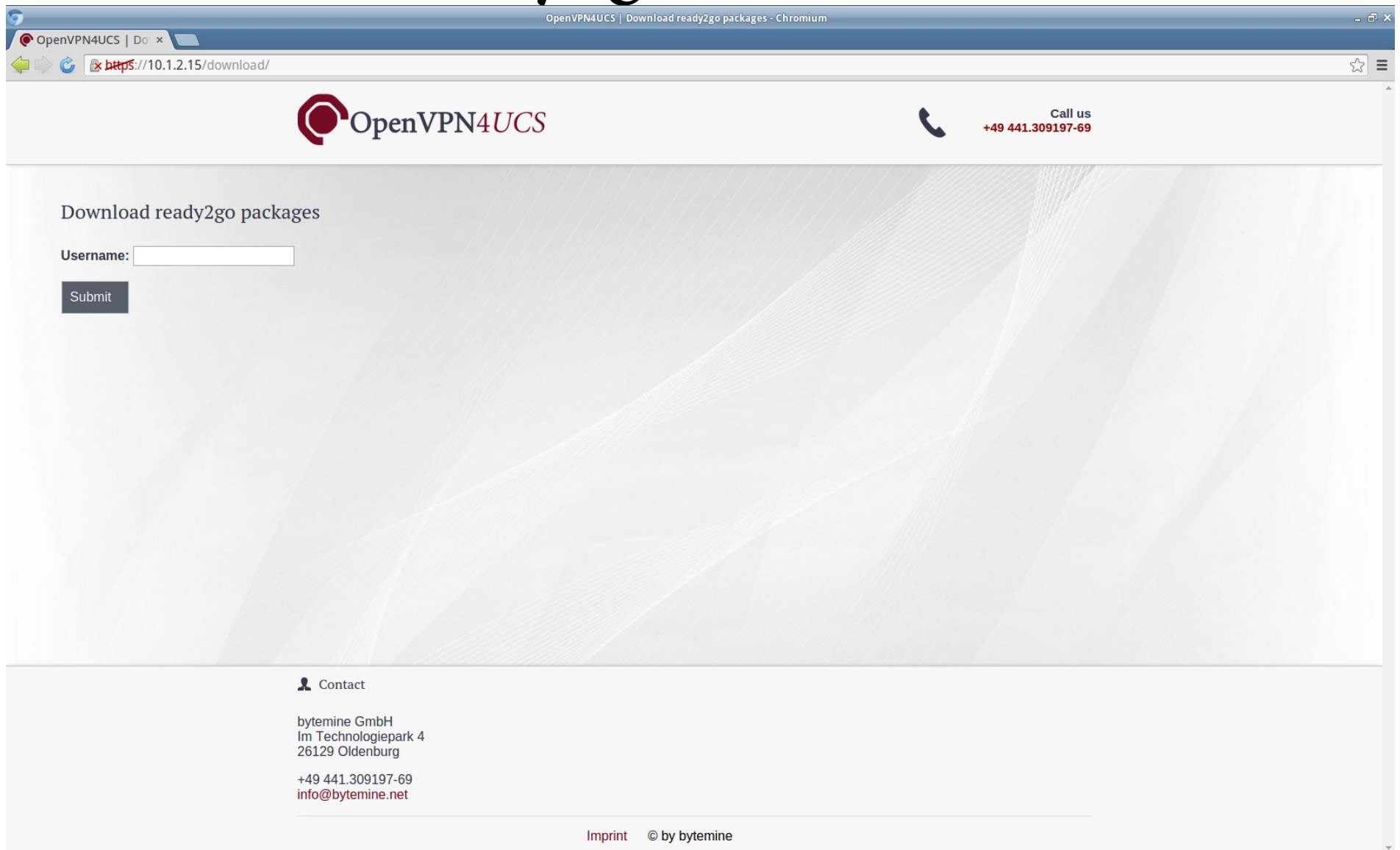
The main content area has a yellow header bar with the text "Users: user0001" and a close icon. Below this, there are two columns of settings:

- Left Column (Navigation):**
 - General
 - Groups
 - Account
 - Contact
 - [Advanced settings]** (highlighted)
 - [Options]
 - [Policies]
- Right Column (Settings):**
 - Mail** (with a dropdown arrow)
 - UMC preferences** (with a dropdown arrow)
 - Windows terminal server** (with a dropdown arrow)
 - OpenVPN4UCS** (with a dropdown arrow)
 - OpenVPN account

Below the "Advanced settings" section, the following details are displayed:

Type: *User*
Position: *intranet.vpntesting/users*

ready2go download



The screenshot shows a web browser window with the following elements:


- Browser Tab:** OpenVPN4UCS | Download ready2go packages - Chromium
- Address Bar:** <https://10.1.2.15/download/>
- Header:**
 - OpenVPN4UCS logo
 - Phone icon and text: Call us +49 441.309197-69
- Main Content:**
 - Section: Download ready2go packages
 - Form: Username:
 - Submit button
- Footer:**
 - Contact icon and text: Contact
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connection overview

OpenVPN4UCS | Connected Users - Chromium

OpenVPN4UCS | Co x

https://10.1.2.15/display_users/



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user0004.openvpn		v4 v6					0	0	
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user0007.openvpn		v4 v6					0	0	

Contact

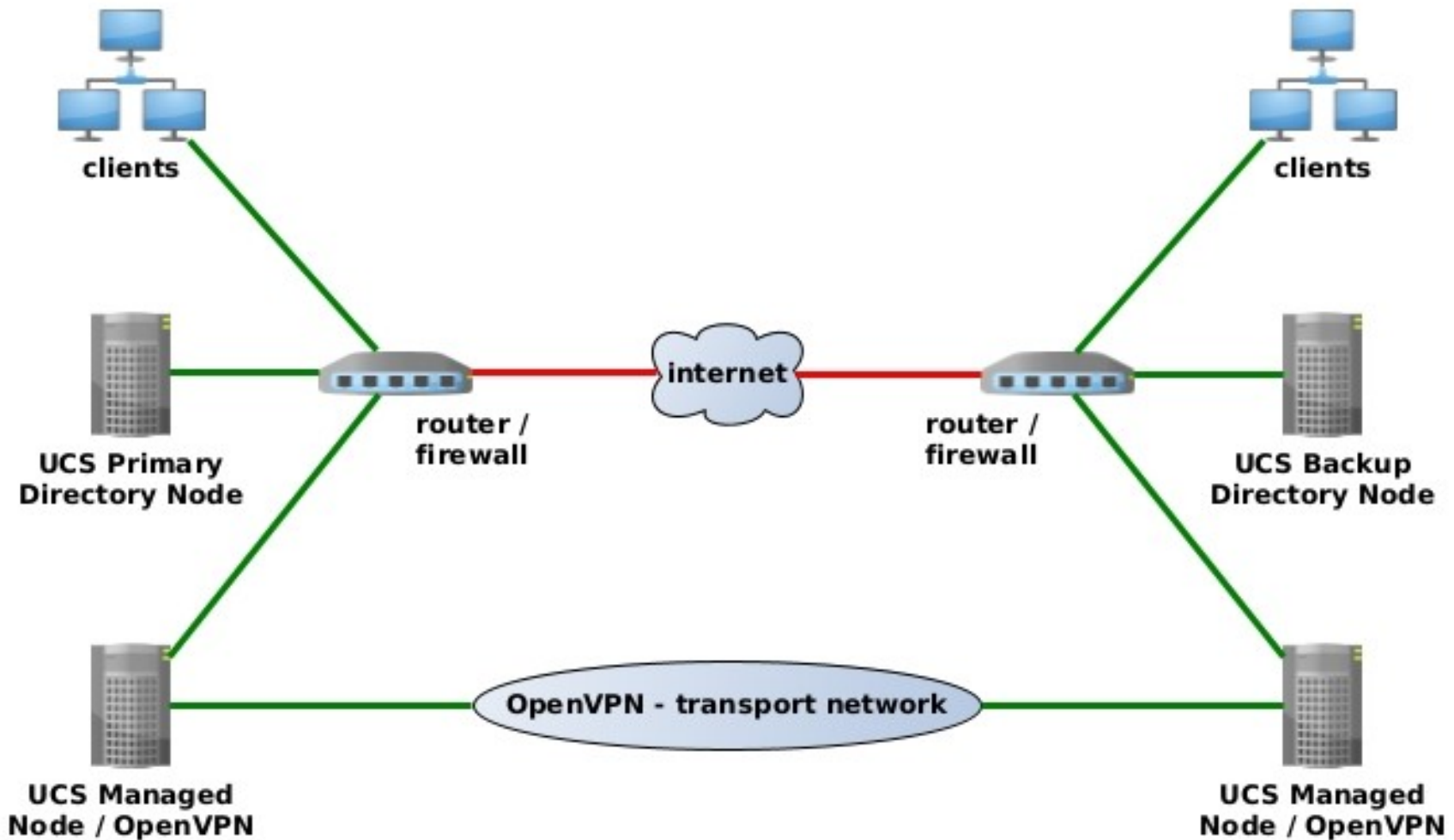
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topology – site-to-site

OpenVPN4UCS - site-to-site VPN - topology (simplified)



UMC – server / site-to-site

Univention Management Console - Chromium

Univention Manager x

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fc9e723280e6fa1ddf8ecf1b4a794490
64e6980d7a6453ea693445d03758097d
```

UVMM

price model / documentation

editions / features	Personal Use	Business
user VPN	yes	yes
site-to-site connection	no	yes
installation support	no	30 days via e-mail
user amount base / max	5 / 5	10 / xxx
base price	n/a	150,- € / year
5 user extension pack	n/a	40,- € / year
comment	equals installation state	for professional environments

web: <https://www.bytemine.net/openvpn4ucs/>

outlook on development

- preparations for UCS 5.0 – app as Docker container
- switch in the UMC, which allows authentication via certificate only (feature request)
- <YOUR_INPUT>

room for questions

- Do you have questions?
- Feedback is welcome!