

**KILOVIEW KiloLink Server Pro Seamless Management**



# KILOVIEW KiloLink Server Pro Seamless Management User Guide

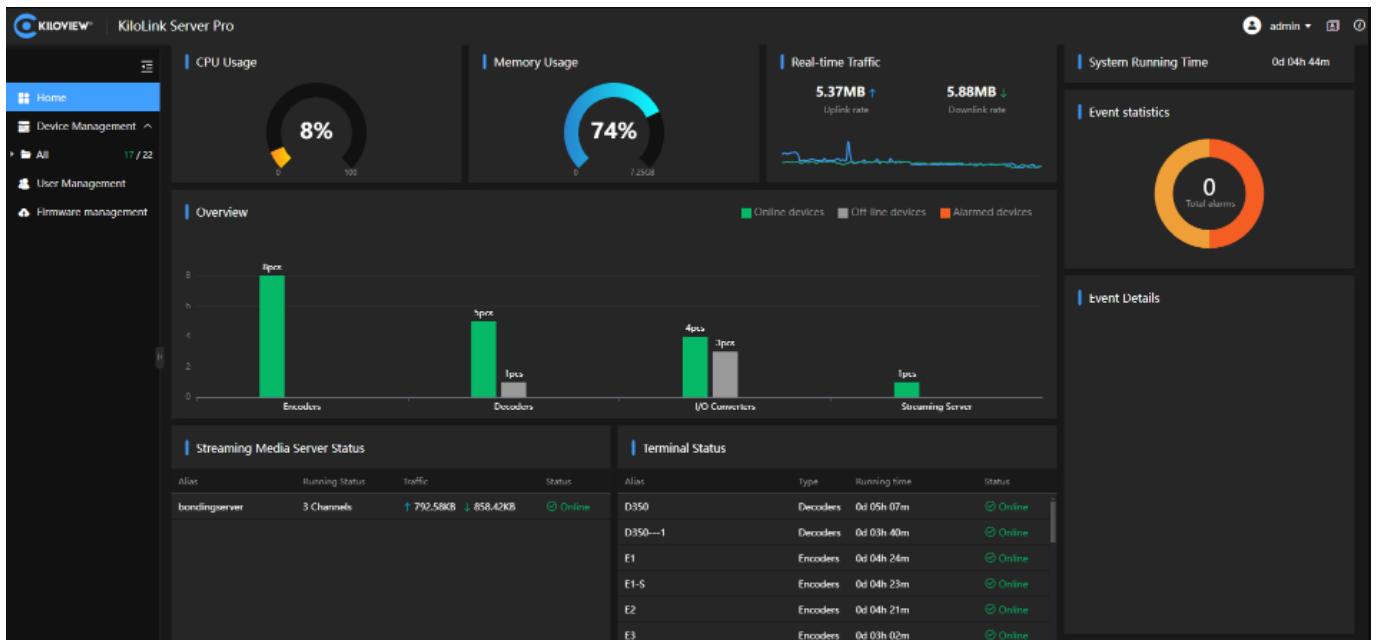
[Home](#) » [KILOVIEW](#) » KILOVIEW KiloLink Server Pro Seamless Management User Guide 

## Contents

- 1 KILOVIEW KiloLink Server Pro Seamless Management
- 2 Specifications
- 3 Product Usage Instructions
- 4 FAQ
- 5 Server Environment Preparation
- 6 Accessing Linux servers
- 7 Docker Environment
- 8 Deployment Process
- 9 INSTALLATION
- 10 Login Verification
- 11 Documents / Resources
  - 11.1 References



**KILOVIEW KiloLink Server Pro Seamless Management**



## Specifications

- **Product Name:** KiloLink Server Pro
- **Features:** Seamless Management, Unlimited Streaming
- **Installation Guide:** Install deployment documentation v1.0

## Product Usage Instructions

### Rapid Deployment of KiloLink Server Pro

To rapidly deploy the KiloLink Server Pro, follow these steps:

1. Ensure you have a cloud server with the following specifications:
  - 4 cores
  - 8GB RAM
  - 64GB storage space
  - Running a 64-bit Linux operating system (e.g., Ubuntu 18.04+ or Debian 9+)
2. Make sure Docker is installed and running correctly on the server.
3. Ensure the curl tool is installed in the system.
4. Connect to the server with sudo privileges.
5. Execute the following command to deploy KiloLink Server Pro:

## FAQ

- **Q:** What are the minimum system requirements for deploying KiloLink Server Pro?
- **A:** The minimum system requirements include a cloud server with 4 cores, 8GB RAM, 64GB storage space, running a 64-bit Linux operating system, Docker installed and running, and the curl tool installed.
- **Q:** Can I deploy KiloLink Server Pro on a server with different specifications?
- **A:** It is recommended to meet the minimum system requirements for optimal performance. Using servers with lower specifications may affect the performance of KiloLink Server Pro.

- **Q:** Is there a specific version of Linux required for deploying KiloLink Server Pro?
- **A:** Yes, it is recommended to use a 64-bit Linux operating system such as Ubuntu 18.04+ or Debian 9+ for deploying KiloLink Server Pro.

## Rapid Deployment KiloLink Server Pro

If you have purchased and configured a cloud server with 4 cores, 8GB RAM, and 64GB storage space, running a 64-bit Linux operating system (such as Ubuntu 18.04+ or Debian 9+), and Docker is installed and running correctly, along with the curl tool installed in the system, you can connect to the server with sudo privileges and execute the following command to deploy KiloLink Server Pro:

```
/bin/bash <( curl -fsSL https://github.com/kiloview/klnk-server/raw/main/install.sh )
```

The command will download and execute the installation script stored in the cloud. Follow the prompts to complete the deployment process. Once done, KiloLink Server Pro will run successfully on your cloud server. If you encounter any issues, please refer to this document or send an email to Kiloview technical support at [support@kiloview.com](mailto:support@kiloview.com). Our engineers will assist you in resolving any problems you may have.

## Server Environment Preparation

The server you are using needs to have internet access. We recommend using a cloud server purchased from cloud service providers such as Amazon Web Services, Microsoft Azure, Google Cloud Platform, Alibaba Cloud, IBM Cloud, Oracle Cloud, Tencent Cloud, Huawei Cloud, Salesforce, or DigitalOcean.

The recommended cloud server configuration is as follows:

Configuration Item	Description
Processor	4-core CPU or higher
Memory	8GB RAM or higher
Storage Capacity	64GB HDD or higher
Operating System	Choose your desired cloud server operating system, recommended Linux 64-bit ( Ubuntu 18.04+ / Debian 9+)
Public IP	The cloud service provider will assign a public IP address; you can adjust public b andwidth as needed;
Public Bandwidth Calculation	Planned based on network conditions. For example, if your aggregate device has a working bandwidth of 6Mbps/unit, and centralized management platform consumes 125kbps/line, if you purchase one aggregate device and four devices requiring centralized management, the bandwidth calculation formula would be $1 \times 6 + 0.125 \times 4 = 7\text{Mbps}$ , the minimum recommended configuration 8Mbps.

## Accessing Linux servers

To remotely connect to a Linux server, there are several common methods

### Using SSH

Connect to the remote server by running SSH commands

### Using the Cloud Service Provider's Management Console

Most cloud service providers (such as AWS, Azure, Google Cloud, Alibaba Cloud, etc.) offer web-based management consoles. You can access and manage servers directly through a web browser.

### Using Third-Party Tools

You can also utilize third-party tools to manage cloud servers, such as:

- PuTTY (Windows): Used for SSH connections.
- MobaXterm (Windows): A versatile terminal that supports SSH, SFTP, and other connections.

### Docker Environment

- To update the package manager's index, fetching the latest package information from the configured software source lists. Enter the command: `sudo apt update`
- To install the Docker, enter the command: `sudo apt install docker.io -y`
- After installation, start the Docker service and enable auto-start on boot:
- Enter the command to start: `sudo systemctl start docker`
- Enter the command to enable: `sudo systemctl enable docker`

### Deployment Process

The one-click deployment command for the KiloLink Server Pro server retrieves and runs an installation script from the cloud to deploy the KiloLink Server Pro platform on your server. You can execute the following command to deploy the KiloLink Server Pro platform:

**(Note:** A stable internet connection is required to ensure smooth deployment.)

```
/bin/bash <( curl -fsSL https://github.com/kiloview/klmk-server/raw/main/install.sh )
```

Since the installation process requires sudo privileges, please follow these steps to check if the current user has Docker execution permissions: Enter the command: `docker ps`

- Check the result: If this command executes successfully and displays a list of running Docker containers, it means the current user already has Docker execution permissions and you can proceed to the next step. If you encounter a permission error (e.g., "permission denied"), you need to add the current user to the docker group by entering the command: `sudo usermod -aG docker your username`
- Re-login: To apply the group changes, please log out and log back in, or use the following command to reload the group settings: `newgrp docker`
- If your system does not have the curl tool installed, you need to enter the command:
- Ubuntu/Debian: `sudo apt-get install curl`
- CentOS/Fedora: `sudo snap install curl`

After installing the curl tool, execute the KiloLink Server Pro deployment command again. After entering the deployment command, we officially begin the deployment process of the KiloLink Server Pro platform.

```
root@hanr:/home/hanr# REPO=registry.cn-hangzhou.aliyuncs.com/luochengbo/kilolink_new /bin/bash <({ cat install.sh})
Kiloview® KiloLink Server (KLS) License Agreement

Please read this document carefully before proceeding. You (the undersigned licensee) hereby agree to the terms of this Kiloview® KiloLink Server
(KLS) License Agreement (the "License") in order to use the software. Kiloview Electronics Co., Ltd. agrees to grant you certain rights as set f
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b. "KLS" means the entirety of the Kiloview® KiloLink Server, including those portions pertaining to specific software provided to you under this
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d. "KLS Documentation" refers to the documentation provided with the KLS software, including the portion pertaining to the Specific KLS.
e. "Specific KLS" refers to the specific KLS for which you intend to use the Kiloview® KLS under the constraints of this License for other spacia
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c. Unless otherwise stated in the KLS, no software, installation programs, scripts, Docker images, or any files within the Specific KLS may be di
stributed.
```

Firstly, you need to read and understand the license agreement for Kiloview® KiloLink Server (KLS). Compliance with the software license agreement is not only a legal requirement but also a respect for the developers' efforts. If you have any questions about the terms of the license agreement, we recommend contacting us for consultation. You can enter [y/Y] to indicate agreement and proceed with the installation, or enter [n/N] to indicate disagreement and terminate the deployment.

## INSTALLATION

### Step 1: Image Download

After you have read and agreed to the license agreement for Kiloview® KiloLink Server (KLS), the KiloLink Server Pro image will automatically be loaded from the Docker image repository, as shown below:

```
You must Type [y/Y] to agree, Type [n/N] to disagree: y
-----
#1. Load/download docker images
-----
Pulling/updating the software images from 'registry.cn-hangzhou.aliyuncs.com/luochengbo/kilolink_new:latest' ...
latest: Pulling from luochengbo/kilolink_new
0d349fa6ec1d: Already exists
a31576bf378b: Already exists
cb7cd1acd91c: Already exists
b93f24981bb2: Already exists
527daadf3fd8: Already exists
9d58969c968c: Already exists
40be363e2825: Already exists
3ec24d231635: Already exists
6be775985f56: Already exists
892e2270b886: Already exists
0aa0965005de: Downloading [=====] 8.943MB/23.91MB
71218faa6ff9: Download complete
a27196b1a7ca: Download complete
0056f6bbf110: Download complete
0aeb7dcb544a: Download complete
7dcf3dd54243: Download complete
ff73c2a50b7d: Download complete
```

### Step 2: Installation Path Selection

If you are a new user of KiloLink Server Pro, enter the installation path you prefer. If you do not specify an installation path, KiloLink Server Pro will be installed in the subdirectory 'killing-server' under the default user directory.

```
#2. Where do you want to install KiloLink Server
-----
You can input your install path below, or just press ENTER to install into default location [/root/kilolink-server]

[/root/kilolink-server] >
```

If you have previously used an older version of the KiloLink Server container, you need to first check the storage path of the data from the old version. Enter the command: `docker inspect "container_name"` This command will

allow you to view the historical storage directory. If you are unsure about the name of the old version KiloLink Server container, you can check it using docker ps.

```
root@VM-20-4-ubuntu:/home/ubuntu/update_test# docker ps
CONTAINER ID   IMAGE                                COMMAND                  CREATED        STATUS        PORTS   NAMES
0057aa0b5b6   kiloview/kilolinkserverfree        "/start_server.sh /b..." 59 minutes ago Up 59 minutes           kilolinkserver
root@VM-20-4-ubuntu:/home/ubuntu/update_test# docker inspect kilolinkserver
[{"Id": "50057aa0b5b6b460b833fc576c41bf33fe2b1d3adfa342ab277c4264ce03949b",
  "Created": "2024-06-18T01:16:23.831236461Z",
  "Path": "/start_server.sh",
  "Args": [
    "/bin/bash"
  ],
  "State": {
    "Status": "running",
    "Running": true,
    "Paused": false,
    "Restarting": false,
    "OOMKilled": false,
    "Dead": false,
```

### Example:

Enter the command: `docker inspect kilolinkserver` to view the storage directory of the old version KiloLink Server container, which is `/data`. This corresponds to the mounted directory on the server as `/home/ubuntu/update_test`

```
    },
    "Name": "overlay2"
  },
  "Mounts": [
    {
      "Type": "bind",
      "Source": "/home/ubuntu/update_test",
      "Destination": "/data",
      "Mode": "",
      "RW": true,
      "Propagation": "rprivate"
    }
  ],
  "Config": {
    "Hostname": "VM-20-4-ubuntu",
    "Domainname": "",
    "User": "root",
    "AttachStdin": false,
    "AttachStdout": false,
    "AttachStderr": false,
    "ExposedPorts": {
      "83/tcp": {}
    },
    "Tty": true,
```

You can specify the mounted directory `/home/ubuntu/update_test` as the installation path. We will endeavour to preserve your historical device information, user information, etc. Additionally, we recommend that you back up historical platform data before installing by following these steps.

### Example:

To back up historical data under the mounted directory `/home/ubuntu/update_test` use the command: `cp /home/ubuntu/update_test /home/ubuntu/update_test_back -rf`

## Step 3: Removing the Old KiloLink Server Container

If an old version of the KiloLink Server is detected, it will be indicated in parentheses as shown below. According to the prompts, proceed to delete the previously installed old version of the KiloLink Server container. Considering that a server supports only one instance of the KiloLink Server container, we recommend removing the old version of the KiloLink Server container.

```

#3. Checking your old configurations
-----
Checking the old software versions (docker containers) ...

[WARNING] You are installing the KiloLink Server to a brand new location, so I can't exactly know what container the old version is.
[WARNING] If you have installed the KiloLink Server before, the old containers need to be DELETED. However, please note that deleting old containers may affect your existing business, so please choose carefully; if the old container is not deleted, it may cause the new software to not work properly. If you are still unsure, please press
CTRL-C to exit and seek necessary assistance.

(Enter DELETING container names separated by spaces) kilolinkserverfree kinkserver kilolinkserverfree
Again, are you sure to delete these containers? [y/N]

```

## Step 4: Port Configuration

- **Configure Web Port:** The Web port is used to access the management console via HTTP, with the default port being 80. Due to varying national regulations regarding network ports, you may need to manually change the Web port.
- **Configure Connection link Port:** The connection port is used for device management and aggregation services. The connection port must be an even number, and the system will occupy both [link\_port] and [link\_port+1] ports simultaneously. For example, if the connection port is set to 50000, the system will use ports 50000 and 50001.
- **Public IP:** Since the platform cannot directly obtain your external public IP address for access, you need to manually specify the public IP address. You can obtain the assigned public IP address from your cloud service provider's management panel.

```

#4. Configure your installation
-----
Web port is for your Web/HTTP accessing KiloLink Server management console.
Web port:[80] >
Link port is for devices connection for aggregation/management purpose.
(NOTE: the link port must be an EVEN NUMBER, and when creating a KiloLink service, it will occupy both the [link_port] and [link_port+1] ports.)
Link port:[50000] >
Public IP address provided by your system for external access
(I need to know the public IP address that your system provides for external access, and based on my automatic detection, the IP on the NICs is not trusted. Because in a Cloud system, the public IP you are accessing externally is not configured on your local NICs, so you need to manually fill in this IP address.)
>192.168.32.133

```

## Step 5: NDI Discovery Service Usage Notice

The system automatically checks if the Linux system service named “avahi-daemon” is installed on the server. This service is used for NDI's automatic discovery service. If you require NDI|HX output functionality while using KiloLink Server Pro, you will need to manually install the “avahi-daemon” system service by using the following commands, according to your Linux distribution:

- Ubuntu/Debian: `sudo apt install avahi-daemon`
- CentOS/Fedora: `sudo yum install avahi-daemon`

```

#5. Finally checking ...
-----
[WARNING!] It seems that your system does not have a Linux system service called 'avahi-daemon' installed!
This service is mainly used for automatic discovery of NDI. KiloLink Server can work without this service, but the NDI|HX output you create in KiloLink Server will not be discovered by the system and may not even function properly.
As this is a system service, you need to MANUALLY install it. Note that different Linux distributions have different installation methods, typical of which are as follows:

Ubuntu/Debian -
    sudo apt install avahi-daemon

CentOS/Fedora -
    sudo yum install avahi-daemon

Are you sure to continue without 'avahi-daemon' service? [y/N]y

```

## Step 6: Confirmation of Information

At this point, you have successfully installed the KiloLink Server Pro. Below are some important access details and configuration recommendations provided for you:



```

.....
Install KiloLink Server SUCCESSFULLY!
.....
Please remember these access endpoints:
* Access http://192.168.3.6:85 for web management.
* When you configure device to connects to the KiloLink Server, its IP is '192.168.3.6' and access port is 50000.
* Your docker container is named 'KILINKSR-pro', you can use 'docker' commands to maintain it.

In addition, you also need to pay attention to checking your FIREWALL configuration, and at least ensure that the following ports are configured on the firewall to allow external access:
* UDP ports: 50000 50001
* TCP ports: 85

If you want to enable NDI|HX features:
(the following var N represents how many NDI|HX streams you wish to allow)
* UDP ports: 5353
* TCP ports: 5961, 5962, ... (keep at least N ports open)
* TCP/UDP ports: 5960 [7960, 7961, ... (keep at least 4*N ports open)]

For other protocols such as RTP, SRTP, webrtc, ..., you also need to open the service port range [30000, 30300] as specified in the corresponding protocol.
ENJOY IT!

```

## 1. Access Points Includes:

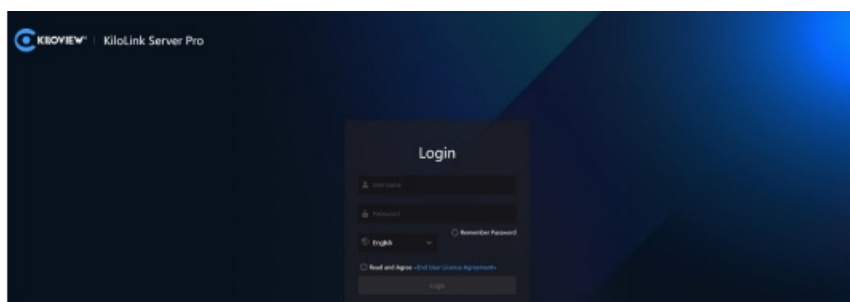
1. The web management interface for managing and configuring the KiloLink Server Pro
2. Connection port for binding and managing devices
3. Docker container name

## 2. Notes and Firewall Configuration

1. Please note that not installing the Avahi Daemon service will disable NDI discovery functionality. If NDI discovery functionality is required, you may need to install and configure the Avahi Daemon service.
2. Firewall Configuration: Ensure the following ports are configured in your firewall to allow external access:
3. UDP ports: 50000, 50001, 5353 (if NDI|HX functionality is enabled)
4. TCP ports: 83, 5961-5962 (maintain at least 4\*N ports open if NDI|HX functionality is enabled) srt, rtsp, webrtc port range: [30000, 30300]

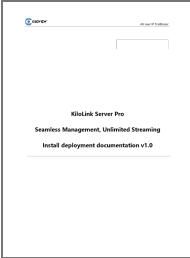
## Login Verification

1. Open your browser: It is recommended to use Google Chrome browser, compatible with other browsers such as Firefox, Edge, etc.
2. Enter the address: In the browser's address bar, enter http://IPaddress:Port. Replace "IPaddress" with the public IP address of your KiloLink Server Pro and replace "Port" with the server's port number. For example, if the server IP is 192.168.1.100 and the port is 83, enter http://192.168.1.100:83
3. Press Enter: Press the Enter key, and the browser will attempt to connect to the specified server and port.
4. Display the login interface: Upon successful connection, you should see the login interface of KiloLink Server Pro.
5. Enter login information: If you are a new user of KiloLink Server Pro, the default login credentials are Username: admin Password: Kiloview001. After logging in, the platform will prompt you to change the password. If you have used the old version of KiloLink Server before, you can continue using the same login credentials



## Documents / Resources



	<p><b><a href="#">KILOVIEW KiloLink Server Pro Seamless Management</a></b> [pdf] User Guide</p> <p>KiloLink Server Pro Seamless Management, Server Pro Seamless Management, Pro Seamless Management, Seamless Management, Management</p>
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References

- [!\[\]\(c8dce68b26731c7aa5915072fc9d68dd\_img.jpg\) Docker: Accelerated Container Application Development](#)
- [!\[\]\(76b3245de86167eba9fcdc9cc9f32aa4\_img.jpg\) \*\*github.com/kiloview/klnk-server/raw/main/install.sh\*\*](#)
- [\*\*User Manual\*\*](#)

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