

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

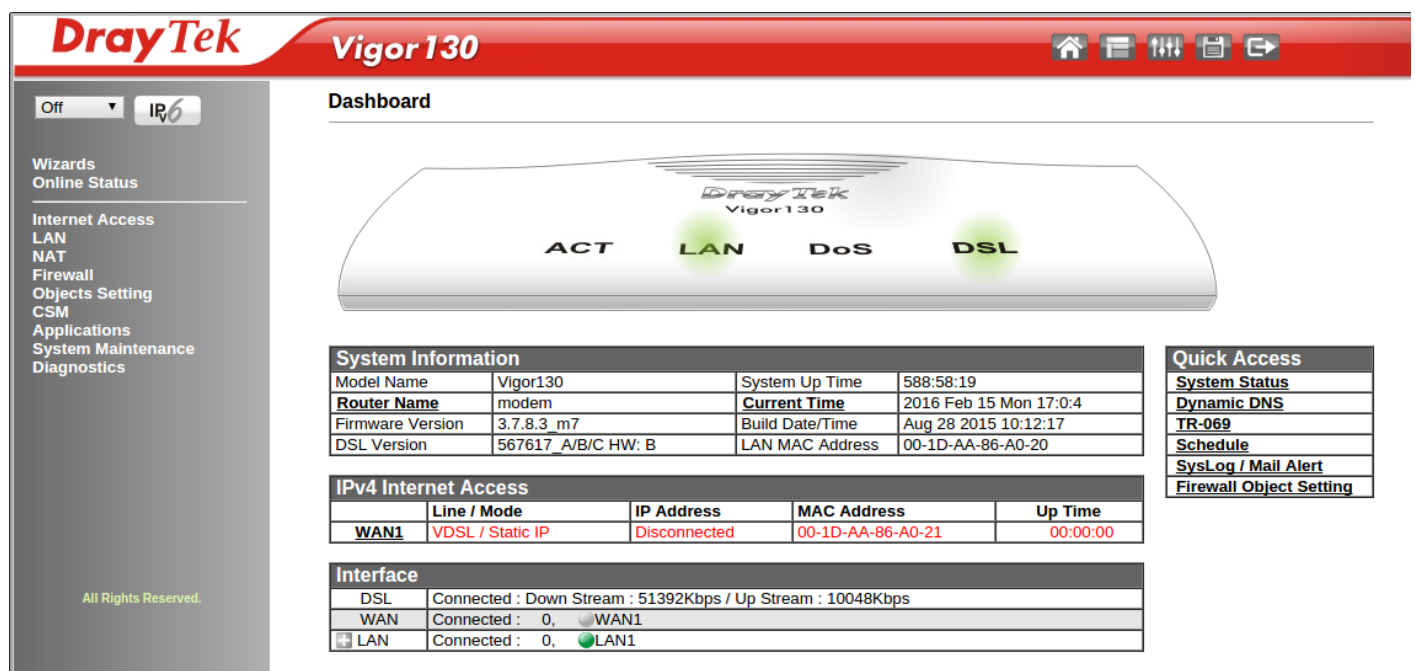
Update: 24.03.2018

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.



DrayTek Vigor 130

Dashboard

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

	Connected	Down Stream	Up Stream
DSL	Connected	51392Kbps	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

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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.

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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 Address192.168.67.1

1st Subnet Mask255.255.255.0

For IP Routing Usage

Enable

Disable

2nd IP Address192.168.1.1

2nd Subnet Mask255.255.255.0

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 Counts0

Gateway IP Address192.168.67.1

Lease Time86400(s)

Advanced

You can configure DHCP server options here.

DNS Server IP Address

Primary IP Address8.8.8.8

Secondary IP Address8.8.4.4

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

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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:

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Vigor 130

Off
IR6

Wizards
Online Status

Internet Access
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NAT
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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
Server IP Address
Destination Port
Enable syslog message:
☒ Firewall Log
☒ User Access Log
☒ WAN Log
☒ Router/DSL information

Mail Alert Setup
☐ Enable
SMTP Server
SMTP Port
Mail To
Return-Path
☐ Use SSL
☐ Authentication
Username
Password
Enable E-Mail Alert:
☒ DoS Attack

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

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Vigor 130

Off
IR6

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Diagnostics

System Maintenance >> Time and Date

Time Information

Current System Time

Time Setup

☐ Use Browser Time
☒ Use Internet Time
Time Server
Priority
Time Zone
Enable Daylight Saving ☒
Automatically Update Interval

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
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Reboot System
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Diagnostics

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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:

Hardware:

Firmware:

Power Mngt Mode:

Line State:

Running Mode:

Vendor ID:

VDSL2

05-06-07-06-01-07

DSL_G997_PMS_L0

SHOWTIME

17A

b5004946 544e0000

ATU-C Information

Vendor ID:

b5004946 544ea465 [IFTN]

Line Statistics

Downstream

Upstream

Actual Rate

51392

Kbps

10048

Kbps

Attainable Rate

89177

Kbps

19812

Kbps

Path Mode

Interleave

Interleave

Interleave Depth

720

163

Actual PSD

-4.7

dB

12.9

dB

Near End

Far End

Trellis

ON

ON

Bitswap

ON

ON

SNR Margin

13

dB

11

dB

Attenuation

11

dB

0

dB

CRC

0

409

FECS

91339

s

1203823

s

ES

0

s

282

s

SES

0

s

3

s

LOSS

0

s

237

s

UAS

34

s

2944

s

HEC Errors

0

0

RS Corrections

0

0

LOS Failure

6

6

LOF Failure

0

0

LPR Failure

0

4

NCD Failure

0

0

LCD Failure

0

0

NFEC

64

83

RFEC

16

16

LYSMB

3434

16047

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