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1 Background introduction

With the development of network technology, network information technology has penetrated into various fields such as military, transportation, scientific research, economy, culture, education and social life around the world, and has brought huge impetus to human development. At the same time, the Internet has gradually entered into our daily lives, greatly changing our survival model and becoming an indispensable part of our lives. Through computer networks, we can obtain information across time and space, communicate with others conveniently, and directly understand current affairs news, acquire all kinds of latest knowledge, and realize information sharing resources.

As the Internet penetrates into all aspects of society, economy, and politics, a large number of negative and untrue remarks flood the Internet. Internet public opinion is the mapping of social public opinion in the Internet space and a direct reflection of social public opinion. Therefore, relevant law enforcement personnel in our country also need to understand and grasp domestic and foreign online public opinions in a timely and comprehensive manner. Due to the complex network environment and special business scenarios, an efficient, fast, and stable scientific Internet access device is needed.

2 Requirements analysis

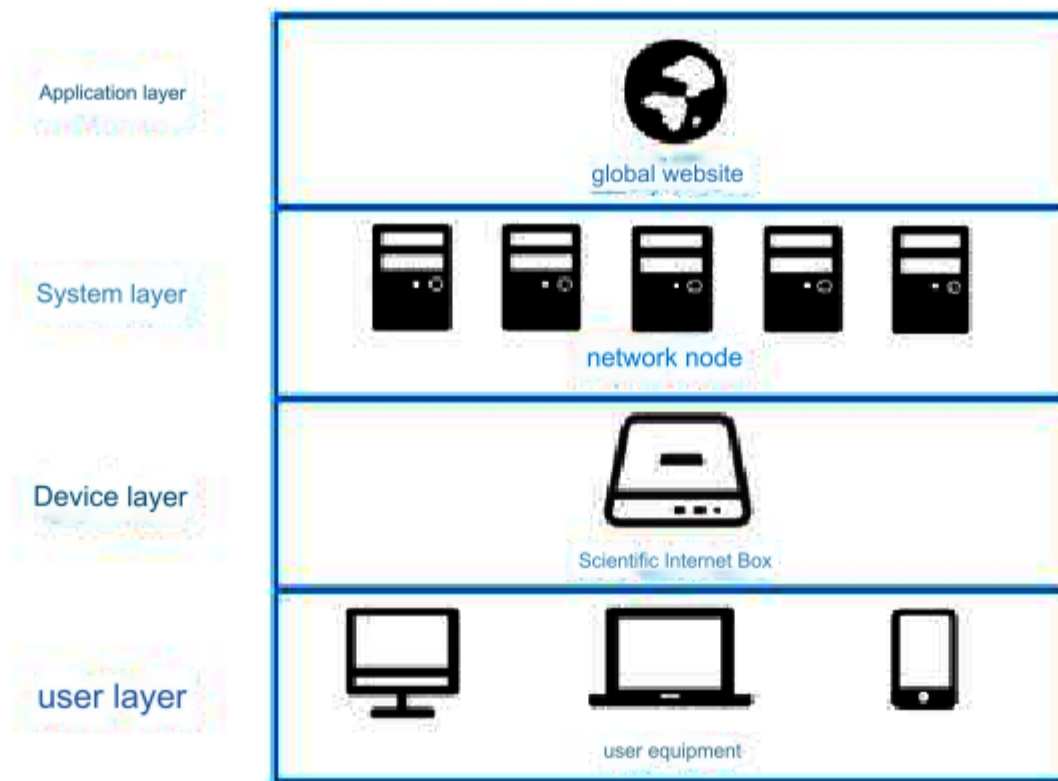
The "Scientific Internet Box" should be designed around the needs of relevant law enforcement agencies to promptly and quickly access global websites, so that law enforcement officers can quickly access global websites and provide high-availability network bandwidth. The Internet link adopts Baiyan's network protocol, which not only provides security protection for the Baishen network, but also has a variety of static and dynamic ways to connect to the network, which can meet the needs of different network environments to monitor domestic and foreign network public opinion.

3 Product Introduction

"Scientific Internet Box-Desktop Version" is a routing device that enables global website access. The product has wireless and wired functions, powerful performance, and supports WIFI6. Users can choose wired network, wireless network and other connection methods according to different network environments. After logging in to the web setting interface and completing the settings, the function of scientific Internet access can be realized.



4 Product Architecture



("Scientific Internet Box" system architecture diagram)

1. The overall architecture design of the scientific Internet link is divided into user layer, device layer, system layer and application layer, of which the core is the device layer and system layer. The device layer is the hardware foundation, and the system layer provides various service modules of the device to ensure the stability of the entire "scientific Internet box" and provide users with high-speed scientific Internet services. The application layer allows users to complete the access and normal use of over-the-wall links by using "scientific Internet boxes" under the premise of obtaining system authorization.

2. Therefore, the construction of the entire system mainly includes the following aspects:

- > User layer: The user layer refers to users' devices, including mobile phones, portable notebooks, desktops, etc., which can meet the needs of different Internet access devices;
- ▶ Equipment layer: The equipment layer is the "Scientific Internet Box". Users can log in to the backend center and make simple settings to enable scientific Internet services;
- ▶ System layer: The system layer is mainly network nodes distributed around the world. According to the user's settings, the system will select the corresponding Internet link and optimize the connection of network nodes between Internet links to achieve stable

Determine the purpose of high-speed scientific Internet access;



> Application layer: scientific Internet service, users can access global websites.

5 core functions

5.1 Scientific Internet Function

5.1.1 Client scientific Internet settings

Industrial server: Select various nodes around the world according to needs.

Multi-threaded concurrent forwarding: The default is automatic, the user can choose according to the actual situation, and simply select automatic move.

Operation mode: The system provides 4 modes, GFW list mode, bypassing mainland China IP mode, global mode, and overseas users returning home mode. Use global mode by default

Ports requiring proxy: Default is all ports

Scientific Internet Settings

Multiple protocols, fast and high speed!

RUNNING

+Server	[SSR:] Hong Kong 01
Multi-threaded concurrent forwarding	automatic (number of CPU threads)
Run mode	global mode
Ports requiring proxy	All ports (default)
DNS resolution method	Query and cache using PDNSD TCP
Access foreign city name DNS	server Google Public DNS (8.8.4.4)

•The format is IP:PORT (default:8.8.4.4.53)

5.1.2 Server node

Server node subscription and management: You can update the latest provided server nodes, delete all server nodes, and the number of all nodes in the past day.

Node list: You can see information related to all server nodes more intuitively and quickly apply the required nodes.



point.



IEPL enterprise-level intranet dedicated line ignores walls and is available during sensitive periods. It has 100+ global landing nodes, nodes in Hong Kong, Taiwan, Singapore, Japan, Russia, the United States, the United Kingdom and other regions. The highest rate of 100Mbps is available, and 99% service availability is guaranteed.

serial number	area	quantity
1	Hongkong	40
2	Japan	18
3	USA	18
4	Singapore	18
5	Taiwan	7
6	India	1
7	U.K.	1
8	Russia	1

5.1.3 Access control

According to the actual situation, you can fill in the domain names that do not use agents, the domain names that force agents to use, and the domain names that prohibit links.



5.1.4 Status check and update

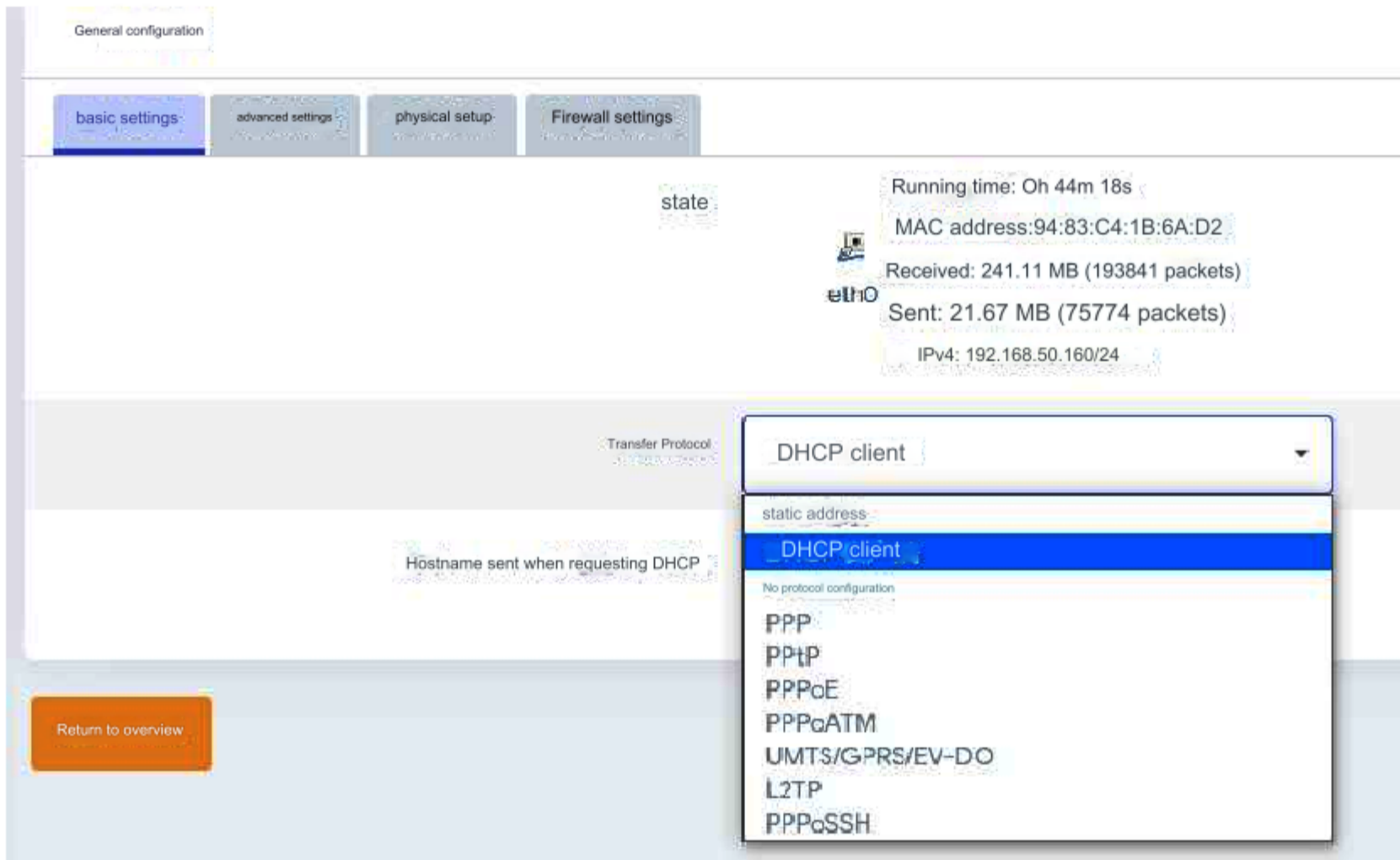
You can check whether Google and Baidu can be connected and perform network checks.

The GFW list and domestic IP network segments can be updated.

5.2 Network configuration

5.2.1 Wired interface settings

The WAN port transmission protocol supports a total of 9 protocols such as static address, DHCP, PPPoE, etc.



The LAN port setting can modify the IP network segment of the LAN port according to the user's actual situation, which can avoid conflict with the internal network.

sudden.



basic settings | advanced settings | physical setup | Firewall settings

state

Running time: Oh 44m 40s
MAC address:94:83 C4:1B:6A:D3
Received: 21.35 MB (124900 packets)
or-lan sent: 237.37 MB (80731 packets)
IPv4: 192.168.221.1/24
IPv6: fdcf:e34a:ba19::1/60

Transfer Protocol: static address

IPv4 address: 192.168.221.1

IPv4 netmask: 255.255.255.0

IPv4 gateway:

IPv4 broadcast:

5.2.2 Wireless settings

Currently, Scientific Internet Box-Desktop Edition supports two WIFI frequency band settings, 2.4GHz and 5 GHz. Users can choose different channels and bandwidths according to the actual network environment. The device supports WIFI6, which greatly improves the user experience.

Generic MAC80211 802.11nacax (radio0)
Channels: 36 (5.180 GHz) | Transmission rate: 288 Mbit/s

81%

SSID: GFP-OG | Mode: Master
BSSID: 94:83:C4:1B:6A:D4 | Encryption: WPA2 PSK (CCMP)

Generic MAC80211 802.11bgnax (radio1)
Channel: 1 (2.412 GHz) | Transmission rate: 1Mbit/s

75%

SSID: GFP | Mode: Master
BSSID: 94:83:C4:1B:6A:D5 | Add: WPA2 PSK (CCMP)

5.2.3 Network Diagnosis

Provides 3 diagnostic tools, namely Ping, Traceroute, and Nslookup

Network tools

IPv4: [] [PING]

IPv4: [] [TRACEROUTE]

[] [NSLOOKUP]



5.3 System configuration

5.3.1 Management permissions

The background management password can be modified according to user habits

host password

Change the administrator password for accessing the device

password:

Confirm Password:

5.3.2 Backup/upgrade

The latest system package can be updated conveniently, making it convenient for users to upgrade.

Flash new firmware

Upload a firmware image file in sysupgrade format to replace the currently running firmware, and check "Keep configuration" so that the updated system still uses the current system configuration. (The new firmware needs to be compatible with the current firmware).

Keep configuration:

Firmware file:

Flash file...

6 product scenarios

"Scientific Internet Box" is a product used to view global public opinion comments. It is suitable for efficient and stable implementation of reconnaissance operations when conducting network reconnaissance and collecting QB data. It can hide the real exit and prevent the leakage of the user's real IP address and physical address. It can be directly connected to the completed Internet system to achieve the role of global network public opinion supervision.

7 core advantages

7.1 The node line is of high quality, stable and has many options

Based on Anxun's years of experience in scientific Internet access, high-quality nodes are selected, the lines are stable and available during sensitive periods,

the number of nodes is large, and there are many options.



7.2 Equipment performance is stable and powerful

In terms of equipment selection, we chose the IPQ6000 quad-core Arm processor @1.2GHz. The CPU performance is stable and powerful. It supports WIFI6 and provides better wireless signals.

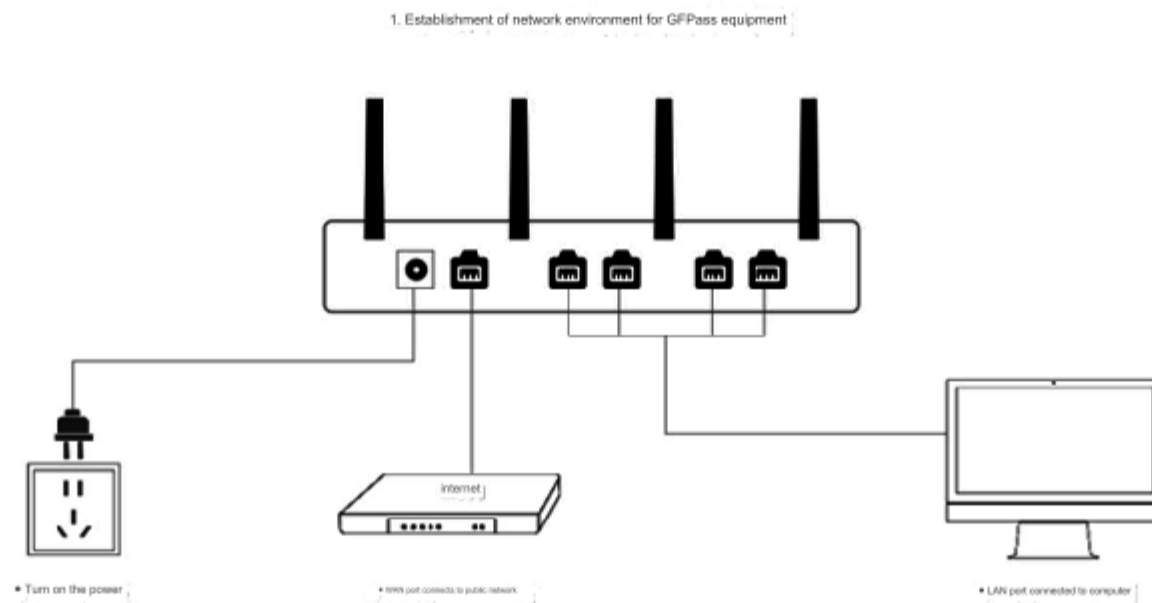
7.3 Automatic switchover of node failures

The system will automatically detect the node information currently in use. If a failure occurs, the node will automatically switch to the next node. The

8 product forms

8.1 Deployment method

"Scientific Internet Box-Desktop Edition" is an all-in-one hardware device similar to routing. The equipment is mainly connected to the entire scientific Internet link through the local operator network, so the local operator only needs to provide an available operator network to complete the deployment and normal use.



8.2 Product parameters

parameter	Scientific Internet Box-Desktop Version
Architecture	ARM
CPU	IPQ6000 Quad-Core Arm Processor @1.2GHz
Memory	DDR3L 512MB / NAND flash 128MB



interface	<ul style="list-style-type: none"> 1 x WAN Ethernet port 4 x LAN Ethernet ports 1 x USB 3.0 (Type-A) 1 x LED 1 x reset button 1 x 12V/1.5A DC input
Network mode	Wired/Wireless
Internet speed	Maximum download speed 60Mbps
size and weight	210 x 120 x 36.8 mm, 445 g
access device	Mobile phones, desktop computers, laptops

To be honest, I have taken this position before, but the timeliness of taking it was not good. Many things that seem valuable today will be gone in two days.

Based on your cooperation experience, what are the requirements for this update?

Have read

Is near real-time postback possible?

- The control terminal includes an operation recording function, which can record the performed operations
- The control terminal has a graphical interface
- The control terminal can remotely modify the connection configuration of the controlled terminal during use.
- The control terminal can remotely uninstall and clear the controlled terminal (including self-starting)
- The controlled terminal supports socks5 proxy function
- Developed using C/C++ language, all functional source codes are required

3. Communication requirements

- Communication uses HTTPS protocol
- HTTPS communication data is encrypted using an algorithm among RC4/AES/RC2/GOST/IDEA/CAST, with a secret key length of 256 bits or more.
- Can penetrate Squid transparent proxy and basic authentication proxy

4. Security requirements

- Contains daemon functionality. After closing the controlled process in the process manager, a new process will be created automatically.
- Anti-virus QuickHeal Total Security Windows Defender, Apex One (subject to the latest version and latest virus database update on the test day)

2. Bonus point indicators

- Autostart cannot be viewed by Sysinternal's autorun
- In addition to HTTPS, it also supports other protocol communications. Communication data uses RC4/AES/RC2/

An algorithm encryption in GOST/IDEA/CAST, the key length is 256 bits or more, the controlled terminal can

switch the communication protocol by the controlling terminal during operation

- Identify Edge/Firefox/chrome/Opera proxy settings and use them to connect back

(subject to the latest version on the test day)

- The controlled terminal contains a customized non-commercial shell and source code is provided

- Avoid killing Kaspersky, Avast, and Symantec (subject to the latest version and latest virus

database update on the test day)

3. Delivery list

serial number	name	number of copies	Require
1.	Software development documentation	1 serving	
2	test documentation	1 serving	
3.	All project source codes	1 item	Engineering projects can be compiled and have comments
4.	Executable program	1 serving	
5.	Instructions for use	1 serving	

4. Technical training

Organize training on the use of Windows forensic tools and coding principles;

Provide software development documents, test documents, and usage instructions documents for this tool:

5. Testing and acceptance

After the project development is completed, Party B must first conduct internal testing, make corresponding test records, and provide test documents to Party A.

In order to ensure the quality of the delivered tools, acceptance testing can only be carried out after the test plan has been reviewed and approved by Party A and experts. The acceptance test must be conducted in the presence of Party A and experts, and complete acceptance test records must be provided. Acceptance must be completed after passing the acceptance test.



Anxun information

Professional, leading and reputable

Scientific Internet Box-Desktop Version

Product white paper

Anxun information

July 18, 2022

