

# How to Use TR069 on Htek IP Phones

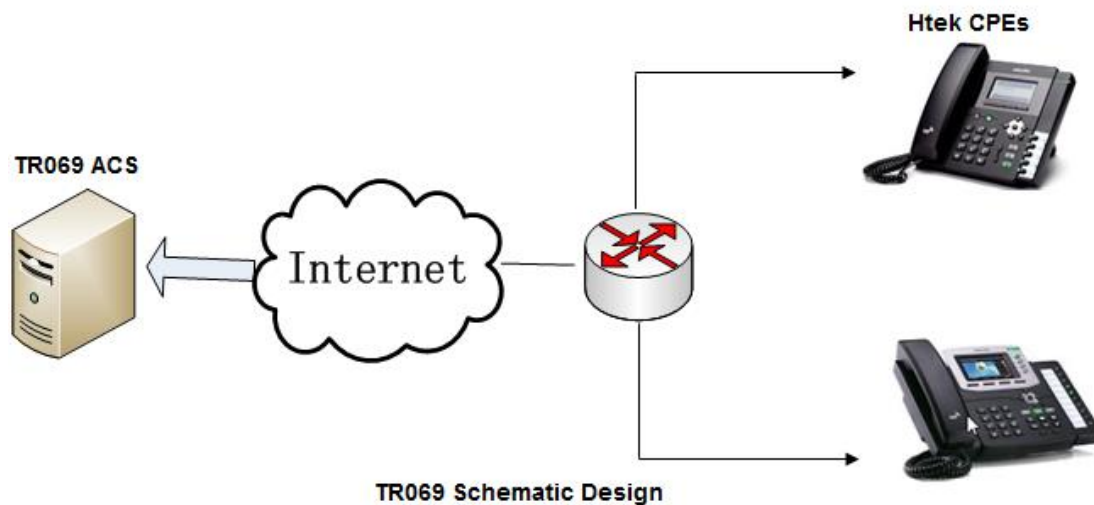


## TR069 feature

This technote mainly provides a general introduction of TR069 (Technical Report 069) and the way of enabling the TR069 on the Htek IP phones. The information in this document is restricted to the following Htek IP phone models with firmware version 1.0.3.85 or later:

## TR069 introduction

TR069 is a technical specification, which is defined by the Broadband Forum. It defines a mechanism that encompasses secure auto-configuration of a CPE (Customer-Premises Equipment), and also incorporates other CPE management functions into a common framework. TR069 uses common transport mechanisms (HTTP) for communication between CPE and ACS (Auto Configuration Servers). The HTTP messages contain XML-RPC methods defined in the standard for configuration and management of the CPE. The protocol addresses different Internet access devices such as modems, routers, gateways, set-top boxes, and VoIP-phones for the end-users.



## Why to use TR069?

TR069 is an application layer protocol, which has broad applicability and no access restriction. TR-69 standard allows the subscriber to manage all devices on a common platform regardless of its device type and manufacturer. Its specifications ensure that the device can be easily and securely configured, activated and managed from a console in the service provider's network. This allows the service provider to provide an efficient and cost effective deployment of services.

## Configure the TR069 feature on the IP phone

TR069 feature is disabled on the IP phone by default. You can enable or disable the TR069 feature using the configuration files or web interface.

### To configure TR069 using the configuration files:

1. Set the following parameters:

Web Setting Path	Permitted Values	Descriptions	Parameter	Default Value
Setting->TR069->TR069 Enable	Number: 0, 1	TR069 Enable (In Use). 0 - No, 1 - Yes	P8100	0
Setting->TR069->ACS URL	String	Specifies the URL of ACS used to establish the TR069 session with the ACS.	P8101	Blank
Setting->TR069->ACS Username	String	Specifies the username used for HTTP authentication against the ACS.	P8102	Blank
Setting->TR069->ACS Password	String	Specifies the password used for HTTP authentication against the ACS.	P8103	Blank
Setting->TR069->Enable Periodic Inform	Number: 0, 1	Enables or disables the phone to report its configuration information to the ACS. 0 –No, 1 - Yes	P8104	0
Setting->TR069->Periodic Inform Interval(seconds)	Integer	Sets the interval (in seconds) to report its configuration information to the ACS.	P8105	60
Setting->TR069->Connection Request Username	String	Sets the username used to authenticate the incoming connection requests.	P8106	Blank
Setting->TR069->Connection Request Password	String	Sets the password used to authenticate the incoming connection requests.	P8107	Blank

2. Store the configuration files to the root directory of the configuration server.

### To configure TR069 via web interface:

1. Login the IP Phone's web
2. Click Setting -> TR069
3. Configure the parameters in the corresponding fields.

4. Click Saveset button to accept the change.  
After configurations, the phone establishes the TR069 session with the ACS.

## Support TR069 RPC Methods:

The RPC (Remote Procedure Call) method defines a generic mechanism that is used for bi-directional communication between a CPE and an ACS. An ACS can get or set parameters to configure and monitor the CPE by using the RPC methods. The following table provides a description of RPC methods supported by the Htek IP phones:

RPC Method	Description
GetRPCMethods	This method is used to discover the set of methods supported by the CPE.
SetParameterValues	This method is used to modify the value of one or more CPE parameters.
GetParameterValues	This method is used to obtain the value of one or more CPE parameters.
GetParameterNames	This method is used to discover the parameters accessible on a particular CPE.
GetParameterAttributes	This method is used to read the attributes associated with one or more CPE parameters.
SetParameterAttributes	This method is used to modify attributes associated with one or more CPE parameters.
Reboot	This method causes the CPE to reboot.
Download	This method is used to cause the CPE to download a specified file from the designated location. File types supported by the Htek IP phones are: <ul style="list-style-type: none"> <li>● Firmware Image</li> <li>● Configuration File</li> </ul>

Upload	This method is used to cause the CPE to upload a specified file to the designated location File types supported by the Htek IP phones are: ● Configuration File ● Log File
ScheduleInform	This method is used to request the CPE to schedule a one-time Inform method call (separate from its periodic Inform method calls) sometime in the future.
FactoryReset	This method resets the CPE to its factory default state.
TransferComplete	This method informs the ACS of the completion (either successful or unsuccessful) of a file transfer initiated by an earlier Download or Upload method call.
AddObject	This method is used to add a new instance of an object defined on the CPE.
DeleteObject	This method is used to remove a particular instance of an object.

The ACS supports a variety of functionalities to manage a collection of phones using the above RPC methods, the following primary capabilities are included.

**Auto-configuration and dynamic service provisioning**

The ACS can provision a phone or collection of phones based on a variety of criteria. Different phone models can be configured using the uniform parameters. Phone can be provisioned at the initial connection and re-provision at any subsequent time. The ACS can also check the provision status (success or failure).

**Firmware image management**

Phone firmware can be upgraded or downgraded by downloading the firmware file from the ACS. TR069 also provides mechanisms for version identification and file download initiation (ACS initiated downloads and optional phone initiated downloads). The ACS can be notified of the success or failure of a file downloading.

**Status and performance monitoring**

The ACS can use the GetParameterValues and GetParameterAttributes methods to monitor the phone's status and performance statistics. TR069 also defines a set of mechanisms that allow the phone to actively notify the ACS of changes to its state.

**Diagnostics**

For troubleshooting purposes, the phone can send diagnostic information such as network status to the ACS, or the ACS can execute the defined diagnostic tests to get the information from the phone.