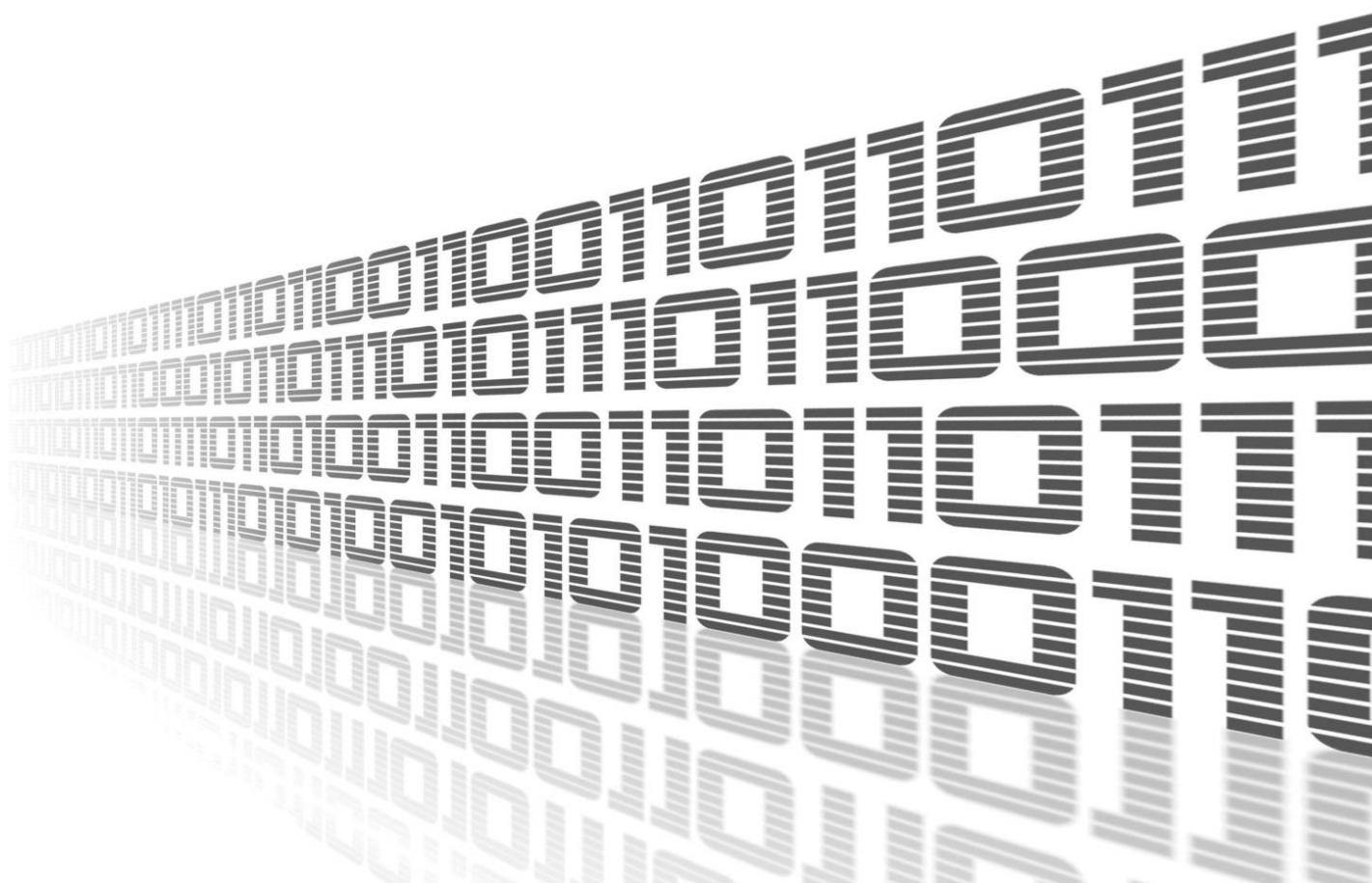




## Technical Report 069



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# Used symbols



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



*Attention* – Problems that can arise in specific situations.



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



*Example* – Example of function, command or script.

# Contents

<b>1. Changelog</b>	<b>1</b>
1.1 Technical Report 069 Changelog . . . . .	1
<b>2. Basic Information</b>	<b>2</b>
<b>3. Router App Description</b>	<b>3</b>
3.1 Web Interface . . . . .	3
3.2 Status . . . . .	4
3.3 Configuration . . . . .	4
3.4 Licenses . . . . .	6
<b>4. Example</b>	<b>7</b>
<b>5. Related Documents</b>	<b>9</b>

# List of Figures

1	Menu . . . . .	3
2	Overview . . . . .	4
3	System log . . . . .	4
4	Global configuration . . . . .	5
5	Licenses . . . . .	6
6	Devices . . . . .	7
7	Detail of the device . . . . .	7
8	Device parameter edit . . . . .	8
9	Push file to the device . . . . .	8

# List of Tables

# 1. Changelog

## 1.1 Technical Report 069 Changelog

v1.0.0 (2022-03-30)

- First release.

## 2. Basic Information

Technical Report 069 (TR-069) is a technical specification of the Broadband Forum that defines an application layer protocol for remote management and provisioning of customer-premises equipment (CPE) connected to an Internet Protocol (IP) network. TR-069 uses the CPE WAN Management Protocol (CWMP) which provides support functions for auto-configuration, software or firmware image management, software module management, status and performance managements, and diagnostics.

## 3. Router App Description

### 3.1 Web Interface

After Router App installation, the module's GUI can be invoked by clicking the router app name on the Router Apps page of router's web interface.

Left part of this GUI contains menu with Status menu section, Configuration menu section and Information menu section. Customization menu section contains only the Return item, which switches back from the module's web page to the router's web configuration pages. The main menu of router app GUI is shown on Figure below.



The image shows a vertical menu structure with four main sections: Status, Configuration, Information, and Customization. Each section has a dark blue header and a light gray body containing menu items.

Status
Overview
System Log
Configuration
Global
Information
Licenses
Customization
Return

Figure 1: Menu

## 3.2 Status

Status menu section contains Overview item where we can find detailed data about TR-069 service and received parameters.

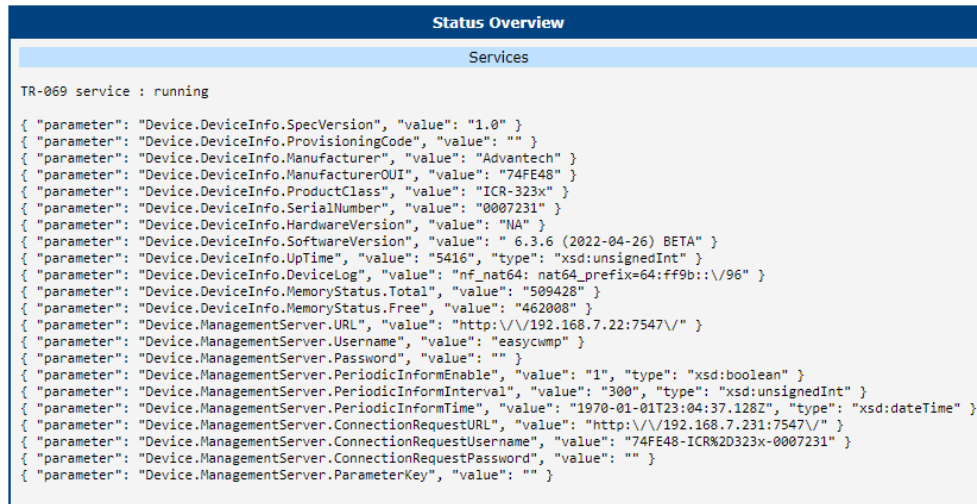


Figure 2: Overview

While System log contains log messages.

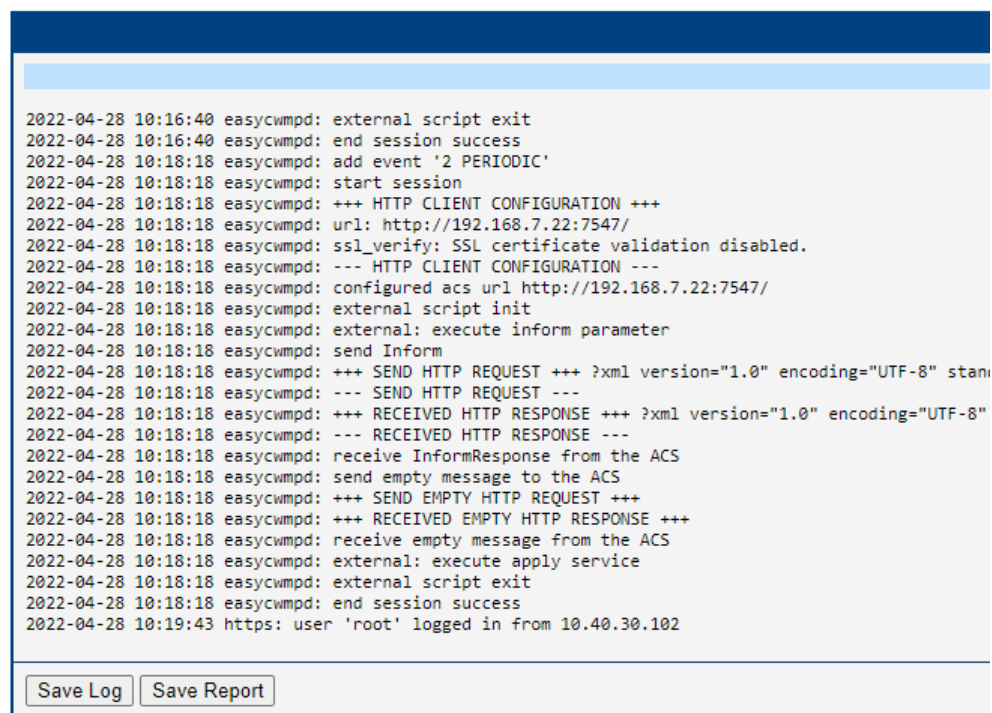
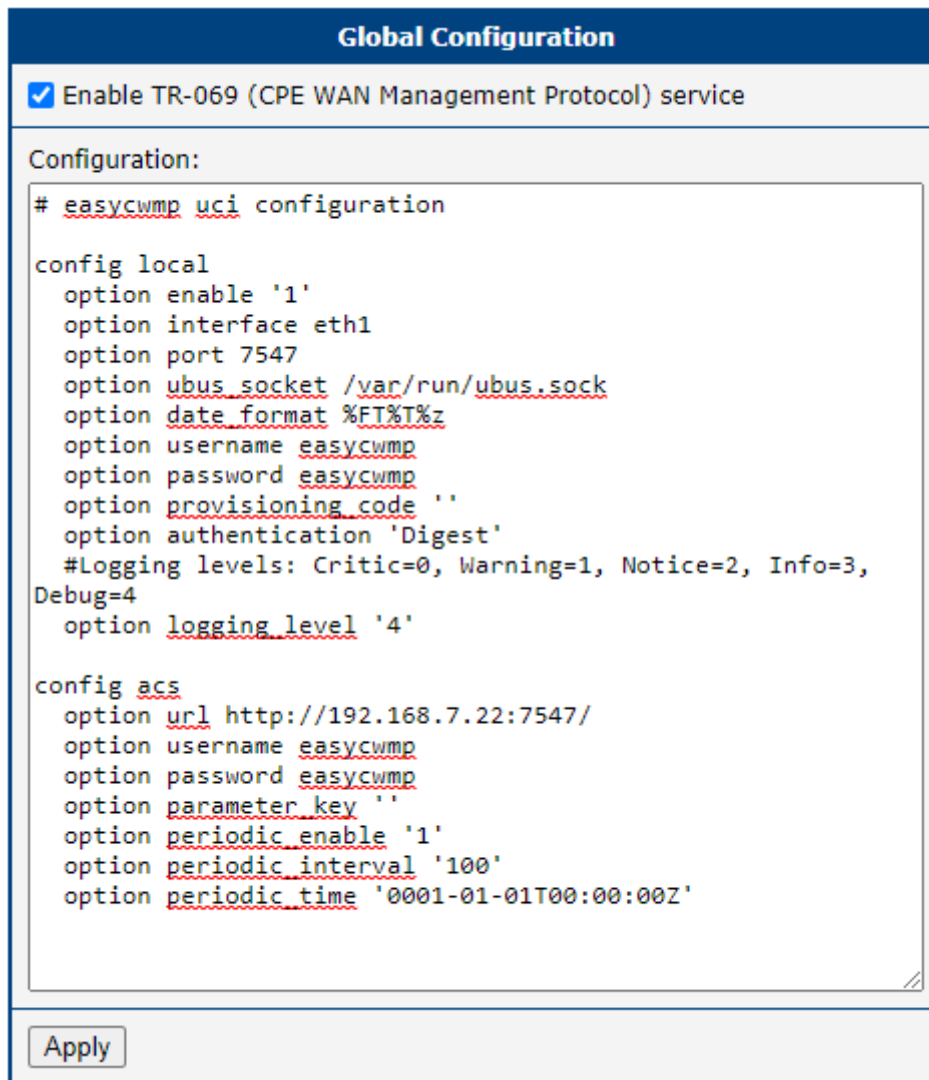


Figure 3: System log



### 3.3 Configuration

Global configuration is place where the configuration string should be. Most important lines are *option url*, *option username* and *option password* in the *config acs* part.



The screenshot shows a web-based configuration interface titled "Global Configuration". At the top, there is a checkbox labeled "Enable TR-069 (CPE WAN Management Protocol) service" which is checked. Below this, a section labeled "Configuration:" contains a text area with the following configuration string:

```
# easycwmp uci configuration

config local
    option enable '1'
    option interface eth1
    option port 7547
    option ubus_socket /var/run/ubus.sock
    option date_format %FT%T%z
    option username easycwmp
    option password easycwmp
    option provisioning_code ''
    option authentication 'Digest'
    #Logging levels: Critic=0, Warning=1, Notice=2, Info=3,
    Debug=4
    option logging_level '4'

config acs
    option url http://192.168.7.22:7547/
    option username easycwmp
    option password easycwmp
    option parameter key ''
    option periodic_enable '1'
    option periodic_interval '100'
    option periodic_time '0001-01-01T00:00:00Z'
```

At the bottom of the configuration area, there is an "Apply" button.

Figure 4: Global configuration

## 3.4 Licenses

Summarizes Open-Source Software (OSS) licenses used by this module.

TR-069 (CPE WAN Management Protocol) Licenses		
Project	License	More Information
easycwmp	GPLv2	<a href="#">License</a>
openssl	OpenSSL	<a href="#">License</a>
json-c	Json-c	<a href="#">License</a>
libubox	Ubox	<a href="#">License</a>
libuci	LGPLv2.1	<a href="#">License</a>
libubus	LGPLv2.1	<a href="#">License</a>
microxml	LGPL2	<a href="#">License</a>
curl	Curl	<a href="#">License</a>

Figure 5: Licenses

## 4. Example

In this example is *genieacs*<sup>1</sup> solution used as auto configuration server (acs). There are 3 routers managed with ACS.

Serial number	Product class	Software version	IP	SSID	Last inform	Tags
ACZ1100002281167	ICR-253x				26. 4. 2022 10:27:56	Others <a href="#">Show</a>
0007231	ICR-323x				28. 4. 2022 7:21:07	Online now <a href="#">Show</a>
N/A	ICR-445x				26. 4. 2022 10:30:31	Others <a href="#">Show</a>

Figure 6: Devices

We can display the detail of each added device

74FE48-ICR%2D323x-0007231

Pinging 192.168.7.231: 0 ms

Last inform 28. 4. 2022 8:36:06 Online now [Summon](#)

Serial number 0007231

Product class ICR-323x

OUI 74FE48

Manufacturer Advantech

Faults

Channel	Code	Message	Detail	Retries	Timestamp
No faults					

All parameters

Search parameters

Parameter	Value	Download
Device		<a href="#">Download</a>
Device.DeviceInfo		<a href="#">Download</a>
Device.DeviceInfo.HardwareVersion		<a href="#">Download</a>
Device.DeviceInfo.Manufacturer	Advantech	<a href="#">Download</a>
Device.DeviceInfo.ManufacturerOUI	74FE48	<a href="#">Download</a>
Device.DeviceInfo.ProductClass	ICR-323x	<a href="#">Download</a>
Device.DeviceInfo.ProvisioningCode	blank	<a href="#">Download</a>
Device.DeviceInfo.SerialNumber	0007231	<a href="#">Download</a>
Device.DeviceInfo.SpecVersion	1.0	<a href="#">Download</a>
Device.ManagementServer		<a href="#">Download</a>

Reboot Reset Push file Delete

Figure 7: Detail of the device

<sup>1</sup><https://genieacs.com/>

In this detail it is possible to edit parameter values

Queued: 0 Pending: 0 Fault: 0 Stale: 0 Commit Clear

Editing *Device.Configuration.eth0\_ipaddr*

10.10.0.1 Queue Cancel

**74FE48-ICR%2D323x-0007231**

+  
Pinging 192.168.7.231: 0 ms  
Last inform 28. 4. 2022 8:42:26 ● Online now Summon

Serial number 0007231  
Product class ICR-323x  
OUI 74FE48  
Manufacturer Advantech

Faults

Channel	Code	Message	Detail	Retries	Timestamp
No faults					

All parameters

Search parameters

Device					
Device.Configuration					
Device.Configuration.eth0_bootproto		static			
Device.Configuration.eth0_ipaddr		10.0.0.1			
Device.Configuration.eth0_netmask		255.255.255.0			
Device.Configuration.eth0_network		10.0.0.0			
Device.Configuration.eth1_bootproto		static			
Device.Configuration.eth1_ipaddr		192.168.7.231			
Device.Configuration.eth1_netmask		255.255.255.0			
Device.Configuration.eth1_network		192.168.7.0			

Reboot Reset Push file Delete

Download

Figure 8: Device parameter edit

or even push files. Files, that can be pushed to router are only:

- Config files
- Router firmware

to the router which could be useful for changing config files of even uploading new firmware.

Queued: 0 Pending: 0 Fault: 0 Stale: 0 Commit Clear

Push

ICR-323x(5).cfg  
ICR-323x.bin

Queue Cancel

**74FE48-ICR%2D323x-0007231**

+  
Pinging 192.168.7.231: 0 ms  
Last inform 28. 4. 2022 8:42:59 ● Online now Summon

Serial number 0007231  
Product class ICR-323x  
OUI 74FE48  
Manufacturer Advantech

Figure 9: Push file to the device

## 5. Related Documents

You can obtain product-related documents on *Engineering Portal* at [icr.advantech.cz](http://icr.advantech.cz) address.

To get your router's *Quick Start Guide*, *User Manual*, *Configuration Manual*, or *Firmware* go to the [Router Models](#) page, find the required model, and switch to the *Manuals* or *Firmware* tab, respectively.

The *Router Apps* installation packages and manuals are available on the [Router Apps](#) page.

For the *Development Documents*, go to the [DevZone](#) page.