Linkar Suite

Configuring Apache for use with Linkar Suite 2.0 on Linux

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Linkar Manager uses the *Microsoft's Kestrel* web server internally for **Linkar Server** configuration, **Linkar Rest API** *Api Keys* creation, **REST API** request management, **Linkar Server** monitoring, etc.

To access the described services from the outside, with special emphasis on the web services that use **Linkar REST API**, we can configure our network (firewalls, VPN, etc.) allowing access to the IP address defined in "*Linkar Server IP or Hostname*" and the port defined in "*Port to access Linkar Manager*".

However if we already have **Apache** installed and configured in our infrastructure, we can configure it to run all these services from it.

In this way, we can conveniently configure the Website from the Apache administrator, and use it to stop and start **Linkar Manager**, manage access links and SSL certificates, etc.

Through this guide, you will learn how to configure Apache as a reverse proxy server on CentOS 7 / RHEL 7 / Fedora and Ubuntu to redirect HTTP traffic to the **Linkar Manager** application running on the Kestrel server.

The following link shows this in more detail.

https://docs.microsoft.com/en-us/aspnet/core/host-and-deploy/linux-apache?view=aspnetcore-3.1

Previous requirements

- Have Linkar Suite installed.
- Have Apache installed.
- Tested in CentOS7, RHEL 7 and Ubuntu 18.

Set up a reverse proxy for redirection in Apache

A reverse proxy is a common configuration used to work with dynamic web applications. The reverse proxy ends the HTTP request and forwards it to **Linkar Manager**.

A proxy server is one that forwards client requests to another server instead of itself. Reverse proxies forward them to a fixed destination, usually on behalf of arbitrary clients. In this guide, we will configure Apache as a reverse proxy running on the same server as the **Linkar Manager** application.

For this example, we will create the "mylinkarsuite.com" site on port 80 that will redirect requests to 127.0.0.1 on port 11201; the latter are the values that we have established in the Linkar Manager configuration.

Configuring Apache for use with Linkar Suite 2.0 on Linux

First, we must make sure we have the necessary modules installed in Apache to manage the redirection.

CentOS 7 / RHEL 7 / Fedora

```
sudo yum install mod_rewrite
sudo yum install mod_proxy
sudo yum install mod_proxy_http
sudo yum install mod_headers
sudo yum install mod_ssl
```

Ubuntu

```
sudo a2enmod rewrite
sudo a2enmod proxy
sudo a2enmod proxy_http
sudo a2enmod headers
sudo a2enmod ssl
```

To create the reverse proxy in Apache, we will only have to create the following configuration file.

CentOS 7 / RHEL 7 / Fedora

```
/etc/httpd/conf.d/mylinkarsuite.conf
```

Ubuntu

```
/etc/apache2/sites-enabled/mylinkarsuite.conf
```

with this content:

```
<VirtualHost *:*>
   RequestHeader set "X-Forwarded-Proto" expr=%{REQUEST_SCHEME}
</VirtualHost>

<VirtualHost *:80>
   ProxyPreserveHost On
   ProxyPass / http://127.0.0.1:11201/
   ProxyPassReverse / http://127.0.0.1:11201/
   ServerName mylinkarsuite.com
   ServerAlias *.mylinkarsuite.com
   ErrorLog ${APACHE_LOG_DIR}mylinkarsuite-error.log
   CustomLog ${APACHE_LOG_DIR}mylinkarsuite-access.log common
</VirtualHost>
```

We set the IP / Port to which we want to redirect in the *ProxyPass* and *ProxyPassReverse* fields, in our case 127.0.0.1 and port 11201, which are the values established in the Linkar Manager configuration. If you have other values defined in your configuration, you should use yours.

In *ServerName* and *ServerAlias* we put the domain name corresponding to the site from which we will receive the requests, which in our case is **mylinkarsuite.com.**

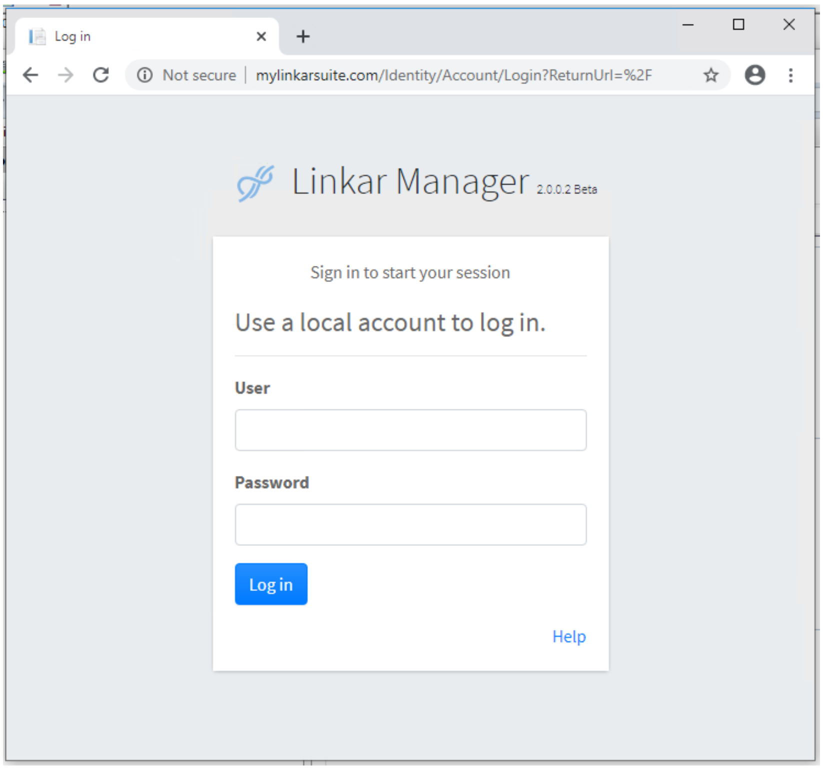
Configuring Apache for use with Linkar Suite 2.0 on Linux

It is important to restart the **Linkar Manager** and **Apache** services (httpd or apache2) when we make a configuration change.

Accessing Linkar Manager from the new site

Once this is done, we can access **Linkar Manager** from the website we have just created:

http://mylinkarsuite.com.



Log in
Not secure
mylinkarsuite.com/Identity/Account/Login?ReturnUrl=%2F
Linkar Manager 2.0.0.2 Beta

Sign in to start your session

Use a local account to log in.

User

Password

Conclusions

With these simple steps, you can configure your **IIS** web server to manage **Linkar Manager**. You will be able to make use of the functionalities offered by this web server and add **Linkar Manager** as one more website within your web server (Apache). In the same way, you can use web services with **Linkar REST API**.

Configuring Apache for use with Linkar Suite 2.0 on Linux

The use of **Apache** allows us to unlink the IP / Hostname that we have configured for **Linkar Server** from the one used to access the **Linkar Manager** and the **Linkar REST API**.

Here are some combinations that you can configure on your server and what you get with them:

- From Kestrel limit access to Linkar Server / Manager from Linkar Manager configuration (Linkar config.xml) :

    - Local Linkar Server local: If the Linkar server IP or hostname is 127.0.0.1 or localhost, we will ensure that only Linkar clients on the same machine can access it.
    - Private Linkar Server: If the Linkar Server IP or Hostname is a Private IP or a hostname that resolves to a Private IP, we will ensure that only Linkar clients within the same network can access the Linkar Server. This requires the firewall to be configured to allow access from other external computers to the network. It may also require the firewall of the computer where the Linkar Server is hosted to be configured.
    - Public Linkar Server: If the Linkar Server IP or Hostname is a Public IP or a hostname that resolves to a Public IP, we will ensure that any client can access the Linkar Server from anywhere. This may require the firewall to be configured to allow access.

- Once we have established one of the previous options, we can allow Access to Linkar Manager from Apache modifying the ProxyPass and ProxyPassReverse properties:

    - Local Linkar Server/Manager: We can allow public access to Linkar Manager via Apache to a Linkar Server / Manager configured as local by redirecting to IP 127.0.0.1 or the localhost host.
    - Private Linkar Server/Manager: We can allow public access to Linkar Manager via Apache to a private Linkar Server / Manager and redirecting the requests to the IP of the Linkar Manager private network.

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    - Public Linkar Server/Manager: In this case, Linkar Manager is already listening to requests from outside. If we want to have another access point, we can allow public access to Linkar Manager via Apache to a public Linkar Server / Manager and redirect the requests to the Linkar Manager public IP.

THANKS

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