KiloLink Server Pro

Seamless Management, Unlimited Streaming

Install deployment documentation v1.0

1.1 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. Our engineers will assist you in resolving any problems you may have.

1.2 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 bandwidth 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, bandwidth calculation formula would be 1*6+0.125*4=7Mbps, minimum recommended configuration 8Mbps.

1.3 Accessing Linux servers

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

1、Using SSH

Connect to the remote server by running SSH commands。

2、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.

3、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.

1.4 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`

1.5 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/klnk-server/raw/main/install.sh )
```

Please note the following:

1、The installation process requires `sudo` permission, so you need to check if the current user has `Docker` execution permission:

Enter the command: `docker ps`

Check the result:

If the command successfully executes and displays a list of running `Docker` containers, it means the current user already has `Docker` execution permission and can proceed to the next step.

If you encounter a permission error, you need to enter the following commands:

```
sudo usermod -aG sudo $USER
newgrp sudo
sudo gpasswd -a $USER docker
```

```
newgrp docker
```

By following these steps, you should be able to grant Docker execution permission to the current user. After completing these operations, run docker ps again to confirm that the permissions have been correctly set.

2、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
orth herein under these terms.

1. Definitions
a. "Kiloview" refers to the company name Kiloview Electronics Co., Ltd. Kiloview® is a registered trademark of Kiloview Electronics Co., Ltd.
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 specia
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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.

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 'kilolink-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`.

```
oot@VM-20-4-ubuntu:/home/ubuntu/update_test# docker ps
ONTAINER ID   IMAGE                          COMMAND                  CREATED          STATUS          PORTS     NAMES
0057aa0b5b6   kiloview/kilolinkserverfree    "/start_server.sh /b…"   59 minutes ago   Up 59 minutes             kilolinkserver
oot@VM-20-4-ubuntu:/home/ubuntu/update_test# docker inspect kilolinkserver

  {
      "Id": "50057aa0b5b6b460b833fc576c41bf33fe2b1d3adfa342ab277c4264ce03949b",
      "Created": "2024-06-18T01:16:23.8312364612",
      "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`

You can specify the mounted directory `/home/ubuntu/update_test` as the installation path. We will endeavor 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 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 KiloLink Server container. Considering that a server supports only one instance of KiloLink Server container, we recommend removing the old version of the KiloLink Server container.

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 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 n
ot 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 f
ill 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, accordingly to your Linux distribution:

Ubuntu/Debian: `sudo apt install avahi-deamon`

CentOS/Fedora: `sudo yum avahi-deamon`

```
#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 Ki
loLink 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, typica
l 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:

1)Access Points Includes:

- Web management interface for managing and configuring the KiloLink Server Pro
- Connection port for binding and managing devices
- Docker container name

2) Notes and Firewall Configuration

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.

Firewall Configuration: Ensure the following ports are configured in your firewall to allow external access:

UDP ports: 50000, 50001, 5353 (if NDI|HX functionality is enabled)

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]

1.6 Login Verification

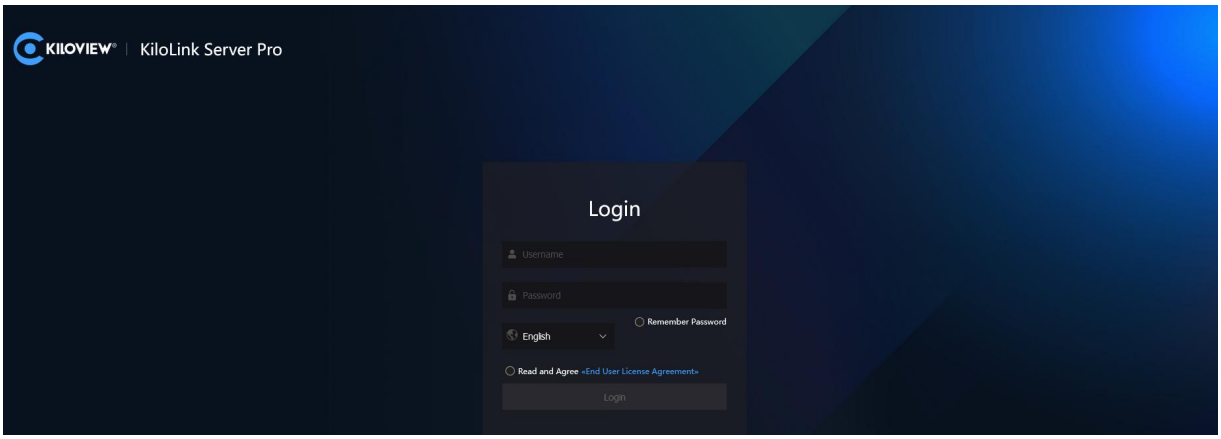
1) Open your browser: It is recommended to use Google Chrome browser, compatible with other browsers such as Firefox, Edge, etc.

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.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English
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