



Web



Deployment



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Scale PSPDFKit Server deployments



PSPDFKit Server has been deprecated and replaced by [Document Engine](#). To migrate to Document Engine and unlock advanced document processing capabilities, refer to our [migration guide](#). Learn more about these enhancements on our [blog](#).

PSPDFKit Server supports horizontal scaling via connecting multiple server nodes to your Postgres database.

This allows you to scale PSPDFKit Server in cloud environments like Amazon EC2 Container Service (ECS), [Azure Kubernetes Service \(AKS\)](#), and [Google Kubernetes Engine \(GKE\)](#). Deployments as a pod in a [Kubernetes](#) environment, on [Docker Compose](#), or to [Docker Swarm](#) are also fully supported.

Whenever you start a new PSPDFKit Server node and connect it to your existing database, it will register itself with your database, and from then on, it will automatically receive and broadcast updates of all the changes made to your documents.

Configuration

Please note that all nodes have to use the same configuration. Always check `docker-compose.yml` to verify the configuration. Please also ensure all nodes are running the same PSPDFKit Server version.

! Important: Since the local asset storage backend stores all assets within a Docker instance, it doesn't work with the deployment of multiple nodes. Please migrate to S3 or to our built-in



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storage backend before deploying multiple nodes. See our guide on [storage migration](#) for information on how to migrate your asset storage backend.

Load balancing

We recommend using a load balancer to distribute clients across your nodes.

Cloud deployments

You can use load balancing solutions from your cloud platform provider:

- ✦ [AWS](#)
- ✦ [Google Cloud](#)
- ✦ [Azure](#)

Custom deployments

You can use [nginx load balancing](#). If you're using Docker Compose, you can start by adding a new service configuration:

```
1  nginx:
2    image: nginx
3    volumes:
4      - ./nginx.conf:/etc/nginx/nginx.conf:ro
5    command: [nginx, "-g", "daemon off;"]
6    depends_on:
7      - pspdfkit
8    ports:
9      - 8000:80
```

The configuration mounts an `nginx.conf` file. A minimal version of that file could be:

```
1  user  nginx;
2  worker_processes  2;
3
4  events {
5      worker_connections 500;
6  }
```

```

7 http {
8     access_log /dev/stdout;
9     error_log /dev/stderr;
10
11     server {
12         listen 80;
13         resolver 127.0.0.11 valid=5s;
14         set $upstream pspdfkit;
15
16         location / {
17             proxy_pass http://$upstream:5000;
18             client_max_body_size 2048m;
19             proxy_http_version 1.1;
20             proxy_set_header Upgrade $http_upgrade;
21             proxy_set_header Connection "Upgrade";
22         }
23     }
24 }

```

In the configuration, instruct nginx to resolve the `pspdfkit` upstream via Docker's built-in DNS, which returns the IP address of one of the running `pspdfkit` containers. You can read more about resolvers and their limitations in the [nginx documentation about resolvers](#).

Finally, you need to change the `ports` definition in the `pspdfkit` container definition in `docker-compose.yml` to avoid port clashing on the host machine:

```

1 pspdfkit:
2     ports:
3         - "5000"

```



After making these changes, you should be able to call `docker-compose up --scale pspdfkit=3` and open the dashboard at `http://localhost:8000/dashboard`. If you look at the Docker Compose logs, you should see HTTP replies from different PSPDFKit Server instances.

Dashboard

The dashboard shows you all of the currently connected nodes, along with their IDs, PSPDFKit Server versions, IP addresses, and times of first connection.



SERVER

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SUPPORT

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Nodes

PSPDFKit Server supports multiple nodes connected to the same database, with each node being able to handle communication with clients and processing PDFs while simultaneously staying synchronized with all other nodes. To learn how to set up multiple nodes, please check our [guides](#).

ID	Version	IP Address	Connected at	Status
xb5so6m8xy4seamwxf1un	2017.7.0	172.20.0.2	2017-10-24 09:46	✓

You currently have 1 nodes of licensed nodes online.

Caching

Check out the [Cache](#) guide for more information on how to improve caching in a PSPDFKit Server setup with multiple nodes.

Licensing

Your license will define the number of servers that can be used. If you have questions, please [contact](#) our sales team for details.

Was this helpful?

✓ YES

✗ NO

Questions? [Contact us](#)

