ThinInx OS

Thin Client User Manual

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product description

1：Remote desktop

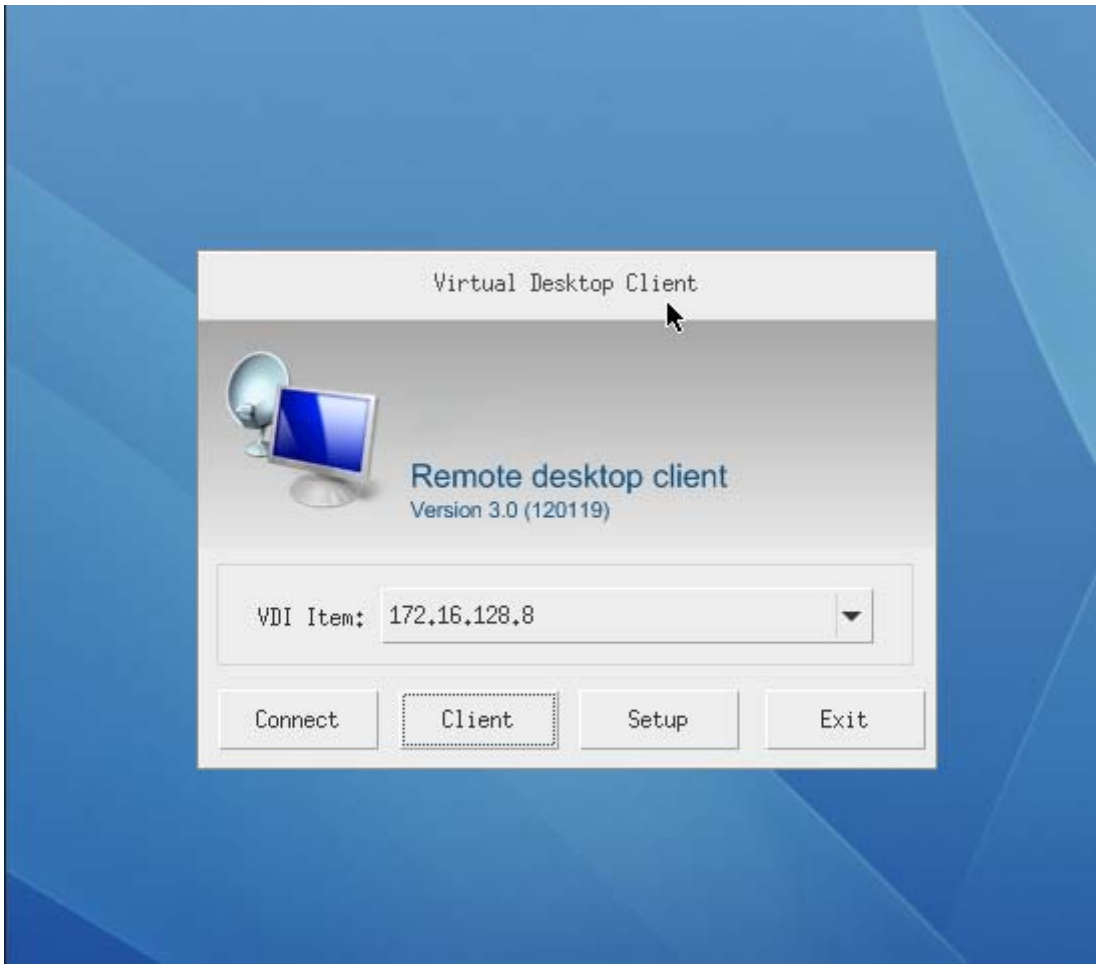
Remote Desktop ------- People engaged in IT technology should have used. Built-in Windows, XP Remote Desktop RDP（Remote Desktop Protocol） protocol，So that users can log in, access to and use of target Desktop from other computers remotely. The RDP protocol was originally used by Microsoft as an access protocol for terminal services on Windows servers, Implemented multi-user mode on Windows server, Enable users to remotely use various applications on the server without installing any applications locally. This technology is to transfer the running interface on the target machine to the user's actual operating machine screen, A series of peripherals such as keyboard and mouse are transmitted to the target machine to realize the interaction.

2：Virtual desktop

Virtual desktop ------- Also known as desktop virtualization（VDI），It refers to the computer's desktop virtualization, in order to achieve security and flexibility for desktop use. Is a server-based computer model, And with the help of cloud terminals, administrators and users can get the advantages of both methods at the same time; All desktop virtual machine hosted unified management of the data center; At the same time, users can get a complete PC experience. Users can access the same user experience as traditional PCs through thin clients or similar devices on LAN or remote access.

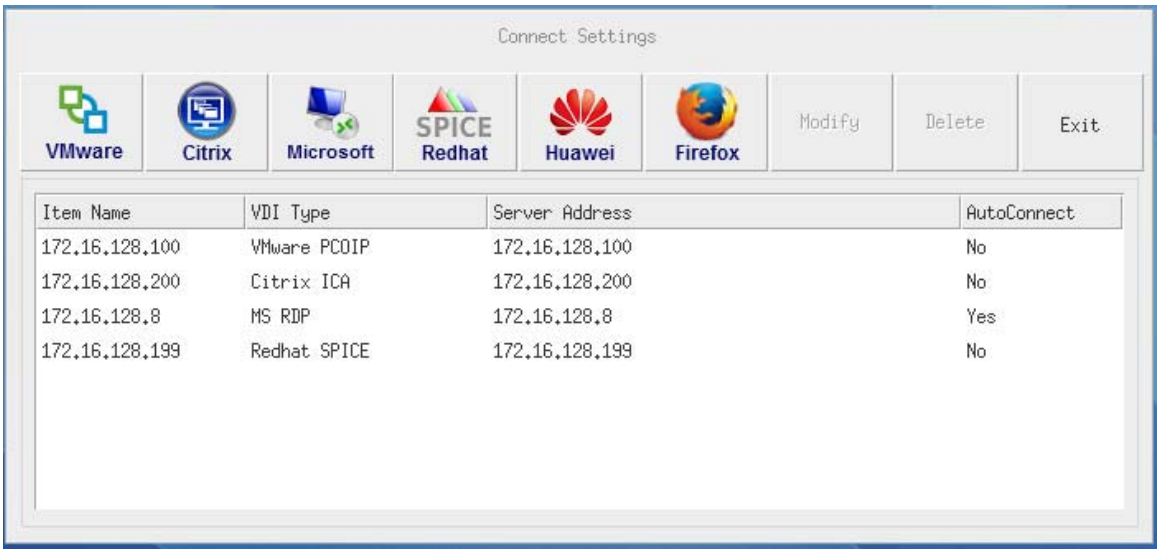
3：Thin client system

The operating system currently used by thin clients is embedded Linux, Safe and reliable, has good stability, Provide simple and fast operation interface, Simple maintenance, easy upgrade, energy saving and power saving, Help users to quickly implement virtual desktop solutions. The following is the desktop of the thin client after entering the system; As shown below：



Thin Client Support VMware Horizon View, Citrix XenDesktop / XenApp, Microsoft RDP10 / RemoteFX, Redhat RHEV / oVirt / OpenStack, Huawei FusionCloud, ThinWork virtual desktops and other solutions.

In the "virtual desktop client" interface, click "Connection Settings" Users can choose the corresponding protocol type according to the virtual desktop environment used; As shown below：



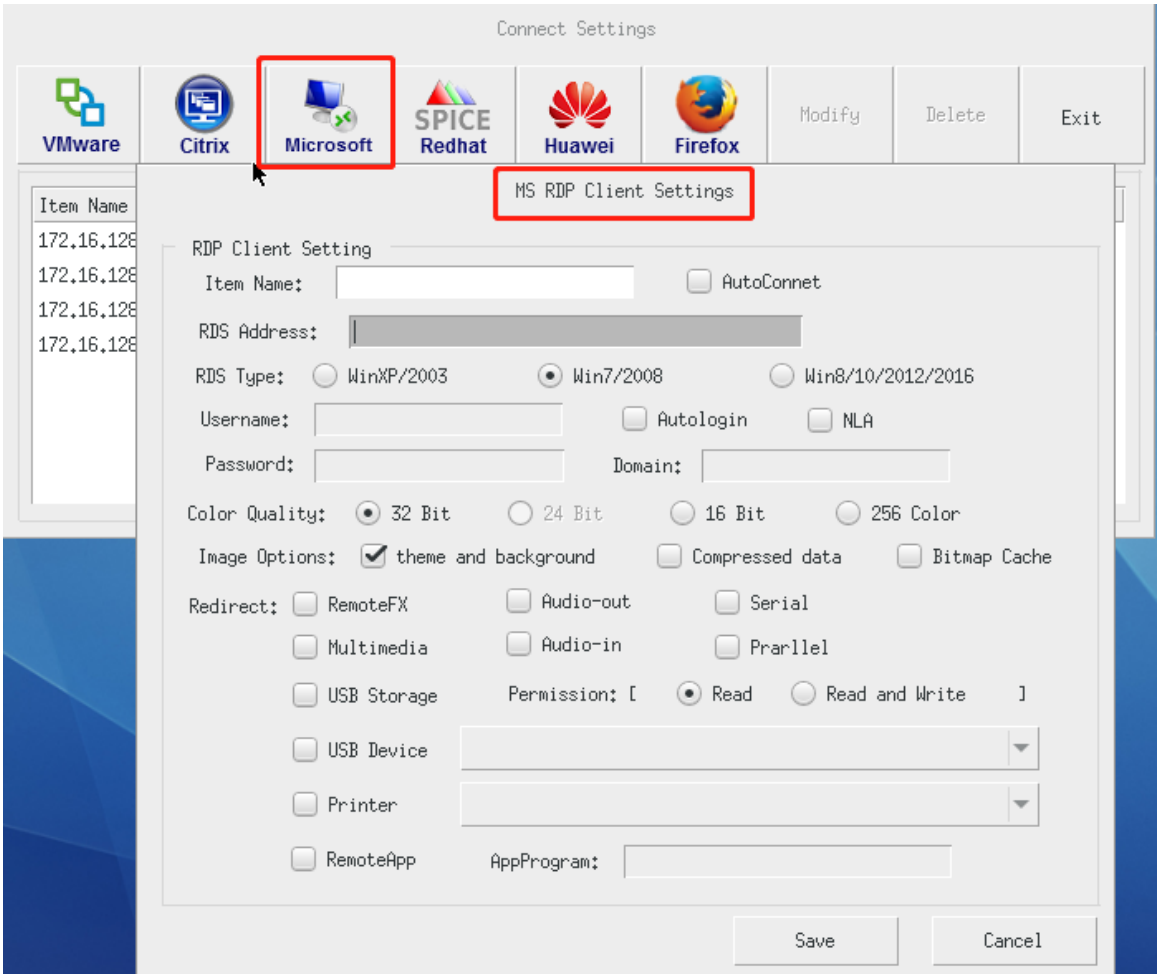
Connection configuration

1： MS RDP settings

Suitable for Microsoft Remote Desktop Users,The remote desktop client supports win7 / 8/10, Win2003 / 2008/2012/2016/2019 systems, and provides RDP7.1 / 8.0 / 8.1 / 10 support.

（1）RDP protocol settings

In the "Virtual Desktop Client" window, click "Connection Settings" to enter the settings window. Click to select the "Microsoft" icon to create a new connection, Create "MS RDP Connection", The following figure shows the MS RDP connection setting window.

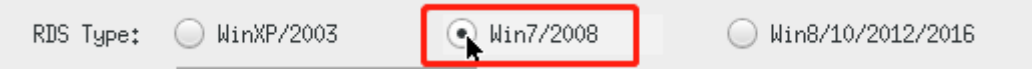


Function option description:

- **Connection name:** The connection name can be set according to user requirements.
- **auto connect:** When Auto Connect is checked, the configuration will automatically run when the thin client starts to connect to the remote desktop.
- **Terminal server address:** RDS or terminal server address; The default communication port is 3389, The user can customize the connection.【Such as: The address for accessing the virtual desktop is 172.16.0.211; You can enter 172.16.0.211 or 172.16.0.211:3389】

- **Agreement version:** According to the system that will access the server version of choice.

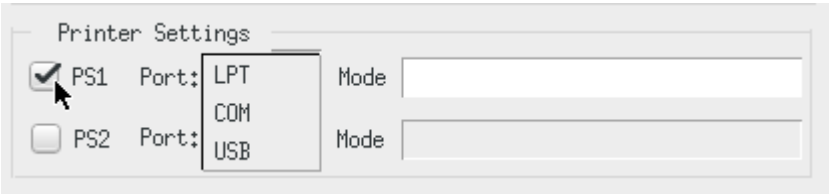
Such as: When you want to access the remote system is win7 or win2008 is chosen Win7 / 2008.



- **user name:** User name to access the remote server.
- **password:** Password for accessing the remote server.
- **domain name:** The default is empty.（Note: When the remote server has an AD domain, you must fill in the corresponding domain name; If you have not joined the domain, you can set internal or leave it blank）
- **Color quality:** The default is 32 bits.
- **Image options:**
- **Desktop themes and backgrounds:** Desktop backgrounds and themes, But it will increase server load.（The default is selected）
- **Compressed data transmission:** Connect with the server to compress and transfer the data.
- **Bitmap cache:** Use the bitmap cache to optimize the display effect on the client.

➢ **Mapping options:**

- **RemoteFX：** Achieve working in remote Windows Aero environment, watch videos, and Silverlight animations, vGPU, applications run smoothly（required）
- **Sound output:** Realize the server sound redirection output to the client for playback.
- **Sound Input:** Implement client sound redirection to the server.
- **Serial and parallel ports:** The client serial port and parallel port are redirected to the server.（With serial or parallel port product support）
- **multimedia:** Implement server-side multimedia player redirection to the client.
- **USB storage:** Redirection of U disk or mobile hard disk to the server, Permissions can be set to read-only or read-write.
- **USB device:** Implement USB device redirection, Such as printers, scanners, etc. USB devices, Supports the RemoteFX enabled virtual machine environment.
- **printer:** To enable the thin client to connect the printer to the server for mapping;（Need to add the printer model in "System Settings", Only then can the mapped printer be selected in the Printer List. As shown below："System Settings" Add Printer Setup）

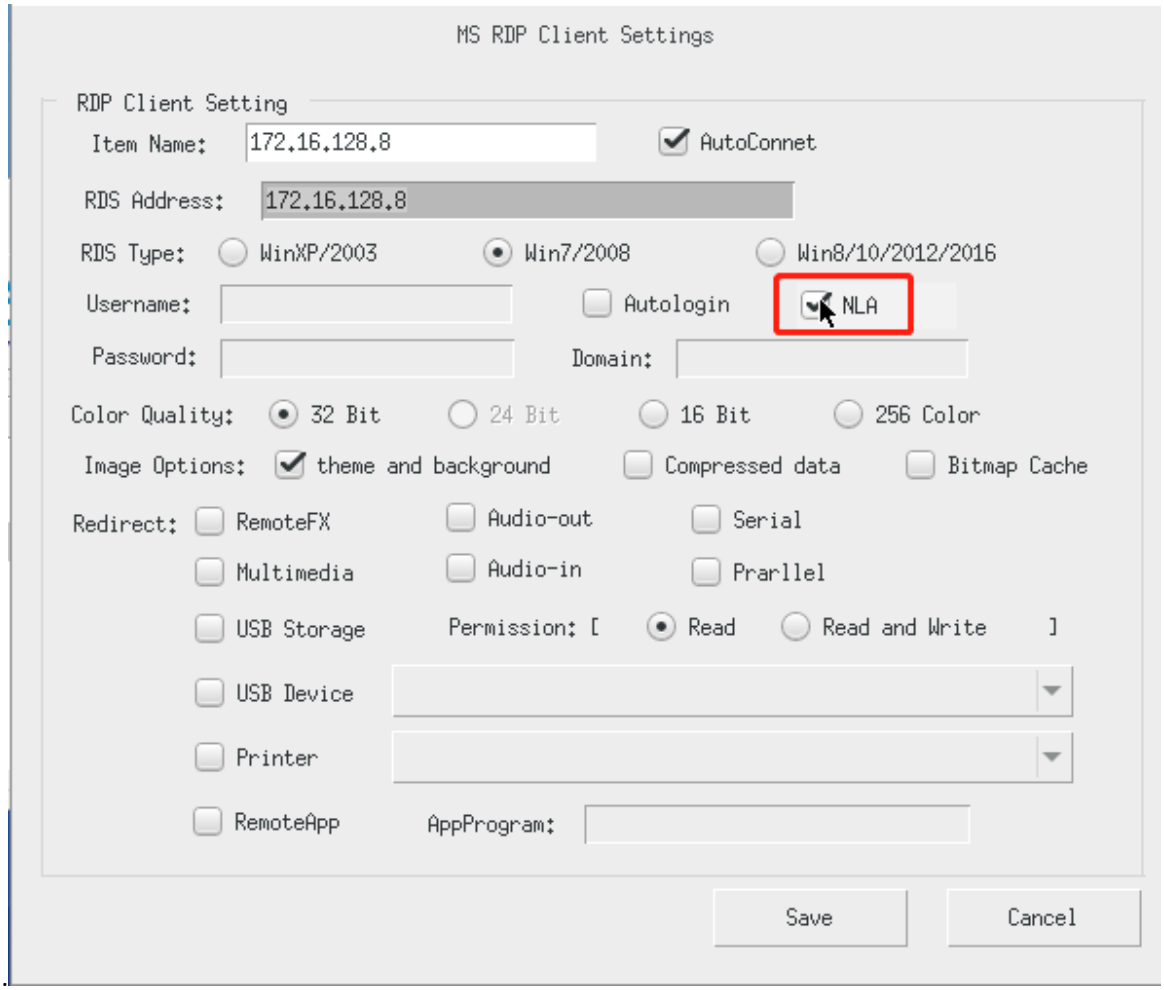


（2）Function setting instructions

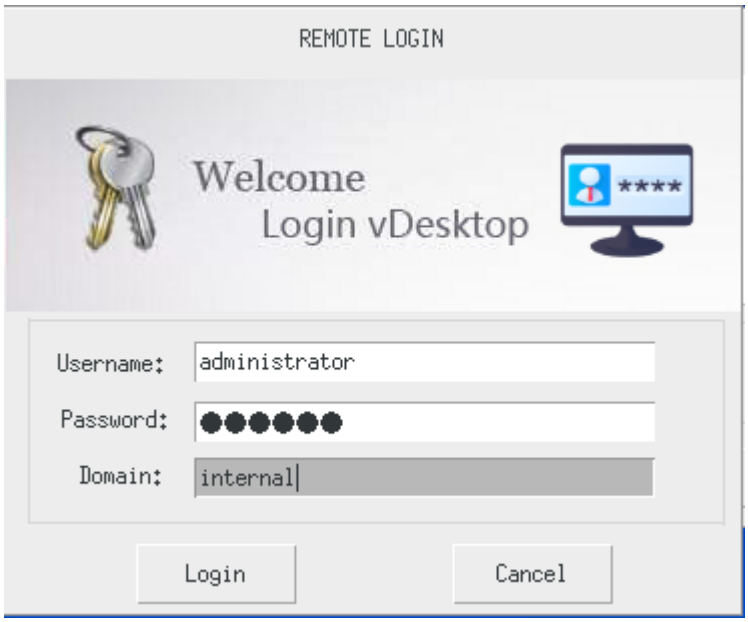
2.1：Network-level authentication

Microsoft RDP supports network-level authentication.

If "Network-level authentication" has been set on the server, You need to check "NLA Authentication" in the "MS RDP Connection Settings" interface, To keep consistent with the configuration of the server. Finally click "Save and Exit"

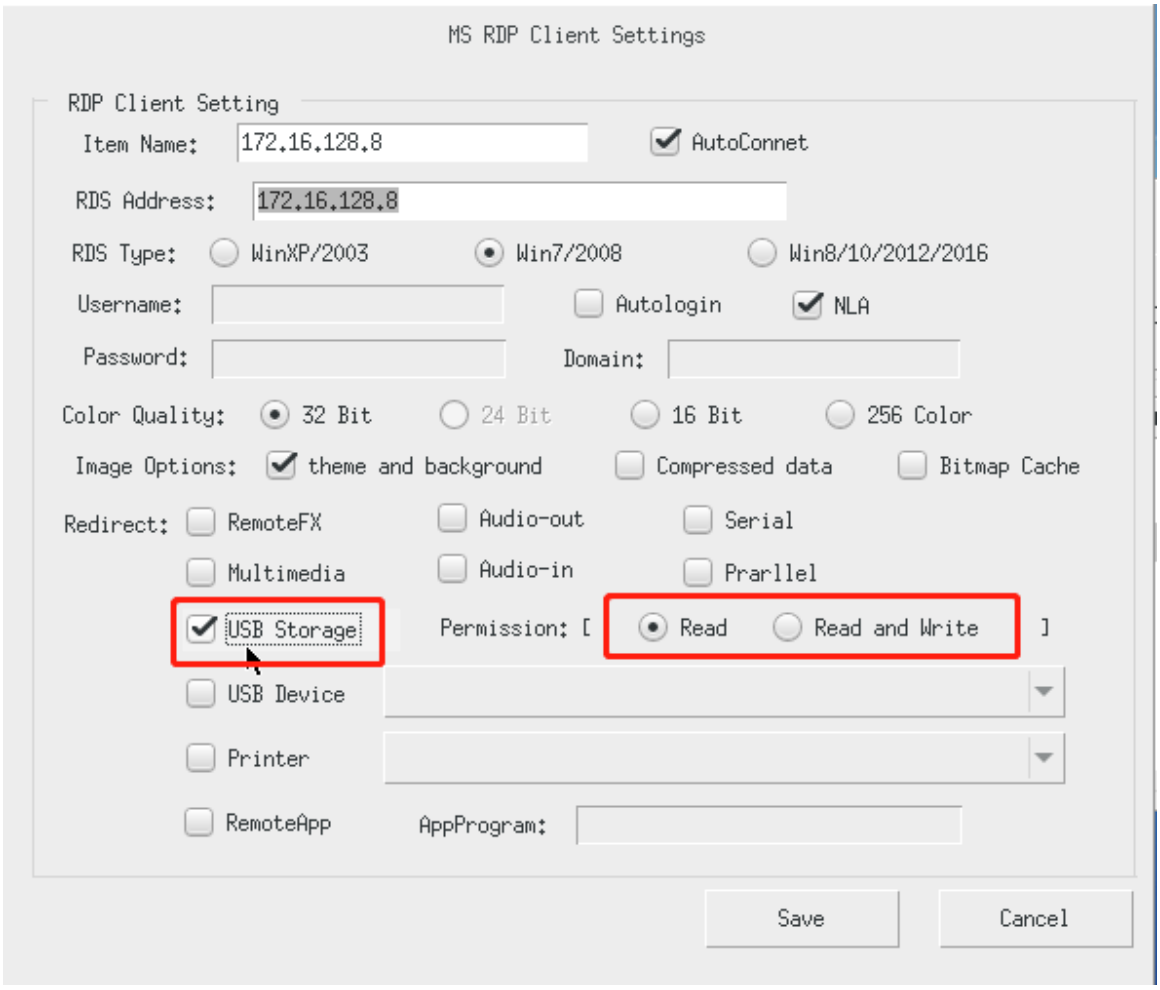


After completing the NLA authentication setup, Return to the "Virtual Desktop Client" interface and click "Connect"; A login window will appear with "Username" and "Password", "Domain", After entering the login information, click "login" to log in. As shown below：

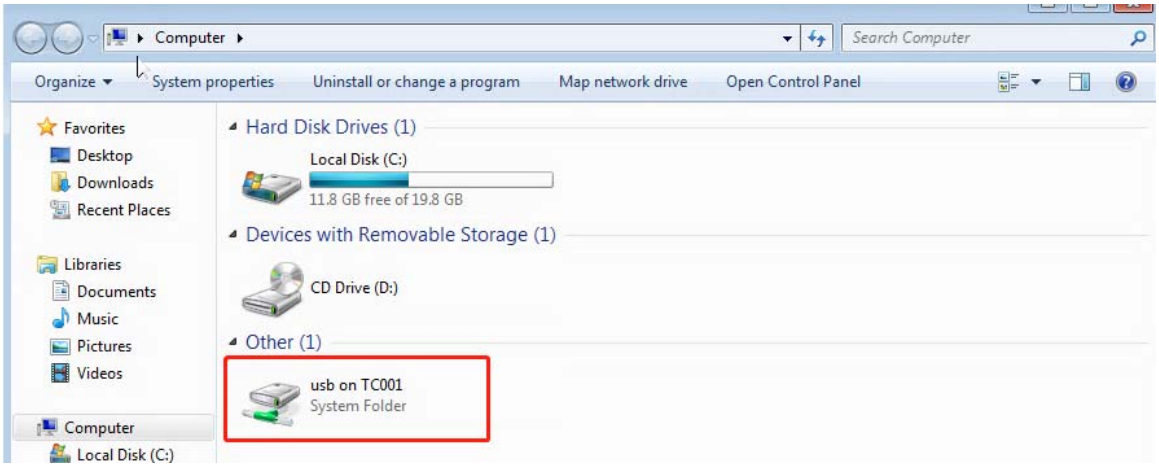


2.2：USB storage redirection

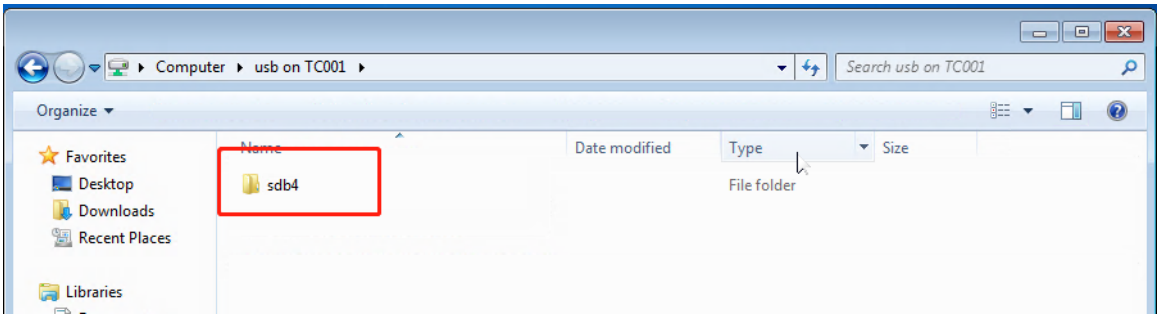
Microsoft RDP supports USB storage settings redirection【Mount U disk to remote computer by network disk】。Set up USB storage redirection, Enter the "MS RDP Connection Settings" interface and check "USB Storage"【At present, the client can implement "read-only" and "read-write" functions.】Click "Save and Exit".



Log in to the access device after setup, Open "Computer" or "My Computer" and you will see the network disk named by the thin client. As shown below：



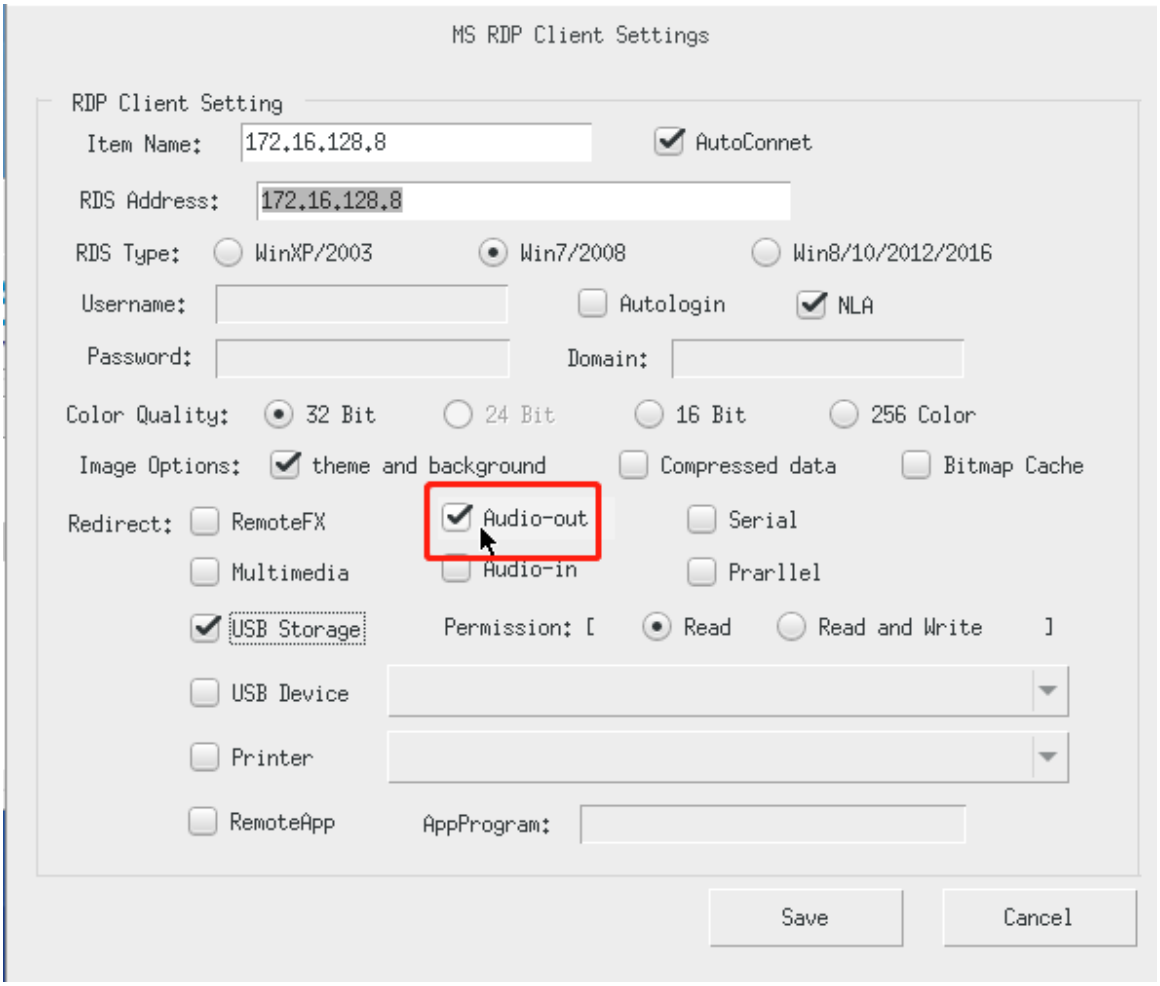
For example: when connected to a USB flash drive, click on the "usb on TC001" network disk to see the contents of the USB flash drive.



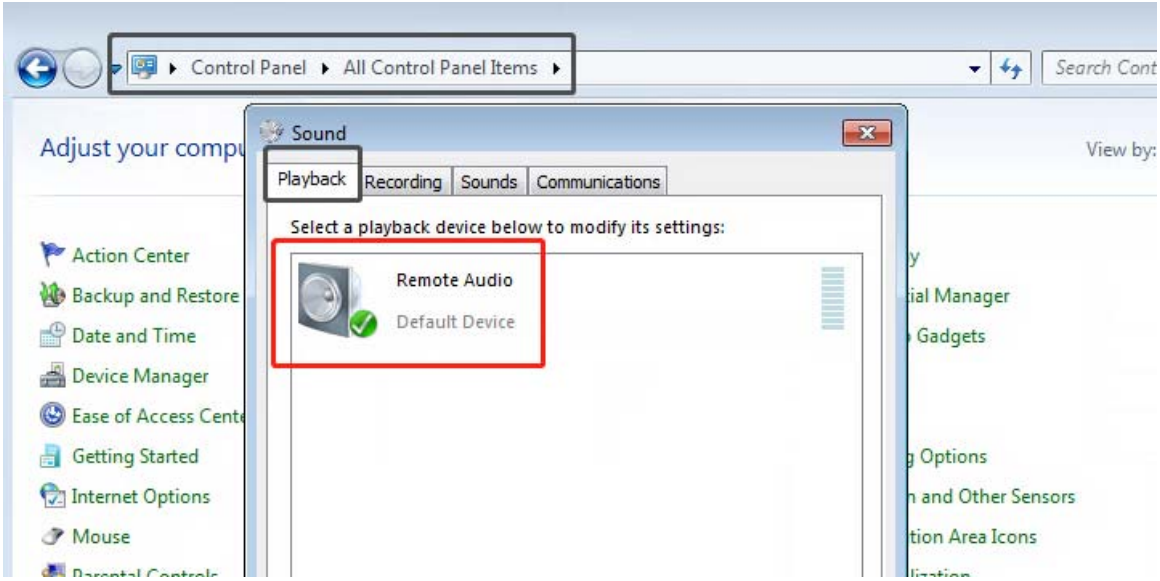
2.3：Sound output redirection

Microsoft RDP supports sound output redirection.

Set sound output redirection, Go to "MS RDP Connection Settings", check "Sound Output" and click "Save and Exit". As shown below：



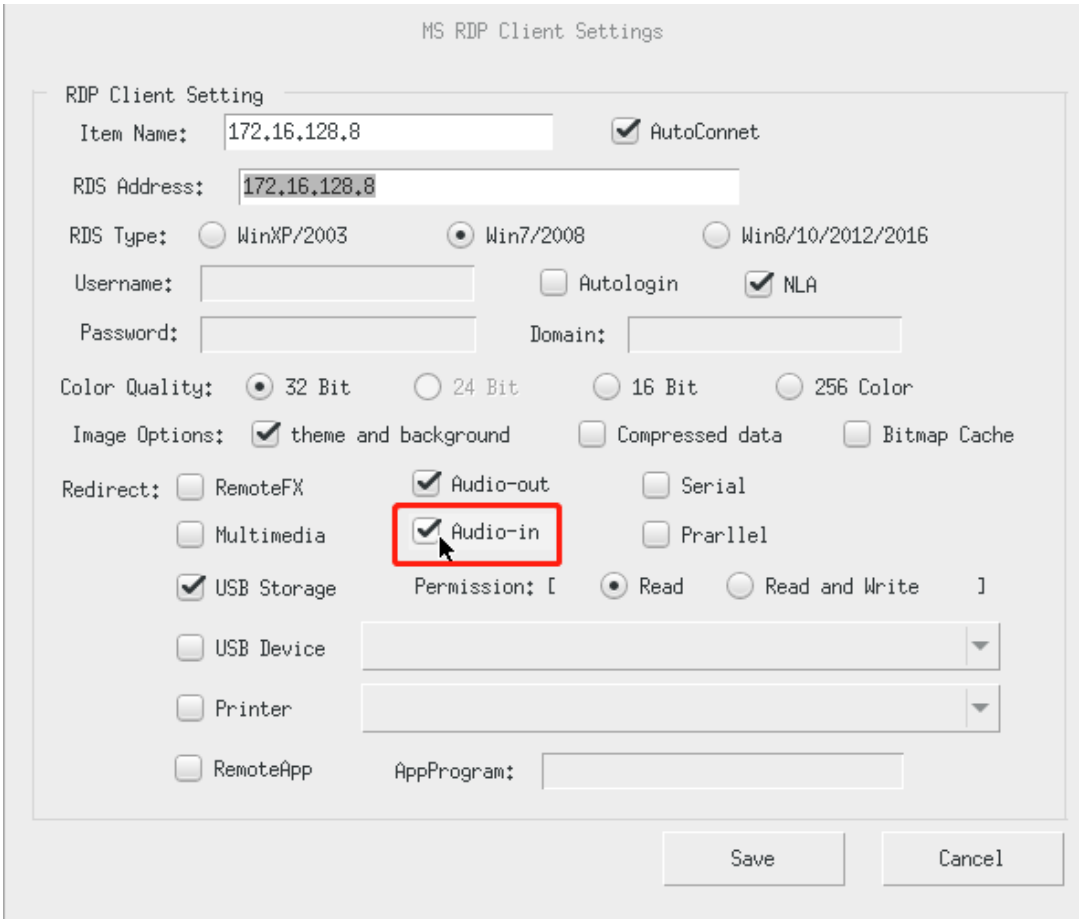
When you check "Sound Output", enter "Control Panel" in the remote server, open "Sound" and click "Play". You will see "Remote Audio" or "Remote Audio". As shown below：



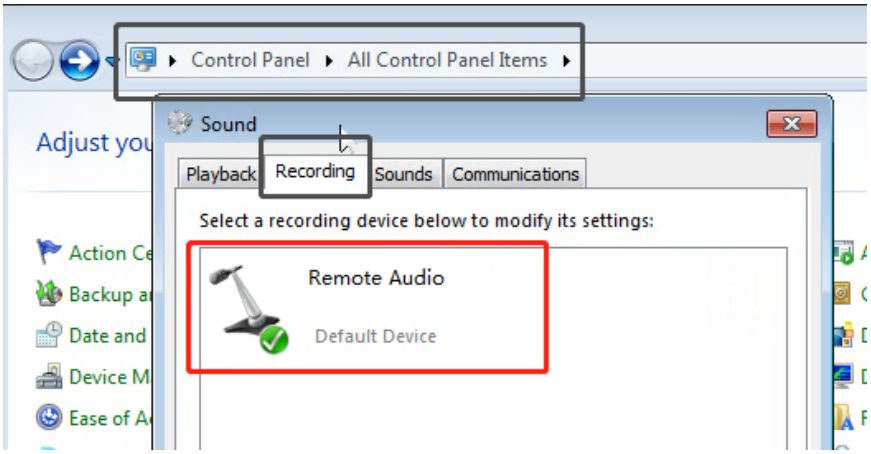
2.4：Voice input redirection

Microsoft RDP supports voice input redirection.

Set up sound input redirection, Enter "MS RDP Connection Settings", check "Sound Input" and click "Save and Exit". As shown below：



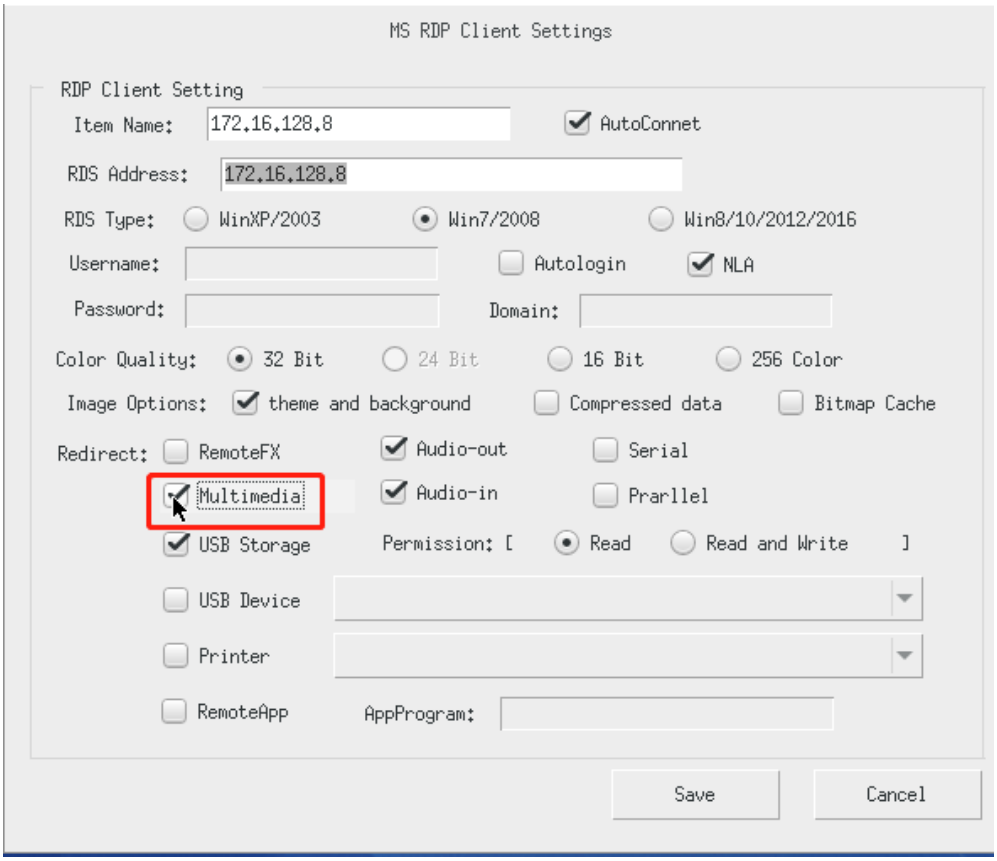
When you check "Sound Input", enter "Control Panel" in the remote server, open "Sound", and click "Record" to see "Remote Audio" or "Remote Audio". As shown below：



2.5： Multimedia redirection

Microsoft RDP supports multimedia redirection.

Set up multimedia redirection, Enter "MS RDP Connection Settings", check "Multimedia" and click "Save and Exit". As shown below：



【Note: When "Sound Output" is not checked, then "Multimedia" is checked. This option will be checked automatically.】

Log in to the remote server, Running Windows media player to play multimedia (such as MP3 movies) will automatically redirect to local playback. As shown below：

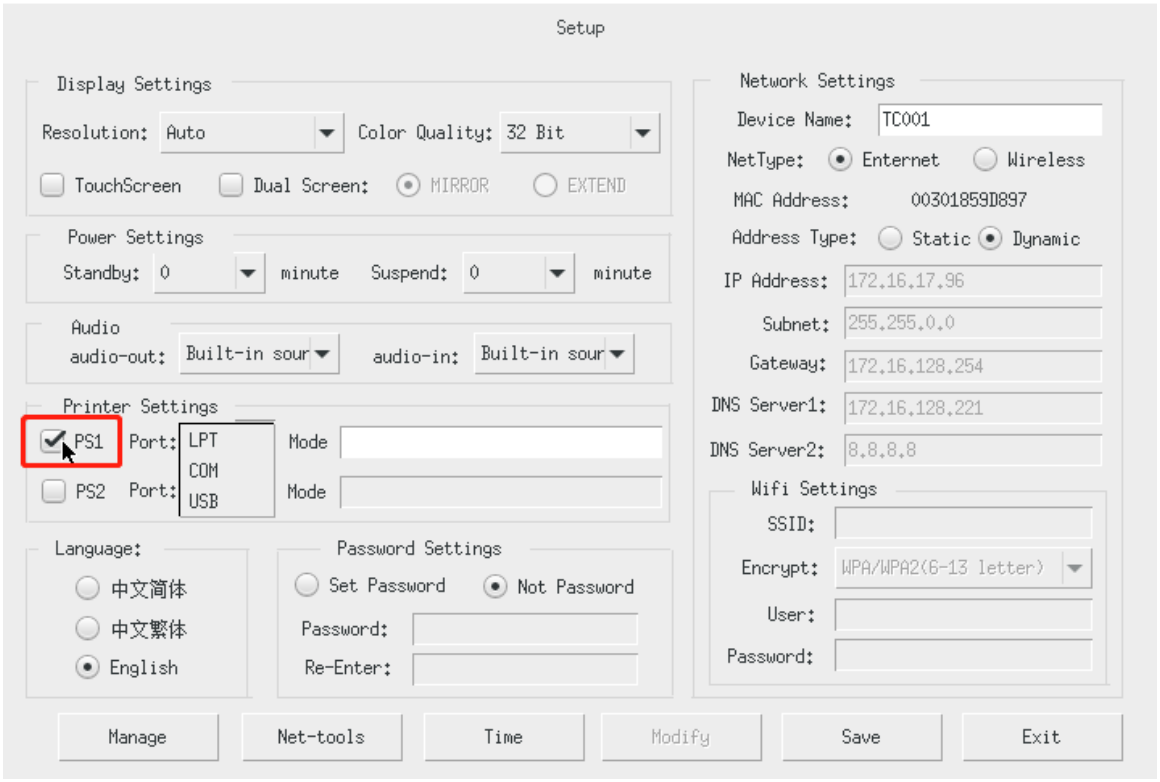
2.6： Printer mapping

Microsoft RDP supports printer redirection.

Set the printer mapping operation process:

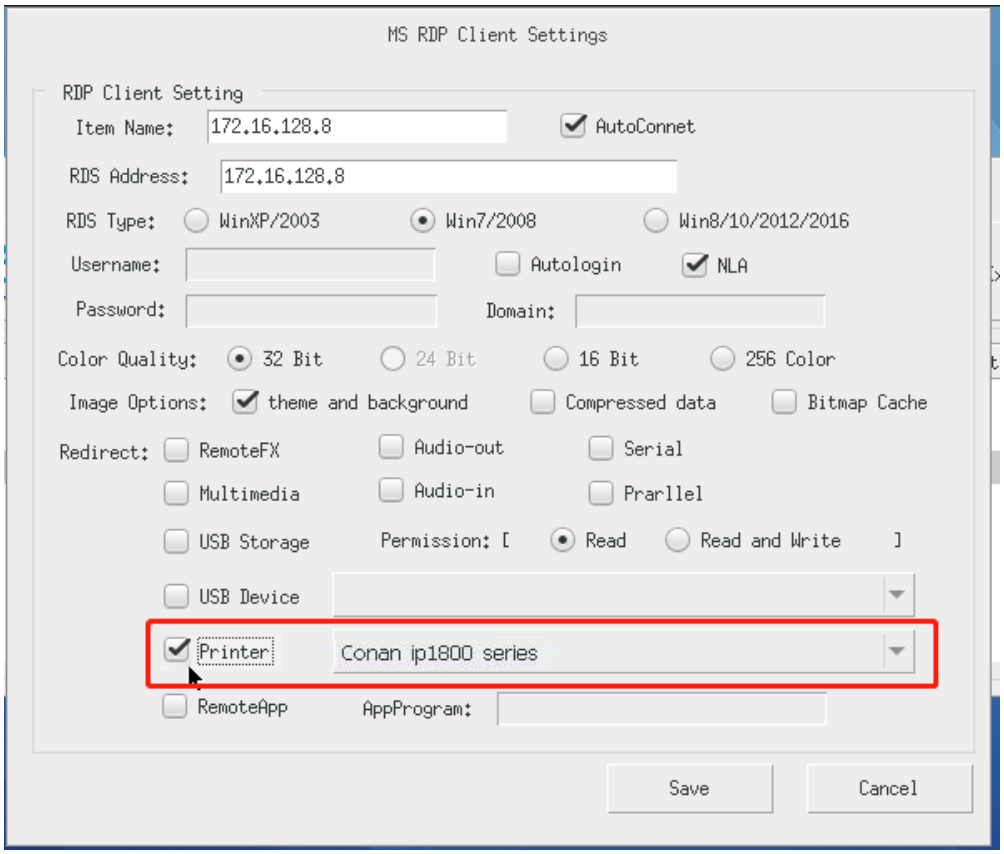
1： The printer driver that needs to be mapped has been installed on the remote server; Note: The name of the printer on the server cannot be changed. Use the default name.

2：Click "System Settings" on the "Virtual Desktop Client" interface and click "Modify";【After clicking "Modify", the display settings, printer settings, sound management, configuration password, network settings, etc. in the system settings can be edited】; Check "Printer PS1" or "Printer PS2" in "Printer Device", The port type of the printer supports "LPT, COM, USB"; Type the model of the connected printer in the Model box, Such as Conan ip1800 series. As shown below：

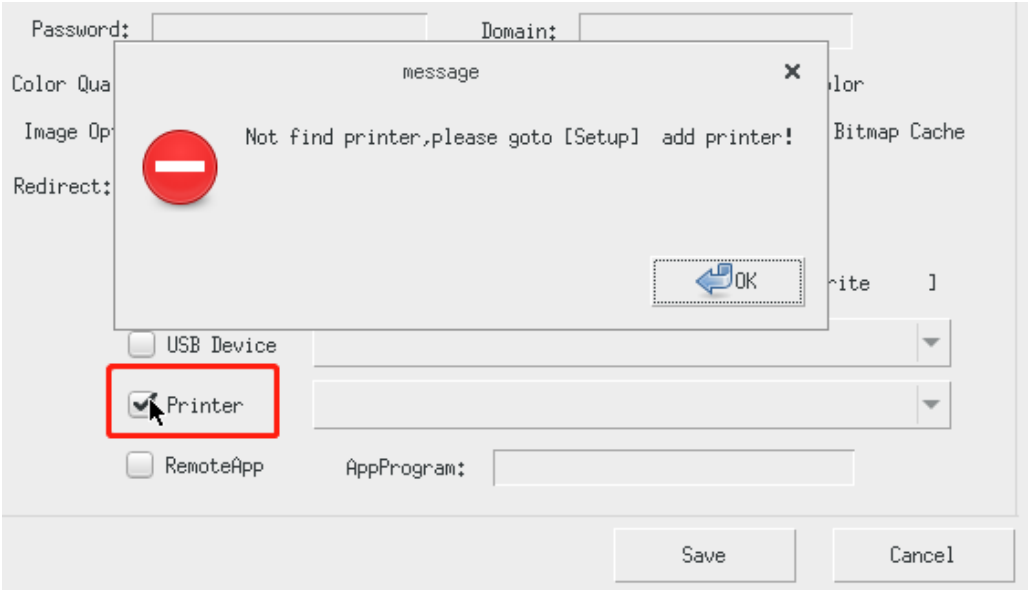


After setting, click "Apply", When prompted if you want to restart the system, click "Yes".【Note 1: After setting the system configuration, you need to restart the thin client to take effect; Note 2: The printer must be turned on first, otherwise the printer mapping cannot be successful】

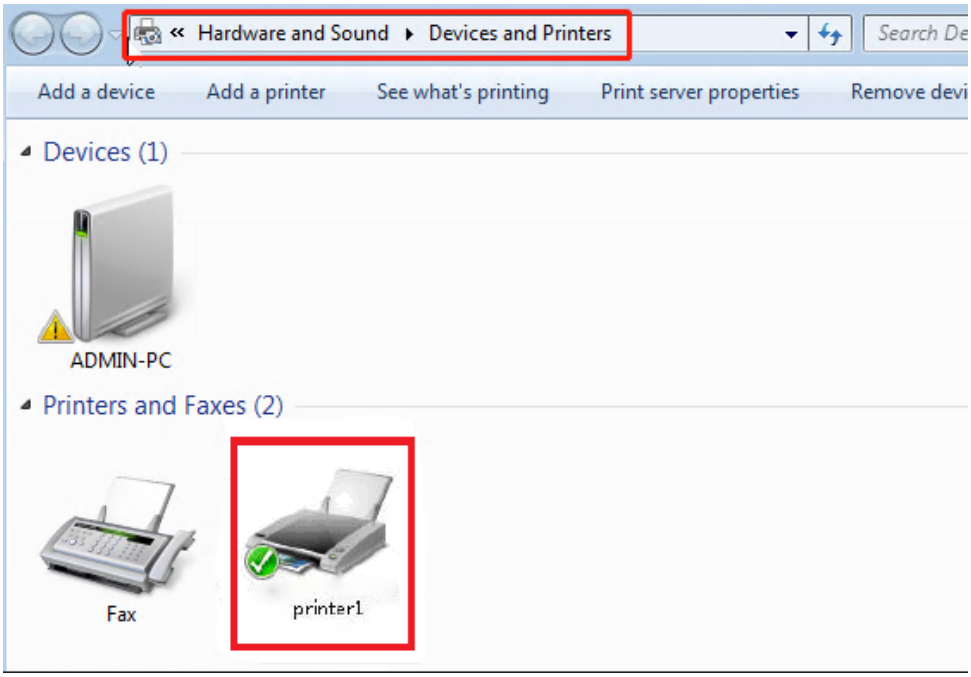
3：After restarting the thin client, enter the "MS RDP Connection Settings" interface, check "Printer" and click "Save and Exit". As shown below:



【Note: If no printer is added in the system settings, the following prompt will appear; As shown below:】



4：Login to the remote server, Enter the system control panel, View printer mapping connections, You can see the printer redirected connection, "printer1". As shown below:

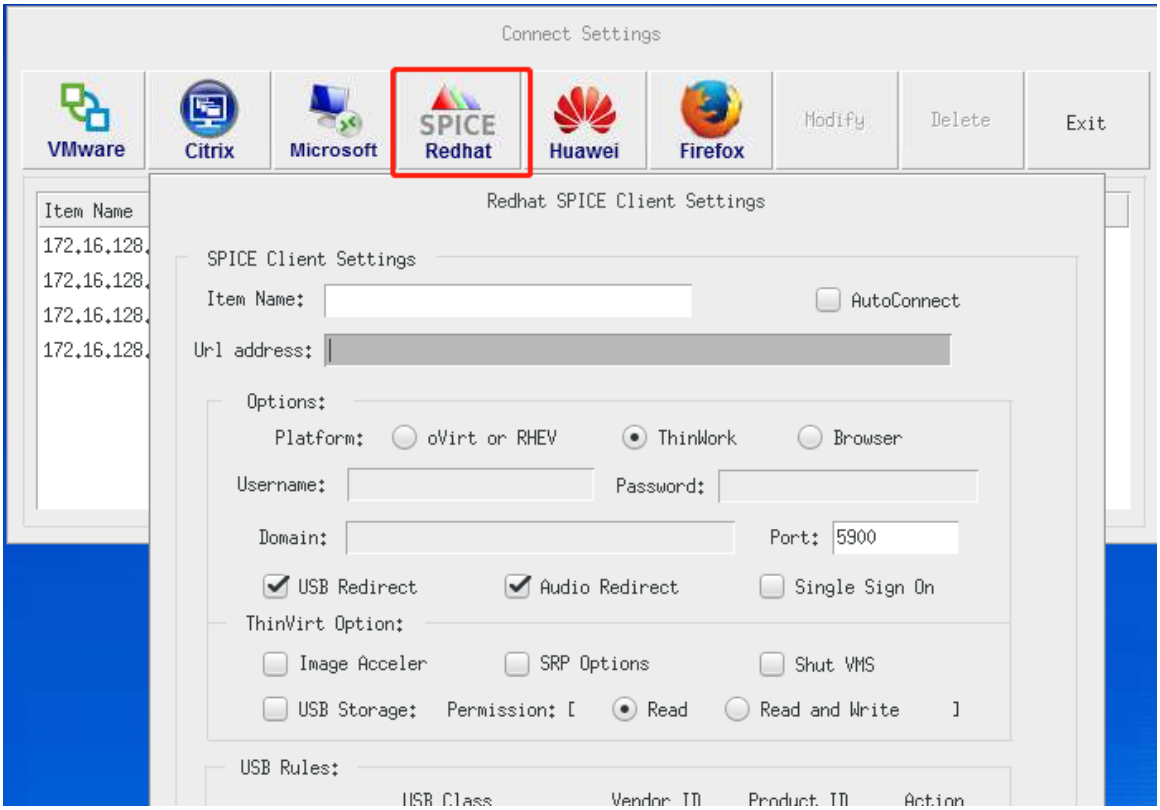


2： Redhat SPICE settings

For KVM (kernel virtual machine) virtualization environments, Support Spice protocol: HD video, USB redirection, audio output input redirection, etc .; currently supports Redhat RHEV / oVirt, thinWork, OpenStack and other virtualization platforms.

（1）SPICE protocol settings

Click "Connection Settings" on the "Virtual Desktop Client" interface and click "Redhat" to enter "Redhat SPICE Connection Settings". As shown below:



The above interface users can add new login settings.

Login configuration instructions:

For example, the accessed SPICE server address is: 172.16.128.199.

When accessing a virtual machine in the server, the settings on the SPICE connection interface are as follows:

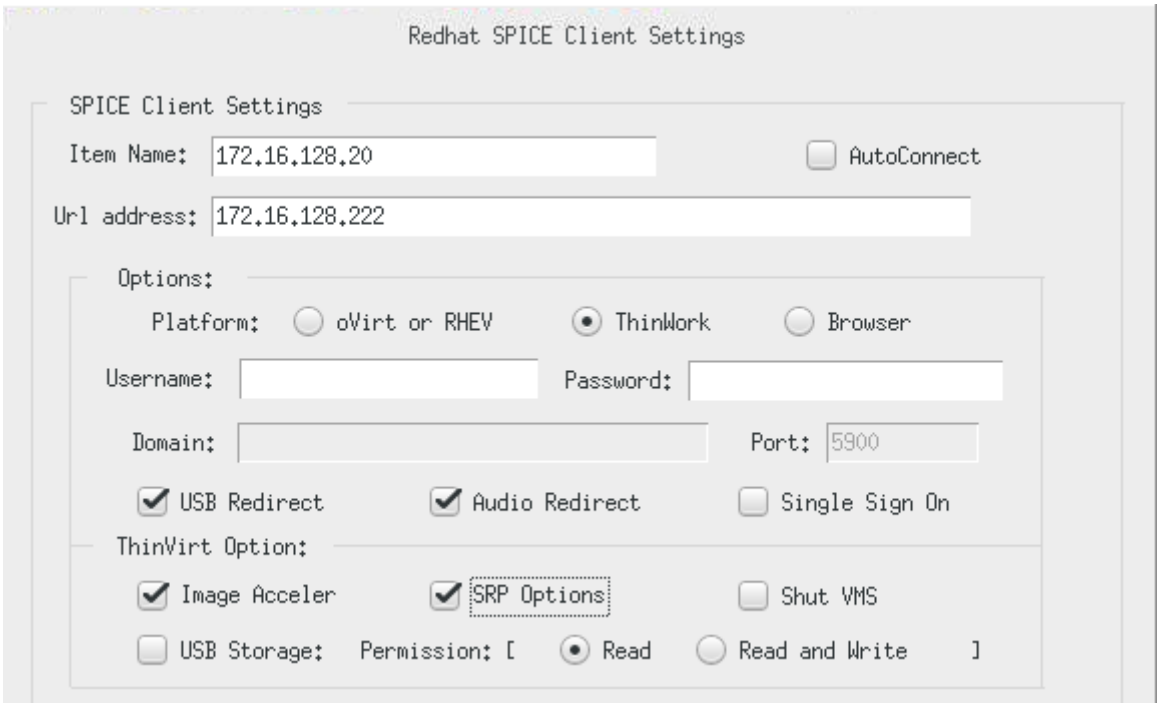
- **Connection name:** Set by users as required. Example: 172.16.128.199
- **Connection address:** The address of the Spice server to be accessed.Example: 172.16.128.199
- **Virtualization management platform:** There are three options "based on ovirt or RHEV, libvirt based, browser based".

（a）Based on ovirt or RHEV settings:

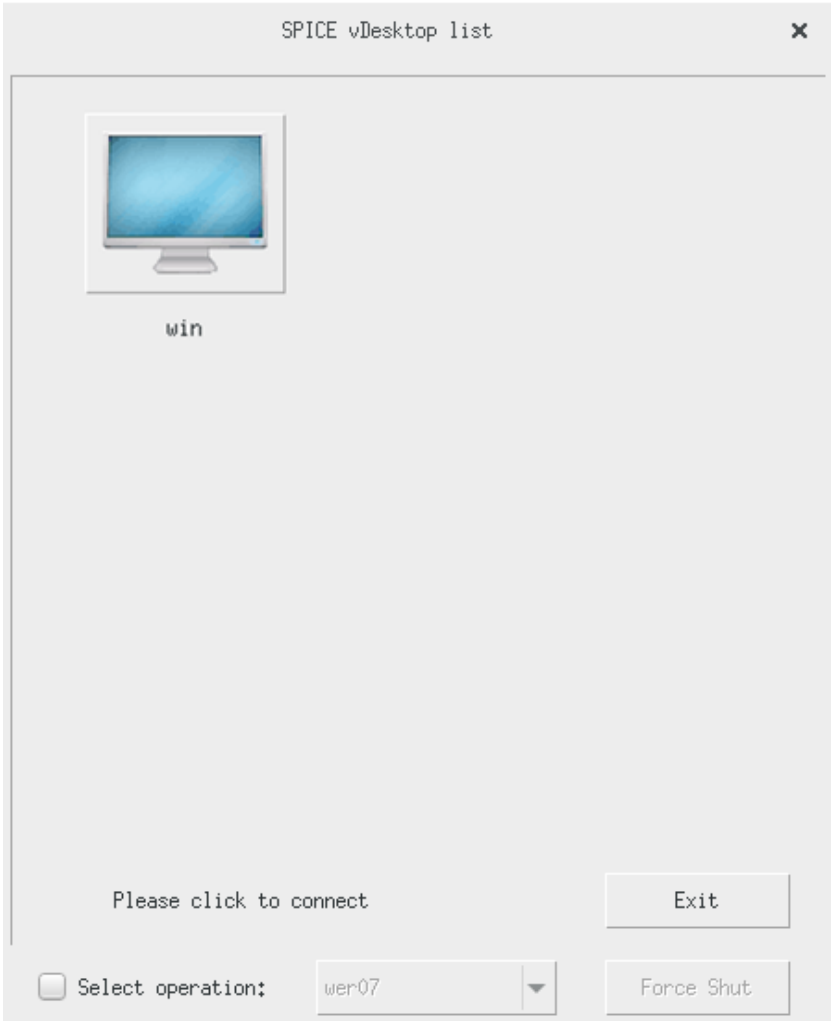
When "based on ovirt or RHEV" is selected, the user name, password, and full domain name will be entered.

- **username:** Login account, that is, authorized user.
- **password:** Password corresponding to the login account.
- **Full domain name:** The default domain name is "internal", Or full AD domain name, Example: abc.com

After configuration is complete, click "Save". As shown below:

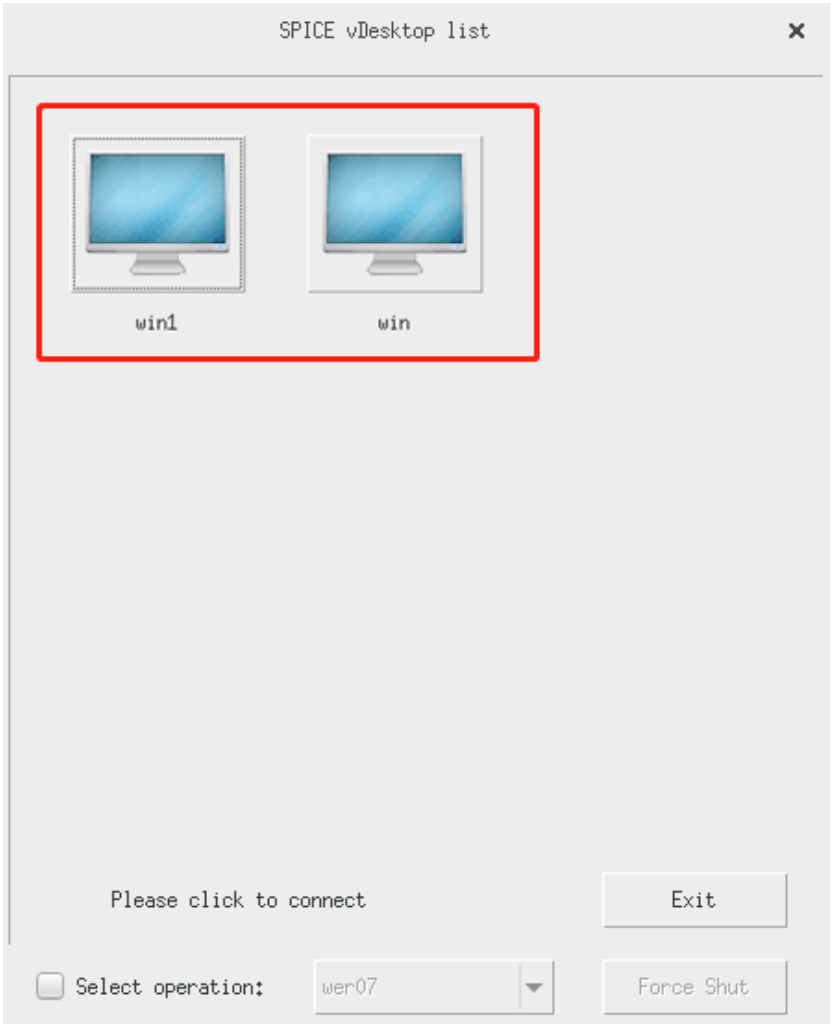


Exit "SPICE Connection Settings" to "Virtual Desktop Client" and click "Connect" to enter the virtual desktop list interface. As shown below:



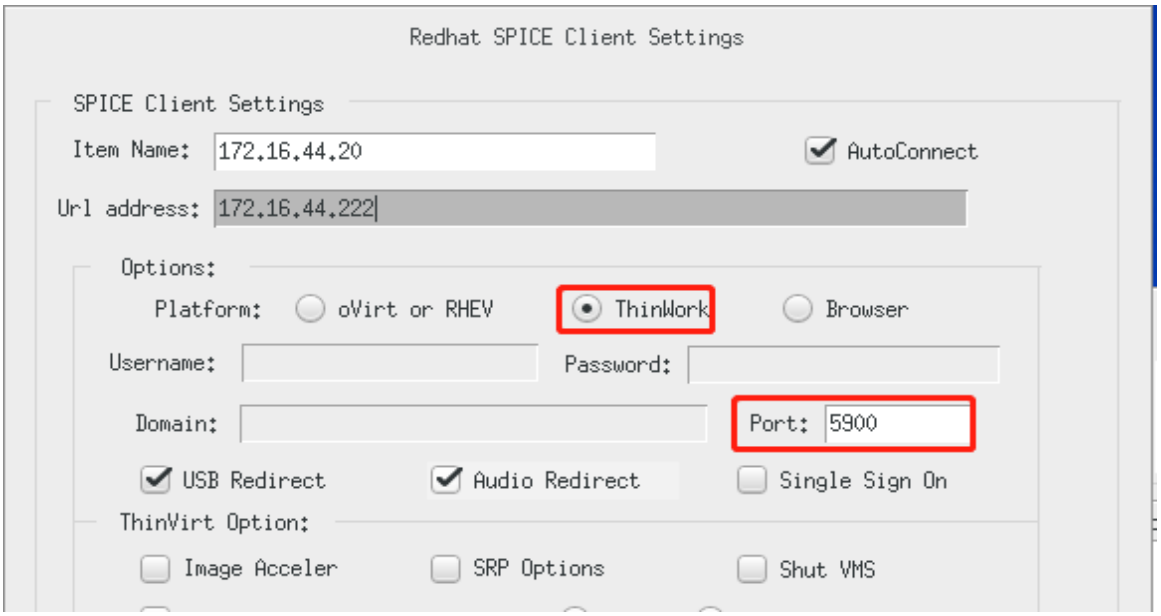
【Note: When an authorized user has only one available virtual desktop, the client will automatically connect to

the virtual machine. If a user has multiple virtual desktops, the user's virtual desktop list window will pop up for the user to select a virtual desktop and log in】The following figure shows a user with multiple virtual desktops. As shown below:



（b）Based on libvirt settings:

Supports virt-manager or libvirt management platform settings.

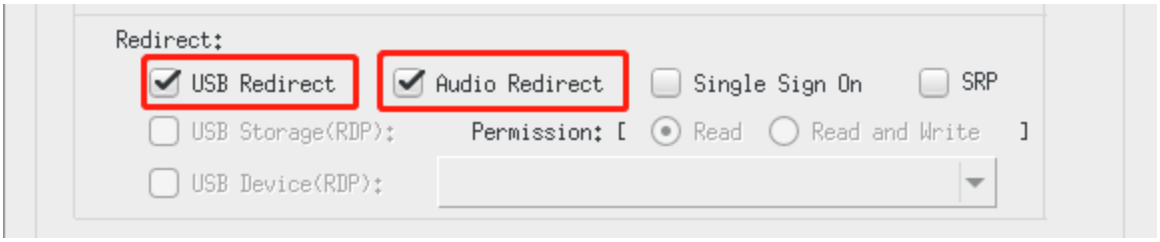


After setting, click "Save" and "Exit" to the virtual desktop; Click on "Connect" system is directly connected to the virtual machine.

（2）Function setting instructions

2.1：USB redirection settings

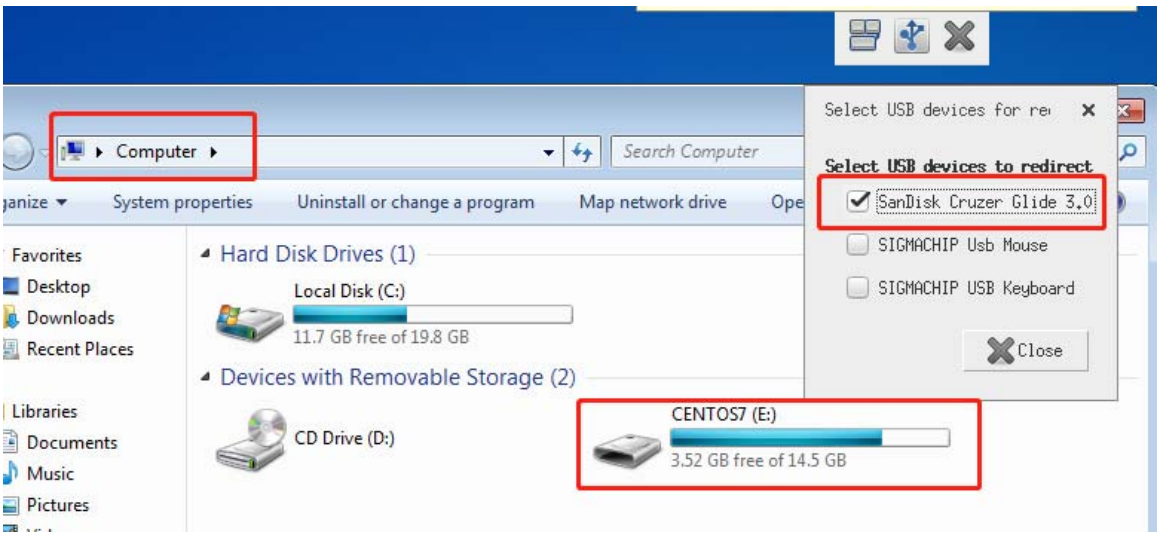
The default setting is to enable USB redirection and sound redirection. As shown below:



The user logs in to the virtual desktop using the SPICE protocol, After connecting the USB flash drive, you can check the USB device redirection by moving the cursor to the middle position above the computer desktop.

As shown below:

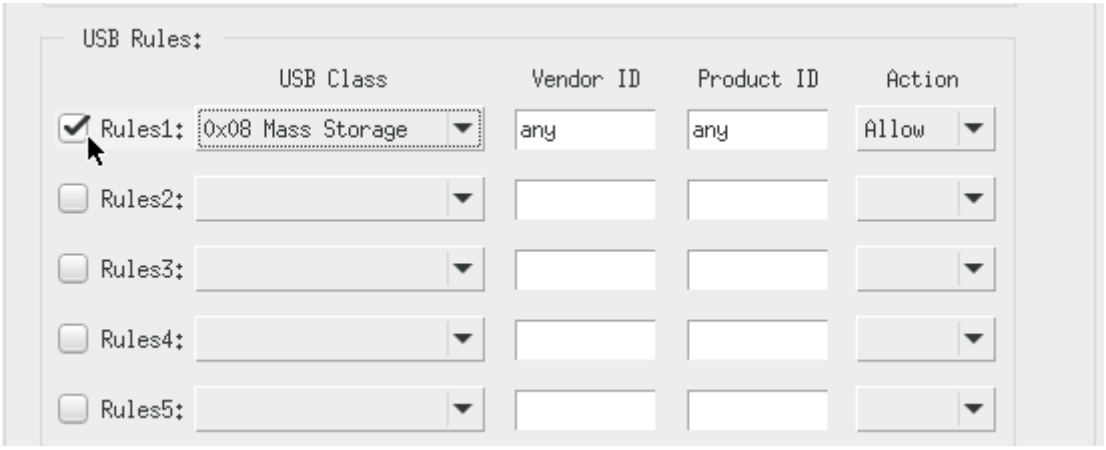
Click the "USB Device Selection" button, A USB redirection option window will pop up, showing the name of the inserted USB flash drive, while also checking the available, exit the USB device management window, enter "Computer" and the inserted USB flash drive will be displayed. As shown below:



The above figure shows the USB devices that have been successfully redirected;

In a production environment, users often need to disable USB storage devices.

Enter "SPICE connection settings", select "Policy 1" in "USB policy", and select the corresponding USB storage device in "USB Class"; "Vender ID" and "Product ID" enter "any"; "Action" choose "Deny" Click Save. As shown below:

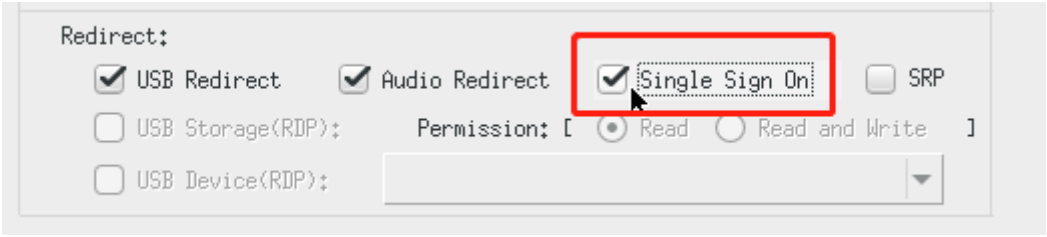


Log in to the virtual desktop again and click "USB Device Selection". The USB device will not be displayed.

2.2：SRP protocol and SSO single sign-on(only support oVirt or RHEV)

The SRP protocol is directly converting the SPICE protocol to the RDP protocol. If you select "SRP Protocol" to save and log in to the virtual desktop again, you will use the RDP protocol to connect to the virtual desktop, but still use the SPICE USB redirection function. This RDP version RDP7.1/8.0/8.1/10

SSO single sign-on is when you use the SPICE protocol to log in, you automatically enter the account password to log in, and there is no need to log in twice.

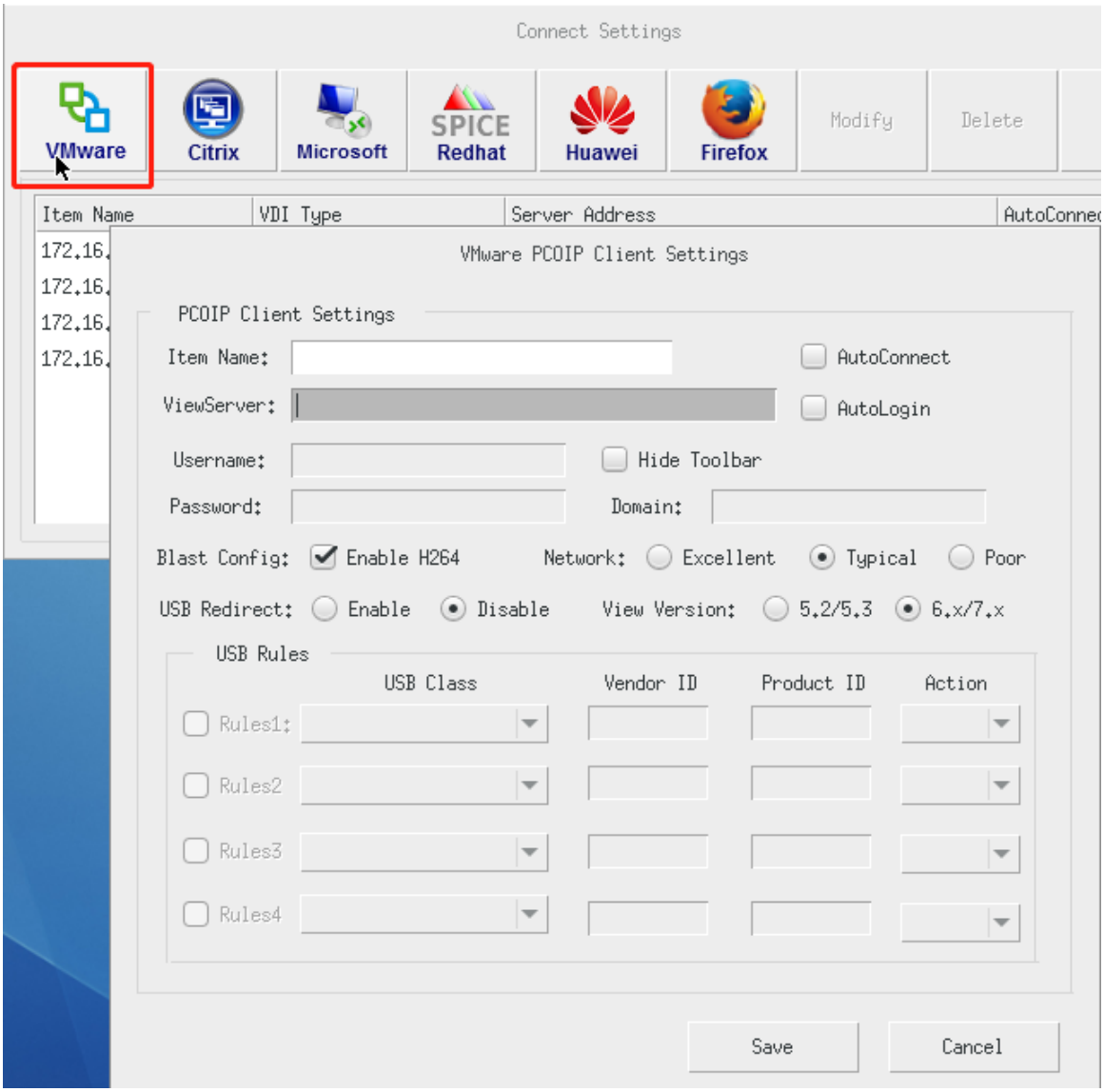


3： VMware settings

For Horizon view virtual desktop users, Horizon View Client supports virtual desktops released with VMmare Horizon view 6 or above.

（1）Vmware PCOIP client settings

Click "Connection Settings" and click "VMware" to enter the "VMware PCOIP Connection Settings" interface to create a new connection. As shown below:



Function option description:

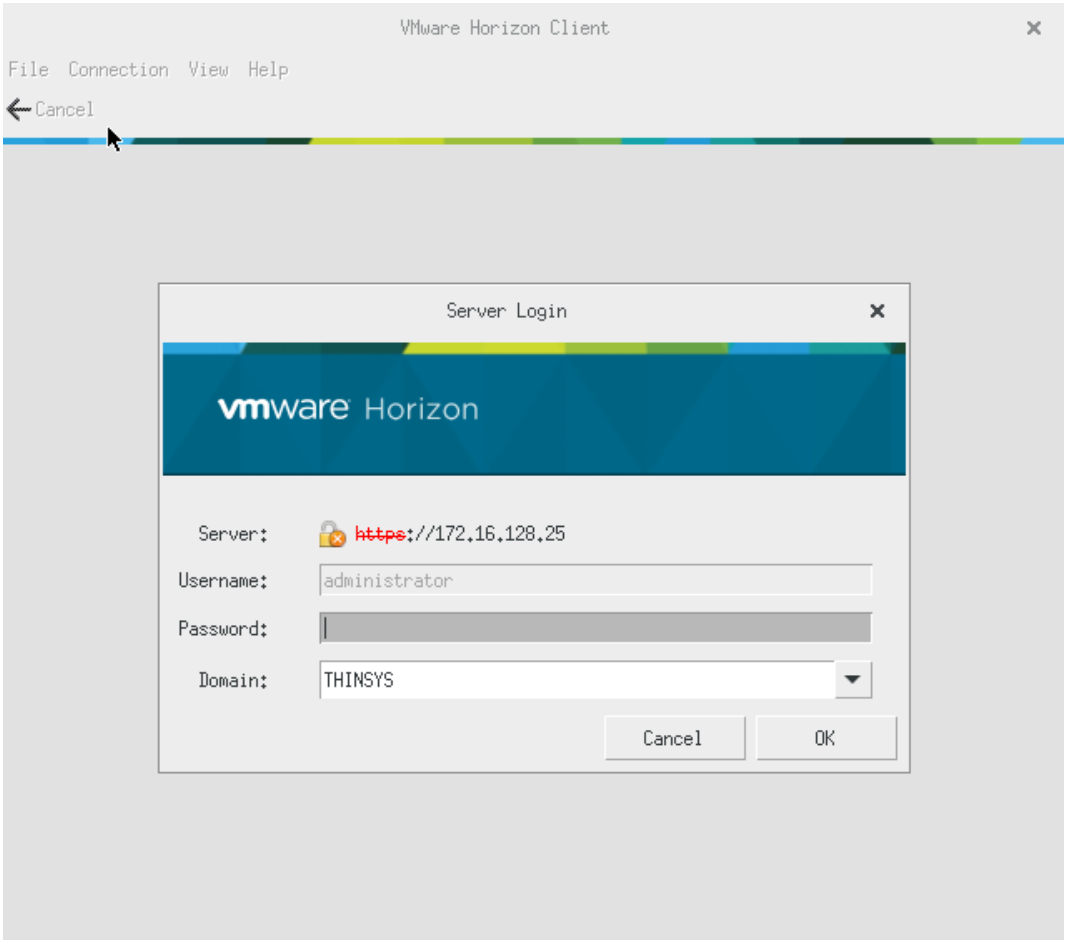
- **Connection name:** The user sets the name as required.
- **connect to the server:** IP address of the server to be accessed.
- **Hide the view menu bar:** Hide the view menu bar above the desktop. This menu bar provides functions such as resetting the desktop, viewing USB redirection, and disconnecting.
- **USB redirection:** In addition to disabling USB redirection on the VMware horizon view platform, USB redirection can also be disabled on the client. You can also use USB policies to do whitelist management of USB devices.【Note: If USB redirection is not available, you need to check whether USB redirection is

enabled on the Horizon view server, whether USB redirection is enabled on the client, and whether USB redirection software is installed when the virtual machine is installed with the view agent】

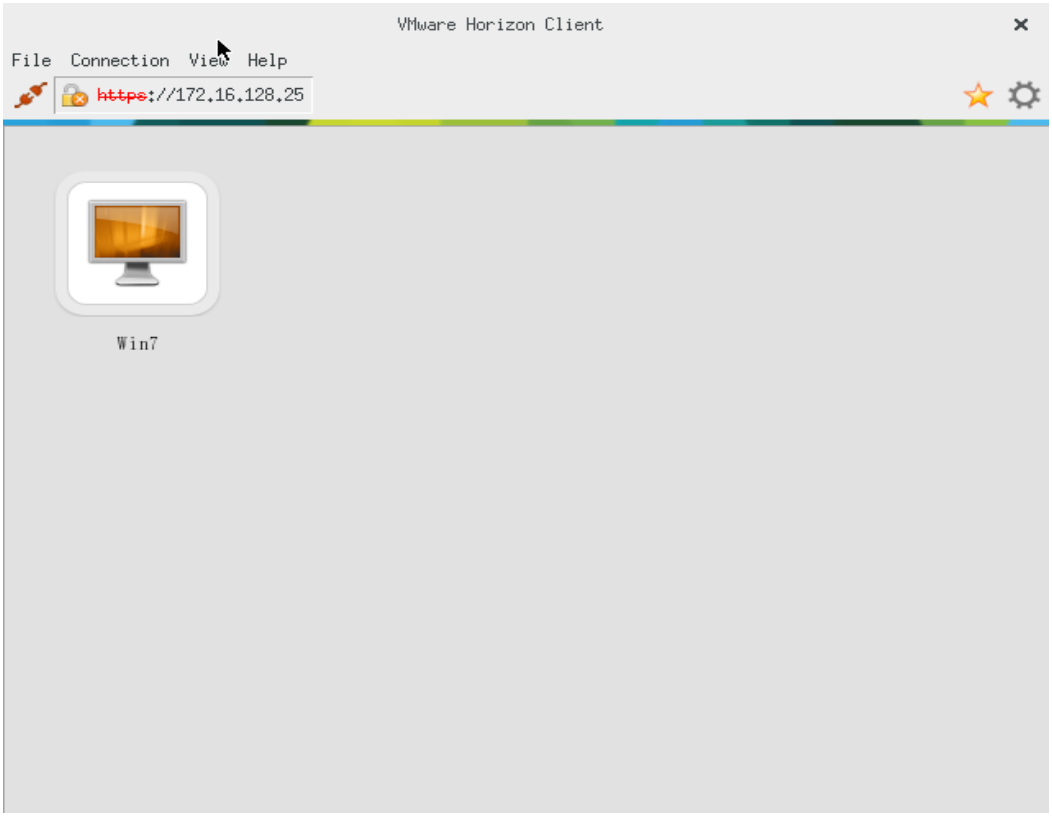
- **Blast configuration:** Configure H264 connection parameters, If it is particularly useful for Internet access, it requires horizon view 7 or above to support it;
- **horizon view version:** View 5.x support is still retained;

（2）Vmware horizon client login verification

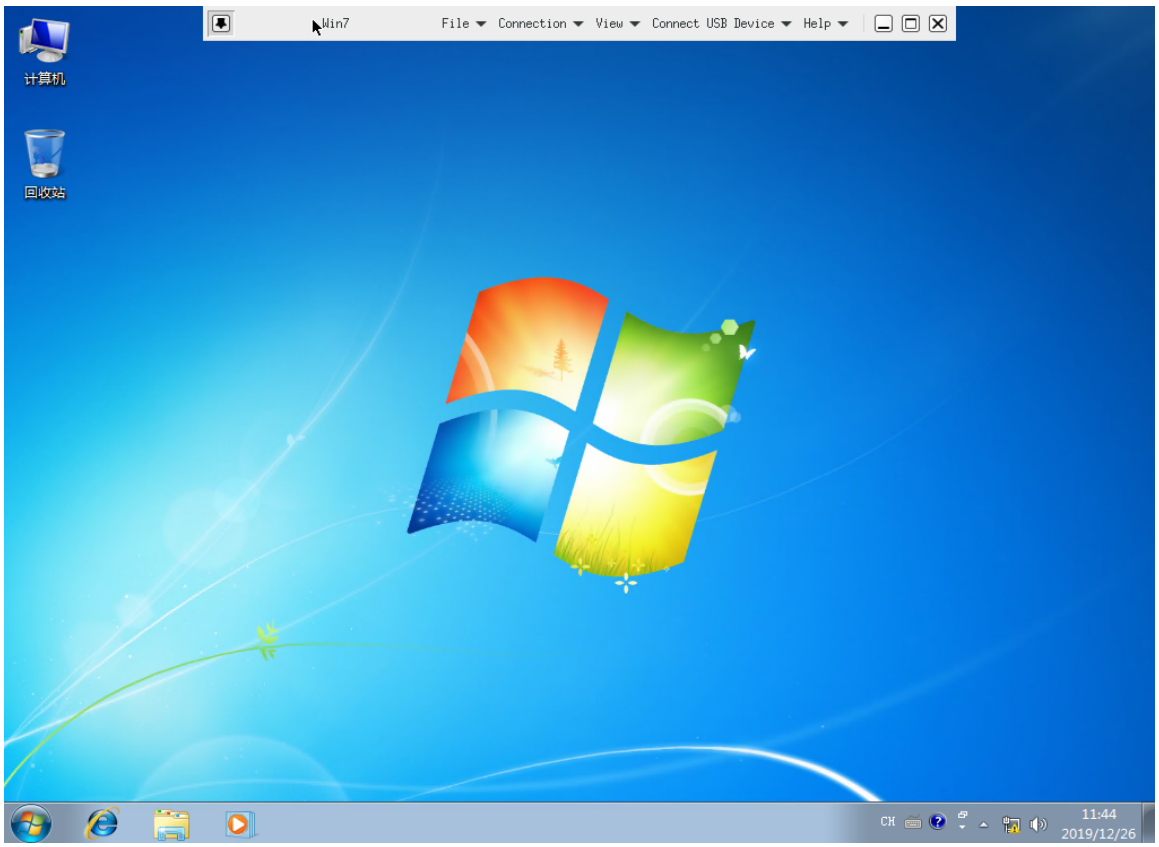
By setting up a new vmware connection, After entering the server, account, domain name and other information, click "Save" and exit, Return to the desktop and click the "Connect" button. The login interface window shown below appears. Enter your account and password and click "OK". As shown below:



After successfully logging in, users can get a list of available virtual desktops; If the user has access to multiple desktops, a list of multiple virtual desktops is displayed. As shown below:



After the View client logs in, if the user has only one available virtual desktop, the client will automatically choose to log in to the virtual desktop. As shown below:

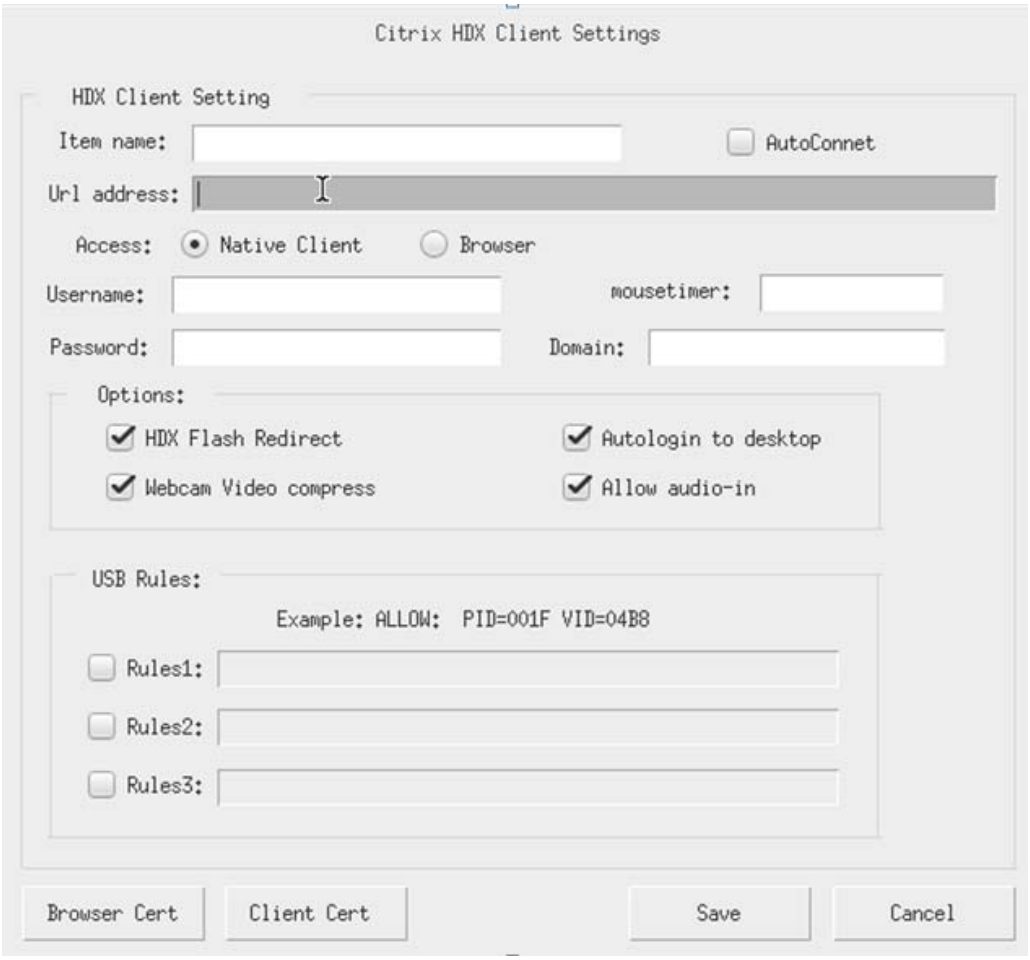


4： Citrix Receiver settings

For Citrix virtual desktops, Citrix Receiver supports virtual desktops released with XenDesktop 7.0 or above.

（1）Citrix HDX client settings

Enter "Connection Settings" Click "Citrix" to enter "Citrix HDX Connection Settings" .As shown below:



Function option description:

- **Connection address:** The default is http: // IP or domain name / Citrix / Store / PNAgent / config.xml
- **Login Method:** Support "Local Client" and "Browser" two login methods.
- **Local client connection address:**[http or https]: // IP or domain name / Citrix / Store / PNAgent / config.xml
- **Browser connection address:** [http or https]://IP or domain name /Citrix/Storeweb

If you need to log in to the Citrix NetScale Gateway to access the virtual desktop, please log in using a browser;

【Note: When using a browser to log in, you can use the shortcut key: Ctrl + F11 to exit the browser】

【Note: USB redirection, flash redirection, multimedia redirection and other functions require the corresponding policies to be enabled on the XenDesktop server to take effect.】

（2）Citrix receiver login verification

Citrix receiver Login verification improves user desktop security, In the "Citrix HDX Connection Settings" window, the password can be left blank. The user will be prompted to enter the password before logging in. If you want to log in automatically every time you turn on the computer, you only need to enter the login account in the "Citrix HDX Connection Settings" interface. Password, domain name click "Save"; The following figure sets the password to be empty. Click "Connect" on the desktop, and the login verification window will pop up. As shown below:

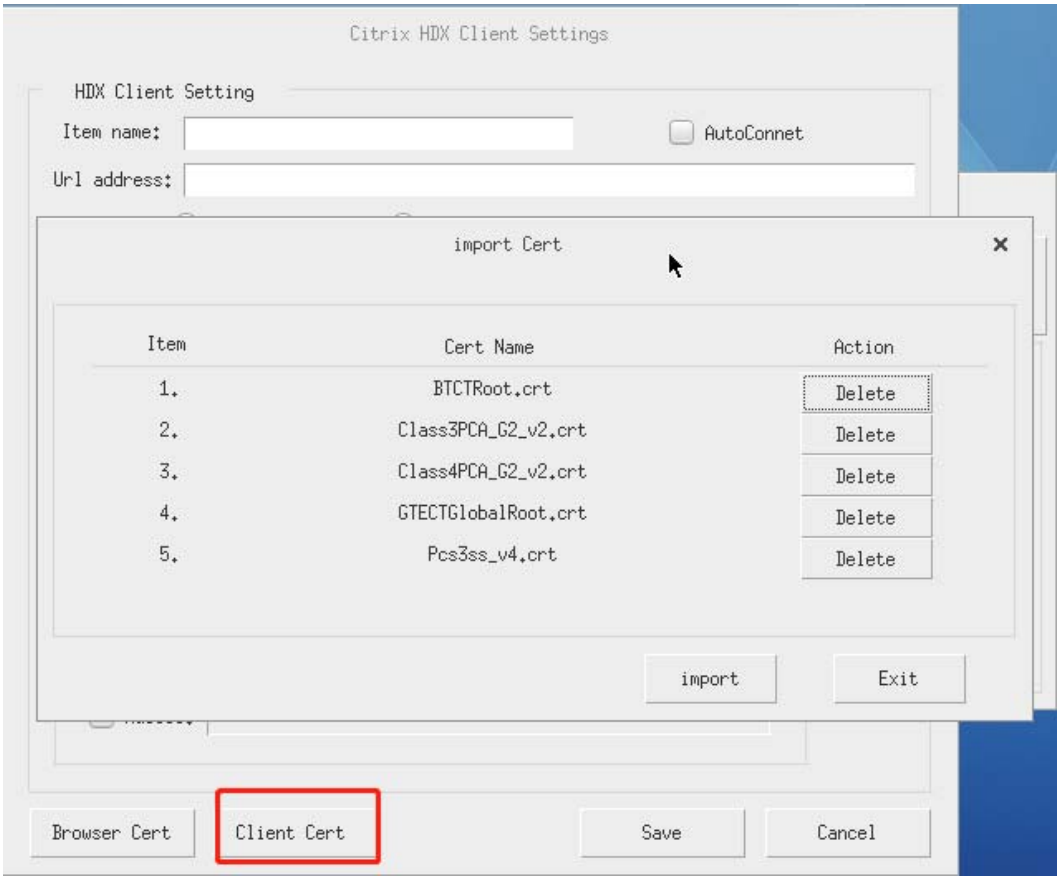
After successful login, the virtual desktop shown below will be displayed.

（3）Certificate import

Client certificate import

Click "Client Certificate" on the "Citrix HDX Connection Settings" interface to display the "Certificate Import

Interface". As shown below:



- Notes on importing certificates:

1：U disk must be formatted as Fat32 before use, not NTFS.【If the U disk has a boot function, please format the entire disk or restore all U disk space by making the boot disk. The U disk only retains one partition】

2：The certificate should be stored in the root directory of the USB flash drive.

3：Modify the extension of the certificate.【For example: test.cer needs to be changed to test.crt】

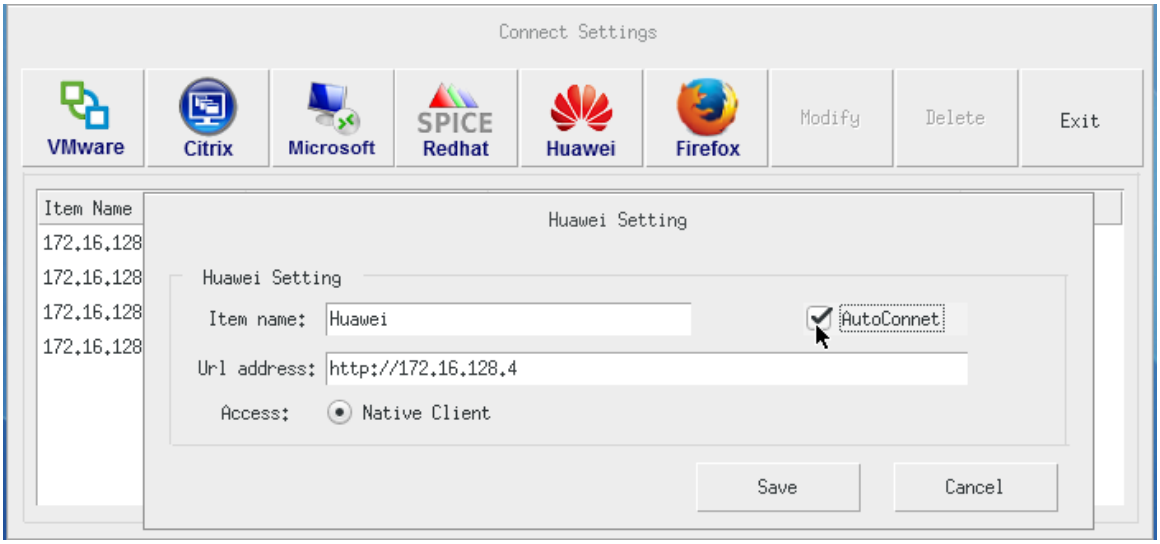
Insert the USB flash drive and click "USB flash drive import".

5： Huawei settings

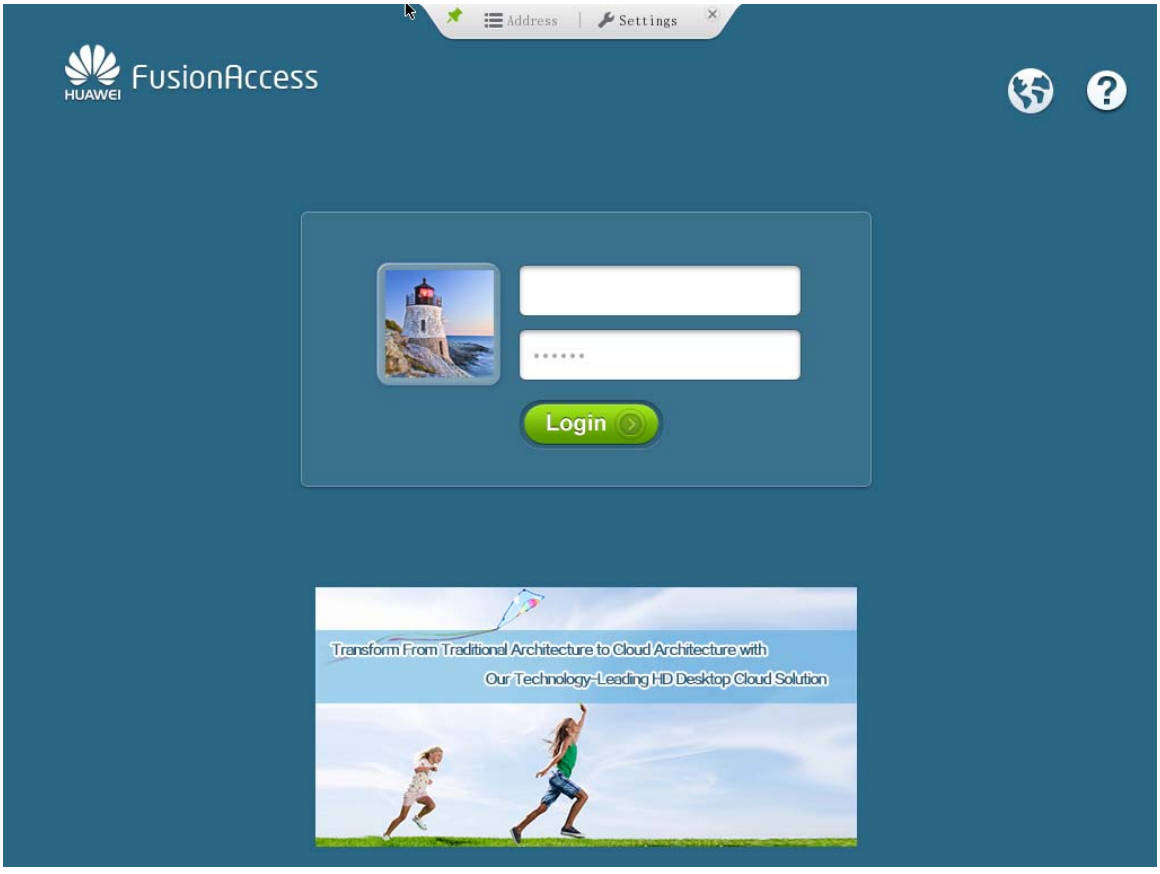
Applicable to Huawei virtual desktop.

（1）Huawei connection settings

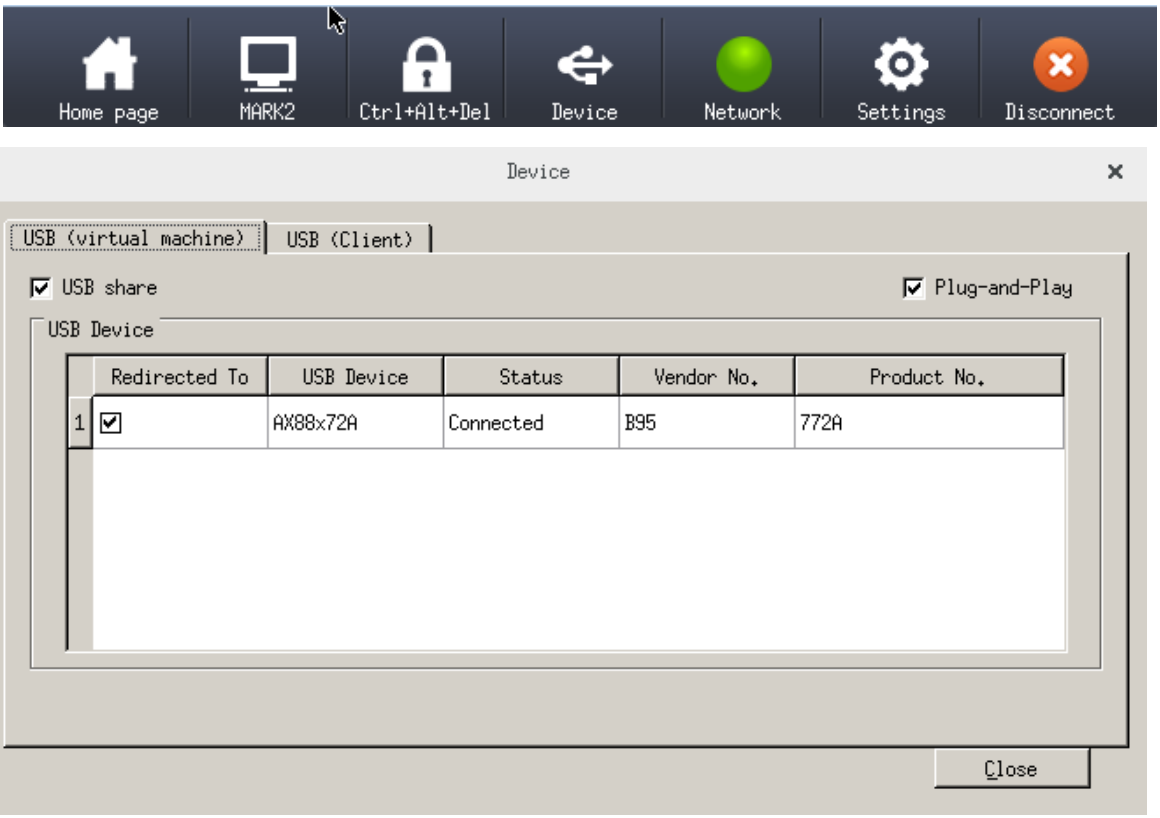
Click "Huawei" on the desktop to enter the "Huawei Connection Settings" interface, and enter the address of the server that accesses the Huawei Cloud Desktop Connection.



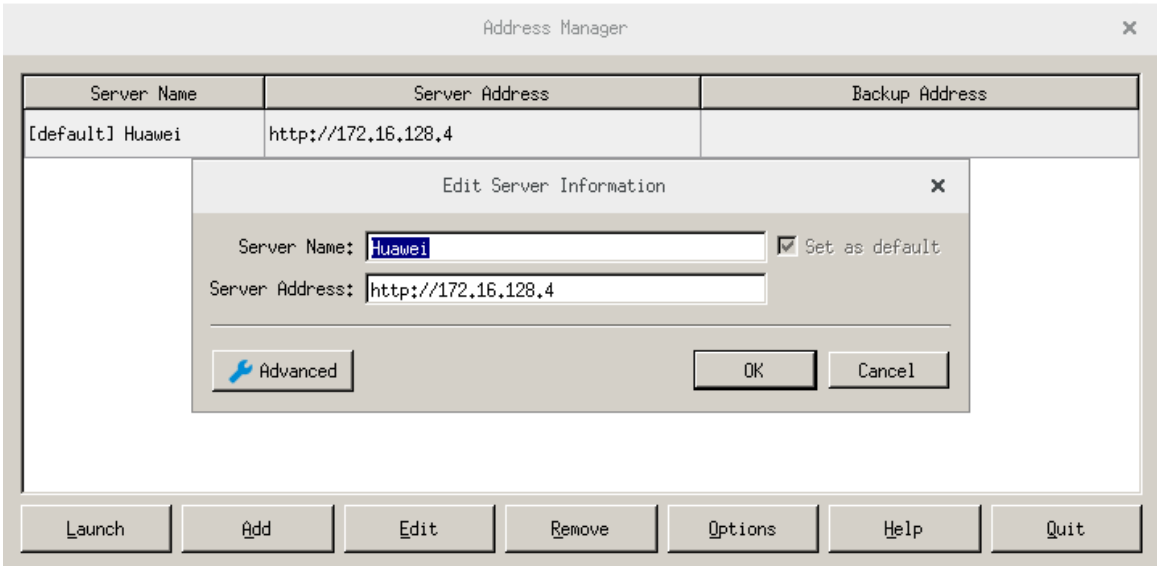
Select the new connection setting and click "Connect". The Huawei client login verification window will appear. As shown below:



After logging in to the virtual desktop, move the cursor to the middle position above the computer desktop to view the client USB redirection connection and select the USB redirection device



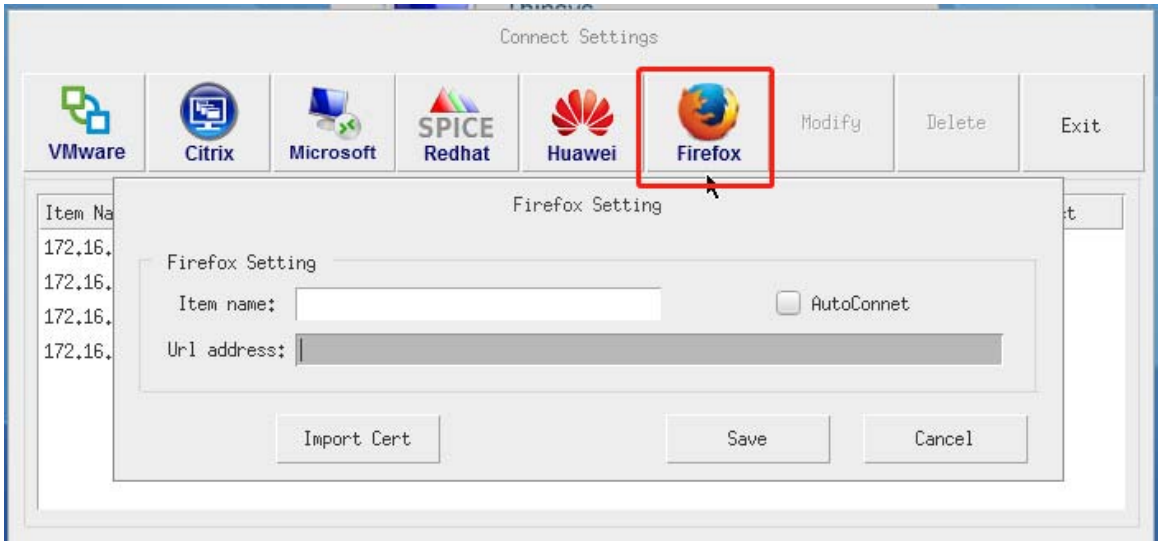
In the login window, check the configuration in "Address Management"



6： Firefox settings

Suitable for browser connection to access virtual desktop or BS-based applications.

Click "Firefox" to enter the "Browser Connection Settings" interface; enter the connection address to be logged in.

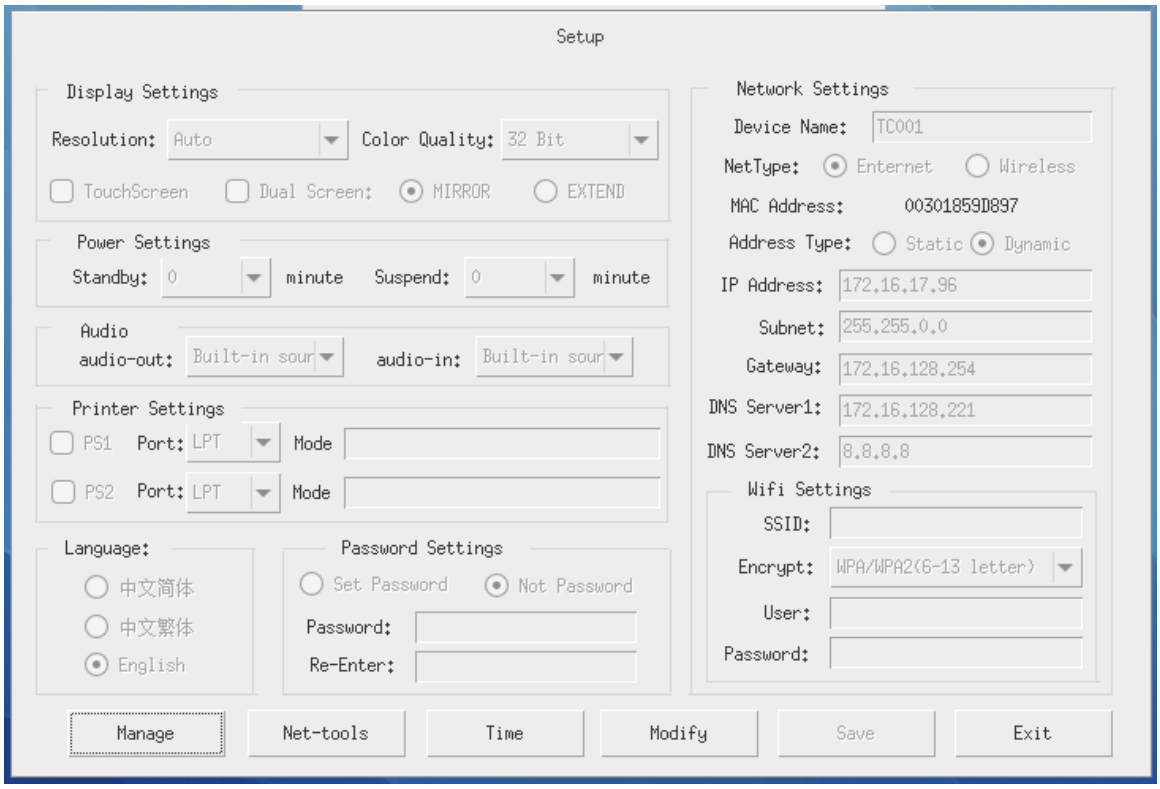


【Note: When using a browser to log in, you can use the shortcut key: Ctrl + F11 to exit the browser】

System settings

1： System settings

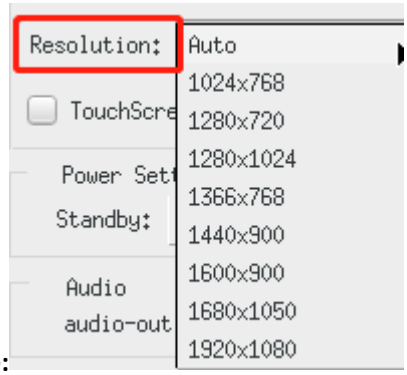
Provide system setting options for users to adjust the system configuration for the application environment. Click "System Settings" in "Virtual Desktop Client" to adjust application environment. As shown below:



System option description:

- **display setting:**

  - **Support distribution rate:**



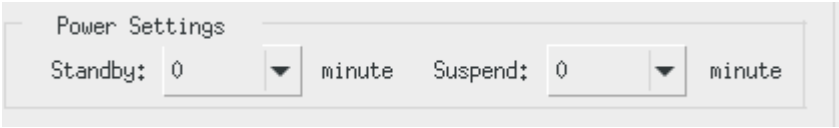
  - **Support color quality:**

- **Enable dual monitors:** Support screen copy and screen expansion, that is, dual screen display output;
- **Activate the touch screen:** Certain models support machines with touch screens.

- **Power settings:**

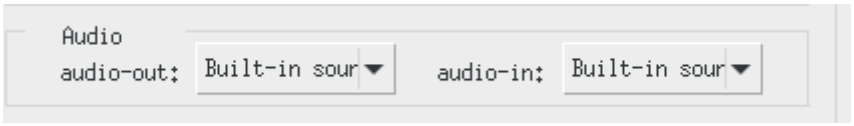
- **standby mode:** Setting the standby time allows the system to automatically enter the standby state when the user has not operated for N minutes, and the system and the monitor enter the power saving mode.（Generally defaults to 0）
- **Turn off the monitor:** Setting the time to turn off the monitor can realize that when the user has no operation for N minutes, the system will automatically stop the display output and the monitor will enter

the power saving mode.（Generally defaults to 0）



➢ **Sound management:**

- **Sound output:** Support built-in sound card output and HDMI output（For example when using an external HDMI TV）
- **Voice input:** Only "built-in sound card" is supported.



➢ **Printer settings:**

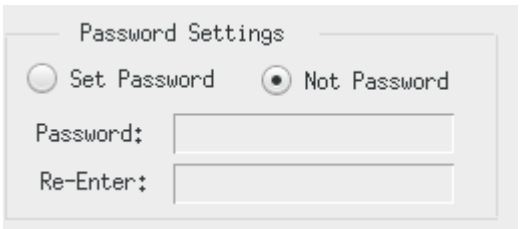
Thin clients can connect to printers, Supported ports are: "USB", "LPT (Parallel)", "COM (Serial Port)" printers; used for thin clients to map local printers to servers; In addition, support for setting thin clients to print sharing with print sharing capabilities A server that allows multiple users to share the printer.【Note: The printer driver needs to be installed on the server. The printer on the server cannot be modified by default.】

➢ **language settings:**

The system supports "Simplified Chinese", "Traditional Chinese", and "English" languages.

➢ **password setting:**

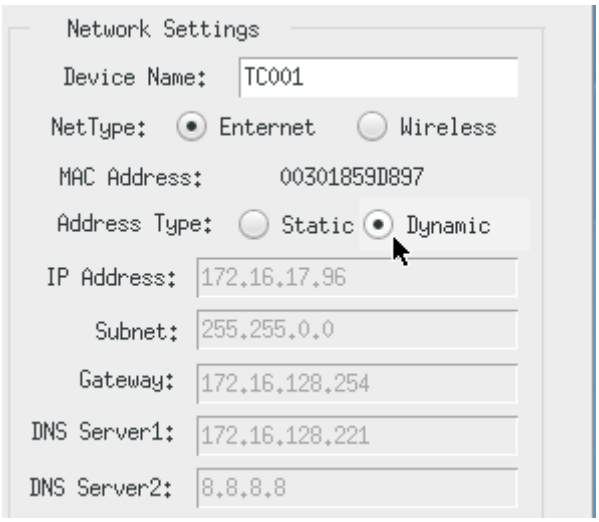
This password setting option effectively prevents users from modifying system settings and connection settings at will. The default setting is "No password required." When a configuration password appears but you forget it, you can use a universal password: Unlockme



➢ **Network settings:**

- **Device name:** Is the thin client device name, used to identify the device ID used by the user; Printer mapping or USB flash disk redirection must have a separate device name for each thin client; remote to the thin client on the unified management platform must have a separate device name for each thin client.
- **Net Type:** Support "Enternet" and "wireless " similar. "Wireless network" is limited by the wireless network card driver, currently only supports some Intel and Realtek models.
- **MAC address:** The thin client must have a separate physical address.
- **Address Type：** Support "static IP address" and "dynamic IP address" assignment.

【Users can set a static IP address or automatically assign an IP address for the thin client according to the application environment】



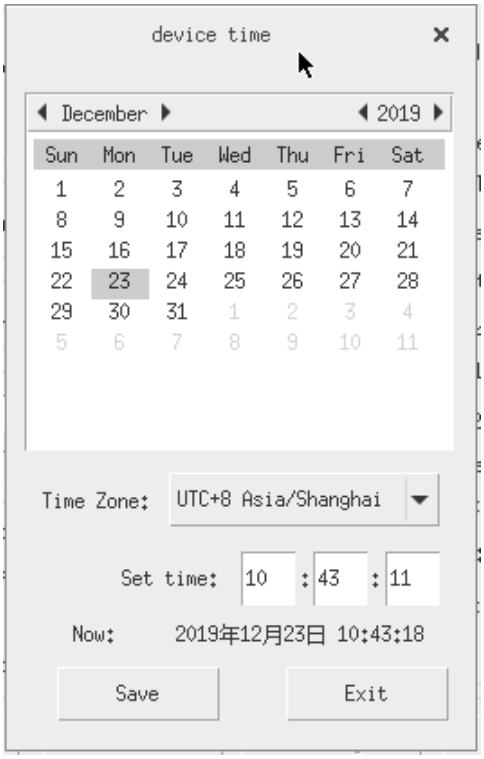
➢ **wireless setting:**

- Select the wireless setting, you need to enter the SSID and password of the wireless network to be connected, and you can choose the encryption method.
- **Encryption mode support:**WEP64、WEP128、WPA/WAP2。

【Note: Must activate or enable "Broadcast SSID", otherwise you cannot connect to the wireless network】

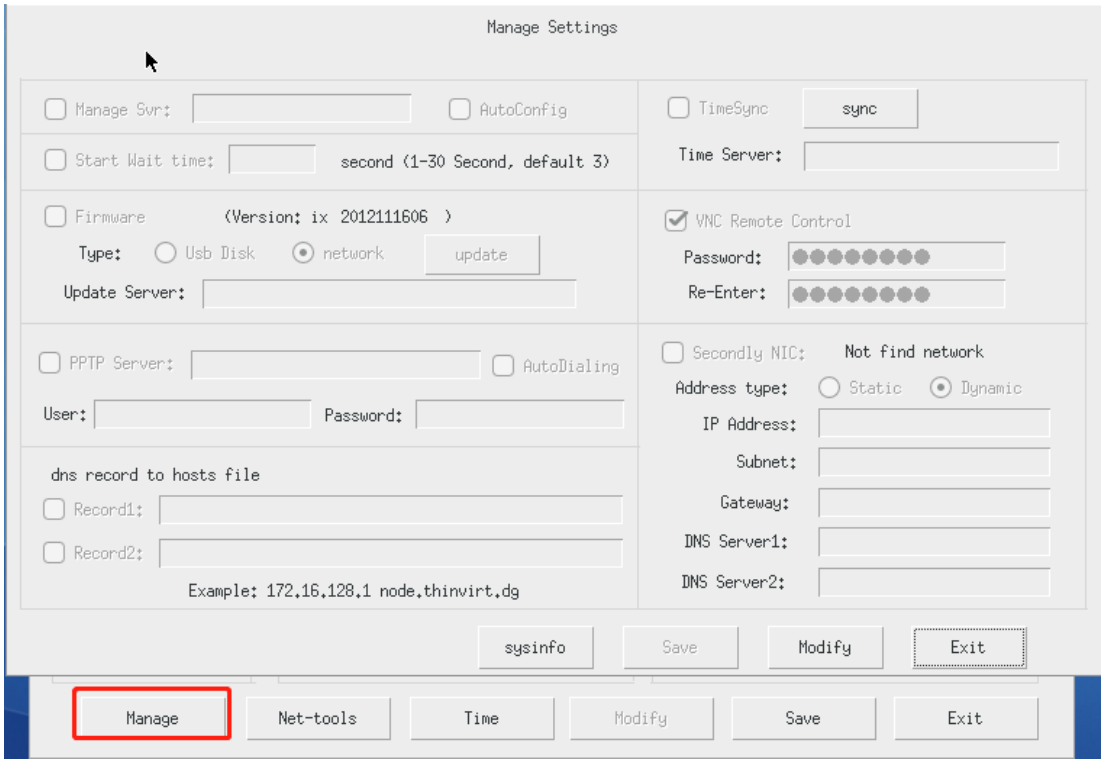
2：Device Time

Click "Device Time" to display the system time interface to modify the time. After the modification is completed, click "Save".



3：Management settings

Click "Management Settings" in the "System Settings" interface will display the following figure:



Function option description:

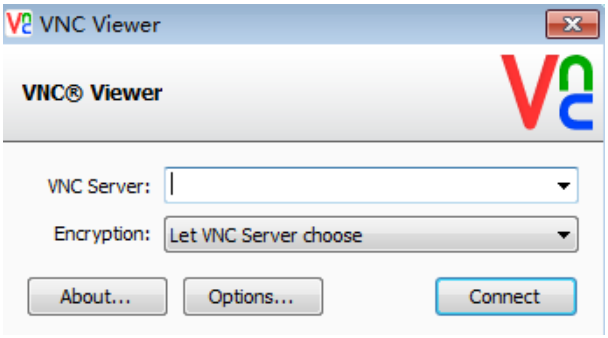
- **Start wait time :** Wait time for running login after thin client startup.

Apply to be delayed or using a VPN connection to log on to the virtual desktop server, you can modify the

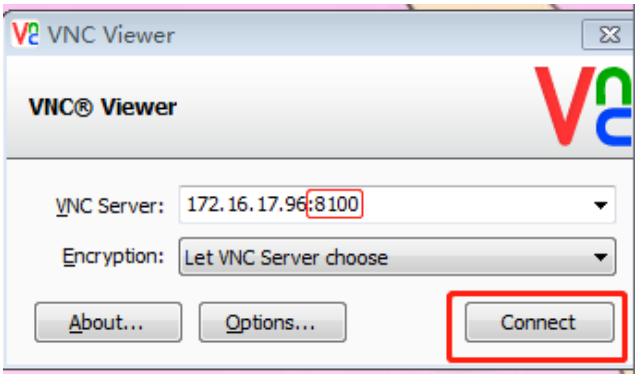
connection time of 15 seconds or more.

- **TimeSync:** The thin client automatically synchronizes with the time server after booting, Such as AD server or NTP server.
- **Firmware：** The thin client can be upgraded online through the network. It can support manual or automatic upgrades, and the unified management platform issues upgrades.
- **VNC remote control：** Remote control of thin clients through VNC viewer tool or unified management platform; After changing the VNC password, you need to restart the device to take effect. X86 terminal default password is:12345678; ARM terminal default password is:888888; Default communication port:8100.

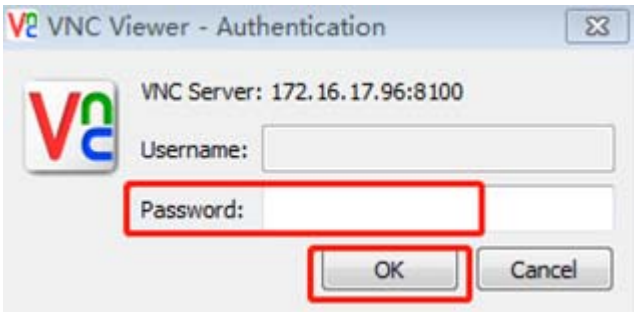
Control via VNC client software: Need to download VNC client software first, Double-click to run VNC client software; The following window appears.

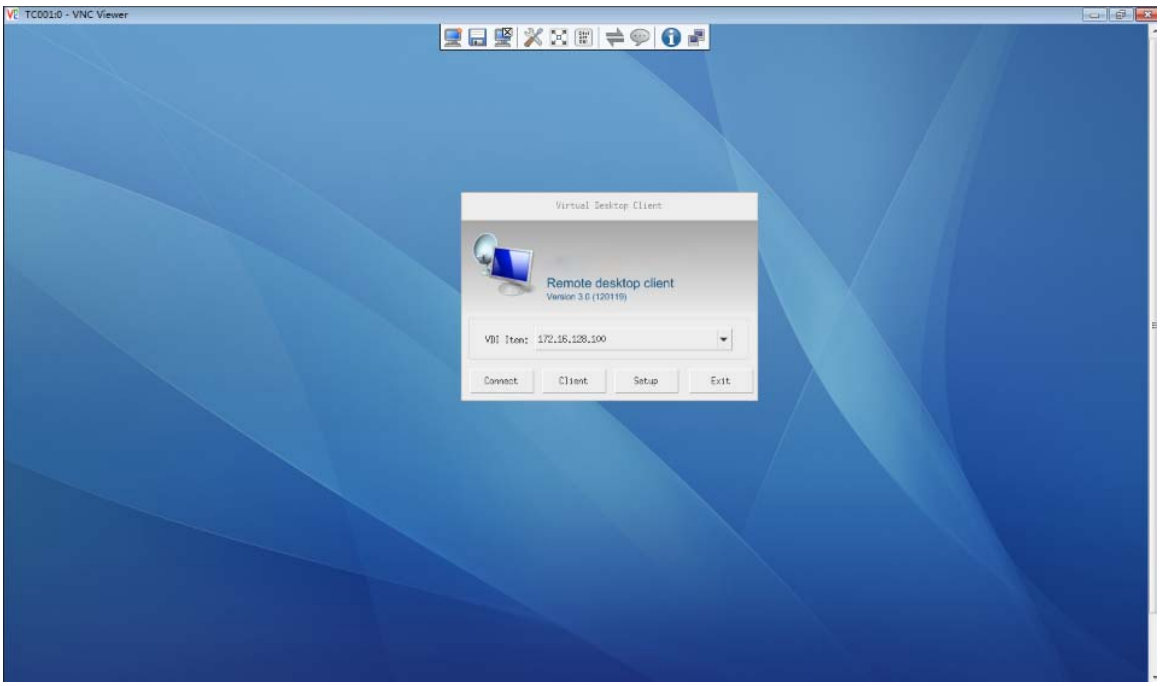


Enter the IP address of the thin client. You can view it in "Local IP Address" in the "System Settings" interface; Enter the IP address and add the port number after the address（The default port number is 8100）; After setting, click “connect”. As shown below:



Click "connect" to pop up another window and click "continue". After login password appears, you can access the thin client after entering the password.

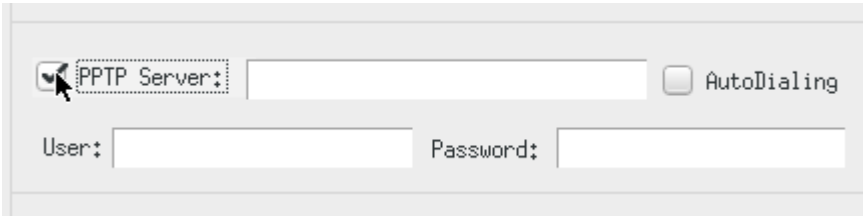




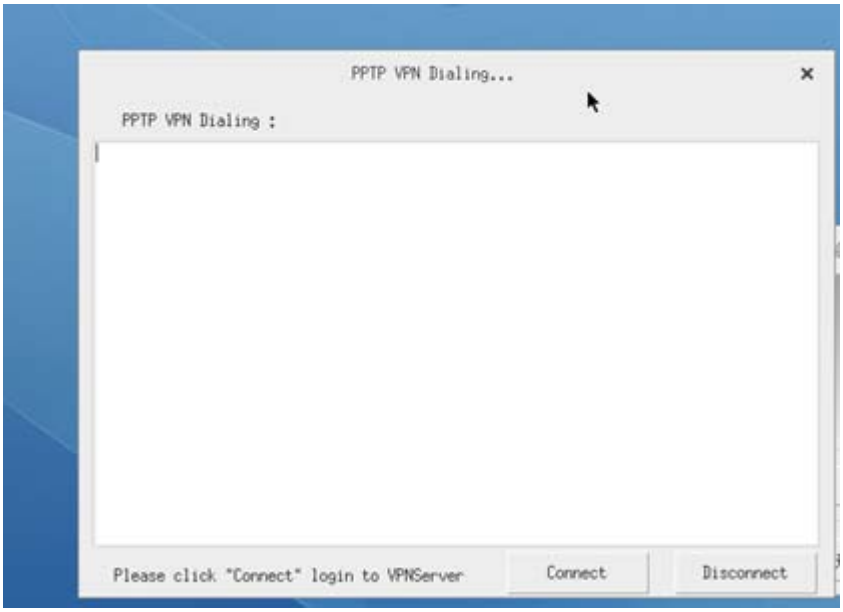
- **PPTP Server：**

Currently, only PPTP VPN is used to log in to the intranet.（That is, the access method of logging in to the LAN through the Internet through a VPN.）

Click Modify in the "Management Settings" interface, select "PPTP Server Address", and enter the server address, account, and password in the corresponding boxes; Check the "Auto Dial" setting is complete, and then click "Save"; As shown below:



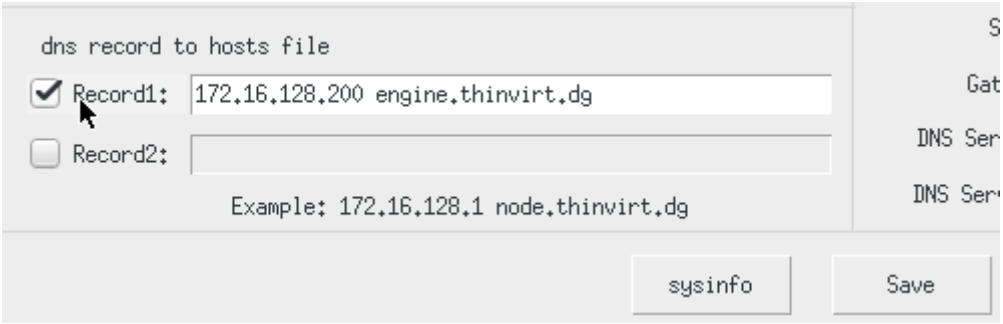
After selecting "Auto dial", the thin client will automatically run the VPN connection when it is turned on; Or press Ctrl + Alt + A to invoke VPN connection; As shown below:



- **Dns record to hosts file：**

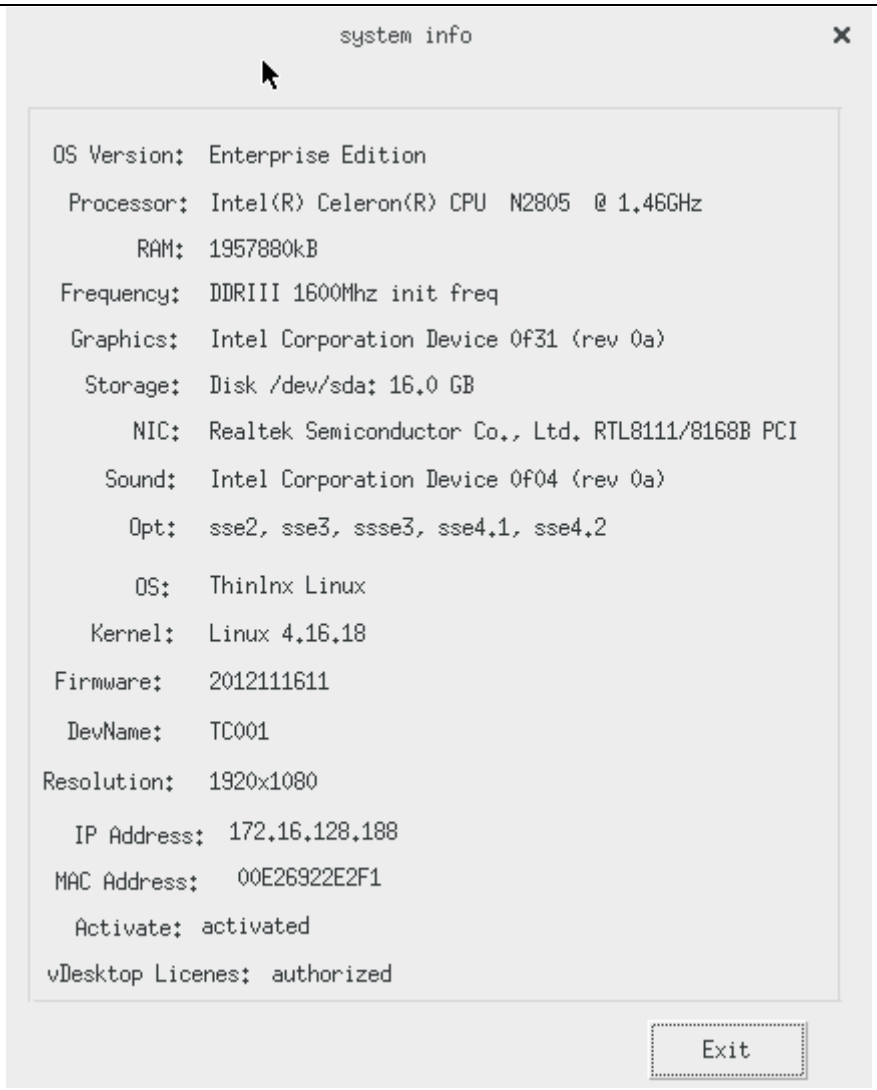
  It is suitable for use without a DNS server to interpret the host name.

【Example: Host domain name:engine.thinvirt.dg、IP address:172.16.128.200；Click "Modify" and select "Record 1". Enter in the corresponding box :172.16.128.200　engine.thinvirt.dg】You need to restart the client after the setting is completed to take effect



- **System info：**

  Display the current hardware parameters and system version, Mac address, IP address, resolution and other information. As shown below:



4：Network Ping Testing

The tool mainly tests the current network communication situation, Such as testing the network communication between the thin client and the server.