



New features in Topkapi version 6.1 definitely focus on **interoperability** (IIoT communication protocol, OPC UA, etc.), ensuring it provides concrete responses to expectations arising from constant technological changes.

Moreover, they include **functional enhancements**, **ergonomic improvements** and **operating optimisations** which demonstrate permanent commitment to simplifying application configurations and making our solutions more agile. Cybersecurity also remains at the heart of our concerns.

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### Interoperability



### Functional enhancements



### Cybersecurity



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## INTEROPERABILITY

### IIoT protocol / scriptable acquisition protocol

Topkapi now has a **new JavaScript-scriptable protocol** meeting the needs of non-standard or custom data acquisition. This protocol is particularly useful when Topkapi needs IIoT data to be acquired.

From now on, it enables to support:

- Sigfox
- Operated LoRa
- Private LoRa (depending on the hub chosen)
- MQTT (as a client, contact us for availability)
- Interfacing with Cloud platforms



In general, it allows custom data acquisition from Webservices of the API REST type (Json or xml format), in any file in the txt format or in an email.

Object auto-discovery mechanisms have been implemented to facilitate auto-configuration of applications. The use of this protocol requires JavaScript coding skills as you must create the script.  
>> For more details, you can request the proto Script information sheet and/or contact our teams.

In the future, this protocol will be enriched with new libraries, allowing for example management of FPT/FTPS/SFTP servers, DBMS data acquisition, etc.

Please note that this data acquisition protocol is also available in version 6.0.



**Topkapi version 6.1 provides great flexibility and freedom to develop customized data acquisition.**

## Webservice server (API REST type)

Introduced in version 6.0, Topkapi's Webservice server can provide real-time or time-stamped data **from a Topkapi application to a third party application**. Data can be read or written in a secure way (https if required) and inherits the rights of access to information from the application concerned.

>> The specifications of the Webservice are available upon request.



**Topkapi version 6.1 provides a Webservice server to make project data available to a third party application.**

## BACnet BMS Web calendar

AREAL keeps investing in its web component, Webserv2 (<https://www.topkapi-scada.com/en/software/webserv2>), for operating applications via a web browser. For the building sector, a **new BACnet calendar operating interface** (SCHEDULE & CALENDAR) specific to the web client was implemented in version 6.1.



**Topkapi version 6.1 features a Web interface dedicated to BACnet calendars management.**

## OPC UA

OPC UA is currently positioned by the OPC Foundation as the component of interoperability between applications. Topkapi version 6.1 is an OPC UA client for real-time data acquisition (time-stamped data management will be available later). This communication driver enables data exchanges with OPC UA servers, whether they are software packages communicating with field equipment or equipment that natively integrates this protocol into their communication coupler.

The immediate interest of OPC UA against the DA version is **data security** (exchanges of encrypted/certified/authenticated data possible) and to be free from COM/DCOM implementation problems as in OPC DA when the server and the client are not on the same PC.

>> Please contact use for more details on the implantation of this protocol in Topkapi and the interoperability profile.



**OPC UA is positioned as the standard of interoperability between applications by handling the cybersecurity issues. In its version 6.1, Topkapi is a UA client.**

## FONCTIONNAL ENHANCEMENTS

### SamplesView

This new sample viewing utility offers the particularity of operating whatever the data logging mode (DBMS or proprietary files) and in client/server (excluding web client).

**SamplesView can be used to view, edit, modify and export samples.** The utility is accessible from the database display view through a variable or via the operating menu.

Ergonomic benefits:

- Allows opening several variables simultaneously
- Tab mode: one variable per tab
- Multisource mode: data table

Date	Temps	Valeur	Rang de défaut	Invalide	Modifié	Nouveau complet
4017 17/10/2019	01:55:00	164	0			
4018 17/10/2019	01:54:00	106	0			
4019 17/10/2019	01:53:00	45	0			
4020 17/10/2019	01:52:00	786	0			
4021 17/10/2019	01:51:00	727	0			
4022 17/10/2019	01:50:00	666	0			
4023 17/10/2019	01:49:00	606	0			
4024 17/10/2019	01:48:00	546	0			
4025 17/10/2019	01:47:00	486	0			
4026 17/10/2019	01:46:00	426	0			
4027 17/10/2019	01:45:00	365	0			
4028 17/10/2019	01:44:00	306	0			
4029 17/10/2019	01:43:00	246	0			
4030 17/10/2019	01:42:00	185	0			
4031 17/10/2019	01:41:00	126	0			
4032 17/10/2019	01:40:00	65	0			
4033 17/10/2019	01:39:00	6	0			
4034 17/10/2019	01:38:00	747	0			

The Echantillons.exe utility is maintained thanks to the upward compatibility.

### New interface for importing graphic objects into mimic pages



A new interface allows browsing the graphic objects library supplied by AREAL, which can be enriched by the user.

Interface specifications:

- Accessible via the object toolbar
- Drag/drop object positioning in the mimic page
- Imported graphic objects are fully part of the application

This interface provides access to the basic library supplied with Topkapi since version 6.0.

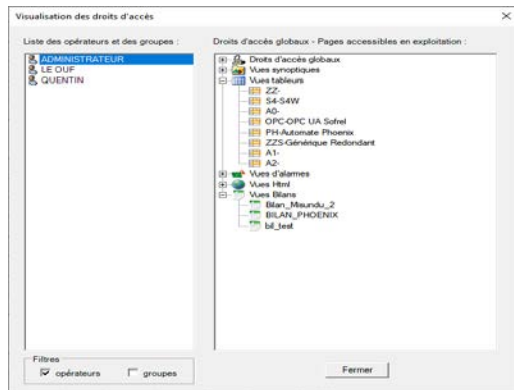
Specifications of AREAL's image library:

- 2 object sizes
- 11 types: Buttons/Motors/Pipes&Valves/Pumps/Tanks/Hvac/ Water, etc.
- Non-animated objects
- Format supplied: png

## New operator rights browsing interface

A new interface is provided to view the actual rights of a given operator or group.

The interface shows the actions authorized per view (mimic, spreadsheets, alarms, html, summaries) and per global access rights.



## New attributes associated with a variable

Six new attributes, global to the application and fully customizable, have been added to customize variables.

They allow information to be added to a variable and can be used for example to implement filters in alarm views.

The attribute entry interface is fully customizable (type, min/max, default value, help, selection list, etc.)

## Multiple actions in the acquisition view

In configuration mode, several controllers can be selected in the acquisition view to copy queries, icons or move controllers.

## Several default layouts

Several layout templates can now be defined for mimic pages. The different layouts are managed using profiles.

These profiles contain the following information:

- Page layout to manage auto-adaptation to the screen's resolution
- Setting a mimic banner
- Setting an alarm banner
- Characteristics of the movement limit zone inside the page

## Remote alarm notification module: text to speech in VoIP by SIP

For text to speech remote alarm notification functionality, Topkapi can connect directly to the company's PABX using the SIP protocol to send voice messages, without using a modem. The voice is generated by Topkapi. Obviously, the PABX must be VoIP/SIP compatible.

## Generating reports in the Excel format without Excel

Reports can now be generated in the Excel xlsx format even if Excel is not installed on the computer running Topkapi. This resolves the problems due to 'Excel launching' when Topkapi's LTS component was run as a service.

This new operating mode is compatible with the existing models in the xlsx format besides those containing macros.

## Webserv2: default session

A default operator can be defined independently on each PC accessing Webserv2. When the browser is launched, the user is logged to the Topkapi application with the default operator login/password. The default session is not limited in time.

## Webserv2: default view upon opening

Webserv2 inherits the operator environment set in the Topkapi application on the server: once the operator is identified, the browser presents the default page defined by him.

After identification, the site can also open a specific page defined in the url.

## CYBERSECURITY

Cybersecurity is a major concern. One of the goals is securing communications between the scada and field equipment in terms of integrity / authenticity / confidentiality of exchanges.

In version 6.1, native support of protocols such as OPC UA or Sofrel S4W (Topkapi has been approved by Sofrel in the S4W secured environment) meets this requirement, particularly with **certificate management (SSL, TLS, etc.) embedded in Topkapi**.

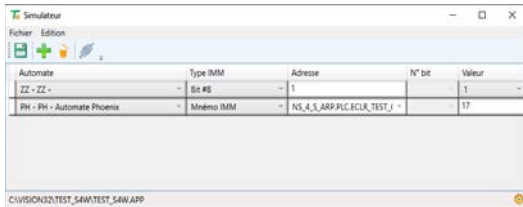


**Topkapi version 6.1 features native support of the main secured communication protocols.**

## ERGONOMIC IMPROVEMENTS

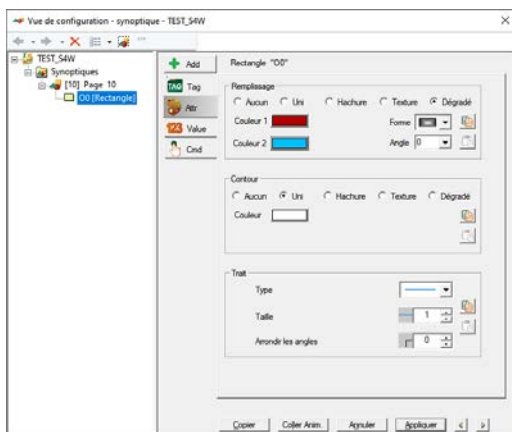
### New simulator

The simulator has been rewritten with functions identical to the previous version for use without restriction regardless of the operating environment (the LTS component runs mainly as a service).



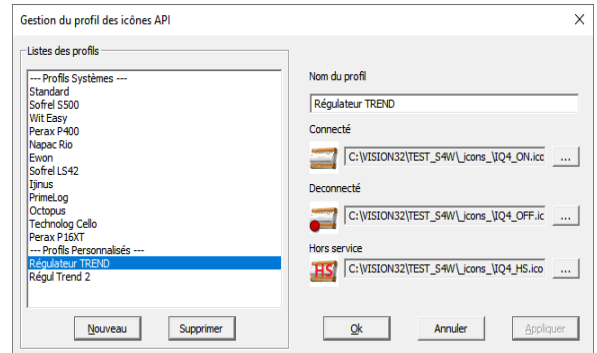
### New interface for graphic object attributes

The attributes of graphic objects (outline and filling) can be configured directly on the graphic object as animations.



### Acquisition view: customized icon profiles

A new interface allows custom icon profiles to be created for controllers and ports, in addition to the profiles supplied by Areal. These profiles are used in the acquisition view.



## COMMUNICATION PROTOCOLS

Topkapi interfaces with new hardware:

- Paratronic: LHC probes (FTP acquisition)
- NIVUS: flowmeters (FTP acquisition)
- Technolog: Cello 6S data loggers (IP protocol)
- Sewerin: Sepem 300 noise logger (email acquisition)

## OPERATING OPTIMISATIONS

### WMS interfacing (GIS)

Fat client stations (Netview & Open Client) no longer need access to the GIS (via the WMS connector) to display the map desired: they now address the Topkapi LTS component (as for Webserv2) to obtain it. When communication drops between Topkapi and the WMS server, the last image served by the GIS is memorized by Topkapi, and is the one displayed.

### Optimised Webserv2 display

Optimisations have been implemented to improve the page display time in a Web client.

### Redundancy optimisation

Optimisations have been made to shorten the restart times of a redundant application (switching from configuration mode to runtime mode).

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