

Placing you at the heart of your operations

Vijeo Citect



Schneider
Electric

10 things you should know about SCADA

1 **Safety of workers** and equipment are ensured through predefined processes managed by a SCADA system.

2 **Engineering costs, time and risk are reduced** through easy integration with all your plant devices.

3 **People, plant assets and the environment are all protected** as SCADA promises high level control over the working environment.

4 **Productivity is increased** via analysis of processes used to improve plant and production efficiencies.

5 **Maintenance costs are reduced** through centralized control and monitoring that ensure minimal downtime.

6 **Quality is improved** through analysis of process data which results in preventing errors before they occur.

7 **Operators are more effective** using SCADA because it consolidates the various plant processes and provides a comprehensive overview of operations.

8 **Alarms are managed** so they do not overwhelm operators, reducing operational effectiveness.

9 Integrating SCADA with an historian package and other business systems will **connect the plant floor to the boardroom** by sharing real-time and historical data.

10 Mobility solutions provide operators with the freedom to **observe operations first hand** no matter where they are.

Reduce costs. Gain productivity.

Solutions are not just about technology but about the expertise behind the technology. At Schneider Electric, we have been delivering solutions for manufacturing and process industries for over 40 years. We understand what you need to help you meet your goals.

Our unmatched automation offer extends from the sensor that measures your process, to the automation system that controls your production to the historian and manufacturing execution system that help you improve your production efficiency and achieve operational excellence.

What you need from a control system:

- Easy to engineer and simple to maintain
- Delivers a clear picture of your process
- Easily integrates with all your plant devices
- Provides added value by connecting to historian and manufacturing execution systems functionality
- Drives increased return on assets
- Meets the needs of your specific application

So the benefits of “going SCADA” are undeniable – the ability to establish transparent communication between field, process, plant and enterprise, while being able to engineer and modify your entire process control system from a single location.

The increased efficiency in your production system that is gained through SCADA's monitoring and control features means lower costs, higher productivity and increased profitability for your business.



The benefits of “going Vijeo Citect” are better still:

- **Preserve your capital investments while improving your system:** Vijeo Citect allows close integration with a complete Schneider Electric solution. For you, this means that Vijeo Citect will work with all other Schneider Electric devices and PLCs you may already have or might acquire in the future.
- **Minimize costly downtime with maximum redundancy:** Vijeo Citect has full redundancy, making your system as reliable as possible and avoiding the damaging, costly effects of system downtime.
- **A flexible system that can grow with your business:** Its highly scalable client server architecture means that Vijeo Citect will always fit your enterprise to a tee. As your needs change, you can easily redesign your system accordingly. You will never “outgrow” Vijeo Citect.
- **Achieve engineering efficiency as well as operational efficiency:** Object-based configuration using Genies and Super-Genies and SpeedLink saves you engineering time and expense while its intuitive visualization tool, Process Analyst, enhances operator effectiveness.

Reliable, Flexible, Scalable

Vijeo Citect is a part of the fully integrated Schneider Electric automation solution that will help you increase your return on assets by delivering a reliable, flexible and high performance control and monitoring system. Easy-to-use configuration tools and powerful features enable you to quickly develop and deploy solutions for any size application.

Vijeo Citect was designed from its beginning to handle all the needs of the smallest to the largest and most complex enterprises in a single, integrated system, while maintaining consistent high performance and reliability.

Vijeo Citect is designed to provide industrial companies of all sizes and industries with agile control over both engineering and runtime operations to significantly improve performance and achieve a lower cost of ownership.

Scalable architecture for the right fit

Scalability is the power to resize your system — up or down — without having to modify any of the existing system hardware or software. Your SCADA system has unique requirements that will change with time, so how do you choose the best architecture? Vijeo Citect gives you the ultimate system architecture, scalable to any application size.

Such innovative architecture scalability allows your system to grow with your requirements, while preserving your initial investment. Need to add a second operator interface? Vijeo Citect makes it easy – just add a LAN and a new computer, and nominate it as a Control Client. The new computer can share the same configuration and will receive I/O from the first Vijeo Citect computer.

Clustered control as the optimum topology

In the current economic climate of widespread corporate belt-tightening, centralized control becomes an even more important issue. When you are able to monitor all your plant processes from a single control location with one central historian, you achieve better operational efficiency, better maintenance efficiency, better energy efficiency, less manpower requirements



Vijeo Citect features overview: Reliable, flexible and high performance SCADA



- Active alarm management
- Alarm & event historical views
- Alarm analysis



- Periodic & event trending
- Millisecond time-stamp accuracy
- Redundant archive



- Windows Integrated Authentication
- Control area and privilege level authorisation
- Dual signature support



- Cicode
- SiVBA
- Other languages via DLL



- Unified process view (alarms, trends)
- Compare many pens or panes
- Time-shift data to compare events
- Click and drag user interface



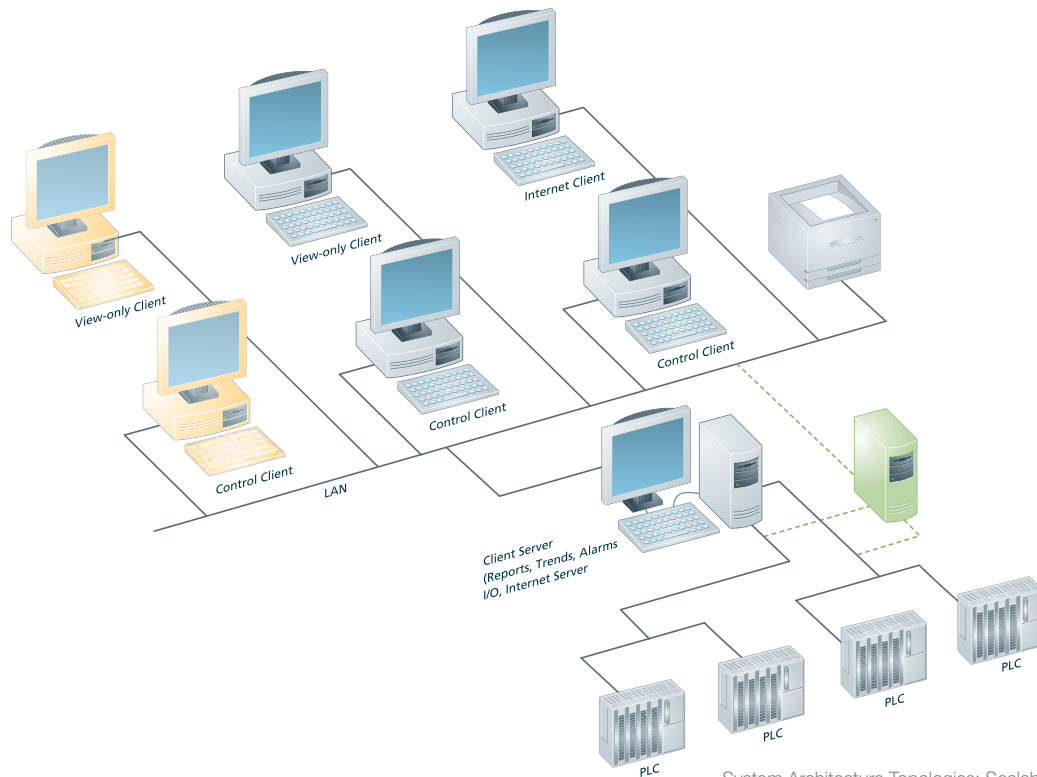
- Multiple control systems connection
- Control systems segmentation
- Additional processing support for scalability



- Symbol libraries
- Genies & templates
- Super-Genies for device pop-ups
- Driven by SpeedLink from your PLC configuration



- Data consistency
- Complete visualization solution
- Inbuilt support for Schneider hardware



System Architecture Topologies: Scalable – the ultimate system architecture, scalable to any application size

and, consequently, reduced operating costs. Vijeo Citect's ability to unify any number of control systems into a single, "clustered" system provides users with the optimum topology. While each local site can view its own control system, global control clients can be implemented to view across the entire control system, complete with unified alarm lists and the ability to compare trended data across multiple systems.

Flexible architecture to suit any configuration

Your SCADA system, like your business, must be able to react to changing requirements. New production lines or pressure on costs can prove challenging. Vijeo Citect uses its client server architecture to enable you to design and redesign your system as required.

To take full advantage of the client-server architecture, Vijeo Citect has five fundamental tasks which handle: communications with I/O devices; monitoring of alarm conditions; report type output; trending and user display. This architecture allows the communications and the control system designs to be completely separated and provides more flexibility for changing I/O server locations or system connections in the future.

Reliable architecture for full-redundancy

In factory automation and other mission-critical applications, hardware failure can lead to production loss and can result in potentially hazardous situations. Vijeo Citect's redundancy will tolerate failure anywhere in your system, with no loss of functionality or performance.

Vijeo Citect supports full, hot standby configurations, providing complete I/O device redundancy. By nominating one device as primary and the other as standby, Vijeo Citect will automatically switch from one to the other in the event of a failure. Using Vijeo Citect's ability to write setpoint changes to both primary and standby I/O devices, even devices that were not designed for redundancy can be used in a redundant configuration.

Easy and economical communication

Monitoring devices and sites over the Public Switched Telephone Network is also easy and economical thanks to Vijeo Citect's Remote Device Monitoring which supports scheduled Dial-Out and unsolicited Dial-In. Using standard wide area communication technologies, Vijeo Citect provides an effective method of communicating with remote telemetry units (RTU) for a fraction of traditional operating costs.



Vijeo Citect comes with rich symbol libraries and utilizes screen resolutions up to 4096 x 4096.

Tag synchronization for data integrity

Your Vijeo Citect database will link to the PLC programming software, providing you with an ideal single database solution. By linking tags directly with PLC programming software, Vijeo Citect makes it easier to configure and maintain your system.

Powerful graphics for intuitive interface

The graphics capabilities of your SCADA system are a critical factor in its overall usability. Vijeo Citect lets you develop true color, easy-to-use graphics that provide the operator with an intuitive, consistent user interface.

Vijeo Citect's graphics are based on a simple set of objects. The movement, rotation, size, color, fill and visibility of any object can be used to realistically replicate plant floor conditions. Commands and touch properties can also be assigned so that the object can accept a variety of operator inputs. Its intuitive and optimal graphics capabilities will reduce operator error and provide superior runtime performance.

Intuitive visualization tool

When analyzing the cause of process disturbances or when trying to improve productivity in the process, the comparison of alarm and trend data

can be quite revealing. While sophisticated analysis tools are available in data historians, Vijeo Citect Process Analyst is unique because it is an intuitive visualization tool that sits directly in the SCADA system itself. It can deliver actionable insight to the operator faster and give them the ability to immediately modify process conditions to achieve the desired results.

Operators can now intuitively spot linkages when alarm and trend data are brought together in one integrated display by Vijeo Citect Process Analyst.

Improving operator efficiency & productivity

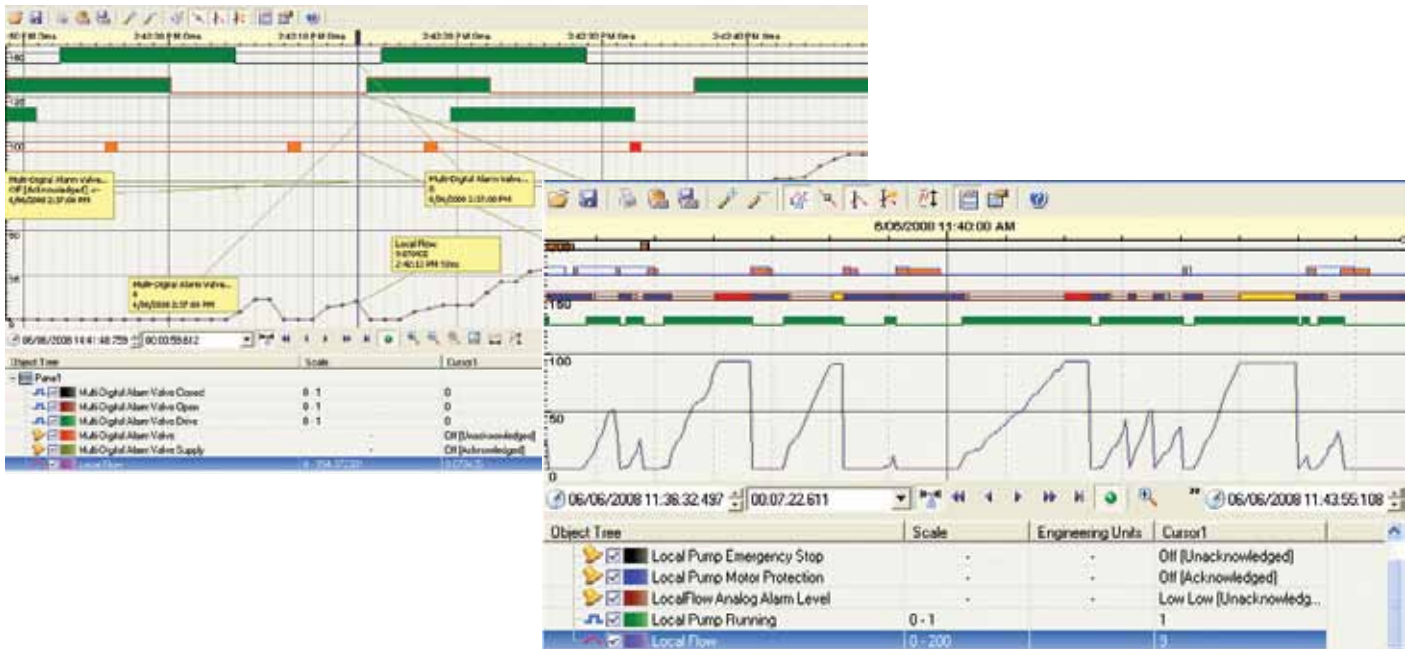
Vijeo Citect Process Analyst presents not only the alarm and trend data, but also the operator's response to those alarms. This feature is useful because it means the analysis incorporates a whole new level of insight into operator effectiveness.

Vijeo Citect Process Analyst's pre-configured templates, saved view or favorite view options mean operators do not have to spend time customizing the most common views that they keep going back to, thereby improving their efficiency and productivity.

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This is proving to be the best tool for process control and potentially can be used for benchmarking the processes. Some of the benefits we have started leveraging from the system are in the area of Improving Standard Operating Practices, establishing SOPs for new products, reduction in process variations, monitoring and control of CTQ parameters and identification of root causes of defects in end products.”

Mr. J.Sood,
AVP (Operations)
Jindal Stainless, India



Vijeo Citect Process Analyst: Get the complete picture with one viewer and improve productivity.

Object-based configuration for rapid development

Developing your control system is made quick and easy by Vijeo Citect's object-based configuration tools such as page templates, Genies and Super Genies and SpeedLink which link the configuration in your control system with the objects in your plant. Object-based configuration reduces maintenance and ensures consistent operator interaction.

Vijeo Citect's unique SpeedLink feature allows the PLC configuration to be linked to the SCADA configuration for tags, alarms, trends and accumulators. SpeedLink-enabled changes to any device type will automatically be reflected across all instances of that device, reducing duplication of effort and ensuring system consistency. With the database synchronized to the PLC configuration, the object linking continues onto the operator graphics screens.

Moreover, Vijeo Citect's libraries can be extended, customized or enhanced to suit your project's requirements...or you can simply build your own.

Engineering with ease

Vijeo Citect offers flexible and targeted system engineering tools to help you be more efficient. Whether you are configuring a distributed system

for water treatment or an entire mining application, it accelerates your control system configuration process, significantly reducing your engineering time and costs and minimizing your project risk.

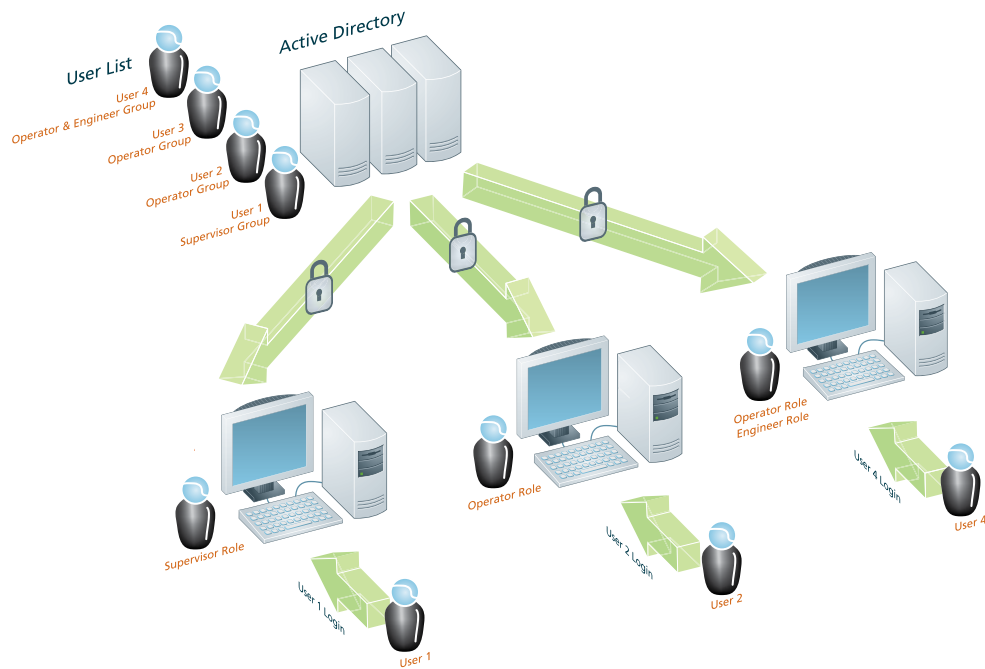
Protect your system

The importance of system security cannot be overstated. Vijeo Citect's integration with Windows security ensures that the same corporate security standards apply to the control system as to other applications. Further, it creates a single location for the management of all user accounts.

With Vijeo Citect support for Microsoft Windows Vista, you can take advantage of the additional security features built into this operating system, as well. Dual signature functionality provides a second level of security for actions. For example, some operations may have financial, environmental or other consequences where your processes dictate that a second level of verified confirmation is required before the action can proceed.

Integrate with your business systems

Vijeo Citect can be easily integrated with your existing business systems using Vijeo Historian, our historian software with powerful reporting tools. Vijeo Historian connects your plant and business database



Vijeo Citect Windows Integrated User Authentication

systems, such as our manufacturing execution system Ampla, to facilitate plant-wide reporting. This added intelligence will help you increase operational excellence and profitability.

Take your control system anywhere you go

Vijeo Citect's mobility solutions give your staff the freedom to observe operations firsthand wherever they are. By providing easy access to the SCADA application from dedicated web clients or smart mobile devices such as PDAs and mobile phones, Vijeo Citect provides greater flexibility, decreased downtime, increased plant productivity and a lower total cost of ownership. The increased visibility into real-time processes helps you make more effective decisions which can then increase plant productivity.

Vijeo Citect web clients allow users outside the control room to access control system data in real time via the Internet. The web client allows all users throughout an enterprise to take advantage of real-time information by providing easy access to the SCADA system outside the control room at zero maintenance cost

A secure and protected investment

Vijeo Citect is complemented by a full range of specialized customer services, including:

- Professional services
- An accredited integration partner program
- Technical support and training

These services ensure that your automation investment is secure and protected.

We will be with you every step of the way, from tailoring the system to your needs to post-installation support and future upgrades.

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