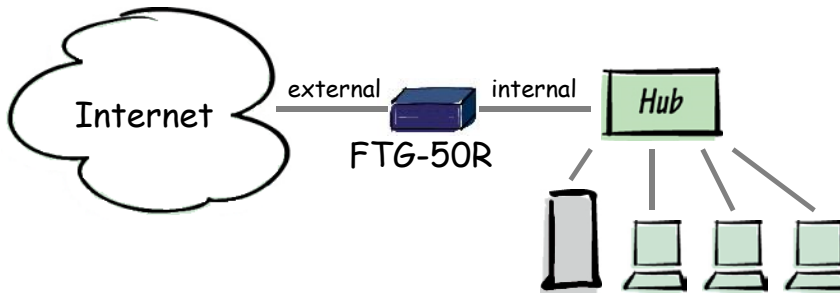




The purpose of this document is to provide you with the necessary steps to configure a FTG-50R to used with T-DSL (German DSL Provider "T-Online"). It's not my intention to replace any official documentation nor release notes. After running a couple of setup scenarios, I thought it might be useful to share this document with you.

For this configuration I've used a FTG-50 R with 2.36 OS Version



Basic Parameters

First thing to do is to provide your FortiGate with basic IP settings to be configured later on with HTTPS.

Following Chart is good to remember, when configuring the appliance.

Administrator Password:	secret	
Internal Interface	IP:	192.168.10.254
	Netmask:	255.255.255.0
External Interface	IP:	<i>dynamically assigned by dialup</i>
	Netmask:	<i>dynamically assigned by dialup</i>
	Default Gateway	<i>dynamically assigned by dialup</i>
	Primary DNS Server	207.194.200.1 (T-Online DNS Server)
	Secondary DNS Server	207.194.200.129 (T-Online DNS Server)
	DHCP	If your ISP supplies you with an IP address using DHCP, no further information is required
	PPPoE – UserName *	AAAAAAAAAAAAATTTTTTTTTTTTTTTT #0001@t-online.de
	PPPoE - Password	mypass

* Your T-Online user Name consists of 4 parts. Verify the entries on your delivery note received from T-Online.



DISCLAIMER

This Technical Tip or TechNote is provided as information only. I cannot make any guarantee, either explicit or implied, as to its accuracy to specific system installations / configurations. Readers should consult each Vendor for further information or support.

Although I believe the information provided in this document to be accurate at the time of writing, I reserve the right to modify, update, retract or otherwise change the information contained within for any reason and without notice. This technote has been created after studying the material and / or practical evaluation by myself. All liability for use of the information presented here remains with the user.

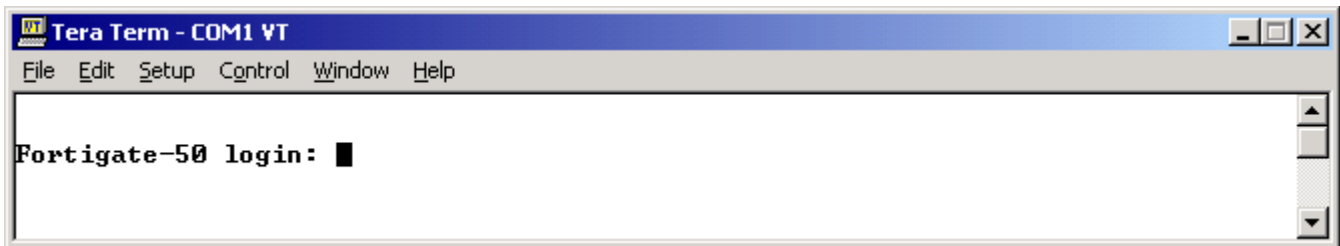
Anschluss Nr. I.e AAAAAAAAAAAAAA
T-Online Nr., i.e. TTTTTTTTTTTTTT
Mitbenutzer Suffix, i.e 0001
Domain: @t-online.de
Kennwort: mypass

The Fortigate NPG contains a DHCP server, that you can configure to automatically set the address of the computers on your internal network.

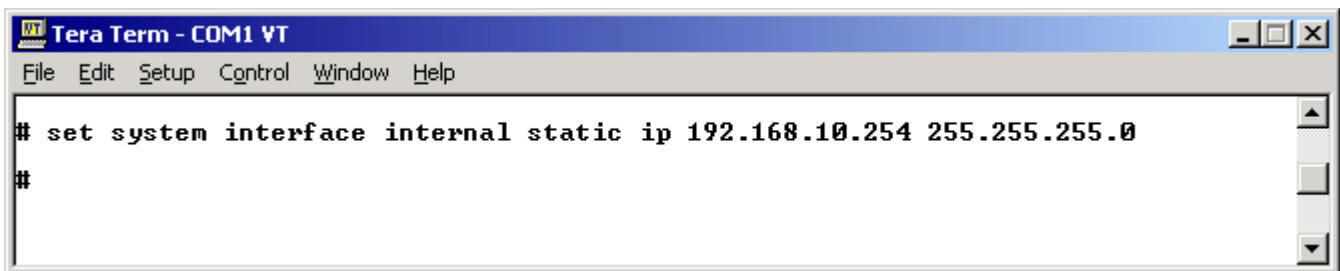
DHCP Settings	Starting IP	192.168.10.30
	Ending IP	192.168.10.50
	Netmask	255.255.255.0
	Default Route	192.168.10.254 (this is internal interface on this FTG)
	DNS IP	207.194.200.1 & 207.194.200.129

Configure Internal IP Address

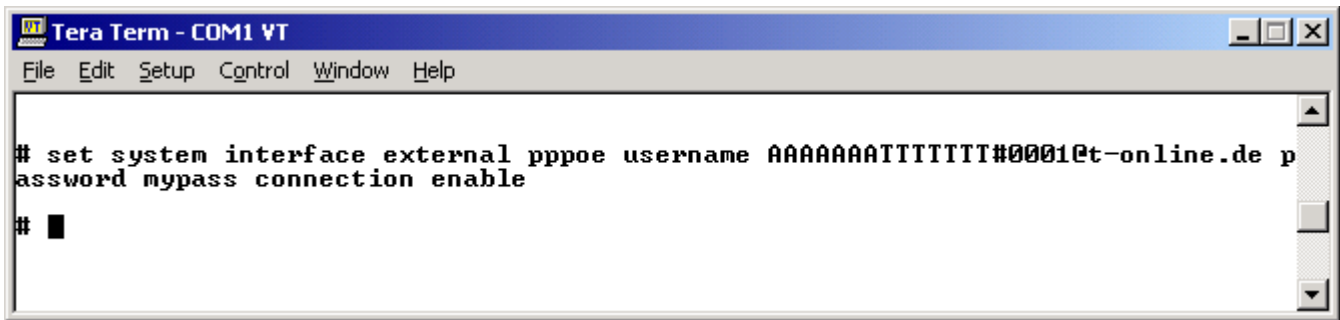
1. Connect the null modem cable with your FortiGate Box.
2. Start a terminal client to connect via COM1 or responding port (serial settings: 9600-8-N)
3. Press <return> and the login prompt appears



4. Type as username **admin**
5. On the password prompt just press <return>
6. First, assign an IP address to the internal interface



7. Set the external interface to use PPPoE. Remember the basic parameters at the beginning.

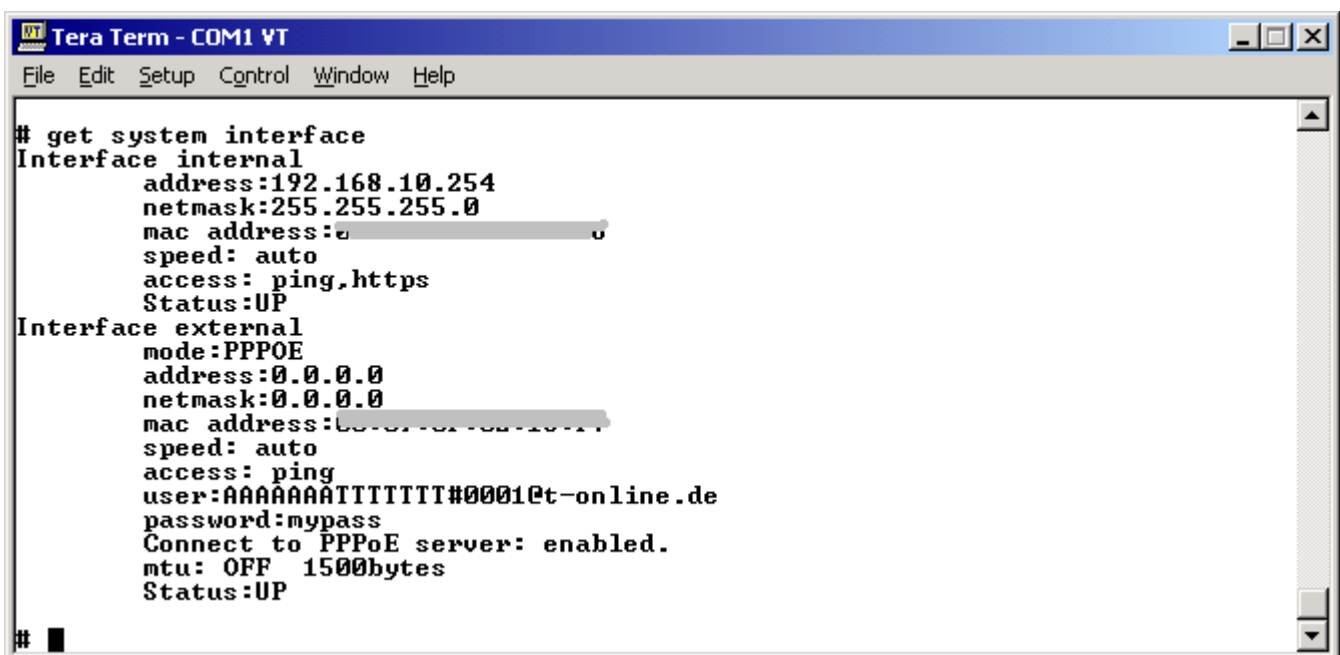


```
VT Tera Term - COM1 VT
File Edit Setup Control Window Help

# set system interface external pppoe username AAAAAAAAATTTTTTT#0001@t-online.de p
assword mypass connection enable

# █
```

8. Confirm that the addresses are correct.



```
VT Tera Term - COM1 VT
File Edit Setup Control Window Help

# get system interface
Interface internal
  address:192.168.10.254
  netmask:255.255.255.0
  mac address:00-00-00-00-00-00
  speed: auto
  access: ping,https
  Status:UP
Interface external
  mode:PPPOE
  address:0.0.0.0
  netmask:0.0.0.0
  mac address:00-00-00-00-00-00
  speed: auto
  access: ping
  user:AAAAAAAATTTTTTT#0001@t-online.de
  password:mypass
  Connect to PPPoE server: enabled.
  mtu: OFF 1500bytes
  Status:UP

# █
```

Note:

External interface shows at address and netmask no IP Address. Either, this is because the appliance is not connected to the DSL Port of the NTBA or username and password don't match.

On the next page, I've added a screenshot with successful connection.

Look at the IP address. Don't worry about seeing a hidden username and password. This time I used a valid username / password combination.



```
Tera Term - COM1 VT
File Edit Setup Control Window Help

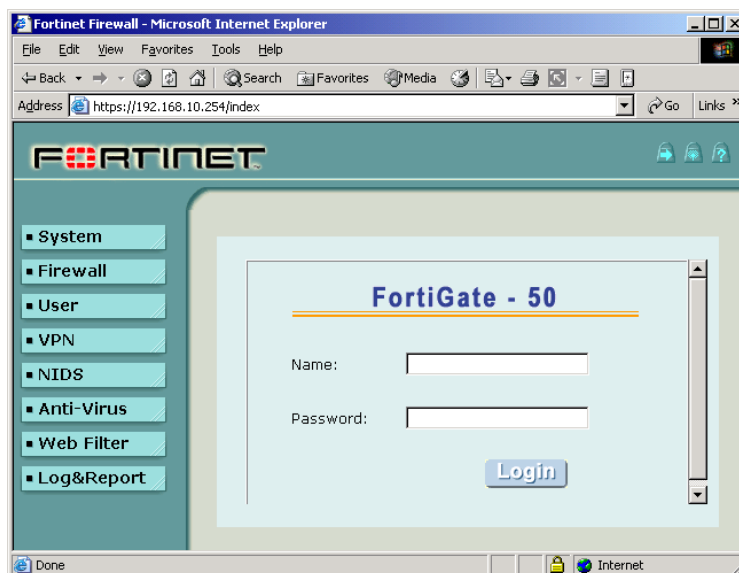
# get system interface
Interface internal
  address:192.168.10.254
  netmask:255.255.255.0
  mac address:
  speed: auto
  access: ping,https
  Status:UP
Interface external
  mode:PPPOE
  address:217.80.228.172
  netmask:255.255.255.255
  mac address:
  speed: auto
  access: ping
  user:
  password:
  Connect to PPPoE server: enabled.
  mtu: OFF 1492bytes
  Status:UP
#
```

This is pretty much everything to do, for a successful connection to your T-DSL. However, if you want to use DHCP Service by FTG-50R, you have to enable and configure DHCP Service.

Configure DHCP Service

Basically, DHCP Service is more easier to configure by using FortiGate's Web Interface.

1. Connect to FortiGate with following URL: <https://192.168.10.254> and type **admin** (no password)



Click on **SYSTEM – NETWORK - INTERFACE**

Interface	DNS	Routing Table	Routing Gateway	DHCP
Name	IP	Netmask	Access	Modify
internal	192.168.10.254	255.255.255.0	HTTPS,PING	
external	217.80.228.172	255.255.255.255	PING	

Note: When looking at external you would see the same IP Address, which has been seen on terminal by executing the command “get system interface”

Click on **DHCP**

Insert proper values (you can use my examples) DNS Server entries are based on T-Online Service during time of this writing.

Enable DHCP:

Starting IP: **Dynamic IP List**

Ending IP:

Netmask:

Lease Duration: (seconds)

Domain:

DNS IP:

Default Route:

Exclusion Range:

Range 1: -

Range 2: -

Range 3: -

Range 4: -

Apply

If you have been using a different DHCP Server first, open a command prompt on you PC and verify settings. You will have to renew the IP Address and also to flush the arp cache.



```
C:\WINDOWS\System32\cmd.exe
C:\Documents and Settings\Rainer Bensel>ipconfig -all
Windows IP Configuration

    Host Name . . . . . : hrc
    Primary Dns Suffix . . . . . :
    Node Type . . . . . : Unknown
    IP Routing Enabled. . . . . : No
    WINS Proxy Enabled. . . . . : No

Ethernet adapter Local Area Connection:

    Connection-specific DNS Suffix  : 
    Description . . . . . : 3Com EtherLink XL 10/100 PCI For Complete PC Management
    NIC (3C905C-1X) . . . . . :
    Physical Address. . . . . : 00-01-02-A9-0C-F7
    Dhcp Enabled. . . . . : Yes
    Autoconfiguration Enabled . . . . . : Yes
    IP Address. . . . . : 192.168.10.34
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 192.168.10.254
    DHCP Server . . . . . : 192.168.10.254
    DNS Servers . . . . . : 192.168.10.254
    Lease Obtained. . . . . : Saturday, December 20, 2003 3:45:11 PM
    Lease Expires . . . . . : Tuesday, December 23, 2003 3:45:11 PM

C:\Documents and Settings\Rainer Bensel>
```

In my example, have a look at DNS Servers. DNS Server has been set to my former default router. With the change to the new Gateway, I also changed DNS settings.

I will release my IP Address and renew, by connecting now to Fortigate's DHCP Service on FTG-50R.

```
Command Prompt
C:\Documents and Settings\Rainer Bensel>ipconfig -all
Windows IP Configuration

    Host Name . . . . . : hrc
    Primary Dns Suffix . . . . . :
    Node Type . . . . . : Unknown
    IP Routing Enabled. . . . . : No
    WINS Proxy Enabled. . . . . : No

Ethernet adapter Local Area Connection:

    Connection-specific DNS Suffix  : 
    Description . . . . . : 3Com EtherLink XL 10/100 PCI For Complete PC Management
    NIC (3C905C-1X) . . . . . :
    Physical Address. . . . . : 00-01-02-A9-0C-F7
    Dhcp Enabled. . . . . : Yes
    Autoconfiguration Enabled . . . . . : Yes
    IP Address. . . . . : 192.168.10.34
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 192.168.10.254
    DHCP Server . . . . . : 192.168.10.254
    DNS Servers . . . . . : 207.194.200.1
    Lease Obtained. . . . . : Saturday, December 20, 2003 9:31:56 PM
    Lease Expires . . . . . : Wednesday, December 24, 2003 8:51:56 AM

C:\Documents and Settings\Rainer Bensel>
```

Have a look on DNS Server, do you realize the changes?



Finally, to make sure, everything is working out the way I wanted.

I'll do an DNS Lookup to see, whether Hostname and Domains can be resolved. Try some different lookups, to see if it works.

```
C:\WINDOWS\System32\cmd.exe - nslookup
C:\Documents and Settings\Rainer Bemsel>nslookup
Default Server:  finna.radiant.net
Address:  207.194.200.1

> fortinet.com
Server:  finna.radiant.net
Address:  207.194.200.1

Non-authoritative answer:
Name:    fortinet.com
Address: 128.242.109.135

> bemsel.com
Server:  finna.radiant.net
Address:  207.194.200.1

Non-authoritative answer:
Name:    bemsel.com
Address: 212.227.109.230

>
```

I hope this short cheat sheet was useful for setting up DSL. I would appreciate any comments either via email at itsec@bemsel.com or on my guestbook at www.bemsel.com/MyPlanet/myplanet.html

