# DOCKER and LINKAR

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# DOCKER AND LINKAR

Back in 2013 Docker started to gain popularity allowing developers to quickly create, run and scale their applications by creating containers. Part of its success is due to being Open Source and the support of companies such as IBM, Microsoft, RedHat or Google. Docker in just two years had been able to turn a niche technology into a fundamental tool available to everyone thanks to its greater ease of use.

Its evolution has been unstoppable, currently representing one of the common mechanisms for deploying software on any server by means of software containers. **Both Docker and Kubernetes, known to be one of the most popular software container managers**, have become the de facto industry standards on their own merits.

Kosday is betting heavily on these technologies by adapting Linkar so that it can be distributed and run in the cloud using these software containers.

In this HowTo we will see how to run a Docker Container with a Linkar instance.

The Docker version of Linkar can be run from any Docker Linux system. It is also possible to run it from Docker Desktop Windows through Windows Linux Subsystem (WSL 2).

## Step 1. Download Image

The official Docker image of Linkar is published on *dockerhub*:

https://hub.docker.com/r/kosday/linkar-suite.

If you already have a Docker platform running, you can download the image with the following command:

```
docker pull kosday/linkar-suite:x. y.z
```

Where $x.y.z$ will be the version numbers, for example, the first released Docker version of Linkar is 2.2.1.

## Step 2. Running Linkar

Use the following command to create a Docker Container with Linkar:

```
docker run -d
 -v /mnt/c/C/CfgLinkarDocker:/etc/KOSDAY/LinkarSuite
 -v /mnt/c/LogLinkarDocker:/var/KOSDAY/LinkarSuite
 -p 30201:11201
 kosday/linkar-suite:2.2.1
```

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## Arguments of the run command

- `-d`
  To run the container in the *background*. The container ID is displayed at startup.

- `-v /mnt/c/C/CfgLinkarDocker:/etc/KOSDAY/LinkarSuite`
  This option allows you to link the internal directory, in this case, the Linkar configuration directory "*/etc/KOSDAY/LinkarSuite*" with an external directory on the host computer of the Dockers system, in this case, the directory "*/mnt/c/CfgLinkarDocker*".

  The directory "*/mnt/c/C/CfgLinkarDocker*", on a Windows Linux subsystem (WSL 2) would be the directory "*CfgLinkarDocker*" on disk "*C:*".

  It is recommended to run the container with this argument, because if configuration changes are made from Linkar Manager, they will be reflected in the external directory. Otherwise, once the container is stopped (`docker stop`) all the changes made will be lost.

  When the external directory does not exist, it is created. If it already exists, its contents will be available in the internal directory of the container.

- `-v /mnt/c/LogLinkarDocker:/var/KOSDAY/LinkarSuite`
  This argument does the same as the previous one but with the directory where Linkar stores the logs and statistics files.

  This argument should be specified if, once the container is stopped, you want to keep the logs and statistics files.

- `-p 30201:11201`
  This argument is used to redirect the internal Linkar port "*11201*" to the external port of the host computer "*30201*". The way to access the configuration and management of Linkar Server (the process that manages client connections to the Databases) is through Linkar Manager. Linkar Manager is an ASP .NET Core application that is listening on port 11201. But Linkar Manager is running inside a container. So it is necessary to redirect the internal port of the container, to an external port of the host computer, so that, from a web browser on the host computer, Linkar Manager can be accessed through the external port.

  In the same way, it will be necessary to include more "*-p*" arguments with the ports of access to the EntryPoints. In this way, from the host it would be possible to use client software to access the Databases through the EntryPoints.

- `kosday/linkar-suite:2.2.1`
  This argument is the image we want to execute.

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## Step 3. Linkar activation and start-up

If the container has been executed as mentioned in the previous section. It is possible to access Linkar Manager, and therefore Linkar configuration using any web browser, and access the following url:
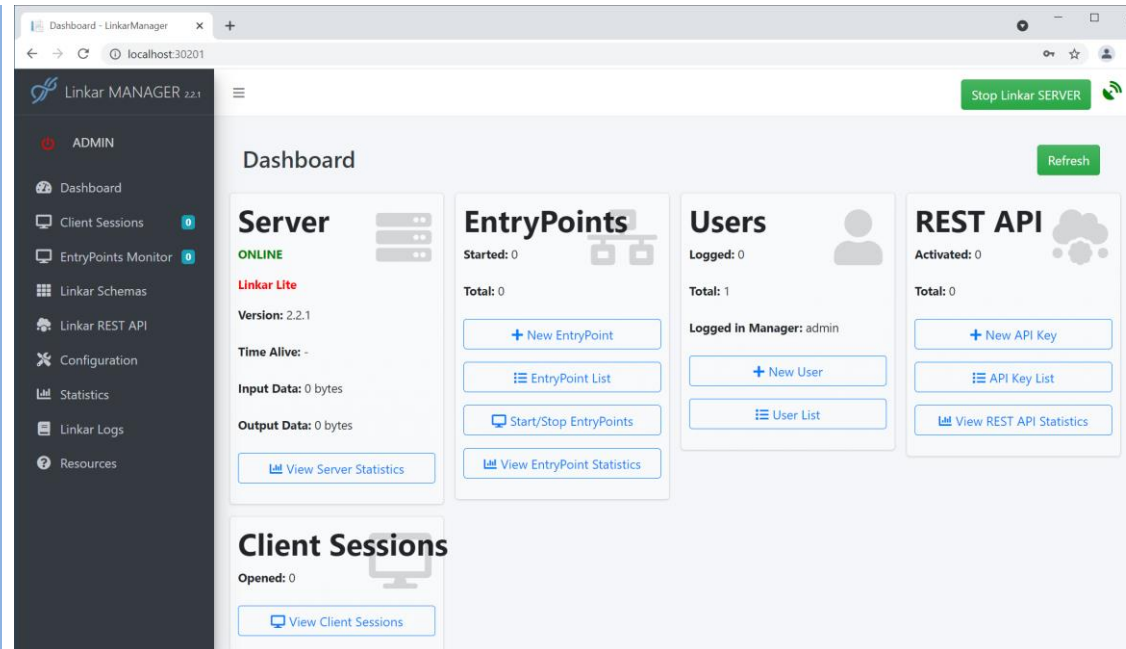
http://localhost:30201

The default user name ("User") is "admin" and the password ("Password") is also "admin".
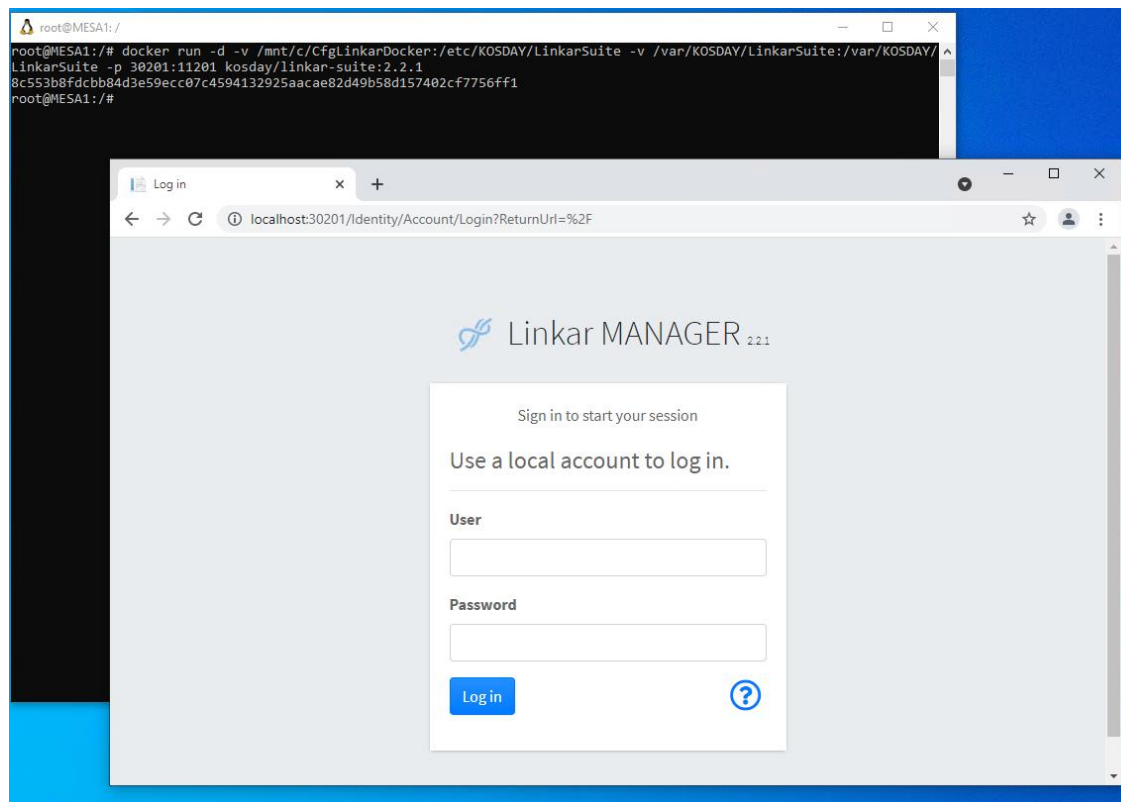


Once the credentials have been entered, the "Dashboard" section will be displayed where it can be seen that this is a "Lite" version.

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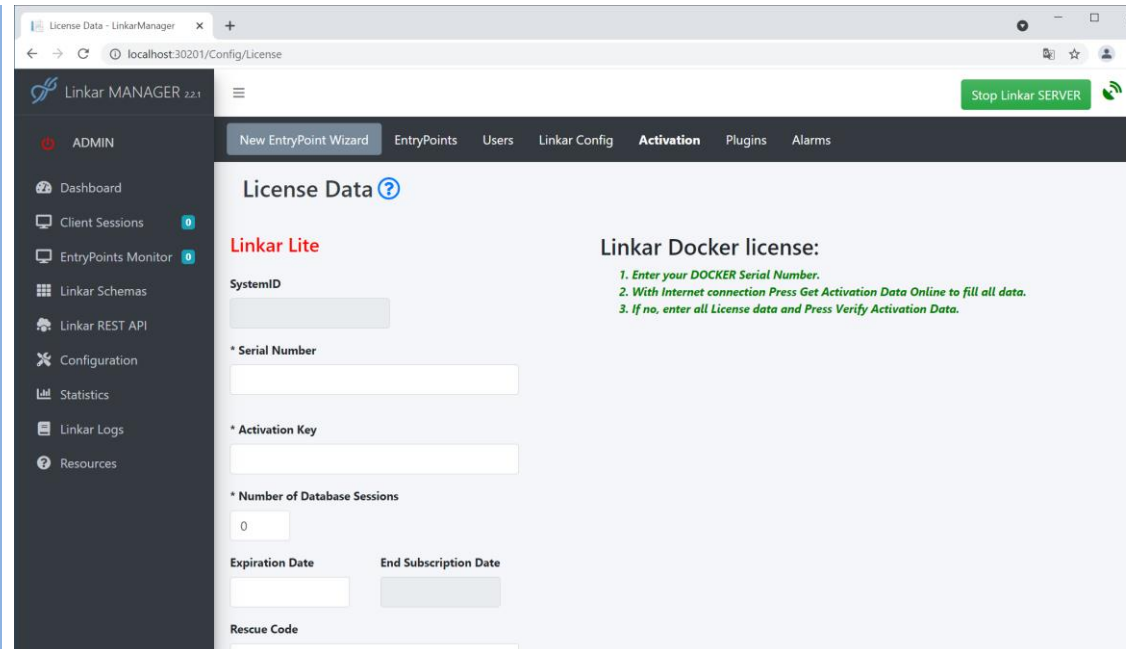www.kosday.com

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By accessing the "Configuration" section and from there the "Activation" tab, you can activate the Evaluation License or the DOCKER License.
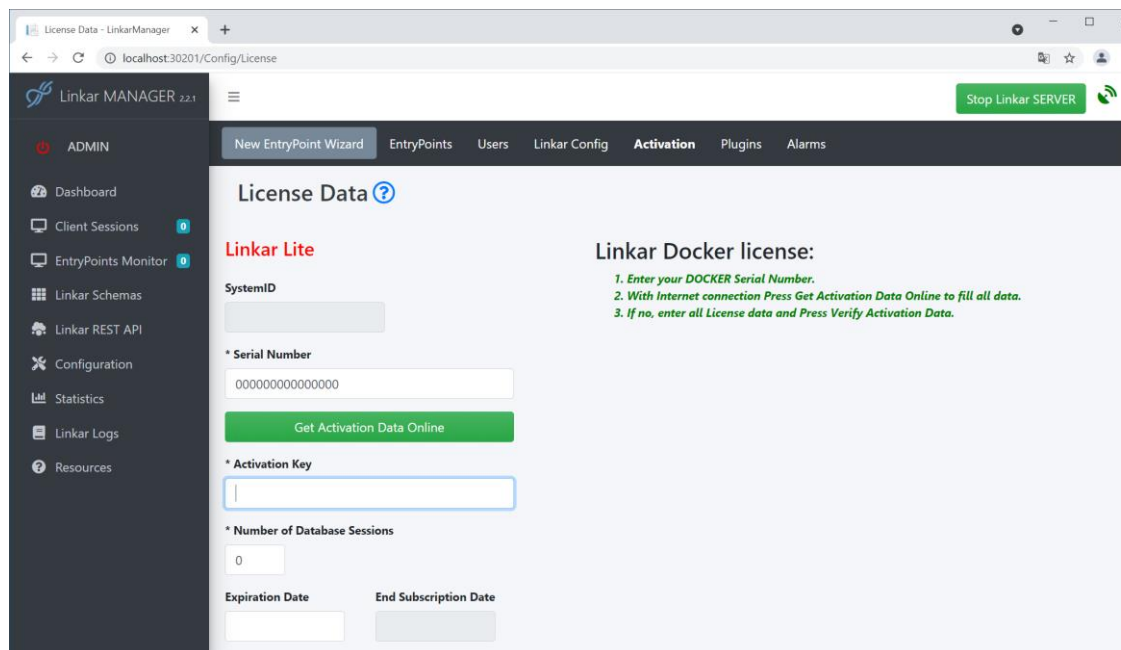
In Docker Linkar, only evaluation licenses or DOCKER licenses are allowed. These licenses must be requested by email (sales@kosday.com).

Initially on first installation, Linkar will be unactivated, but shows a Lite License. However, in Docker, this Lite License is not functional. You will be able to perform all kinds of configuration tasks such as creating Profiles, EntryPoints, and LoginString to connect to the Databases, test the connections to the Databases, etc. You will also be able to activate Evaluation Licenses and DOCKER Licenses. But you will not be able to open an EntryPoint, and therefore the clients will not have access to the Databases until a valid License is activated.

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Enter in the "Serial Number" field the code provided to you by the sales department (sales@kosday.com). Press the "Tab" key and the "Get Activation Data Online" button will be displayed. It is not necessary to enter the "Activation Key" field or any other data.

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Just click on the "Get Activation Data Online" button and you will receive all the activation data and Linkar will be activated with the Evaluation License or DOCKER License.
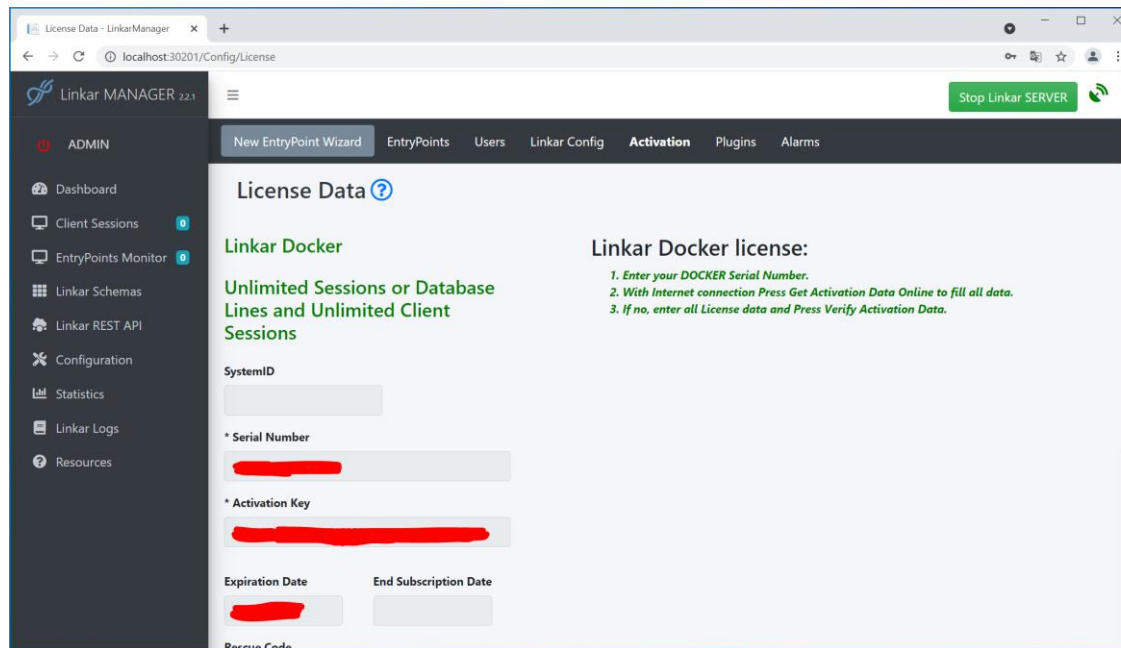


Linkar is now fully functional. Remember that all this activation data, along with all the configuration, is stored in files inside folders internal to the container and that unless you have run the container with the -v option to link the internal configuration directory to an external one on your host computer, all this information will be lost the moment the container is stopped.

With your Evaluation License or DOCKER License you can run as many containers as you want without any restrictions. Contact the sales department to request these licenses (sales@kosday.com).

## Step 4. Stopping EntryPoints, LinkarServer and Container

Through a web browser, via Linkar Manager, it is possible to stop and start the EntryPoints. It is also possible to stop and restart the Linkar Server process. All this can be done using the buttons on the Linkar Manager interface.

It is also possible to perform these tasks using the Linkar Manager API.

But the most common way is to execute the following command:

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```
docker stop <containerID>
```

This command allows you to stop in an orderly manner all processes that Linkar Server has open. The database lines will be closed, the EntryPoints will be closed, the final statistics will be saved, and finally the Linkar Server service will be stopped.

If you choose to run the docker kill command, it will automatically stop the container as if you had turned off the power without an orderly shutdown.

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# THANK YOU

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