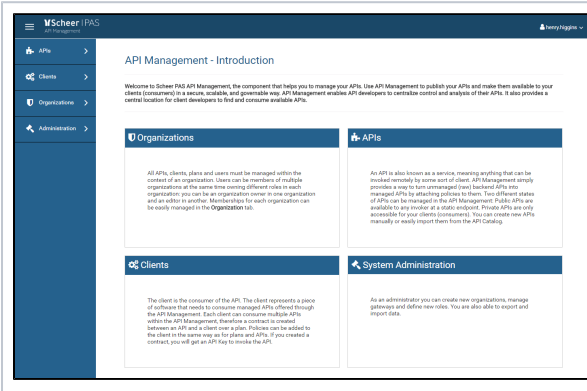
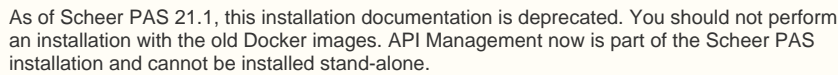


API Management Installation Guide



This guide explains how to install and configure the **Scheer PAS API Management**.

On this Page:

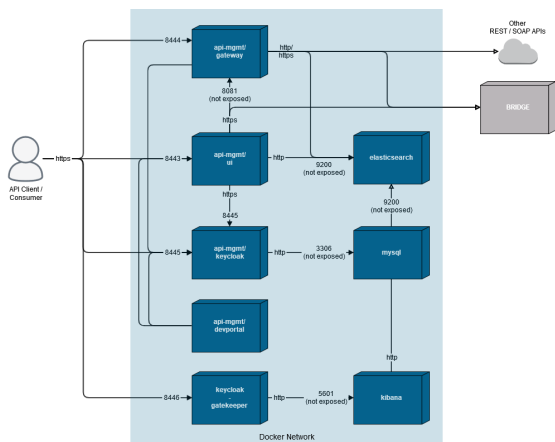
- Overview on the Docker Setup of API Management
 - Overview on the Installation Containers
- System Requirements
- Prerequisites
- Overview on the Installation Process

Related Pages:

- Installing API Management
- Updating API Management
- Troubleshooting the API Management Installation

Overview on the Docker Setup of *API Management*

Have a look at the figure below to get a technical overview on the Docker setup of **Scheer PAS API Management**.



Related Documentation:

- [API Management Release Notes](#)
- [API Management Guide](#)

Elasticsearch:

- Install Elasticsearch with Docker > Notes for production use and defaults
- Setting the heap size

Overview on the Installation Containers

Container Name	Description	Default port
api-mgmt/gateway	This container contains the engine of API Management. It handles all incoming client requests, applies the policies and forwards the requests to the API endpoint. The gateway is powered by Eclipse Vert.x which can handle a lot of concurrency using a small number of kernel threads. Vert.x lets your app scale with minimal hardware.	8444
api-mgmt/ui	This container provides the UI to manage all your APIs and gateways. It also allows you to view corresponding metrics. The UI is powered by Apache Tomcat.	8443
api-mgmt/keycloak	This container contains the authentication provider Keycloak. Keycloak is used to authenticate users of the API Management UI and users of the Keycloak OAuth policy. Keycloak runs on JBoss WildFly.	8445

api-mgmt /devportal	This container contains the Developer Portal. Using the Developer Portal, you can give clients a consolidated access to the APIs they need in a separate view. It uses Keycloak to authenticate users, and accesses Elasticsearch via the API Management UI container.	8447
elasticsearch	This container contains an official version of Elasticsearch. API Management stores all metrics information and configuration in Elasticsearch.	
mysql	This container contains an official version of MySQL. Keycloak uses MySQL to store users and configurations.	
kibana	This container contains an official version of Kibana. Kibana can be used to create advanced and detailed analyses on API Management Metrics	
keycloak-gatekeeper	This container contains an official version of Keycloak Gatekeeper. API Management uses this container to provide a proxy server in front of Kibana. This way, Kibana access can be granted or restricted for API Management users.	8446

System Requirements

For **Scheer PAS API Management**, you have to consider that there are several components running on the same host (see [Overview on the Installation Containers](#) above). For a lean setup, you should have at least 8 GB of memory available on your API Management host.

Consider around...

- 2 GB for Tomcat
- 1 GB for the Gateway
- 2 GB for Keycloak and MySQL
- 2 GB for Elasticsearch



2 GB for Elasticsearch is the default value. Please refer to the official Elasticsearch documentation for more information on memory usage and how to determine the needs for your setup (see [Install Elasticsearch with Docker > Notes for production use and defaults](#) and [Setting the heap size](#)). You do not need to edit the **docker-compose.yml** to adjust this as we provide a variable in the **.env** file to configure this (see [Installing API Management > Configure the Installation Settings](#)).

Prerequisites

Please consider the following prerequisites regarding **Scheer PAS API Management**.

The software uses [Docker](#) to run.

- The **Docker Community Edition (CE)** (version 18.06 or newer) is sufficient to run the software. The provided Docker containers are Linux containers. Refer to the [Docker documentation pages](#) for more information on supported platforms and how to install Docker.
- As Docker host, we support Linux, namely the following Linux distributions:
 - RedHat/CentOS
 - Ubuntu
- The Docker tool **docker-compose** (version 1.23 or newer) must be installed.

Overview on the Installation Process

To install the **Scheer PAS API Management**, you need to go through the following steps:

1. **Download and Extract the Software**
API Management uses Docker to provide a simple setup which is easy to update and scalable if necessary.
2. **Configure the Installation Settings**
Configure the installation settings in the Docker configuration file.
3. **Prepare the Certificate**
You need a certificate to establish secure connections between clients and API Management,

as well as between the different components of API Management itself. You can use an official certificate, or you can create a self-signed one.

Refer to [Certificates and Keystores](#) for more information on certificate and keystore handling.

4. **Configure the Authentication Service (Keycloak)**

Keycloak is an open source identity and access management solution and is used to create and manage the users of API Management and OAuth2 secured APIs.

Before you can start API Management, you need to change some of the Keycloak settings in the Docker configuration file.

5. **Start All Services**

To start API Management, start all Docker containers.

6. **Login to API Management**

Finally you can log in to API Management and test the connections.