

Mastering interfaces between #Humans #Systems #Connected things



PcVue

Technical presentation

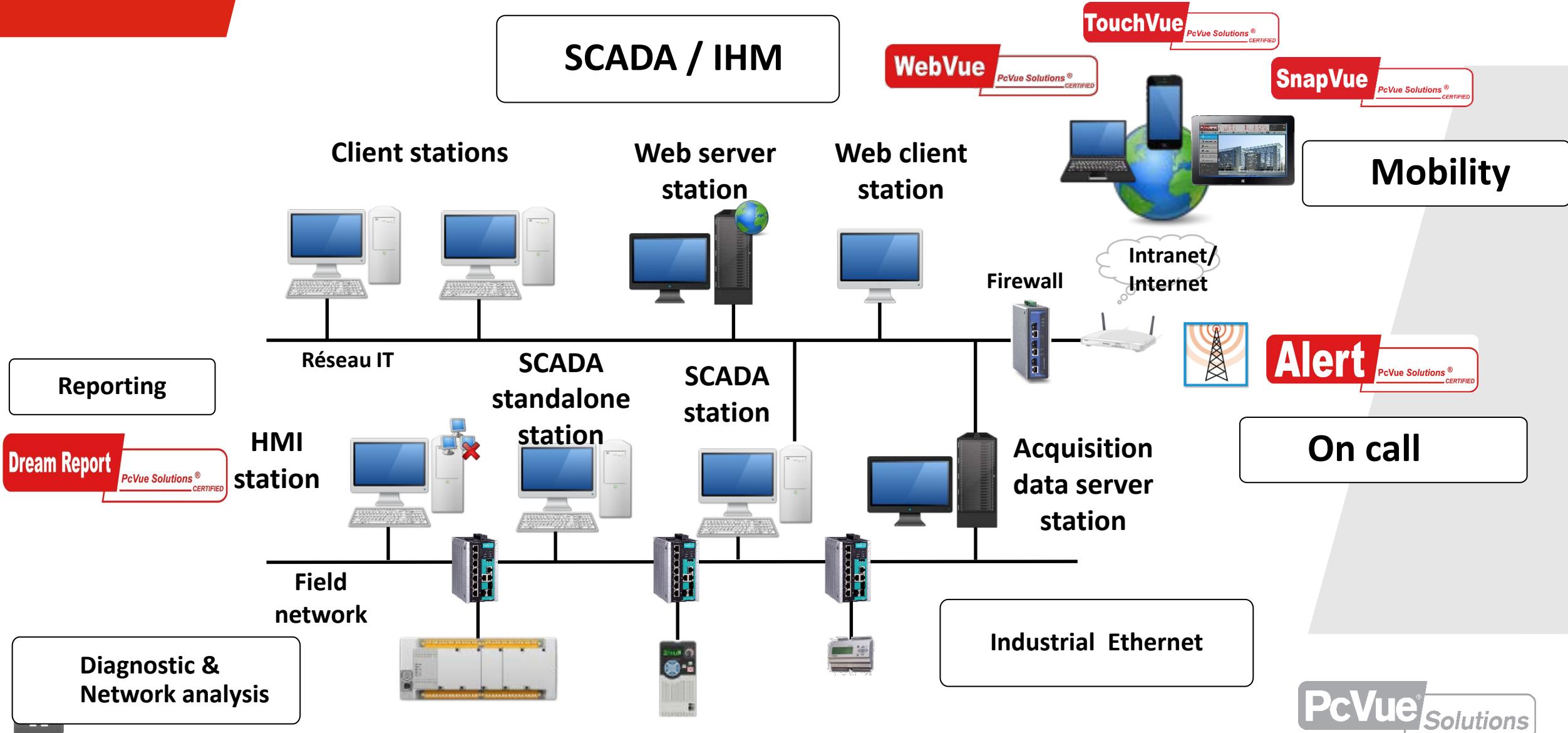
PcVue[®] Solutions

Content

- Introduction
- 01. Configuration
- 02. Real-time data
- 03. Data acquisition/Interoperability
- 04. Monitoring & control
- 05. Alarms & events
- 06. Data processing
- 07. Architectures
- 08. Remote solutions
- 09. Security, deployment, commissioning tools



PcVue Solutions offer



PcVue

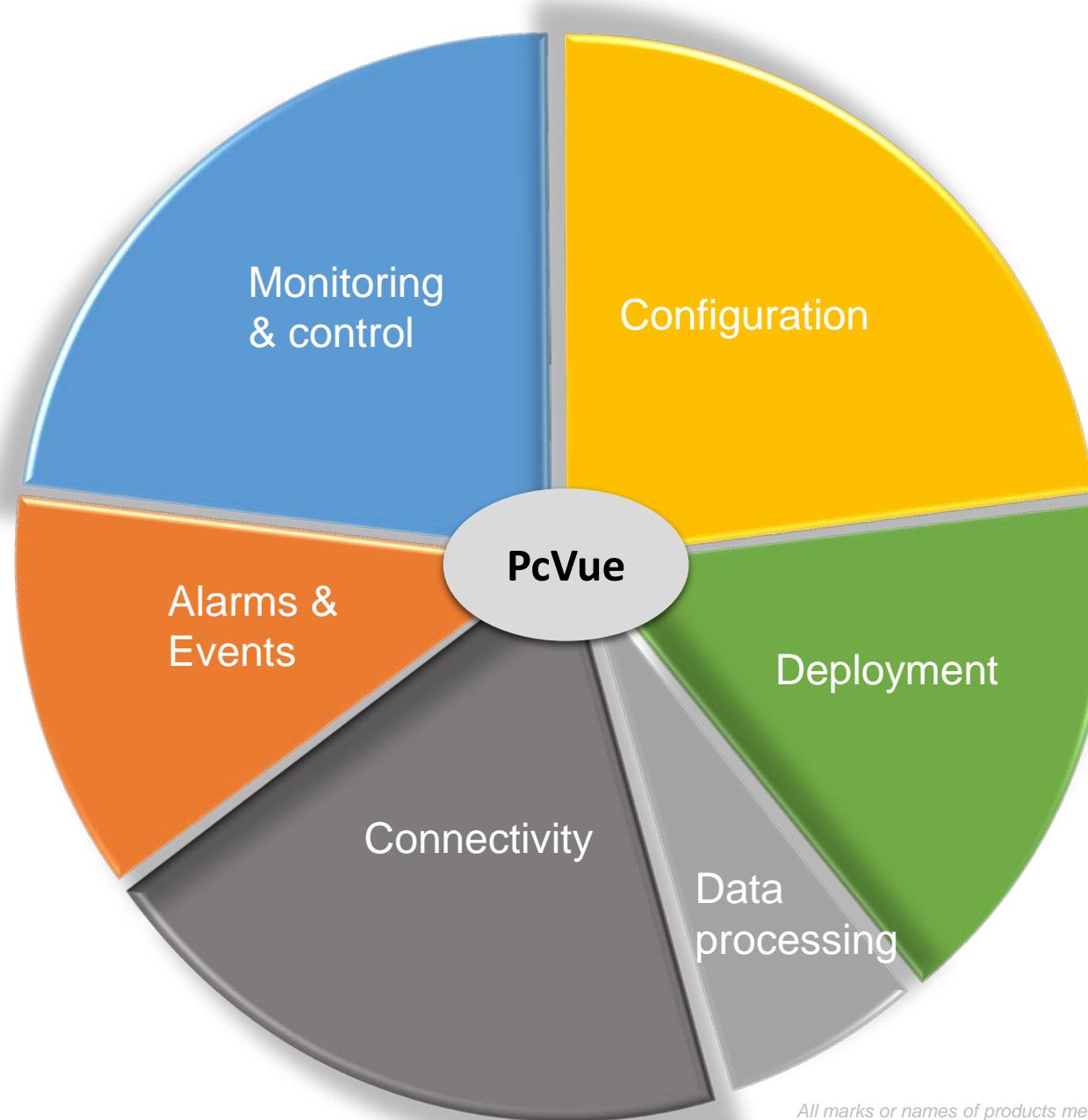
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A single platform

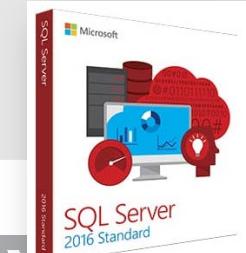
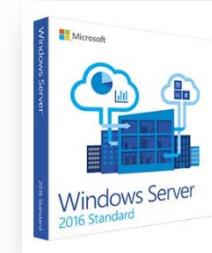
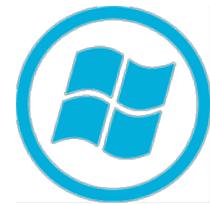
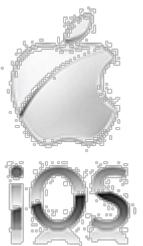
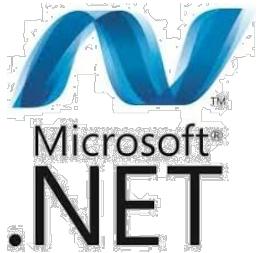
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PcVue overview



Technologies et Standards



Certifications



ARC Informatique **ISO 9001 & 14001**
certified for 15+ years

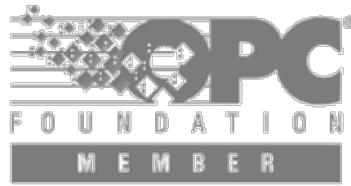
PcVue is **BACnet B-AWS** certified and
listed by the BTL laboratory

PcVue 61850 driver is certified by
DNV-KEMA



Partnerships

- **Microsoft Certified Partner** since 2004
- Member of several groups :
 - **OPC Foundation**
Involved in several workgroups
 - **BACnet International**
Active member of several BACnet interest group
(Europe, China)
 - **LonMark associate** since 2000
 - **Smart Building Alliance**
 - **ThinkSMARTGRIDS**
 - **DNP3 US**



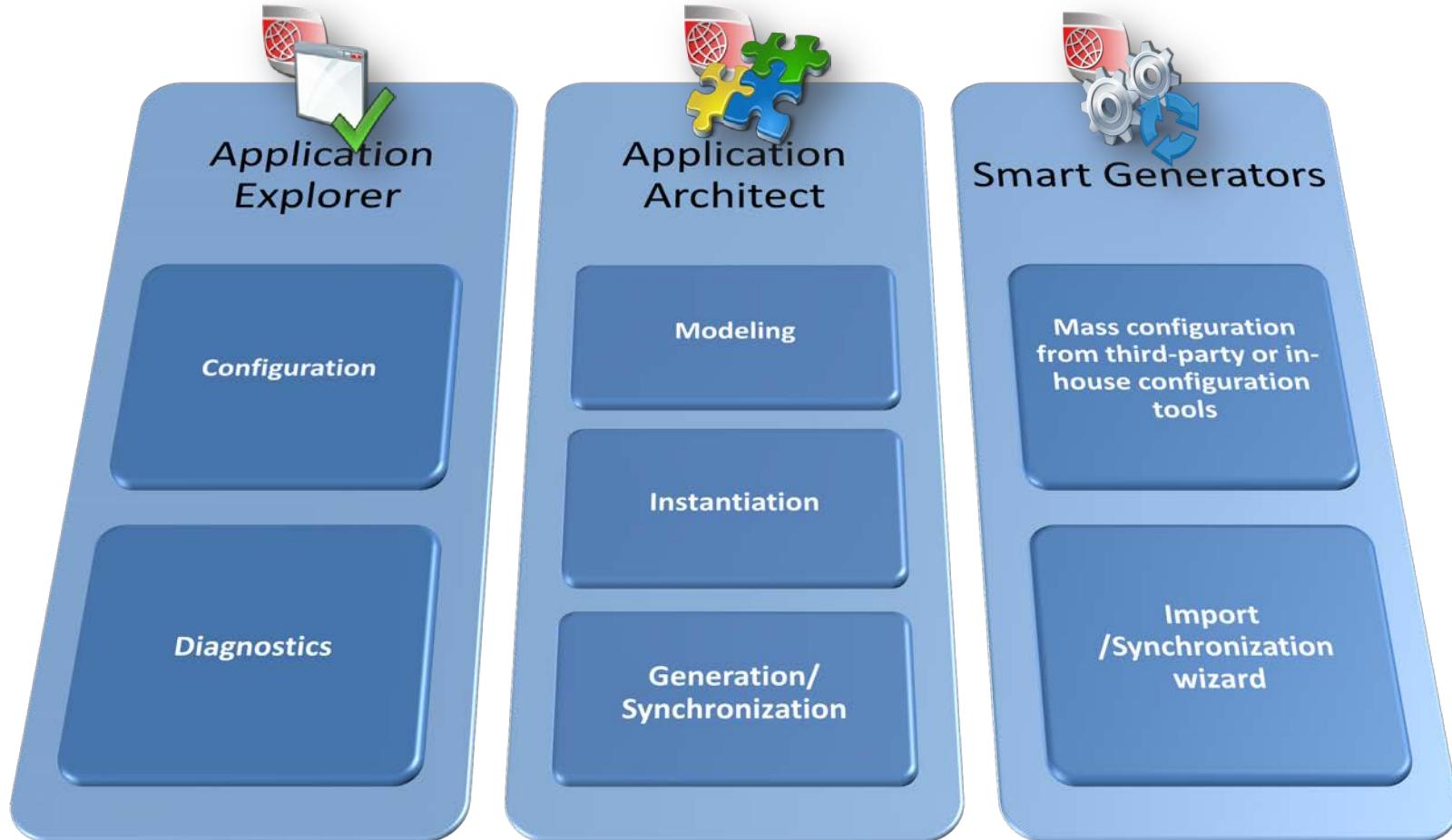
Configuration

“ Advanced Configuration Environment



Configuration

Advanced Configuration Environment

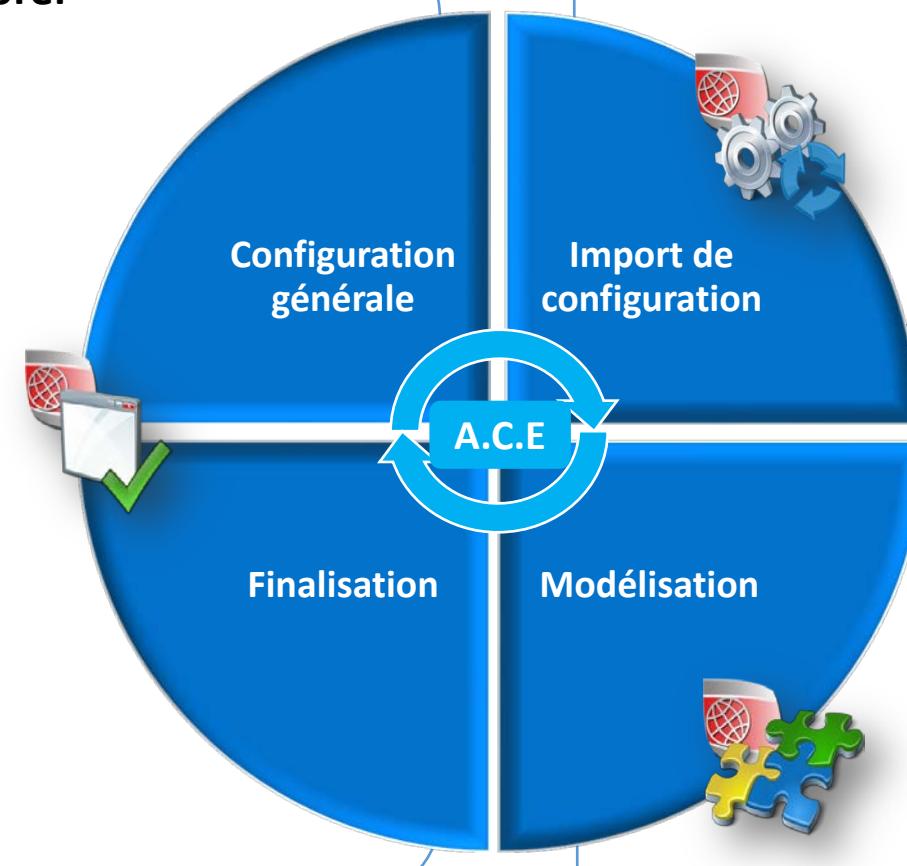




Configuration

Design process

- **Application Explorer**
 - Global settings
 - Multi stations
 - Libraries
 - Scripts
 - Processing
 - Archivage
 - Languages
 - Users



- **Smart Generator**
 - Import 3rd party configuration
 - Reduce risk of configuration errors
- **Application Architect**
 - Modelize useful objects
 - Instantiate/Generate/Synchronize





Application Explorer

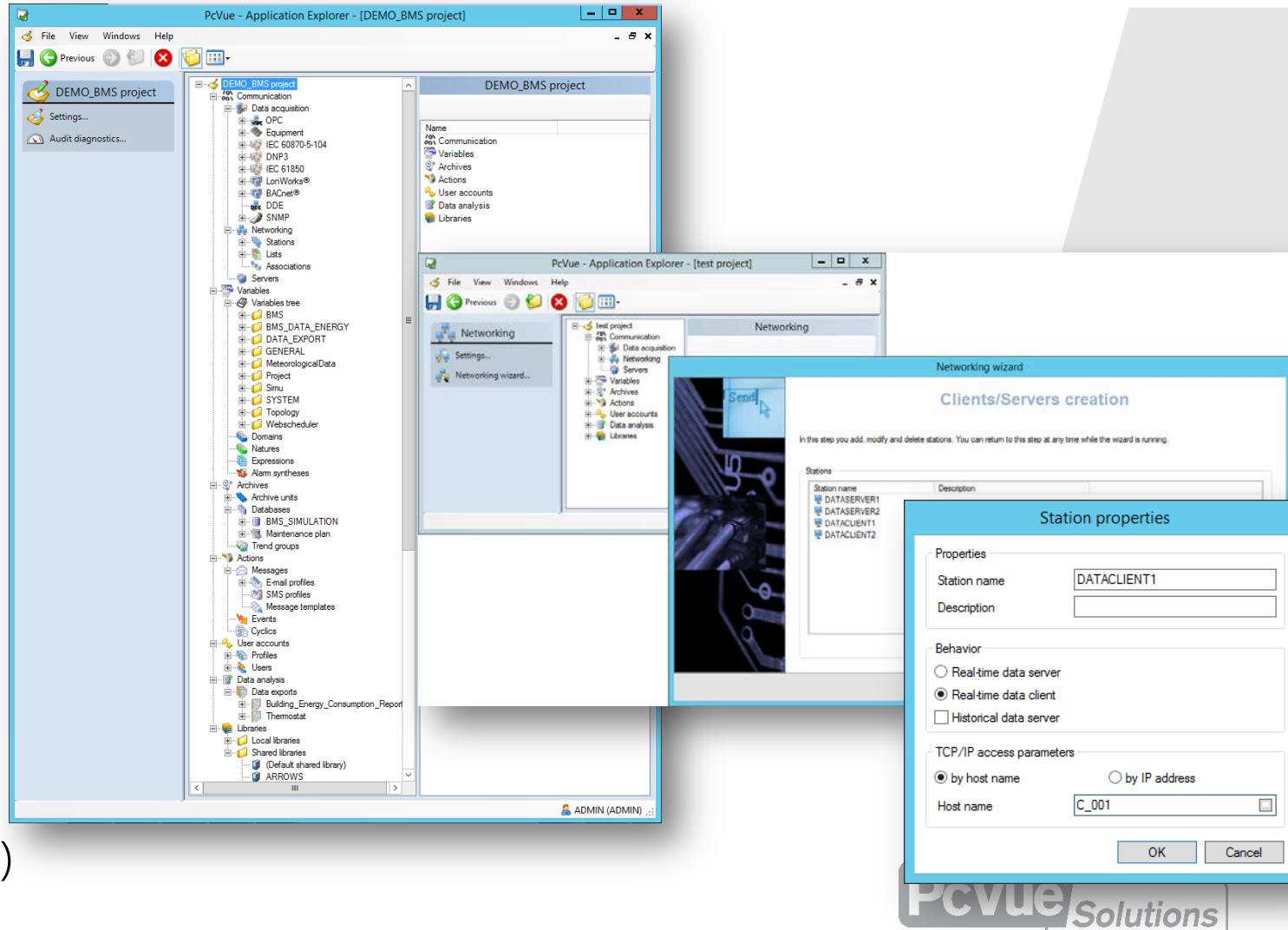
Configuration & diagnostic

'All in one' configuration tool

- Communication / Network
- Variables
- Archives
- Data processing (Data export, expressions, email/sms,...)
- User management
- Libraries

User friendly interface

- Treeview structure
- Multiple Document Interface (MDI)
- Configuration wizards





Application Architect

Modeling

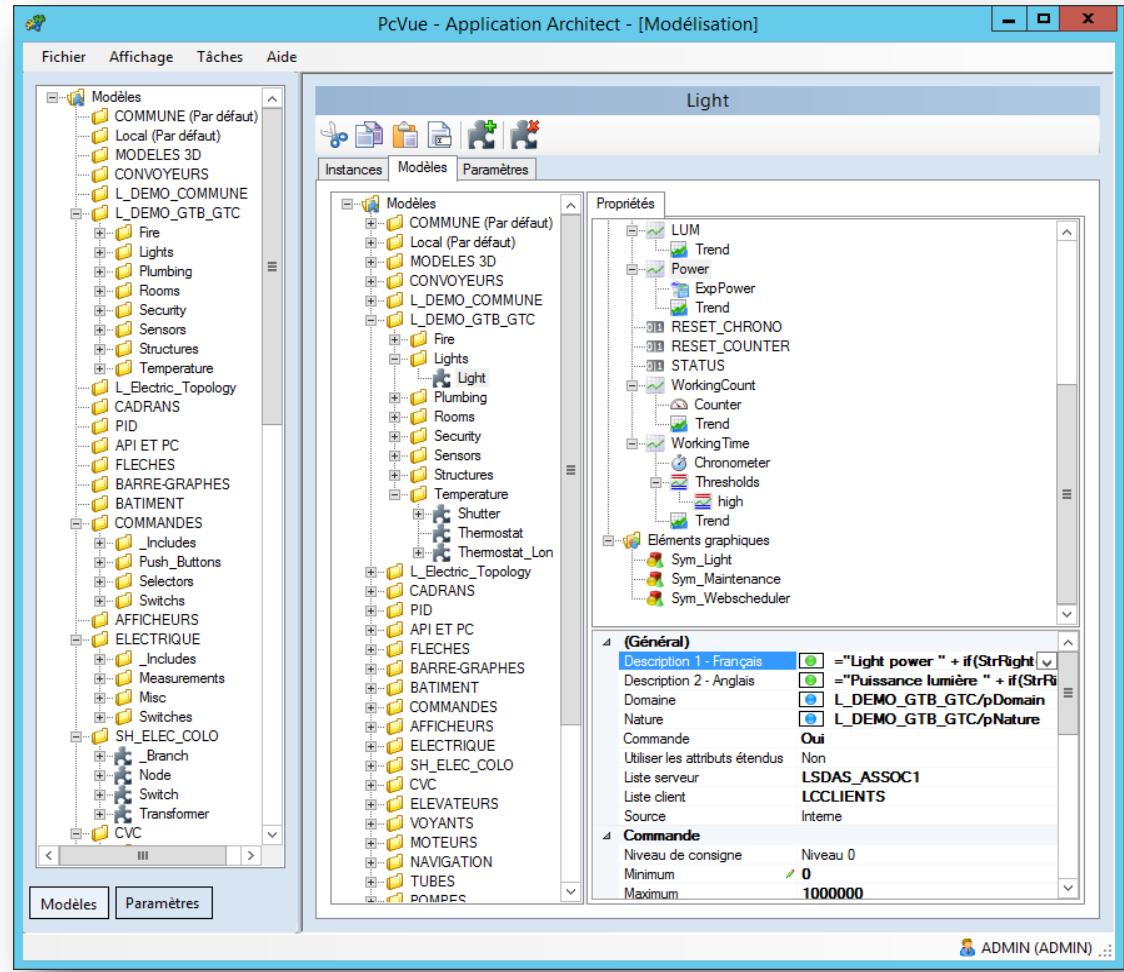
Creation of templates

- Instantiable
- Parametrable
- Reusable
- Including all configuration element

Generation/synchronisation of the configuration

Reduce the development time

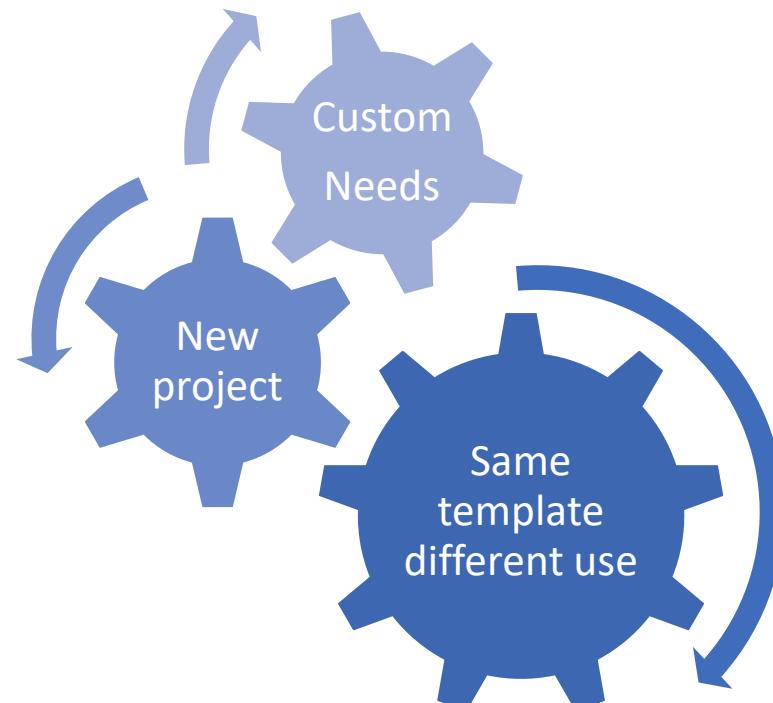
Increase the reliability
and minimize the risk of error





Application Architect

Modeling in 3 steps





Smart Generators

3rd party configuration import

- Generates elements of PcVue's configuration from 3rd party applications
- Minimize development time
- Avoid double configuration and risk of error
- 15+ Smart Generators available

- TIA portal
- Unity pro®
- WAGO®
- MOXA®
- OPC
- ISaGRAF™
- CAD (AutoCAD)
- LNS®
- FactoryLink®
- STEP7®
- DALI®/WAGO®
- Stardom™
- Harmonas®
- SAIA PCD™
- TwinCAT®
- BACnet™
- Generic XML



Real-time data

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At the heart of PcVue

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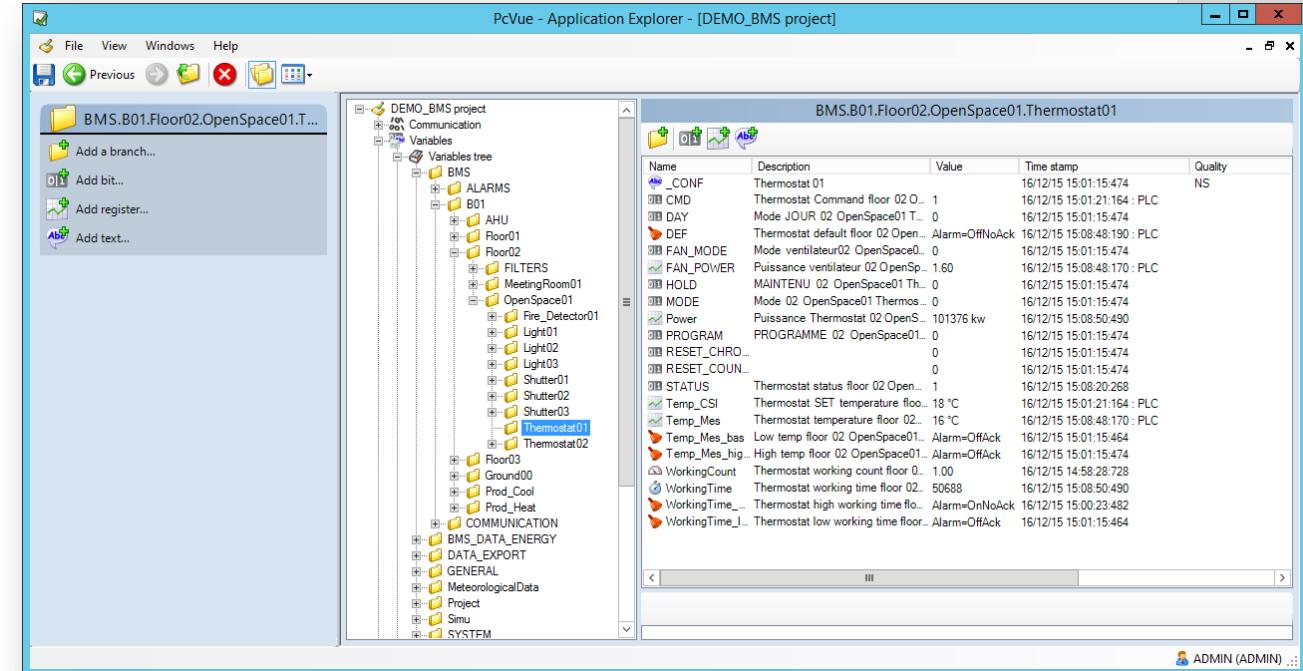
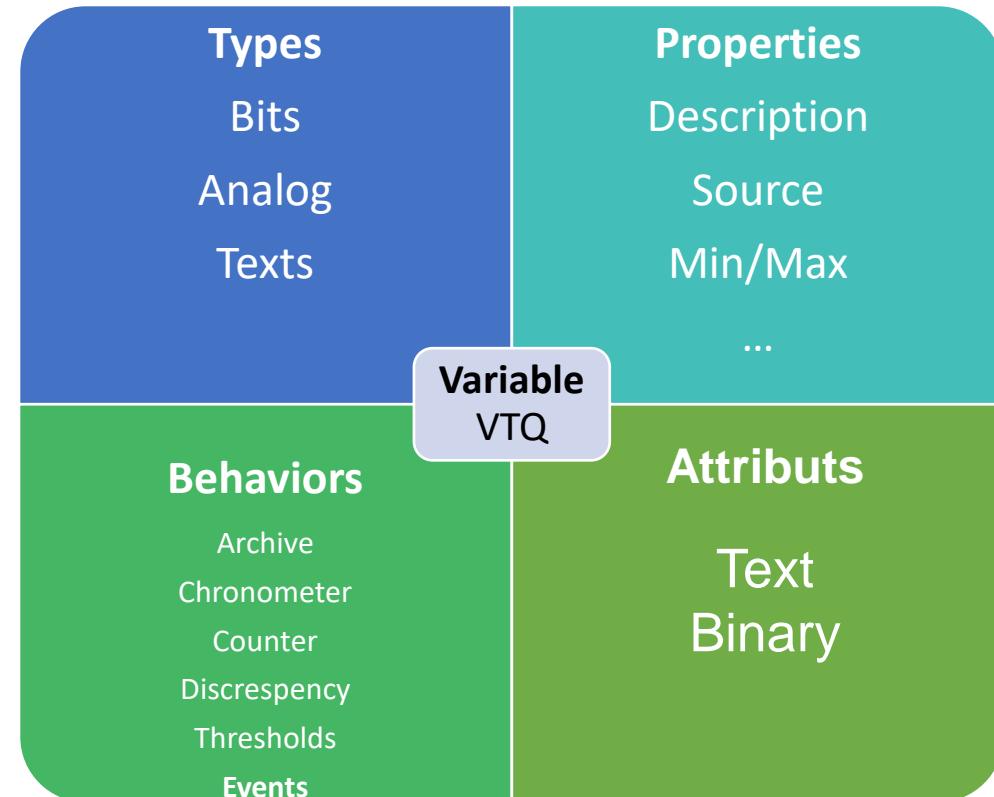




Real-time data

Variables database

Variables

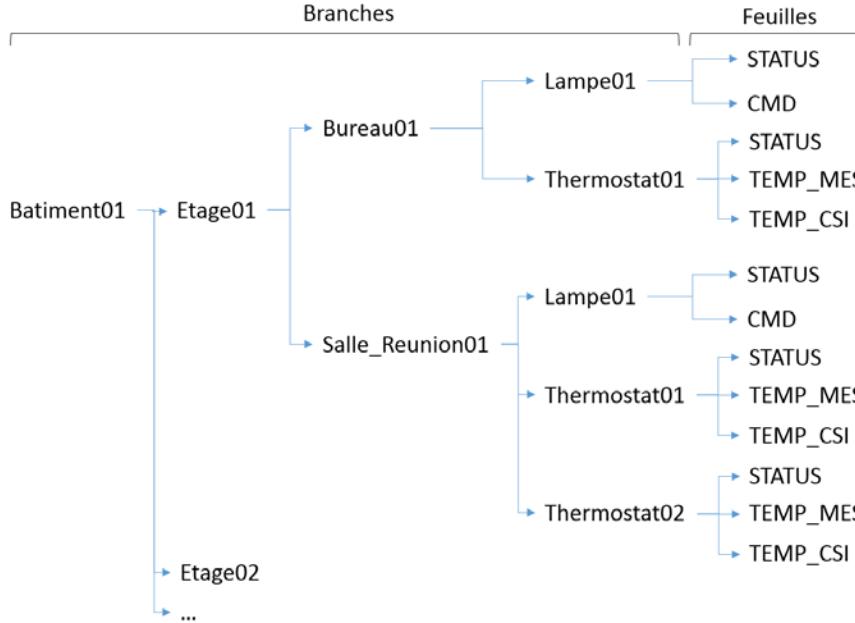


Structured organization of data
corresponding to the supervised physical
process

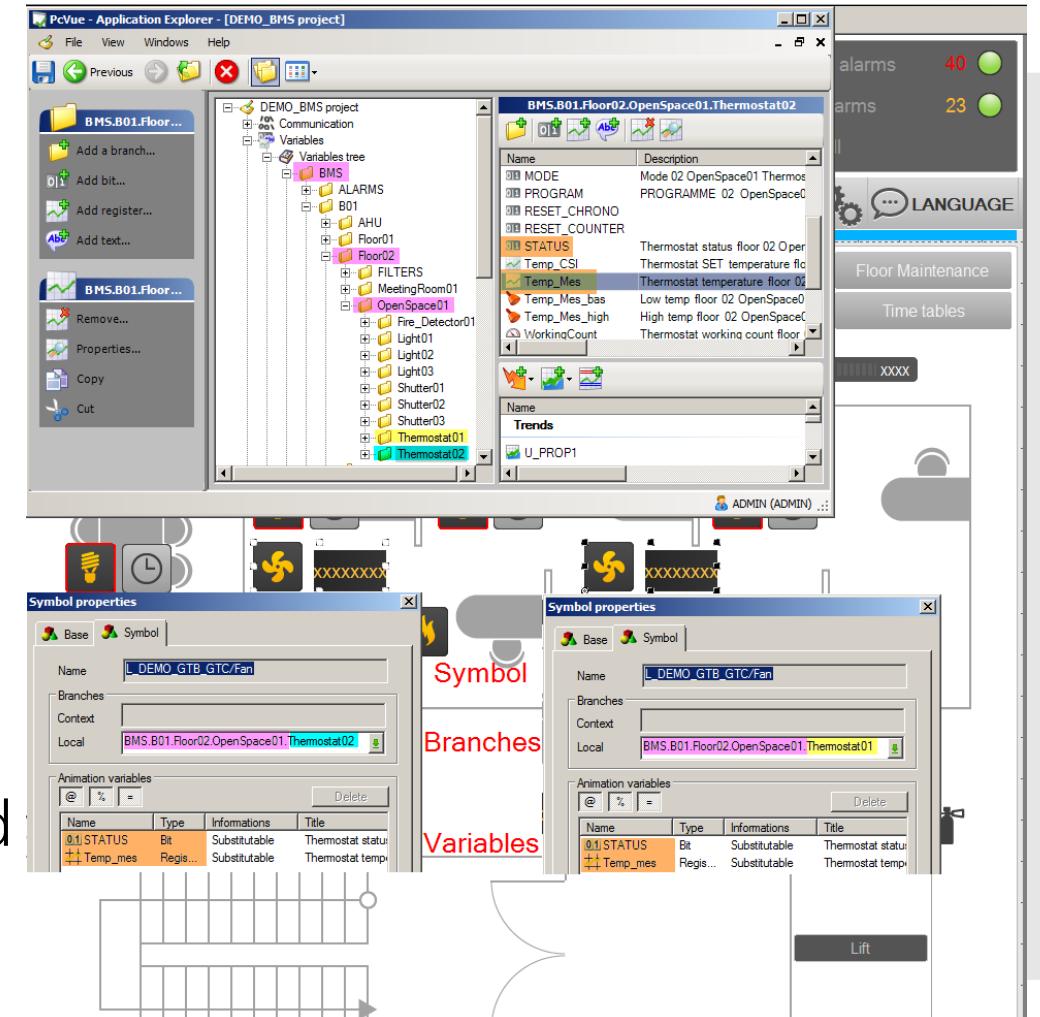


Real-time data

Generic approach



- The same generic symbol can be connected to several variables
- Applicable to any PcVue object (mimics, programs, expressions,...)





Data acquisition Interoperability

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Open platform

”



Data acquisition - Interoperability

Benefits - Features

- An unique communication platform suitable for any vertical market
- High performances & reliability
- Fast implementation and easy configuration – no script
- Wide range of built-in communication drivers – 100+
- Built-in advanced features
 - Redundancy
 - Time stamped
 - ...
- Software development kits for a better interoperability



Data acquisition Interoperability

01. Data acquisition drivers
02. Markets oriented drivers
03. Universal data connector
04. Software Development Kits – S.D.K.





Data acquisition drivers

Overview

150+ drivers

- OPC
- Modbus IP
- SNMP
- BACnet
- IECs
- MQTT
- LoRa
- LonWorks
- ...

Built-in

Manufacturers agnostic



Markets oriented drivers

BMS/BAS overview

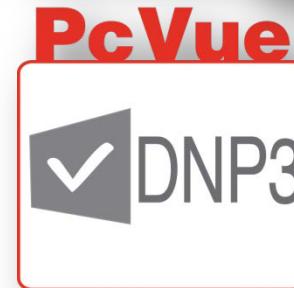
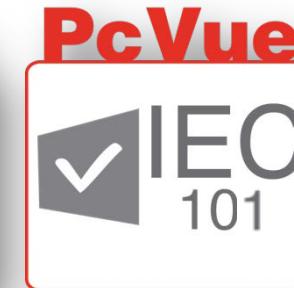
- BACnet – BTL Listed for the highest integration level B-AWS
- KNX
- LonWorks
- DALI
- COMMEND
- POSM
- SIEMENS OPC MK8000IP
- ...



Markets oriented drivers

Energy - Overview

- IEC60870-5-104 Client/Server
- IEC60870-5-101 Client
- IEC60870-6/TASE.2 (ICCP)
- IEC61850 Client certified GL-DNV (form. KEMA)
- IEC61400-25
- DNP3
- OPC, Modbus TCP/IP,...





Markets oriented drivers

Water production, distribution & treatment - Overview

SOFREL

- Lacbus RTU
- Lacbus SMS
- Sofbus
- Sofbus SMS

Wit

- TRSII

Napac

- Napbus

Perax

- Perax SMS

...



- Auto discovery of points declared in equipment
- Reporting of real-time values, archiving, time-stamped at source, logged ...
- Alarm management, acknowledgment
- Exchange of time programs
- Equipment time synchronization
- ...



Information & technologies

SNMP

SNMP Manager

- Monitoring and troubleshooting any IP devices
- All SNMP versions supported :
 - V1,V2/V2c,V3 – Authentication & encryption
- Optimized for large scale networks



SNMP Agent

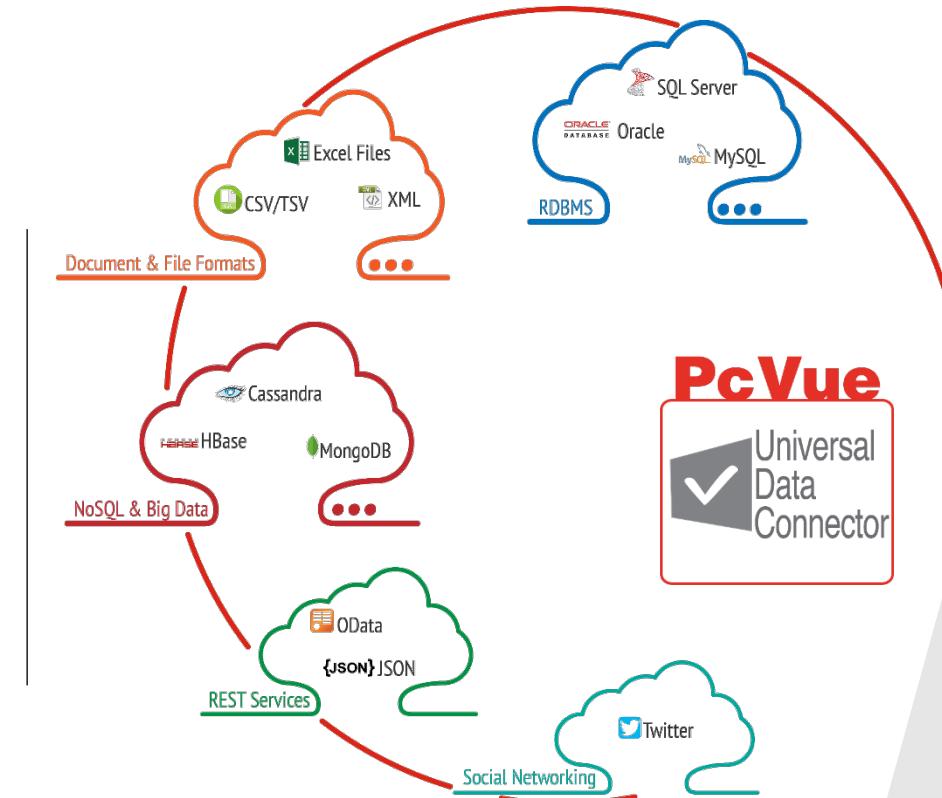
- Allows a third party system to control various operating parameters of the supervisor
- PcVue is able to expose any variable via SNMP
- Allows PcVue to be a gateway or a converter



Universal Data Connector

Overview

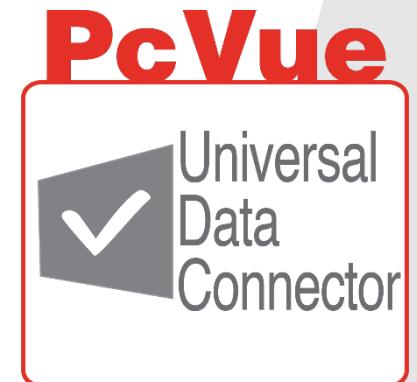
- SQL data bridge
 - Connect any ADO.net provider data source
 - Support for SQL requests (SELECT, INSERT, UPDATE)
- SQL data acquisition
 - Map a PcVue variable as any other driver
 - SQL request can be executed on event or cyclically
- Benefits
 - Linkt to ERP, MES, CMMS,...
 - Connect to REST services
 - Zero scripts



Universal Data Connector

Features

- Built-in - No need for VBA scripting
- Error handling and asynchronous calls
- Centralize connection strings
- Control which PcVue server is in charge of the RDBMS interface
- Support for SQL requests
 - SELECT, INSERT, UPDATE
- Map a PcVue variable as any other driver
- SQL request can be executed on event or cyclically
- Zero scripts
- WebVue-compliant SCADA Basic scripting
- SV Manager Toolkit API





Software Development Kits – S.D.K.

A suite of SDK

Manager toolkit

- Data exchange between PcVue and 3rd party software

Protocol toolkit

- To develop a very specific driver integrated in PcVue
- To interface with another software or hardware

WebServices toolkit

- To embed data from PcVue to an external Web portal



Monitoring & Control

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User interface

”



Monitoring & Control

01. Graphical interface
02. Run time features
03. Trends
04. GEO map control

Graphical interface

Quickstart

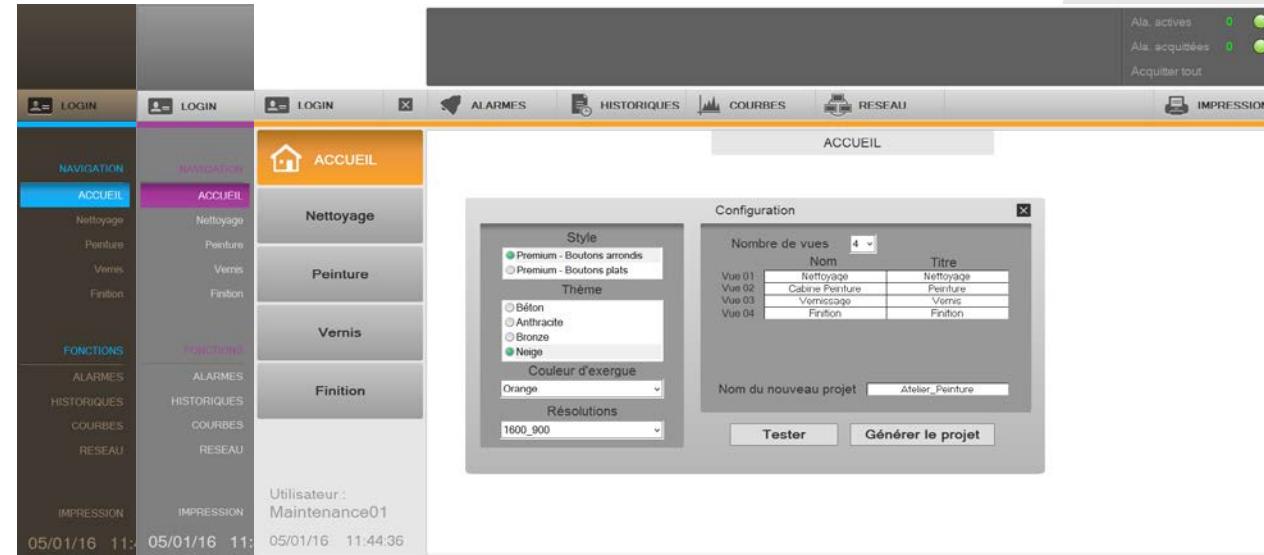
A pre configured project coming with
PcVue including:

...a configuration helper to

- Select differents templates and styles
- Create custom menus buttons

...regular mimics and preconfigured
settings:

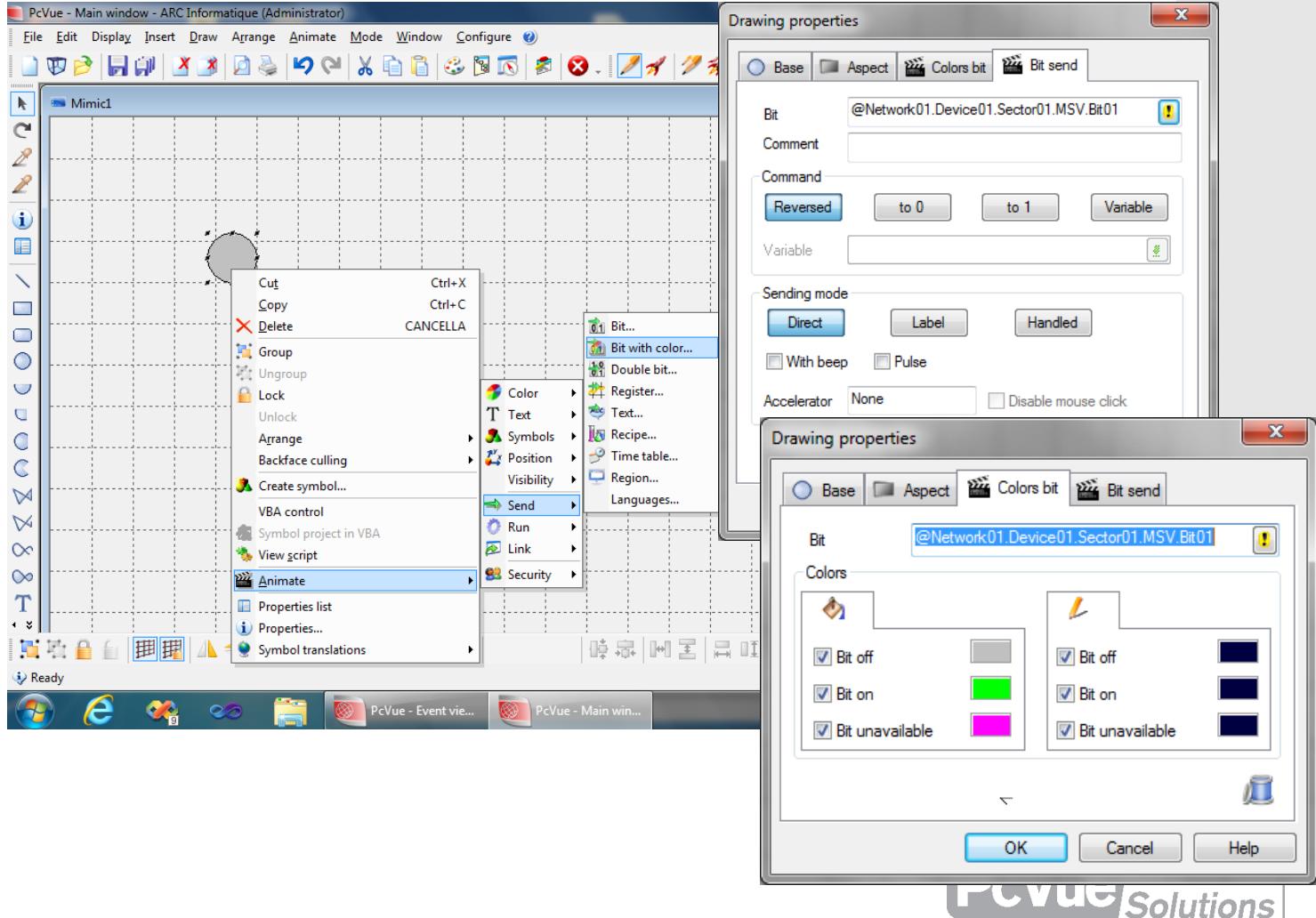
- Trends
- Archiving settings
- Alarms mimics and counters
- User profiles



Graphical interface

A user friendly interface yet powerful

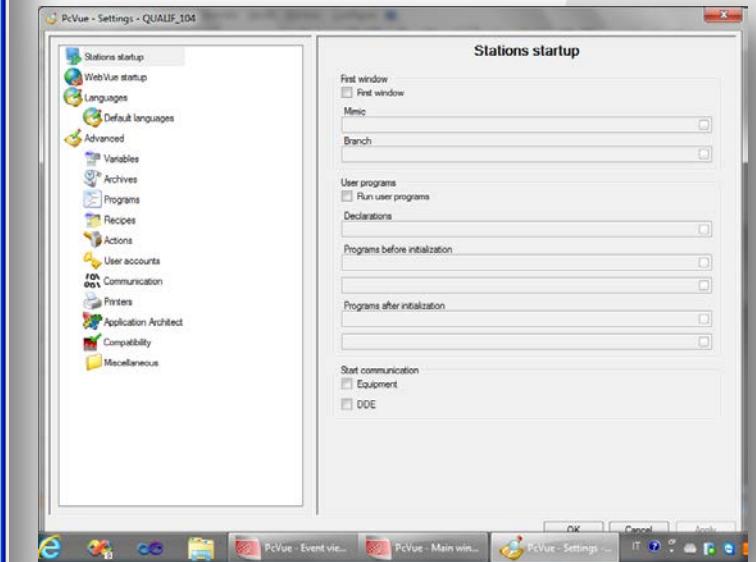
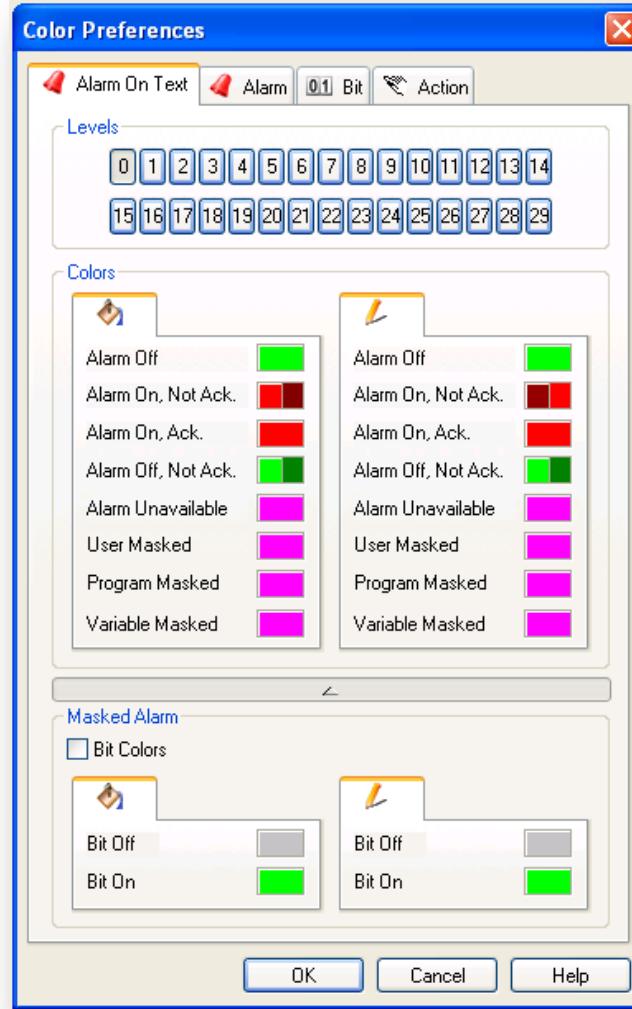
- Windows environment
- More than 60 pre defined animations
- Design helper tools
- Mimic templates
- Real time design display



Graphical interface

Advanced customization

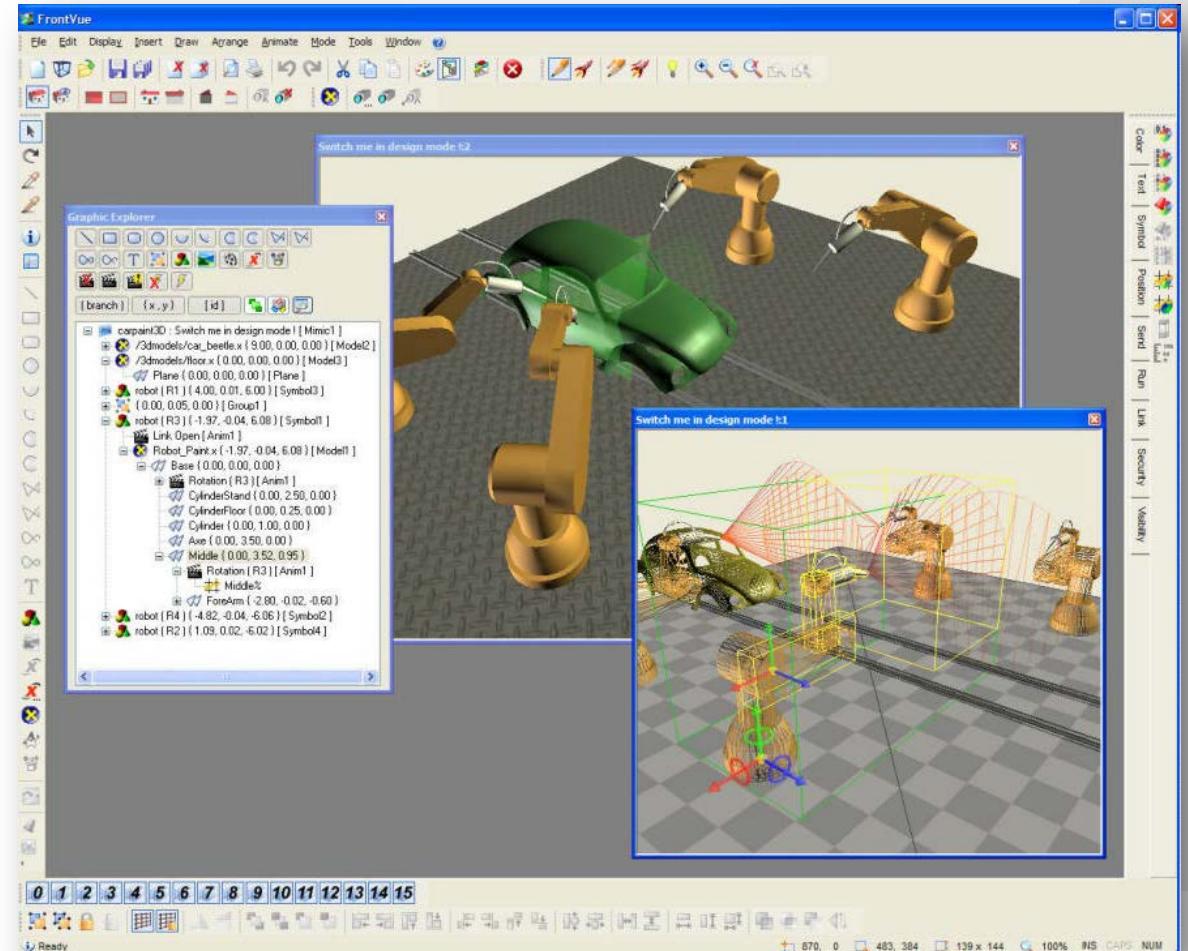
- Custom animations
- User friendly configuration



Graphical interface

3D animated mimics

- Support for DirectX objects
- Support for pre defined animations for 3D objects
- 3D advanced built-in features
(camera management,...)





Graphical interface

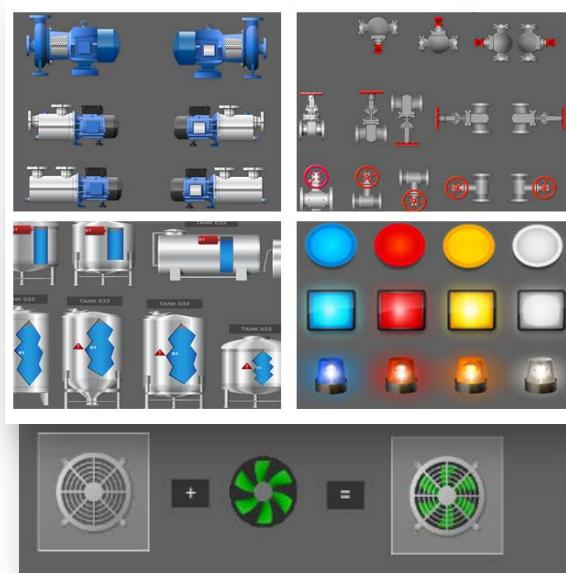
Libraries

A modular approach

- Consistent and modular objects
- Infinite combinations
- Custom templates of complex objects

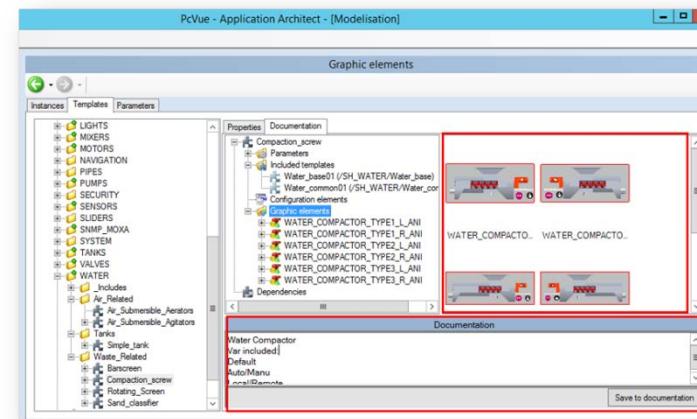
A market approach

- Predefined objects for an adapted usage for most projects
- Libraries of standard objects and for specific businesses



1000+ Symboles

8000+ Images

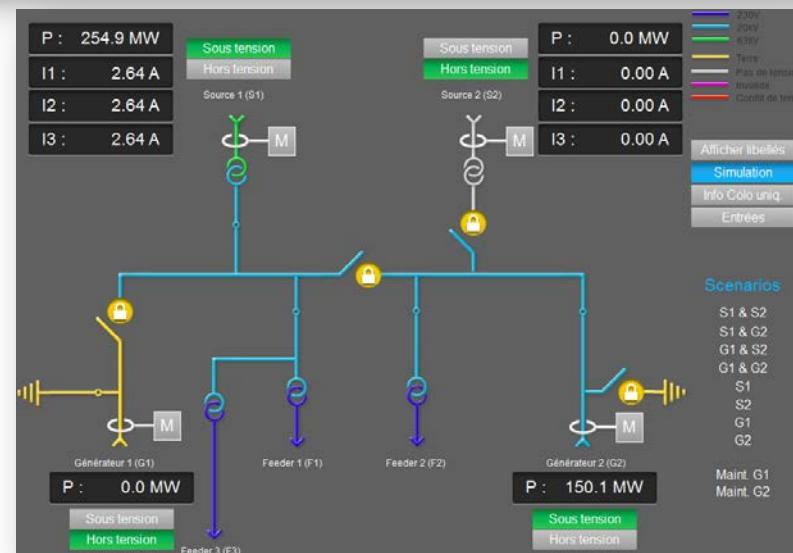
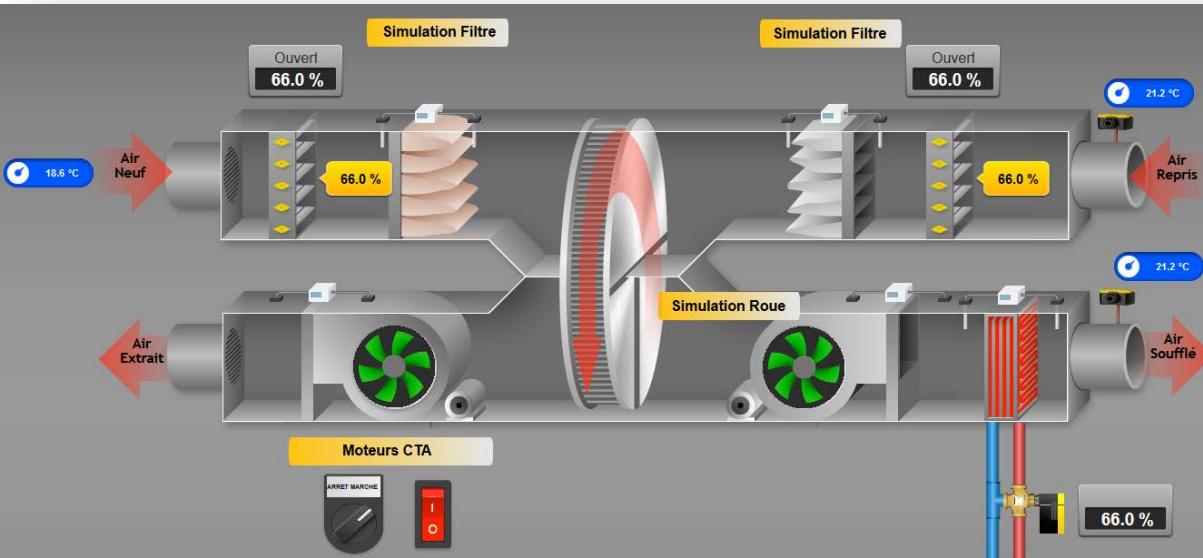


100+ Object
templates

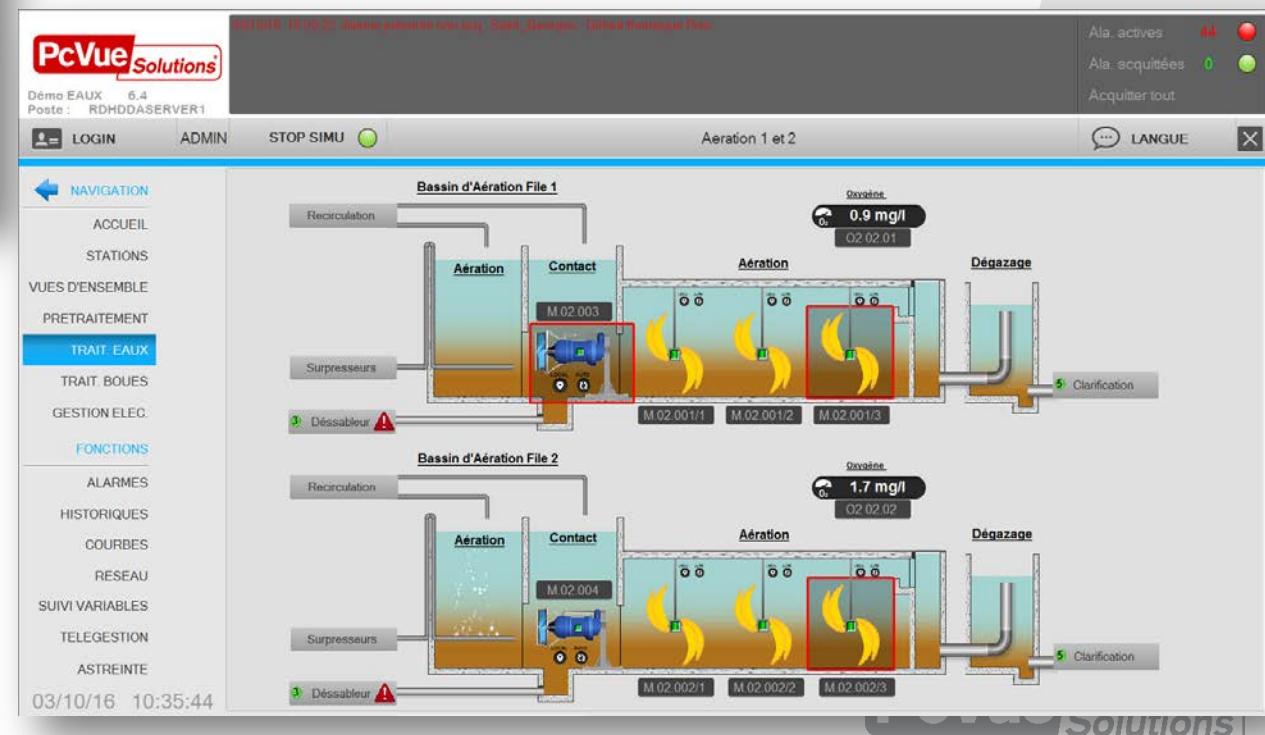
PcVue®
Solutions



Graphical interface *Libraries*



Sample mimics designed with PcVue libraries





Graphical interface

Multi screens

- Built-in support for multi screens display and wall screen display
- Display of simultaneous information on several screens
- Up to 4 display area in Windows
- Mimics up to 10 000 x 10 000 pixels



Iberdrola control center

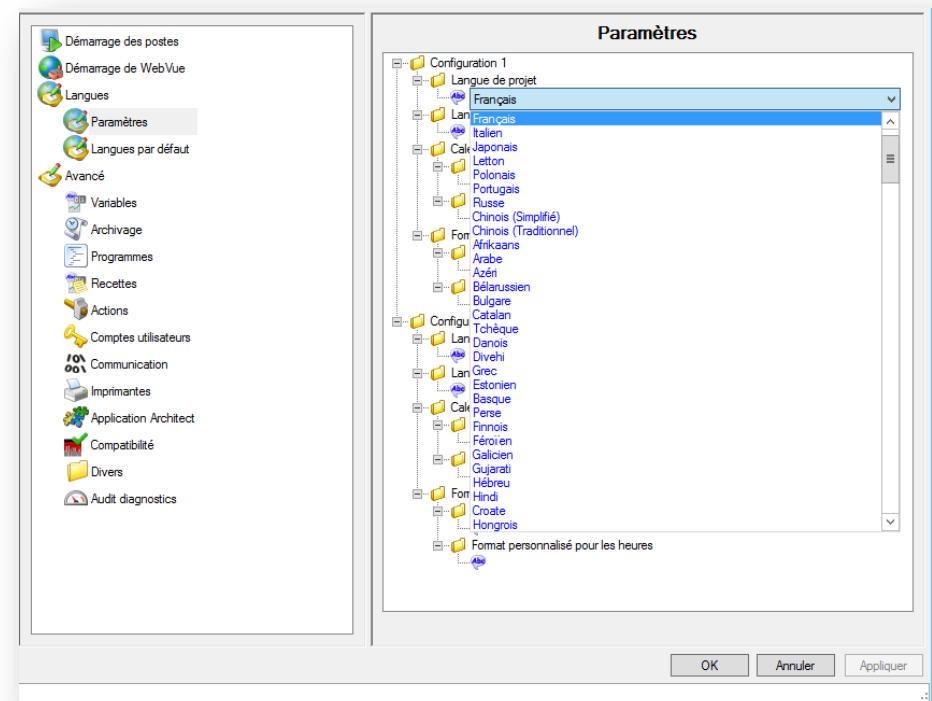




Graphical interface

Multi language

- 12 languages for installation for bilingual menus display
- Bilingual mimic with support for any languages
- Translation import/export tool that supports both ANSI et Unicode encoding



French

Russian

Lithuanian

Italian

German

Chinese

Polish

Spanish

Portuguese

English

Brazilian

Japanese

PcVue® Solutions

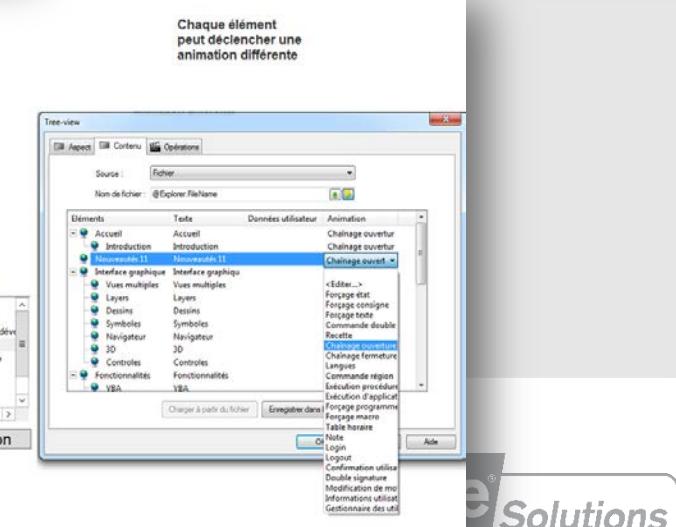
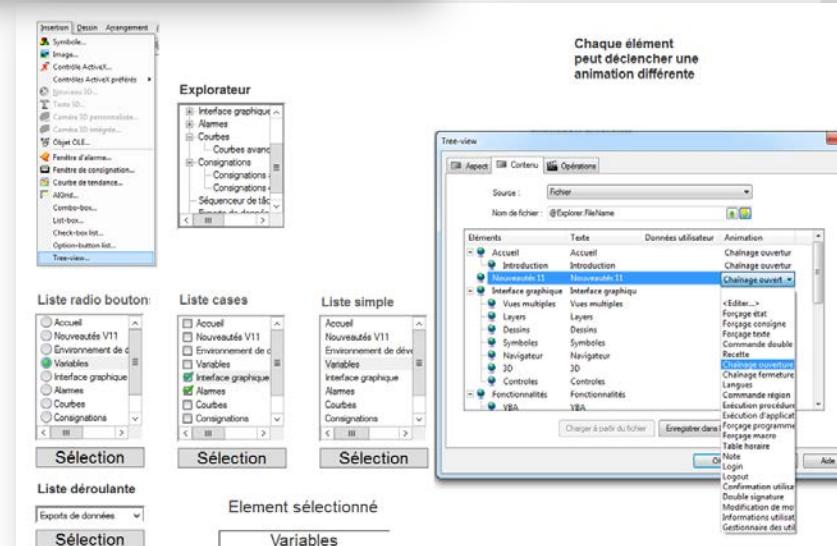
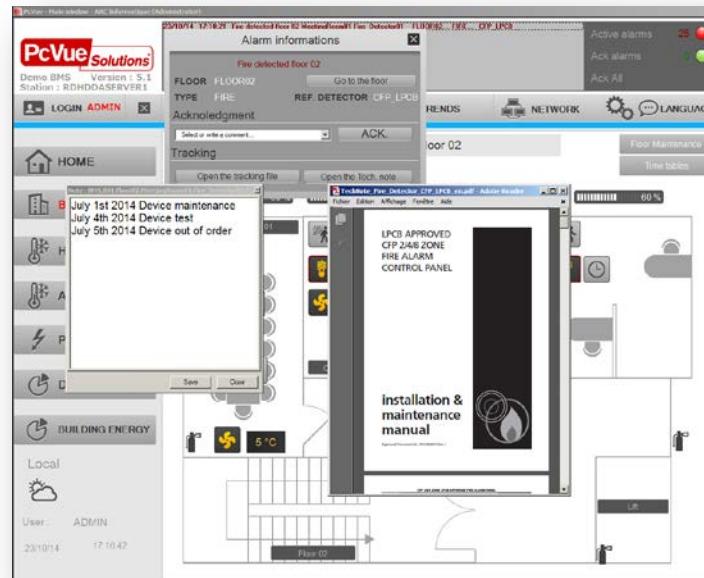




Run-Time features

Mimics & behaviors

- Contextual pop up
- Zooms and layers management
- Mimics navigator
- Mimics tab control
- Built-in controls
- Functions keys

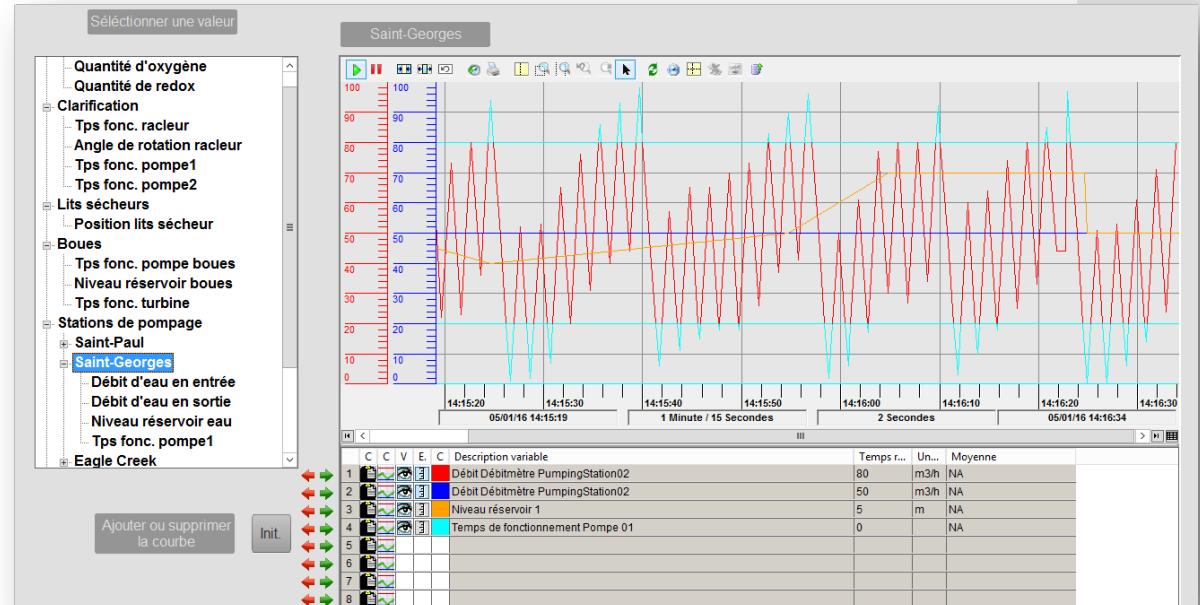




Trend viewer

Display interface for real-time and historical trends

- Built-in control that can be embedded in any mimic
- Up to 100 traces per viewer
- Highly customizable interface
- Fully customizable legend
- Threshold display
- Trends comparison
- Data export to EXCEL
- ...



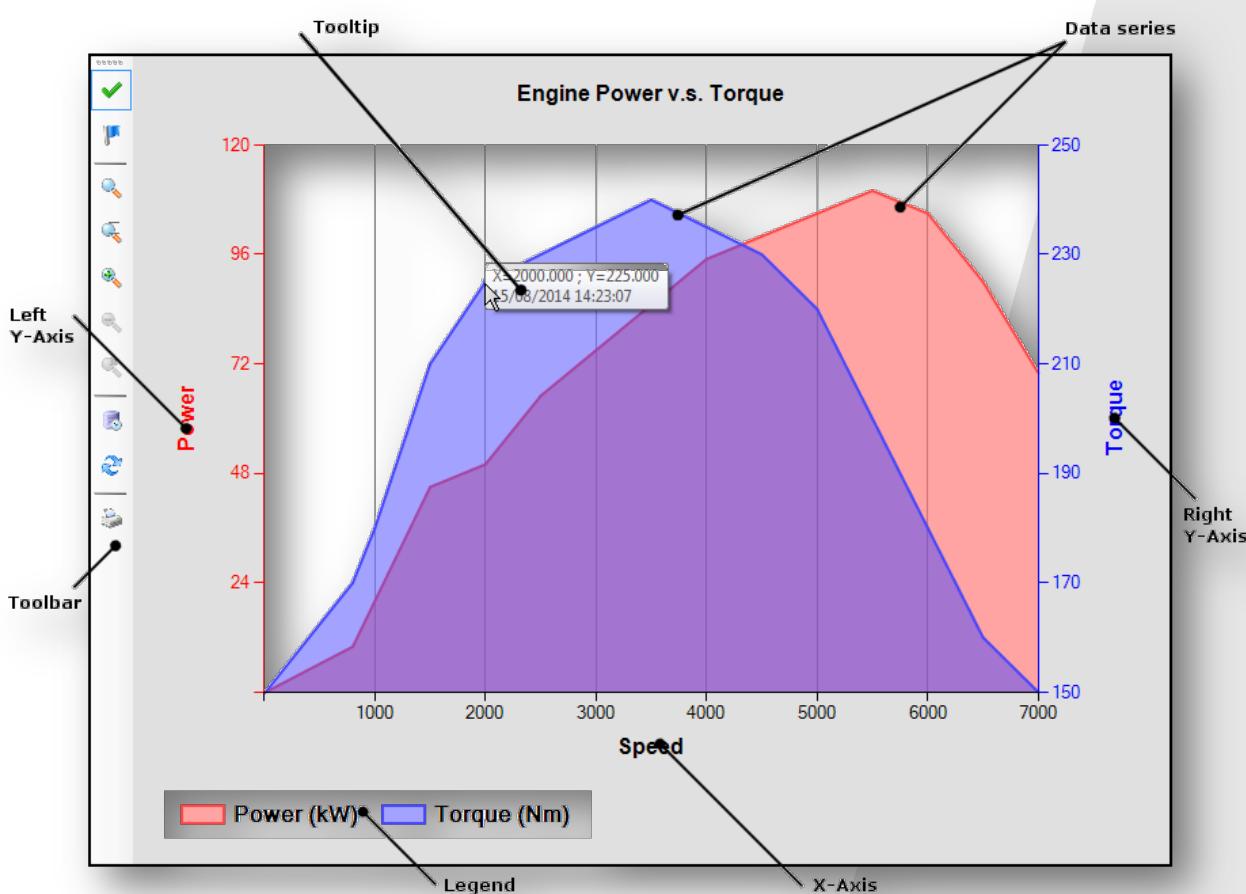
Trend $Y=f(X)$

Types of representations

- Lines,
- Columns,
- Cylinders,
- Points,...

Graphic features

- Legend,
- Zoom,
- Cursor,
- Tooltip,
- Print,
- Popup on right click,
- Reference series for comparison
- ...



GEO Map control

Monitoring and control of distributed assets

- Interactive maps provide enhanced situation awareness for operation
- Quickly identify your assets on a map
- Visualize the key data at a glance
- Application across industries
 - Renewable energy generation, pipelines and oil&gas production, substation automation, transportation, water and wastewater...

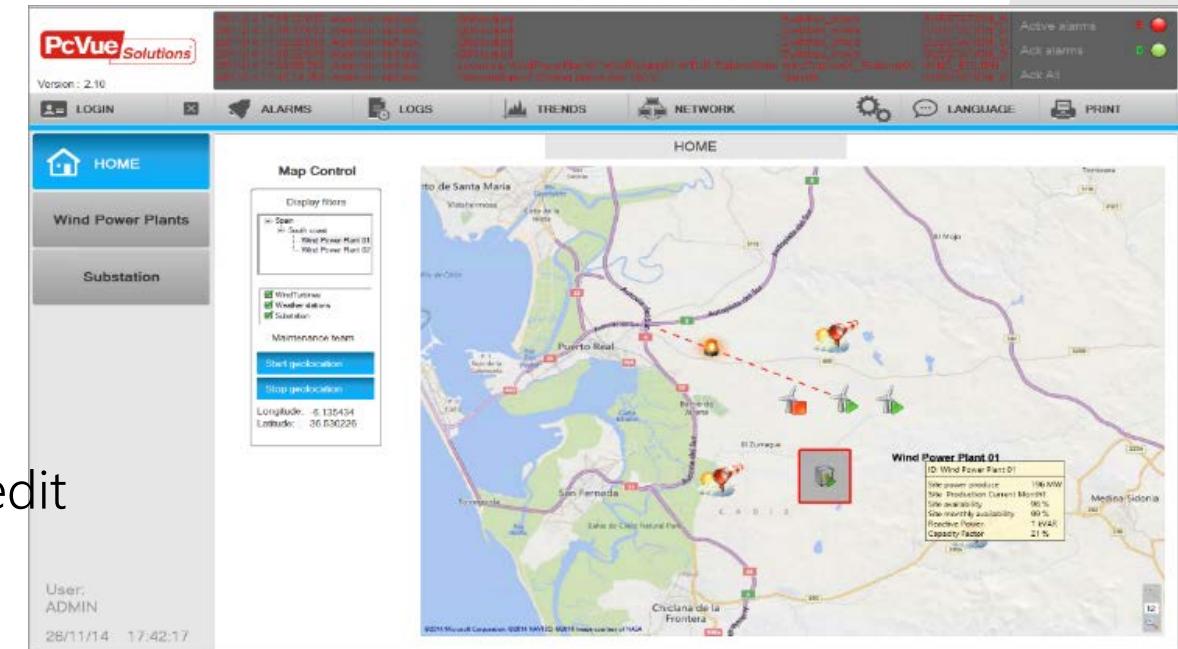


Run-Time features

GEO Map control

Full integration in PcVue

- Built-in map component
 - client for GIS mapping service
- Support for more than 50 map providers
- Online & Offline maps both supported
- PcVue symbols as custom markers
- Integrated configuration tools provided to edit markers and create map caches
- Support for runtime animations & scripting



Run-Time features

GEO Map control

Quickly identify your assets on the map

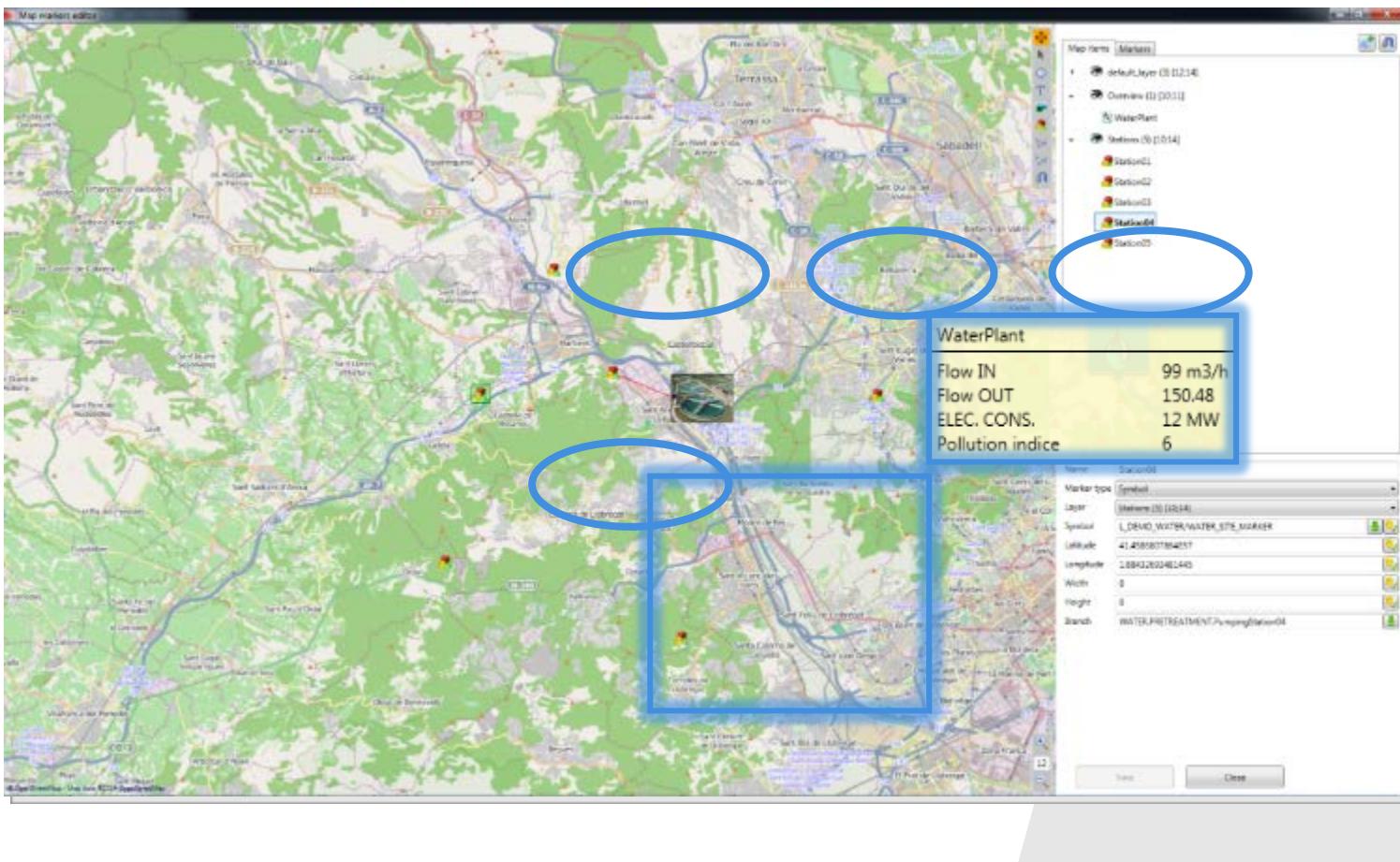
- Turn any PcVue symbol into a marker on a map with an associated position
- Support for basic markers : shapes, images or texts

Fast access to data

- Display of variables value or attributes
- Popup and mimic open on markers

Easy marker management

- Marker editor – no scripts
- Markers and layers are stored in a standard GPX file loaded
- Direct loading and rendering of GPX files – No import/export necessary

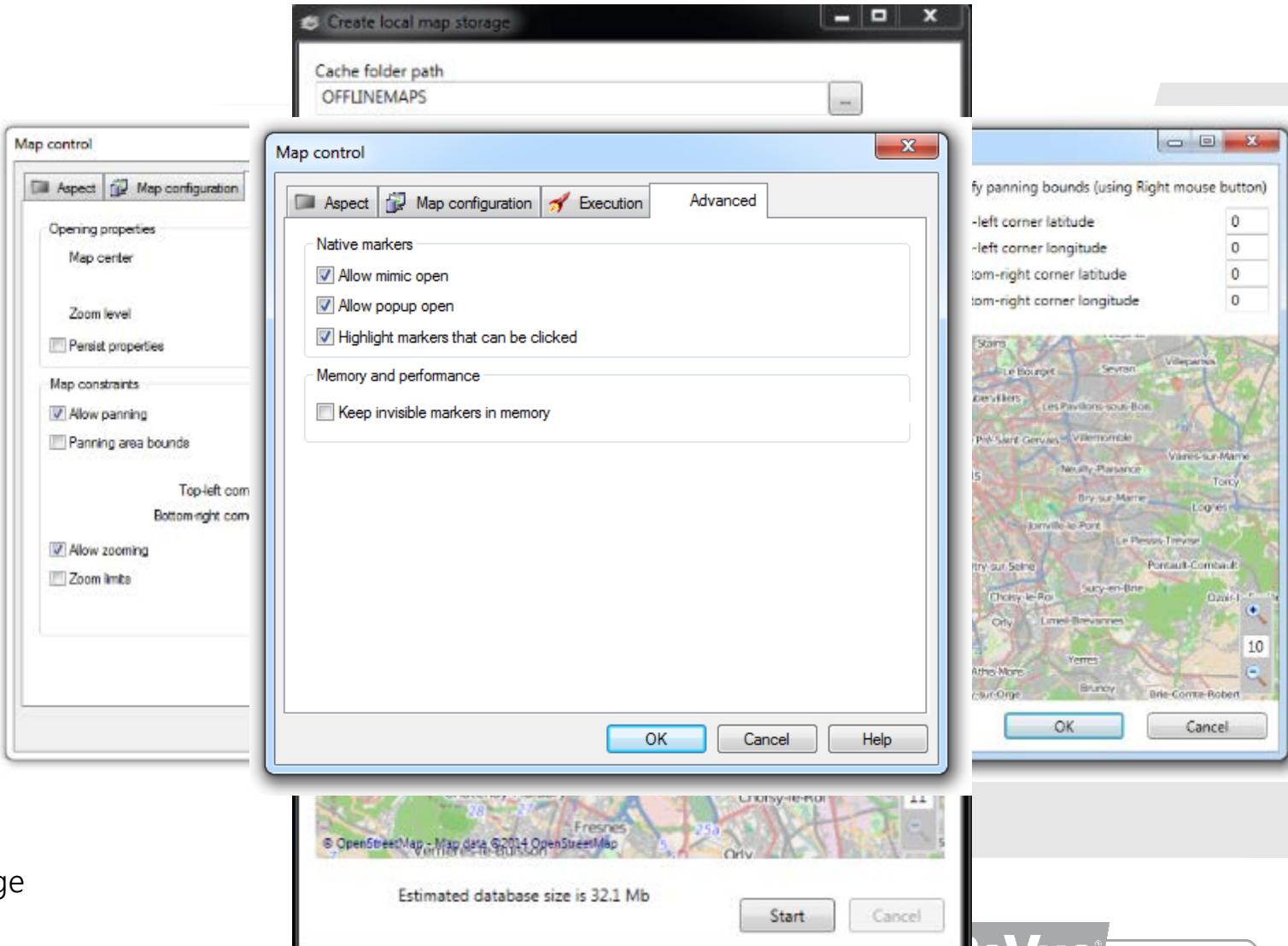


Run-Time features

GEO Map control

Easy configuration – no scripts

- Basic configuration
 - Sources of the map (online/offline) and markers
 - Execution
 - Initialization
 - Map center, zoom, panning
 - Visual editor
- Advanced configuration
 - Control graphical behavior and performance
- Map cache creator
 - Retrieves map data online
 - Prepare the map cache for offline map usage



Alarms & events

“ Real-time and historical alarms and events management ”

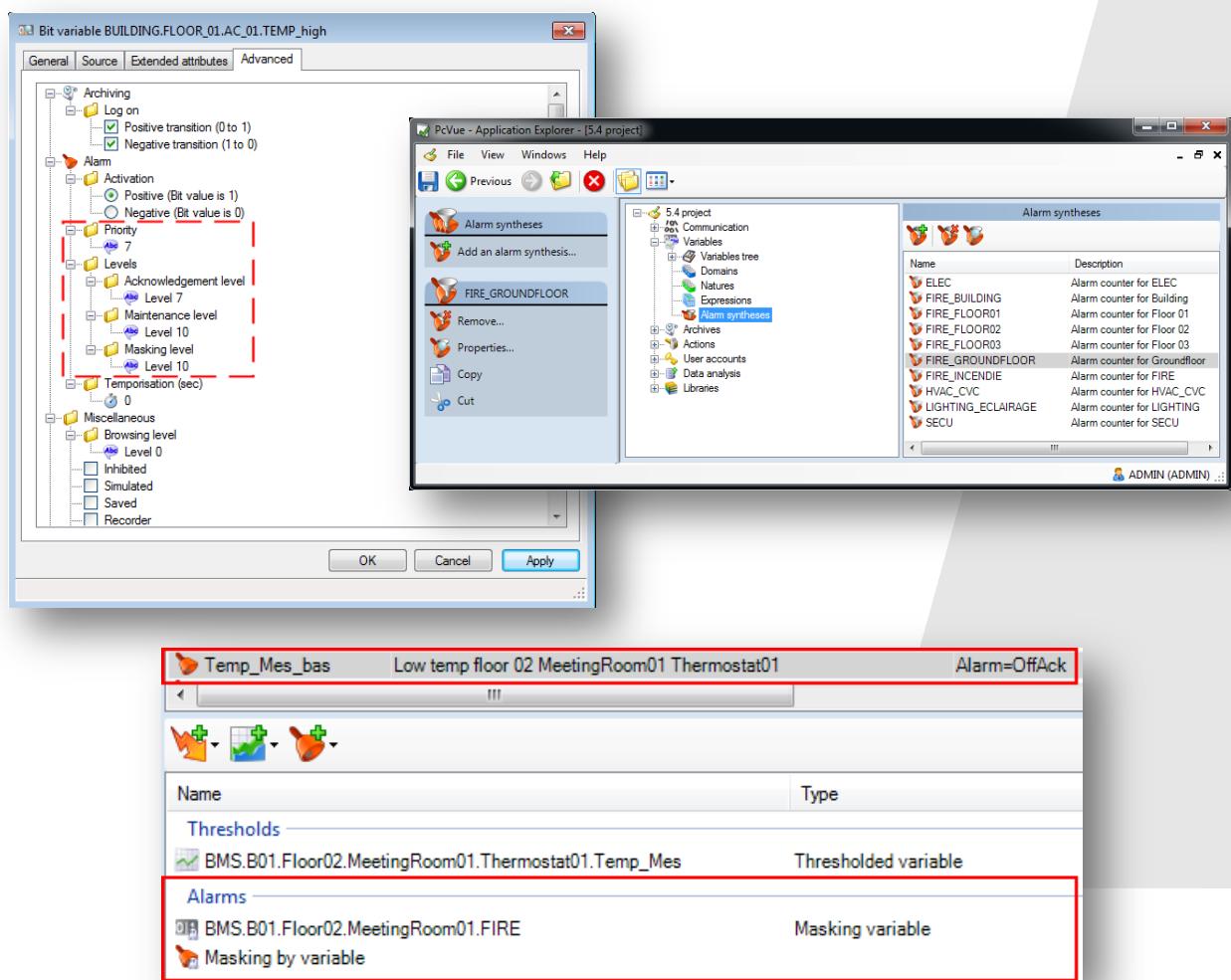




Alarms

Built-in alarms system

- 32 alarm levels
- Operator acknowledgment depending on user profiles
- Avalanche management, masking, inhibition, maintenance mode
- Built-in thresholds system
- Alarms synthesis





Alarms

Built-in alarms system

Customizable alarm display viewer

- Timestamp
- Name, description
- Status
- Priority level
- Dynamic and customizable text attributes
- ...

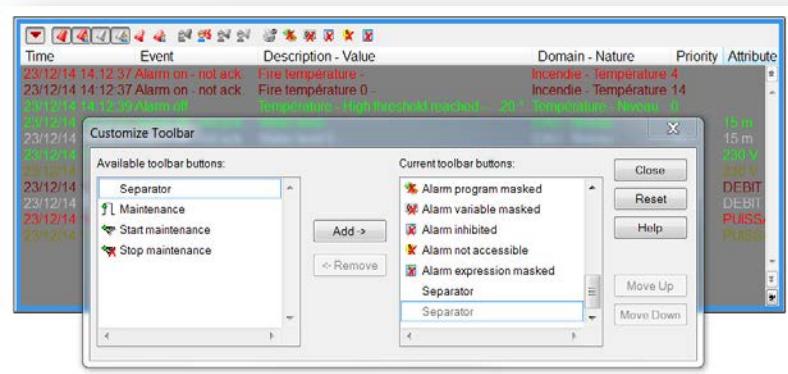
Run-time features

- Acknowledgment,
- Associated actions,
- Filtering and sorting,
- Contextual popup
- ...

TOTAL	POWER	HVAC	SECU	LIGHTING	FIRE	
On NOACK.	25	5	12	0	7	1

Filters: Floor FLOOR 2 Type ALL

Date	Time	Event	Title	Floor	Type	Info
14/10/2014	11:57:24	Alarm on - not ack.	Thermostat high working time floor02 OpenSpace01 Thermostat01	FLOOR02...	HVAC...	
14/10/2014	11:57:24	Alarm on - not ack.	Thermostat high working time floor02 OpenSpace01 Thermostat02	FLOOR02...	HVAC...	
14/10/2014	11:57:24	Alarm on - not ack.	Thermostat high working time floor02 MeetingRoom01 Thermost...	FLOOR02...	HVAC...	
23/10/2014	15:42:52	Alarm on - not ack.	Light high working time floor 02 OpenSpace01 Light01	FLOOR02...	LIGHT...	
23/10/2014	15:42:52	Alarm on - not ack.	Light high working time floor 02 OpenSpace01 Light03	FLOOR02...	LIGHT...	
23/10/2014	15:42:52	Alarm on - not ack.	Light high working time floor 02 OpenSpace01 Light02	FLOOR02...	LIGHT...	
23/10/2014	15:42:52	Alarm on - not ack.	Light high working time floor 02 MeetingRoom01 Light01	FLOOR02...	LIGHT...	
23/10/2014	15:42:52	Alarm on - not ack.	Light high working time floor 02 MeetingRoom01 Light02	FLOOR02...	LIGHT...	
23/10/2014	16:45:51	Alarm on - not ack.	Low temp floor 02 OpenSpace01 Thermostat02	FLOOR02...	HVAC...	
23/10/2014	17:08:13	Alarm on - not ack.	Low temp floor 02 MeetingRoom01 Thermostat01	FLOOR02...	HVAC...	
23/10/2014	17:10:21	Alarm on - not ack.	Fire detected floor 02 MeetingRoom01 Fire_Detector01	FLOOR02...	FIRE...	Device out of order
23/10/2014	17:19:26	Alarm on - not ack.	Low temp floor 02 OpenSpace01 Thermostat01	FLOOR02...	HVAC...	





Lists of events

Event logs viewer

- Display of recorded events
- Event or alarms status
- Operator actions

Run-time features

- Filtering and sorting,
- Operator comment,
- Contextual pop-up,
- ...

The screenshot shows the PcVue Solutions software interface. At the top, there's a header bar with the title "PcVue - Main window - ARC Informatique (Administrator)", the date and time "25/09/14 16:48:37", and several system status indicators. Below the header is a navigation menu with links like "LOGS", "TRENDS", "NETWORK", and "LANGUAGE". The main area is titled "Historical" and contains a table of event logs. The table has columns for Date Time, Event, Title, Nature, Value, Info, User, and Cc. The data in the table shows various HVAC-related alarms and events occurring on 27/10/2014, such as "Alarm off - not ack" and "Alarm on - not ack" for different thermostats and floors.

Date Time	Event	Title	Nature	Value	Info	User	Cc
27/10/2014 17:02:09	Alarm off - not ack	Low temp floor 02 OpenSpace01 Thermostato01	HVAC CVC/FLO...	(10 °C)			
27/10/2014 17:01:58	Alarm on - not ack	Low temp floor 02 OpenSpace01 Thermostato01	HVAC CVC/FLO...	(10 °C)			
27/10/2014 17:01:55	Alarm off - not ack	Low temp floor 02 OpenSpace01 Thermostato01	HVAC CVC/FLO...	(10 °C)			
27/10/2014 17:01:53	Alarm on - not ack	Low temp floor 02 OpenSpace01 Thermostato01	HVAC CVC/FLO...	(10 °C)			
27/10/2014 17:01:51	Alarm off - not ack	Low temp floor 02 OpenSpace01 Thermostato01	HVAC CVC/FLO...	(10 °C)			
27/10/2014 17:01:50	Alarm on - not ack	Low temp floor 02 OpenSpace01 Thermostato01	HVAC CVC/FLO...	(10 °C)			
27/10/2014 17:01:33	Alarm off - not ack	Low temp floor 02 OpenSpace01 Thermostato01	HVAC CVC/FLO...	(10 °C)			
27/10/2014 17:01:23	Alarm on - not ack	Low temp floor 02 OpenSpace01 Thermostato01	HVAC CVC/FLO...	(10 °C)			
27/10/2014 17:01:20	Alarm off - not ack	Low temp floor 02 OpenSpace01 Thermostato01	HVAC CVC/FLO...	(10 °C)			
27/10/2014 17:01:19	Alarm on - not ack	Low temp floor 02 OpenSpace01 Thermostato01	HVAC CVC/FLO...	(10 °C)			
27/10/2014 17:01:02	Alarm on - not ack	Low temp floor 02 OpenSpace01 Thermostato01	HVAC CVC/FLO...	(10 °C)			
27/10/2014 17:01:01	Alarm off - not ack	Low temp floor 02 OpenSpace01 Thermostato01	HVAC CVC/FLO...	(10 °C)			
27/10/2014 17:00:58	Alarm on - not ack	Low temp floor 02 OpenSpace01 Thermostato01	HVAC CVC/FLO...	(10 °C)			
27/10/2014 17:00:54	Alarm on - not ack	Low temp floor 02 OpenSpace01 Thermostato01	HVAC CVC/FLO...	(10 °C)			
27/10/2014 16:52:28	Alarm on - not ack	Low temp floor 02 MeetingRoom01 Thermostato01	HVAC CVC/FLO...	(10 °C)			
27/10/2014 16:52:27	Alarm off - not ack	Low temp floor 02 MeetingRoom01 Thermostato01	HVAC CVC/FLO...	(10 °C)			
27/10/2014 16:51:57	Alarm off - not ack	Low temp floor 02 OpenSpace01 Thermostato01	HVAC CVC/FLO...	(10 °C)			
27/10/2014 16:51:55	Alarm on - not ack	Low temp floor 02 OpenSpace01 Thermostato01	HVAC CVC/FLO...	(10 °C)			
27/10/2014 16:51:54	Alarm off - not ack	Low temp floor 02 OpenSpace01 Thermostato01	HVAC CVC/FLO...	(10 °C)			
27/10/2014 16:51:31	Alarm on - not ack	Low temp floor 02 OpenSpace01 Thermostato01	HVAC CVC/FLO...	(10 °C)			
27/10/2014 16:51:21	Alarm on - not ack	Low temp floor 02 OpenSpace01 Thermostato01	HVAC CVC/FLO...	(10 °C)			
27/10/2014 16:51:07	Alarm on - not ack	Low temp floor 02 MeetingRoom01 Thermostato01	HVAC CVC/FLO...	(10 °C)			
27/10/2014 16:51:05	Alarm off - not ack	Low temp floor 02 MeetingRoom01 Thermostato01	HVAC CVC/FLO...	(10 °C)			
27/10/2014 16:51:04	Alarm on - not ack	Low temp floor 02 MeetingRoom01 Thermostato01	HVAC CVC/FLO...	(10 °C)			
27/10/2014 16:50:07	Alarm off - not ack	Low temp floor 02 MeetingRoom01 Thermostato01	HVAC CVC/FLO...	(10 °C)			
27/10/2014 16:50:02	Alarm off - not ack	Low temp floor 02 MeetingRoom01 Thermostato01	HVAC CVC/FLO...	(10 °C)			
27/10/2014 16:49:22	Alarm on - not ack	Low temp floor 02 MeetingRoom01 Thermostato01	HVAC CVC/FLO...	(10 °C)			
27/10/2014 16:49:05	Alarm off - not ack	Low temp floor 02 OpenSpace01 Thermostato01	HVAC CVC/FLO...	(10 °C)			
27/10/2014 16:48:51	Alarm off - not ack	Low temp floor 02 MeetingRoom01 Thermostato01	HVAC CVC/FLO...	(10 °C)			
27/10/2014 16:48:14	Alarm on - not ack	Low temp floor 02 MeetingRoom01 Thermostato01	HVAC CVC/FLO...	(10 °C)			
27/10/2014 16:48:01	Alarm on - not ack	Low temp floor 02 OpenSpace01 Thermostato01	HVAC CVC/FLO...	(10 °C)			
27/10/2014 16:47:26	Alarm off - not ack	Low temp floor 02 OpenSpace01 Thermostato01	HVAC CVC/FLO...	(10 °C)			
27/10/2014 16:45:48	Alarm off - not ack	Low temp floor 02 MeetingRoom01 Thermostato01	HVAC CVC/FLO...	(10 °C)			



Data processing

“

From raw data to information

”



Data processing

01. Data archiving
02. Data export and reporting
03. On-call features
04. Scheduler
05. Recipes
06. Scripts





Archiving

Several archive mechanisms and formats

- Database SQLServer via built-in Historical Data Server (H.D.S.)
- Databases via ODBC connector
- Proprietary text files
- Specific archiving system for Replay feature
- Redundancy mechanisms

Built-in archive to SQLServer via HDS

- Records in an industry standard database
- Easy access to data by 3rd party applications
- Qualified with Access and SQL server
- Includes a scheduler to run database maintenance tasks

Cloud

- PcVue archiving to Azure database





Data export & reporting

From raw data to information

PcVue mimics
Alarm, log, trend
viewers

- Need for real time data & short term history
- Logged events and alarms
- Trends

Data Export

- Need for comparisons, statistics and regulatory compliance
- PcVue viewers
- Detailed Excel reports

Dream Report

- Need for graphic reports, or a more interactive tool
- Excel or Pdf reports
- Web Portal

SQL Server
Reporting
Services

- Advanced needs
- Drill-down analysis
- domain specific data processing





Data export

Archive extract and export to EXCEL

Built-in data statistics export from PcVue to EXCEL

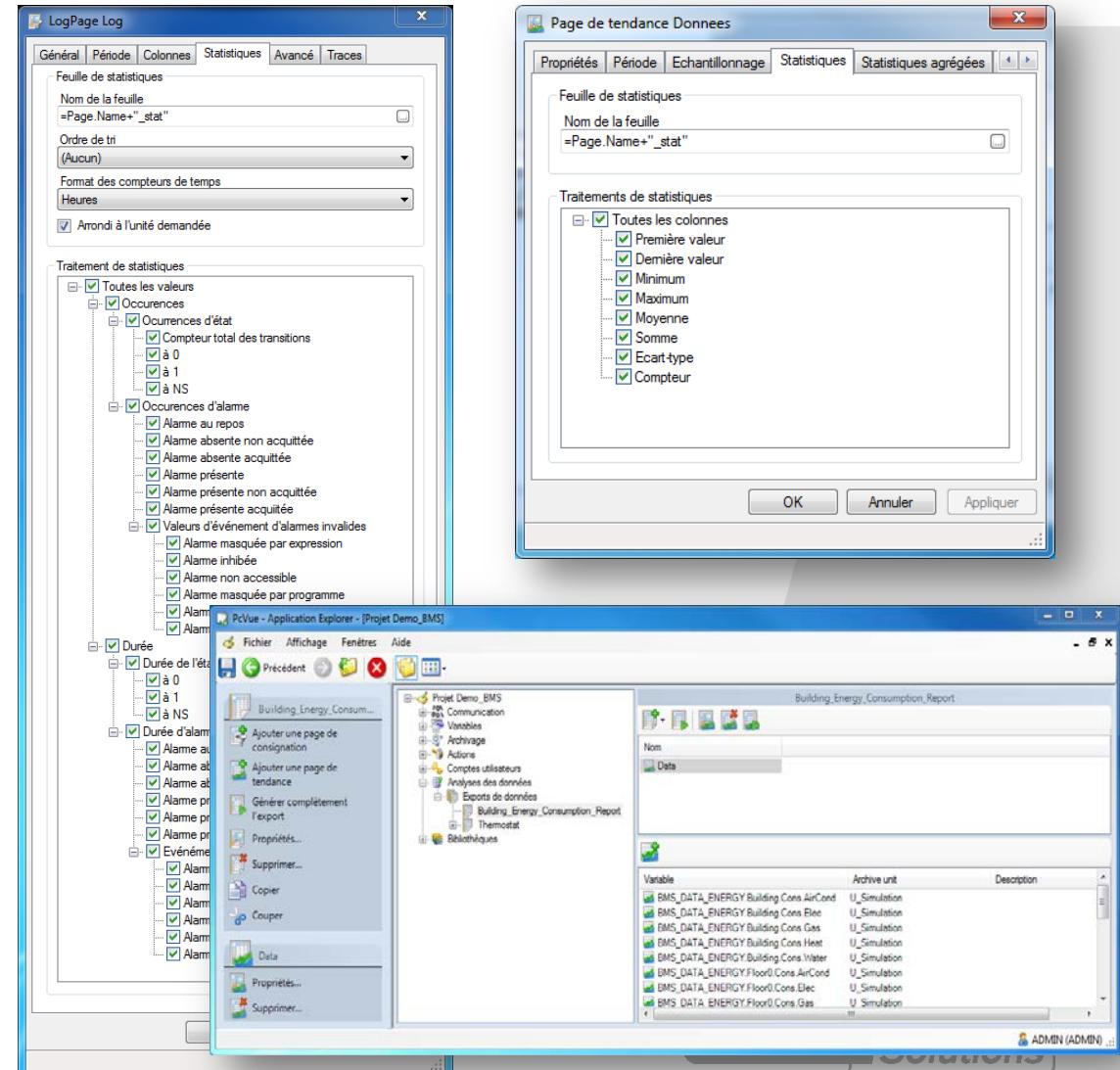
- Data export to Excel or CSV file

Statistics

- Raw data, sampling, with or without synchronization
- Number of alarms/bits occurrences
- Alarms/Bits changes duration
- Sum
- Average/weighted average
- Minimum/Maximum
- Standard deviation
- Counter
- ...

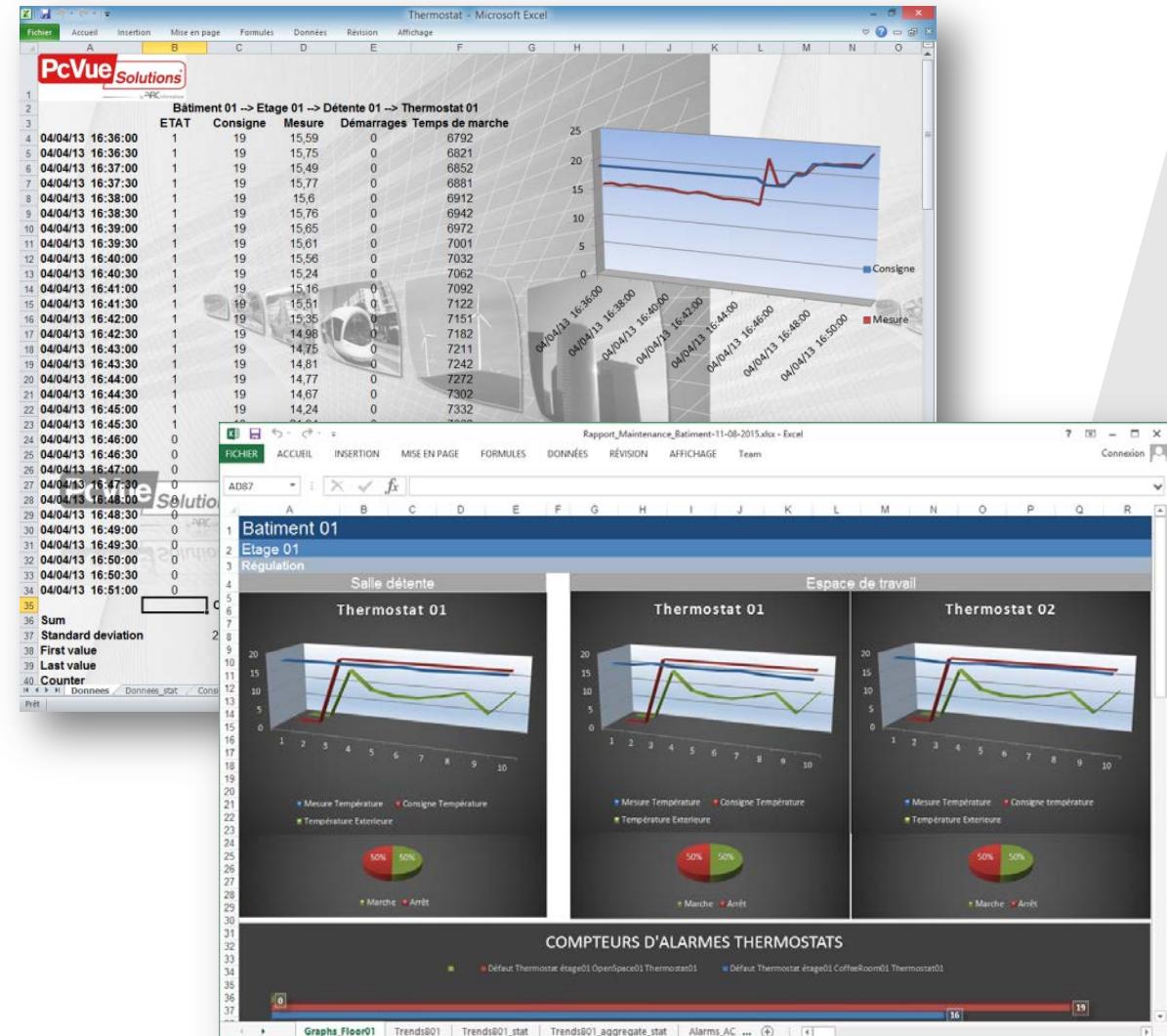
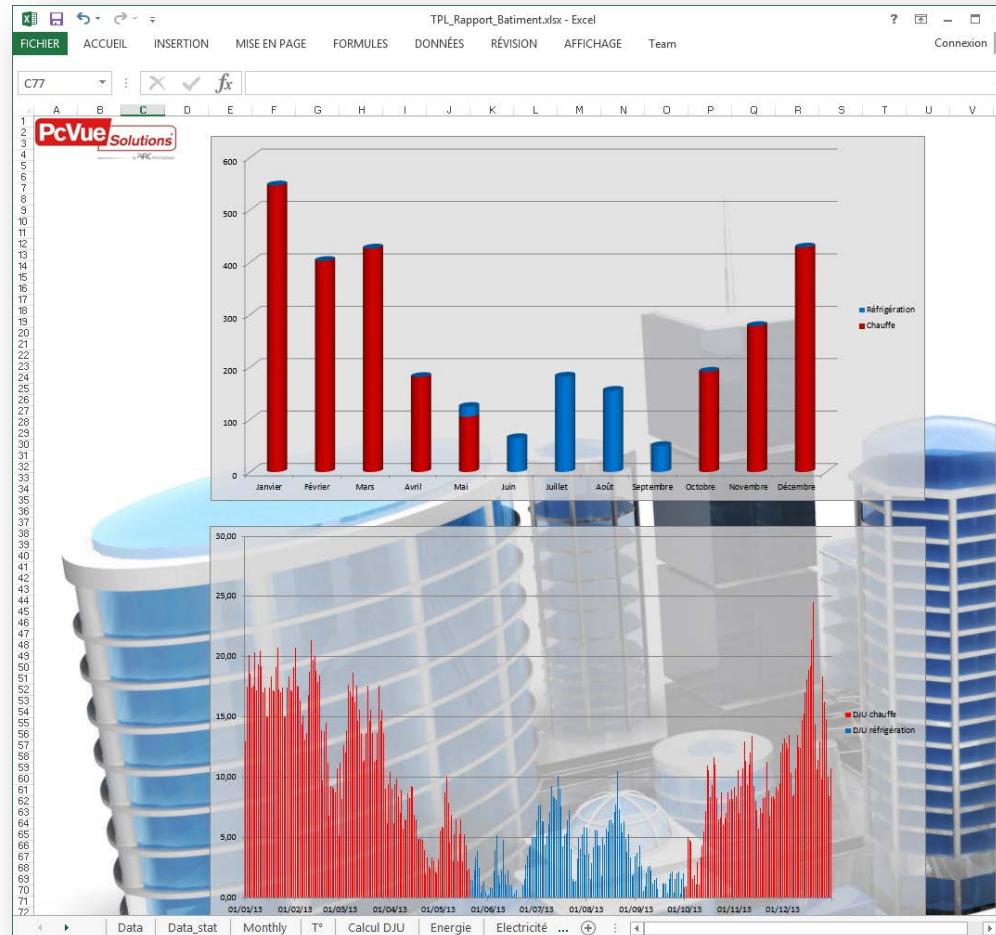
Manual or automatic generation

- Export can be sent by email



Data export

Samples reports





Advance reporting solution

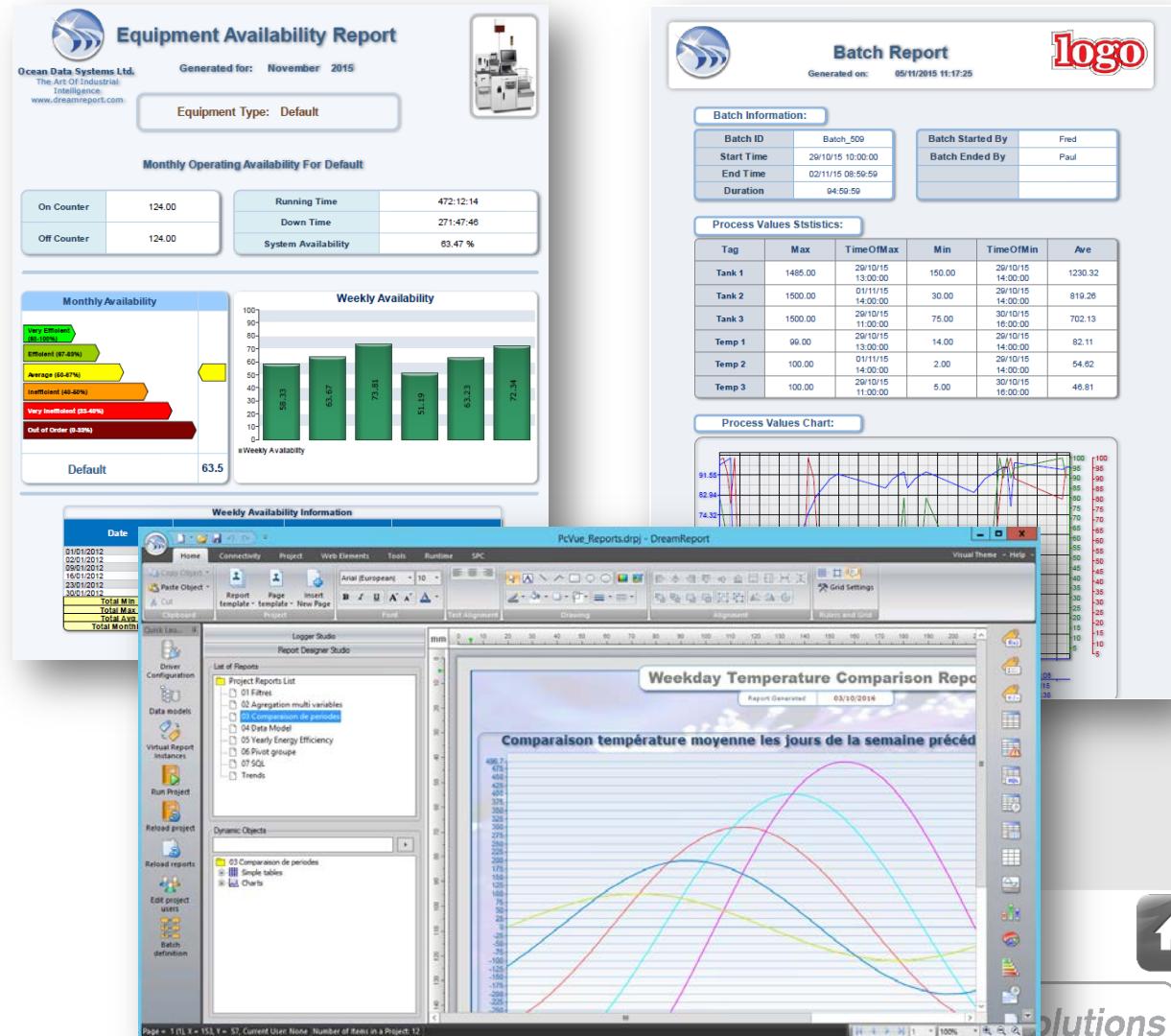
Dream report

Data collection and logging

- Multiple data sources connections
- SGBD (SQLServer, Oracle, MySQL, MS Access,...)
- HMI, PcVue, PLC...

Data extraction and analysis

- Statistics with predefined functions
- Reports templates for several markets
- User friendly and script free design
- Object libraries



Advance reporting solution

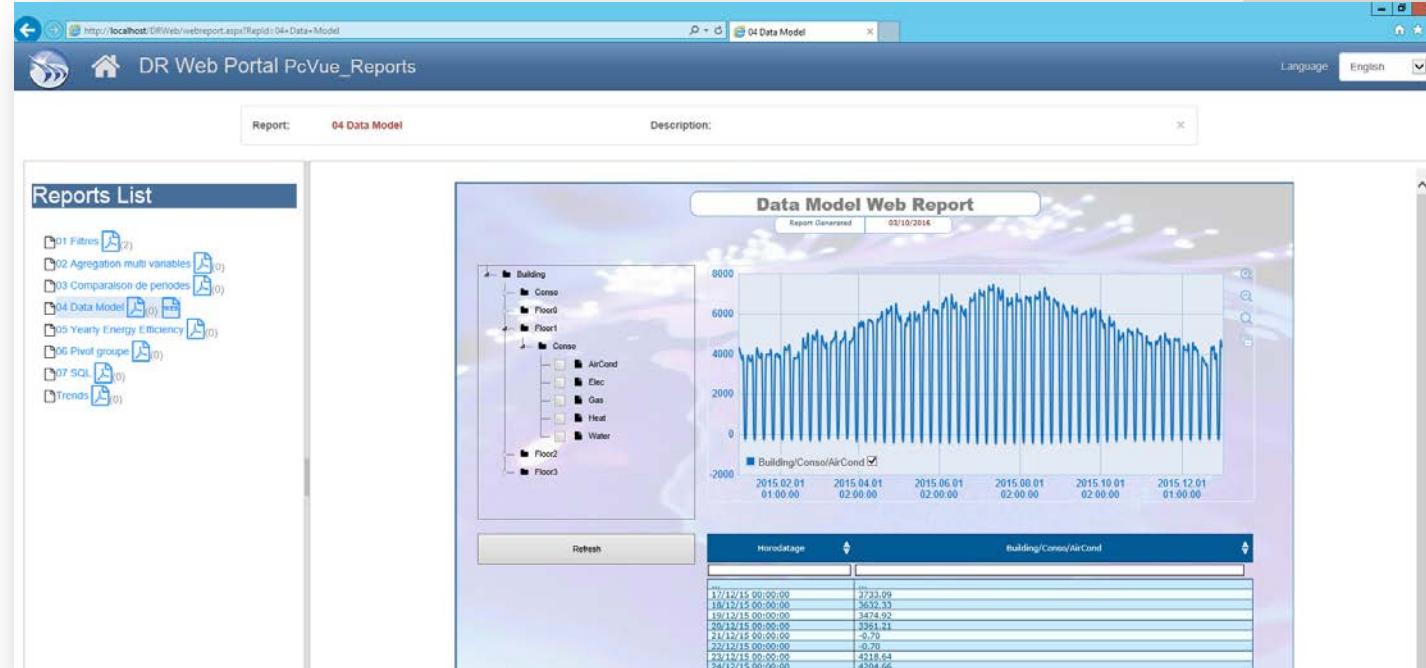
Dream report

Reports and distribution

- Automatic or manual generation
- PDF,Excel
- Web portal,FTP,Email,...

Security

- Support for Active Directory
- Report version management
- Support for FDA CFR 21 Part 11





Data
processing

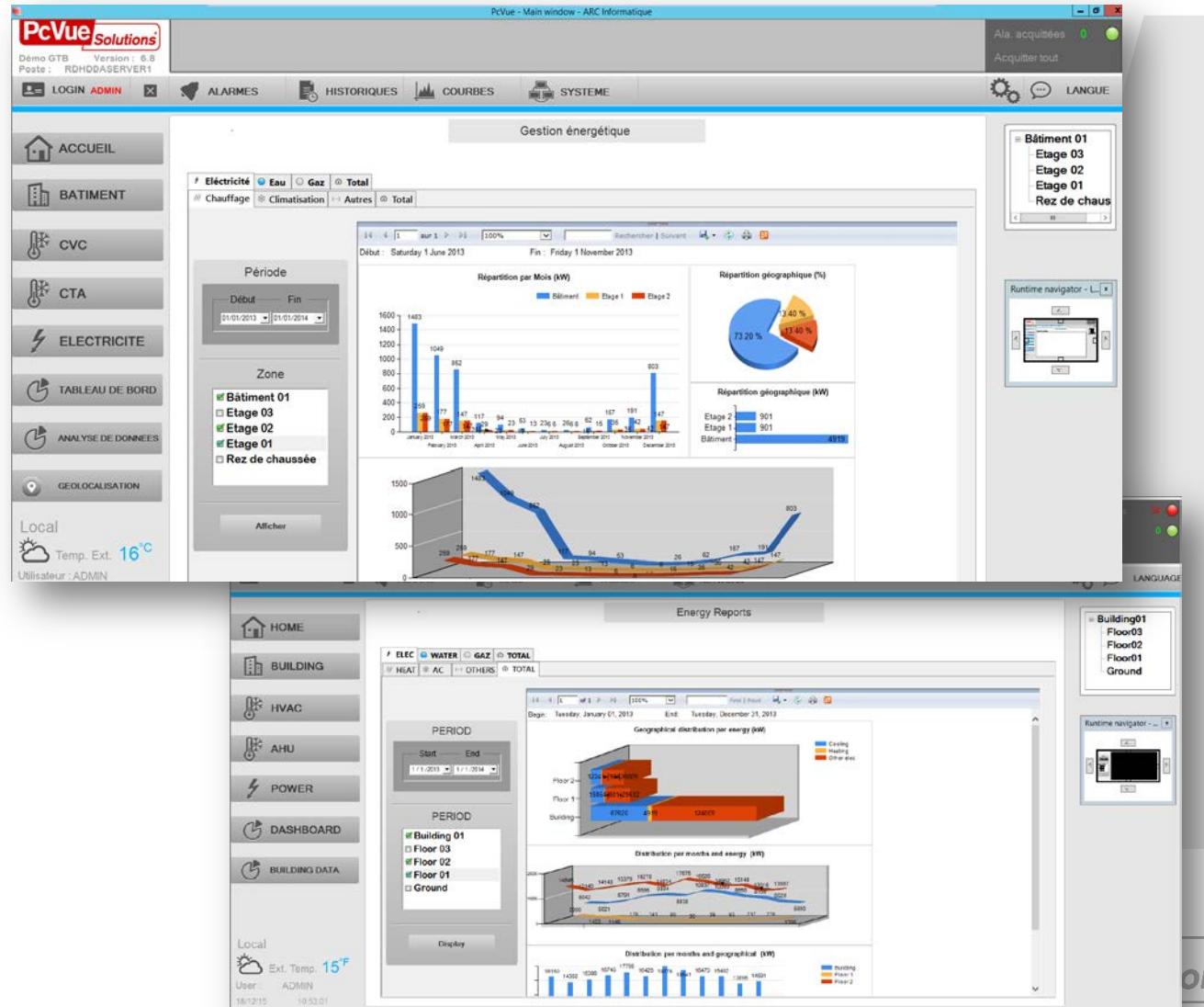
Advanced reporting solutions

SQLServer – Report Services

Creation, generation and deployment
of reports from SQLServer database

Full integration in PcVue

Reports available in webbrowser



On-call features

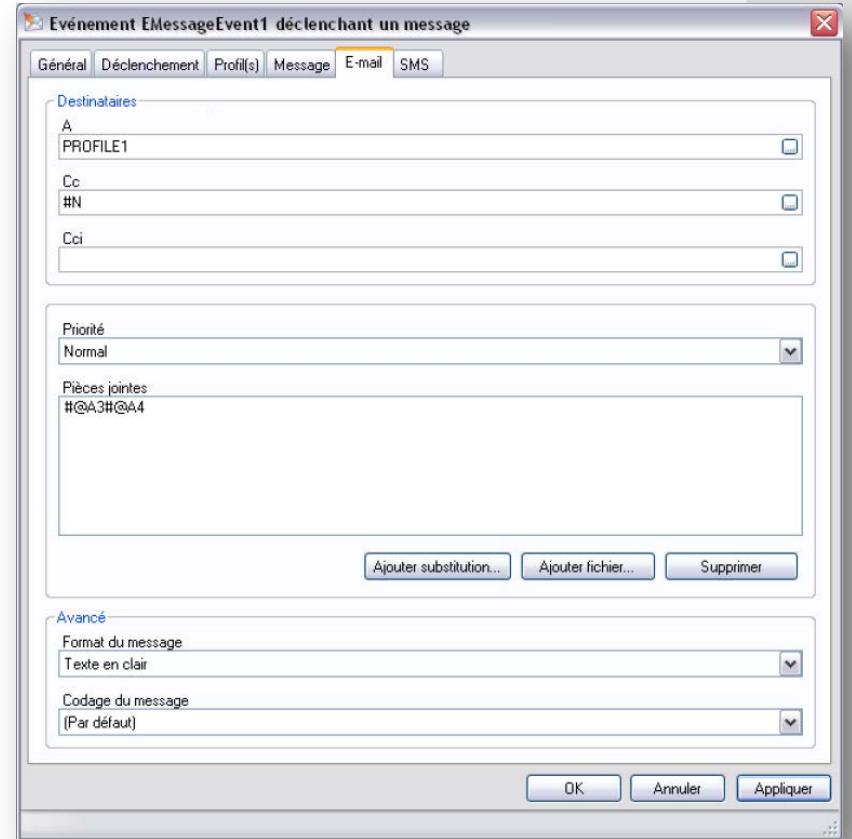
Emails & SMS

Built-in SMS/Email system

No script configuration

Advanced features

- Priority levels definition
- Messages templates with predefined or customizable parameters and substitution characters (real-time variables values,...)
- Automatic send of messages on alarm or event or on any others actions



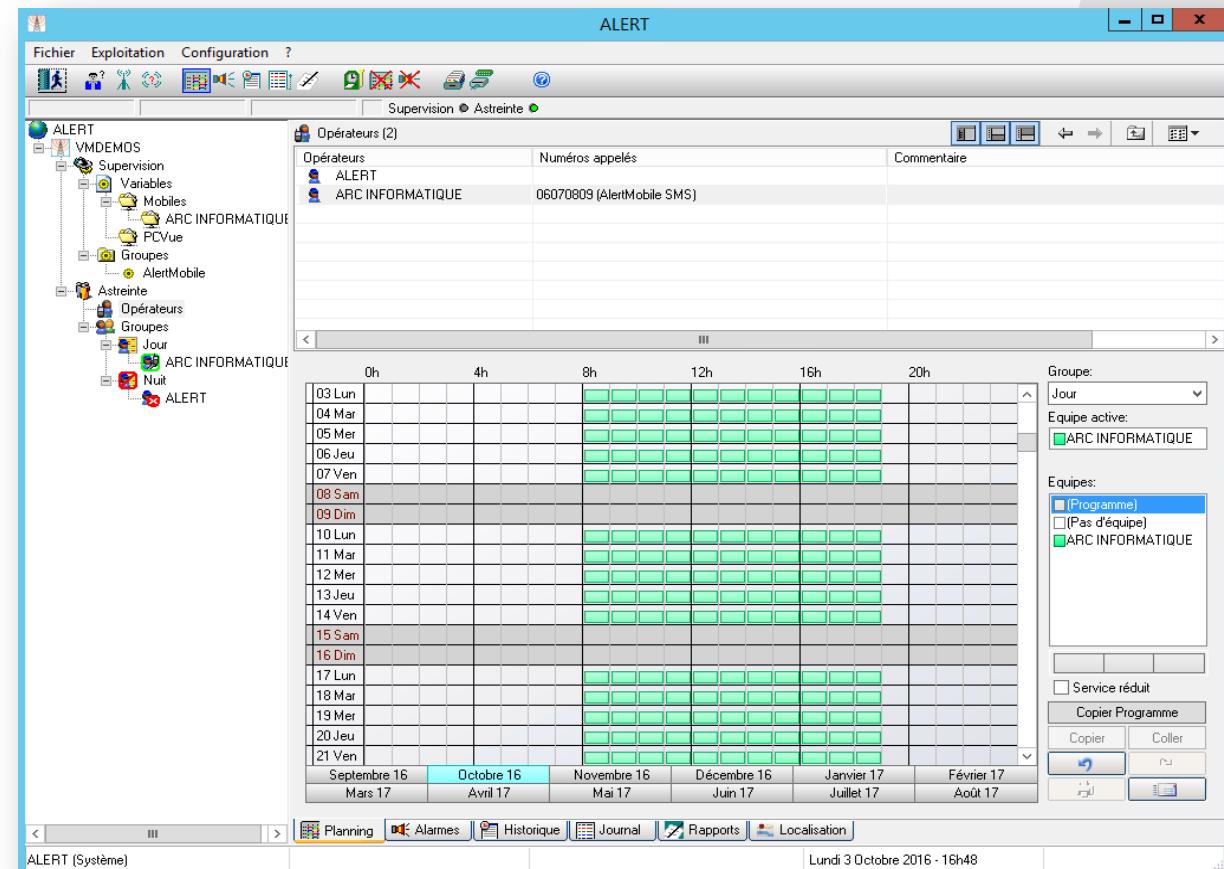
On-call solution

ALERT software

Automatic transmission of alarms from
PcVue to mobile devices

Operator acknowledgment

On-call team planning management



Scheduler

Webscheduler

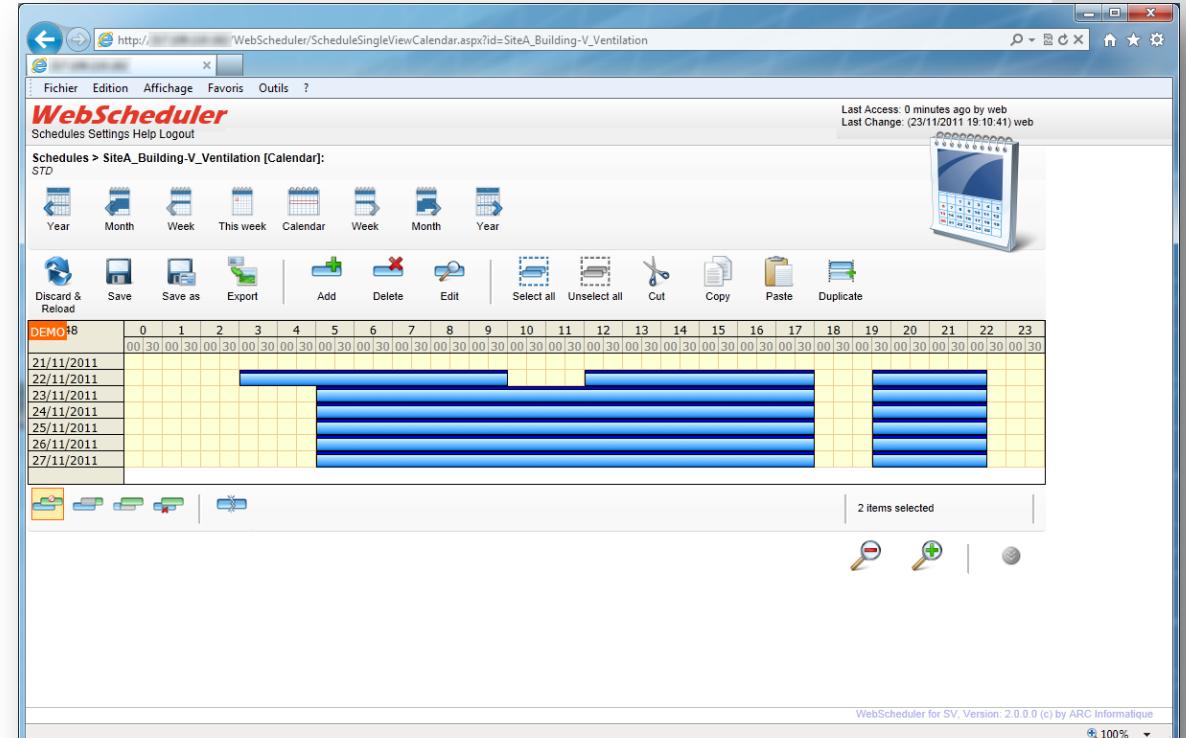
Display and control PcVue scheduler

Automatic command and recipes send depending on time slots

Available via Webbrowser or embedded in PcVue

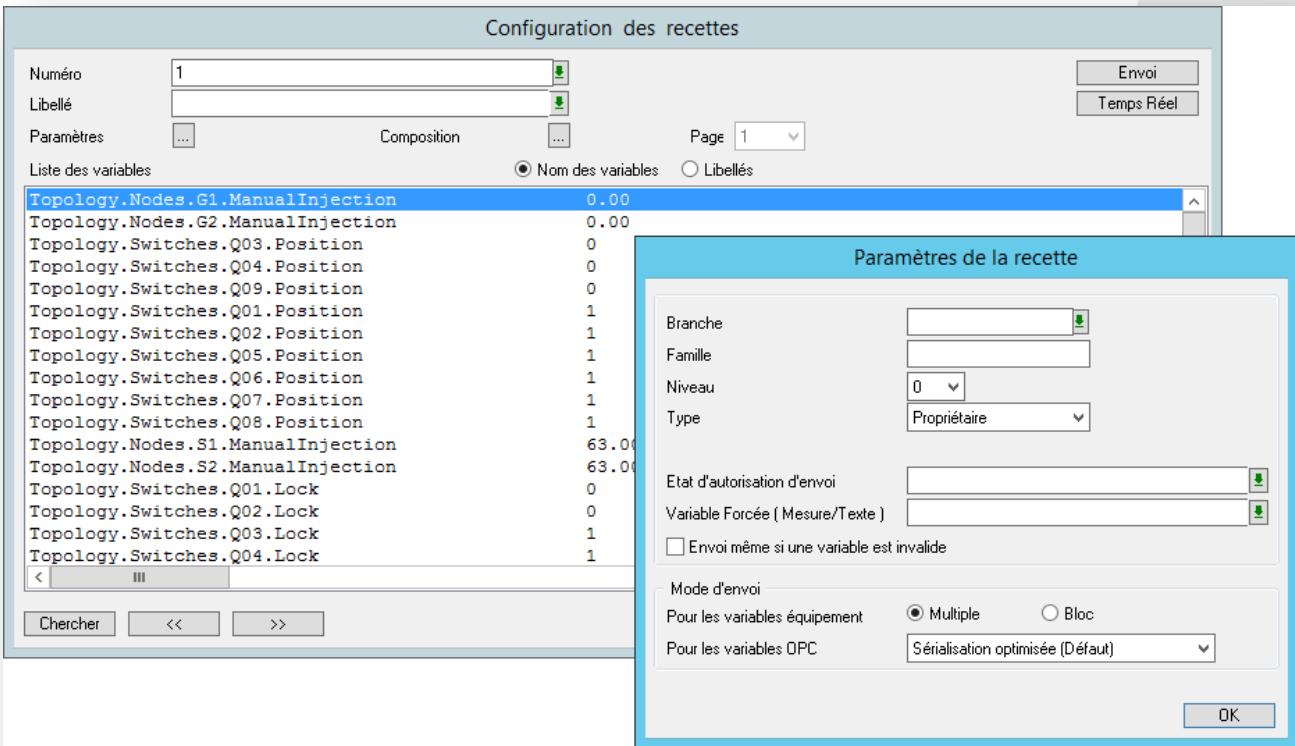
Includes BACnet calendar management

User friendly interface for non expert users



Recipes

- List of variable's predefined or real time values sent to a device
- Recipes can be sent automatically or manually
- Groups of recipes can be created
- User right can be applied for recipes





Scripts

SCADA BASIC

- Script editor for managing all the PcVue features
- Powerful editor interface

The screenshot shows the 'Editeur SCADA Basic' application window. The menu bar includes Fichier, Edition, Fenêtre, and Aide. The toolbar contains various icons for file operations. The main area displays SCADA BASIC code:

```
1 sub main ()
2
3     @ALARMS.FILTER = 1;
4
5 end sub
6 sub tre()
7     dim re as integer;
8     re=LOGDISPLAY("FILTER","Consignation_custom","", "log2", "=(#A3==\"15 m\")",1);
9     print(re);
10    end sub
11 *****
12 sub filter()
13
14     Dim Filtre as
15     Dim Res as
16     Dim Flag as
17
18     =@ "AFTER", Window, Branch, Identity
19     =@ "AUTOREFRESH_PAUSE", Window, Branch, Identity
20     =@ "AUTOREFRESH_RESUME", Window, Branch, Identity
21     =@ "AUTOREFRESH_SET", Window, Branch, Identity, AutorefreshPeriod, PauseWhenNavigating
22     =@ "BEFORE", Window, Branch, Identity
23     =@ "BEGIN", Window, Branch, Identity
24     =@ "DOMAIN", Window, Branch, Identity, Argument
25     =@ "DOMAIN", Window, Branch, Identity, Argument [,Context]
```

The screenshot shows the 'Microsoft Visual Basic - Mimic4 [design]' window. The menu bar includes File, Edit, View, Insert, Format, Debug, Run, Tools, Add-Ins, Window, Help. The toolbar has icons for file operations. The main area shows VBA code:

```
Private Sub Timer1_Timer()
    'Timer1.Enabled = False
    If Not Mimics.IsOpened("mvdc") Then
        Dim mim As Mimic
        Dim win As Window
        [MULTIVIEWED_LEVEL] = 0
        Set mim = Mimics.Open("mvdc", "", 0, 0, "Multiviewd", "", 0, 0, 850, 339, True)
        Set win = mim.NewWindow
        win.Left = 222
        win.Top = 332
        win.Mode = fvWindowModeDesign
    End If
End Sub
```

Below the code are several toolbars and panes: Project Explorer, Properties, Immediate, Watches, and Declarations.

VBA for PcVue

- Known standard script editor
- To implement specific needs



Architectures & deployment

“ Scalability. Flexibility. High availability.

”



Architectures & deployment

01. Architectures building blocks
02. Exemples of architectures
03. Remote solutions
04. Security

Building blocks

Building blocks	Role	Typical deployment
Standalone station 	<ul style="list-style-type: none">-Data acquisition-Historical data-HMI-Does not have the capability to exchange data with other stations	<ul style="list-style-type: none">-As a Desktop Application-Under a desktop OS
SCADA Station 	<ul style="list-style-type: none">-Data acquisition-Historical data-HMI	<ul style="list-style-type: none">-As a Desktop Application if it requires an HMI-Under a desktop OS <p>Or</p> <ul style="list-style-type: none">-As a Windows Service if an HMI is not required-Under a server OS
Data Acquisition Server 	<ul style="list-style-type: none">-Data acquisition-Historical data-HMI	<ul style="list-style-type: none">-As a Windows Service-Under a server OS



utions

Building blocks

Building blocks	Role	Typical deployment
Client station 	-HMI	As a Desktop Application Under a desktop OS Or with a server OS hosting Remote Desktop Services combined with lightweight terminals used as operator workstations
Historical Data Server 	- Historical data	-As a Windows Service -Under a server OS
WEB Server 	- IIS -Hosts the Supervisor's web services required to serve the web & mobile applications	-Requires Microsoft IIS -Under a server OS
WEB backend 	- PcVue station acting as a gateway to provide data to the WEB server	-As a Windows Service -Under a server OS



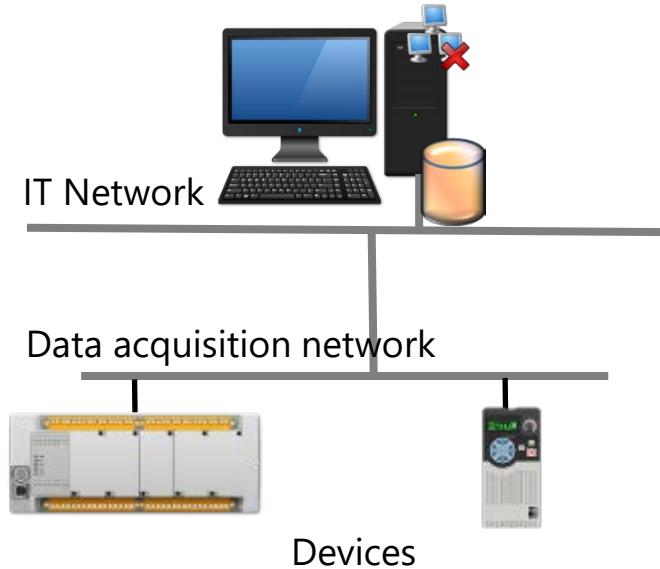
Building blocks

Building blocks	Role	Typical deployment
Mobiles clients 	<ul style="list-style-type: none">-Remote monitoring and control over the Internet or Intranet via desktop or mobile devices-WebVue clients and TouchVue clients or RDS clients	<ul style="list-style-type: none">-Using a Web browser or a Web App On a desktop PC or a mobile device
Engineering station 	<ul style="list-style-type: none">-Depending on the architecture and project design, an engineering station can have very different roles, ranging from those of a data acquisition server (for testing communication with field devices), to archive server or just an HMI workstation (to design mimics). Project development and maintenance. Project and libraries version management. Interoperability with third-party generation tools.	<ul style="list-style-type: none">-As a Desktop Application-Under a desktop OS





Stand-alone station

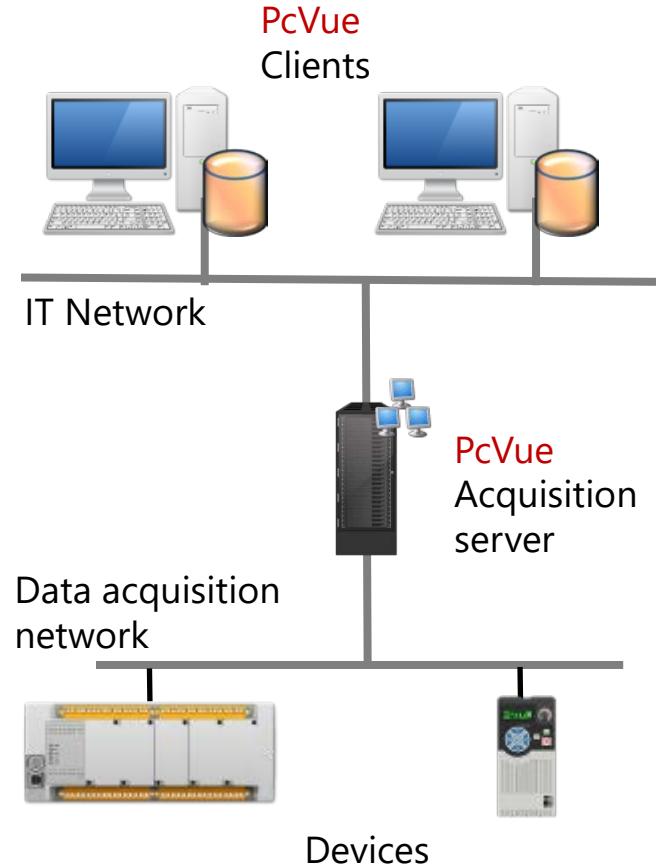


- ✓ The simplest architecture
- ✓ To monitor and control your process from a single “all-in-one” station
- ✓ All performances of a **PcVue** station for a stand-alone architecture





Multi-station

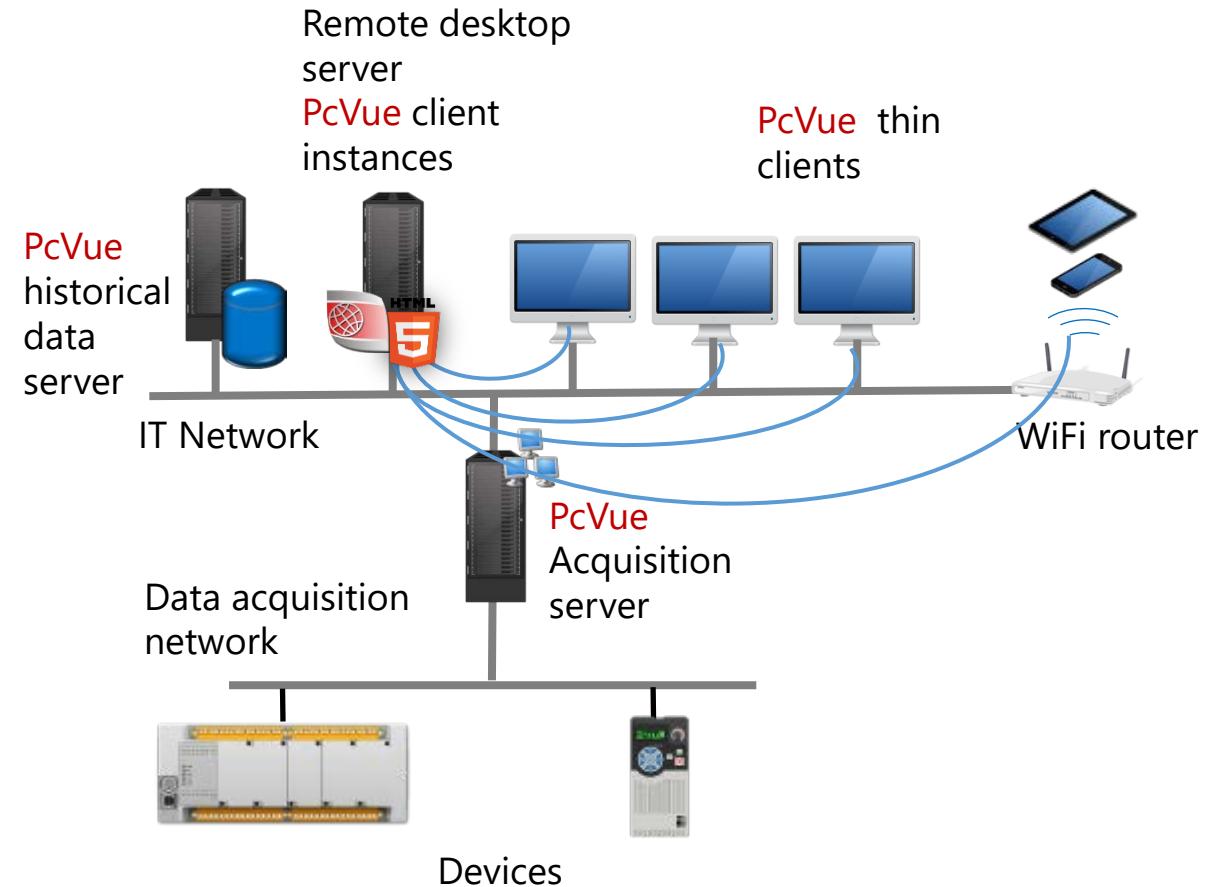


- ✓ The simplest multi stations architecture
- ✓ The process is monitored from several remote user stations
- ✓ Data processing network load optimized





Multi-station with a Remote Desktop Server for deploying client stations

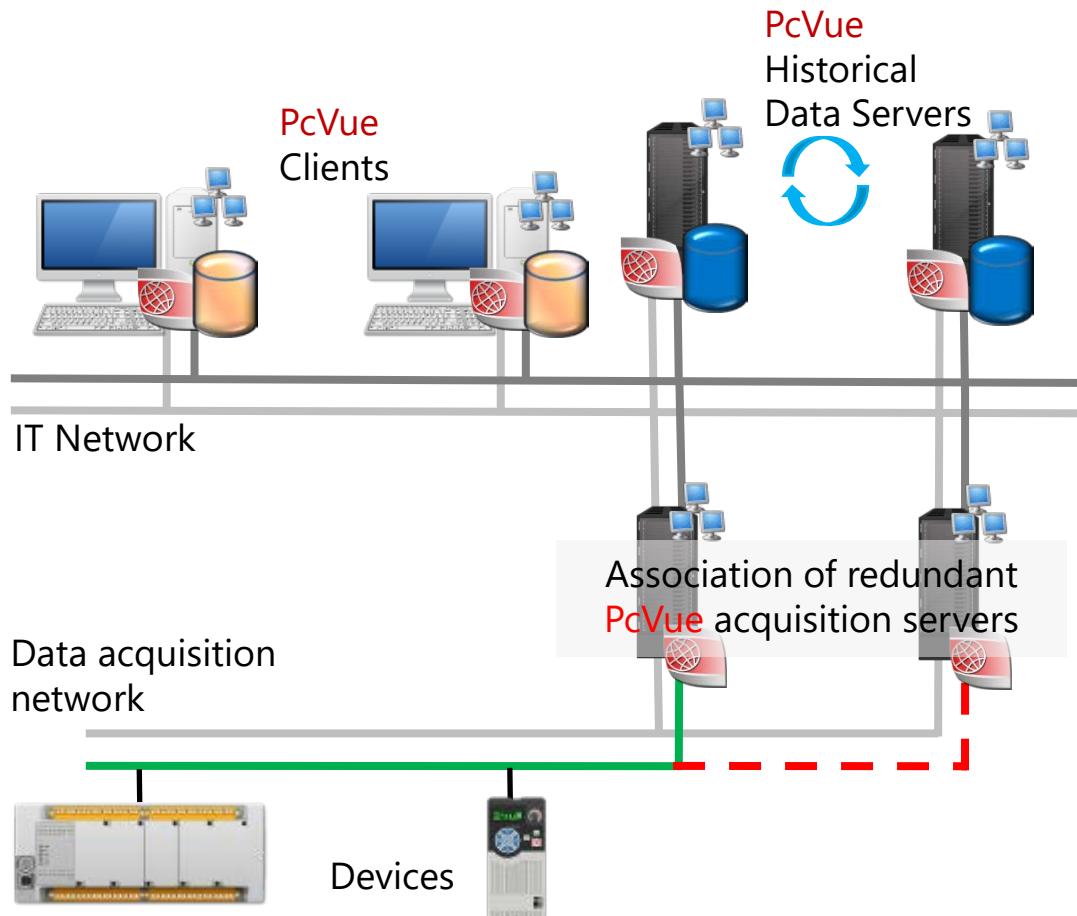


- ✓ To reduce the administration effort and costs
- ✓ Low cost thin hardware clients
- ✓ Installation free on thin clients





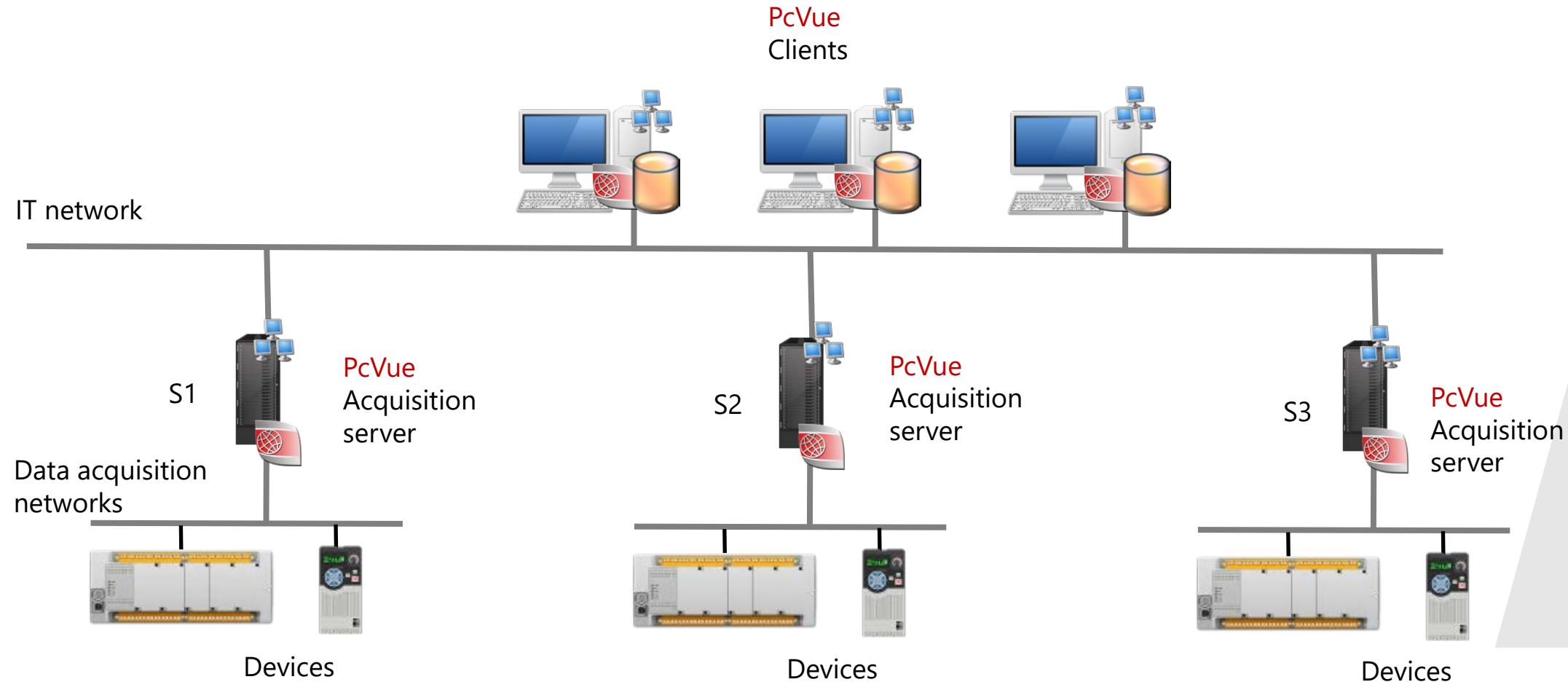
High availability



- ✓ Very high level of security and system/data availability
- ✓ Secure Client-Server setup with dual networks
- ✓ Several user stations
- ✓ Data processing and field networks data load optimized

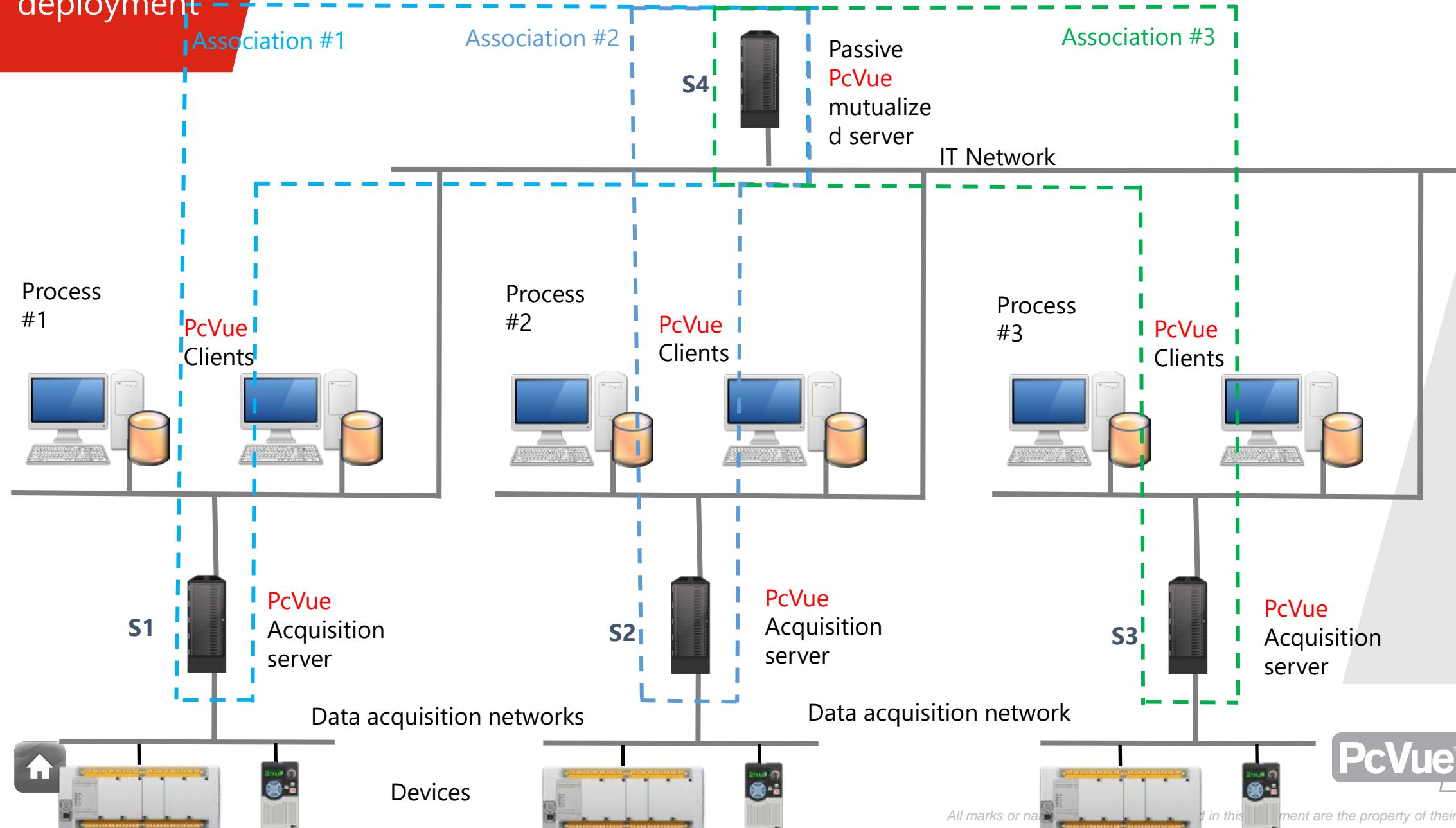


Distributed architecture





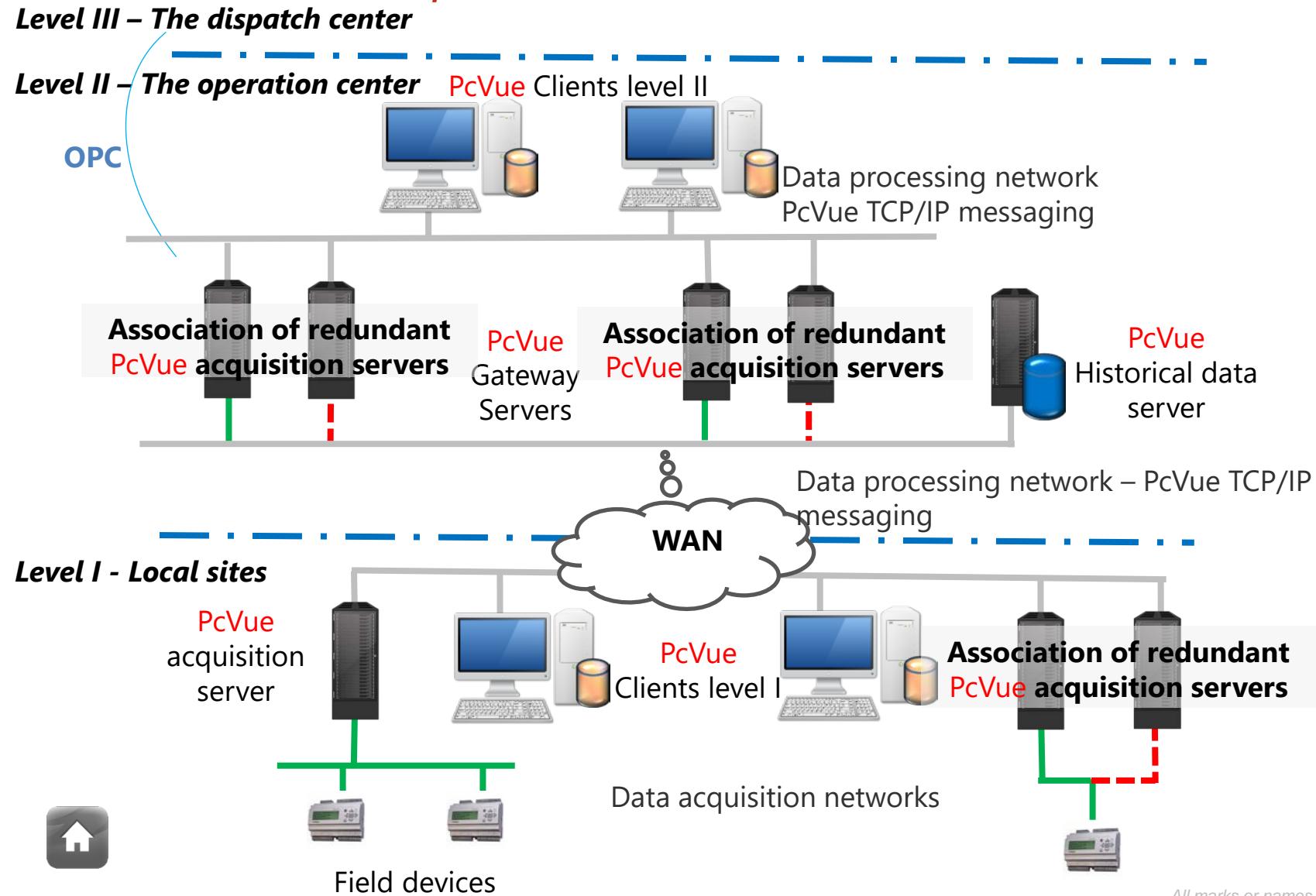
Mutualized servers





Multi-levels

Implementation #1



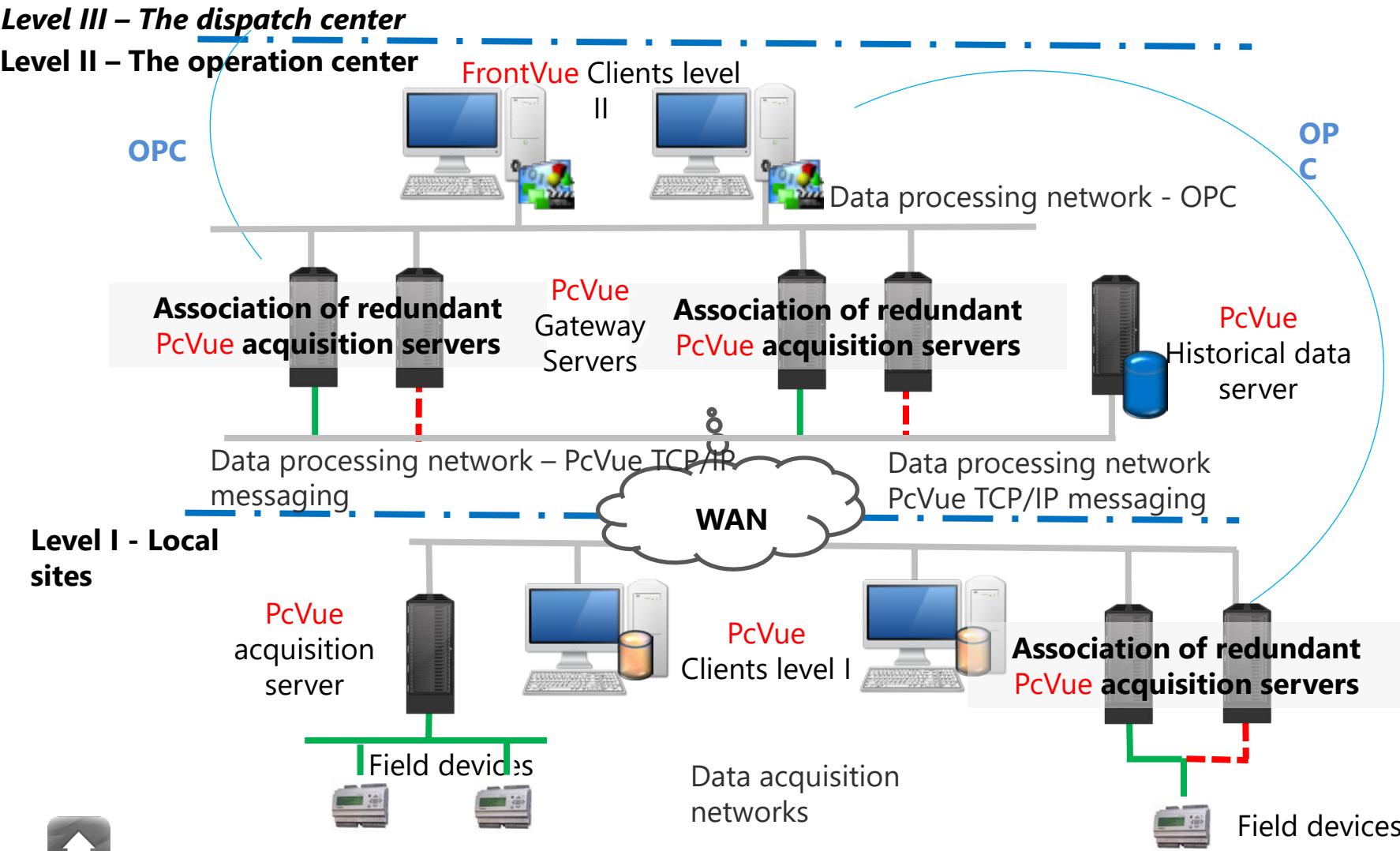
- ✓ For very large scale applications and geographically widely distributed system
- ✓ Several levels of control
- ✓ Very flexible





Multi-levels

Implementation #2

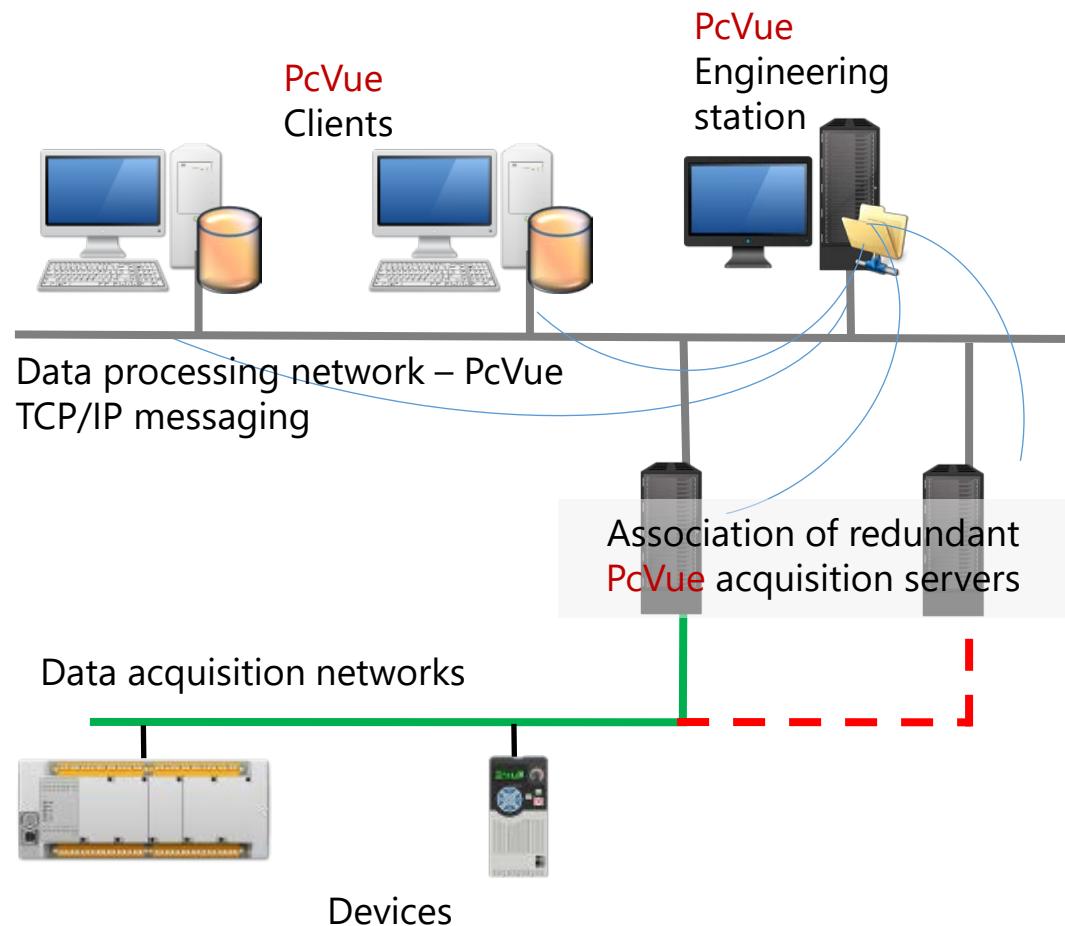


- ✓ For geographically widely distributed system
- ✓ Several levels of control
- ✓ For **very large amount of data/high growth rate projects**
- ✓ Very flexible





Engineering station with version management



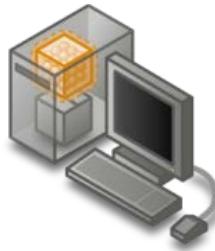
- ✓ Easy maintenance and deployment of a project and/or libraries
- ✓ Unlimited number of versions
- ✓ Modifications tracking
- ✓ Reduce the risk of errors and loss





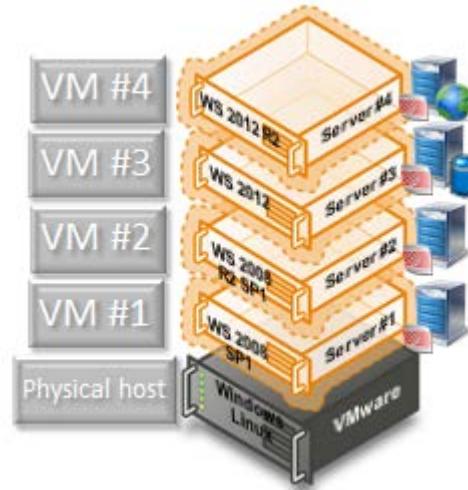
Virtualization

Application virtualization



- The host computer can run different versions of **PcVue** or **FrontVue** in isolated environments
- Setting up a working environment for one-off operations becomes easy
- Setting up an ancient operating system is possible
- Runs under Windows 7, Windows 8, Windows 8.1, Windows 2008 SP2 and 2008 R2 SP1, 2012 and 2012 R2 Server and VMWare

Ressources virtualization



- Virtualized environments can run various **PcVue** servers under different operating systems on a single physical machine
- **PcVue** licenses can be of different types
- Dynamic assignment of virtual machines to physical hosts according to resources optimization rules

- ✓ To reduce the number of physical stations
- ✓ To reduce the administration effort and cost
- ✓ Low-cost thin clients
- ✓ Installation free on thin clients
- ✓ Comply with IT requirements

Remote solutions

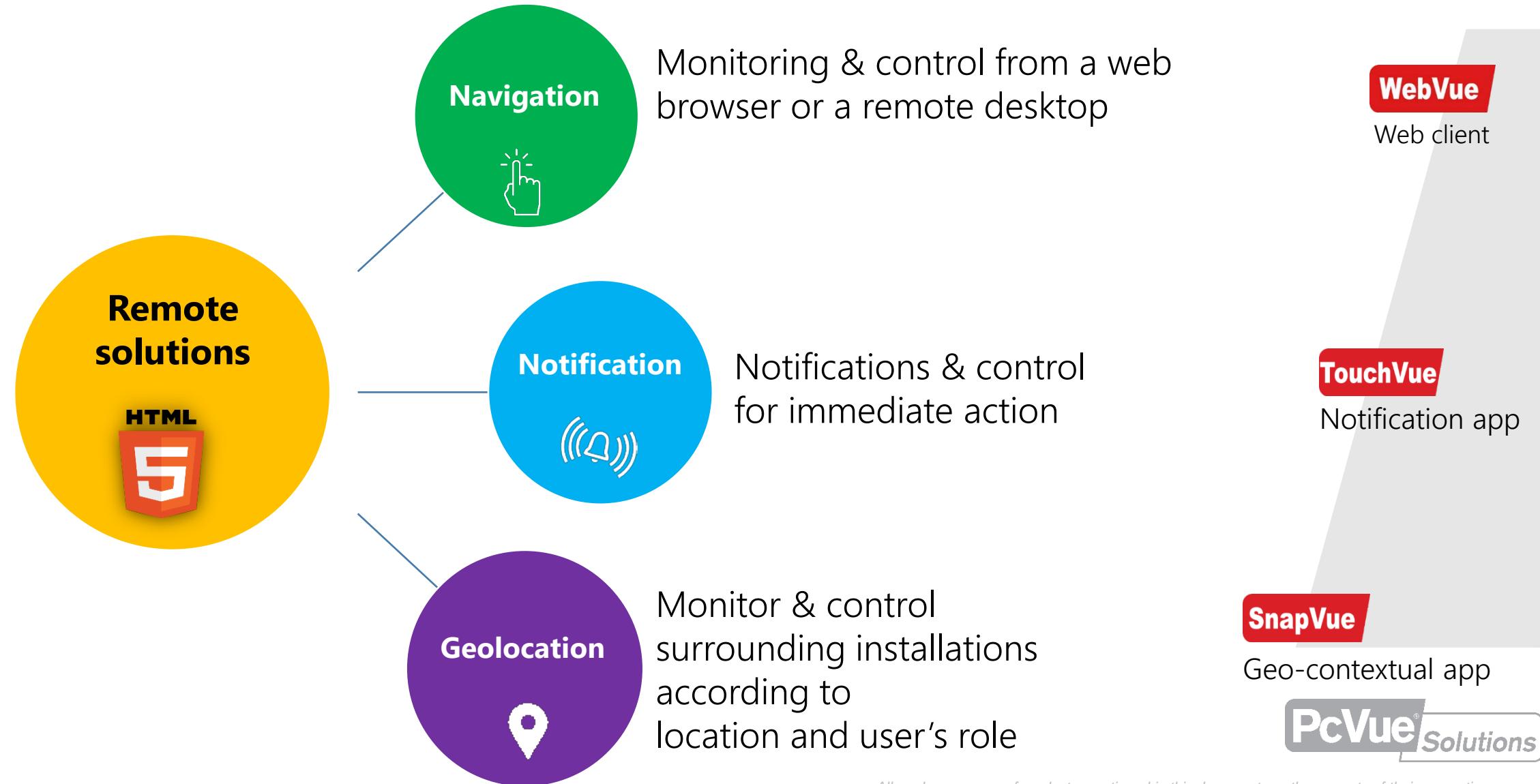
“ A suite of services and products to fit
any remote needs ”





Products for remote access

Combined products for remote solutions



Technology

EasyMobile Technology

- No gateway, no extra plugin
- No installation on client side
- Easy settings – no scripts – wizard only
- Open to third-party application
- Adapted to any users: end-user, SI, IT
- Secure scalable architectures and communication
- Easy Diagnostic
- Affordable solutions

Web & Mobile

EasyMobile Technology



PcVue Solutions

WebVue Web client

“

*Remotely monitor and control your
installation from your web browser*

”





WebVue

Full built-in HTML5 client

- No gateway – embedded HTML5
- Better graphics rendering
- Better user experience
- IT friendly - secured
- Cross-browser compatibility
- Scalable & open
- Mobile friendly
- Less resource intensive



Benefits for all users

End user

- Ease of access to a remote installation
- User friendly and maintenance free

System integrator

- Guide deployment and maintenance using a dedicated console
- No plug-in or external component needed
- Integration of the web components into 3rd party systems (Open API)

IT

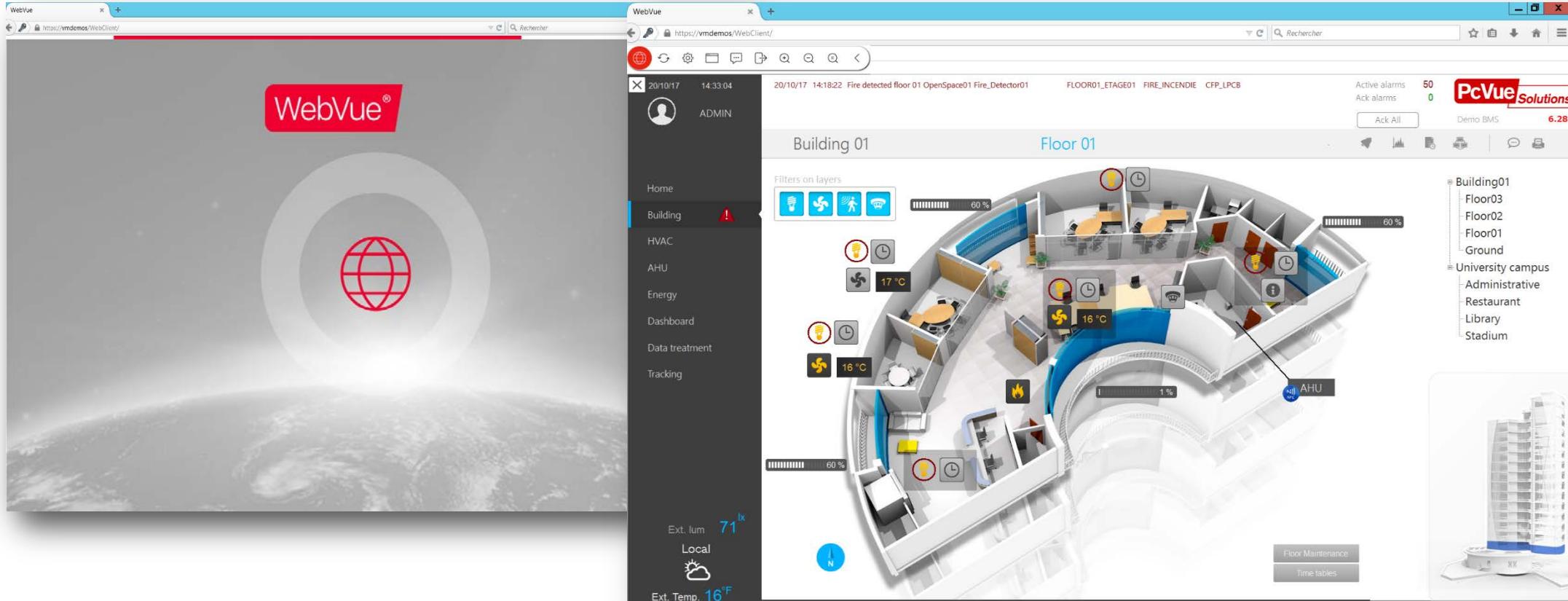
- Secure architectures and communications (HTTPS, DMZ)
- Built-in diagnostic console



Navigation
based solution

WebVue

Screenshots



When do I use WebVue ?

- When I need a cost-effective full web-based HMI to access a PcVue project from any web browser
- Recommended for PC or tablets

Can I use WebVue on a smartphone or a tablet?

- Yes, the HTML5 technology allows to use any web browser, on any OS
- Responsive design technology adapts the size to the device
- Navigation using a very reduced size screen may be not user friendly

Do I have to develop specific mimic for WebVue?

- No, mimics from PcVue are automatically available on the WEB client

Can I monitor multiple mimics concurrently in multiple web browser tabs?

- Yes

Does WebVue handle user context?

- Yes. WebVue can display or control user specific context.



WebVue

Deployment

What do I need to deploy WebVue?

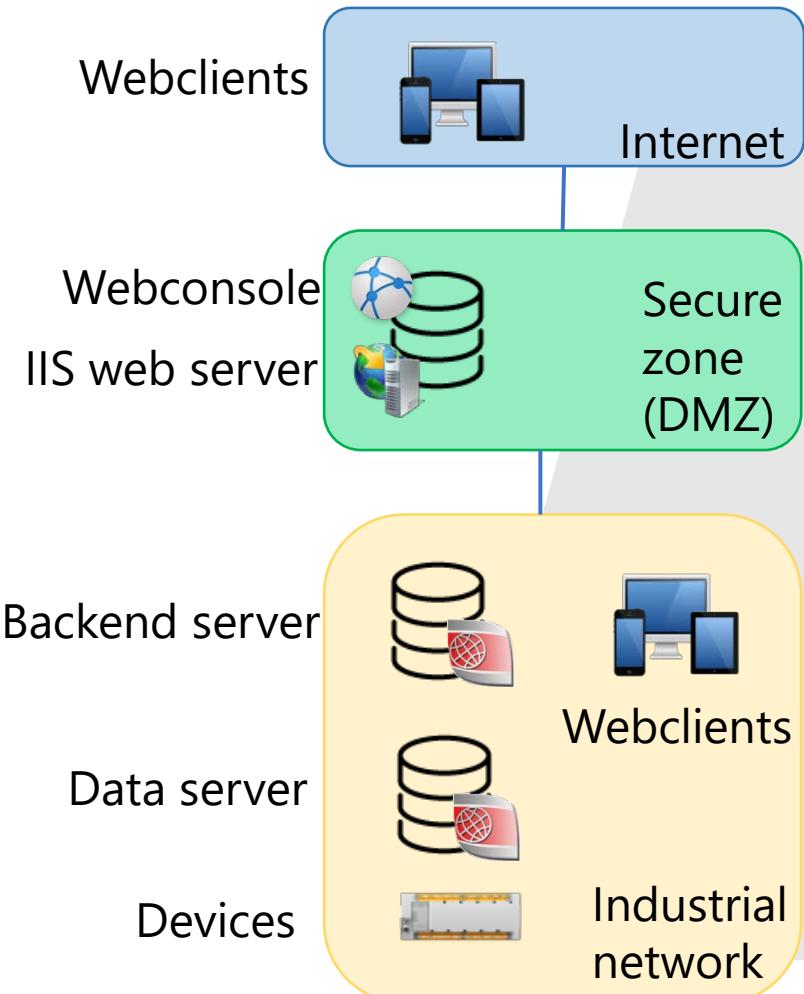
- A PcVue station acting as web backend server with a network access

Do I have to use a specific station for WebVue ?

- Up to 5 concurrent Web client the Web backend server can be any PcVue station
- For more Web clients, it is mandatory to use a dedicated Web backend server station and a license

How secure is the solution?

- Use of HTTPS communication
- The web server can be located in a DMZ



WebVue

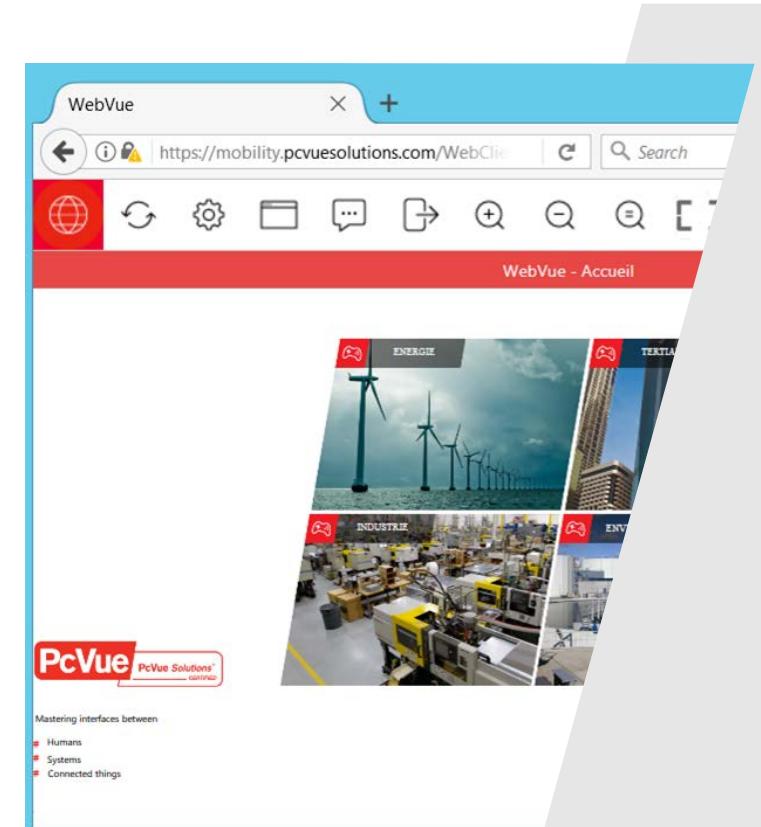
Demonstration

- Scan the QRCode

<https://mobility.pcvuesolutions.com/webclient>



- Name : webvue_en
- Password : webvue_en



Remote Desktop Access

“

HTML5 thin remote client

”



Remote HTML5 thin client

Remote client

A PcVue « thin/heavy » client

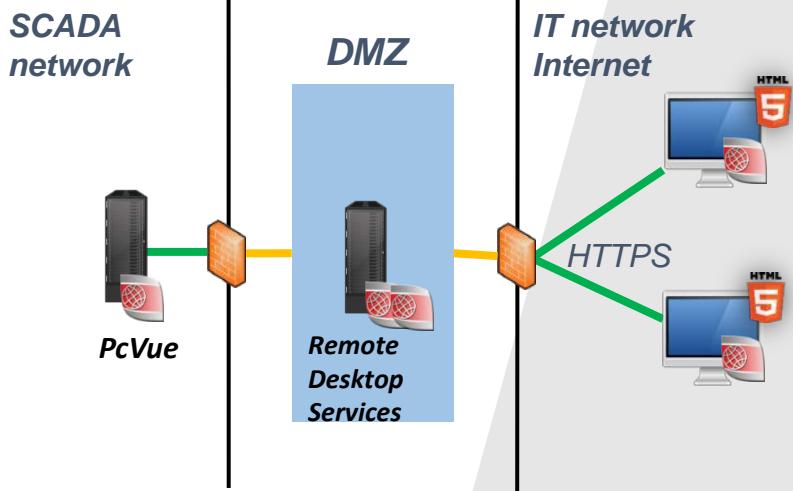
- Based on the Windows (RDS) feature
- From a desktop station or a mobile device

Full featured

- All standard client station features
- Support for redundancy
- Support for HTML5

Secured access

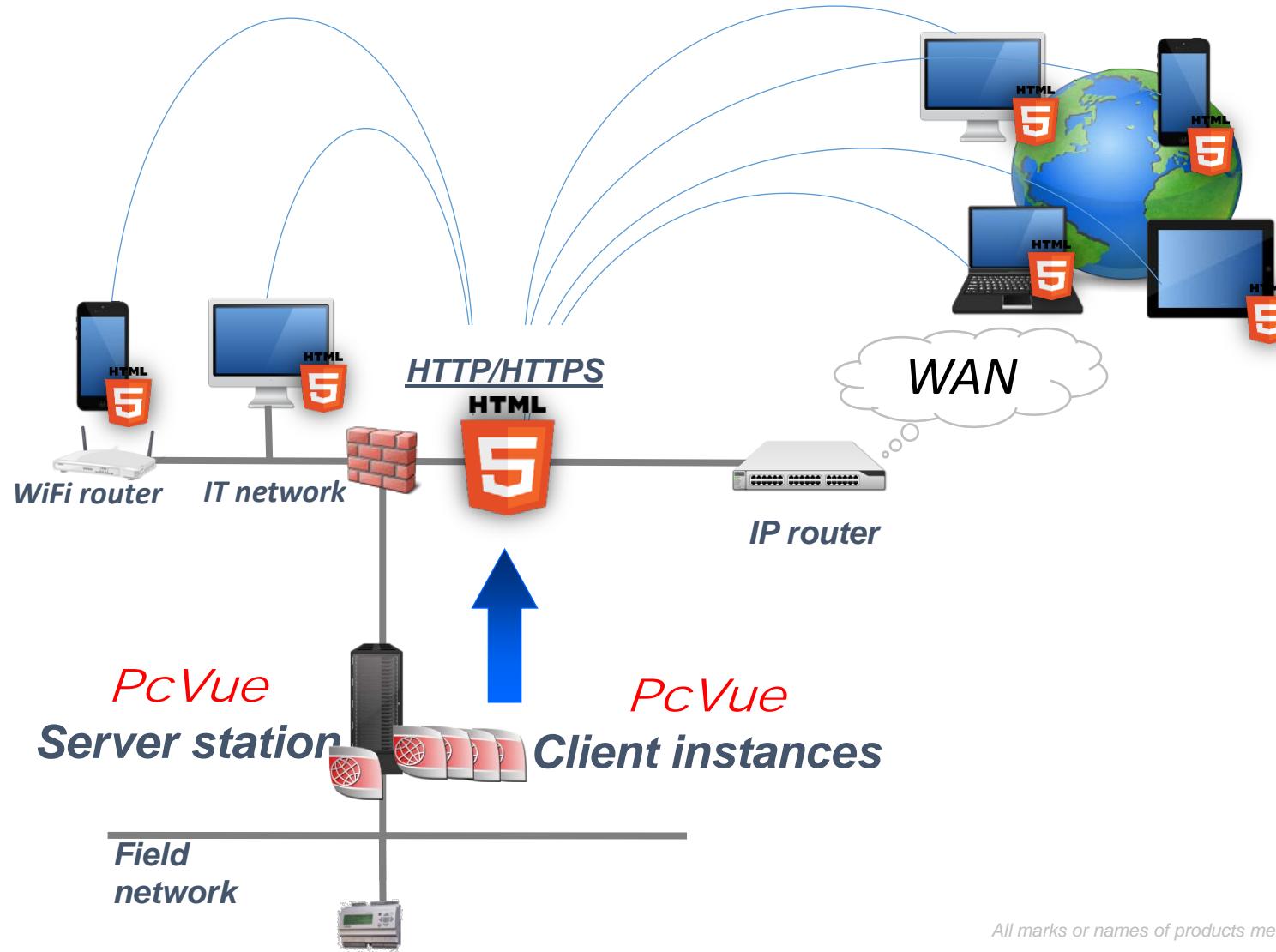
- Support for secure architectures (DMZ)
- HTTPS exchanges
- Only mouse and keyboard actions are transmitted through the network



Navigation
based solution

Remote HTML5 thin client

Architecture



PcVue® Solutions

Remote HTML5 thin client

FAQ

When do I use a remote thin client?

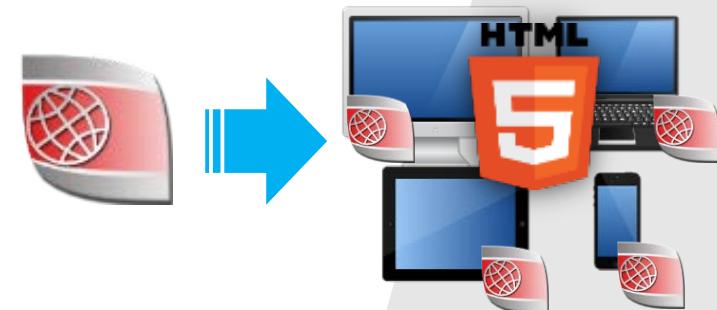
- When I need a remote access to my SCADA project from any device : smartphones, tablets, PC,...
- Suitable for small to very large project
- Recommended for PC and tablets

Do I have to develop specific mimics for thin clients?

- No because the mimic display is simply deported from the project to the thin client with no treatment. You'll see exactly the same and the display will be adapted to the screen

Can I use the thin client on a tablet, or smartphone?

- Yes, the HTML5 technology allows to use any web browser, on any OS
- Responsive design technology adapts the size to the device
- Navigation using a very reduced size screen may be not user-friendly



Remote HTML5 thin client

Deployment

What do I need to deploy a remote thin client ?

- A Windows server with RDS features enabled
- ERICOM interface for HTML5
- A PcVue station with a network access and a fix IP address

How secure is the solution?

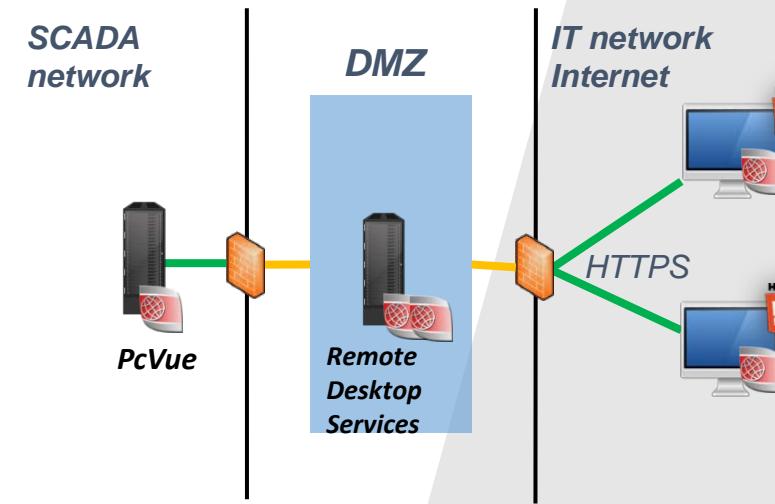
- Use of HTTPS communication
- The server can be located in a DMZ
- No data are transmitted. Only mouse/keystrokes and mimics

Do I have to use a specific station for remote thin clients?

- It is not mandatory. The server can be any station of the architecture (standalone, runtime, communication server, client station)

What licenses do I have to purchase?

- 1 RDS CAL license per thin client
- 1 PcVue license with 1 network right per thin client
- 1 ERICOM license for HTML5



TouchVue

“

*Notification mobile app
for immediate action*

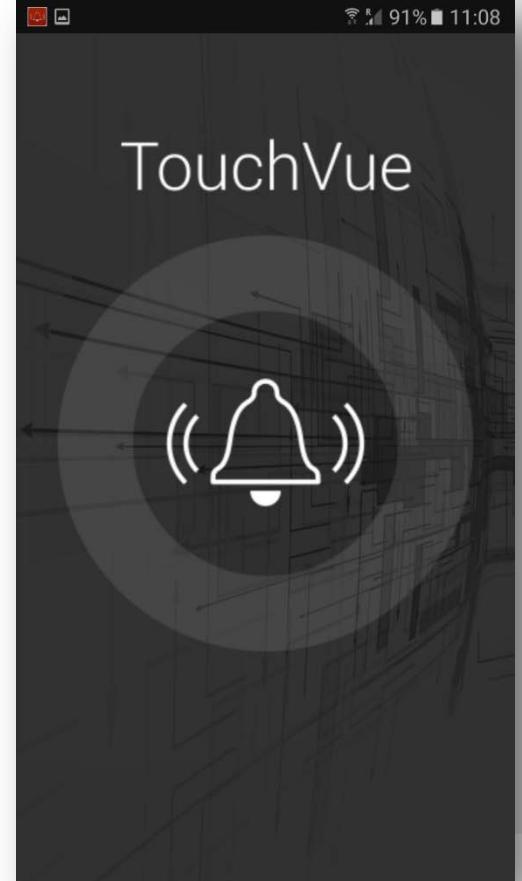
”



TouchVue – Features

The mobile app for immediate action

- On-call/on-duty mobile app for PcVue
- Access the data from several sites
- Real time information and notifications (alarms, values, trends) for immediate action (acknowledgment or control values)
- Archived data (events logs, historical trends)
- Data filter depending on user profiles
- Contextual mimic for alarms



Benefits

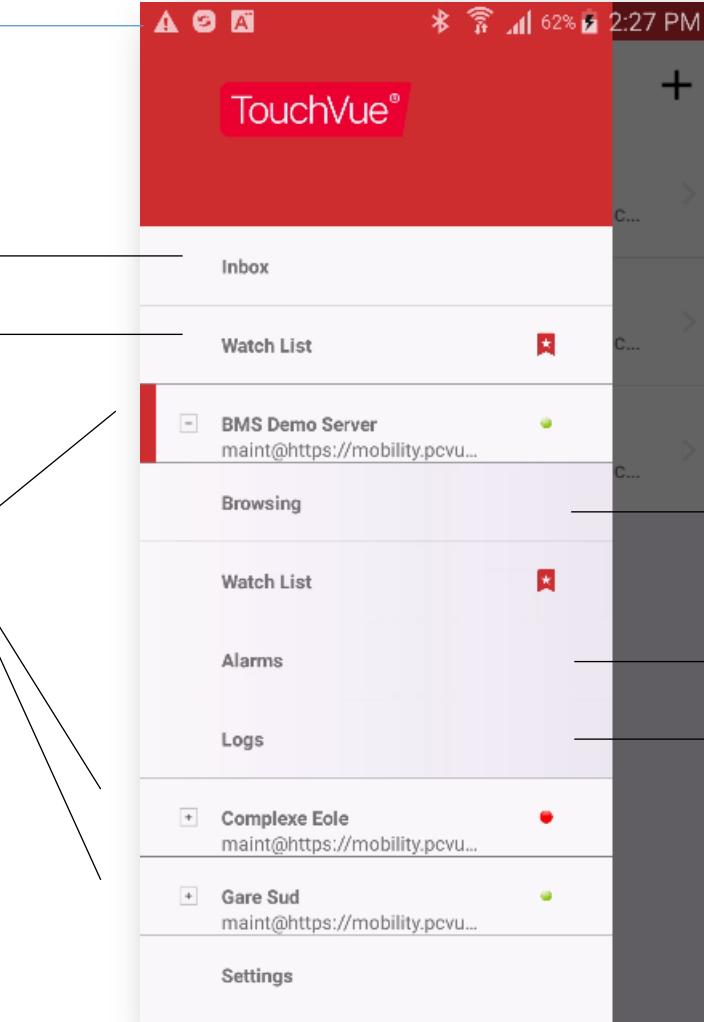
- The easy notification solution
- Fill the gap where remote access and light clients are not enough
- Help both sub-contractors and end-users in increasing productivity
- Ready to use – No extra development – Easy to implement in an existing project
- Give managers an eye on their site
- Cost effective solution



TouchVue

At a glance

Notifications



Notifications inbox

List of variables to
follow

Multi-site connexion

Variables access

Real-time alarms list
Recorded event logs

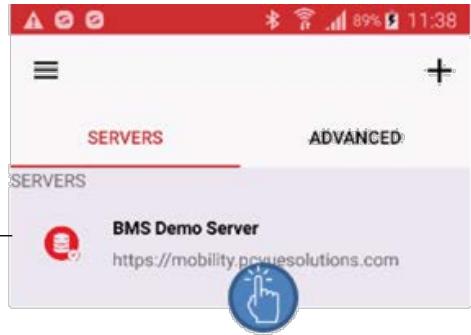


Notification
based solution

TouchVue

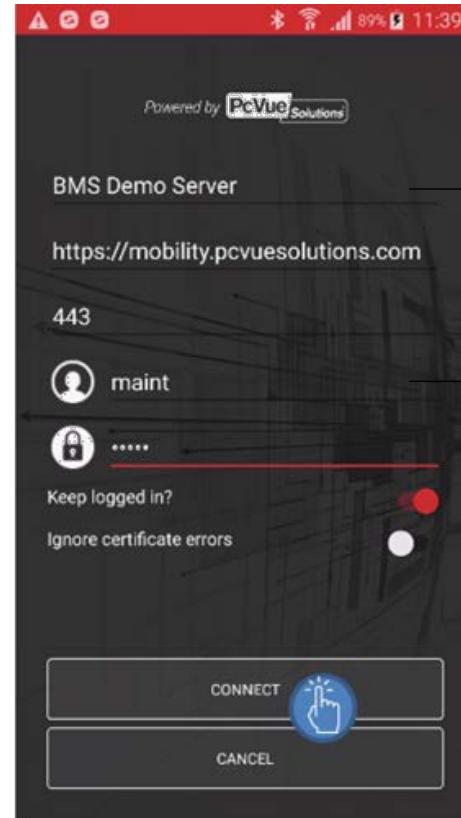
Connection

Server



Server access

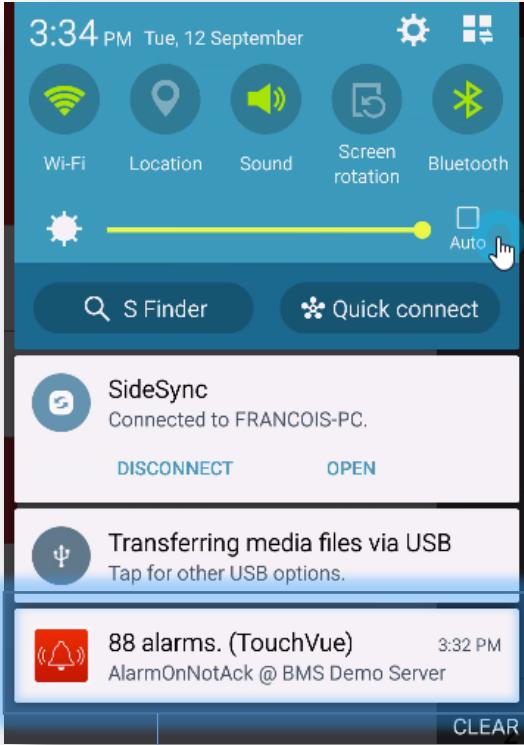
Credentials



Notification
based solution

TouchVue

Alarms



Notified alarms

Notification

Acknowledgment
or mask

Selection

This screenshot shows the 'Alarm list' screen. It features a header with three dots, the title 'Alarm list', and a 'SELECT' button. Below is a list of ten alarm entries, each with a small icon and a timestamp. The first entry is highlighted with a blue background. To the right of the list are two buttons: 'Ack' and 'Mask'. The entries are as follows:

- Thermostat high work...ace01 Thermostat02
AlarmOnNotAck
17/11/2017 18:14
- Thermostat hi...Thermostat01
AlarmOnNotAck
17/11/2017 18:14
- Thermostat high work...om01 Thermostat01
AlarmOnNotAck
17/11/2017 18:14
- Thermostat high work...ace01 Thermostat01
AlarmUnavailable
17/11/2017 18:14
- Fire detected floor 02 ...m01 Fire_Detector01
AlarmOnAck
05/10/2017 09:57
- Fire detected floor 00 Lobby Fire_Detector03
AlarmOnNotAck
04/10/2017 13:50
- Fire detected floor 00 Lobby Fire_Detector02
AlarmOffNotAck
03/10/2017 09:44
- Fire detected floor 00 Lobby Fire_Detector01
AlarmOffAck
03/10/2017 09:44
- Fire detected floor 01...ce01 Fire_Detector01
AlarmOffNotAck
02/10/2017 17:12
- Fire detected floor 02...ce01 Fire_Detector01
AlarmOffAck

Real-time list

Status &
name

Status

Attributes

This screenshot shows a detailed view of an alarm entry. At the top, there are back and forward navigation arrows, a magnifying glass icon, and an information icon. The main area has a red header with the alarm name 'Fire detected floor 00 Lobby Fir...' and a red 'i' icon. Below are four data fields: 'Value' (red bell icon), 'Status' (text 'Alarm on - not ack.'), 'Domain' (text 'LOBBY_RDC'), and 'Nature' (text 'FIRE_INCENDIE').

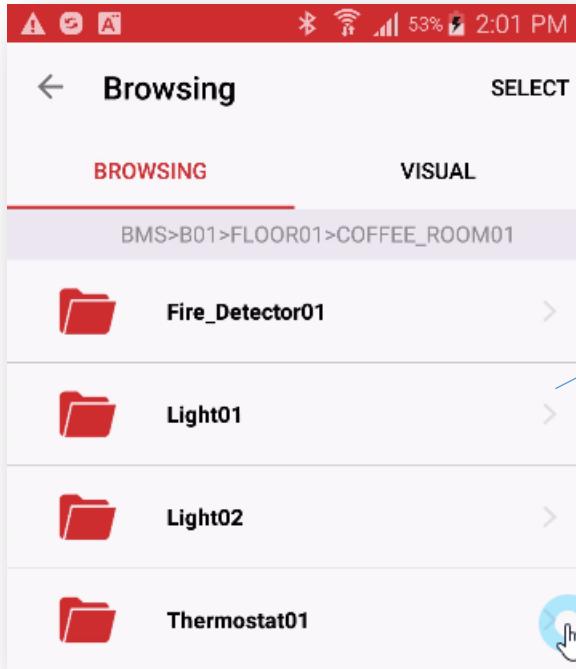
This screenshot shows the 'Ack' and 'Mask' buttons from the previous screen. The 'Ack' button is red with white text, and the 'Mask' button is white with black text.

DetailVue®
Solutions

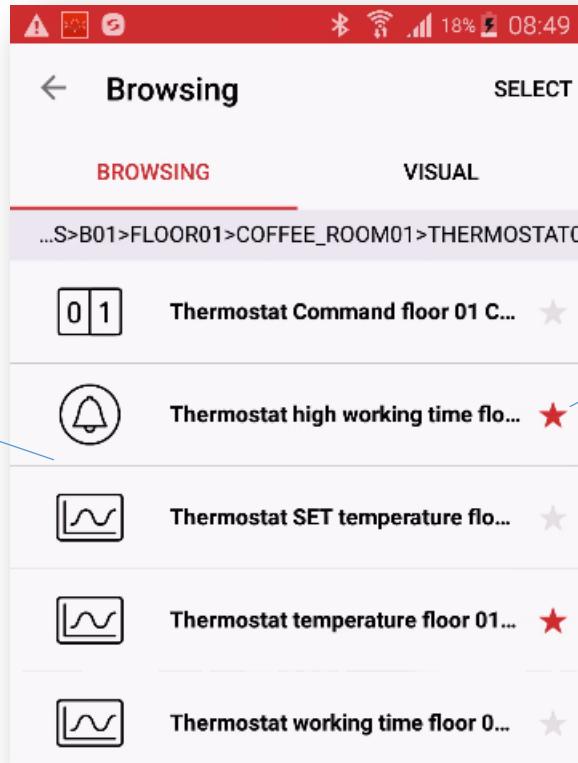
TouchVue

Real-time data

- Access real-time information of your process
- Monitor, control



Variable
tree

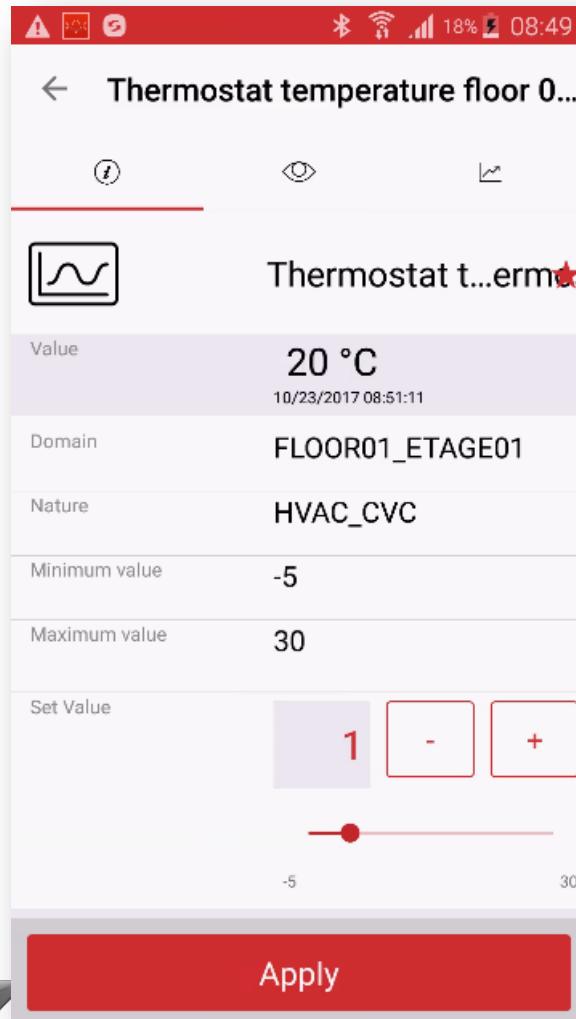


Favorite
variable

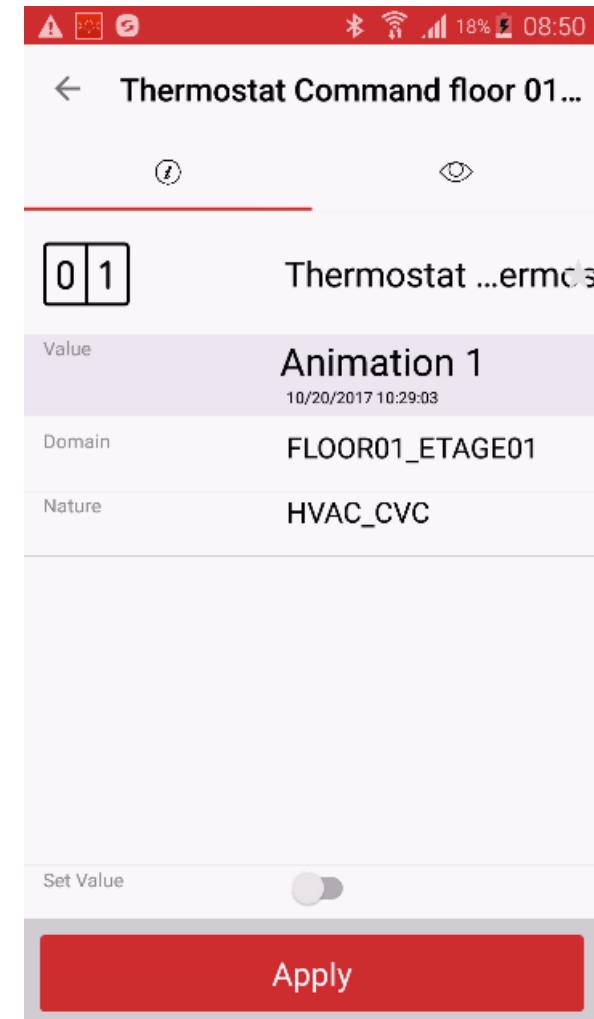
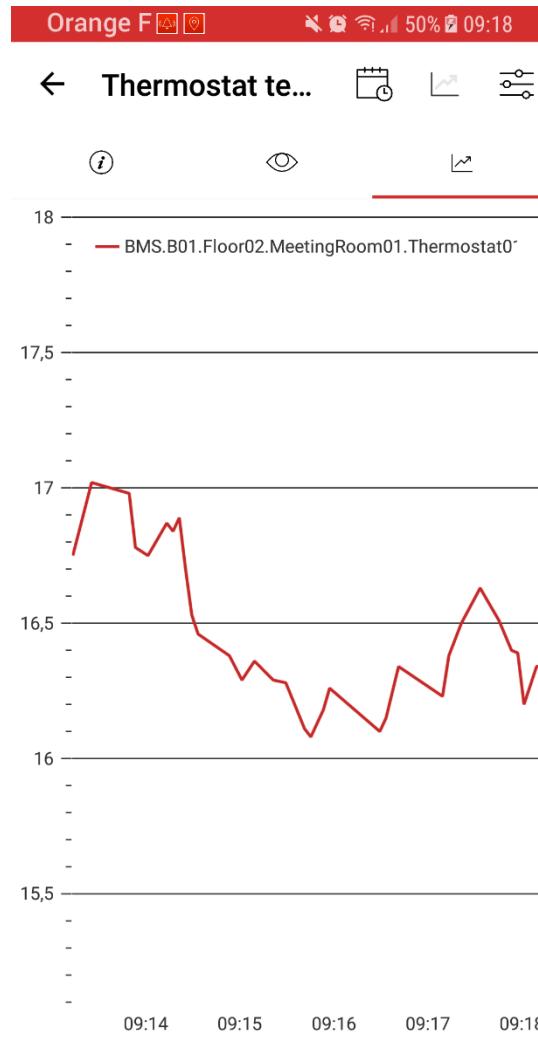
Notification
based solution

TouchVue

Monitoring & control



Analog value



Bit

Notification
based solution

TouchVue

Demonstration

- Download the app



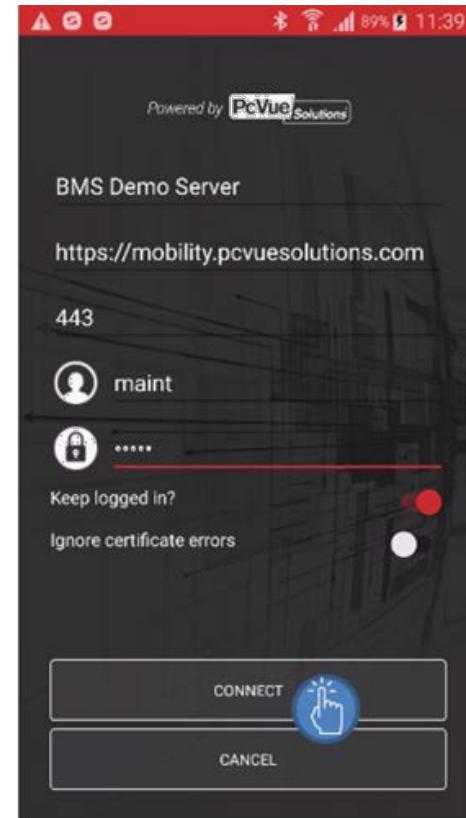
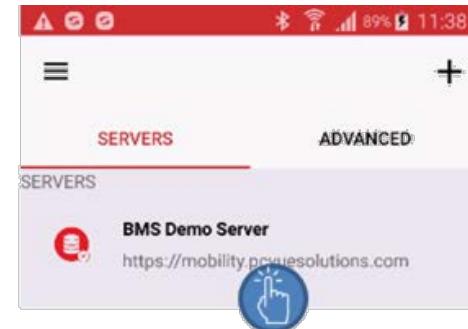
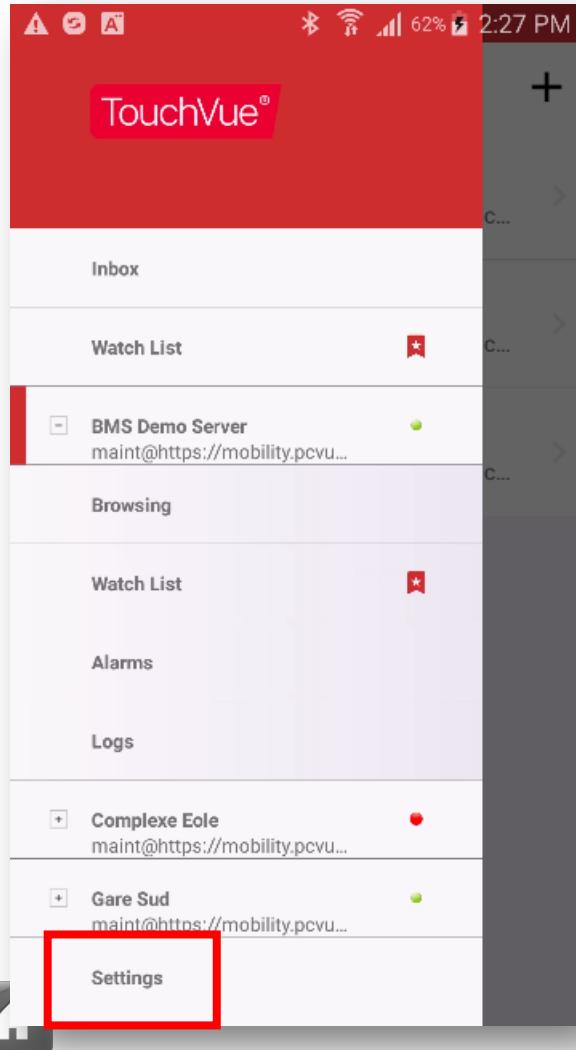
<https://mobility.pcvuesolutions.com/download>



Notification
based solution

TouchVue

Demonstration



- Server:
mobility.pcvuesolutions.com
- Name: maint_en
- Password: maint_en



SnapVue

“

Geolocation solution

”





SnapVue

Location-based control of equipment and facility resources

- Convert raw data into information
- Automatically pushes relevant information to any mobile device according to
 - indoor/outdoor device geolocation
 - mobile user's role and rights



Mobile app + Geolocation + Services



PcVue® Solutions

Location based
solution

SnapVue

Geo tags

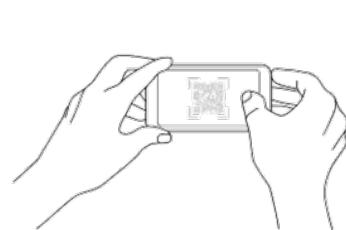
Indoor Positioning System

QR CODE

Matrix 2D Barcode



Scan QR Code



NFC TAG

Unpowered
passive
microchip

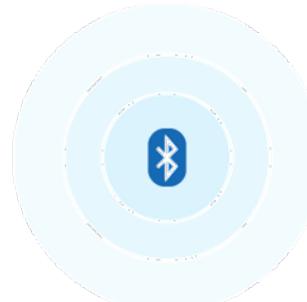


Touch NFC Tag or bring
to immediate proximity

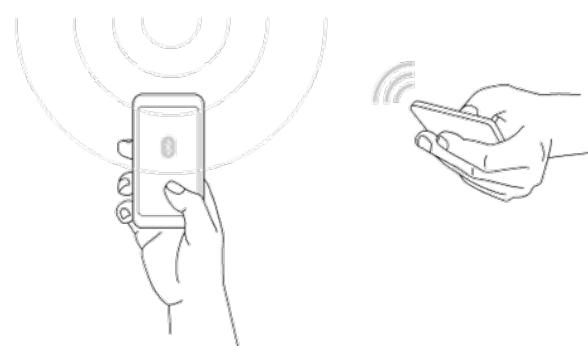


BLE BEACON

Self-powered
Bluetooth
transmitter



BLE Beacon is detected
via Bluetooth device



WiFi ROUTER

Wireless
Communication
Network

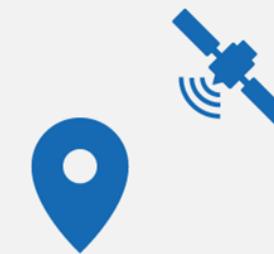


Detection of WiFi router ID
connected to mobile device



Global Positioning System

GPS



GPS Coordinates detected
via mobile device



PcVue®
Solutions



Location based
solution

SnapVue

How it works

Process



Indoor/Outdoor
Positioning



Context

Info/control

Contextual
Logic engine



Monitoring

Tracking

Central control



Devices

PcVue®
Solutions

SnapVue – Services & features

Mobile app

Monitor & control surrounding devices

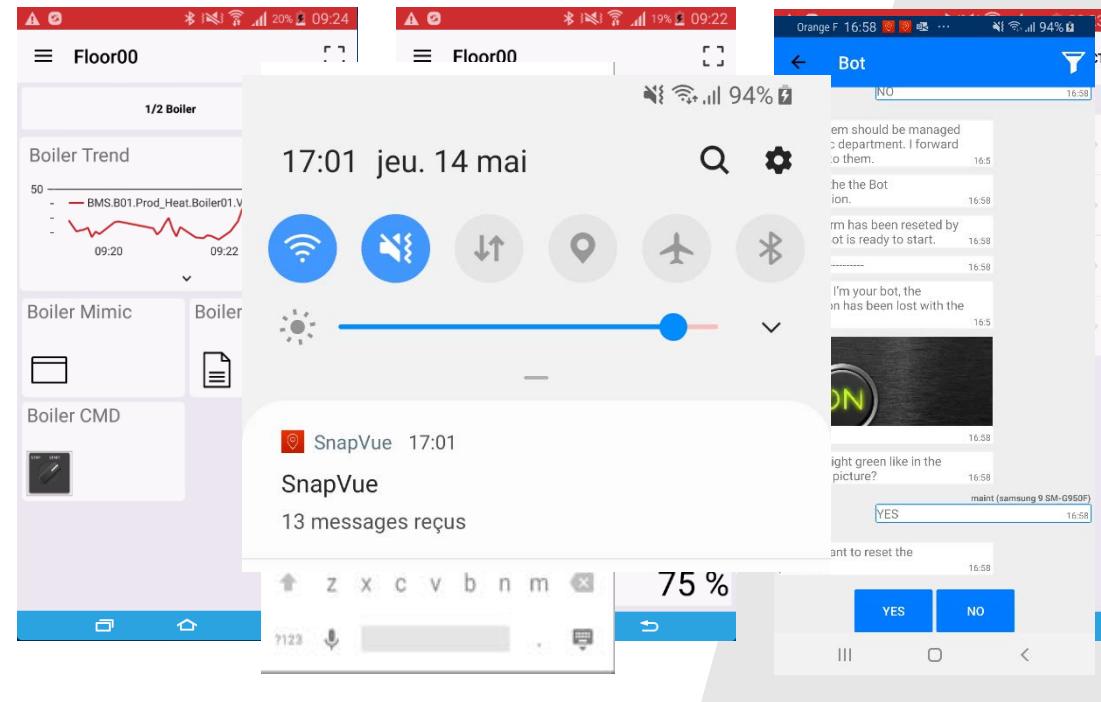
- Automatic display of relevant real-time information (values, alarms list, trends)
- Value control
- Log list
- Resources access (documents, webpages,...)
- Contextual animated view

Notifications

- Alarms & events

Built-in instant messaging system

- Texts, voices, images, videos
- Between mobiles users and/or with a server
- SNAPPY companion: an interactive messaging system to help the decision making



SnapVue – Services & features

On the server side

Real-time information

- Update the real-time values (actuals, control, alarms acknowledgement)

Geolocation of mobile devices

- Record of actions and location
- Real-time tracking

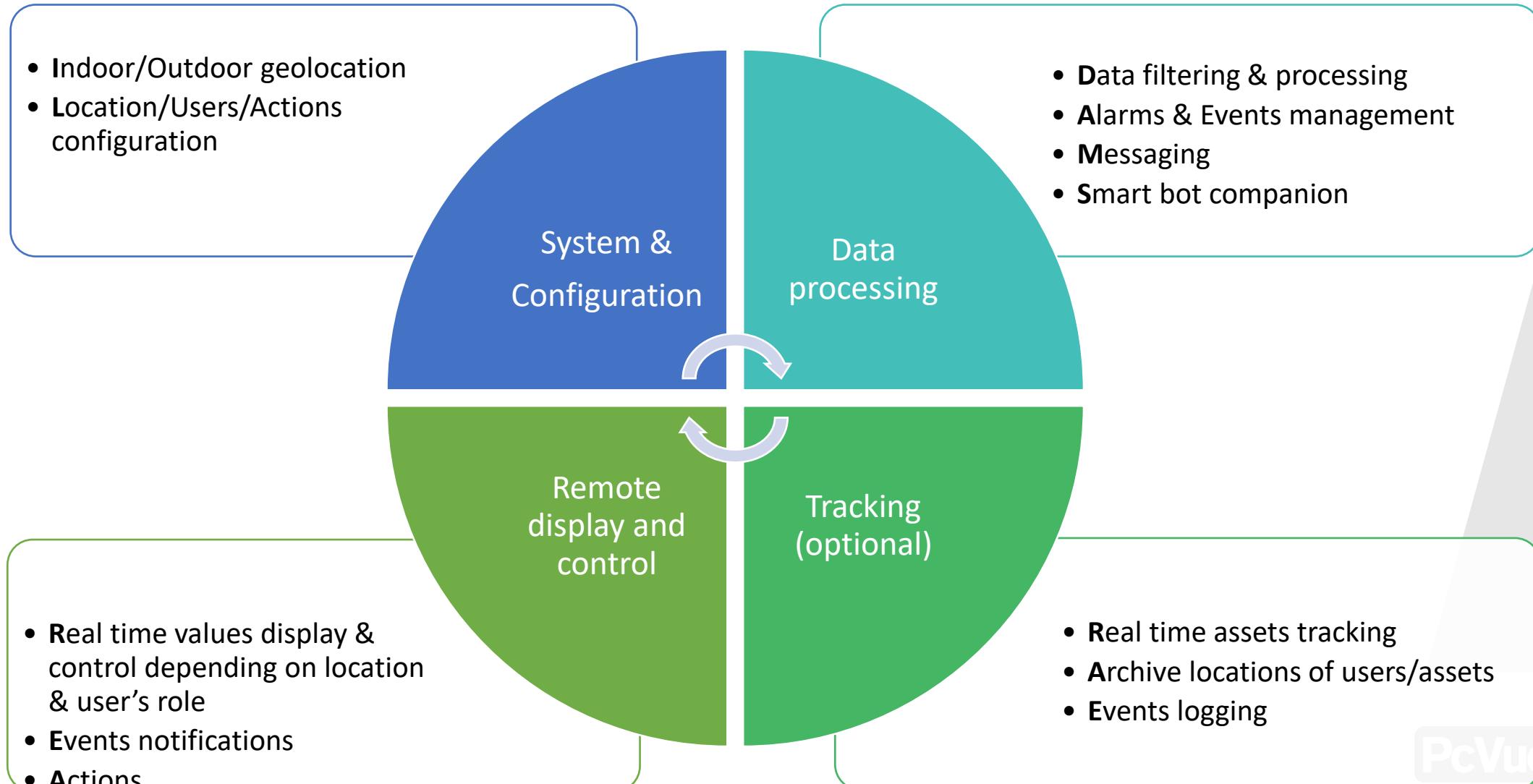
Built-in messaging system

- Texts, voice, images, videos
- Between the server and mobile devices



SnapVue – Services & features

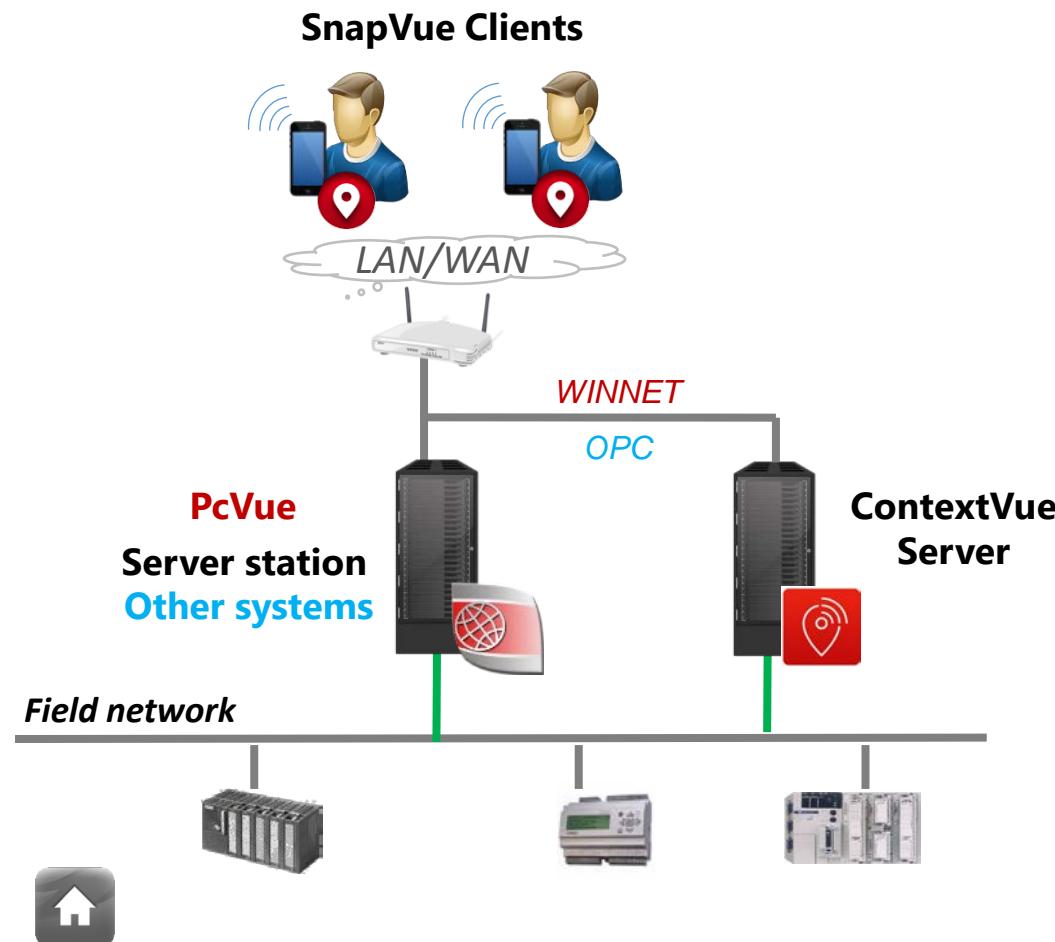
Overview





SnapVue - Deployment

Deployment options



Contextual engine- ContextVue server

- **Standalone**
 - 1 data acquisition driver
 - Contextual services & features
- **Connected to PcVue**
 - No direct communication with equipments
 - Get the data from a PcVue station via Winnet
- **Connected to a 3rd party system**
 - No direct communication with equipments
 - Get the data from a 3rd party system via OPC



Benefits

Improved efficiency of operations

- Increase comfort and services for all users
- Better responsiveness and team effectiveness

Reduced cost of labor and training

Improved decision-making for

- Monitoring & control of industrial process
- Commissioning
- Diagnostic & maintenance
- Team dispatch and security





SnapVue

Benefits for mobile users

Facilities occupants

- Automatic tuning adjustment
- Access control
- People safety

Maintenance team

- Diagnostic & trouble shooting

Managers

- KPI monitoring
- Reporting

Engineering

- Commissioning

Central control

- Occupancy monitoring in an area
- Operation monitoring & control
- Geo fencing
- Team dispatching and security





SnapVue – Use cases

Visualization & control of nearby assets



Maintenance operations

Commissioning

Team dispatch & security

...



SnapVue

Demonstration

- Scan the QRCode



- Download the app



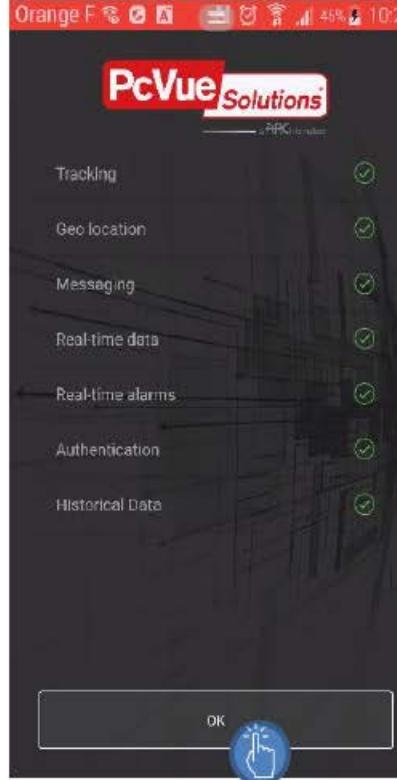
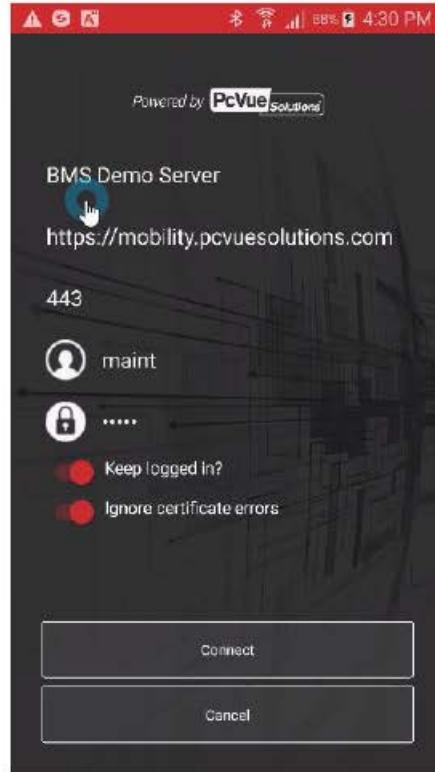
<https://mobility.pcvuesolutions.com/download>



SnapVue

Demonstration

- Run the app
- Open Account menu
- Enter the server name:
mobility.pcvuesolutions.com
- Enter the credentials:
Name: **maint_en**
Password: **maint_en**

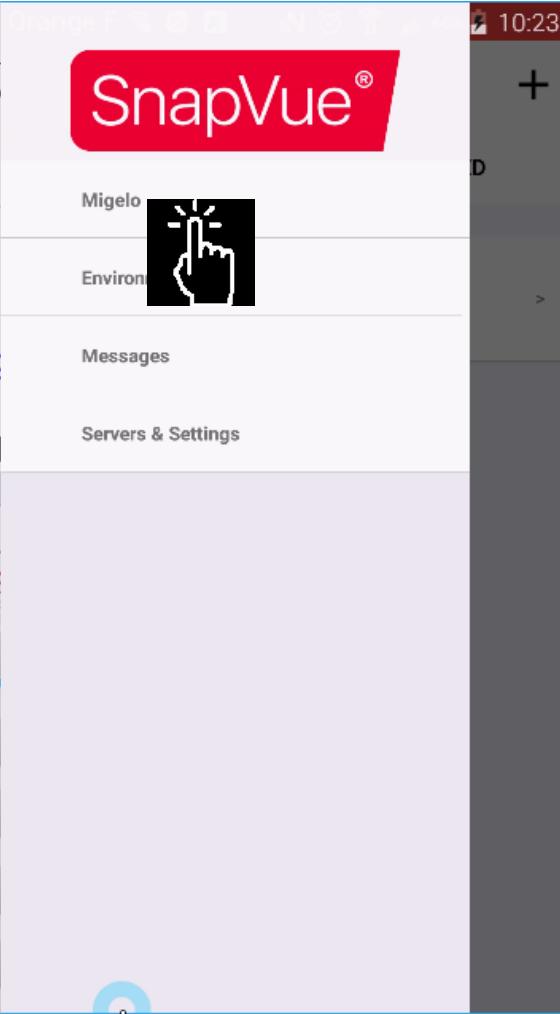


Notification
based solution

SnapVue

Demonstration

- Open “Migelo”



Notification
based solution

SnapVue

Demonstration

- Tap “QRCode” menu
- Scan the following QRCode to access data :

BMS



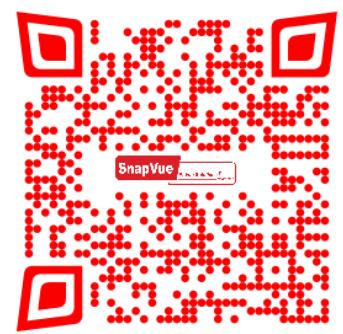
Floor00 TechRoom
ID : fda50693-
a4e2-4fb1-afcf-
c6eb07647825-7-1



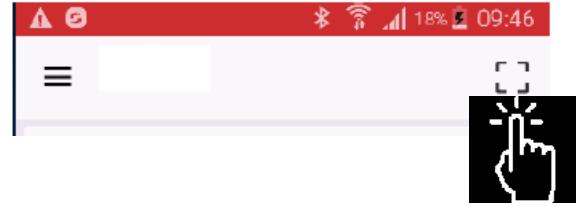
Floor00 CHILLER
ID :
QRCode_Chiller



Floor00 BOILER
ID : Boiler



Floor01 TechRoom
ID : fda50693-
a4e2-4fb1-afcf-
c6eb07647825-2-1



PcVue® Solutions

Notification
based solution

SnapVue

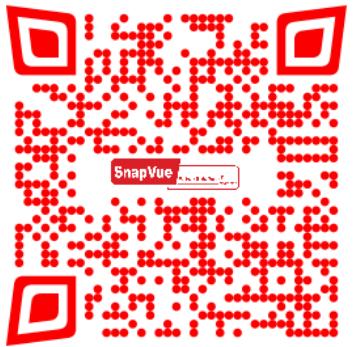
Demonstration

Wind farm



WindFarm aera

ID: fda50693-a4e2-
4fb1-afcf-
c6eb07647825-3-1



Transformer aera
ID: fda50693-a4e2-
4fb1-afcf-
c6eb07647825-5-1



Transformer
ID: Transformer



Substation
ID: fda50693-a4e2-
4fb1-afcf-c6eb07647825-4-1



Distribution
board
ID:
QRCode_DB



ID: Turbine



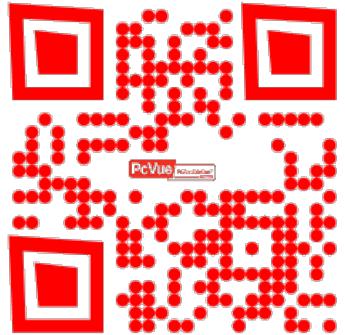
PcVue® Solutions

Notification
based solution

SnapVue

Demonstration

INDUSTRY



Machine 01
ID: M01



Info line
ID: fda50693-a4e2-4fb1-
afcf-c6eb07647825-1-2



Notification
based solution

SnapVue

Demonstration

WATER



ID: Water station



ID: Water_pump



Remote solutions

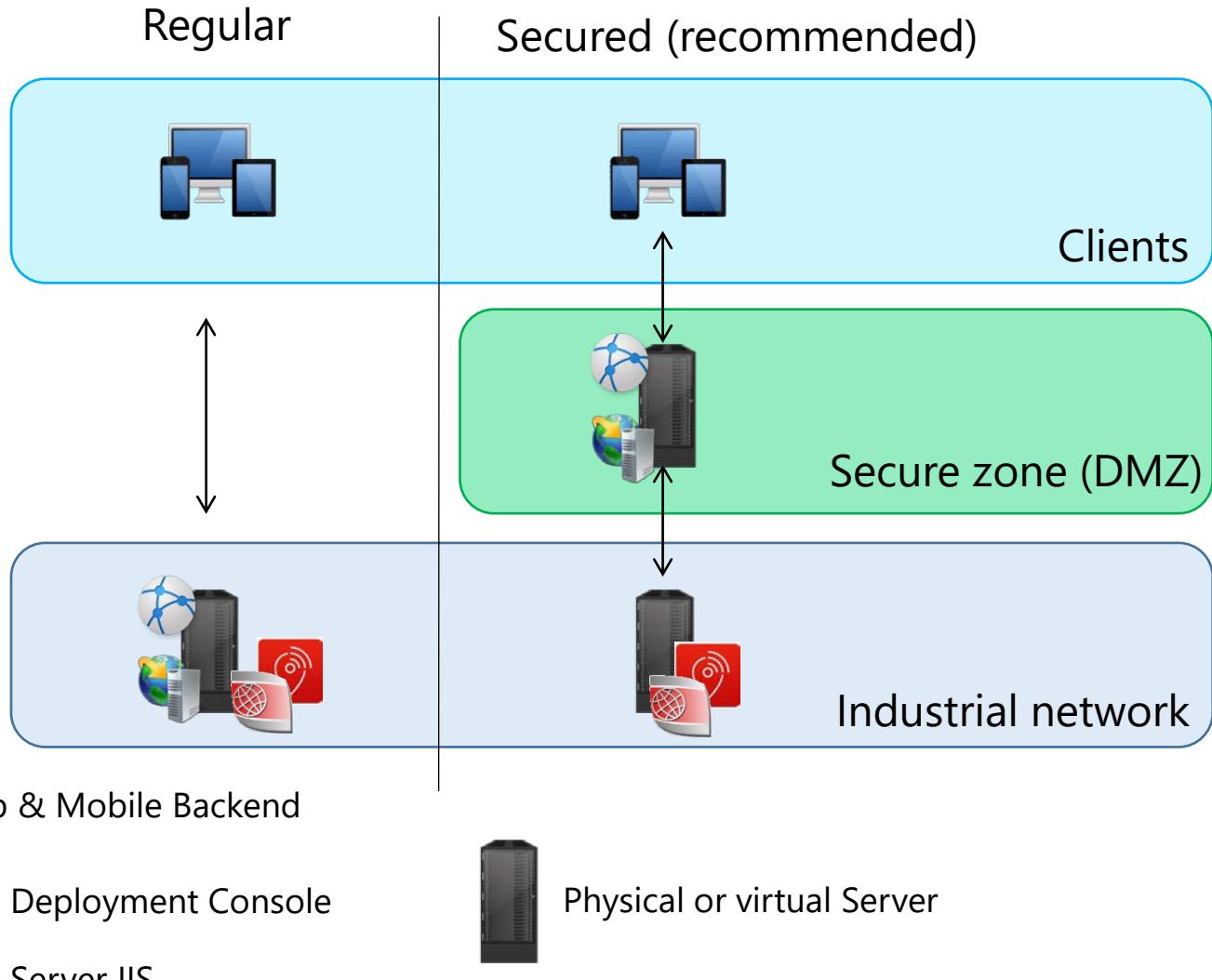
Features matrix

Usage/Features	WebVue	TouchVue	SnapVue
Mimics Navigation			
Notification			
Control			
Real time value			
Geo location			



Architectures

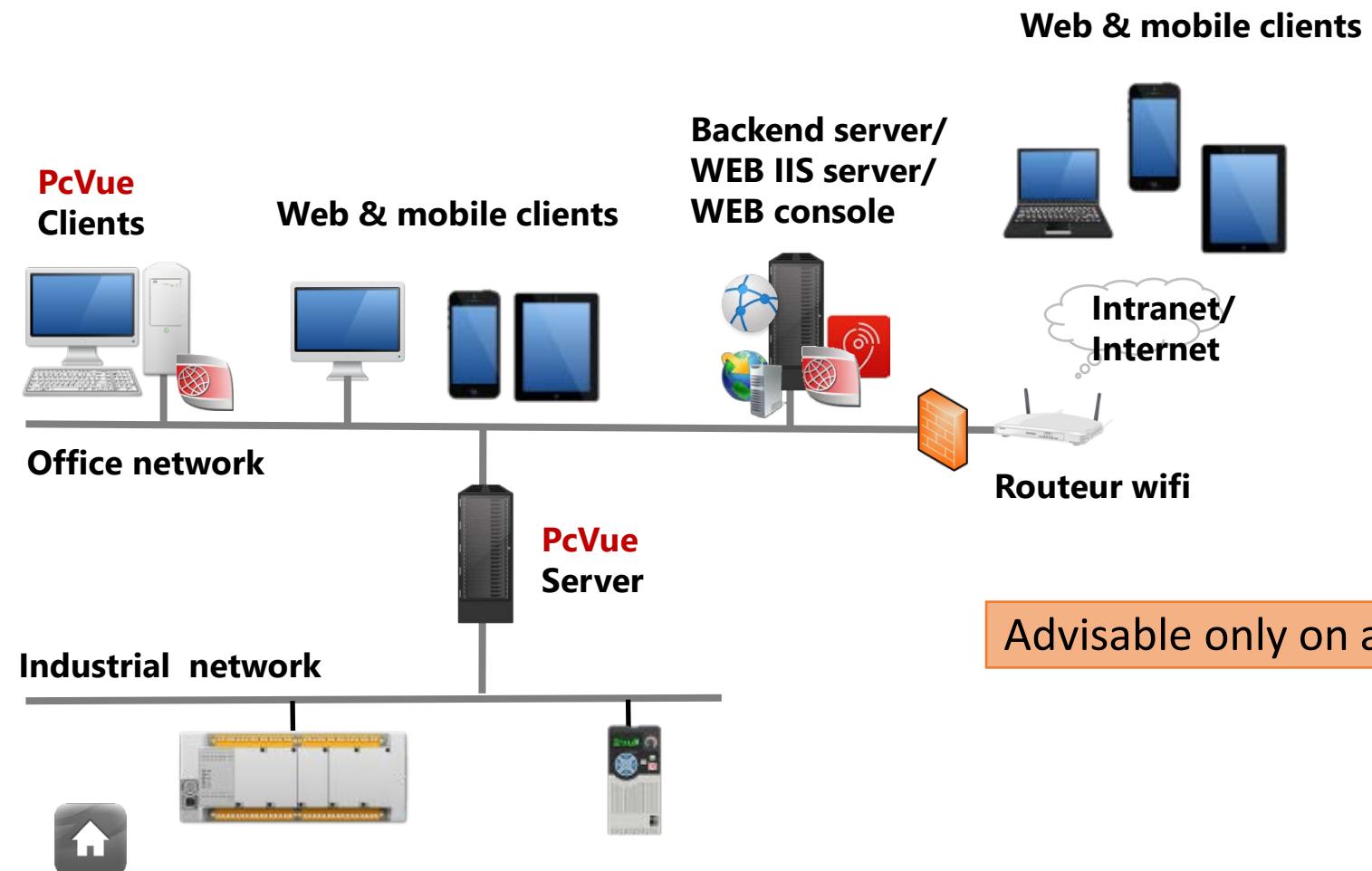
Secure by design





Architectures

Regular



Web & mobile clients

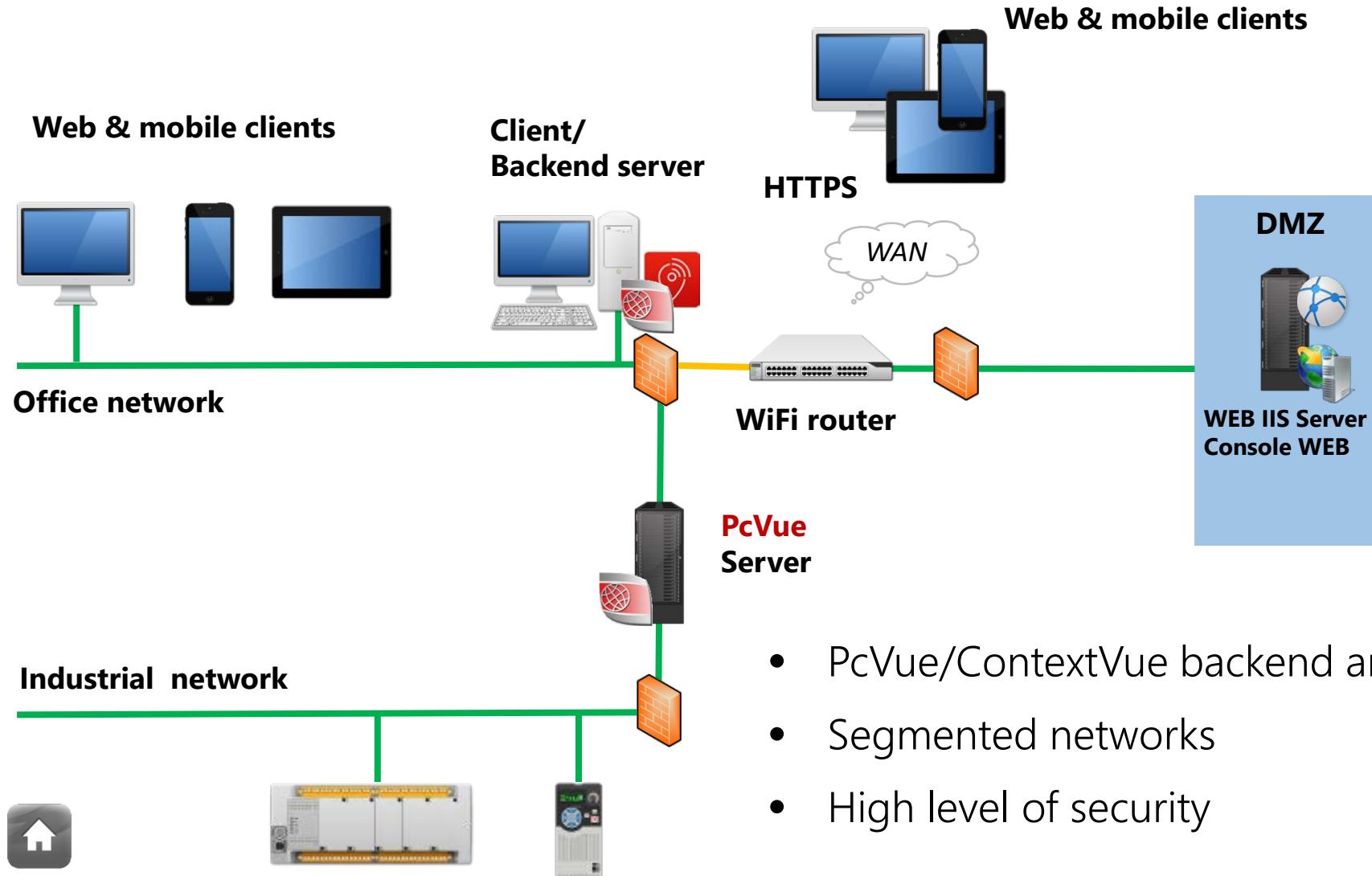
- PcVue/ContextVue backend and server WEB/IIS hosted on the same machine
- No segmented network
- Low security level

Advisable only on a private and isolated network



Architectures

Secured by network segmentation (recommended)



- PcVue/ContextVue backend and WEB IIS servers are isolated
- Segmented networks
- High level of security





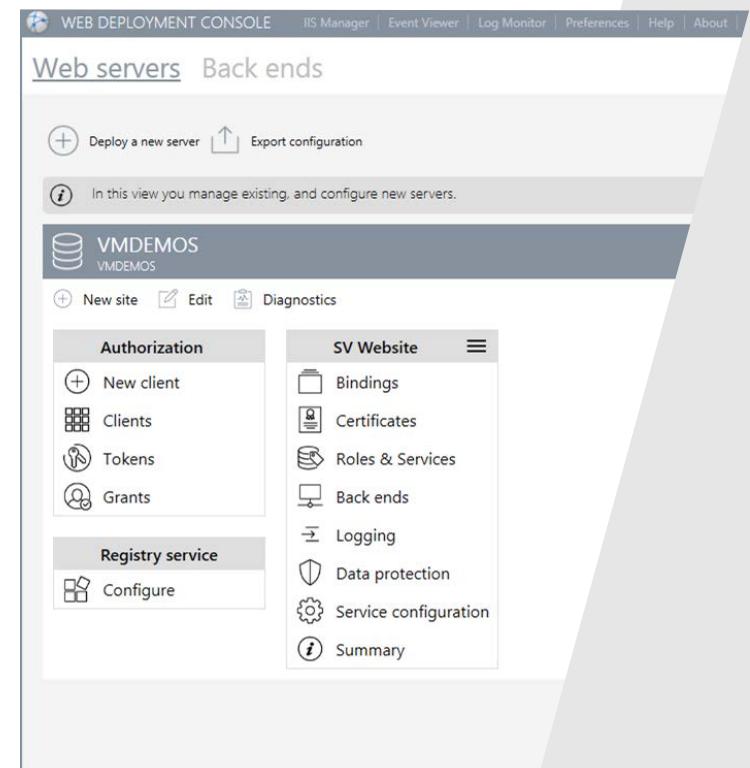
The deployment console

Web and mobile ready in few clicks!

- Interface for configuring and deploying web& mobile architectures
- Deployment of web services and web apps on IIS
- PcVue Web Backend endpoint management
- Data protection management
- Certificate management
- User access logging & OAuth Server management

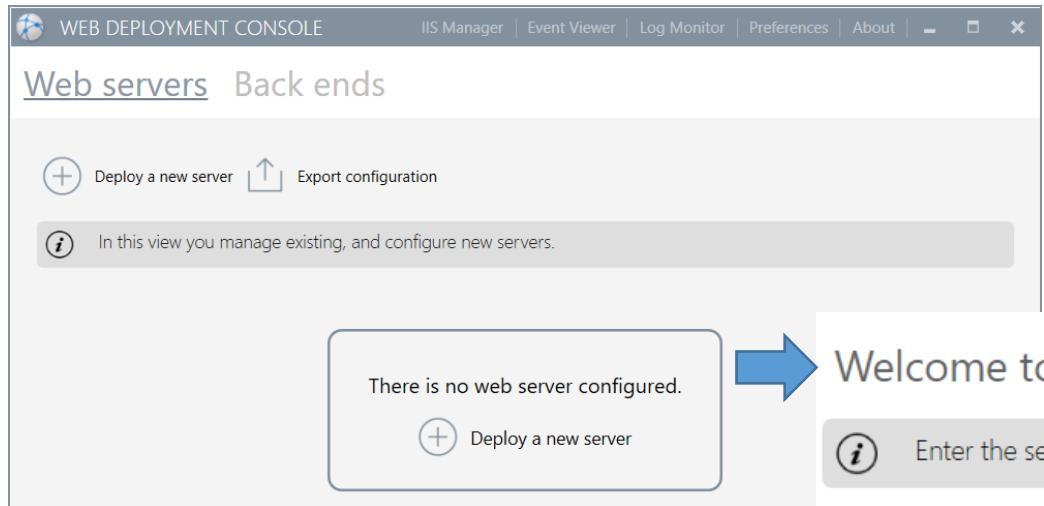


IIS auditing / diagnosis



The deployment console

Web server configuration



Welcome to the server configuration

(i) Enter the server configuration and click next to continue.

Alias

(i) Click quick to continue using default settings or custom
if you want to change the defaults. You must click

Will all the services be provided by one web server?

On

Simplified deployment wizard based on roles

Custom deployment wizard if you require fine tuning



The deployment console

Name & Binding

→ Name

(i) Please give a name for the website that will be deployed.

MyWeb

x



Bindings

Certificate

Back ends

Roles

Summary

MyWeb



You must securely bind your site to a specific port and host. Web clients can then access the web server using either the IP address,

→ Bindings

Bind using hostname

On

Hostname

USER-MACHINE-ID

Port

443 + -

Certificate

Back ends

Roles

Summary



solutions

The deployment console

Certificate

MyWeb

Name Bindings **Certificate** Back ends Roles Summary

(i) You must have a certificate to use HTTPS. You can either select an existing certificate or create a new one.

Certificate

No certificate selected

New certificate

(i) In this view, you can manage certificate enrollment. Proceed according to the requirements and constraints.

import a certificate

self-signed

create request

let's encrypt®

MyWeb

Name Bindings **Certificate** Back ends Roles Summary

(i) You must have a certificate to use HTTPS. You can either select an existing certificate or create a new one.

Certificate

USER-MACHINE-ID issued by CN=USER-MACHINE-ID on 01/08/2018

USER-MACHINE-ID

CN=USER-MACHINE-ID

01/08/2019 02:00:00

The deployment console

Back end



Name
Bindings
Certificate
Back ends
Roles
Summary

MyWeb

Select an existing back end configuration or click the add button to add a new one

PcVue back end



Back end configuration

If you change the back end after you have configured a site the site configuration will be automatically updated

Alias
MyPcVue

Host
localhost

PcVue back end
 On

8090 + -

save **cancel**

MyWeb

Name
Bindings
Certificate
Back ends
Roles
Summary



Select an existing back end configuration or click the add button to add a new one

PcVue back end

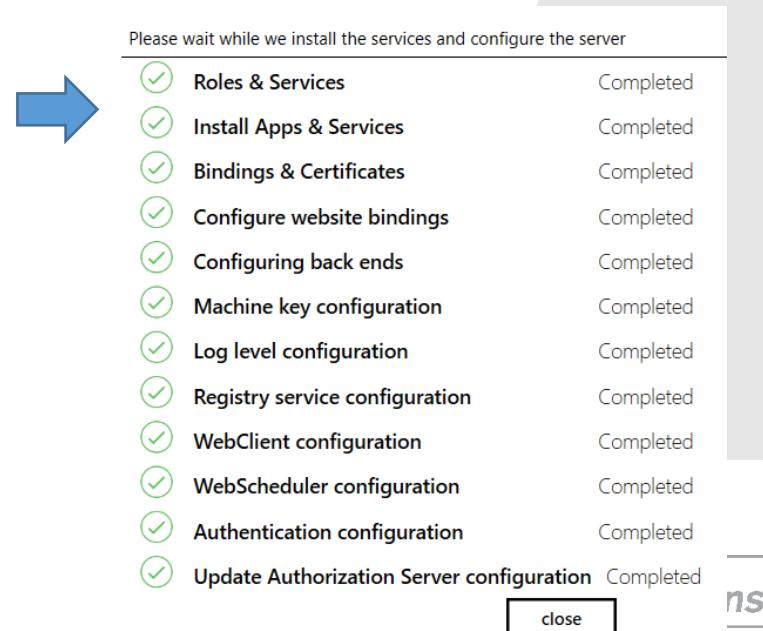
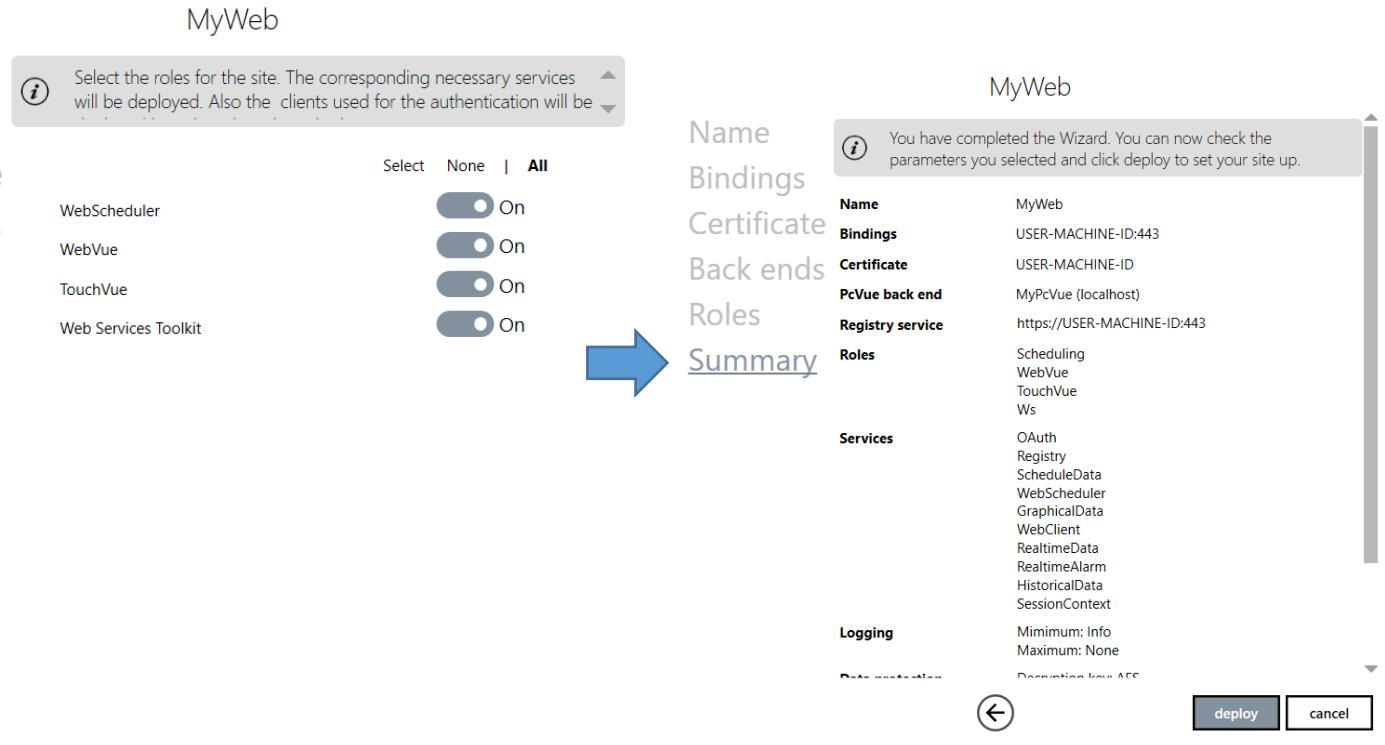
MyPcVue - localhost

ons



The deployment console

Roles & deployment



The deployment console

Diagnostics

WEB DEPLOYMENT CONSOLE

IIS Manager | Event Viewer |

Web servers Back ends

+ Deploy a new server Export configuration

(i) In this view you manage existing, and configure new servers.

MyServer
USER-MACHINE-ID

+ New site Diagnostics

Authorization

- + New client
- Clients
- Tokens
- Grants

Registry service

- Configure

MyWeb

- ≡
- Bindings
- Certificates
- Roles & Services
- Back ends
- Logging
- Data protection
- Service configuration
- (i) Summary

Run Diagnostics

(i) The diagnostic check for missing features in the Microsoft® Internet Information Services web server and verifies the configuration of the deployed sites.

Run Diagnostics

IisSettings	Diagnosis detected no errors.
ApplicationPools	Diagnosis detected no errors.
Authentication	Diagnosis detected no errors.



The deployment console

Benefits



- Make the deployment process as simple as possible for system integrators
- A tool designed for any users from beginners to IT experts
- Can be used as part of the documentation and auditing of web servers
- Facilitate diagnostics



Security & safety

“

Security commitment at all levels

”



Users management

Overview

- User management based on user account and profile
- A profile determine the functionalities and access authorized for the user
- A user has a name and a password
- The rights of the same user can be different depending on the computer to which the user is connected

- Support for Windows Active Directory and Single Sign-On (SSO) technologies
- Support for 21CFR11 rules



Users management

Features

- Auto disconnects a logged in user after a configurable idle time
- Allows you to configure a validity period for passwords
- Allows you to check the strength of the password
- Offers 10 levels of hierarchical profiles.
- Offers easy locking of access to specific screens, command or archived variables, acknowledgments and masking of alarms, etc.
- Allows the configuration of different profiles for a user depending on the computer to which he is connected, in a multi-station architecture
- May require password change on first login
- Manages the "quarantine" of a user after three failed login attempts.
- Integrates encryption of user account information
- ...



Commissioning tools

“

Help to run the project

”



Variables tracking

Monitor & control

Variables tracking

- Built-in component to monitor & control all variables
- Support for filtering
- Allow to monitor real-time values at a glance
- Facilitate the commissioning

System variables

- Variables indicating the supervisor's operating status
- Visualization in the project and possible archiving

The screenshot shows a software application window titled "Suivi de variables". The left sidebar has a "NAVIGATION" section with links like "Présentation", "Nouveautés", "Env. de Dév. Avancé" (which is selected), "Interface graphique", "Alarmes", "Courbes", "Histographiques", "Tables horaires", "Exports de données", and "IMPRESSION". The main area is titled "Suivi de variables avec l'Algrid : Pour visualiser et commander des variables de la base". It displays a grid of variables with columns for the variable name, its current state, and a tooltip. A "Filtres" panel on the right allows filtering by value or status, with a "Appliquer" button.

Variable	Description
ALARMS_ABACK	Fil de l'eau
ALARMS_ABACK	Fil de l'eau
ALARMS_ADRESSE_URL	NS
ALARMS_AIDE	NS
ALARMS_ATTRIB1	NS
ALARMS_ATTRIB2	NS
ALARMS_DOMAINE	NS
ALARMS_EAU_COURANT	Alarme présente non acq.
ALARMS_EAU_COURANT1	Alarme présente non acq.
ALARMS_EAU_NIVEAU	Alarme absente non acq.
ALARMS_EAU_NIVEAU1	Alarme absente non acq.
ALARMS_ELECTR_ALIM	Alarme présente non acq.
ALARMS_ELECTR_ALIM1	Alarme présente non acq.
ALARMS_ELECTR_SURTENSION	Alarme absente non acq.
ALARMS_ELECTR_SURTENSION1	Alarme absente non acq.
ALARMS_EVENT	NS
ALARMS_FILTER	Etat à 1
ALARMS_HELP	NS
ALARMS_HUILE	Closed
ALARMS_HUILE_CHRONO	NS
ALARMS_HUILE_START	NS
ALARMS_INCENDIE_Temperature	Alarme présente non acq.
ALARMS_INCENDIE_Temperature1	Alarme présente non acq.
ALARMS_INVAL	Fig?
ALARMS_LEVEL	Etat à 1
ALARMS_MASKOP	Fig?
ALARMS_MODE	Fil de l'eau



Monitor PcVue health

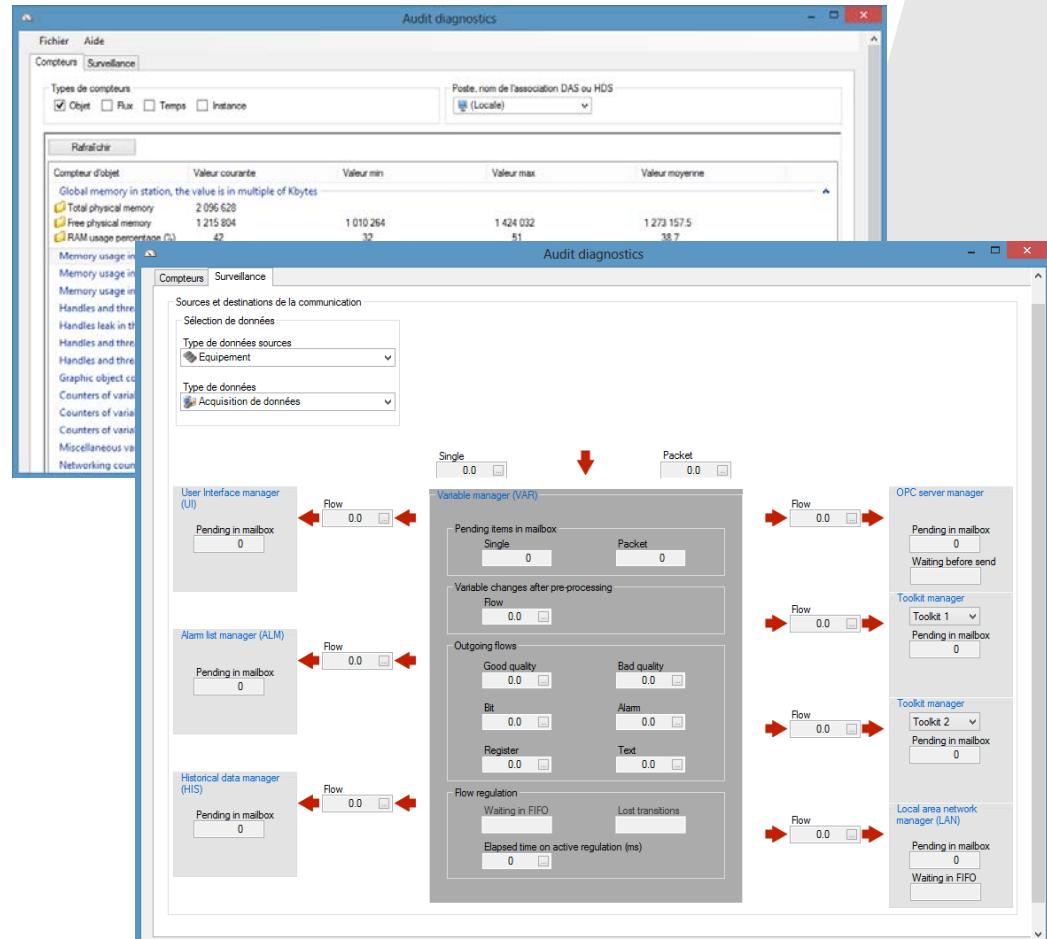
Audit diagnostic

Counters

- System resource, memory, internal messages, flows,...

Monitoring

- Monitoring internal PcVue data flow



Monitor PcVue health

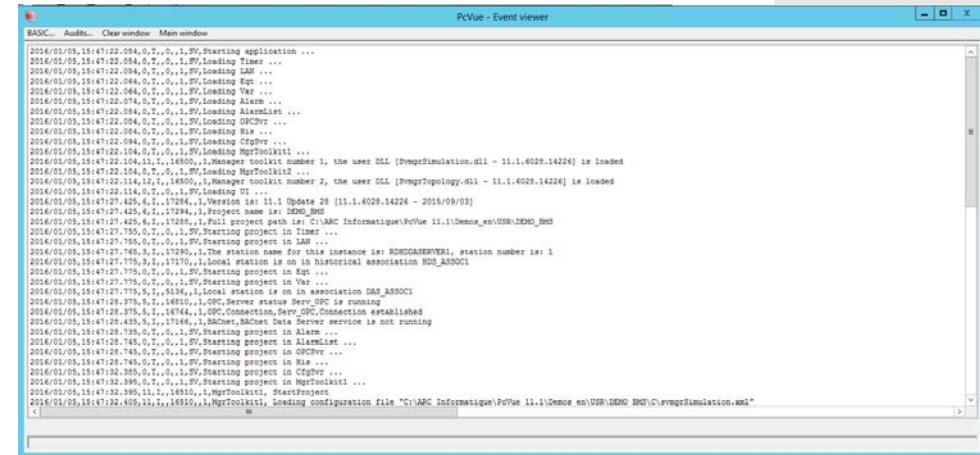
Logging and tracing

Event log

- PcVue internal event traces
- Stored as files usable by SIEM (Security Information & Events Management)

SYSLOG & Windows Events viewer

- Meets ANSSI and IEC 62443 requirements for logging and traces
- Support of Windows event logs and Syslog on UDP, TCP & TLS - RFC 3164 & 5424
- Enables aggregation of Pcue events by third-party IT tools



Deployment

“

Flexible. Secure.

”



Production & installation

Signed installation package

- Confidence in our deliverable

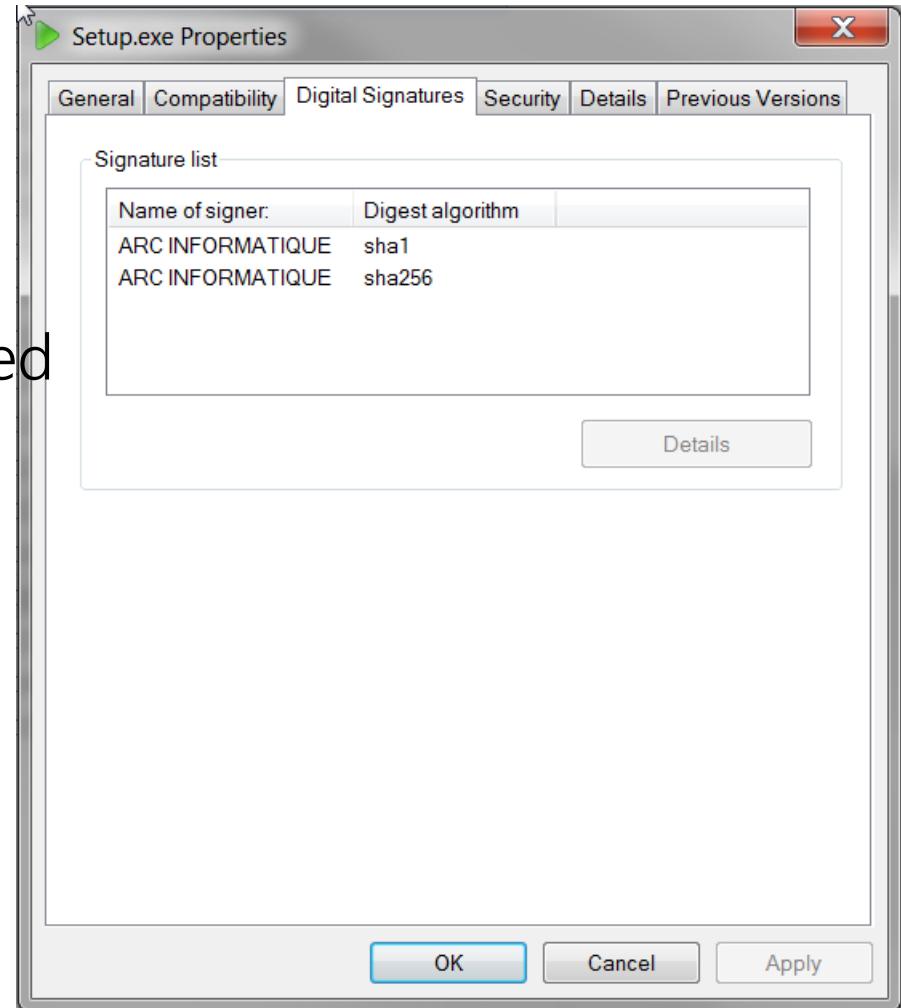
Authentication & Integrity

- The package you are installing was created
- by ARC Informatique
- The package was not tampered since
- its production

Download options

- zip - Single compressed archive
- .iso file
- Cumulative patches for update

Signed binary files



Running modes

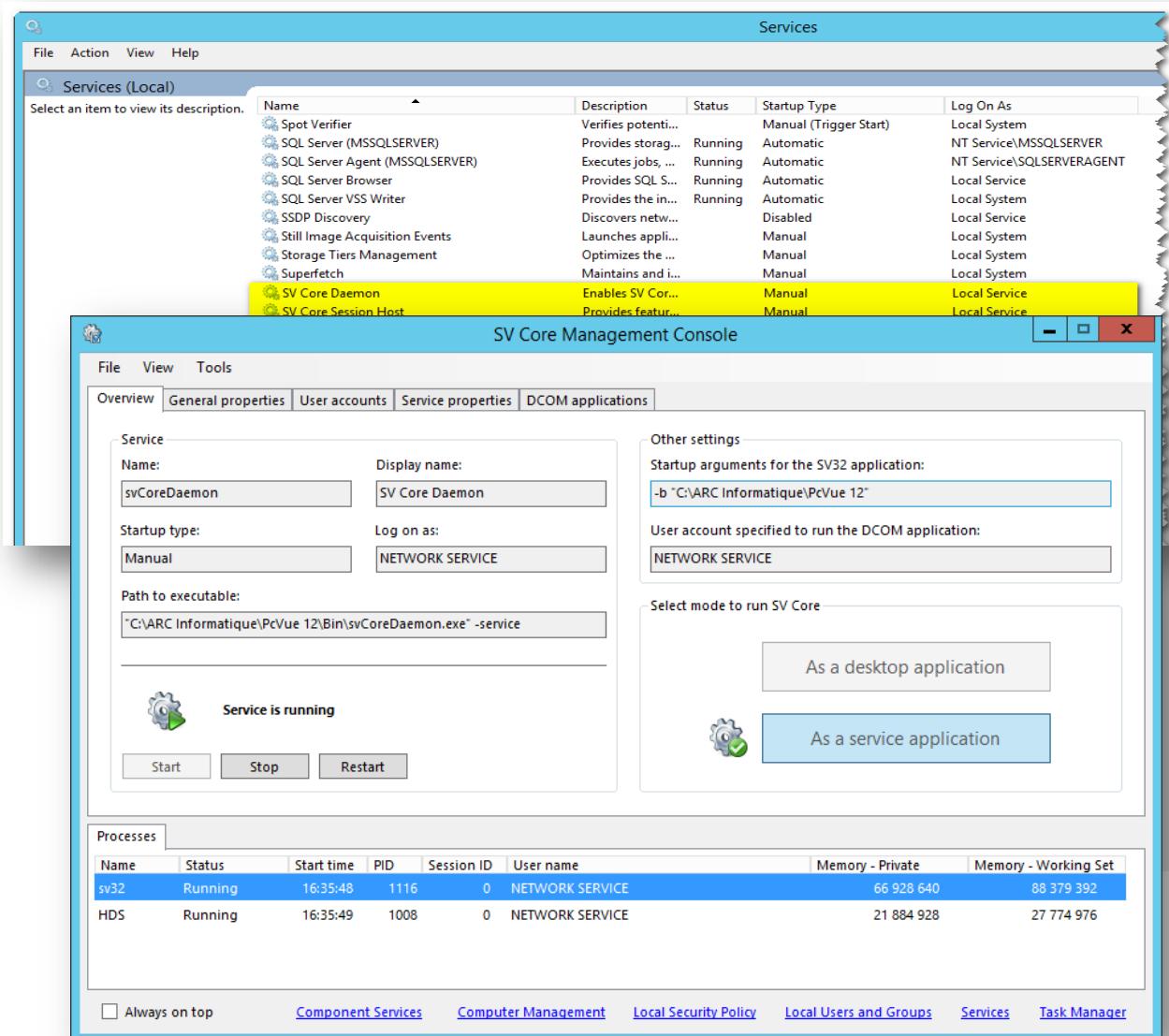
Leverage IT-Style deployment

2 running modes

- Desktop application bureau
- Windows service

Server components protection

- Deploy PcVue server components as Windows services
- And PcVue clients components as desktop applications



Protection

Licensing

Licences control management

- Support for Software license
- USB dongle



Questions/Answers

Let's talk!



PcVue[®] Solutions

Thank you for your attention

Stay connected !

Position

