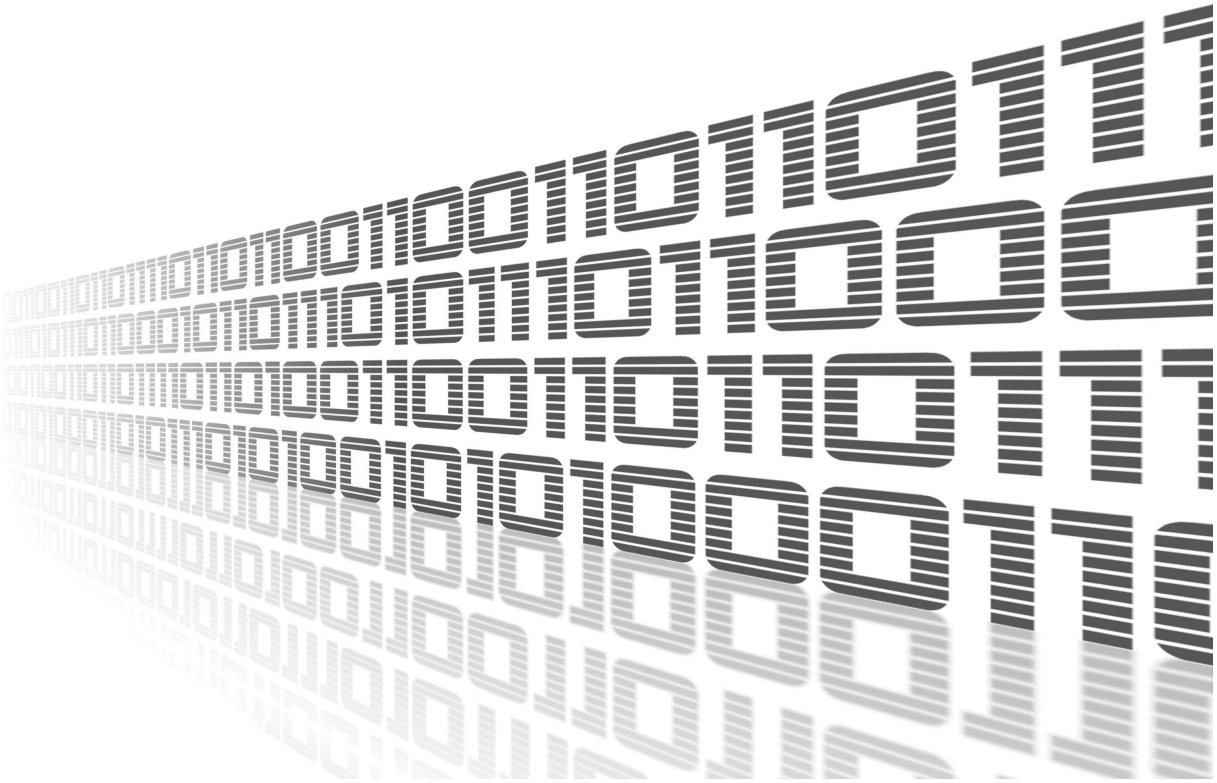
RouterApp

User Module

Ethernet Port Detector

APPLICATION NOTE



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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 *Ethernet Port Detector* 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 router to detect physical disconnection of an Ethernet cable and drop eth0 interface so that after the cable is reconnected, it is not possible to communicate via the Ethernet interface. After uploading the module into the router and the subsequent activation of this module, communication on the Ethernet interface is not limited in any way. It is therefore possible to connect to the router in a standard way. The moment the cable is disconnected (and subsequently connected), communication via Ethernet is unavailable. To be able to connect to the router via ethernet again, administrator (or headquarters and the like) intervention is needed (administrator has the ability to remotely connect to the router and re-enable communication via Ethernet interface). *Ethernet Port Detector* also allows router to send information about disconnection of an Ethernet cable and dropping eth0 interface. There are two information channels – SMS message and SNMP trap. If administrator re-enables communication via Ethernet interface (based on received information), the same rules same as after module activation are applied. This means that communication on the Ethernet interface is not limited in any way and it is standardly possible to connect to the router. At a time when the cable is physically disconnected (and subsequently connected), communication via Ethernet is unavailable again (eth0 interface is dropped). Therefore, administrator intervention is necessary again. . .

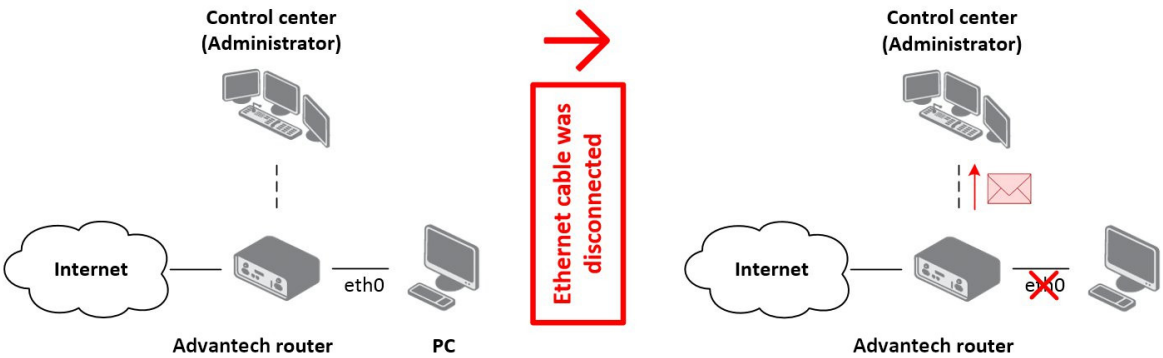

Figure 1: The principle of module operation

For configuration *Ethernet Port Detector* 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 monitoring (*Status*) and customization (*Ethernet options*) of the module. *Ethernet options* block contains inter alia the *Return* item, which switches this web interface to the interface of the router.

2. Configuration

The actual configuration of the *Ethernet Port Detector* user module configuration is performed via the form on the *Ethernet detection* page. The first item in the configuration form – *Ethernet link detection* – is used to activate this user module. The following is a configuration of sending information about disconnection of an Ethernet cable and dropping eth0 interface. Check the *Send SMS* box to send information via SMS messages to number which must be entered into the *SMS phone number* box. We recommend to maintain the international format, which is indicated. It is also possible to send information via SNMP trap. For this purpose there is the *Send SNMP trap* check box. The relevant (destination) address must be entered in the *SNMP destination address* box. All changes in settings will be applied after pressing the *Apply* button.

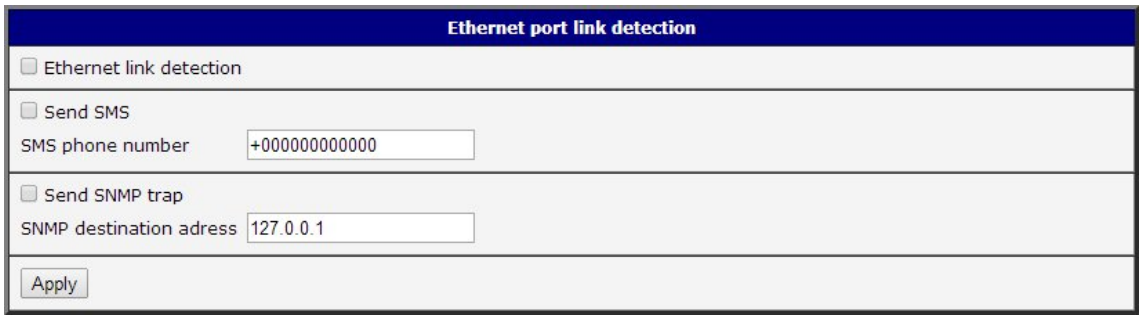

Figure 2: Ethernet Detection

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 *Ethernet Port Detector* module.

The highlighted line in the figure illustrates a situation where the system log displays information about the activation of the module.

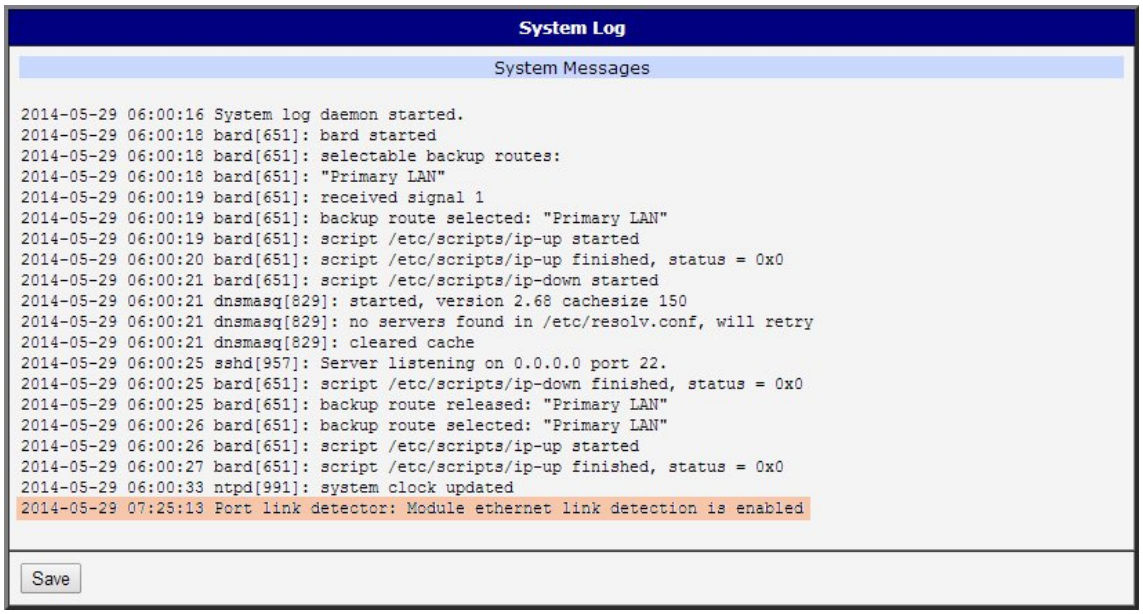

Figure 3: System Log

3. Related Documents

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

Product related documents can be obtained on *Engineering Portal* at www.ep.advantech-bb.cz address.