

# Galigeo Print Server - Docker Image Installation Guide

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## Introduction

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In this chapter:

Public concerned by this guide

Document goal

Reading conventions

## About this document

Galigeo Print Server is a third party component of the Galigeo platform. It is a ready-to-use Docker image: **galigeo-print-server.tar**.

Galigeo Print Server installation is optional:

- Galigeo Print Server is needed for WebI PDF scheduling with Galigeo maps.
- It is not needed for Galigeo PDF printing or WebI PDF export with Galigeo maps.

## PUBLIC CONCERNED BY THIS GUIDE

This document is aimed at technical persons in charge of the preparation and execution of the Galigeo platform installation as well as persons doing the exploitation.

## DOCUMENT GOAL

This document presents the technical architecture of the Galigeo Solution. It describes the technical pre-requisites and the installation steps of the Galigeo Print Server.

The installation steps of the Galigeo Core Server, is described in a separate [installation guide](#).

## READING CONVENTIONS



*Steps to follow*



*Notice*



*Advice*



*Careful*



*Example*

## Chapter 1: Pre-requisites

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In this chapter:

[Architecture Schema](#)

[Galigeo Print Server](#)

[Network](#)

## 1.1 Architecture Schema

### GENERAL ARCHITECTURE

Galigeo is designed as an n-tiers, client-server, architecture deployed on Intranet/Internet:

- The top most layer is the “**presentation tier**” or the user interface. The Galigeo user interface is a thin Internet remote client.
- The “**application tier**” or the business logic tier consists of the WebIntelligence BI server, **Galigeo Server**, and optionally: **Galigeo Print Server** (and/or ArcGIS Server). This tier controls the data exchange and connections between the presentation tier and the data tier (described below). **Note that the** WebIntelligence server also controls the authentication/access through BusinessObjects security model.
- The last layer is the “**data tier**” with database servers where information is stored in and retrieved from DBMS.

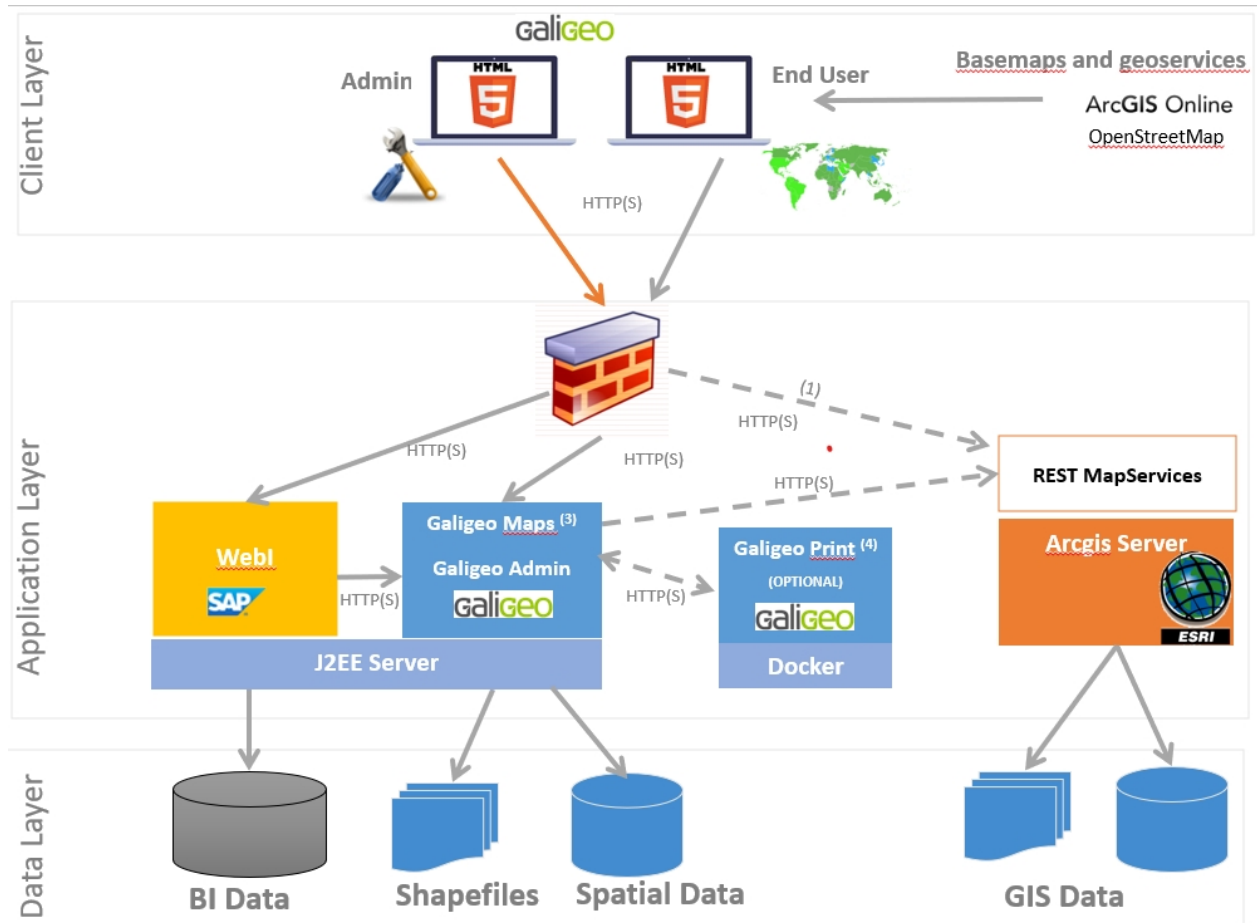
The complete architecture includes the tools for managing and administering this system: The Galigeo Administration console, BusinessObjects Central Management Console and Designer.

Galigeo Server webapp is deployed in BOE Tomcat Server. Galigeo Print Server Docker image is deployed in Docker at a dedicated server.

Galigeo Print Server installation is optional:

- Galigeo Print Server is needed for WebI PDF scheduling with Galigeo maps.
- It is not needed for Galigeo PDF printing or WebI PDF export with Galigeo maps.

## ARCHITECTURE SCHEMA



- (1) Optional - Used by the user if the basemaps are stored on a local Arcgis Server
- (3) Optional - Galigeo Maps needs to access arcgis.com for isochrones calculations
- (4) The optional Print Server is used for PDF report scheduling. It needs to have access to the basemap server.

## 1.2 Galigeo Print Server

Galigeo Print Server is a ready-to-use Docker image that communicates with the Galigeo Server that is deployed in BOE Tomcat at BI Server.

Item	Pre-requisite	Notices	Check test
<b>Docker Host OS</b>	<b>Linux with Docker</b> <b>Windows with Docker Desktop</b>	NA	Check Docker supported platforms at <a href="https://docs.docker.com/engine/install/">https://docs.docker.com/engine/install/</a>
<b>Docker</b>	<b>Docker 24.0.2 to 27.4.0</b>	NA	<p><i>In Command-Line Interface, type : <b>docker version</b></i></p> <p><b>Example</b> of expected result:</p> <pre>Client: Docker Engine - Community Version:      24.0.2 API version:  1.43 Go version:   go1.20.4 Git commit:   cb74dfc Built:        Thu May 25 21:52:17 2023 OS/Arch:     linux/amd64 Context:     default  Server: Docker Engine - Community Engine: Version:      24.0.2 API version:  1.43 (minimum version 1.12) Go version:   go1.20.4 Git commit:   659604f Built:        Thu May 25 21:52:17 2023 OS/Arch:     linux/amd64 Experimental: false containerd: Version:      1.6.21 GitCommit:   3dce8eb055cbb6872793272b4f20 runc: Version:      1.1.7 GitCommit:   v1.1.7-0-g860f061 docker-init: Version:      0.19.0 GitCommit:   de40ad0</pre>
<b>Galigeo Server</b>	<b>Galigeo for WebI G23 or G24</b>	Galigeo Server runs within BOE Tomcat at SAP BI Server	<p><i>Connect to the Galigeo Administration Console and check Galigeo version on the welcome page.</i></p> <p><b>Ex:</b> <a href="http://boe-srv:8080/Galigeo">http://boe-srv:8080/Galigeo</a></p> <p><i>Or check the detailed Galigeo version at the following URL:</i></p> <p><b>Ex:</b> <a href="http://boe-srv:8080/Galigeo/version.xt">http://boe-srv:8080/Galigeo/version.xt</a></p>
<b>Galigeo</b>	Administrat or account	NA	<i>See above</i>



<b>Administrator account</b>	is needed for configuration in Galigeo Administration Console		
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## 1.3 Network

This table lists the ports used in the communication between Galigeo Server and Galigeo Print Server. The ports must be available from the calling application, which might in some cases require some firewall adjustment.

**The communication between Galigeo Server and Galigeo Print Server is bi-directional.**



The default port values might be different in the real situation.

Port	Protocol	Opened on	Used by	Default Value	Firewall rule
<b>Galigeo / BI Tomcat port (Business Intelligence)</b>	HTTP(S)	BI Server + Galigeo Server	<ul style="list-style-type: none"> <li>- BI Server (<i>from BI server to GGO server as a WebI Custom Element</i>)</li> <li>- Galigeo Client (<i>from client to BI server</i>)</li> <li>- Optional: Galigeo Print Server (<i>to Galigeo Server</i>)</li> </ul>	8080	If Galigeo Print Server is deployed, open in the direction Galigeo Print Server → Galigeo Server
<b>Galigeo Print Server http port</b>	HTTP(S)	Galigeo Print Server	Galigeo Server ( <i>to Galigeo Print Server</i> )	3000	Open in the direction Galigeo Server → Galigeo Print Server

## Chapter 2: Deploy and Run Galigeo Print Server

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In this chapter :

[Where the deployment takes place?](#)

[Deploy & Run Galigeo Print Server](#)

[Declare Print Server in Galigeo Admin](#)

[Frontal Web Server](#)

[Stop/Start galigeo-print-server container](#)

## 2.1 Where the deployment takes place?

**We recommend to deploy Galigeo Print Server on a dedicated server that runs Docker.** We recommend this server to be distinct from BOE/Galigeo Server.

Most of the steps involves your favorite Command-Line Interface (CLI) depending on Docker Host OS. **Ensure that you have appropriate permissions to execute docker.**

## 2.2 Deploy & Run Galigeo Print Server

- Copy **galigeo-print-server.tar** Docker image, from **GaligeoPrintServer\_DockerImage.zip** package, in a folder, somewhere on the server
- In CLI navigate to the above folder
- Load Galigeo Print Server image in Docker:  
**docker load -i galigeo-print-server.tar**
- Run it in docker as a container:  
**docker run -p 3000:3000 galigeo-print-server**
- Check that Galigeo Print Server is up and running:
  - In your favorite browser use URL **http://<print-server-name-or-ip>:3000/alive**
  - The browser output should be: ***{"message":"Galigeo Print Server is up and running on container port 3000"}***
- The print server URL is **http://<print-server-name-or-ip>:3000/print**. To be declared in Galigeo Administration (see chapter "[Declare Print Server in Galigeo Admin](#)")

**Notice:** print server uses HTTP protocol. Switching to HTTPS can be done using a frontal web server (see chapter "[Frontal Web Server](#)")

**Notice** about **docker run** command. The generic command is:

**docker run -p <HOST\_TCP\_PORT>:<CONTAINER\_TCP\_PORT> galigeo-print-server**

- **-p** option binds **<HOST\_TCP\_PORT>** to **<CONTAINER\_TCP\_PORT>**
- **<CONTAINER\_TCP\_PORT>** is always **3000** and cannot be changed
- **<HOST\_TCP\_PORT>** can be changed if you want to expose on a different free port than 3000 (default value).



For example, to expose on port **80**:

- The command is: **docker run -p 80:3000 galigeo-print-server**
- The alive URL is then: **http://<print-server-name-or-ip>:80/alive**
- The print URL is then: **http://<print-server-name-or-ip>:80/print**

## 2.3 Declare Print Server in Galigeo Admin

- Connect to Galigeo Administration Console with Administrator Account:

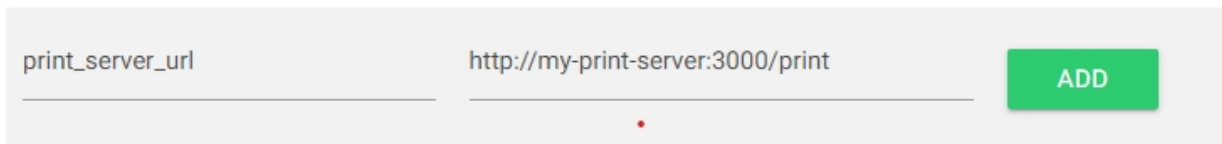
**http://<BOE\_TOMCAT\_SERVER>:<BOE\_TOMCAT\_PORT>/Galigeo**

- Display the (hidden) parameters page:

**http://<BOE\_TOMCAT\_SERVER>:<BOE\_TOMCAT\_PORT>/Galigeo/viewer/admin/admin\_params.jsp**

- At the bottom of the page add the new parameter **print\_server\_url** with value **http://<print-server-name-or-ip>:<print-server-port>/print**

**Example:**



print_server_url	http://my-print-server:3000/print	ADD
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- At any moment the parameter can be updated using amin\_params.jsp page.

## 2.4 Frontal Web Server

Galigeo Print Server can be accessed through a frontal web server with the appropriate proxy/forward/etc rules. For example, to use https protocol with print server URL.



**For example:**

- Alive URL: **https://my.organization.com/alive**
- Print URL: **https://my.organization.com/print**

## 2.5 Stop/Start galigeo-print-server container

In your favorite CLI:

- Get galigeo-print-server <CONTAINER\_ID>:  
**docker ps**  
or  
**docker ps -a -q --filter ancestor=galigeo-print-server**
- Stop galigeo-print-server container:  
**docker stop <CONTAINER\_ID>**
- To (re)start galigeo-print-server container (adapt <HOST\_TCP\_PORT> if different than default **3000** value)  
**docker run -p 3000:3000 galigeo-print-server**

## Chapter 3: Uninstall Galigeo Print Server

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The procedure takes place on Galigeo Print Server using your favorite CLI.

1. **Stop and Remove galigeo-print-server container:**

- Get galigeo-print-server <CONTAINER\_ID>:  
**docker ps**  
or  
**docker ps -a -q --filter ancestor=galigeo-print-server**
- Stop galigeo-print-server container:  
**docker stop <CONTAINER\_ID>**
- Remove galigeo-print-server container:  
**docker rm <CONTAINER\_ID>**

2. **Remove galigeo-print-server image:**

- Get galigeo-print-server <IMAGE\_ID>:  
**docker images galigeo-print-server**
- Remove image from container registry:  
**docker rmi <IMAGE\_ID>**



## Chapter 4: Update an existing installation

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**The procedure takes place on Galigeo Print Sever using your favorite CLI.**

1. Follow the steps from chapter "[Uninstall Galigeo Print Server](#)"
2. Then follow the steps from chapter "[Deploy and Run Galigeo Print Server](#)"

## Chapter 5: Internet Access

If Galigeo Print Server has no internet access, to access internet basemaps configured by default with Galigeo Server, you have to declare the following URLs in the company proxy.

Feature	Domain to be reached through https (or http)	Examples of URLs
Print Base Maps "ArcGIS Online" (All)	<b>server.arcgisonline.com</b>	<b>https://server.arcgisonline.com/ArcGIS/rest/services/World_Imagery/MapServer/tile/3/3/2</b>
Print Base Map "OpenStreetMap"	<b>tile.openstreetmap.org</b>	<b>http://a.tile.openstreetmap.org/3/1/2.png</b> <b>https://c.tile.openstreetmap.org/3/0/2.png</b>
Print Base Map "OpenStreetMap Hot/FR"	<b>tile.openstreetmap.fr</b>	<b>http://c.tile.openstreetmap.fr/hot/3/7/1.png</b> <b>https://a.tile.openstreetmap.fr/osmfr/4/6/6.png</b>
Print Base Maps "Stamen Toner"	<b>stamen-tiles-a.ssl.fastly.net</b>	<b>https://stamen-tiles-c.a.ssl.fastly.net/toner-background/3/4/4.png</b>

**Notice:** For OpenStreetMaps base maps http or https protocol depends whether Galigeo web application is accessed through http or https from client web browsers.

**The command to run galigeo-print-server container is then:**

```
docker run --env "HTTP_PROXY=<HTTP_PROXY_URL>" --env "HTTPS_PROXY=<HTTPS_PROXY_URL>" --env "NO_PROXY=*.test.example.com,.example.org" -p 3000:3000 galigeo-print-server
```

Example:

If company proxy URLs are **http://proxy.example.com:3128** and **https://proxy.example.com:3129** and Galigeo Server URL is **https://internal.organization.com/Galigeo**

```
docker run --env "HTTP_PROXY=http://proxy.example.com:3128" --env "HTTPS_PROXY=https://proxy.example.com:3129" --env "NO_PROXY=internal.organization.com" -p 3000:3000 galigeo-print-server
```

The NO\_PROXY parameter is a coma separated list of hosts that should be reached directly, bypassing the proxy. The patterns may start or end with a '\*' for wildcards.

## Appendix

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In this chapter:

[Docker Logs set up](#)

## Docker Logs set up

Please see [Docker Logs set up](#) at Galigeo Github.