

TR-069

Summary

TR-069 (Technical Report 069) is a technical specification of the Broadband Forum that defines an application layer protocol for remote management of customer-premises equipment (CPE) connected to an Internet Protocol (IP) network. This section is a summary of **TR-069** in RUT routers.

TR-069 Client Configuration



field name	value	description
Enable	yes no; Default: no	Toggles TR-069 client ON or OFF
Periodic enable	yes no; Default: yes	Toggles periodic transmissions of data to server ON or OFF
Accept server request	yes no; Default: no	When enabled, the router accepts connection requests from server
Sending interval	integer [60..99999999]; Default: 100	Periodic data transmission interval
Username	string; Default: easycwmp	User name used for authentication on a TR-069 server
Password	string; Default: " "	Password used for authentication on a TR-069 server
URL	host ip; Default: http://192.168.1.110:8080/openacs/acs	TR-069 server's address

Management via TR-069

TR-069 can be used to set or get values from RUT routers. Below is a list of commands used for router management via TR-069.

- R - Read only
- RW - Read/Write
- string(64) - 64 bit string
- string(256) - 256 bit string
- unsignedInt - integer storing only positive values

FW Upgrade:

1. **FileType** - 1- Firmware Upgrade Image, string(64)
2. **URL** - URL, specifying the source file location, string(256)

3. **Username** - Username to be used by the CPE to authenticate with the file server. This string is set to the empty string if no authentication is required, string(256)
4. **Password** - Password to be used by the CPE to authenticate with the file server. This string is set to the empty string if no authentication is required, string(256)
5. **FileSize** - The size of the file to be downloaded in bytes, unsignedInt

Device Information:

1. **DeviceInfo.SpecVersion** - R
2. **DeviceInfo.ProvisioningCode** - RW
3. **DeviceInfo.Manufacturer** - Device manufacturer (e.g., Teltonika) R
4. **DeviceInfo.ManufacturerOUI** - R
5. **DeviceInfo.ProductClass** - Device model (e.g., RUT955) R
6. **DeviceInfo.SerialNumber** - Device serial number (e.g., 09547785) R
7. **DeviceInfo.HardwareVersion** - Device hardware version (e.g., 0505) R
8. **DeviceInfo.SoftwareVersion** - Device software version (e.g., RUT9XX_R_00.03.816) R
9. **DeviceInfo.UpTime** - Router uptime R
10. **DeviceInfo.DeviceLog** - Last line of device log. R
11. **DeviceInfo.MemoryStatus**
 - 11.1 **DeviceInfo.MemoryStatus.Total** - Total device memory (e.g., 61008) R
 - 11.2 **DeviceInfo.MemoryStatus.Free** - Free memory (e.g., 24224) R

IP Ping Diagnostics support:

1. **IPPingDiagnostics**
 - 1.1 **IPPingDiagnostics.DiagnosticsState** - Diagnostics State (e.g. None) R
 - 1.2 **IPPingDiagnostics.Host** - Host RW
 - 1.3 **IPPingDiagnostics.NumberOfRepetitions** - Number Of Repetitions RW
 - 1.4 **IPPingDiagnostics.Timeout** - Timeout RW
 - 1.5 **IPPingDiagnostics.DataBlockSize** - Data block size RW
 - 1.6 **IPPingDiagnostics.SuccessCount** - Success count R
 - 1.7 **IPPingDiagnostics.FailureCount** - Fail count R
 - 1.8 **IPPingDiagnostics.AverageResponseTime** - Average Response Time R
 - 1.9 **IPPingDiagnostics.MinimumResponseTime** - Minimum Response Time R
 - 1.10 **IPPingDiagnostics.MaximumResponseTime** - Maximum Response Time R

Mobile Information:

1. **MobileInfo:**
 - 1.1 **MobileInfo.RSSI** - GSM signal level R
 - 1.2 **MobileInfo.ConnState** - Connection state R
 - 1.3 **MobileInfo.NetState** - Network link state R
 - 1.4 **MobileInfo.ICCID** - SIM ICCID R
 - 1.5 **MobileInfo.IMSI** - IMSI R
 - 1.6 **MobileInfo.RSCP** - RSCP level R
 - 1.7 **MobileInfo.ECIO** - ec/io level R
 - 1.8 **MobileInfo.RSRP** - RSRP level R
 - 1.9 **MobileInfo.SINR** - SINR level R
 - 1.10 **MobileInfo.RSRQ** - RSRQ level R

- 1.11 **MobileInfo.CellID** - CellID R
- 1.12 **MobileInfo.Operator** - Name of operator used R
- 1.13 **MobileInfo.OperatorNum** - Operator number R
- 1.14 **MobileInfo.ConnType** - Data carrier type R
- 1.15 **MobileInfo.Modem**
 - 1.15.1 **MobileInfo.Modem.Model** - Modem model R
 - 1.15.2 **MobileInfo.Modem.Manufacturer** - Modem manufacturer R
 - 1.15.3 **MobileInfo.Modem.Serial** - Modem serial number R
 - 1.15.4 **MobileInfo.Modem.Revision** - Modem revision number R
 - 1.15.5 **MobileInfo.Modem.IMEI** - Modem IMEI R
 - 1.15.6 **MobileInfo.Modem.SimState** - SIM card state R
 - 1.15.7 **MobileInfo.Modem.PinState** - PIN state R
 - 1.15.8 **MobileInfo.Modem.Temperature** - Modem temperature in 0.1 degrees Celsius R
- 1.16 **MobileInfo.SentToday** - Bytes sent today R
- 1.17 **MobileInfo.ReceivedToday** - Bytes received today R
- 1.18 **MobileInfo.SentThisMonth** - Bytes sent this month R
- 1.19 **MobileInfo.ReceivedThisMonth** - Bytes received this month R

WAN Information:

- 1. **WANConnectionDevice**
 - 1.1 **WANConnectionDevice.WANIPConnection**
 - 1.1.1 **WANConnectionDevice.WANIPConnection.ConnectionStatus** - Connection status (e.g., Connected) R
 - 1.1.2 **WANIPConnection.ExternalIPAddress** - IP address R
 - 1.1.3 **WANIPConnection.MACAddress** - MAC address R
 - 1.2 **WANConnectionDevice.WANPPPConnection** - PPP connection
 - 1.2.1. **WANConnectionDevice.WANPPPConnection.1.Enable** - Connection state (e.g., 1 or 0) R
 - 1.2.2. **WANConnectionDevice.WANPPPConnection.1.APN** - APN R
 - 1.2.3. **WANConnectionDevice.WANPPPConnection.1.ExternalIPAddress** - IP address R

Wi-Fi Information:

- 1. **Radio**
 - 1.2 **Radio.Enable** - Enabled (e.g., 0 or 1) RW
 - 1.3 **Radio.Status** - Wifi status (e.g., Up) R
 - 1.4 **Radio.Name** - Device name R
 - 1.5 **Radio.SupportedFrequencyBands** - Supported frequency bands (e.g., 2.4GHz) R
 - 1.6 **Radio.OperatingFrequencyBand** - Operating frequency band (e.g., 2.4GHz) R
 - 1.7 **Radio.ChannelsInUse** - Channels R
 - 1.8 **Radio.Channel** - Channel in use RW
 - 1.9 **Radio.AutoChannelSupported** - Auto channel support (e.g., 1) R
 - 1.10 **Radio.AutoChannelEnable** - Auto channel state (e.g., 1) RW
 - 1.11 **Radio.OperatingStandards** - Operating standards (e.g., 11ng) RW

2. SSID

- 2.1 **SSID.Enable** - Wifi interface state (e.g., 1) RW
- 2.2 **SSID.Status** - Wifi interface status (e.g., 1) R
- 2.3 **SSID.Name** - Interface name (e.g., wlan0) R
- 2.4 **SSID.SSID** - SSID RW

3. Security

- 3.5 **Security.ModesSupported** - (None,WEP-64,WEP-128,WPA-Personal,WPA2-Personal,WPA-WPA2-Personal,WPA-Enterprise,WPA2-Enterprise,WPA-WPA2-Enterprise) R
- 3.6 **Security.ModeEnabled** - Current mode (e.g WPA2-Personal) RW
- 3.7 **Security.WEPKey** - WEP Key RW
- 3.8 **Security.PreSharedKey** - Pre shared key RW
- 3.9 **Security.KeyPassphrase** - Key passphrase RW

Hotspot Information:

1. General

- 1.1 **General.Enable** - State (e.g. 1) RW
- 1.2 **General.IP** - IP address (e.g. 192.168.2.254) RW
- 1.3 **General.Mode** - Authentication mode
(**extrad** - External radius, **intrad** - Internal radius, **norad** - Without radius, **add** - Advertisement, **mac** - MAC auth, **sms** - SMS OTP) (e.g., norad) RW
- 1.4 **General.ExternalLandingPage** - Enable external landing page (e.g., 1) RW
- 1.5 **General.LandingPageAddress** - External landing page address (e.g., www.landingpageaddr.com) RW
- 1.6 **General.HTTPSRedirect** - Enable HTTPS redirect RW

2. Radius

- 2.1 **Radius.Server1** - First radius server address RW
- 2.2 **Radius.Server2** - Second Radius server address RW
- 2.3 **Radius.AuthenticationPort** - Authentication port RW
- 2.4 **Radius.AccountingPort** - Accounting port RW
- 2.5 **Radius.RadiusSecretKey** - Radius secret key RW
- 2.6 **Radius.UAMPort** - UAM port RW
- 2.7 **Radius.UAMUIPort** - UAM UI port RW
- 2.8 **Radius.UAMSecret** - UAM secret RW
- 2.9 **Radius.NASIdentifier** - NAS identifier RW
- 2.10 **Radius.SwapOctets** - Swap octets RW
- 3.1 **Radius.LocationName** - Location name RW

Management Server Information:

- 1. **ManagementServer.URL** - Server url (e.g., <http://192.168.1.110:8080/openacs/acs>) RW
- 2. **ManagementServer.Username** - Username (e.g., easycwmp) RW
- 3. **ManagementServer.Password** - Password (e.g., easycwmp) RW
- 4. **ManagementServer.PeriodicInformEnable** - Enable periodic inform (e.g., 1 or 0) RW
- 5. **ManagementServer.PeriodicInformInterval** - Interval (e.g, 100) RW
- 6. **ManagementServer.PeriodicInformTime** - Inform time (e.g, 0001-01-01T00:00:00Z) RW