



NFSDesktop V5.0 User's Manual

Copyright ©2023 National Fundamental Software of China Co., Ltd. All rights reserved

Tel: 400-118-5115

Technical support email: os_support@nfschina.com

Official website: <http://www.nfschina.com>

-- wechat public account --



Catalog

About NFSDesktop	1
Special Notes	2
1.Basic operation	3
1.1. Login	3
1.2. Lock screen	4
1.3. Logout	4
1.4. Power down/restart	4
2. Desktop Environment Configuration	6
2.1. Desktop	6
2.2. Start Menu	7
2.3. Taskbar	10
3.System Settings	11
3.1. Network Settings	11
3.2. Bluetooth Settings	13
3.3. Background Settings	13
3.4. Font Settings	14
3.5. Theme Settings	15
3.6. Notification Settings	16
3.7. Privacy Settings	17
3.8. Lock screen	18
3.9. Sound Settings	20
3.10. Power Settings	21
3.11. Display Settings	21
3.12. Peripherals	23
3.13. User Settings	23
3.14 System default keyboard shortcuts	24
4. Apply/Drive management	27
4.1. Software/driver center	27
4.2. Download and install the app/driver	28
4.3. Update and uninstall apps/drivers	28
4.4. Support for installation package format	28
5. System management	29
5.1. File manager	29
5.2. Device Manager	33
5.3. Resource Monitor	34
5.4. Disk partitioning tools	36
6.System Upgrade	37
6.1. Update Upgrade	37

6.2. Update Settings	38
7.Backup and Restore	40
7.1. Backup and Recovery System	40
7.2. NFSDesktop Backup/Restore Tool	41
8.Major Software	43
8.1. nfs-cloud-sync	43
8.2. NFSBrowser	44
8.3. FeatherPad	45
8.4. SecurityCenter	46
8.6. Screenshot	48
8.8. NFS Archiver	52
9.Questions and Answers	53
10. Common commands	72
10.1. File and directory management	73
10.2. File & directory search	79
10.3. The file system management	81
10.4. System process management	86
10.5. Network management	90
10.6. Software management	93

About NFSDesktop

Based on the achievements of safe-reinforced core for major projects of core High base, NFSDesktop V5.0 is continuously optimized and developed. It is suitable for domestic cpus such as Haiguang, Mega Core, Feiteng, Loongson, Sunway and Kunpeng, and supports x86, ARM, MIPS, LoongArch, SW and other mainstream architectures with excellent performance, beautiful and easy to use. It can well support desktop computers, laptops, all-in-one computers and embedded devices, mainstream hardware platforms and common peripherals.

At present, NFSDesktop has been widely used in party and government organs, medical, telecommunications, education, finance and other fields, to provide customers with a stable, easy-to-use desktop platform to meet customers' office, scientific research, education, development, entertainment and other application needs.

Special Notes

Examples of commands, operation steps, etc. in this manual are for reference only and may vary slightly on different CPU platforms or due to version upgrades of operating systems and components; The contents of this manual are as correct and accurate as possible. Please refer to the actual operation or output information of NFSDesktop

1. Basic operation

1.1. Login

Boot your computer and go to the grub page, which defaults to the Font-Side desktop operating system, as shown in Figure 1.1:

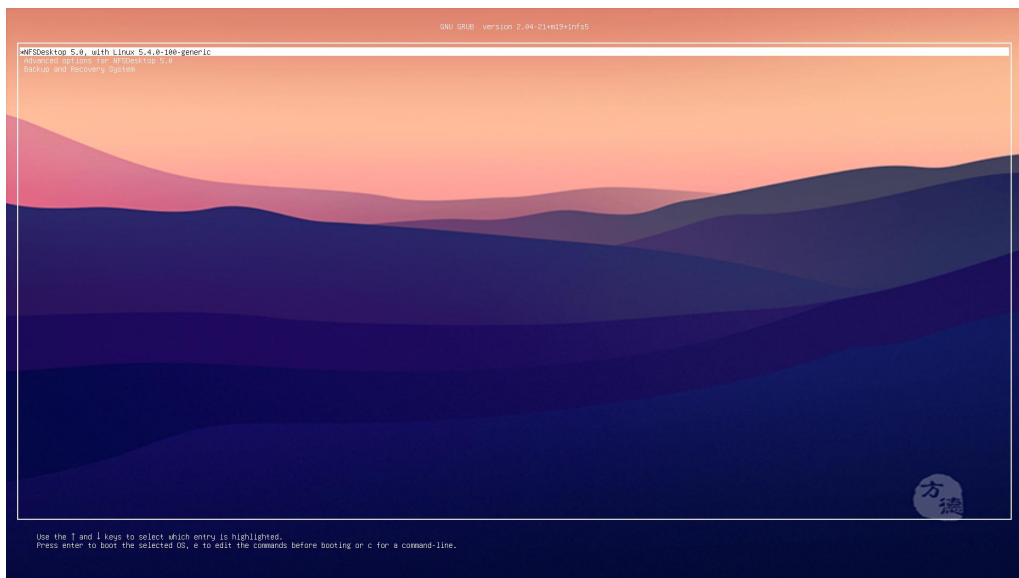



Figure 1.1 grub page

Users need to verify their account and password to enter the system. When entering the system for the first time, they need to enter the account and password created when the system is installed to authenticate in the login interface. If the authentication passes, users can enter the system, as shown in Figure 1.2:




Figure 1.2 Login interface

1.2. Lock screen

Lock screen to protect user data, click on the start menu, select "Lock screen".  After the lock screen, password verification is required to enter the system. The lock screen related Settings can be configured in System Settings > Lock screen.

1.3. Logout

The logout function is to clear the information of the currently logged-in user, that is, to log out the currently logged-in account. Click on the Start menu and select "Logout".  You can log in with another user account after you log out of your computer.

1.4. Power down/restart

The shutdown/restart function is to turn off/off the computer again, it will clear the current logged-in user information and close the

application, click in the start menu, select "Shutdown"/" Restart ".



Please make sure you have saved important information before closing/restarting.

2. Desktop Environment Configuration

2.1. Desktop

After entering the system, the first display is the system main screen, as shown in Figure 2.1. You can open applications/files on the desktop and perform related operations. You can also create new files/folders, change the sorting method, open the terminal, set the background and display, etc.

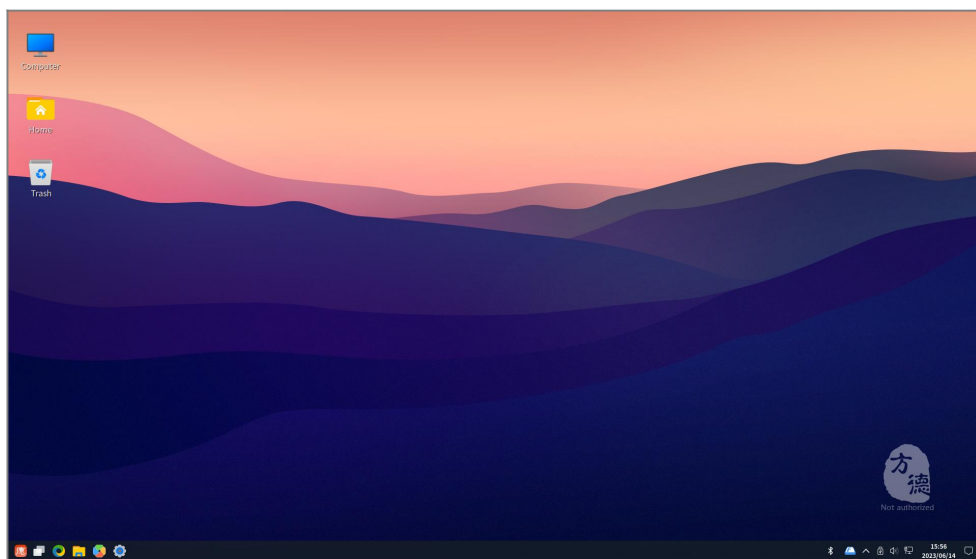


Figure 2.1 Main screen

2.1.1. New File

- ✧ On the desktop, right-click, select Folder from New, and type in the folder name.
- ✧ On the desktop, click the right mouse button, select "Text Document" in "New" and enter the name of the file.

2.1.2. Desktop icon size/sort

- ✧ Right mouse click > View > Select the icon size you need.
- ✧ Hold Ctrl+ mouse scroll to resize the icon.
- ✧ Check/uncheck Auto Arrange ICONS.

2.1.3. Background Settings

- ✧ Click on Background Settings, you will be redirected to System Settings > Background screen.
- ✧ Support custom add your favorite picture.

The detailed operation will be introduced in **3.3 System Settings - Background Settings**.

2.2. Start Menu

2.2.1. Apply Alignment

There are two ways to display applications in the Start menu: default sorting, all categories, and click to switch, as shown in Figure 2.2.



- ✧ Default sorting: Sort according to the letters of the application name, and display the 5 frequently used applications in the system.
- ✧ Most commonly used: All categories: Sort by category the app belongs to.

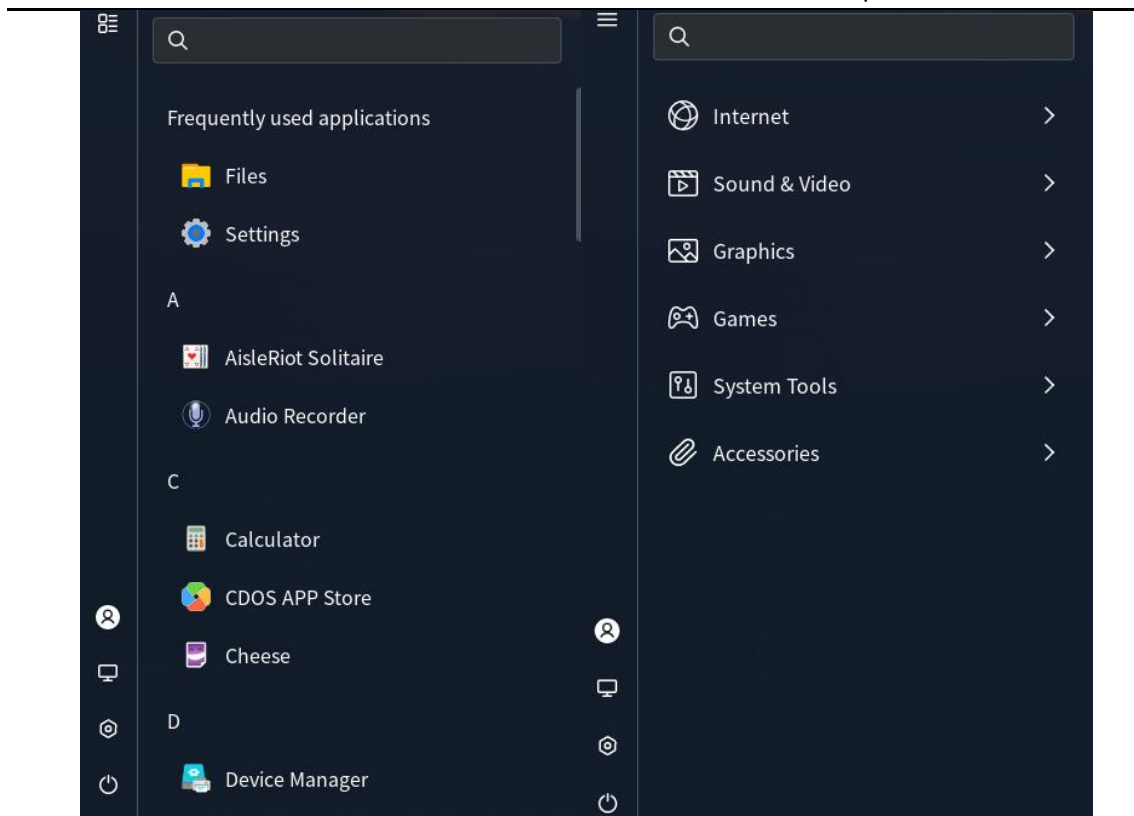


Figure 2.2 Ordering of apps

2.2.2. App Lookup

Find the app inside the Start menu:

- ✧ Navigate to find by category
- ✧ Scroll your mouse wheel inside the Start menu to find
- ✧ Type the app name/keyword/app initials into the search bar to find

2.2.3. App launch/uninstall

The application in the Start menu supports startup/shortcut startup, uninstall and other operations, as shown in Figure 2.3.

- ✧ Click the app name with the left mouse button to launch the app.
- ✧ Right click the name of the app and select "Fix to taskbar" to quickly access the app by clicking the fix app icon on the taskbar.
- ✧ Right click on the app name and select "Add to Desktop shortcut" to quickly enter the app by double-clicking the app icon on the desktop.
- ✧ Right click on the app name and select "Uninstall" to automatically uninstall the app.

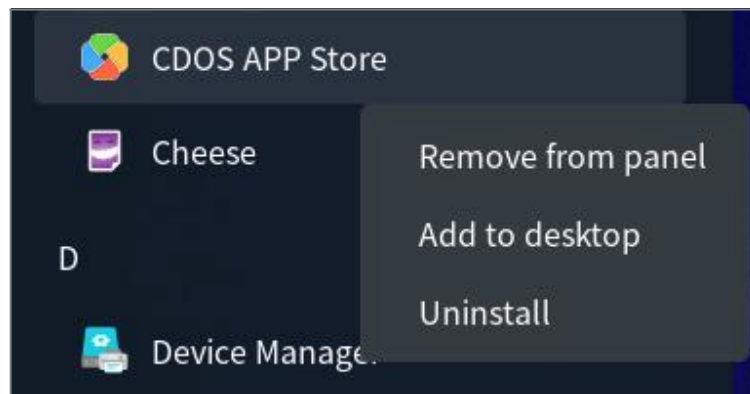





Figure 2.3 App startup/uninstall

2.2.4. Quick Entry

- ✧ Click  to view user information.
- ✧ Click to quickly open the "File Manager" screen. 

- ✧ Click Quick to open the "Settings" screen.



- ✧ Click Quick to change the system status, see  "1. Basic Operations" for details.

2.3. Taskbar

- ✧ Show the app shortcut by pinning in the taskbar in 2.2. 3, left click to quickly open the app, right click to select "Unpinning from Taskbar".

- ✧ Click to expand/close system notifications.



- ✧ Display sound, time, keyboard, tray, mobile device, network information, right mouse button can choose to enter the relevant Settings interface.
- ✧ You can display the desktop, open the system monitor, stack window, side by side window, select the task bar display position, choose to hide the task bar.

3 . System Settings

3.1. Network Settings

Enter the setting page, select "Network Settings" to modify the following connection mode Settings, as shown in Figure 3.1.

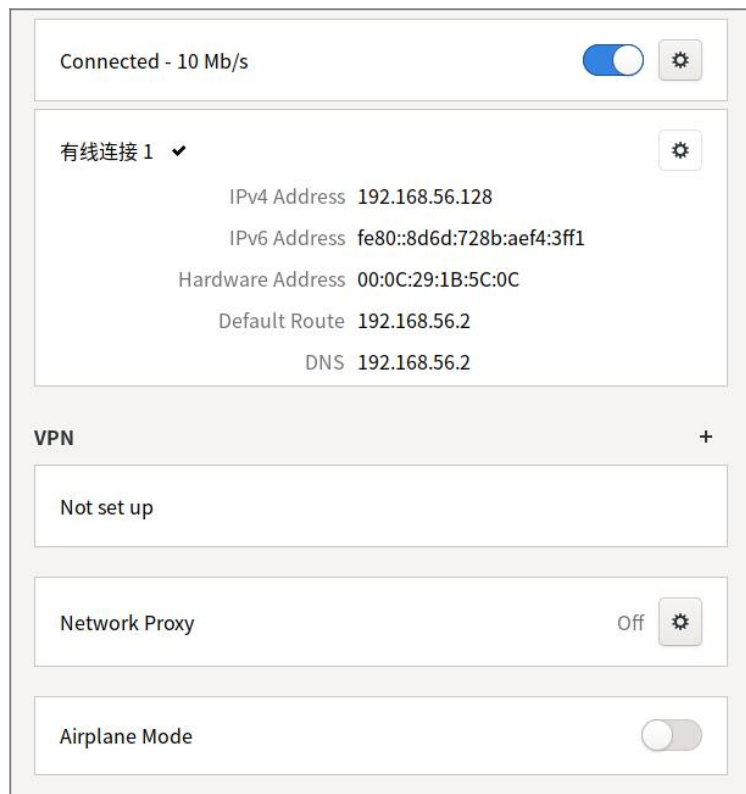


Figure 3.1 Network Settings

3.1.1. Wired connection Settings

When a network cable is used to connect the network, the system automatically selects a wired connection. Wired connection supports the following Settings:

- ✧ Turn on/off the wired connection.
- ✧ Click to access advanced Settings such as IPv4, IPv6, security, etc

- ✧ Click on New Configuration and click on the configuration name to

switch the current wired connection Settings.



- ✧ Turn airplane mode on/off.

3.1.2. Wireless connection Settings

When the system has a wireless network card driver, the system allows wireless connection. The following Settings are supported for wireless connection:

- ✧ Turn on/off the wireless connection to show the list of visible networks.
- ✧ Click on the WiFi you want to connect to, enter the password and match, and you can connect after matching successfully.

- ✧ Click to access IPv4, IPv6, security and other advanced Settings.



- ✧ Click to select functions such as connecting to hidden networks, turning on WIFI hotspots, etc.



3.1.3. VPN

Click, select Import VPN from local file, select and add to verify.



After selecting VPN support protocol, VPN can be added and verified.

3.1.4. Network Proxy

Click on/off network proxy to support automatic/manual

configuration of network proxy.



3.2. Bluetooth Settings

Bluetooth Settings are supported when the system has a Bluetooth driver

3.3. Background Settings

Open the desktop background main screen, as shown in Figure 3.4:

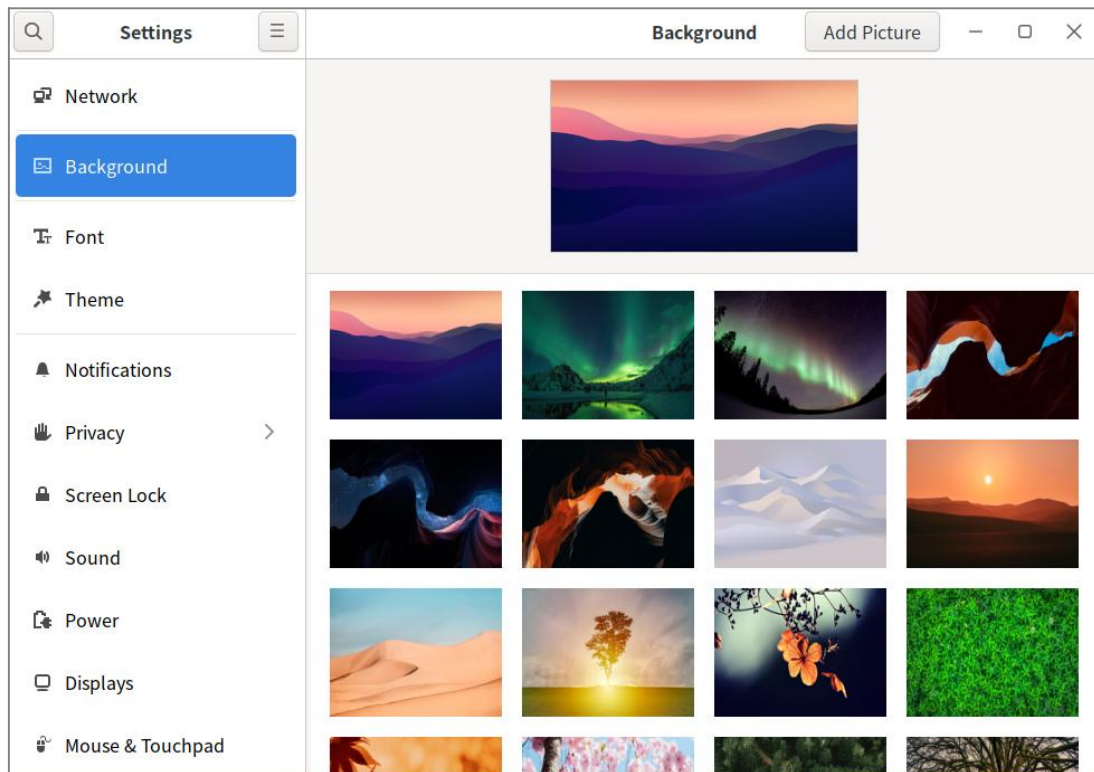


Figure 3.4 Background Settings

- ✧ The user can choose the default background image and set the appearance of the picture.
- ✧ Click to select the local picture, and the added background picture

Add Picture

can be deleted.

3.4. Font Settings

Users can set the font format according to different needs, set the default font of the system, monospace font, smooth and fine tune. To add a new font, the font file needs to be added through the Font Manager application, as shown in Figure 3.5:

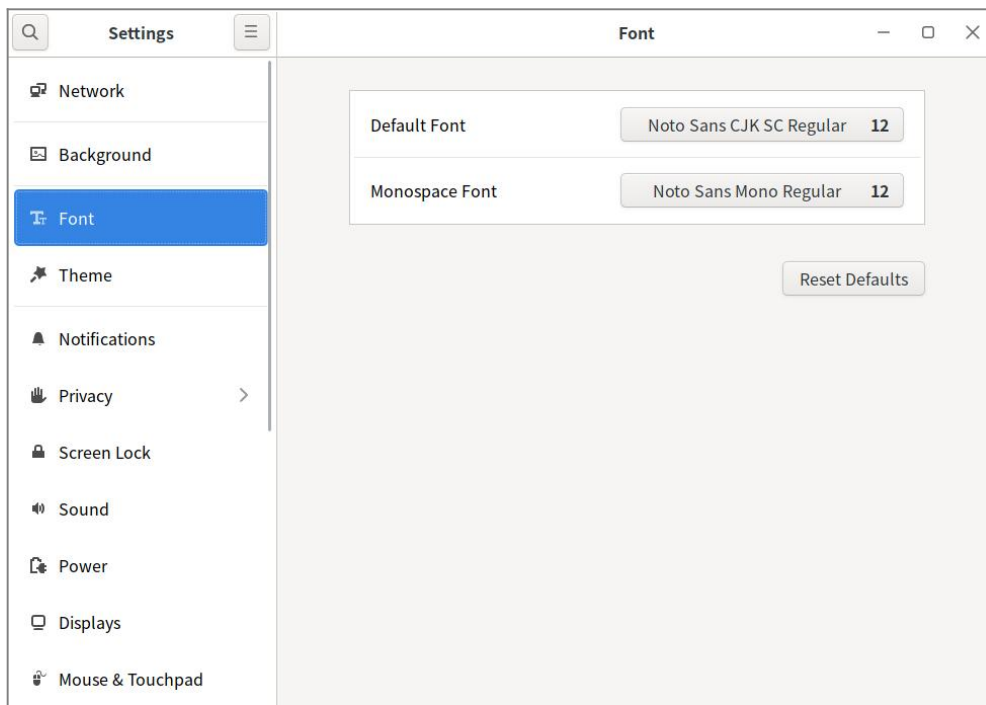


Figure 3.5 Font Settings

3.5. Theme Settings

✧ You can set the desktop theme, window Settings, etc., as shown in

Figure 3.6:

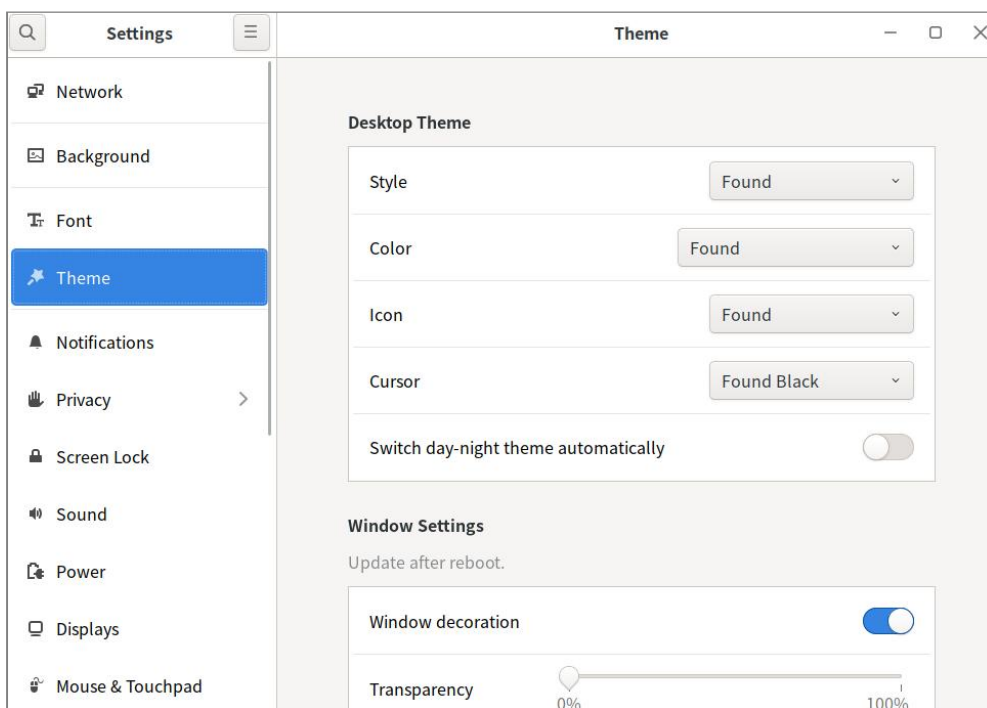



Figure 3.6 Theme Settings

- ❖ Style Theme: Click the drop-down menu to select, and the style theme can be changed to the current selected theme.
- ❖ Color theme: Click the drop-down menu to select, and the color theme can be changed to the current selected theme.
- ❖ Icon theme: Click the drop-down menu to select, and the icon theme can be changed to the current selected theme.
- ❖ Cursor theme: Click the drop-down menu to select, and the cursor theme can be changed to the current selected theme.
- ❖ Automatic theme switch following sunrise and sunset: The switch state is on, and the style theme is switched according to the sunrise and sunset time.
- ❖ Window Settings: Set to adjust the window manager's transparency, blur, rounded corners, border, shadow, etc.

3.6. Notification Settings

Support setting Do Not Disturb mode, click  to enable/disable, as shown in Figure 3.7.

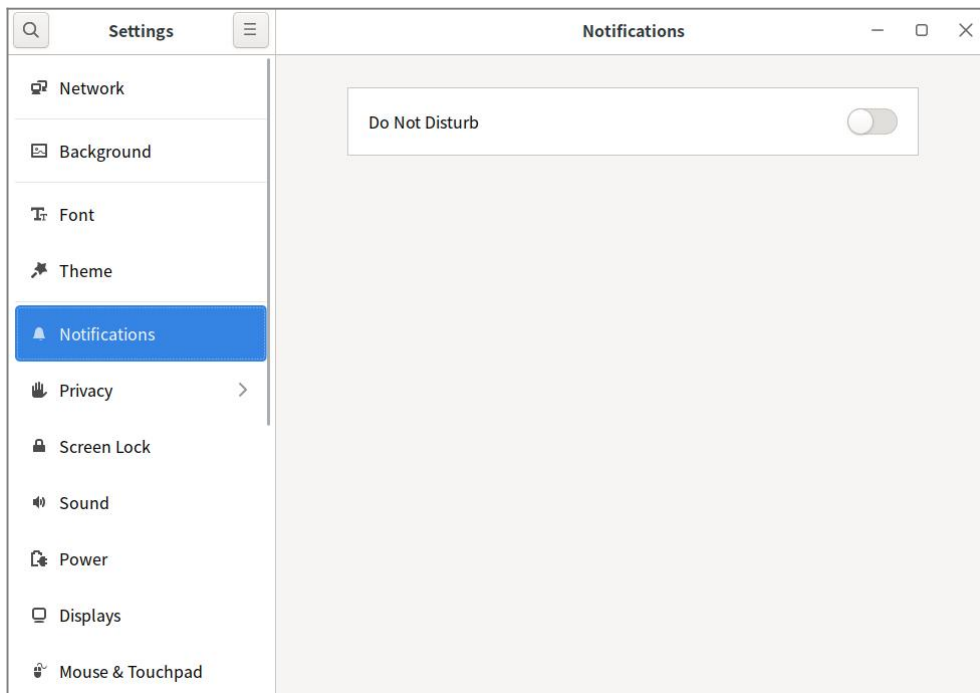


Figure 3.7 Notification Settings

Do not Disturb: Do not allow notification information for related reminders.

3.7. Privacy Settings

3.7.1. File history with Recycle Bin

The Settings for reading file history and automatically emptying temporary files in the Recycle bin are shown in Figure 3.8:

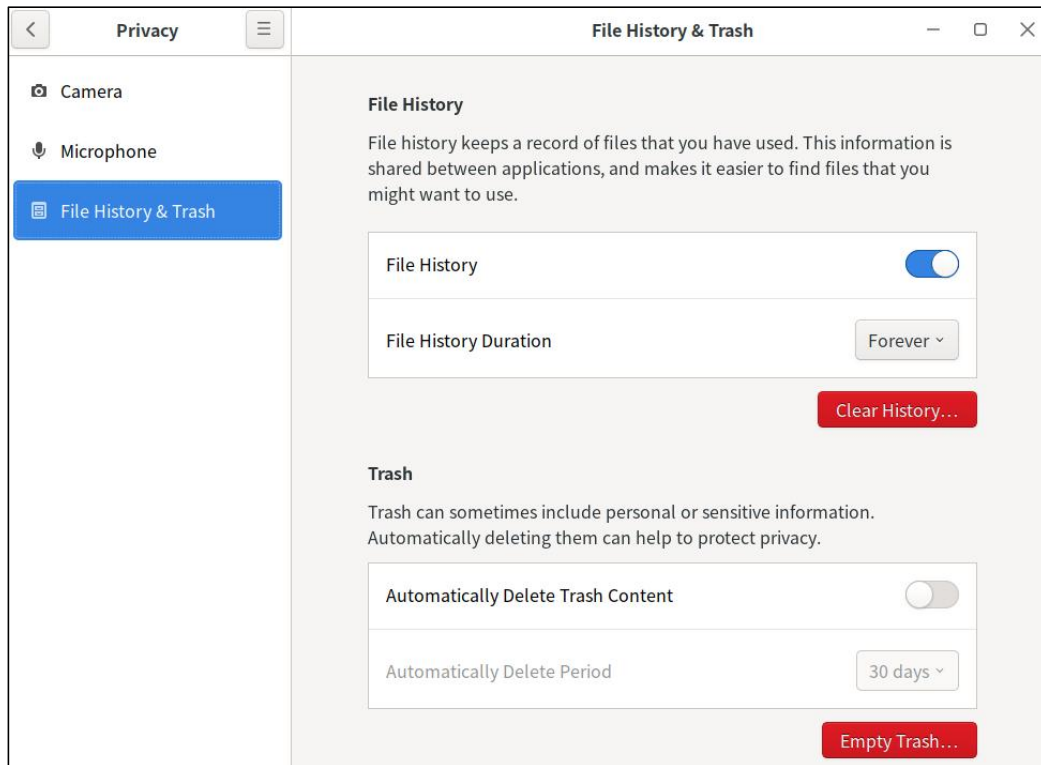


Figure 3.8 File history and Recycle bin Settings

- ✧ Support to open the file history, can quickly find the recently used related file information in the file manager for related file name search, and can set the "file history duration".
- ✧ Support to enable automatic emptying of the recycle bin, emptying time Settings.

3.8. Lock screen

The Settings for the lock screen related functions are shown in Figure 3.9:

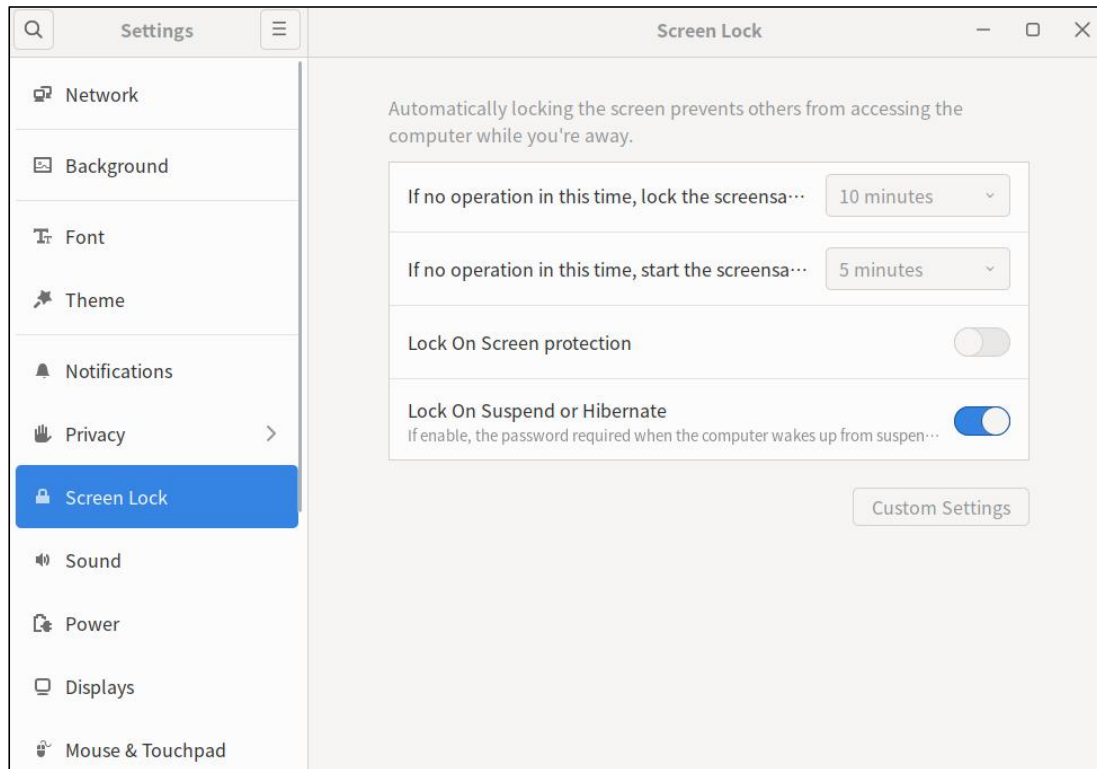


Figure 3.9 Lock screen Settings

- ✧ If there is no operation within this time, the lock screen will be started: after setting the idle time, the lock screen state will be entered.
- ✧ If there is no operation within this time, start the screen saver: after setting the idle time, enter the screen saver state.
- ✧ Lock screen when activating screen saver: Whether to enter the lock screen state when switching back to desktop environment from screen saver state.
- ✧ Lock screen while sleeping: Whether to enter the lock screen state when switching back to desktop environment from sleep state.
- ✧ Custom Settings: Lock screen wallpapers and screensaver Settings.

3.9. Sound Settings

The setting of the input and output device sound, and the change operation of the system sound effect, as shown in the figure:

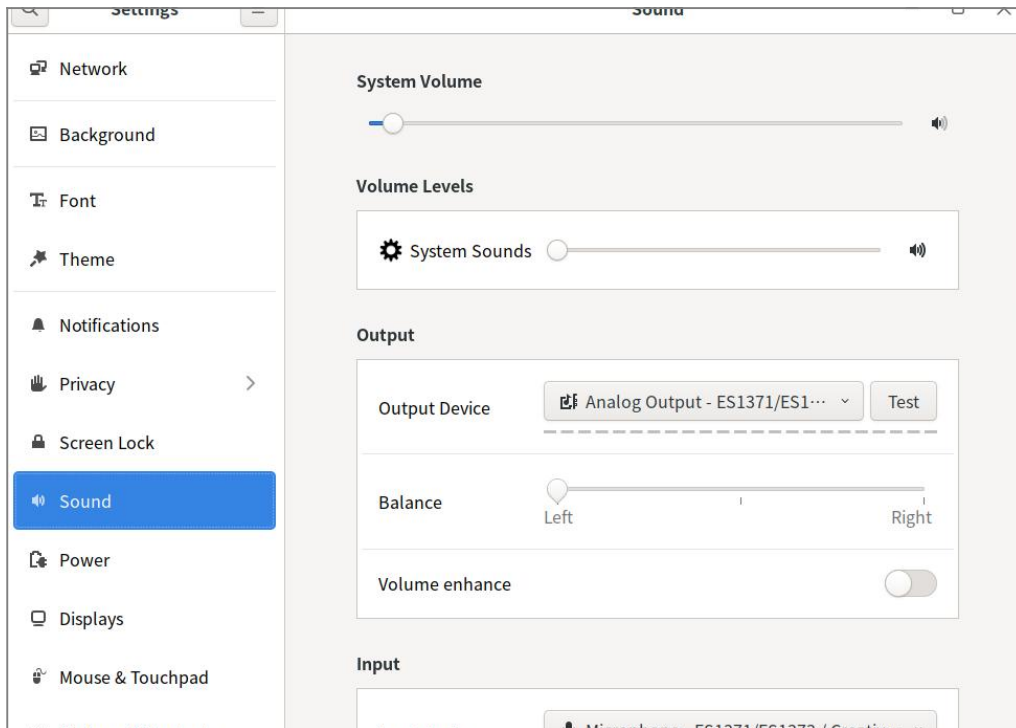


Figure 3.10 Sound Settings

- ✧ Support adjusting system volume, application volume, alarm sound, click Mute.
- ✧ Support input, output device selection and testing.
- ✧ Turn on volume enhancement, and the adjustable range of volume is changed from 0~100% to 0~120%.
- ✧ Turn on Noise suppression to suppress the noise of the input sound source.

3.10. Power Settings

Support the related Settings of the off screen, sleep, lock screen, and power button. Click the drop-down menu to select.

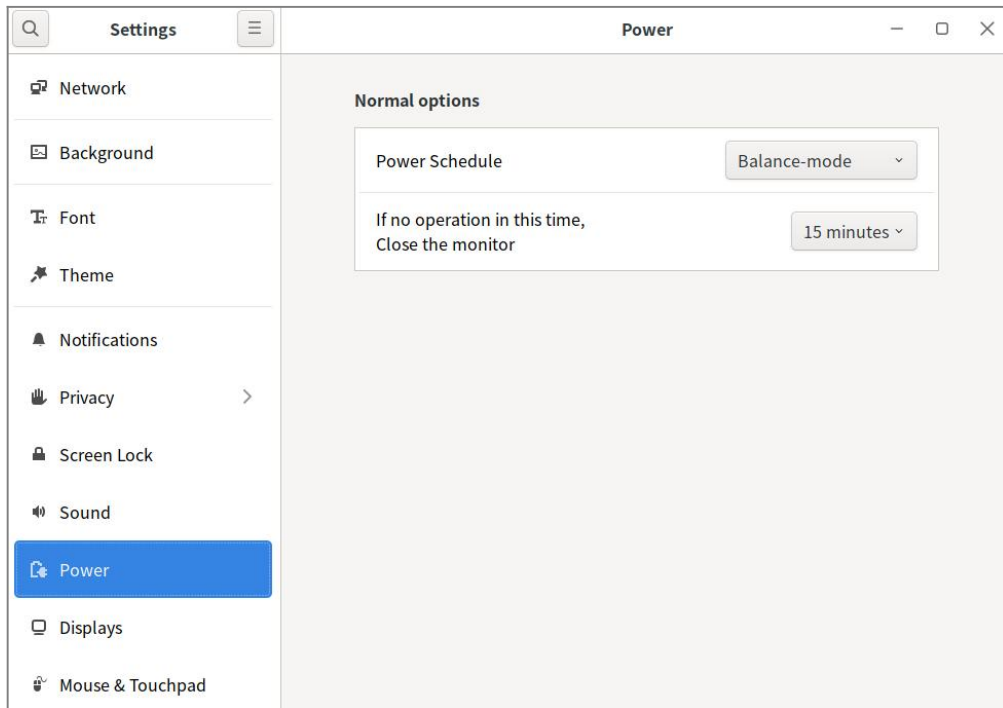


Figure 3.11 Power Settings

- ✧ In the Power plan area, select Balance Mode, High Performance mode, or Power Saving mode.
- ✧ When there is no operation within this time, the screen will be closed:
select the time to close the display, and it will take effect immediately after the selection.

3.11. Display Settings

You can set the resolution, orientation, zoom adjustment, and night

light of the display by yourself, as shown in Figure 3.12.

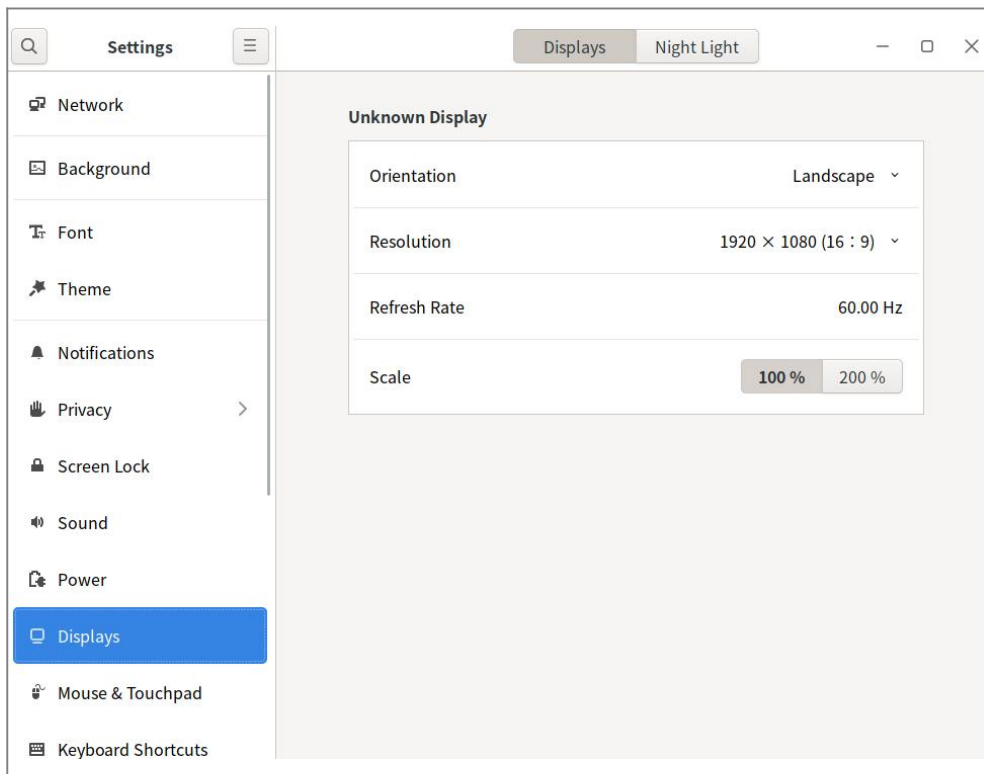


Figure 3.12 Display Settings

- ✧ Resolution Adjustment: Set different screen scale resolutions.
- ✧ Screen Orientation Adjustment: Screen display orientation adjustment.
- ✧ Zoom: Screen zoom is global zoom, suitable for 2K/4K high resolution screen users.
- ✧ Night light: Night mode setting entrance. Only after opening can the start time of night mode be set and the color temperature be adjusted.

3.12. Peripherals

- ✧ Mouse and touchpad Settings: includes left and right hand Settings, touchpad on/off, slide/scroll/touch speed Settings.
- ✧ Keyboard shortcut Settings: View all the shortcuts set within the system and add or remove custom shortcuts.
- ✧ Printer Settings: Support wired connection, LAN connection and print related Settings and management.
- ✧ Removable media: The setting to start the program when inserting different media into the system.

3.13. User Settings

Using the account management tool, you can easily manage users and account types in the system, including all the operations of creating, viewing, managing accounts, passwords, permissions, and so on, as shown in Figure 3.13.

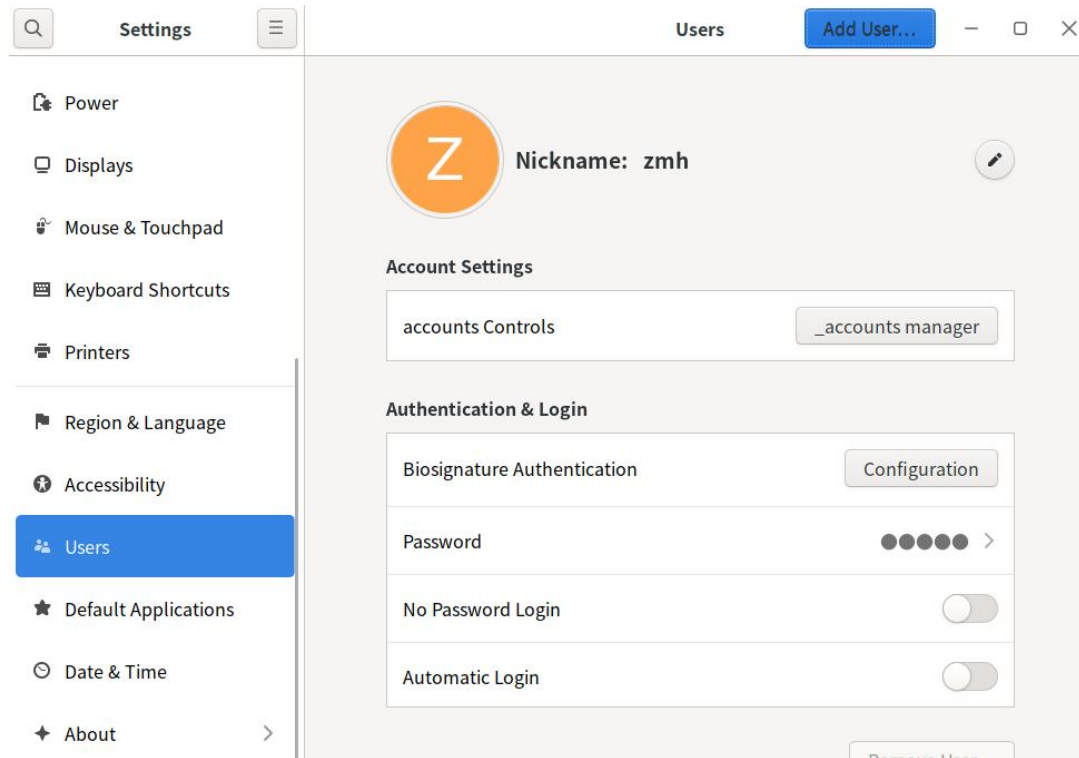


Figure 3.13 User Settings

- ❖ Supports changing user information, including avatar, username, password, and setting up automatic login (skip the boot page and go directly to the system).
- ❖ Support to create, remove users and set user permissions.

3.14 System default keyboard shortcuts

The main keyboard shortcuts supported by default are listed in the following table:

Focus and Toggle	
Features	Shortcuts
Switch to the right workspace	Ctrl+Alt+ Right

Switch to the left workspace	Ctrl+Alt+ Left
Switch in the same app	Super+`
Switch in reverse in the same app	Shift+Super+`
Switch in the app	Super+Tab
Toggle in reverse in the app	Shift+Super+Tab
Switch Windows directly	Alt+Super+Tab
Window & Move	
Close Windows	Alt+F4
Move the window to the upper display	Shift+Super+ on
Move the window to the lower display	Shift+Super+ down
Move the window to the right monitor	Shift+Super+ Right
Move the window to the left display	Shift+Super+ Left
Restore window size	Super+ down
Change window size	Alt+F8
Change the window maximization state	Alt+F10
Display desktop	Super+D
Maximize window	Super+ on
Minimize window	Super+N

Move window	Alt+F7
Systems and Tools	
Launch the screenshot tool	Print
Launch terminal	Ctrl+Alt+T
Launch the lock screen	Super+L
Logout	Ctrl+Alt+ Delete

4. Apply/ Drive management

The Fande desktop operating system is preinstalled with multiple applications/drivers to meet basic usage requirements. You can also install, update, and uninstall the software/driver center.

4.1. Software/driver center

Software Center is an operation-friendly and resource-rich software resource library provided by Funde desktop for users. You can find software resources close to your needs here, and you can also evaluate/score the software you have used here to provide reference for other users.

The software center contains the driver area, which supports the installation of drivers for printers, scanners, network cards, tablets and other types of devices from major manufacturers such as HP, Ricoh, Epson and so on. Support one-click installation, that is, after installation, no other configuration can take effect.

4.2. Download and install the app/driver

- ✧ After opening the Software Center, you can find the software you need through the contents of "Search", "Popular Recommendation", "Essential for Installation", "Essential for Office", "All Applications" and "Driver Area".
- ✧ Click "Install", it will be downloaded/installed automatically, and support batch operation.
- ✧ Click "Task Management" to view the application installation progress, or to start/pause/cancel operations.

4.3. Update and uninstall apps/drivers

- ✧ After opening the Software Center, go to "Personal Center" and follow "Installed" and "Updated" to display the app/driver content.
- ✧ In "Installed", the "uninstall" and "open" operations of the installed applications are supported.
- ✧ In the "Update" section, the "Update" and "ignore" operations of the application to be updated are supported.

4.4. Support for installation package format

The system supports deb format installation packages for installation. You can use the command line to get the system package resources and install.

5. System management

5.1. File manager

5.1.1. Basic operations

Click to open File Manager, as shown in Figure 5.1

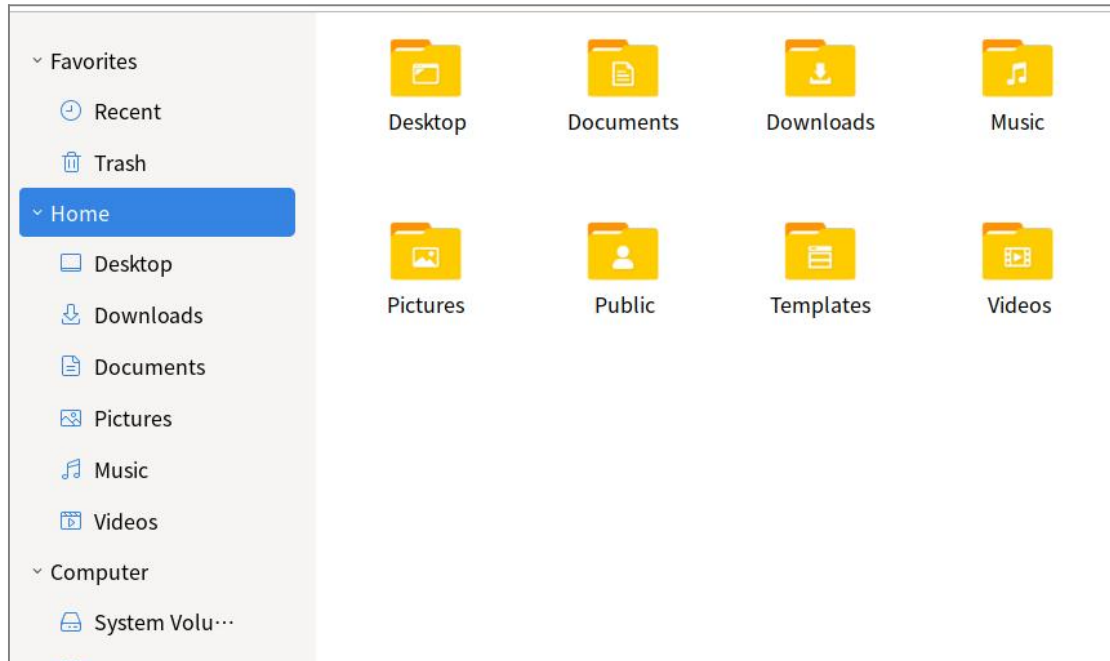


Figure 5.1 File Manager

The toolbar is located above the menu bar, and the ICONS on the toolbar correspond to commonly used functions, as shown in Figure 5.2:



Figure 5.2 File Manager - Toolbar

In 5.2, the buttons of the toolbar function as follows:

ICONS	Basic Description
<	Go to the last visited location
>	Go to the next visited location
Q	Show the search box

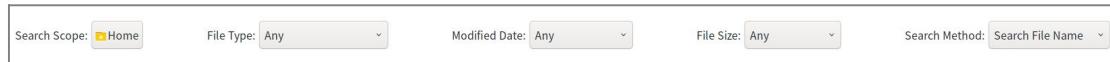
The address bar shows the currently open directory, as shown graphically in Figure 5.3:



Figure 5.3 File Manager - Address Bar

After clicking the input box, the current address can be displayed in the form of text. You can manually enter the location to enter the specified location in the file manager.

Click the search icon and turn the address bar into a search box. You can search the file by entering the keyword of the file name, or you can enter the search state by the shortcut key Ctrl + F.



Search Scope: Home File Type: Any Modified Date: Any File Size: Any Search Method: Search File Name

Figure 5.5 File Manager - Search

Advanced Search:

In the search state, you can select the search range, file type, file size, modification time, file name or file content for more accurate search.

5.1.2. File management

- ✧ Double-click on the icon to access a folder or file.
- ✧ Right click on the icon to cut/copy/delete/rename folders or files and view their properties.
- ✧ In the File manager, you can undo the previous action by pressing Ctrl + Z.
- ✧ Other operations on files and directories, such as moving and drag-and-drop, follow a Windows-like approach. When operating on system-level files, you must act as a super administrator.

5.1.3. Favorites

- ✧ Recent: Displays recently opened folders
- ✧ Recycle Bin: Shows deleted folders
- ✧ Users can also add folders or files to favorites to quickly navigate to the file directory.

5.1.4. File Settings

- ✧ View Settings: Adjust the default display and default sorting of files.
- ✧ Behavior Settings: Set the way to open files and folders.
- ✧ Mount: When the removable device is inserted into the computer device, it will be automatically attached to an existing directory.
- ✧ List column: The setting for displaying information in list view display mode.
- ✧ Preview: The conditions for displaying thumbnails of the file are set.

5.1.5. File type

The file types supported by desktop operating system are:
normal file, directory file, device file and symlink file.

- ✧ General files: include text files, data files, executable binary programs.
- ✧ Directory files: A directory is a special kind of file that forms the hierarchical tree structure of the file system.
- ✧ Device file: In this system, the device file is used to identify each device driver and communicate with hardware devices. It includes character device file and block device file.
- ✧ Symbolic links: The data stored in symbolic links is the path to other files in the file system. When a symlink file is called, the system automatically accesses the path stored in the file.

Refer to the following table for specific file types and open software:

File type	Software
.txt or other text files	FeatherPad
.pdf	Document Viewer
Audio format files	Music player
Video format files	Video player
.bmp/.png/.jpg/.gif/.xpm and other graphic image files	Image browser
Web formats such as.html/.htm/.php	Fand is compatible with browsers or other browsers

5.2. Device Manager

Device manager is a tool software for viewing and managing hardware devices. It can view the parameter status, export data information and so on for hardware devices running in the operating system. Open the Start menu and click to open the Device Manager, as shown in Figure 5.6:



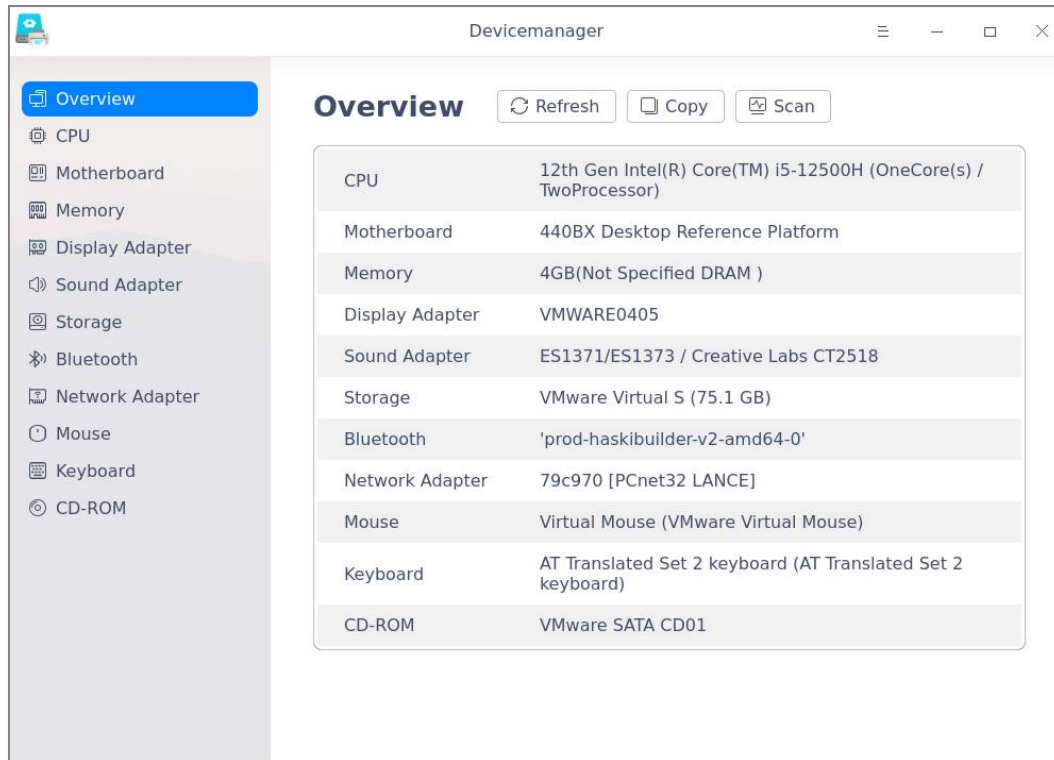


Figure 5.6 Device Manager

- ❖ Export: Click "Export" and select the save file address to generate the device information file.
- ❖ Copy to clipboard: Select the device information to be copied and click "Copy" to paste in the system.

5.3. Resource Monitor

A resource monitor is a management tool used to view the usage of system resources, services, processes and other modules. Open the Start menu and click to open the Resource Monitor, as shown:



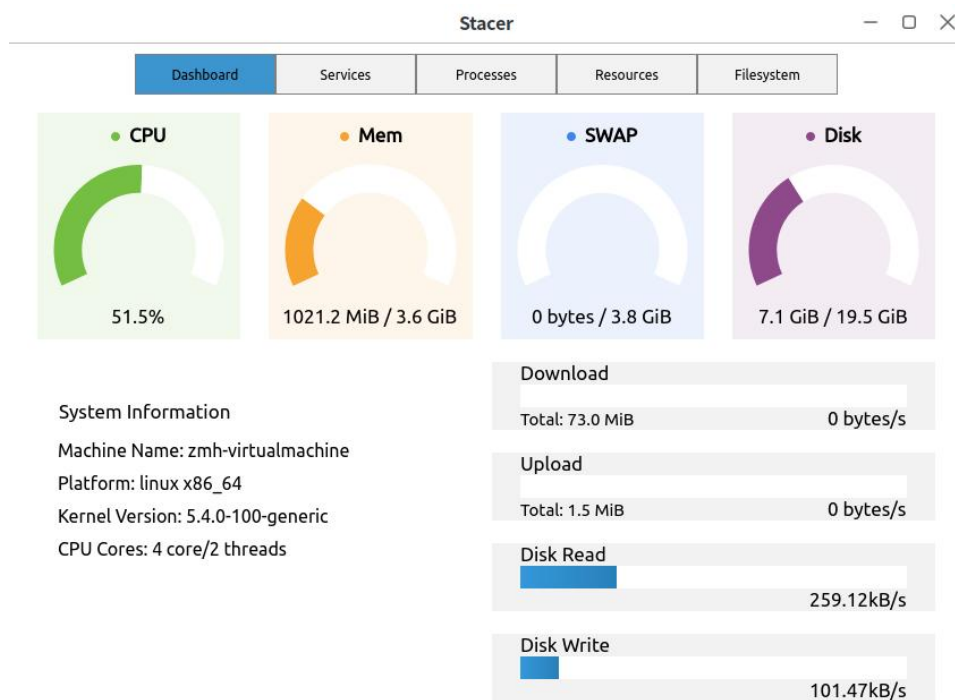



Figure 5.7 Resource Monitor

- ✧ Dashboard: Shows a general overview of the system, including CPU, memory, swap, disk operation and usage
- ✧ System service: Display system service information, operation and setup startup, boot from the boot situation.
- ✧ Process: Display the current process information of the system, operate and set the pause, resume, end and priority.
- ✧ Resources: Display the current CPU, memory and network usage of the system.

5.4. Disk partitioning tools

The disk partitioning tool can complete the partition of the disk identified by the system and other related operations. Click  to open the Disk Partition tool.

Note: Opening the disk partition tool requires administrator permission verification, which can be used to enter the application.

6. System Upgrade

6.1. Update Upgrade

Automatic upgrade:

- ✧ Go to the system upgrade screen and check for updates automatically.
 1. If there is no update in the system, it will prompt "Your system is already up to date".
 2. If the system has been updated, the "Download and install updates" button and details will be displayed
- ✧ Click the "Download and Install updates" button to perform the update operation.
- ✧ After the update is successful, an "Update Success" prompt will be given.

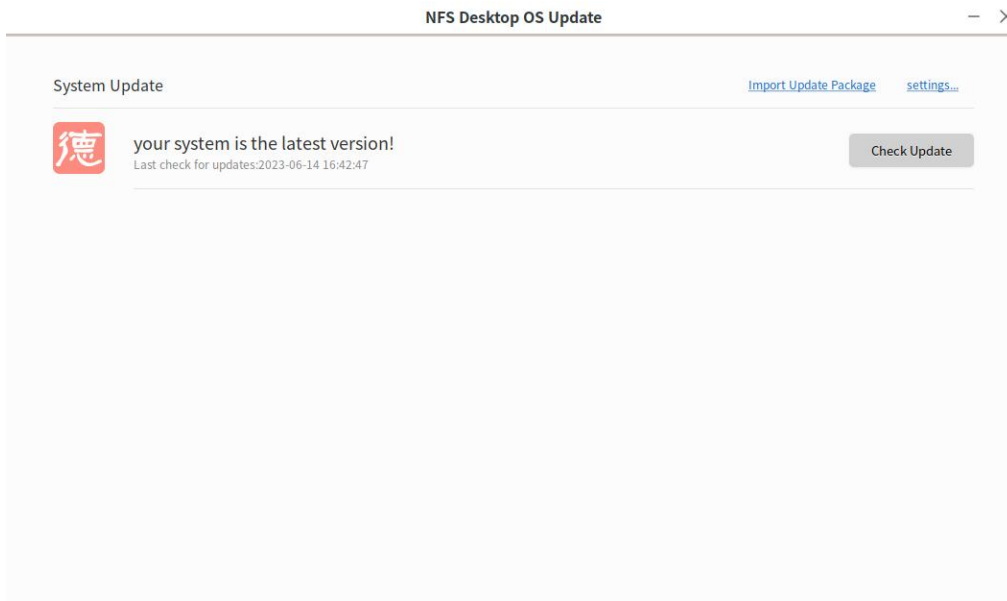


Figure 6.1 System update

System update and upgrade include system upgrade and component upgrade.

Import the update package to upgrade:

Support users to import update packages manually for upgrade operation.

- ✧ Click "Import Update package"
- ✧ After selecting the update package, the system performs a background upgrade

6.2. Update Settings

Set system updates and reminders.

- ✧ Click "Update Settings"
- ✧ Set how you want to update and download

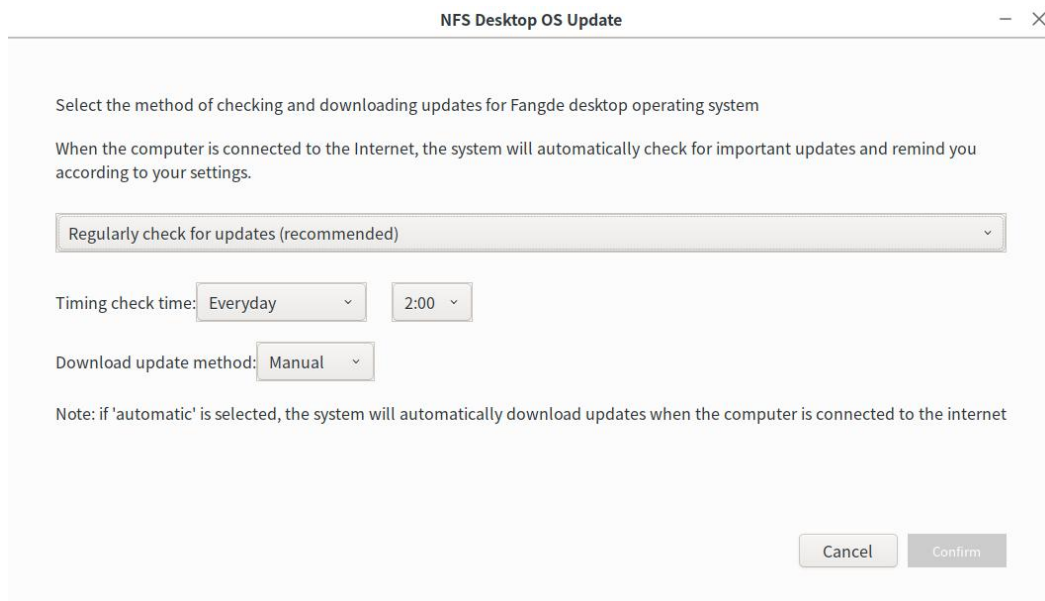


Figure 6.2 Update Settings

7. Backup and Restore

Backup restore is used to backup system files and data, or to backup again based on a backup; Support to restore the system to the state of a backup, or in the case of retaining some data for partial restore.

When the user performs automatic installation, the system will automatically create a backup recovery partition to backup the factory Settings.

7.1. Backup and Recovery System

When booting, in the selection interface, move through the $\uparrow \downarrow$ arrow key of the keyboard, and select NFSDesktop Backup/Restore Tool to enter the backup and restore subsystem, as shown in Figure 7.1:

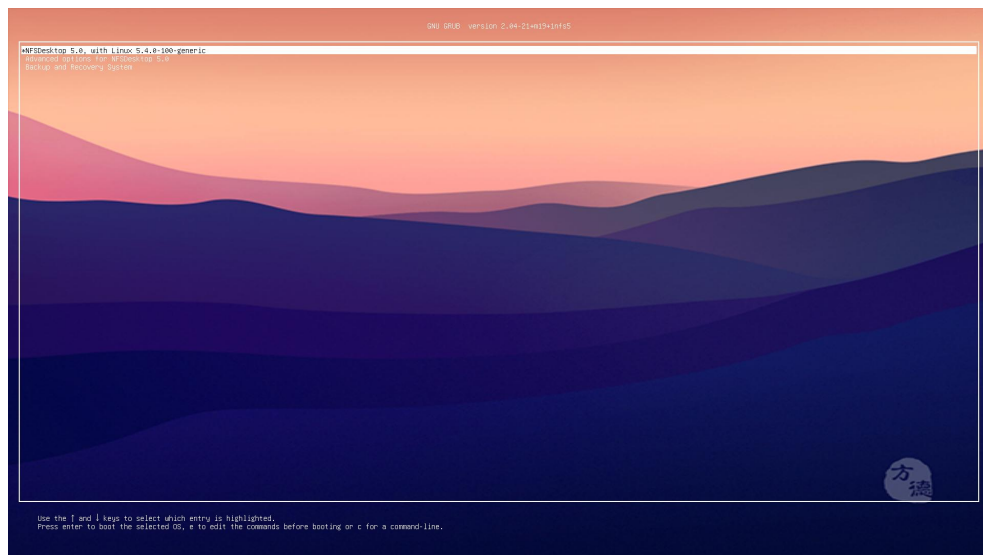


FIG. 7.1 grub interface to enter backup and recovery system

The backup and restore subsystem provides system full backup, system incremental backup, system one-tone restore, restore factory Settings, operation log management, backup file management functions. This part of the function is consistent with the function of the backup and restore application, and will not be described here. Please refer to the introduction of the function of the Backup and Restore application in 7.2.

7.2. NFSDesktop Backup/Restore Tool

Click to enter the NFSDesktop Backup/Restore Tool, you can manually backup the system or restore the system environment to a node,



as shown in Figure 7.2.

Backup:

- ✧ Select backup related functions
- ✧ Set backup mode and backup path

Backup mode: system full backup, system incremental backup

System full backup: full backup of the system disk

Incremental system backup: to continue the backup based on the existing backup

Note:

1) Full backup does not include directories such as home, tmp, media, backup_data, etc

2) Incremental system backup should be based on the full system backup node completed by the user

Restore:

- ✧ Select Restore related functions
- ✧ Set the restore mode

Restore mode: System restore, restore factory Settings

System one-key restore: Restore the system to a backup state

Restore factory Settings: Restore the system to factory Settings

Note:

Only factory backup files can be restored by system

8 . Major Software

8.1. nfs-cloud-sync

nfs-cloud-sync is a tool that synchronizes system configuration through a unified nfs-cloud-sync.

- ✧ In the network environment, the mobile phone number in mainland China is supported for registration and login.
- ✧ After logging in to the nfs-cloud-sync, you can choose to turn on or off the synchronization configuration.
- ✧ After opening synchronization, all kinds of system configuration will be automatically synchronized to the cloud, such as desktop background, theme, screensaver, font, network, mouse, taskbar, power supply, etc.
- ✧ Using the same system configuration on another computer, you can synchronize the above configuration to the device with one click by logging into this nfs-cloud-sync.

8.2. NFSBrowser

The main features of compatible browser are: friendly interface, simple operation; Superior performance, providing you with a fast Internet experience; Safe and reliable, effectively reduce the risk of accessing dangerous websites. As shown in Figure 8.2:

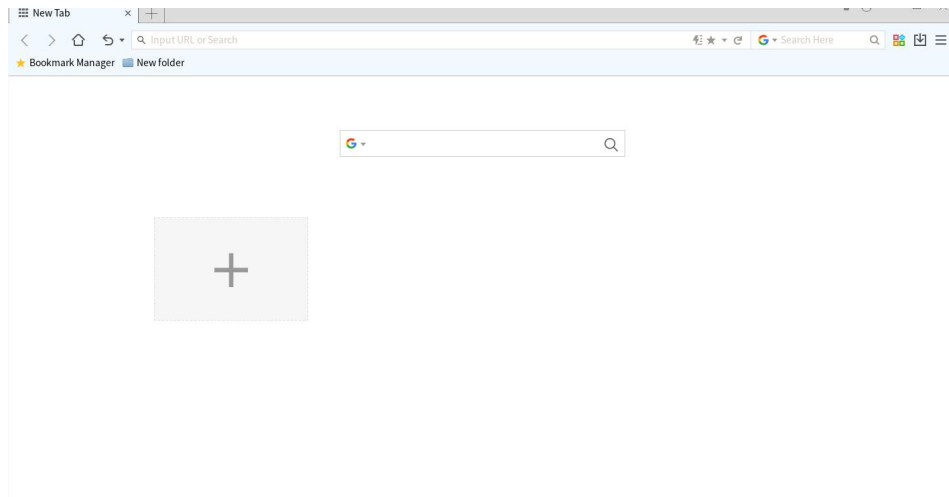


Figure 8.2 NFSBrowser

- ✧ Tap to open the app.
- ✧ Web compatibility, supports normal access to IE web pages.
- ✧ Plug-in compatible, provide ActiveX plug-in compatible scheme.
- ✧ Support for installing major browser extensions.

8.3. FeatherPad

A FeatherPad is a simple text editing tool. You can use it to write simple text documents, or use its advanced features to complete the writing and viewing of complex documents, as shown in the figure:

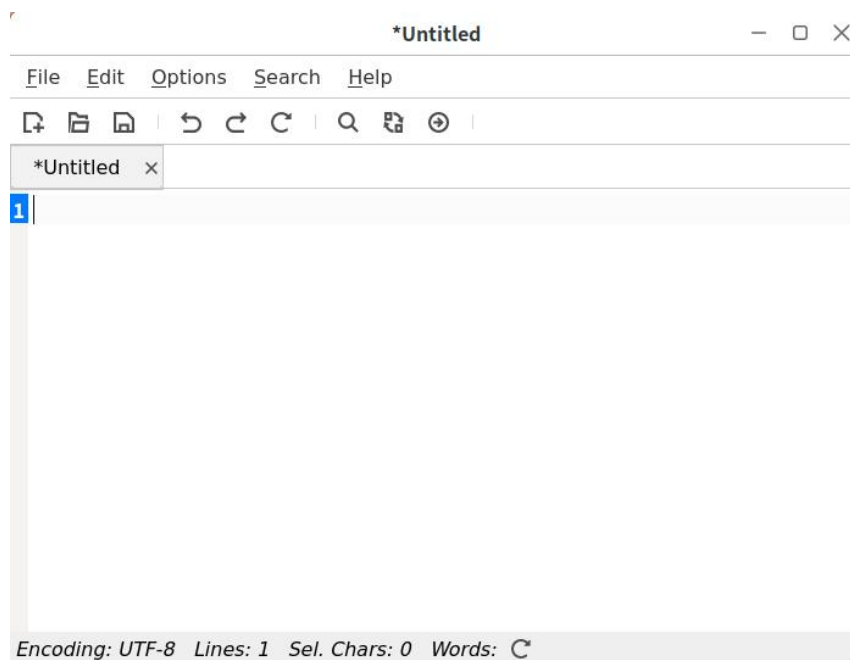


Figure 8.3 FeatherPad

- ✧ Tap to open the app.
- ✧ Edit text: You can input, move the cursor, switch case, delete, undo and other operations through the keyboard and mouse, and you can set the corresponding shortcut keys.
- ✧ View text: Click "Search" to support keyword search, replacement, highlighting, etc.
- ✧ Manage text: Click on "Options" to support line count display, encoding format changes, adding markers, etc.

8.4. SecurityCenter

Security Center is a feature set about system security management provided by desktop for you. The function set provides some management tools related to system security, such as system physical examination, system cleaning, firewall, boot optimization, system security, and security tools.

- ✧ Tap to open the app.
- ✧ System checkup: includes system spam detection, system security detection, system service detection, system audit and log detection. Click "System physical examination" to start the detection. If there is a problem item, the problem items that need to be repaired will be listed.
- ✧ System cleaning: Click full scan to check the garbage in the system, and the scanning results will be displayed. The system cleaning also supports periodic operation, which will be scanned and cleaned according to the rules of the periodic cleaning system set by you.
- ✧ Firewall: firewall level setting, network security, external site control and application traffic monitoring.

Firewall level Settings: firewall monitoring level Settings, allowing for custom Settings. Monitor and manage the system at different levels according to the selected Settings.

Network security: Enable network security configuration policy, support the opening of ARP firewall (gateway Mac binding detection).

External site control: Set the list of allowed/prohibited sites.

Application traffic monitoring: The current network page displays all the launched applications, showing the current downlink network speed, uplink network speed and control of each application. Click "Manage" to jump to the network control page.

- ✧ Startup optimization: Optimize application startup items, optimize service startup items, and click Enable/disable.
- ✧ System security: account password security (password expiration reminder), risk account, SSH service security related Settings, close the monitor, automatic lock screen time Settings.
- ✧ Security tools: application blacklist, data shredding, behavior audit, resource monitoring, equipment control.

App Blacklist: Apps that enter the app blacklist will no longer appear in the Start menu

Data shredding: Wipe files, directories, and partitions completely. Erasure operations are not recoverable.

Behavior audit: Support to customize the audit rules, monitor according to the rule Settings, and display the monitoring results in the behavior audit home page.


8.5. nfs-mplayer


Provides an intuitive and easy-to-use operation interface and a rich variety of shortcuts, as shown in Figure 8.5:



Figure 8.5 nfs-mplayer

- ✧ Tap to open the app.
- ✧ You can play the movie as follows:

When there are no files in the playlist, click and open the file selector to select the movie file. 

Click, open the File selector to select the movie file. 

Select "Open URL", select Open URL, paste online play address, play online movie.

- ✧ You can modify the playback Settings through the control bar, menu bar:

8.6. Screenshot

Support a variety of scene screenshots, small and convenient. As shown in Figure 8.6:

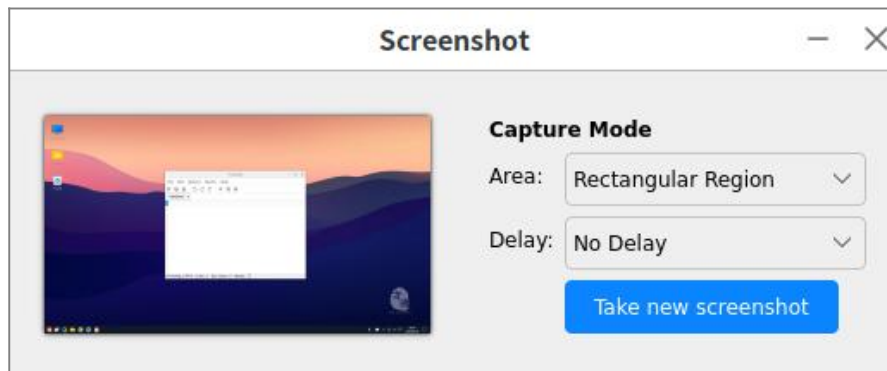









Figure 8.6 screenshot

- ✧ Tap to open the app.
- ✧ Screenshot area: You can select rectangular area, window area, full screen area.
- ✧ Delay screenshot: Set the delay time, click "New Screenshot", wait for the delay time, start screenshot.

The screenshot tool is shown in the table below:

ICONS	Basic Description
	Brush tool
	Line tools
	Arrow tools
	Shape tools
	Counting tools
	Word tool
	Mosaic tool

	Undo/save/Cancel/Confirm
---	--------------------------

Common shortcuts:

Functions	Shortcuts
Wake up the screenshot tool	Ctrl+Alt+A
Select the entire screen	Ctrl+A
Save Capture	Ctrl+S
Leave Screen capture	Ctrl+Q
Copy the selection to the clipboard	Ctrl+C
Undo last change	Ctrl+Z

8.7. nfs-biosignature

Assistive software for managing biometrics, as shown here:

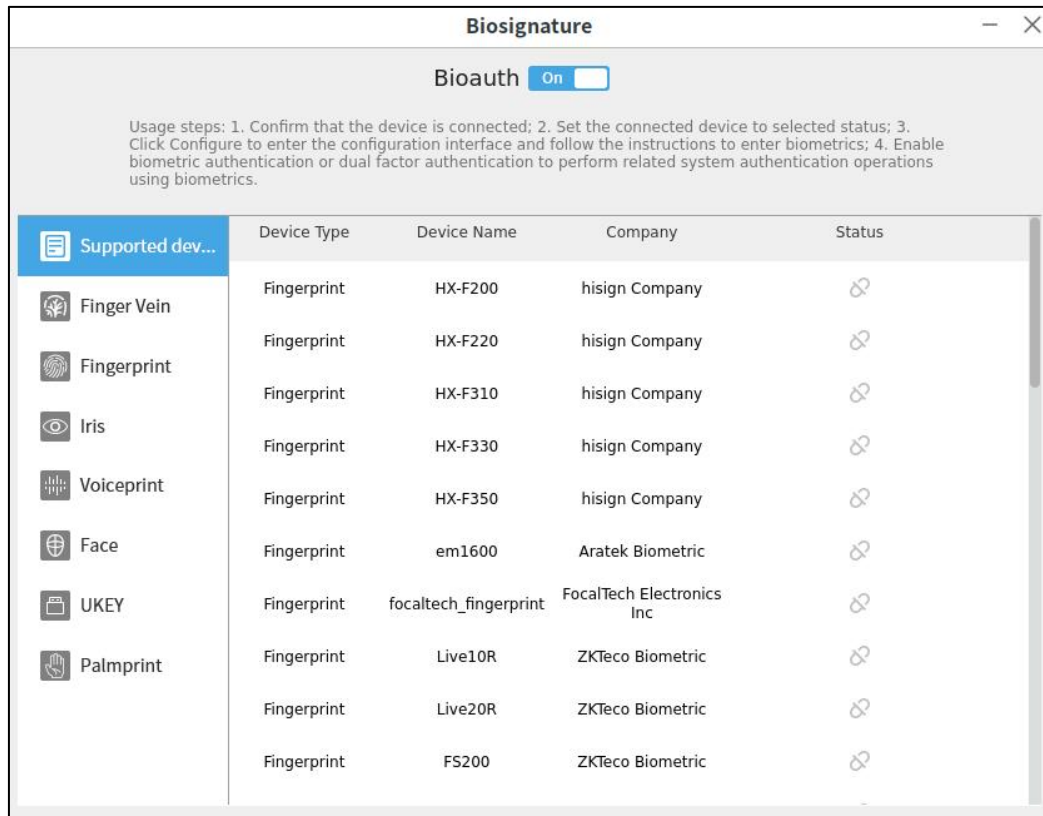



Figure 8.7 nfs-biosignature

✧ Click to go to App 

✧ Instructions for Use Steps:

(1) Connect the device and set the use status switch to "On" in the corresponding device type interface.

(2) Open the switch of biometric authentication in the main interface.

(3) Enter the corresponding biometric page, click "Enter", and enter the information according to the prompts.

8.8. NFS Archiver

A convenient compression software that supports multiple compression formats, as shown in Figure 8.8:

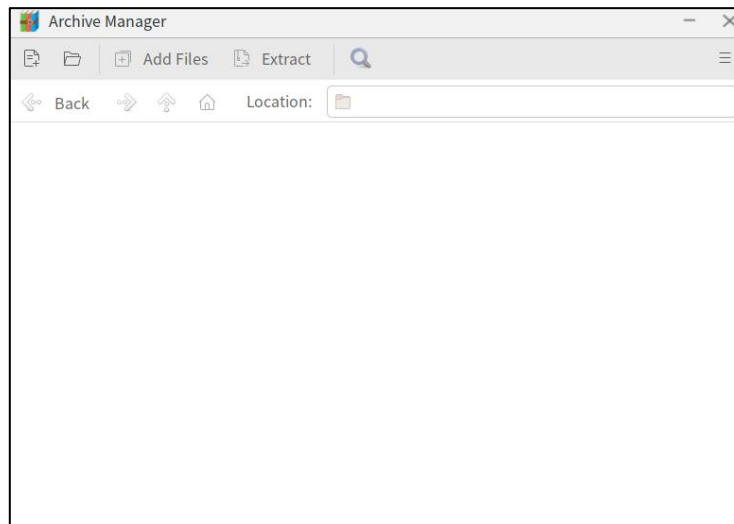


Figure 8.8 NFS Archiver

- ✧ Tap to open the app
 - ✧ Click Create New compressed file, enter the name of the archive file, and after selecting the save location, click Compress Now.
 - ✧ Click Add File, select the file that needs to be compressed and click Add to add the file to the newly established archive file.
- Compression/decompression formats supported:

Compressed formats supported	.7z,.cbz,.cpio,.ear,.exe,.iso,.jar,.tar,.tar.7z,.tar.z,.tar.bz2,.tar.gz,.tar.lz,.tar.lzma,.lzo,.tar.xz,.war,.zip
Decompress formats are supported	.7z,.cbz,.cpio,.ear,.exe,.iso,.jar,.tar,.tar.7z,.tar.z,.tar.bz2,.tar.gz,.tar.lz,.tar.lzma,.lzo,.tar.xz,.war,.zip,.rar

9. Questions and Answers

Q: How much hard drive space is required to install the r desktop?

A: At present, the installation of r desktop requires at least 45G of available hard disk space. However, in daily use, the system operation and software installation need more hard disk space, so please allocate space according to the actual situation.

Q: What are the ways to install r desktop? What's the difference between installing it and Windows?

A: You can install the desktop via DVD or USB flash drive. The biggest difference compared to installing Windows is that the filesystem type of r desktop must be ext2 or ext3 or ext4, while the Windows filesystem type is FAT32 or NTFS.

Q: Can r Desktop coexist with the Windows operating system?

A: Yes. If the Windows system is installed on the hard disk, there will be a dual system on the hard disk after installing the desktop. Select any system you want to enter in the boot item after booting.

Q: What is the difference between partition on r desktop and partition on Windows?

A: There are three kinds of hard disk partitions: primary disk partition,

extended disk partition and logical partition.

In the Windows system, the physical address is first separated (the main disk partition and the logical partition), and then the directory is created on the partition, so all paths start from the disk letter, such as C://Program Files. On the contrary, there are directories first, and then the physical address (partition) is mapped into directories, so in the desktop, all paths start from the root directory [/].

Introduction to each common partition:

/ root partition - is the root directory of the whole system, is the necessary partition of Font-desktop system;

/swap partition - a swap partition that temporarily stores data and is required for Font-desktop and is usually allocated twice the size of RAM;

/home partition - for personal user data, recommended to be mounted separately;

/usr partition - where your system stores software.

Q: What is a reasonable partition for Font-desktop?

A: The specific partition can be according to your actual needs. Generally, the common partition methods are: 1) commonly used partition mode; 2), double partition mode. It is recommended to use the dual partition mode to install the system. The advantage of this is that the system partition and the user data partition can be separated. The advantage of dual partition is that you can maximize the use of hard disk

space, but when reinstalling the system, you should back up your personal data first, otherwise it will be deleted. Also, having a single root partition, where all your data will be stored on a single partition, is not safe enough for actual production environments. We usually recommend that you use a triple partition, where you have a /home partition in addition to the root and swap partitions, so that you can cleanly reinstall without destroying your personal user data.

Q: Is it possible to access the contents of the partition under Windows system under Font-desktop?

A: You can access the contents of the partition under Windows. On the contrary, you cannot access the contents of the r desktop partition under Windows.

Q: How do I access the Windows partition?

A: r Desktop driver will automatically mount all partitions, including Windows partitions, supporting ntfs partition read and write. The mouse can be accessed by double-clicking "Computer" on the desktop.

Q: Is there a function like edit taskbar in Fand desktop like Windows?

A: Right click on the taskbar. In the popup list, you can choose whether the taskbar is hidden or not.

Q: How to use Windows software in Font-Desktop?

A: windows software support service is available. Please contact us for details. Contact number: 400-118-5115

E-mail: os_support@nfschina.com

Q: Does Font-Desktop have a similar tool to monitor system processes and startup items (like Task Manager under windows)?

A: Under Font-Desktop, you can open System Monitor by clicking on the Start menu.

Q: What is root?

A: The superuser of the system is usually named root. root is the only superuser in the system and has all the privileges in the system, such as starting or stopping a process, deleting or adding users, adding or disabling hardware, and so on.

Q: Does Font-Desktop support wireless peripheral hardware?

A: Yes, such as wireless keyboard and mouse.

Q: How do I set the mouse to make it more suitable for me?

A: Open the System menu — "System Settings" — "Mouse and Trackpad" to set the mouse operation mode suitable for you according to your personal habits, so that it becomes easier to use.

Q: How to set the keyboard button response speed, and set a variety of shortcuts?

A: Open the System menu — "System Settings" — "Auxiliary Functions", you can set the keyboard repetition key, the cursor size. More importantly, you can set the operation of shortcut keys arbitrarily in the shortcut key Settings. You can set all kinds of commonly used shortcut keys according to your own preferences.

Q: How do I install and uninstall software in Font-desktop?

A: There is "Software Center" in Font-Desktop, which can provide one-stop management of online software update, installation and uninstallation.

You can also use the command to install. See 10.6 Software Management for more instructions.

Q: Is it possible to use the Chinese input method under the r desktop?

A: desktop supports Chinese input methods, and the commonly used input methods such as Pinyin and Wubi have been pre-installed.

Q: What are the shortcut keys for input method operation?

A: The same as the operation under Windows, "Ctrl+ Space" is the

shortcut key to open/close the input method, "Ctrl+Shift" is the shortcut key to switch the input method, and "Shift" is the shortcut key to switch the full/half Angle of the input method.

Q: Is there any image processing software similar to Photoshop under Font-side desktop?

A: The software center of r desktop has a famous graphic processing software: gimp. Its interface is more concise than Photoshop. It supports many image formats and has powerful functions, which you can choose to use.

Q: Can I play PC games under Windows in r desktop?

A: There are more than 1000 games available in the Software Center of r Desktop. You can download and install these games and play games on r desktop. How to open Software Center: Click on the System menu and select "Software Center".

Q: Is it possible to play movies in r desktop?

A: There is a video playing software called FAND in the desktop. After opening the video file, it can play it automatically. To open Fandav: Click the system menu and select "Fandav".

Q: Is it possible to play music in desktop?

A: There is a music playing software in the desktop. After you open the music file with it, you can play it automatically.

Q: Why can't I play DVD?

A: DVD support is not available by default due to legal and technical restrictions. Most commercial DVDS are encrypted, so decryption software is required in order to play them. There are two solutions:

1) Use Fluendo to legally play DVDS

You can purchase a commercial DVD decoder that handles the copy protection added by Fluendo. It runs on Fonterra desktop and is legal to use in all countries.

2) Use alternative decryption software

In some countries, the law does not allow the use of the following unlicensed decryption software. Confirm that you have the right to use it.

Install the following 4 packages:

`libdvdnav4;`

`libdvdread4;`

`gststreamer0.10-plugins-bad;`

`gststreamer0.10-plugins-ugly.`

If you want to play an encrypted DVD(see Legal notes above), launch a terminal command-line tool.

Type the following, then press Enter:

```
sudo /usr/share/doc/libdvdread4/install-css.sh
```

Enter your root password to complete the installation.

Q: Why can't anyone else play the video I made in r Desktop?

A: If you make a video in your Fontaine desktop and send it to someone else using Windows or Mac OS, you may find that they have problems playing the video.

To be able to play your video, the person you are sending it to must have the correct decoder installed. A decoder is a small piece of software that knows how to read a video and play that video on the screen. There are many different video formats, each of which requires a different codec to play.

You can find out the formats of your video using:

Open the File Manager and locate the video file you made.

Right-click on the video file and select Properties.

Select the Audio/Video TAB and see what decoders are available under the video.

Ask the person who is having playback problems if they have the correct codec installed. They will find it very helpful to search the web for the name of the codec and the name of their video playback program. For example, if your video uses Theora format and your friend uses Windows Media Player to try to watch it, search for "theora windows Media Player". If not installed, you will be able to download the correct encoder-decoder for free.

If you do not find the correct codec, you can try the VLC Media player. It runs on Windows, MacOS, and Linux, and supports a variety of video formats. Alternatively, try converting your video to another format. Most video editors can do this, and specific video conversion apps are also available. You can find such available software in the Software Center.

Open the Software Center Method: Click on the System menu, click on "All Programs," and select "Software Center."

There are also some other issues that may prevent others from playing your video. The video may have been damaged when you sent it to them (sometimes large files weren't copied perfectly), their video playing application may have had a problem, or the video may have been created improperly (some error may have occurred when you saved that video).

Q: Songs purchased from online music stores cannot be played

A: If you download music from an online store, you may find that you can't play the downloaded music on your computer, especially if you bought the music on a Windows or Mac OS computer and copied it over.

This may be because the format of the music is not recognized by the computer. To be able to play a song, support for the appropriate audio format must already be installed, for example, if you want to play

an MP3 file. When you try to play a song, if a particular audio format is not supported, a message will be displayed explaining what to do. The message will also have instructions on how to install support for that format, so that the song can be played.

If you did install support for the audio format of the song you want to play, but the song you want to play still cannot be played, the selected song may be copyrighted (also known as DRM -restricted). DRM is a way to restrict the player and device of a song. This is controlled by the company that sells the song, not the user. If a music file is DRM -restricted, you probably can't play it, and you usually have to use the vendor's proprietary software to play the DRM -restricted file, but that software is often not supported by the Front desktop.

Q: Does the system support compressed files in rar format?

rar file format is a common compression format in Windows operating system, but due to legal and copyright licensing reasons, this format is not fully supported by default on desktop. Font Desktop can view and decompress compressed files in rar format, but cannot compress files into rar format.

Q: How to send and receive E-mail under r desktop?

A: Thunderbird, a mail client software, has been pre -installed in

desktop. After configuring Thunderbird client, you can receive and send daily emails.

Q: How do I handle my daily office documents?

A: desktop supports a variety of office software, which can meet most of the daily office needs such as text, tables, presentations and so on. For example, daily operations such as processing spreadsheets, processing text, editing presentations, and viewing PDF documents using document viewer, etc., you can choose to install the corresponding office software in the "Software Center" to complete the office.

To open the Software Center method: Click on the System menu, click on "All Programs", select "System Tools" — "Software Center".

Q: Is there a shortcut to create files, folders and applications under Font- Desktop?

A: Yes, you can. Right click in any directory in r desktop, you can select Create Folder, Document, Launcher (shortcut) in the current directory.

Q: How to display the desktop in r desktop?

A: You can move the mouse to click the "Show Desktop" button on the far right of the bottom panel of the r desktop or use the shortcut key "Super+D".

Q: How to change the desktop background?

A: In the system desktop, right click and select "Background Settings" to open the main window of "Desktop Background". r desktop provides a wealth of background pictures to choose from by default. As long as you click the selected background image, double click to realize the background change. At the same time, you can also add your favorite background picture.

Q: How do I add a new user account to the system?

A: Click "System Menu" — "System Settings" to open the "System Settings" interface, and click "User" to open the account management tool.

Q: What is a terminal? How do I use "terminal" in r Desktop?

A: In r Desktop, although there is a powerful graphical interface, there are some operations where using the command line makes the problem much easier. The terminal is similar to the command line prompt in Windows. To open the terminal, click the "Terminal" button in the bottom panel of the desktop or use the combination of shortcut keys Ctrl+Alt+T.

Q: Is it possible to program under Desktop?

A: The "Software Center" supports the download of programming related applications, and you can directly install VSCode and other

development software.

Q: How to search the contents of the computer?

A: Open "Computer" on the desktop, and then enter the content in the search box in the toolbar to start searching. Alternatively, you can use the shortcut Ctrl+F to initiate the search.

Q: How do I lock my computer screen?

A: Under the System menu — "Screen Lock", you can automatically lock the screen by setting the time to lock the screen regularly. You can also use the "Menu" button in the lower left corner of the desktop to bring up the system menu, click the Account button, and select from the pop-up menu to achieve manual lock screen.

Q: Why is it that after the virtual keyboard is opened, if the current option is not Latin letters, after the lock screen, the password entered will not default to Latin letters, resulting in unlocking?

A: The lock screen operation will not cause the program running on the system to close. Therefore, if the virtual keyboard with non -Latin letters is selected and the user's password is Latin letters, it is obvious that the password cannot be entered normally unless the virtual keyboard is displayed on the lock screen interface, which is obviously unreasonable, so it cannot be unlocked in this case.

Q: How do I set up the network?

A: Right-click the mouse to open the network connection symbol in the lower right panel of the desktop, and select the "network Settings" option. You can set the network proxy Settings and wired network Settings, and you can further set the network IP, subnet mask, gateway and other advanced Settings.

Q: What is the default location to open the "Home Directory" option?


A: The default location to open the "home directory" option is /home/username, which is the root directory of the currently logged-in user.

Q: How do I add an app to or remove it from my favorites?

A: Provide the favorites function. Click the system menu, select the application bar from all programs to select the application to be set, right click, you can select "Add to Favorites"; You can also delete the application in your favorites.

Q: What is a workspace? How does Font-desktop operate the workspace?

A: Workspaces can also be called virtual desktops. You can extend your work to multiple desktops instead of squeezing many applications on one desktop. You can customize different desktops. Click on the Fand

taskbar to start the workspace switch, enter the workspace switch interface, click the following row of workspace ICONS, you can switch the workspace.  Users can freely choose different desktops through workspace switching. You can also use the shortcut Alt+F1 to initiate workspace switching.

Q: How do I restore the Recycle bin?

A: There are recovery options on the right-click pop-up menu of the desktop Recycle Bin. If you need to restore a file or folder that has been deleted by mistake, you can double-click into the Recycle Bin, select the item that needs to be restored, right-click the menu that is displayed, and select "Restore".

Q: Is there a firewall in the desktop to protect the network security of the computer?

A: There is a firewall tool in the desktop of r. Open the system menu — "r Security Center" — "Firewall", you can set the opening and closing of the firewall and related Settings.

Q: How to back up various files or programs in desktop?

A: r desktop comes with backup tools, you can choose to boot into the boot. You can also enter the backup and restore function in the system Settings to backup the files you need to backup.

Q: How do I reinstall r desktop?

A: Use the installation CD or U disk, restart the computer, and reinstall the system through the Live CD.

Q: What is a LiveCD?

A: A LiveCD is a system that runs on a CD. It is stored on a removable storage device and does not need to be installed on the computer's hard drive. The media used include CD-ROM (Live CD), DVD (Live DVD), and flash drive (Live USB). It works by "putting the files originally in the hard disk into the virtual disk of the memory".

Q: How do I register r Desktop?

A: Click System Settings — About — System Information, click "Activate", you can jump to the "Register Client" application, you can input the product key in the application.

Q: The operating system can't start properly?

A: It is very rare that the operating system cannot be started. One of the cases is that when entering the boot animation, the screen will appear the information shown in Figure 9.1:



Figure 9.1 Operating system startup interface

Press "F" or "I", OS can start the mount system normally, if you press "S" to skip the mount, "Could not start the X server...." will appear. "Error message, the operating system can not start normally.

The reason for the above screen is that it may have entered the bios environment before, modified the system time and saved the exit. If the modification time is much less than the current system time (such as: one month), when the system restarts the self detection, it will be found that the hard disk time does not match the system time, and the hard disk directory mount error occurs.

For the sake of self-protection mechanism design, the system will prompt the user to choose whether to repair at this time. If the user

selects "S" to skip mounting at this point, an error message will appear when the system starts because some directories cannot be mounted.

Solution:

When this screen appears, do not select "S", select "F" or "I", and the system will automatically fix the error and start normally.

Q: Operating system black screen or stuck?

A: If the hard disk mode is IDE, choose to boot from the installation disk, the system is stuck during the installation process; If the system is restarted or hibernate in the desktop environment, the system will be stuck or the screen will be black .

At present, desktop only supports AHCI mode hard disk installation, not IDE mode hard disk installation.

Solution:

Before installing the system, set the hard Drive mode to AHCI format in the BIOS: Press F1 to enter BIOS Settings, select Devices—ATA Drive Setup—Configure SATA as, and set it to AHCI, as shown in Figure 9.2:

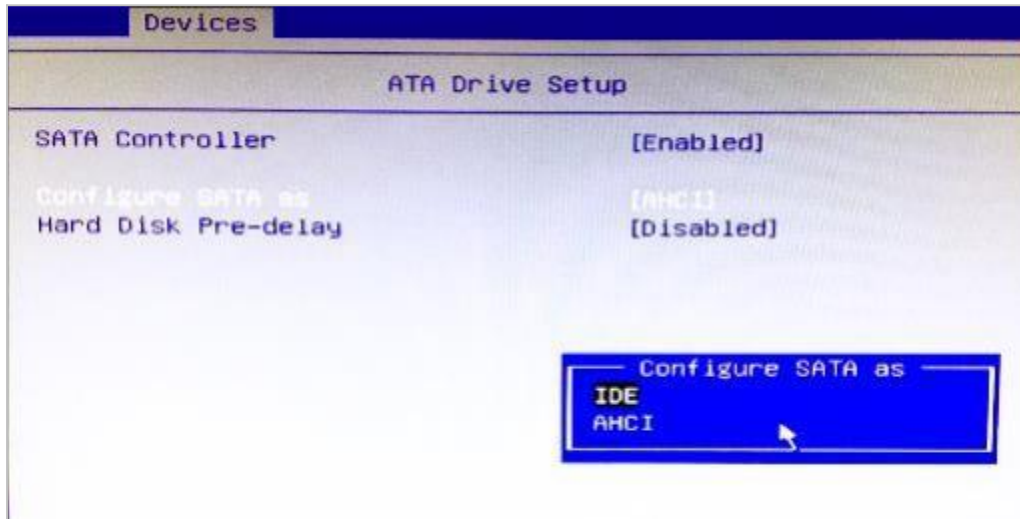


Figure 9.2 Operating system boot interface

Q: How do I contact the technical support staff when I encounter problems or want technical support?

A: Please contact us with the following information:

Contact number: 400-118-5115

E-mail: os_support@nfschina.com

10. Common commands

This chapter will introduce the commands that are commonly used when using NFSDesktop. All commands in this document will be used in the Terminal, which is the interface for human-computer interaction. Henceforth, all commands will be executed in the terminal. How to open desktop Terminal: Open the system menu and click **"Terminal"**

10.1. File and directory management

(1) Is List directory contents (List)

The `ls` command is used very frequently, but these are just a few of the most common. To get the most out of `ls`, check out the `ls --help` page

Usage: `ls [options]... [File]...`

Common options for `ls` command:

- l Output file properties in long list format
- R lists recursively, going through the entire directory and its subdirectories
- color=[WHEN] gives the item different colors depending on the nature of the

output file (type of file or directory, etc.). The value of WHEN can be 'always' (the default), 'never', or 'auto', meaning always, never, or auto, respectively

- d Lists the directory itself, not the contents of the directory

- h Humanized output, such as file size marked in K,M,G way

Examples of usage:

ls Lists the contents of the current directory

ls -l /home lists the details of all files in the /home directory and its subdirectories

(2) cd (Change working Directory)

cd [directory path] # If you omit the directory path, you will go to the user home directory.

Example usage:

cd /tmp

cd ~ # Goes into the user's home directory, and in the bash shell, the symbol "~" indicates the user's home directory

cd # omits the path and also goes into the user's home directory

(3) touch creates a text file

If the file you want to create already exists, update the file access and modification time to the current time

```
touch [Options] Filename 1...
```

Example Usage:

```
touch file1 # Create a text file named file1 if file1 does not exist, otherwise update its access time and modification time
```

(4) cat View text file contents (Concatenate)

If there are multiple files, output to standard output in sequence, which is equivalent to concatenate the contents of several files

```
cat [Options] File 1...
```

cat Common options:

-n Shows the line number

Examples of usage:

```
cat /etc/issue # outputs the contents of the file /etc/issue to standard output
```

(5) cp file and directory Copy (Copy)

```
cp [Options] Source File Target file
```

Common options for cp command:

-r Recursively copy, that is, copy the entire directory

-v prints information about the copy process

-i If the object file already exists, the default action will overwrite the object file, and this option asks the user for confirmation

-n does not copy files that already exist

-u only copies files that are newer than the target file

Example usage:

```
cp testfile testfile1 # Copy the testfile file in the current directory into testfile1
```

```
cp -r dir1 down # Copy the dir1 directory in the current directory to the down directory
```

(6) mv file Move & Rename (Move)

The mv command is similar to the cp file copy command, except that the source file is deleted when the operation is complete;

Note that the mv command does not have the recursive -r option, so moving a directory is the same as moving a regular file

```
mv [Options] Source file Target file
```

Common options for mv command:

-i By default, mv will overwrite the source file. This option asks the user for confirmation

-n does not move existing files

-u only moves files that are newer than the target file

-v shows the detailed move process

Example usage:

`mv -vi file1 file2 # Move files interactively. This command moves in the same directory and actually renames the file`

(7) mkdir Make Directory

Do nothing if the directory you want to create already exists

`mkdir [Options] Directory name 1...`

Common options for the mkdir command:

-p | - parents when necessary, establish the parent directory

The -m directory permissions Settings

-v outputs the details of the current operation

Examples of usage:

`mkdir -pv a/b/c #` will create three directories a, b and c according to the a/b/c hierarchy. Because the `-p` option is used, the a or b directories will be created together automatically when they do not exist. If `-p` is not used, an error will be thrown when the parent directory does not exist

`mkdir a b c #` creates three directories a b c in the current directory

(8) `rm` Delete files or directories (Remove)

`rm [Options] File or directory...`

`rm` command Common options:

- `-f` Force mode, never prompts, and does not require user confirmation
- `-i` Interactive mode, which asks the user for confirmation before deleting files
- `-r` Recursive delete, which deletes the entire directory
- `-v` outputs the details of the current operation

Examples of usage:

`rm -vi file1 #` Delete file file1

`rm -vir dir1 #` Delete directory dir1

(9) `rmdir` Delete empty directory (Remove Rirecotry)

If the directory is not empty, an error will be reported and the directory will not

be removed

`rmdir [Options] Empty directory...`

`rmdir` common command options:

After `- p | - parents` if delete the directory, the parent directory also become empty directory, delete it

`- v` output current operation detailed information

Examples of usage:

`rmdir -pv a/b/c` # delete empty directory c, then if b directory is also empty, delete b directory,...

10.2. File & directory search

(1) find Search for files

The `find` command is very powerful and supports Regular expressions

The `find` command is often written as follows:

`find [Options] path [Other options]`

Common options for the `find` command:

`- P` Do not follow symlinks, that is, ignore files pointed to by symlinks

- L follows a symbolic link

Other options commonly used by the find command:

- type <file_type> Finds the specified file type, which can be f (regular files), d (directory files), c (character device files),...

- name <file_name> Finds a specific file, the filename is case sensitive

- iname <file_name> is the same as -name, but case is ignored

- maxdepth level Specifies the maximum number of directory levels to search, where level is a positive number

- mindepth level specifies the minimum number of directory levels to search, and level is a concrete positive number

- size [-/+] <file_size> Limits the size of the file to be searched, where file_size is a number in units c, w, b, k, M, and G. Number leading " - " or "+" sign indicates the file size, to be "less than" or "greater than" this value, omit means that the file size is strictly this value.

- the regex pattern using regular expression search files, the pattern for the expression in the file name

- regextype type limited find parsing the standard of the regular expression, the type of optional value of emacs (default), the posix - awk, posix - egrep, posix extended

-exec command \; Execute the command. Everything after -exec parses into part of the command until a semicolon ";" is encountered. ", because semicolons have a special meaning in the Bash Shell, they are escaped with a slash "\"

Example usage:

Find. -type f # find all files in the current directory

find ~ -name.bashrc # Find a file named ".bashrc" in the user directory

find/usr-type f-iname "*conf*" # Ignore case in directory /usr Find files with "conf" in their filename

find/usr-size + 100K-size-2M-regextype posix - egrep-regex "*.png\$" # In /usr, find files between 2kB and 2MB in size, And the filename ends in png.

find ~ -type d -size +40M -exec file {} \; # Find files in the user directory that are over 40MB in size and use the file command to find their type.

10.3. The file system management

(1) df lists file system usage

df [Options] [file]...

Common options for df command:

-a outputs all filesystems

-h Humanized output information

-t <fs_type> outputs only fs_type-restricted filesystem types

-T outputs the filesystem type

Example usage:

df-ht ext4 # Output filesystems of type ext4

df-T # outputs filesystem type

df-h /dev/sda1 # outputs the usage of the first partition of the first hard disk

(2) fdisk disk partition management

This command requires privileged user privileges

fdisk [Options] Disk

Common options for the fdisk command:

-v prints version information for fdisk and exits

-l lists the partition table information for the specified device and exits; If no device is given, those mentioned in /proc/partitions are used

-u displays the information about the partitions in the partition table as the number of sectors rather than the number of cylinders

`-s` outputs the size (in blocks) information of the partition to standard output

Example usage:

`fdisk -l #` outputs detailed partitions of all hard disks in the current system

`fdisk /dev/sda #` enters disk partition mode

1. Type `m` to show all commands listed
2. Type `p` to display the partition of the hard disk .
3. Enter `a` to set the hard disk boot area.
4. Enter `n` to set a new partition.
5. Enter `t` to change the hard drive partition properties.
6. Enter `d` to delete the hard drive partition attributes.
- Enter `q` does not save the hard disk partition property.
8. Enter `w` end and write hard disk partition properties

(3) `mkfs` formats the disk

This command requires privileged user privileges

`mkfs [Options] partition`

Common options for mkfs command:

- t specifies the format filesystem type
- c checks the partition for bad blocks before formatting the filesystem
- block specifies the size of the block

Example usage:

```
mkfs -t ext3 /dev/sda6 # Format /dev/sda6 partition with ext3 file type
```

(4) du calculates the size for the file/directory

du [options] Directory or file...

Common options for the du command:

- h humanized output, file size in K,M,G way marked
- s output directory/file the total footprint size

Example usage:

```
du -h ~ # prints the size of all files and subdirectories in the user's home directory
```

(5) mount mounts the file system

This command requires privileged user permissions

```
mount [Options] Device target directory
```

Common options for the mount command:

-t specifies the filesystem type, such as ext3, ext4, etc

-B mount directory

Example usage:

```
mount # Lists all mounted filesystems
```

```
mount -t ext4 /dev/sda6 /mnt # Mount the sixth partition of the first hard drive  
into the /mnt directory
```

```
mount -B /media /mnt # mount the directory /media into /mnt directory here
```

(6) umount unmounts the filesystem

This command requires privileged user permissions

```
umount [Options] Device or directory...
```

Common options for the umount command:

-f Forces the unmount directory

Example usage:

```
umount /dev/sda6 # Unmount the already mounted file system /dev/sda6
```


10.4. System process management

(1) top displays a list of processes in real time

Once the top command is running, press the letter "q" key to exit.

top [Options]

top command Common options:

-p pidlist only shows the dynamics of processes whose process number is in pidlist

3-d num update interval of time. Num for time, the unit (s) for the second

Example usage:

Top 1 - p - d 1 #, 2 # monitoring process only two processes for 1, 2, and update information once per second

(2) ps Lists the processes currently running in the system

The ps command to accept 3 kind of option, but there are options is conflict, there are options function are the same, increases the difficulty of using

ps [options]

The ps command options:

- e Shows all processes
- a lists all processes except the session head and processes that are not assigned a terminal
- u userlist lists processes with a valid user ID or user name, which is located in userlist
- p pidlist only lists processes whose specified process number is in the process number list pidlist, this option can be used multiple times
- ppid pidlist lists only children of processes whose process number is in pidlist
- x lists the processes that belong to the current user
- ax lists all processes. The 'x' and 'a' combination, combination when other options may not be available again

Example usage:

ps aux oracle # Query oracle process

ps -- ppid 1 # Lists the processes whose parent is 1

(3) pidof lists the processes running on the current system

pidof finds the process Number (pid) by process name

pidof [Options] Process name

Common options for pidof command:

The `-s pidof` option will output as many process numbers of a given name as possible, limiting it to one

Example usage:

```
pidof lightdm
```

(4) kill sends a signal to the process

```
kill [options] pidlist
```

Common options for the kill command:

`-l` Lists the signal name

`-s` signal specifies the signal to send, the default is 15

Example usage:

```
kill -s 9 <PID> #PID is the process number (found using pidof), and signal 9 is to kill the process
```

(5) killall kills the process

`killall` kills a process by name

```
killall [Option] Process name
```

Common options for the killall command:

-l List all known signal names

-v reports if the signal was sent successfully

Example usage:

```
killall gedit # Kill all processes named "gedit"
```

10.5. Network management

(1) ifconfig View/Set network (Interface Configure)

Privileged user permissions are required for this command

ifconfig Settings network is not saved, all changes disappear after restart.

The network interface in Linux system can be understood as a network card. The number of the wired network card is: eth0 eth1... ; The wireless card number is: wlan0 wlan1...

```
ifconfig [Options] [Network interface]
```

```
ifconfig Network Interface [Protocol address cluster] Options Address...
```

Common options for ifconfig:

-a Show all network interfaces

up opens network interfaces

down turns off the network interface

netmask sets the mask

broadcast sets the broadcast address

Example usage:

ifconfig -a # shows all network interface information

ifconfig eth0 192.168.1.10 netmask 255.255.255.0 broadcast 192.168.1.254

The above command sets the IP address of the wired network card to 192.168.1.10, the subnet mask to 255.255.255.0, and the broadcast address to 192.168.1.254

ifconfig eth0 down # Close the eth0 network card

ifconfig eth0 up # Turn on the eth0 network card

(2) ping host to send packets

Used for network connectivity test.

ping [option] host

Common options for ping command:

-c By default, ping runs until the user presses Ctrl+ C. This option limits the

number of pings

Example usage:

```
ping-c 5 127.0.0.1 # Tests if the native TCP/IP protocol is working, 127.0.0.1 has been configured to represent the native machine
```

(3) netstat Check Network Status

netstat [Options]

Common netstat options:

- p shows process information

- t lists only entries related to the tcp protocol

- u only lists entries related to the udp protocol

- n ports, addresses, etc. are displayed using numbers rather than names

- a shows all

- l displays only entries that are in listening state

Example usage:

```
netstat -atunp # shows all processes using tcp and udp protocols, along with the addresses and port numbers of both sides of the communication
```

10.6. Software management

(1) dpkg package management tool

This command requires privileged user permissions

dpkg is used to manage the system's internal deb package, can install, uninstall, deb package, deb decompress and other operations

dpkg [option] deb package

dpkg common command options:

-i Install the package

-r Remove packages

-P Delete packages (including configuration files)

-l Lists the packages installed on the current system

Examples of usage:

dpkg-i cheese-common_3.10.1 - 1sid1_all.deb # installation of video camera package

dpkg-r libmccrypt4 # Uninstall of the package

(2) apt-get management tool

This command requires `privileged` user permissions

`apt-get` is primarily used to automatically search for, install, upgrade, and uninstall software or operating systems from software repositories on the Internet.

`apt-get [Options] command pkg`

`apt-get` common command options:

`update` Regets the list of packages

`upgrade` to `update`

`install` Installs new packages

`remove` Removes packages

`autoremove` automatically removes all unused packages

Examples of usage:

`apt-get upgrade #` Update an installed package

`apt-get install nfs-screenshot #` Install Fonder screenshot

`apt-get remove kolourPaint #` Remove kolourPint software from the system