

DrayTek

- DrayTek Vigor 130 als VDSL-Modem am 1&1-Anschluss

DrayTek Vigor 130 als VDSL-Modem am 1&1-Anschluss

Update: 24.03.2018

Inzwischen bin ich auf den VDSL-100 Tarif von 1&1 gewechselt. Die folgende Anleitung funktioniert damit genauso, die Umstellung brachte auch keine Probleme. Zusätzlich habe ich den Draytek Vigor 130 auf die aktuelle Firmware 3.8.2 (Modem 7) aktualisiert, die man sich beim [Hersteller](#) herunterladen kann.

Da ich etwas flexibler an meinem VDSL-50 Anschluss von 1&1 sein wollte, habe ich mir einen [Ubiquiti EdgeRouter POE-5](#) besorgt. Dieser hat (leider) kein integriertes DSL-Modem, so dass ich mir noch ein DrayTek Vigor 130 gekauft habe.

Im folgenden geht es um die ideale Konfiguration, um den [DrayTek](#) Vigor 130 an einem VDSL2 Anschluss zu betreiben.

Diese Anleitung wurde geschrieben als die [Firmware Version 3.7.8.3](#) (modem 7 für VDSL in Deutschland) aktuell war.

The screenshot shows the DrayTek Vigor 130 web interface. The top header is red with the DrayTek logo and 'Vigor 130'. Below the header is a navigation menu on the left with options like 'Wizards', 'Online Status', 'Internet Access', 'LAN', 'NAT', 'Firewall', 'Objects Setting', 'CSM', 'Applications', 'System Maintenance', and 'Diagnostics'. The main content area is titled 'Dashboard' and features a large image of the Vigor 130 device with labels for 'ACT', 'LAN', 'DoS', and 'DSL'. Below the image are three tables: 'System Information', 'IPv4 Internet Access', and 'Interface'. The 'System Information' table shows details like Model Name (Vigor130), Router Name (modem), Firmware Version (3.7.8.3_m7), and DSL Version (567617_A/B/C HW: B). The 'IPv4 Internet Access' table shows WAN1 connected via VDSL / Static IP. The 'Interface' table shows DSL, WAN, and LAN interfaces with their respective connection status and speeds.

System Information			
Model Name	Vigor130	System Up Time	588:58:19
Router Name	modem	Current Time	2016 Feb 15 Mon 17:0:4
Firmware Version	3.7.8.3_m7	Build Date/Time	Aug 28 2015 10:12:17
DSL Version	567617_A/B/C HW: B	LAN MAC Address	00-1D-AA-86-A0-20

IPv4 Internet Access				
	Line / Mode	IP Address	MAC Address	Up Time
WAN1	VDSL / Static IP	Disconnected	00-1D-AA-86-A0-21	00:00:00

Interface	
DSL	Connected : Down Stream : 51392Kbps / Up Stream : 10048Kbps
WAN	Connected : 0, WAN1
LAN	Connected : 0, LAN1

Quick Access	
System Status	
Dynamic DNS	
TR-069	
Schedule	
SysLog / Mail Alert	
Firewall Object Setting	

Im Bereich „Internet Access“ ? „General Setup“ sind folgende Einstellungen wichtig:

- VDSL2 only
- VLAN Tag insertion (VDSL2): Tag value 7

Off ▼

IPv6

Wizards
Online Status

Internet Access

General Setup

PPPoE / PPPoA

MPoA / Static or dynamic IP

IPv6

Multi-PVC/VLAN

LAN

NAT

Firewall

Objects Setting

CSM

Applications

System Maintenance

Diagnostics

Internet Access >> General Setup

WAN 1

Display Name:	<input type="text" value="1und1 DSL"/>
Physical Mode:	VDSL2
DSL Mode:	VDSL2 only ▼
Physical Type:	Auto negotiation ▼
VLAN Tag insertion (ADSL):	Disable ▼
Tag value:	<input type="text" value="0"/> (0~4095)
Priority:	<input type="text" value="0"/> (0~7)
VLAN Tag insertion (VDSL2):	Enable ▼
Tag value:	<input type="text" value="7"/> (0~4095)
Priority:	<input type="text" value="0"/> (0~7)

Note : In DSL auto mode, the router will reboot automatically while switching between VDSL2 and ADSL lines.

OK

Cancel

Unter „MPoA / Static or dynamic IP“ muss das hier eingestellt werden:

- Multi-PVC channel: Channel 2
- Encapsulation: 1483 Bridged IP LLC
- VPI: 1
- VCI: 32
- Modulation: Multimode
- MTU: 1492
- Enable Bridge Mode
- optional: DNS-Server

Off IPv6

Wizards
Online Status

Internet Access

General Setup

PPPoE / PPPoA

MPoA / Static or dynamic IP

IPv6

Multi-PVC/VLAN

LAN

NAT

Firewall

Objects Setting

CSM

Applications

System Maintenance

Diagnostics

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Internet Access >> MPoA / Static or dynamic IP

MPoA / Static or dynamic IP

MPoA (RFC1483/2684) ☒ Enable ☐ Disable

DSL Modem Settings (for ADSL mode only)

Multi-PVC channel Channel 2

Encapsulation 1483 Bridged IP LLC

VPI 1

VCI 32

Modulation Multimode

WAN Connection Detection

Mode ARP Detect

Ping IP

TTL:

MTU 1492 (Max:1500)

RIP Protocol

☐ Enable RIP

Bridge Mode

☒ Enable Bridge Mode

WAN IP Network Settings

☐ Obtain an IP address automatically

Router Name Vigor

Domain Name

☐ DHCP Client Identifier *

Username

Password

☒ Specify an IP address WAN IP Alias

IP Address 0.0.0.0

Subnet Mask 0.0.0.0

Gateway IP Address 0.0.0.0

☐ Default MAC Address

☐ Specify a MAC Address

MAC Address: 00 1D AA 86 A0 21

DNS Server IP Address

Primary IP Address 8.8.8.8

Secondary IP Address 8.8.4.4

Advanced You can configure DHCP client options here.

*: Required for some ISPs

OK

Unter „LAN“ ? „General Setup“ wird eingestellt, wie der Router im lokalen Netz erreichbar ist (Um die Weboberfläche bedienen zu können). Der Router, der dann letztlich die PPPoE-Verbindung herstellt nutzt als PPPoE Gerät das Interface eth0, das auch gleichzeitig die IP 192.168.67.2 konfiguriert hat.

DrayTek

Vigor 130

Off

IPv6

Wizards
Online Status

Internet Access
LAN
General Setup
Static Route
Bind IP to MAC
NAT
Firewall
Objects Setting
CSM
Applications
System Maintenance
Diagnostics

LAN >> General Setup

Ethernet TCP / IP and DHCP Setup

LAN IP Network Configuration
For NAT Usage
1st IP Address: 192.168.67.1
1st Subnet Mask: 255.255.255.0
For IP Routing Usage: ☐ Enable ☒ Disable
2nd IP Address: 192.168.1.1
2nd Subnet Mask: 255.255.255.0
2nd Subnet DHCP Server
RIP Protocol Control: Disable

DHCP Server Configuration
☐ Enable Server ☒ Disable Server
Relay Agent: ☐ 1st Subnet ☐ 2nd Subnet
DHCP Server IP Address
Start IP Address
IP Pool Counts: 0
Gateway IP Address: 192.168.67.1
Lease Time: 86400 (s)
Advanced You can configure DHCP server options here.
DNS Server IP Address
Primary IP Address: 8.8.8.8
Secondary IP Address: 8.8.4.4
☐ Force router to use address for DNS

OK

Um das Modem für meine internen Netze und von den VPN-Verbindungen aus erreichbar zu machen, habe ich ein paar Rückrouten gesetzt, die auf das VPN-Gateway zeigen:

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Vigor 130

Off

IPv6

Wizards
Online Status
Physical Connection
Virtual WAN

Internet Access
LAN
NAT
Firewall
Objects Setting
CSM
Applications
System Maintenance
Diagnostics

LAN >> Static Route Setup

Static Route Configuration

[Set to Factory Default](#)
[View Routing Table](#)

Index	Destination Address	Status	Index	Destination Address	Status
1.	192.168.66.0	v	6.	???	?
2.	192.168.254.0	v	7.	???	?
3.	192.168.79.0	v	8.	???	?
4.	10.20.30.0	v	9.	???	?
5.	???	?	10.	???	?

Status: v --- Active, x --- Inactive, ? --- Empty

Das Modem loggt sämtliche Ereignisse (sind in diesem Fall nur DSL-Statusmeldungen und Admin-Logins) zu meinem Syslog-Server, der über das VPN erreichbar ist:

DrayTek
Vigor 130

Off
IR6

Wizards
Online Status

Internet Access
LAN
NAT
Firewall
Objects Setting
CSM
Applications
System Maintenance
System Status
TR-069
Administrator Password
Configuration Backup
SysLog / Mail Alert
Time and Date
Management
Reboot System
Firmware Upgrade
Diagnostics

System Maintenance >> SysLog / Mail Alert Setup

SysLog / Mail Alert Setup

SysLog Access Setup
☒ Enable
Syslog Save to:
☒ Syslog Server
Router Name modem
Server IP Address balder-int.ovtec.it
Destination Port 514
Enable syslog message:
☒ Firewall Log
☒ User Access Log
☒ WAN Log
☒ Router/DSL information

Mail Alert Setup
☐ Enable [Send a test e-mail](#)
SMTP Server
SMTP Port 25
Mail To
Return-Path
☐ Use SSL
☐ Authentication
Username
Password
Enable E-Mail Alert:
☒ DoS Attack

OK
Clear

Damit auch ordentliche Zeiten angezeigt werden, sollte das System einen Zeitserver konfiguriert haben:

DrayTek
Vigor 130

Off
IR6

Wizards
Online Status

Internet Access
LAN
NAT
Firewall
Objects Setting
CSM
Applications
System Maintenance
System Status
TR-069
Administrator Password
Configuration Backup
SysLog / Mail Alert
Time and Date
Management
Reboot System
Firmware Upgrade
Diagnostics

System Maintenance >> Time and Date

Time Information

Current System Time 2016 Feb 15 Mon 16 : 49 : 18 [Inquire Time](#)

Time Setup

☐ Use Browser Time
☒ Use Internet Time
Time Server 192.168.67.2
Priority Auto
Time Zone (GMT+01:00) Amsterdam, Berlin, Bern
Enable Daylight Saving ☒ [Advanced](#)
Automatically Update Interval 30 min

OK
Cancel

Für das Monitoring verwende ich neben Icinga (ping) auch Observium. Dazu habe ich den SNMP-Agent unter „System Maintenance“ ? „Management“ konfiguriert. Vermutlich muss ich für die Verwaltung des Modems die Punkte unter „Allow management from the internet“ gar nicht aktivieren, da ich mich dafür ja von einer lokalen Quelle verbinde. Muss ich mal ausprobieren bei Gelegenheit.

Off **IPv6**

System Maintenance >> Management



Wizards
Online Status

Internet Access
LAN
NAT
Firewall
Objects Setting
CSM

Applications
System Maintenance
System Status
TR-069
Administrator Password
Configuration Backup
SysLog / Mail Alert
Time and Date

Management
Reboot System
Firmware Upgrade
Diagnostics

All Rights Reserved.

Management Setup

Router Name <input type="text" value="modem"/>													
<input checked="" type="checkbox"/> Default:Disable Auto-Logout													
Internet Access Control <input checked="" type="checkbox"/> Allow management from the Internet Domain name allowed <input type="text"/>													
<input type="checkbox"/> FTP Server <input checked="" type="checkbox"/> HTTP Server <input checked="" type="checkbox"/> HTTPS Server <input type="checkbox"/> Telnet Server <input type="checkbox"/> TR069 Server <input checked="" type="checkbox"/> SSH Server <input checked="" type="checkbox"/> Disable PING from the Internet													
Access List from the Internet <table border="1"> <thead> <tr> <th>List</th> <th>IP</th> <th>Subnet Mask</th> </tr> </thead> <tbody> <tr> <td>1</td> <td><input type="text"/></td> <td><input type="text"/></td> </tr> <tr> <td>2</td> <td><input type="text"/></td> <td><input type="text"/></td> </tr> <tr> <td>3</td> <td><input type="text"/></td> <td><input type="text"/></td> </tr> </tbody> </table>		List	IP	Subnet Mask	1	<input type="text"/>	<input type="text"/>	2	<input type="text"/>	<input type="text"/>	3	<input type="text"/>	<input type="text"/>
List	IP	Subnet Mask											
1	<input type="text"/>	<input type="text"/>											
2	<input type="text"/>	<input type="text"/>											
3	<input type="text"/>	<input type="text"/>											
Management Port Setup <input checked="" type="radio"/> User Define Ports <input type="radio"/> Default Ports Telnet Port <input type="text" value="23"/> (Default: 23) HTTP Port <input type="text" value="80"/> (Default: 80) HTTPS Port <input type="text" value="443"/> (Default: 443) FTP Port <input type="text" value="21"/> (Default: 21) TR069 Port <input type="text" value="8069"/> (Default: 8069) SSH Port <input type="text" value="22"/> (Default: 22)													
SNMP Setup <input checked="" type="checkbox"/> Enable SNMP Agent Get Community <input type="text" value=""/> Set Community <input type="text" value=""/> Manager Host IP <input type="text" value=""/> Trap Community <input type="text" value=""/> Notification Host IP <input type="text" value=""/> Trap Timeout <input type="text" value="10"/> seconds													
TLS/SSL Encryption Setup <input type="checkbox"/> Enable SSL 3.0													
<input checked="" type="checkbox"/> Device Management <input type="checkbox"/> Respond to external device <input checked="" type="checkbox"/> Broadcast DSL status to router in LAN													

OK

Wenn alles funktioniert, zeigt der DSL-Status etwa folgendes:

Off

- Wizards
- Online Status
- Internet Access
- LAN
- NAT
- Firewall
- Objects Setting
- CSM
- Applications
- System Maintenance
- Diagnostics
- Dial-out Triggering
- Routing Table
- ARP Cache Table
- DHCP Table
- NAT Sessions Table
- DNS Cache Table
- Ping Diagnosis
- Data Flow Monitor
- Trace Route
- DSL Status**

All Rights Reserved.

Diagnostics >> DSL Status

General

Tone Information

[Refresh](#)

ATU-R Information

Type:VDSL2

Hardware:

Firmware:05-06-07-06-01-07

Power Mngt Mode:DSL_G997_PMS_L0

Line State:SHOWTIME

Running Mode:17A

Vendor ID:b5004946 544e0000

ATU-C Information

Vendor ID:b5004946 544ea465 [IFTN]

Line Statistics

Downstream

Upstream

Actual Rate51392Kbps10048Kbps

Attainable Rate89177Kbps19812Kbps

Path ModeInterleaveInterleave

Interleave Depth720163

Actual PSD-4.7dB12.9dB

Near End

Far End

TrellisONON

BitswapONON

SNR Margin13dB11dB

Attenuation11dB0dB

CRC0409

FECS91339s1203823s

ES0s282s

SES0s3s

LOSS0s237s

UAS34s2944s

HEC Errors00

RS Corrections00

LOS Failure66

LOF Failure00

LPR Failure04

NCD Failure00

LCD Failure00

NFEC6483

RFEC1616

LYSMB343416047