

Introduction

Welcome to KBC Networks' Quick Start Guide for the ThruLink 3rd Generation Transmission Solution. This document provides a step-by-step guide to setting up a ThruLink server, client, and linking them together. This guide gives information about basic connectivity. For more detailed information, please refer to the downloads section below.

Assumptions

- You have a basic understanding of IP Networking
- You can set up port forwarding on the server side of the link
- If using Bridge mode, you have pre-planned the IP range and assignments

Downloads

Full specifications, features, and additional support information can be found on the KBC Networks website product page: www.kbcnetworks.com.

General

Check the product upon receipt for any visible damage which may have been caused during shipping.

System Contents

Qty	Description
1	ThruLink 3 rd Generation unit
1	12 Vdc power supply for Standard/Standard Plus units*
1	Power cable for High/High Capacity Plus units**
2	4G/LTE Antenna***
1	Quick Start Guide

* Standard Capacity and Standard Capacity Plus units only.

**High Capacity and High Capacity Plus units only.

** LTE units only

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1. Connecting to ThruLink

Note: Please ensure that the wireless connection on your computer is disabled while conducting this procedure. For each ThruLink in the setup, follow the instructions that fit the setup requirement (Server or Client). The default topology is "route" mode. If you require MULTICAST or any other LAN-designed protocol, you will need "bridge" mode for the topology. Additional support documents and contact information can be found on the KBC Networks website.

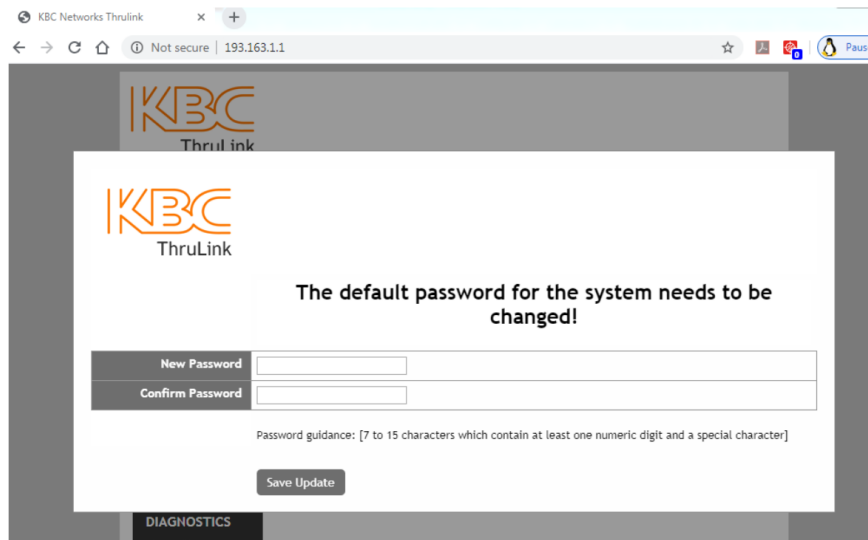
By default, ThruLink runs a DHCP service on the LAN port for convenience and it is within the network range of 193.163.1.0/24 (ThruLink LAN IP is 193.163.1.1). If using Bridge mode, it is recommended that you disable DHCP mode on all but the server unit.

1. Connect an appropriate RJ45 Ethernet cable to the ThruLink LAN port.
2. Connect power to the ThruLink unit.
3. Set the Ethernet port on your PC to DHCP.
4. Power up the ThruLink unit.
5. After a brief time, 15 to 30 seconds, ThruLink will provide an IP Address.
6. Open a browser on the PC and enter the LAN port's default IP address as `http://193.163.1.1`, and press Enter.
7. You will be prompted to enter your username and password. The default username and password are set to **admin/admin**.

2. ThruLink GUI Default Password Change Policy

It is good practice to change the default password for the Graphical User Interface (GUI), even though this interface is not available by default on the WAN segment. The force password change policy has been implemented on all versions of ThruLink installed with version 6.1.0.18 onwards to facilitate this requirement. This policy is only executed when the device is in factory default mode and will not affect any existing units that upgrade to the latest version while maintaining their current configuration.

The NEW password policy also has restrictions on characters that can be used. Any alphanumerical characters and any of the following special characters can be used in the passphrase: `! $ % ^ @ * ? #`



As soon as the password is changed, you will be prompted to log in again with the new password.
When your screen appears as shown below, you are connected to the ThruLink Web GUI and ready to start the configuration.



GENERAL

Configuration
Backup/Restore
Firmware

NETWORK

Interfaces
Encryption tunnel

STATUS

System
Tunnel information
Active subnets
Network traffic

ADVANCED

Network routing

DIAGNOSTICS

General
Ping utility
DHCP leases
Attached devices
Factory defaults
Reboot system

System Name	
System Version	ThruLink Standard Capacity version 6.1.0.10
System Date	Sun Jan 2 02:46:23 UTC 2000
Uptime	1 day, 02:41
Connection status	Disabled and not connected

WAN interface

Status	active
Type	DHCP
MAC address	00:0d:b9:39:73:dc
IPv4 address	192.168.222.109/255.255.255.0
IPv4 gateway	192.168.222.1
Media	100baseTX
In/out packets	5123/1654 (395 KB/77 KB)
In/out errors	0/0

LAN interface

Status	active
Type	Static
MAC address	00:0d:b9:39:73:dd
IPv4 address	193.163.1.1/255.255.255.0
Media	100baseTX
In/out packets	14282/440 (909 KB/259 KB)
In/out errors	0/0

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3. Route and Bridge mode explained

Route Mode: In route mode, each ThruLink would have a unique subnet, and the ThruLink system would manage the routing of all traffic as needed throughout the entire network. In the simple example below, a server and client, with the server configured with its own unique subnet on 193.163.1.xxx/24 and the client with its own unique subnet using 193.163.2.xxx/24. In this scenario, any device connected to the remote client would be configured with an IP address on the same subnet as the client, and ThruLink would deal with any routing requirements automatically between all remote clients.



The above two examples show that both units have their own unique .24 networks.

Bridge Mode: In bridge mode, the entire network operates as a single network, using the same subnet across all devices connected to it. In the system below, you can see that both ThruLink units are on the same /24 network of 193.163.1.xxx but both ThruLink units have unique IP addresses (1 and 2). Every additional ThruLink and every additional device placed onto the network will also need to be configured with a unique IP address within the same subnet.



4. Design your network

Please ensure that you plan your implementation before you begin. Determine whether you require route or bridge mode initially, then design the IP addressing scheme you will use. For example, if using multiple types of devices, such as cameras and Building Management systems, you could consider a network map like this.

193.163.xxx.250	= ThruLink Units
193.163.xxx.20~50	= Cameras
193.163.xxx.60~80	= BMS sensors
193.163.xxx.90~100	= Computer systems/NVR/VMS

Remember that each ThruLink requires a unique name. In route mode, each ThruLink must be on a separate subnet. However, when using Bridge mode, all ThruLink units and all connected devices share a common subnet with unique IP addressing.

Configuring ThruLink as a Server

Each ThruLink Network requires at least one ThruLink acting as an Authentication Server

Important: Ensure the steps in 'Connecting to ThruLink' have been followed.

1. Click 'GENERAL->Configuration' menu link on the left and give ThruLink a unique name in the Hostname field (each ThruLink on the network requires a unique name).
2. Click 'Save Update' at the bottom of the page to validate the changes.
3. Click 'NETWORK-> Interfaces' menu link, set the WAN interface to 'static' (default is DHCP).
4. Configure the WAN interface IP address, Subnet and Gateway, to place ThruLink onto your local network. (you will be port forwarding to this IP address).

Notes:

The WAN IPV4 address must be an IP address that is not already in use on the local network.
The default gateway IP will either be the router or the gateway switch on your local network.

5. The LAN interface represents your private and secure local area network (LAN). The default range on ThruLink is 193.163.xxx.xxx, which you can change to conform to your network requirements; however, we will leave the default IP address in place for the server for purposes of this guide. Note: This cannot be the same subnet as the WAN.
6. Click 'Save Update'.
7. The unit will prompt you to perform a reboot.
8. Log back into the system using either the original IP address or the new IP address. (If you forgot the IP address, open a command prompt and type 'ipconfig'. The IP address should be the gateway address shown if DHCP on the LAN interface is still enabled).
9. Click on 'NETWORK->Interfaces' and confirm that it looks like the image below. Your WAN IP Address may not be the same as the one in the image below.

WAN interface		Static ▾	Connection Type
Hostname	UKDEMOSVR		
IPv4 address	192.168.1.223		
Subnet mask	255.255.255.0		
Default gateway	192.168.1.254		

LAN interface		Static Connection Type	
IPv4 address	193.163.1.1		
Subnet mask	255.255.255.0		
Address aliases	 Add additional gateways on the physical network i.e. 172.13.13.1/255.255.0.0. Further gateway addresses can be added using the , separator. This feature allows ThruLink to be the gateway for different network address devices. This is an advanced feature and any incorrect entry could affect the entire network.		

DHCP on LAN		☒ Enable
IPv4 range from address	193.163.1.5	
IPv4 range to address	193.163.1.10	

DHCP option 150		☐ Enable
Option 150 server address		

10. Click on 'NETWORK->Encryption tunnel' menu link on the left.
11. Click the 'Enabled' checkbox at the top and select 'Server' to the right.
12. Leave the default Preshared Key 'PSKPSKPSK' for the setup.

Note: Please remember to change this value when implementing this system in a live environment to something more complicated. All ASCII characters are supported except the space character. You can use up to 50 characters, but no spaces. A good example of a key would be **9@xrB7~5zB)/D3>3*qKf** A good strong key is important, but please do not use this example.

13. Leave the 'Encryption' set to 'AES-128' for this setup. (All ThruLink units on the same network must be configured with the same level of Encryption)
14. Leave the 'Mode' setting (default: Route).
15. Leave the 'Port' setting (default: 32000).
16. Click 'Save update' and confirm your configuration is the same as the following image:

Enabled ☒ Type: ☐ Client ☒ Server

Preshared key	PSKPSKPSK Private common shared key for this network
Encryption	AES-128 (128 bit) Select the same encryption for all devices. This device has been optimised for AES-128 (128 bit).
Mode	☒ route ☐ bridge Bridge mode is required when dealing with multicast data traffic.
Port	32000 TCP/UDP port that will be used for the encryption tunnel. This needs to be the same across all devices.
Additional tunnel networks	 Add additional networks that are accessible on the physical network i.e. 172.13.13.0/24. Additional networks can be added using the , seperator. This is an advanced feature and any incorrect entry could affect the entire network. Please consult before applying any changes
Timeout	 In rare cases network latency can exceed 3-4 seconds between nodes. In these circumstances the Encryption network timeout might need to be increased. An example is a satellite connection where the optimum setting needs to be 8 seconds set on each node.

17. Click 'STATUS-> System' menu on the left. A similar indicator, like the following image, should appear:

System Name	UKDEMOSVR
System Version	ThruLink Standard Capacity version 6.1.0.10
System Date	Sun Jan 2 03:43:40 UTC 2000
Uptime	1 day, 03:39
Connection status	Enabled and actively in listening mode.

Port Forwarding Between Internet Router and Server

The ThruLink in Server mode will be listening for remote clients trying to authenticate and join the network. Typically, the ThruLink Server is situated behind an internet router or other Internet-connected device with a firewall. For any remote connection to operate correctly, it must first establish a connection with the server; therefore, a single port needs to be open on the router or firewall. This is known as **"Port forwarding"**, also sometimes seen as a **"virtual server"**.

Ports and port forward rules

Every IP network device uses one or more of the 65,535 available ports to communicate with other devices. For example, the HTTP protocol uses port 80 and FTP uses port 21. The default port used for ThruLink is 32000, which can be changed to suit your port preference. For remote ThruLink clients to be able to authenticate with the ThruLink server, you need to forward port 32000 (or your preferred port) to the WAN IP address of the ThruLink server. You will need to ensure both TCP and UDP ports are forwarding, and if possible, maintain two separate rules rather than one rule for both.

If you change the default port to any other port, please note that all ThruLink units, including the server, must be using the same changed port.

Configuring ThruLink as a Client

Important: Ensure the steps in 'Connecting to ThruLink' have been followed.

1. Click 'GENERAL->Configuration' menu link on the left and give ThruLink a unique name in the Hostname field (every ThruLink on the network requires a unique name).
2. Click 'Save Update' at the bottom of the page.
3. Click 'NETWORK->Interfaces' menu link on the left and ensure the 'WAN Interface' is set to DHCP (*assuming it is connected or will be connected to a network that can supply DHCP*).
4. Set the 'LAN interface' to 193.163.2.1 (or a unique subnet of your choosing).
5. Click 'Save update' (you will be prompted to reboot the unit).
Note: The DHCP Server is enabled, and the IP range will be updated to reflect the LAN IP address in use.
6. The unit will function after about 1 minute.
7. Log back into the system using either the same IP address or the new IP address (if you forgot the IP address, open a command prompt and type 'ipconfig'). The IP address should be the gateway address shown if DHCP on the LAN interface is still enabled).
8. Click on 'NETWORK->Interfaces' and confirm it looks like the following image:

WAN interface	DHCP ▾ Connection Type In DHCP mode an IP address will automatically be assigned by the network.
Hostname	UKDEMOCLIENTONE
LAN interface	Static Connection Type
IPv4 address	193.163.2.1
Subnet mask	255.255.255.0
Address aliases	Add additional gateways on the physical network i.e. 172.13.13.1/255.255.0.0. Further gateway addresses can be added using the , seperator. This feature allows ThruLink to be the gateway for different network address devices. This is an advanced feature and any incorrect entry could affect the entire network.
DHCP on LAN	☒ Enable
IPv4 range from address	193.163.2.6
IPv4 range to address	193.163.2.11
DHCP option 150	☐ Enable
Option 150 server address	

9. Click on 'NETWORK->Encryption tunnel' menu on the left.
10. Click the 'Enabled' checkbox at the top and select 'Client' to the right of it.
11. Leave the default 'Preshared key' (PSKPSKPSK) for this setup.

Note: Please remember to change this value when implementing this system in a live environment to something more complicated. Any ASCII character is supported except the space character (all units must have the same key).

12. Type in the name of the server in the 'Remote host' field. This name will be the unique hostname you gave the server.
13. Type in the Public IP address of the router that the server is connected to in the 'Remote connection' field. (If performing this step on a local network, type in the static IP address configured on the server). If the server is behind a router or firewall, this will be the router's public Internet address.
14. Leave the 'Encryption' field set to 'AES-128' (128-bit).
15. Select 'Route' or 'Bridge' mode as set in the Server configuration (default: Route).
16. Set the 'Port' field to the same as the Server configuration (default: 32000).
17. Click 'Save update' at the bottom of the page and confirm that your setup matches the one shown in the following image.

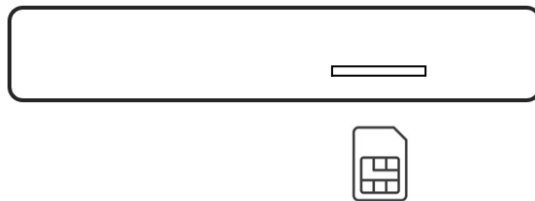
Enabled ☒ **Type:** ☒ **Client** ☐ **Server**

Preshared key	PSKPSKPSK Private common shared key for this network
Remote hostname(s)	UKDEMOSVR This is the hostname of the remote ThruLink server(s) you wish to connect to. i.e. <i>THRULINKSVR_1</i> . Additional hostnames can be added using the , separator i.e. <i>THRULINKSVR_1,THRULINKSVR_2</i>
Remote connection(s)	212.134.23.24 Specify either the remote external IP address or DNS name as provided by your internet service provider. Multiple addresses can be specified using the , separator
Encryption	AES-128 (128 bit) ▼ Select the same encryption for all devices. This device has been optimised for AES-128 (128 bit).
Mode	☒ route ☐ bridge Bridge mode is required when dealing with multicast data traffic.
Port	32000 TCP/UDP port that will be used for the encryption tunnel. This needs to be the same across all devices.
Additional tunnel networks	 Add additional networks that are accessible on the physical network i.e. 172.13.13.0/24. Additional networks can be added using the , separator. This is an advanced feature and any incorrect entry could affect the entire network. Please consult before applying any changes
Timeout	 In rare cases network latency can exceed 3-4 seconds between nodes. In these circumstances the Encryption network timeout might need to be increased. An example is a satellite connection where the optimum setting needs to be 8 seconds set on each node.

Note: The connection status between the Client and Server can be viewed via the 'STATUS-> System' menu (i.e. 'Enabled and actively connected to UKDEMOSVR', while 'STATUS->Tunnel information' and 'STATUS->Active subnets' displays each ThruLink on the secured encryption network.

Configuring ThruLink LTE as a Client

Important: Ensure the steps in 'Connecting to ThruLink have been followed.
Ensure the DATA SIM has been inserted in the SIM slot before powering up the unit.
(copper side up, notch first – SIM holder has a push click mechanism)



1. Click 'GENERAL->Configuration' menu link on the left and give ThruLink a unique name in the Hostname field (every ThruLink on the network requires a unique name).
2. Ensure 'Cellular Radio Cards' is enabled.
3. Click 'Save update' at the bottom of the page and confirm your setup is the same as the following image:

Hostname	LTEDEMO7 Name of this device e.g. <i>THRULINKSVR</i> (Remember to use a unique name for each device)
Password	 (confirmation) If you want to change the password for accessing the system.
Web protocol	☒ HTTP ☐ HTTPS
Web port	 Change the default port number (http:80, https:443).
Enable GUI on WAN	☐ Enable If selected then the Web GUI will be made available on the WAN port and accessible via the WAN IP Address.
Allow DNS override	☒ Enable If selected then the DNS nameservers can be overridden when using DHCP on the WAN interface.
DNS Nameserver1	
DNS Nameserver2	 Only valid Nameserver IP addresses are accepted.
Time zone	Etc/UTC Select the same timezone for all devices.
Time update interval	300 Minutes between network time sync. 300 recommended, or 0 to disable.
NTP time server	pool.ntp.org
Traffic management	☒ Enable If selected then all traffic will be directed onto the Encryption tunnel.
Encryption tunnel subnet	☒ 255.0.0.0 ☐ 255.255.0.0 If not requiring the entire network address, select a smaller range of addresses for the network. (Option only functional when in route mode)
Cellular Radio cards	☒ Enabled If enabled then Cellular radio card will be used to establish the WAN link.
WAN Link failure prevention	☐ Enabled ☐ WAN ☒ Cellular (Primary active port) 60 Minutes before resetting back to primary. 60 is the default, or 0 to disable. If enabled then monitoring will be used to maintain the WAN link. In the event of failure, any available active interfaces will be used.



Save Update

4. Click 'NETWORK-> Interfaces' menu and set the 'Sim PIN number' field if you were provided with a SIM PIN.
5. Set the 'APN (Access Point Name)' field. Your provider can supply this, or contact support for help, or you may find it on our APN list at the following address: <https://www.kbcnetworks.com/apns>
6. Set the 'Username and Password' fields if you were provided this information (typically not required).
7. Set the 'Dial code' if connected to a GSM CDMA only network (default value is suitable for most LTE networks).
8. Set the 'LAN interface' to 193.163.3.1 (or a unique subnet of your choosing).
11. Click 'Save update' (you will be prompted to reboot the unit).

Note: The DHCP Server is enabled, and the IP range will be updated to reflect the LAN IP address used.

12. The unit will function after about 1 minute.
13. Log back into the system using the same IP address or the new IP address (if you forgot the IP address, open a command prompt and type 'ipconfig'). The IP address should be the gateway address shown if DHCP on the LAN interface is still enabled).
14. Click on 'NETWORK->Interfaces' and confirm it looks like the following image:

Cellular interface

SIM PIN number	1111 If a PIN has been provided please enter it correctly here. An incorrect PIN will LOCK the device and prevent it from functioning correctly.
APN (Access Point Name)	everywhere
Username	
Password	
Dial code	*99# Typically (*99# for GSM networks and #777 for CDMA networks)

Note: When in Cellular mode an IP address will automatically be assigned by the network provider.

LAN interface

Static Connection Type

IPv4 address	193.163.3.1
Subnet mask	255.255.255.0
Address aliases	 Add additional gateways on the physical network i.e. 172.13.13.1/255.255.0.0. Further gateway addresses can be added using the , seperator. This feature allows ThruLink to be the gateway for different network address devices. This is an advanced feature and any incorrect entry could affect the entire network.

DHCP on LAN

☒ Enable

IPv4 range from address	193.163.3.6
IPv4 range to address	193.163.3.11

DHCP option 150

☐ Enable

Option 150 server address	
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15. Click on 'NETWORK->Encryption tunnel' menu on the left.
16. Click the 'Enabled' checkbox at the top and select 'Client' to the right of it.
17. Leave the default 'Preshared key' (PSKPSKPSK) for this setup.

Note: Please remember to change the preshared key value when implementing this system in a live environment to something more complicated. All ASCII characters are supported except the space character (all units must have the same key).

18. Type in the name of the server in the 'Remote host' field.
19. Type in the Public IP address of the router that the server is connected to in the 'Remote connection' field. (If performing this on a local network, type in the static IP address configured on the server).
20. Leave the 'Encryption' field set to 'AES-128' (128-bit).
21. Select 'Route' or 'Bridge' mode as set in the Server configuration (default: Route).
22. Set the 'Port' field to the same as the Server configuration (default: 32000).
23. Click 'Save update' at the bottom of the page and confirm your setup is the same as the following image:

Enabled ☒ **Type:** ☒ **Client** ☐ **Server**

Preshared key	PSKPSKPSK Private common shared key for this network
Remote hostname(s)	UKDEMOSVR This is the hostname of the remote ThruLink server(s) you wish to connect to. i.e. <i>THRULINKSVR_1</i> . Additional hostnames can be added using the , seperator i.e. <i>THRULINKSVR_1,THRULINKSVR_2</i>
Remote connection(s)	212.134.23.24 Specify either the remote external IP address or DNS name as provided by your internet service provider. Multiple addresses can be specified using the , seperator
Encryption	AES-128 (128 bit) ▼ Select the same encryption for all devices. This device has been optimised for AES-128 (128 bit).
Mode	☒ route ☐ bridge Bridge mode is required when dealing with multicast data traffic.
Port	32000 TCP/UDP port that will be used for the encryption tunnel. This needs to be the same across all devices.
Additional tunnel networks	 Add additional networks that are accessible on the physical network i.e. 172.13.13.0/24. Additional networks can be added using the , seperator. This is an advanced feature and any incorrect entry could affect the entire network. Please consult before applying any changes
Timeout	 In rare cases network latency can exceed 3-4 seconds between nodes. In these circumstances the Encryption network timeout might need to be increased. An example is a satellite connection where the optimum setting needs to be 8 seconds set on each node.

Note: The connection status between the Client and Server can be viewed via the 'STATUS-> System' menu (i.e. 'Enabled and actively connected to UKDEMOSVR', while 'STATUS->Tunnel information' and 'STATUS->Active subnets' show all ThruLink units on the encrypted ThruLink network.

Working with Multiple Remote Clients

If you are working with multiple remote clients, it is advisable to follow the procedure below to ensure that there are no typos or errors in the configuration.

1. Create a document with the name and LAN IP address used on each ThruLink unit.
2. Configure a single client and confirm it is connecting correctly. You should see a statement like the pink line below, where it states the connection.

System Name	LTEDEM07
System Version	ThruLink Standard Capacity version 6.1.0.10
System Date	Sun Apr 8 15:50:40 UTC 2018
Uptime	00:11
Last config change	Sun Apr 8 15:50:27 UTC 2018
Connection status	Enabled and actively connected to KBCUK.

3. Go to the Backup/Restore section on the working client and create a backup copy of the configuration (note this is encrypted for security).
4. Power on and log in to the new client.
5. Go to Backup/Restore and restore the backup from the previous unit (this will force a restart).
6. Please remember to access the unit using the new LAN IP address, not the default one.
7. Go to the configuration page and update the hostname of the new client (client2, etc.).
8. Click the Save update at the bottom.
9. Go to the Interfaces page and change the LAN IP.

Notes:

- In bridge mode, the IP will remain in the same subnet but not conflict with any other IP addresses.
 - In route mode, the subnet must be unique.
 - The default 193.163.1.1/255.255.255.0 is one unique subnet. On the second unit, this would be changed to 193.163.2.1/255.255.255.0 to ensure it is a unique subnet.
10. Click save update, and again the unit will request a restart.
 11. Once restarted, log back in with the new IP address and test to ensure a successful connection.
 12. Repeat this process for each client, ensuring you note the name and corresponding LAN IP address.

The ThruLink setup configuration is complete!

Troubleshooting

1. The client is unable to connect to the server.
 - a. Does the client have a working internet connection?
 - b. Use the ping utility built into the ThruLink GUI to ping a known working IP, such as Google's DNS, 8.8.8.8. If you do not get a positive response, then your ThruLink does not have a working internet connection.
 - c. Assuming the ping is successful, confirm that the IP address you are instructing the client to connect with is correct and that the pre-shared keys match both the server and the clients.
 - d. Using Telnet on your computer or phone, connect to the server's public IP address using the selected port for the network, as follows.

TELNET 80.80.80.80 32000 (replace 80.80.80.80 with your servers public IP

If the port forward rules are working correctly then you should see the name of your server and a string of characters display, if you do not get this, and are sure the IP and port is correct then it is likely the port rules are either not setup correctly or pointed at the wrong IP address.

ThruLink3 Reset Utility

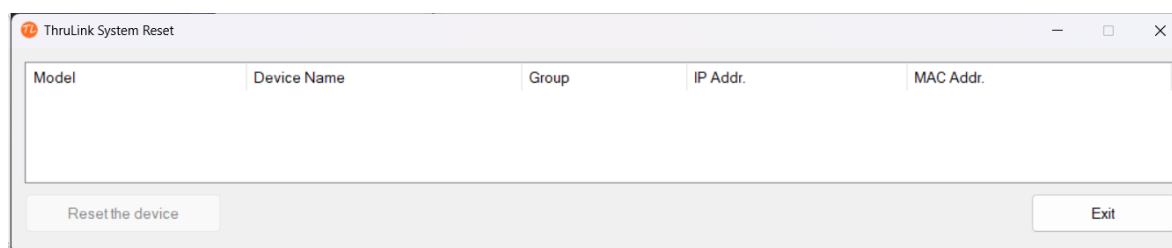
ThruLink3 uses a reset utility to factory reset the unit. This is typically used when you have forgotten the IP address on the LAN port or you have forgotten the password to login to the device GUI.

The reset utility can be downloaded from the following link:

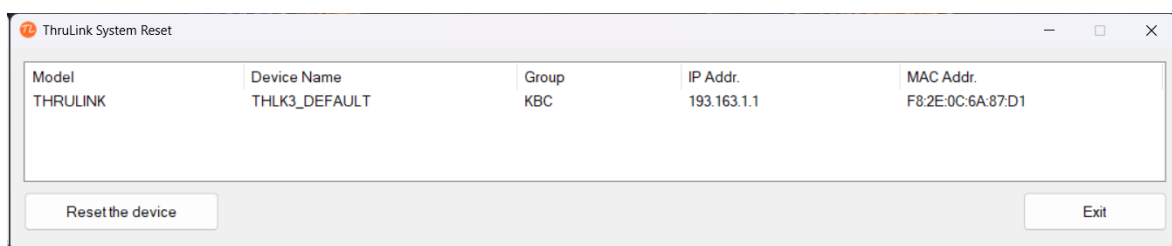
<https://www.kbcnetworks.com/support/download-resources/thrulink-3-reset-utility/download>

Please follow the guide below to reset the ThruLink3

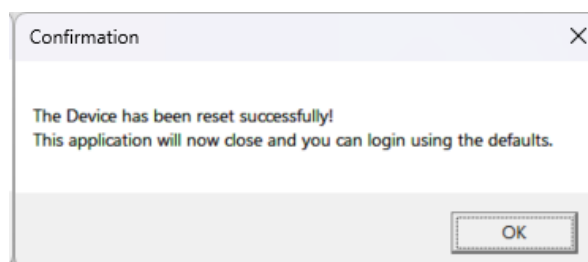
1. Download the utility from the link above.
2. Please make sure the ThruLink unit is powered off.
3. Connect your computer Ethernet port to the LAN port of the ThruLink.
4. Disable all other network connections on your computer (Wireless, secondary LAN, VPN, Virtual devices etc)
5. Extract the zip file to your computer
The zip file contains two files as follows
thlksysreset.exe, Newtonsoft.Json.dll
6. Power up the ThruLink and wait for approx. 10 seconds.
7. After 10 seconds, right click on the Reset utility software and select run in Administration mode.
8. Once open you should see this window



9. After a few seconds, the software should detect your ThruLink unit and the display should refresh to show your device like below (note your device name, IP address and other information will not necessarily be the same)



10. Select the ThruLink unit in the list and click the “Reset the device” button on the lower left.
11. You should get this message to confirm



Your ThruLink will now restart and be reset to the factory defaults, you can now open an internet browser and go to the address <http://193.163.1.1> and login with the default admin/admin parameters.

Warranty

Warranty information can be found at www.kbcnetworks.com.

Need Help/Troubleshooting?

Visit our website www.kbcnetworks.com or contact your nearest KBC office or dealer:

USA:

Phone: +1 949-503-3470

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