

## REFERECE-FACILITY | 05/2020

### Building Project: Rheinhalle Eggenstein-Leopoldshafen

Renewal of the building management system and portal solution with OAS components and PGA integration services



Figure 1 3D modeling exterior view Rheinhalle

### Project introduction

The Rheinhalle culture and event hall is located on the outskirts of Leopoldshafen. The hall is suitable for a variety of public events. It is approx. 380 m<sup>2</sup> in size and has a stage area as well as the associated dressing rooms, rehearsal rooms and storage rooms.

Commissioned by the municipal administration Eggenstein-Leopoldshafen building and real estate office, PGA replaced the building automation of the ventilation system in the Rheinhalle and extended it within the project. The building automation of the ventilation system in the hall, in the kitchen and the fire protection will be expanded and improved. The portal solution was started and completed in 2020. The project was started in May and ran until July.

### The portal solution

With the PGA WEBvisuPORTAL solution, Rheinhalle opted for our inexhaustible cloud automation solution. The Building Management System (BMS) was connected with our PGA WEBvisuPORTAL solution as well as the remote-control technology was set up on the PGA WEBvisuPORTAL solution. The complete heating and ventilation technology of the Rhine Hall can be operated and monitored via our PGA WEBvisuPORTAL.

Portal software and hosting from a single source offers extensive advantages. With our portal solution, there is no longer any need for a separate server or server structure on site. System failures and data loss of important information are a thing of the past. The Rheinhalle system thus always remains up to date and can be accessed from anywhere. If the Internet fails, the Rheinhalle project has an on-site visualization system on a controller as an emergency control centre. This means that there

is always a backup solution, even if the Internet fails. The time-consuming and cost-intensive care and maintenance of the company's own server is no longer necessary and is provided by a PGA data centre as a service. The data centre is part of the critical infrastructure and is therefore TÜV tested, classified as highly available and ISO27001 certified.

In the course of the Rheinhalle project and the portal solution, alarming compatible with the portal was also integrated. The PGA WEBvisuALARM is a 100% web-based alarm centre for the management of alarms and fault messages. Fault messages and alarms are forwarded with notifications via e-mail or SMS. Emails are sent based on created escalation groups, on-call schedules, and delay times.

## Building automation

For the replacement and renewal, PGA has chosen the BACnet certified (B-BC) controller EAGLE and HAWK. These are equipped with the AMEV test certificate and BTL certificate. A PGA EAGLE, a powerful and Niagara 4-based BACnet® automation device for heating, ventilation and air conditioning (HVAC), and the matching PGA I/O module Panel Bus CLIOP I/O fieldbus modules were installed in the heating center. For the ventilation of the kitchen, hall and shower, a HAWK 8000 (SBS EAGLEHAWK NX automation device) was installed with the latest generation I/O modules from OAS components.

## PGA WEBvisu

The monitoring and operation of individual lights, sliding shutters, heating, cooling, ventilation, and audio is carried out in parallel via the BMS. Furthermore, all maintenance messages and faults from the automation stations are processed and visualized on the BMS. Rheinhalle also decided to create a customized 3D modelling of their Building Management System (BMS).

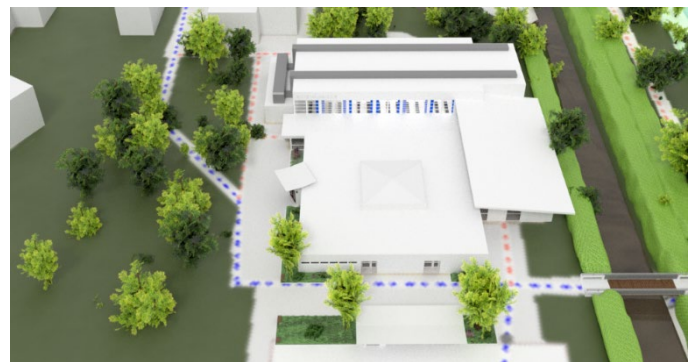


Figure 2 Bird's eye view of the Rheinhalle



Figure 3 Visualization interior view hall with seating

## Implemented products

A total of ten panel bus modules and four SBS IOM I/O field bus modules (for kitchen ventilation and hall ventilation) were installed.

- 3x CLIOPR824: Relay Output Module with Manual Override
- 2x CLIOPR822: Analog Output Module with Manual Override
- 3x CLIOP823: Digital Input Module
- 2x CLIOP821: Analog Input Module
- 1x OAS SBS IOMR 1024: Digital Output Module with Relay Outputs
- 1x OAS SBS IOMR 1025: Digital output module with 2 x 3-point relay outputs
- 1x OAS SBS IOM 1023: Digital / binary inputs
- 1x OAS SBS IOM 1021: Analog input module

Data points: 593 data points total. Almost 600 data points.

Time programs: 14-time programs each in RLT01- hall, RLT02-showers, and RLT03-kitchen.

## Contact

To confirm our declaration, we name as reference giver / contact person:

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Figure 4 The overall complex of the Rheinhalle consists of the large event hall with a separate foyer in front. There is also a fully equipped kitchen.

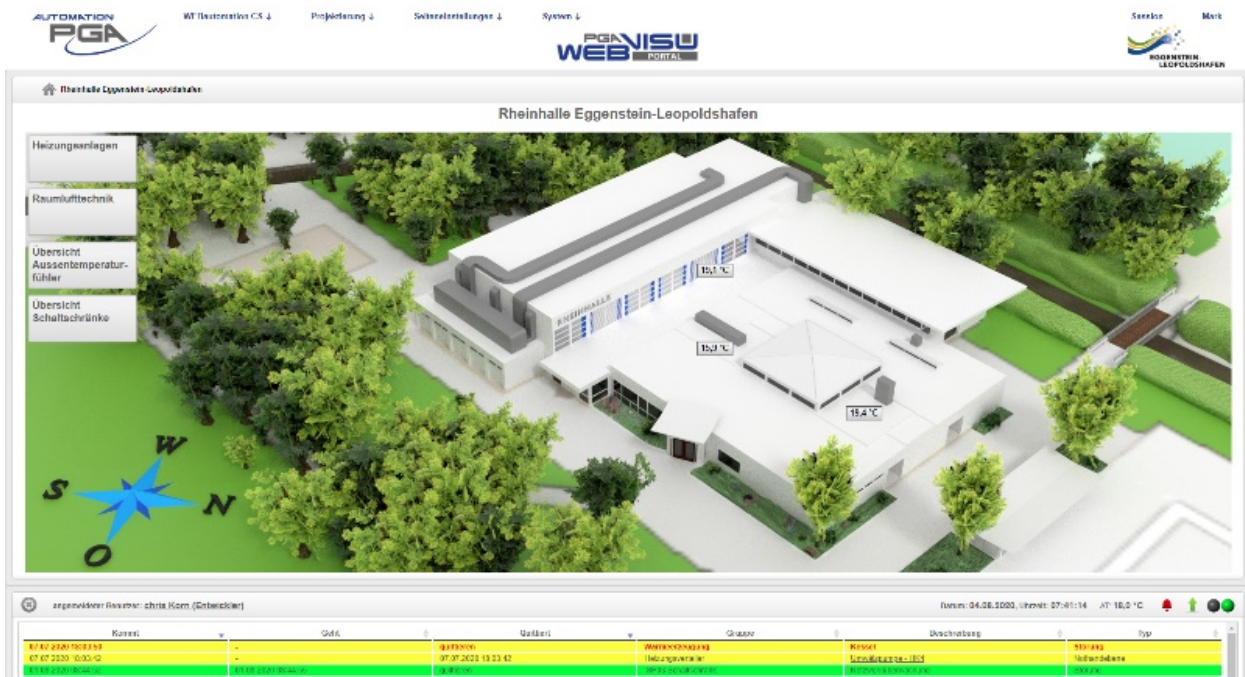


Figure 5 Navigation within the OAS WEBvisuPORTAL



Figure 6 Air handling unit AHU system 1 hall part 2

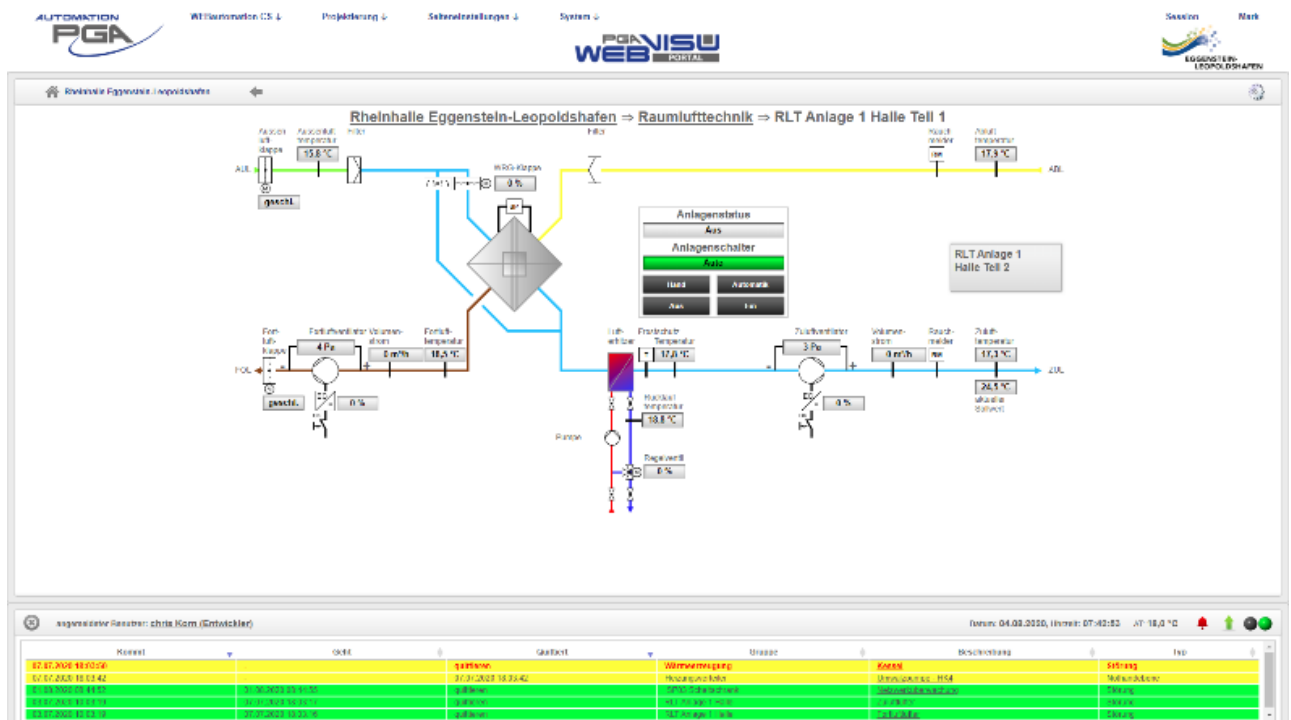


Figure 7 Air handling unit AHU system 1 hall part 1

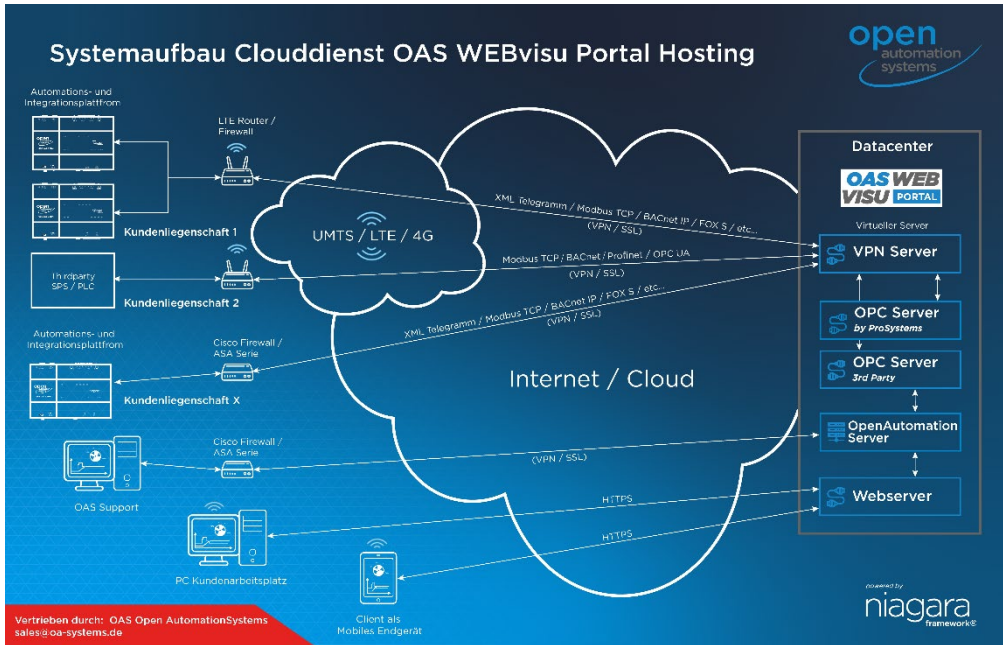


Figure 8 System structure cloud service OAS WEBvisuPORTAL Hosting