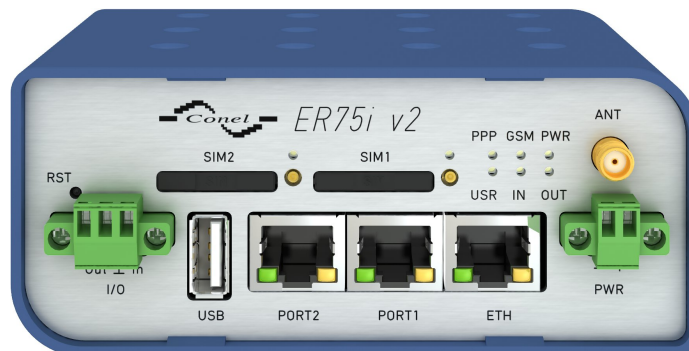


User Module

PPP Gateway

APPLICATION NOTE



ADVANTECH

Used symbols



Danger – Information regarding user safety or potential damage to the router.



Attention – Problems that may arise in specific situations.



Information or notice – Useful tips or information of special interest.



Example – example of function, command or script.



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1. Description of user module



User module *PPP Gateway* is not contained in the standard router firmware. Uploading of this user module is described in the Configuration manual (see [1, 2]).



The user module is v2 and v3 router platforms compatible.

This module allows the router to establish connection via PPP (data link protocol commonly used in establishing a direct connection between two networking nodes) between router and device which is connected to the router over a serial line. For example, this way it is possible to provide Internet access for older devices which do not have this ability, but have the use of connection over a serial line.

For configuration *PPP Gateway* user module is available web interface, which is invoked by pressing the module name on the *User modules* page of the router web interface. The left part of the web interface contains the menu with pages for *Configuration*, monitoring (*Status*) and *Customization* of the module. *Customization* block contains only the *Return* item, which switches this web interface to the interface of the router.

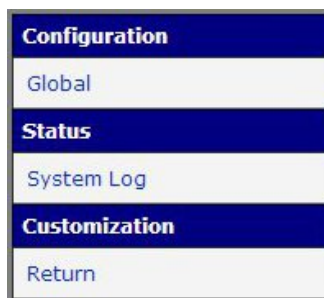


Figure 1: Menu of web interface

2. Configuration

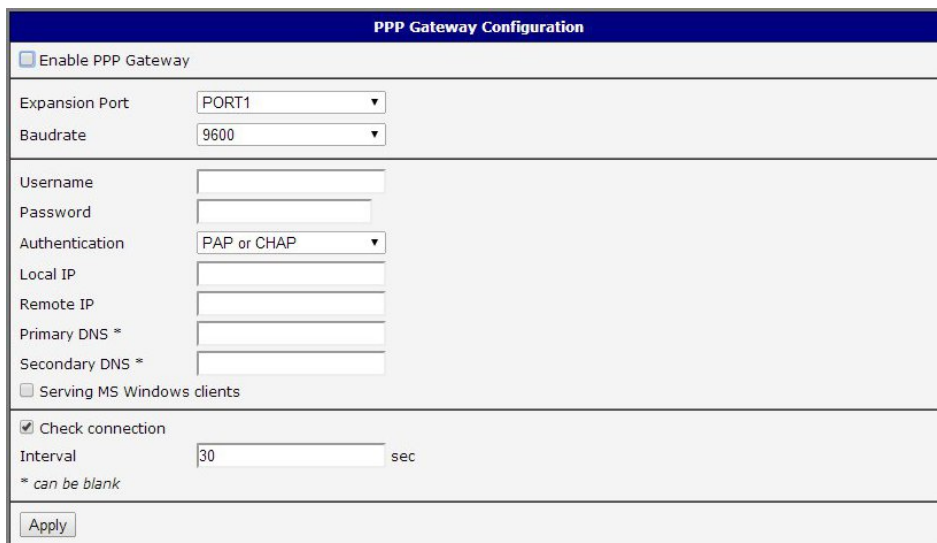
Configuration of *PPP Gateway* user module is performed via the form on the *Global* page in the *Configuration* part of the module web interface. The first item in the configuration form – *Enable PPP Gateway* – is used to activate this user module. Meaning of other items is described below.

Item	Description
Expansion Port	Port to which the device is connected
Baudrate	Communication speed
Username	User name to log into the network
Password	Password to log into the network
Authentication	Authentication protocol: <ul style="list-style-type: none"> • PAP or CHAP – router chooses one of these two methods • PAP – it's used PAP authentication method • CHAP – it's used CHAP authentication method
Local IP	IP address of the local side
Remote IP	IP address of the remote side
Primary DNS	Primary DNS server
Secondary DNS	Secondary DNS server
Serving MS Windows clients	It should be ticked when the connected device uses the operating system MS Windows

Table 1: Description of items in the configuration form

In the bottom of the window can be activated connection check by ticking the *Check connection* check box. This check is intended to recognize throughput of a route. It is possible to set the time delay between outgoing requests (checks) in the *Interval* field.

Any changes must be confirmed by pressing *Apply* button.



PPP Gateway Configuration

☐ Enable PPP Gateway

Expansion Port:

Baudrate:

Username:

Password:

Authentication:

Local IP:

Remote IP:

Primary DNS *:

Secondary DNS *:

☐ Serving MS Windows clients

☒ Check connection

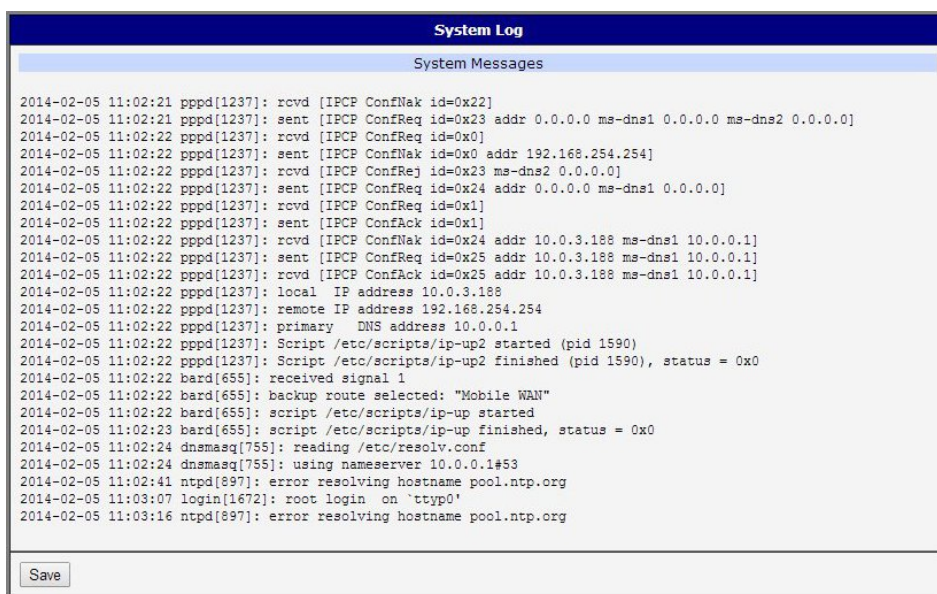
Interval: sec

* can be blank

Figure 2: Configuration form

2.1 System log

In case of any problems it is possible to view the system log by pressing the *System Log* menu item. In the window are displayed detailed reports from individual applications running in the router including possible reports relating to the *PPP Gateway* module.



System Log

System Messages

```

2014-02-05 11:02:21 pppd[1237]: rcvd [IPCP ConfNak id=0x22]
2014-02-05 11:02:21 pppd[1237]: sent [IPCP ConfReq id=0x23 addr 0.0.0.0 ms-dns1 0.0.0.0 ms-dns2 0.0.0.0]
2014-02-05 11:02:22 pppd[1237]: rcvd [IPCP ConfReq id=0x0]
2014-02-05 11:02:22 pppd[1237]: sent [IPCP ConfNak id=0x0 addr 192.168.254.254]
2014-02-05 11:02:22 pppd[1237]: rcvd [IPCP ConfReq id=0x23 ms-dns2 0.0.0.0]
2014-02-05 11:02:22 pppd[1237]: sent [IPCP ConfReq id=0x24 addr 0.0.0.0 ms-dns1 0.0.0.0]
2014-02-05 11:02:22 pppd[1237]: rcvd [IPCP ConfReq id=0x1]
2014-02-05 11:02:22 pppd[1237]: sent [IPCP ConfAck id=0x1]
2014-02-05 11:02:22 pppd[1237]: rcvd [IPCP ConfNak id=0x24 addr 10.0.3.188 ms-dns1 10.0.0.1]
2014-02-05 11:02:22 pppd[1237]: sent [IPCP ConfReq id=0x25 addr 10.0.3.188 ms-dns1 10.0.0.1]
2014-02-05 11:02:22 pppd[1237]: rcvd [IPCP ConfAck id=0x25 addr 10.0.3.188 ms-dns1 10.0.0.1]
2014-02-05 11:02:22 pppd[1237]: local IP address 10.0.3.188
2014-02-05 11:02:22 pppd[1237]: remote IP address 192.168.254.254
2014-02-05 11:02:22 pppd[1237]: primary DNS address 10.0.0.1
2014-02-05 11:02:22 pppd[1237]: Script /etc/scripts/ip-up2 started (pid 1590)
2014-02-05 11:02:22 pppd[1237]: Script /etc/scripts/ip-up2 finished (pid 1590), status = 0x0
2014-02-05 11:02:22 bard[655]: received signal 1
2014-02-05 11:02:22 bard[655]: backup route selected: "Mobile WAN"
2014-02-05 11:02:22 bard[655]: script /etc/scripts/ip-up started
2014-02-05 11:02:23 bard[655]: script /etc/scripts/ip-up finished, status = 0x0
2014-02-05 11:02:24 dnsmasq[755]: reading /etc/resolv.conf
2014-02-05 11:02:24 dnsmasq[755]: using nameserver 10.0.0.1#53
2014-02-05 11:02:41 ntpd[897]: error resolving hostname pool.ntp.org
2014-02-05 11:03:07 login[1672]: root login on 'tty0'
2014-02-05 11:03:16 ntpd[897]: error resolving hostname pool.ntp.org
    
```

Figure 3: Systémový log

3. Recommended literature

- [1] Advantech B+B SmartWorx: **v2 Routers Configuration Manual** (MAN-0021-EN)
- [2] Advantech B+B SmartWorx: **SmartFlex Configuration Manual** (MAN-0023-EN)
- [3] Advantech B+B SmartWorx: **SmartMotion Configuration Manual** (MAN-0024-EN)
- [4] Advantech B+B SmartWorx: **SmartStart Configuration Manual** (MAN-0022-EN)
- [5] Advantech B+B SmartWorx: **ICR-3200 Configuration Manual** (MAN-0042-EN)



Product related documents can be obtained on *Engineering Portal* at <https://ep.advantech-bb.cz/> address.