JAG PROCESS PLANTS AUTOMATION ROBOTICS

Visualisation module JAG PVI+

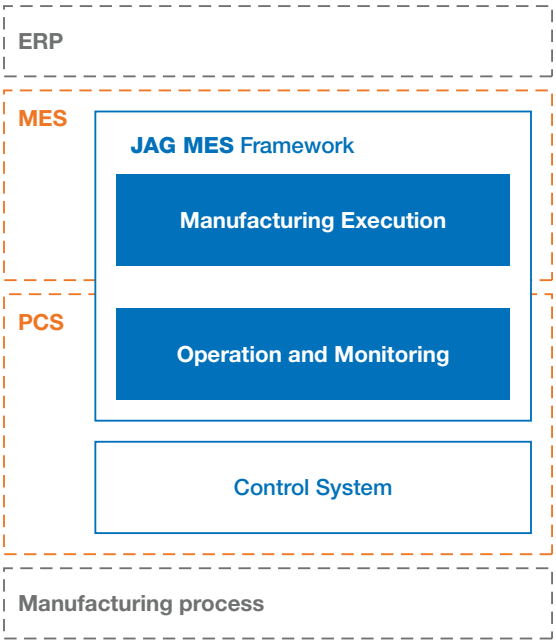
Web-based. Versatile. Future proof.

JAG PVI+ is a web-based, modern visualisation module. It allows building tailormade user interfaces with animated images and interactive dialogs, that guide the operators efficiently.

As JAG PVI+ is part of the JAG MES Framework it can be combined with MES modules for the management of articles, orders, plant parameters, recipes, protocols etc. while using the same user interface.

The management of historical data is ensured by JAG Historian, which is integrated seamlessly. This does not only simplify the engineering and maintenance but is as well the base for innovations like the Replay feature, which allows analysing what happened in the past conveniently by means of selecting a moment in the past and animating the images in timelapse, normal speed or slow motion.

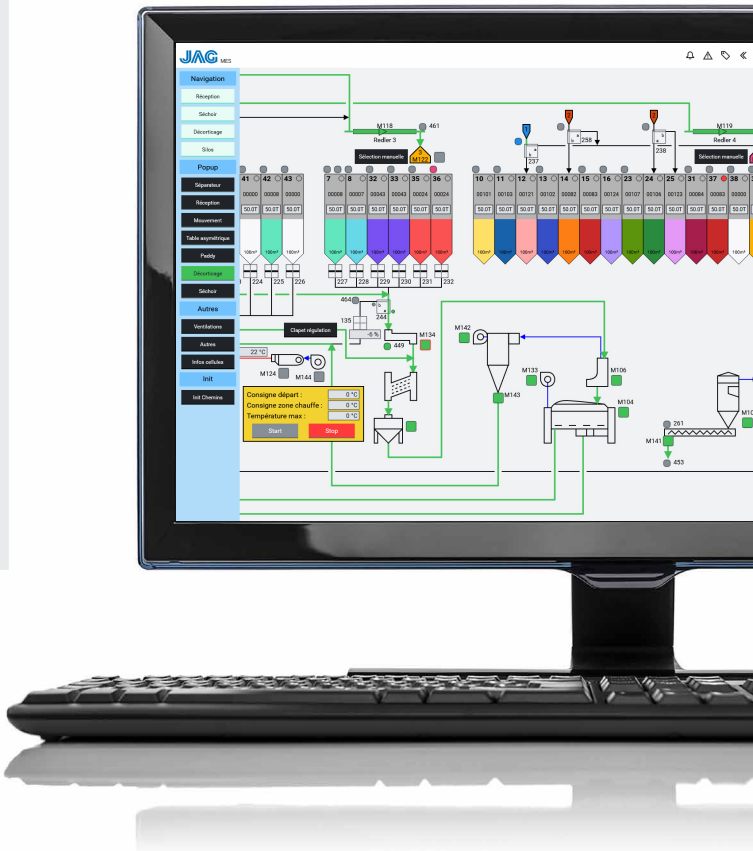
For existing installations JAG PVI+ ensures an efficient migration path for both iFIX- and WebFPS-based visualisations.



Features and benefits

JAG PVI+ offers the following features and benefits:

- » **Web-based architecture**
- » **Is part of the JAG MES Framework and can be combined with MES modules**
- » **Handling of historical data fully integrated**
- » **Innovative Replay feature**
- » **Efficient migration path for existing iFIX- and WebFPS-based installations**
- » **Client virtualization easily possible**



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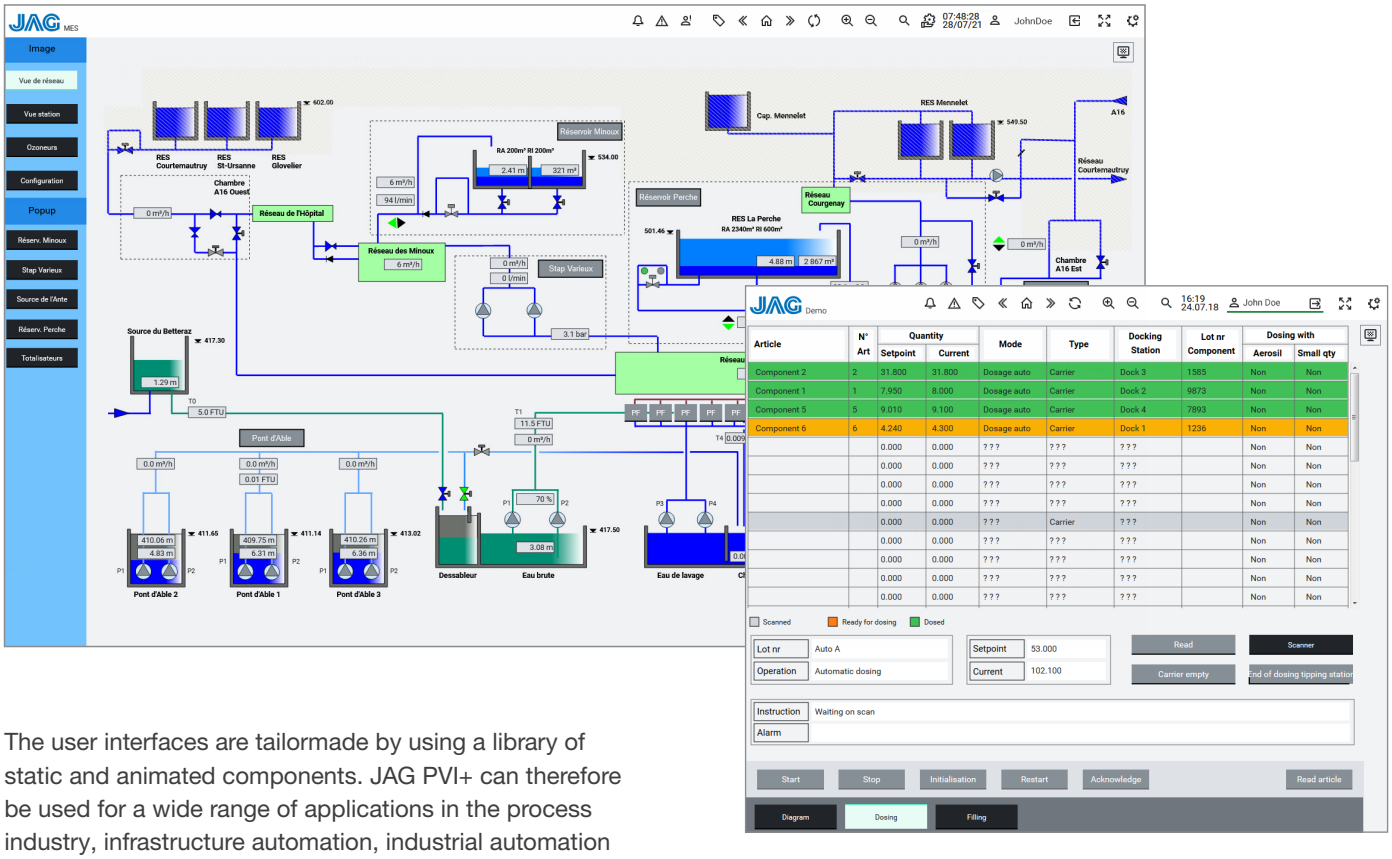
Wide range of applications

Process, industrial and infrastructure automation. Robotics.



The user interfaces are tailormade by using a library of static and animated components. JAG PVI+ can therefore be used for a wide range of applications in the process industry, infrastructure automation, industrial automation and robotics.

Depending on the size of an installation, one or several visualisation images are created. The images can be used to visualize the current state of the plant or machine, for interactive user dialogs, or for a mix of both.

If none of the existing visualisation components matches the specific requirements of a project, new components are added to the library. This flexibility allows us adapting to new fields of application and changing requirements.

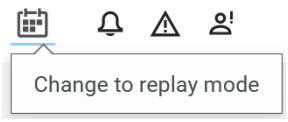
In many industries, the service life of plants and machines far exceeds the typical life of software solutions. Offering migration paths for existing installations is therefore essential. JAG PVI+ can both be used to update existing WebFPS and iFIX-based visualisations.

Visualisations that have been implemented with WebFPS can be updated by simply replacing WebFPS by JAG MES. Existing WebFPS images are compatible with JAG PVI+.

When migrating iFIX-based visualisations, existing iFIX images can be imported to JAG PVI+. This streamlines the task significantly. Project-specific implementaitons such as custom pop-ups, scripts and communication interfaces have to re-implemented during the migration.

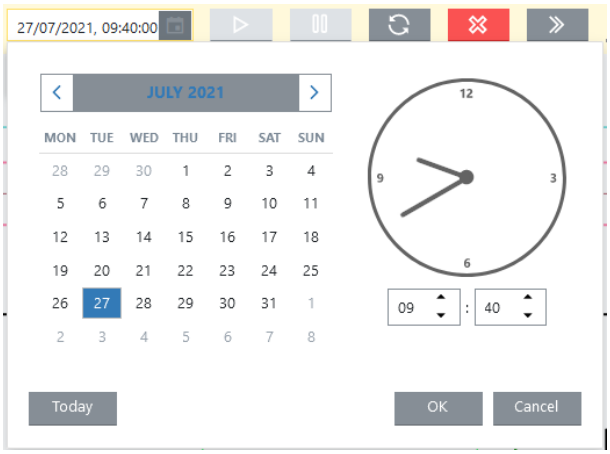
The replay feature.

An animated journey into the past.



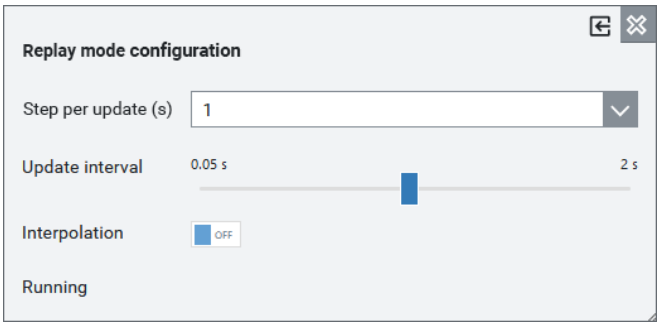
1) Changing to replay mode

The button that allows changing to the replay mode is available in the header.



2) Defining the start time

The next step is to define a moment in the past which is used as start time. After selecting a date and a time the current visualisaton image is updated to reflect the state the plant or machine had at the selected moment.



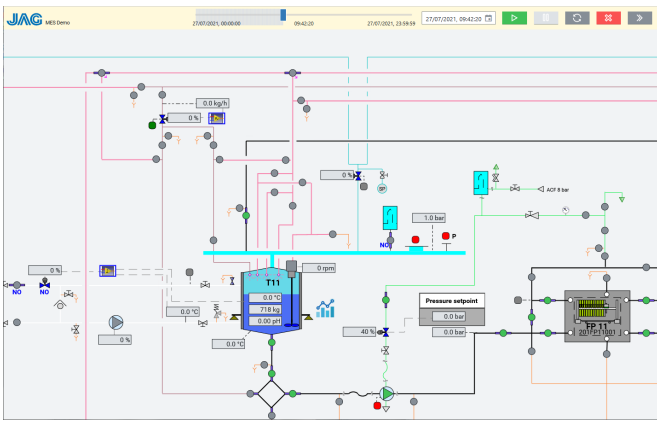
3) Configuring the animation

The images can be animated in timelapse, normal speed or slow motion. The timing depends on two parameters:

Step per update > Update interval : Timelapse

Step per update = Update interval : Normal speed

Step per update < Update interval : Slow motion



4) Running the animation

The animation can be started, paused or closed using the corresponding buttons. The configuration of the animation can be modified anytime to speed up things or have a closer look. This means that analyzing what happened in the past is very simple and efficient.

While the replay mode is active, the header of the visualisation window is tinted in light yellow, so the user is aware that he or she is not seeing the current state of the installation but for a moment in the past.

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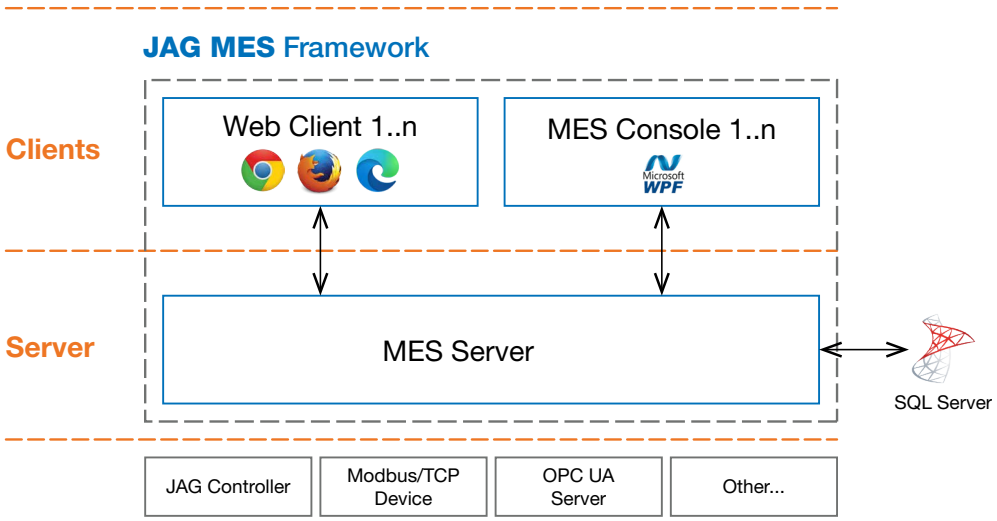
Client / Server architecture.

Built for modularity and extensibility.



JAG PVI+ is the visualisation module of JAG MES and therefore benefits from the up to date architecture and modular design of the JAG MES Framework.

The Client / Server architecture is designed for multiuser environments. Its core is the **MES Server**. It runs as a service and offers a large number of interfaces. OPC UA and Modbus/TCP are the quasi-standards for the data exchange among automation components of different vendors. Other interfaces can be implemented by using LUA scripts, for instance MQTT, REST and WebDAV.

On the Client side there are two alternative options to work with JAG PVI+. In most cases **Web Clients** are used. The advantage of Web Clients is that only a current generation web browser and a network connection to the MES Server is required to get started.

Different types of client devices can be used, for instance mobile tablets, PCs in the LAN or remote PCs connected via VPN.

For customers working with MES Advanced, JAG PVI+ is as well available in the MES Console.

As the MES Framework hosts both the modules for MES and PCS related functions, there are **no complex and unnecessary interfaces** between these application layers. This ensures a seamless information flow across the whole application. For customers that only require a visualisation to start with this means to be future proof, as MES modules can be enabled anytime to cope with new requirements.

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