VTScada®

Software for Monitoring & Control

A COMPREHENSIVE DATASHEET

FOR SCADA SOFTWARE APPLICATIONS

WATER & WASTEWATER | OIL & GAS | POWER | MARINE

AGRICULTURE | BROADCASTING | AIRPORT SOLUTIONS

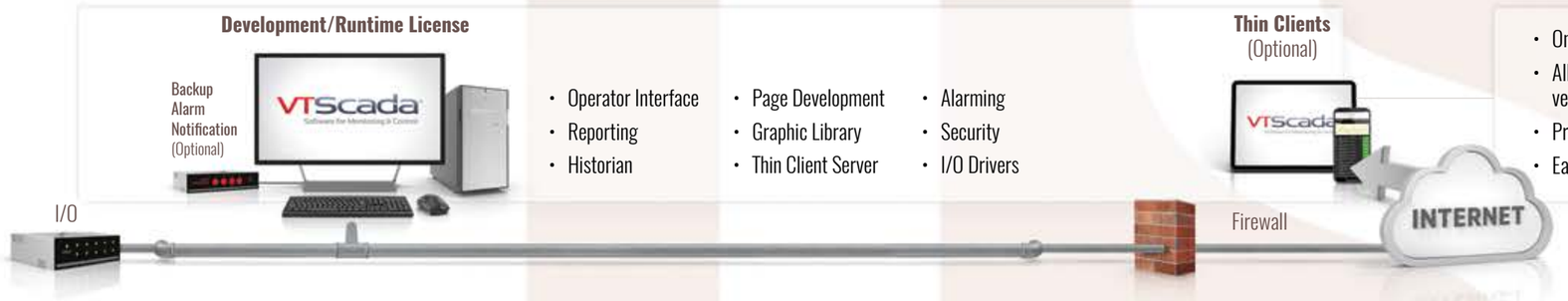
MAUNUFACTURING | PUBLIC SAFETY | FOOD & BEVERAGE

UNIQUE ARCHITECTURE

UNLIMITED SCALABILITY

THREE COMMON CONFIGURATIONS

VTScada's allows you to easily grow from a few hundred tags on a single laptop all the way up to a multi-million tag system spanning distributed synchronized servers. Below are three of the common application configurations that VTScada makes possible.



Fully-Integrated SCADA

- One install provides everything required for a fully-featured SCADA system.
- All components are native to VTScada and upgrade seamlessly with every new version and Windows® OS.
- Pre-integrated features simplify pricing, reduce integrating time.
- Easily add additional tag capacity and optional components at any time.

Seamless Redundancy and Synchronization

- Integrated design means every license can be an additional redundant server.
- Each server contains synced historian, alarms, change history, accounts, etc.
- Configure redundant servers, networks and historians in seconds.
- Applications support any number of redundant servers (each requires a VTScada license).

Enterprise-level Architecture

- VTScada does not retire versions forcing users to start over on a new platform.
- Use powerful tools to design your own architecture or use sample settings to create standard configurations.
- Easily share historical data with a wide variety of third-party business platforms.
- Optional yearly support and version upgrades never increase in price while support remains current.

BUILD SCADA INTELLIGENCE

BUILT-IN DATA LOGGING

The VTScada Historian STANDARD

Our Historian is part of every application. Tags receiving data begin logging automatically.

BUILT FOR SPEED - Historians can log up to 4K values/sec. and sync across a WAN at up to 160K values/sec.

PROTECTING HISTORICAL DATA - Create multiple synchronized historians at multiple sites.

THIRD-PARTY DATABASE SUPPORT - VTScada also supports other industry standard database formats (licensed separately).

EFFICIENT LOGGING - Log on time of day or changes in value. Use deadbands and delays to save disk space and bandwidth.

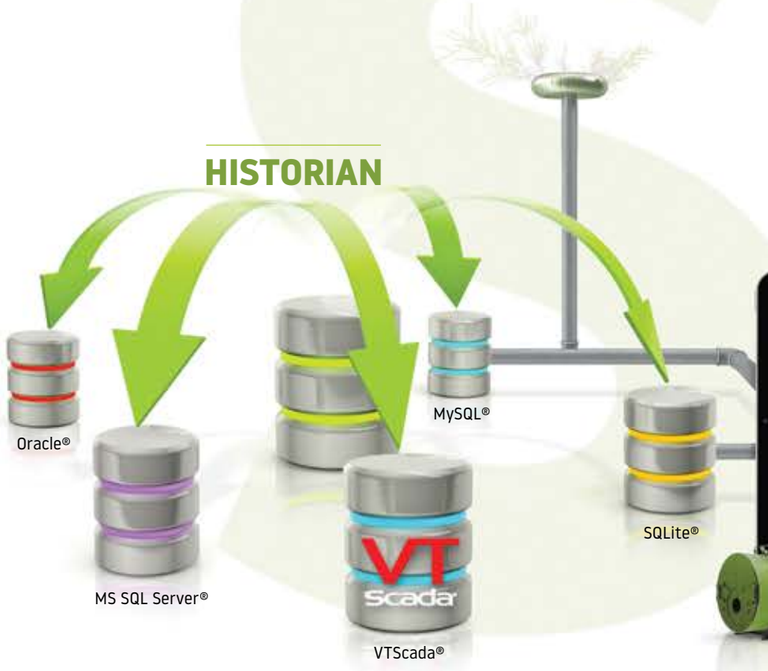
HISTORIAN IMPORT - Replace your SCADA. Keep your history.

BUILT-IN I/O POLLING

Polling Tag & Comm Link Sequencer Tag TAGS NOT COUNTED TOWARDS LICENSE LIMIT

Integrated Comm Link Sequencer Tag (IP Radios) and Polling Tag (Serial Radios) automatically manage poll sequencing and radio resources eliminating the need for a master PLC device reducing integration costs, and points of failure.

- Reduce the number of radios by transmitting multiple protocols on a single comm link.
- Configure any number of polling groups.
- Select 'Fast Polling' rate for specific RTUs.
- Poll by external triggers, on schedule, or on command.
- Display min, max, and average values.



NON-PROPRIETARY CONNECTIVITY

Device Driver Library STANDARD

CONNECT TO ANY COMBINATION OF HARDWARE

VTScada includes over 100 industry standard and proprietary I/O protocols, each with built-in communications alarms. Use OPC by choice, not necessity. We can also create drivers to meet your needs.

NEW - COMMON PROTOCOLS - OPC UA, OPC DA, DNP3, IEC, DF1, DDE, Modbus (serial, TCP/IP, RTU), SNMP.

DATA LOGGER PROTOCOLS - Enron Modus, Stevens, Campbell Scientific Pakbus.

PROPRIETARY DEVICES - Motorola, GE, Siemens, BSAP, Omron, DFS, Dexter Fortson,Allen-BradlyCIP, and many more.

RADIO DIAGNOSTICS DRIVERS - MDS, DataRadios®.

NEW - MQTT & JSON DRIVERS - Open your system to the IIoT.

NEW - SHARED DRIVER LISTS - Define driver server lists that can be shared with any driver. Select lists in the driverconfig dialog.

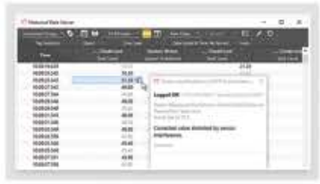
MAXIMIZE MODEM EFFICIENCY

Modem Management USED WITH OPTIONAL ALARM NOTIFICATION SYSTEM

- Pool modems across servers for improved efficiency.
- Includes a custom Unimodem driver.
- Supports logging of modem activities.
- Configure dedicated modems for functional areas.
- Data and alarm notification routed to appropriate voice/data modem(s) or email servers. No configuration necessary.
- Supports logging of modem activities.
- Display modem events, usage stats, and modem status.

FIX FAULTY VALUES - INPUT MANUAL DATA

New - Historical Data Editing STANDARD



- Authorized users can override faulty values or add missing ones.
- Edit individual or ranges of values.
- Overwritten values are not lost.
- Edits require an explanatory note.
- Edited values are marked in the Historical Data Viewer.

PUT IT TO WORK ACROSS YOUR ORGANIZATION

EASY OPERATOR TRENDING

Historical Data Viewer (HDV) STANDARD

The HDV gives operators the power to create and save their own customized trend groups without the help of a developer. Included in every application, the HDV combines historical and real-time data to provide a continuous picture of any number of I/O values.

OPERATORS CAN EASILY...

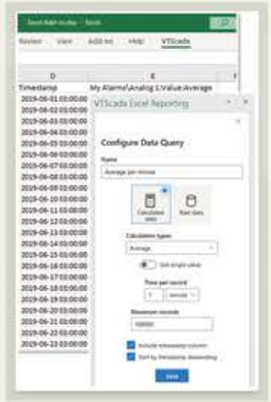
- See analog and digital data displayed simultaneously.
- Add unlimited pens representing individual I/O values.
- Adjust each pen's appearance and save as a group.
- Add encrypted notes to explain atypical readings.
- Export any range of data to a file or database.
- Select overlapping, stacked, or tabular views.

WORK DIRECTLY WITH YOUR DATA

New - Microsoft Excel Plugin STANDARD IN DEVELOPMENT RUNTIME LICENSES

Allow your team to work with their history the same way they work with all their data whether or not they use VTScada.

- Download the Excel Plug-in from the Microsoft Store.
- Choose the VTScada Historian as the data source.
- Select I/O tags and build queries.
- Requires a Microsoft Excel® license".



INTUITIVE REPORTING OUT-OF-THE-BOX

The Report Page & Report Tag STANDARD

AD-HOC REPORTS - Reports Page easily generatesr eports on the fly.

SCHEDULED REPORTS - Time-zone aware Report Tag can be triggered on schedule or on event.

PRE-DEFINED REPORTS - Choose from a suite of standard water/wastewater reports. Alarm Page includes reports for managing nuisance alarms.

DISPLAY OPTIONS - Output to a screen, spreadsheet, database, or email. Add custom script reports and Excel® templates as needed.

SEAMLESSLY SHARE YOUR PROCESS DATA

Enterprise Connectivity Package STANDARD IN DEVELOPMENT RUNTIME LICENSES

NEW - OPTIMIZED PERFORMANCE FOR THIRD-PARTY CONNECTIVITY.

- REST Interface to VTScada Historian.
- Single Table for SQL Databases.
- Improved performance when making large ODBC queries.
- New ODBC tables for getting tag lists.
- Support for LIKE operator in SQL queries.

OPC SERVER - Allows OPC-compliant programs (including other VTScada applications with OPC clients) to exchange live data to and from a standard VTScada application.

OPC CLIENT - Allows VTScada applications to exchange live data with an OPC-compliant server (including VTScada applications with configured OPC servers).

ODBC SERVER - Use popular software like XLReporter®, Dream Report®, Crystal Reports®, Access®, or Excel® to extract VTScada system data. VTScada acts as a database where each logged tag represents a table of timestamps and values that reporting software can query to retrieve logged values.

REST & WEB SERVICES - Our REST and SOAP (XML) interfaces allow business systems to request real-time and historical data. Supports time/date ranges, min, max, time of min, time of max, average, total, and SQL that include SELECT commands and WHERE clauses.

THIRD-PARTY REPORTING - Reporting products e.RIS®, XLReporter® and Dream Report® both have integrated VTScada interfaces.

EMPOWER OPERATORS

AN INTUITIVE OPERATOR INTERFACE

Graphic Display Pages STANDARD

Every application includes pre-integrated pages for alarms, trends, reports, maps, and Thin Client monitoring.

- Open pages in full screen or windowed.
- 24-bit / 32-bit 'true color' support.
- Dual/quad monitor support.
- Supports consistent display on all screen resolutions.

Intuitive Page Navigation

- The auto-generated Page Menu lets you move easily through your application.
- Monitor multiple live pages at once using the standard Tiled Page Menu (left).
- Change pages with custom hotboxes and buttons.
- Users can pin their favorite pages along the bottom.
- NEW - Easily provide users Read-only privileges.

PUT YOUR SYSTEM ON THE MAP

VTScada Slippy Maps STANDARD

Navigate sites with a click, toss, or scroll, the same way you use online tools like OpenStreetMap®. Embed maps into custom pages or use the standard map page. Administrators can easily designate map servers.

PICK A PIN TO SEE A SITE - Pins change color based on polling status. Click to open each site. Drag pins into place or position them with Lat and Long coordinates.

CACHED MAP TILES - Online applications pull map tiles from providers like OpenStreetMap® and CARTO® *. Pre-load tiles for offiine applications or load your own custom made tiles. Once displayed, tiles are cached indefinitely.

NEW - BULK DOWNLOADER - Import all tiles for designated areas and elevations for use offiine.

NEW - LIMIT AREAS AND ZOOM LEVEL - Ensure users remain focused on their relevant operational areas.

NEW - MAP TILE OPTIONS - Instantly switch between new high performance, high contrast, or night view styles from CARTO.

CONNECT YOUR DOTS - Add site connectors simulating pipes, power lines, or other infrastructure. Appearance can change based on system variables. Add arrows, labels, or customized icons.

MOBILE MAPPING - Thin Clients natively support mapping.

*Map tiles from commercial and open source websites may be subject to terms of license or user agreements, compliance with which is the user's.

BUILD TEAM COMMUNICATION

Temporary Sticky Notes STANDARD

Leave co-workers temporary messages and reminders.

- Add to any page or every page.
- Cover control elements to discourage use.
- Easy to create, format, and edit.
- Hide/show all notes with one click.
- NEW - ACKNOWLEDGE BOX Operators can add check marks to existing notes. Acknowlegments are recorded in the Event history.

MANAGE MULTIPLE APPLICATIONS WITH EASE

Updated VTScada Application Manager (VAM) STANDARD

- Create multiple application lists.
- Run on a Thin Client to manage applications when running VTScada as a service.

NO MORE PAPER LOGBOOKS

Encrypted Operator Notes STANDARD

Need to keep a log of users' actions? VTScada includes a searchable electronic operator's notebook.

DISTRIBUTED - Create any number of notebooks. Embed a notebook on multiple pages. Add notes to points on a trend.

SOCIAL - Users can comment on each other's notes providing a useful dialog across shifts and departments.

TAMPER-PROOF - Notes include time-stamps and user names. Once created, these encrypted files cannot be edited or deleted.

ACCESSIBLE - Authorized users can access notes from any workstation or web client. Search by date. Print any range.

SCADA FOR A GLOBAL MARKET NEW - Multi-Language Support STANDARD

- Create translations for any number of languages.
- Users can set a preferred language or change on the fly.
- Add new strings all at once and as needed.
- Translate standard VTScada system language and custom application strings.
- VTScada recognizes homonyms.

VTScada 12 and up includes English by default. Translations to other languages are the responsibility of the end user.

ADVANCED SITUATIONAL AWARENESS

ALARM & EVENT MANAGEMENT IN EVERY APPLICATION

The VTScada Alarm Page STANDARD

In the event of an alarm, click the blinking icon in the top right corner of every page to jump to the Alarm Page.

- See current, active, unacknowledged, disabled, and shelved alarms.
- Sort by date/time and filter by functional area or priority.
- Acknowledge, silence, or mute alarms even while configuring.
- Shelve alarms to stop alerts during maintenance or alarm floods. NEW – SHELVE MULTIPLE ALARMS AT ONCE.
- Use daytime and nighttime views to reduce eyestrain.
- Print any range of the alarm or event history.
- Adjust text and row size for optimal viewing.
- See time-stamped events (e.g., logons, setpoint changes).

EFFECTIVELY MANAGE ALARMS

ISA 18.2 Compliant Alarm Tools STANDARD

The Alarm Page and other augmented tools help you enact the best practices of the ISA 18.2-2009 Alarm Management Standard.

- Combine text, symbols, color, and sound to easily convey alarm status and priority for each listed alarm.
- Easily plot an alarm's tag data or open related displays.
- Add encrypted operator notes to alarms.

MULTI-PLANT ARCHITECTURE

Create separate Alarm and Event databases for individual plants and processes for targeted alarm processing.

- New applications include Alarm and Event databases.
- Add more Alarm Database Tags as required.
- Sync distributed databases to protect history.
- Manage alarms even when disconnected from alarm servers.

MULTI-PLANT ARCHITECTURE

- Easily create alarm tags in the VTScada Tag Browser.
- Built-in alarms for Analog Status and Digital Status Tags.
- Embed customized alarm lists into display pages.

CRITICAL ALARMS FIND YOU ANYWHERE

Alarm Notification Systems OPTIONAL

This native component remains tightly integrated for the life of your system. View and acknowledge alarms via SMS text message, email, pager, and text-to-voice phone call.

CHECK IN BY PHONE - Logon from any telephone to check levels, manage alarms, change setpoints, or control equipment.

ROSTERS - Lists of up to 30 users to contact in sequence until an alarm is acknowledged. Create any number of rosters for the whole application or functional areas. Change rosters by events or on schedule (recorded in alarm history).

MANAGE ALARMS WITH MOBILE THIN CLIENTS (Right)

TWILIO SUPPORT - This web-based platform provides some users better text-to-voice performance and fewer compatibility issues than traditional modems. (Twilio licensed separately).

HIGH PERFORMANCE OR HIGH RESOLUTION? YOU DECIDE.

Built-in Data-Driven Widgets STANDARD

VTScada supports whatever design philosophy you choose to help you effectively manage your ever-growing system.

HIGH RESOLUTION GRAPHICS - Photo-real images and widgets provide operators with vibrant depictions of their process.

HIGH PERFORMANCE GRAPHICS - Use data-driven color on a grey-scale background to focus attention on emerging issues.

NEW - HIGH PERFORMANCE WIDGETS - Built-in sparklines, analog indicators, analog bars, and spider graphs.

SECURE MOBILE ACCESS VTScada Thin Clients OPTIONAL

Monitor and control your process from any networked mobile device or computer. Clients are licensed by concurrent users and require one or more Runtime or Development Runtime licenses. Individual and bundled pricing available.

FULLY INTEGRATED INTERNET SERVER - Eliminates the need for third-party products like Apache® or Microsoft IIS®.

INDUSTRY-STANDARD ENCRYPTION - Support for Transport Layer Security (TLS) protects application security data.

CONFIGURE FROM THIN CLIENTS - Authorized users can edit tags and many system settings.

THIN CLIENT MONITOR - Displays and logs Thin Client activity. Send messages to clients or force disconnection. Logs user IP, computer name, screens viewed, session length and any control actions.

SET UP IN SECONDS - No need to rebuild displays.

THREE THIN CLIENT FORMATS

Choose the format that best suits your device and data plan.

VTScada ANYWHERE CLIENT FOR SMARTPHONES, TABLETS, PCS, MACS, LINUX

A full workstation experience from any HTML5 browser.

EASY ON DATA - 'Push' technology doesn't waste mobile data.

ZERO-FOOTPRINT - Nothing to install. Java not required.

VTScada INTERNET CLIENT FOR WINDOWS PCS AND LAPTOPS

A full workstation experience from Windows computers. Open VIC sessions from a desktop icon or web link.

SECURE REMOTE PORTAL - Log in from any on-line Windows PC.

FLEXIBLE WORKSTATIONT - A simple alternative to installed licenses.

NEW - SCREEN DEVELOPMENT ON THE VIC - Version 12 allows authorized users to create and edit application displays using the intuitive drag-and-drop VTScada Idea Studio (p. 11).

MOBILE INTERNET CLIENT (MIC) FOR SMARTPHONES, TABLETS, PCS, MACS, LINUX

A tag-and-trend HTML5 interface perfect for smaller screens. Refresh data manually or set a refresh rate that suits your cellular plan.

CREATE & EDIT TAGS

MODEL REAL-WORLD OBJECTS

Hierarchical VTScada Tag Browser STANDARD

Create and edit tags in this intuitive interface. Configure reusable tag structures that model how real-world elements relate. e.g., lift stations can include multiple pumps, each of which can include I/O and communication drivers.

CLONE WHOLE SUBSYSTEMS - Simply copy the parent tag. Copied tags automatically reference their new scope.

MULTI-TAG SELECTION - Saves time when copying, enabling, disabling, or deleting tags. Rename and reorganize tags without losing history, page references, or alarms.

REUSABLE TEMPLATES - TAGS & GRAPHICS

REUSABLE PAGE TAG TEMPLATES - Combine tag structures with custom graphics to simplify configuration of applications with similar assets.

BUILT-IN TEMPLATES - Use pre-defined Page Templates for these two Remote Telemetry Units (RTU) which have consistent configurations from device to device:

- NEW - GRUNDFOS PUMP CONTROLLER®
- XYLEM MULTISMART®
- MPE PUMP CONTROLLERS® BUILT-IN TEMPLATES

Also useful for similar devices or as examples.

TEMPLATES INCLUDE - Alarms, analog and digital inputs, digital controls, analog setpoints, counters and runtime totalizers, data age, communication link status, latitude longitude with VTScada Slippy Maps support, summary starts/stops.

GET MORE FROM YOUR TAGS

Only I/O Tags Count Against Your License

VTScada uses tags to manage application resources such as I/O, calculations, alarms, and menus. Since version 11, only I/O tags count towards your tag count. This frees you to include any number of menu items, fonts, alarms, and other configuration tag types. Right-click individual tags to plot data or view pages that reference that value.

HIGH-EFFICIENCY SMART TAG DEVELOPMENT

FLEXIBLE TAG CREATION

NEW I/O & CALCULATION TAG - Version 12 simplifies configuration by replacing a dozen tag types with a single universal tag type. It includes new parameters that add context to auto-generated pages as well as new high-performance widgets. It helps you grow applications by allowing you to change a tag's type without losing its history. Existing tag types still work but are hidden by default on new applications.

WORKING SMARTER WITH TAGS

CONVERT THIRD-PARTY TAGS - Our team can save you time by converting the tags from your old SCADA software.

NEW - PLC TAG IMPORT - Pull tags directly from Allen-Bradely PLCs and OPC.

TAG EXPORT - Create/edit tags outside VTScada via Access®, Excel®, SQL Server®. NEW -Hide empty tabs on export to Excel.

MULTI-WRITE TAG - Writes up to 50 outputs with one action. Useful for starting HMIs or replacing PLCs.

HISTORY STATISTICS TAG - Displays calculated values.

TRIGGER TAG - Initiates actions based on time or changes.

MANUAL TAG VALUES - Test systems without live I/O.

RATE-OF-CHANGE TAG - Detects rapid value changes (e.g., leaks) or lack of changes (e.g., failed pumps or valves).

INTEGRATED ALARMS & LOGGING - Built into certain analog and digital tag types.

ADVANCED PUMP STATUS TAGS - Built-in high/low alarms. Delays reduce alarms for minor changes.

LOG ON CHANGE - Only save meaningful data to the database.

QUESTIONABLE FLAGS - Flag new I/O while commissioning.

CUSTOMIZABLE DRAG-&-DROP SCREEN DEVELOPMENT

CREATE GREAT SCREENS WITH EASE

The VTScada Idea Studio STANDARD IN DEVELOPMENT RUNTIME LICENSES

This intuitive design environment makes it easy for anyone to start creating outstanding displays using a huge library of built-in drag-and-drop elements that are easily selected and aligned. Zoom in to tweak the finest details. No more messy screens and custom API calls to third-party platforms.

NEW - HIGH PERFORMANCE WIDGETS - Drag-and-drop sparklines, analog indicators, analog bars, and spider graphs work seamlessly with the NEW VTScada I/O & Calculation Tag.

HIGH PERFORMANCE OR HIGH IMPACT - Create effective displays using your preferred design philosophy. Built-in library includes both photo-real and greyscale widgets. Dynamically color grey- scale graphics based on alarms and process values.

FLEXIBLE TAG DEVELOPMENT - Lay out graphics first and create tags later or vice -versa. Search and replace any tag on a page.

FAMILIAR RIBBON INTERFACE - Easily customize the context-sensitive toolbar.

NEW – IDEA STUDIO ON THIN CLIENTS - Create and edit screens from VTScada Internet Clients (p. 9).

OVER 200 GRAPHIC 'WIDGETS' - Recreate your process with photo realistic meters, switches, and animations.

EXTENSIVE IMAGE LIBRARY - Includes over 4,500 industry-specific images, symbols, and polygons. Import JPG, BMP, PNG, WMF, and EMF files right from your desktop.

AUTO ALIGNMENT - Snap Points effortlessly align and space your graphics for you.

NEW - LAYER SELECTOR - Easily select one-or-more elements that are stacked on one another.

PHOTO REAL BACKGROUND TILES - Create a consistent look and divide pages into functional areas. Drag-and-drop over 100 patterns and simulated lighting effects.

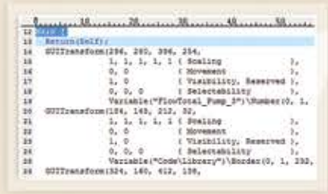
STYLE SETTINGS TAGS - Create consistent display conventions for groups of Widgets (e.g., red for "off" and green for "on"; or vice-versa).

SIMPLE PIPE DRAWING - Connect graphics using 3D pipes with just a few clicks. Use tag values or calculations to change appearance based on calculations or tag values.

BUILD ONCE, VIEW ANYWHERE - Design for multiple monitor resolutions. Choose from full screen or pop-up displays. Thin Clients support full graphics on mobile devices. NEW - Its now even easier to configure dual or quad monitors.

UNLIMITED CUSTOMIZATION

VTScada Scripting Language STANDARD IN DEVELOPMENT RUNTIME LICENSES



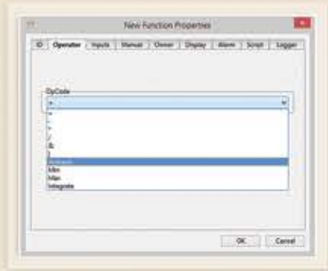
VTScada includes a powerful object-oriented scripting language (similar to C++) for unlimited customization. Code changes are recorded in the Application Version Control system and can only be imported by authorized developers. Scripting examples include custom services (start tasks or watch for events), custom tag types & drivers, and custom API calls to third-party platforms.

SCRIPTING DEBUGGING TOOLS

- Million thread history with dead thread identification.
- Tracing of all VTScada activities.
- View device driver error stats and sent/received.
- Source Debugger highlights what code has been run/tested.

SOFT LOGIC CONTROL - Alternative data sources for output controls:

- Deadband tags with delay and hysteresis.
- Calculation tags with mathematical and logical functions.
- Expression tags with complex scripting logic.



BUILDING SYSTEM CONFIDENCE

THE MOST RELIABLE, COMPREHENSIVE, & USER-FRIENDLY REDUNDANCY

Redundancy & Automatic Failover

SCADA SERVERS - In seconds, configure any computer running a VTScada license to be a redundant hot backup server that can take over polling and logging if the primary server goes offline.

INTERNET SERVERS - If a Thin Client server goes offline, client connections seamlessly switch to the next designated server.

HISTORICAL & CONFIGURATION HISTORY - Each server maintains a synchronized copy of the application's tags, displays, security settings, scripts, networked variables, configuration history, and historian.

ALARM MANAGEMENT - Applications now support any number of distributed synchronized Alarm and Event databases.

I/O CONNECTIONS - If a communications network or I/O fails, VTScada's Driver Multiplexer can automatically fail over to a backup.

A BETTER WAY TO BACK UP YOUR SCADA

Real-Time Full System Backup

REQUIRES MULTIPLE VTScada LICENSES

Integrated architecture and fast networking allows every SCADA server to be a real-time copy of the whole application including:

- The latest configuration history.
- Up-to-the-second historical data.
- Alarm, Event, and Tag databases.

Each distributed server is an off-site disaster backup.

SEE HARDWARE PROBLEMS COMING

Server and Network Health Monitoring STANDARD

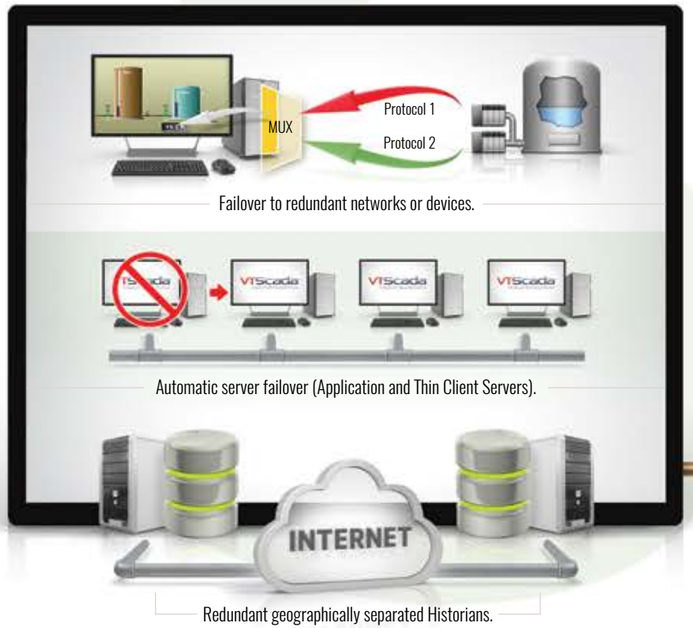
Monitor and alarm critical hardware & network resources.

SNMP DRIVER - UPS time remaining, network switch flow.
NETWORK STATUS - Connection status between computers.
WORKSTATION STATUS - CPU usage, remaining hard drive space.
DRIVER MULTIPLEXOR - Be notified of failover to another network.

NO LOGGED-ON WINDOWS USER REQUIRED

VTScada as a Service STANDARD

- When IT policy forbids unattended logged-on users.
- VTScada service automatically starts with Windows®.



CENTRALIZED MONITORING AND CONTROL OF MULTIPLE SYSTEMS

Master/Subordinate Applications REQUIRES MULTIPLE VTScada LICENSES

For customers with multiple independent facilities/systems. A Master Application has access to all data, displays and historical data from sub-applications.

- Sub-app I/O tags are not counted twice against your tag count.
- Sub-apps can monitor locally if cut off from the master.
- Configure Sub-Applications in seconds.

TYPICALLY INCLUDES:

- Summary data views.
- Summary status views (mapped, general alarm indicators).
- Drill down to individual facilities.

SMART CONFIGURATION MANAGEMENT

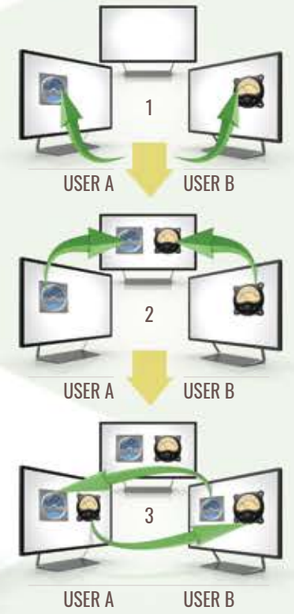
WORK ONLINE WITHOUT INTERRUPTING YOUR PROCESS

Real-time Configuration STANDARD

Edit tags, displays, and system properties without stopping the application and disabling alarm management.

OPERATORS CAN EASILY...

- Work with live I/O.
- Apply changes without restarting.
- Multiple users can develop simultaneously.
- No configuration server required.
- Conflicts are easily resolved.
- Edit tags via VTScada Thin Clients.
- Edit server lists using VTScada Runtime licenses.



TRACE ANY CHANGE – UNDO ANY CHOICE

Application Version Control (AVC) STANDARD

A native part of VTScada, AVC provides change traceability, enhances application management in networked environments, and greatly improves recovery from unexpected effects of configuration.

- See a history of all changes by all users on all servers.
- See side-by-side incremental changes in each version.
- Instantly switch to any previous good version.
- Merge changes in multi-developer environments.
- Undo specific changes at any time in the past without universal rollback.
- Change history automatically stored on each synced server.

Version	Time Applied
SERVER1-D74	Mon May 30, 2019 19:44:56.895
SERVER1-D73	
SERVER2-D72	
SERVER1-D71	
SERVER1-D70	
SERVER1-D69	
SERVER1-D68	
SERVER1-D67	
SERVER1-D66	
SERVER1-D65	Thu Jan 12, 2019 16:25:04.134
SERVER1-D64	Wed Jan 11, 2019 10:11:06.938
SERVER1-D63	Wed Jan 11, 2019 10:11:11.854

Show Version Details
Switch to this Version
Reverse Version Changes
Merge Version Changes
Reverse Version Range
Merge Version Range

EASY APPLICATION DEPLOYMENT

Online

DEPLOY - Once VTScada is installed on a new server, the application can be easily pulled from any networked server. When added to the application Server List, this PC becomes a hot-backup redundant server with synchronized Historians, change list, user accounts, and Alarm/Event databases.

UPDATE - Once changes have been validated on one server they can be pushed out to all networked application servers.

SUPPORT - Integrators with a OEM Licenses can securely VPN into a customer's system to fix problems or add functionality without the need to travel to site.

Offline

DEPLOY - Easily distribute new or updated applications to multiple offiine computers with a single VTScada ChangeSet file.

- Reuse work by cloning existing applications.
- Backup/restore applications with version history.
- Update OEM layers without affecting end user applications.

SUPPORT - Non-technical users can easily generate ChangeSet files to send to their integrators via email, FTP, or USB stick. Integrators can add functionality, fix issues, or roll back changes. Users can apply modified Change Sets without system restart.

A REFRESHING APPROACH TO SUPPORT

The VTScada Support Team

OPTIONAL YEARLY RENEWALS

Are you frustrated trying to get help from a major supplier? Our team of developers, programmers, and engineers provide a level of personal support that keeps customers coming back for upgrades, enhancements, and consulting services as their facilities grow and evolve.

EVERY NEW LICENSE INCLUDES 90 DAYS OF SUPPORTPLUS

- Includes phone and email support Monday to Friday*, 8 AM – 4 PM (EST) as well as the ability to download and install the latest version any time.
- Optional renewals cost 15% of the original software price per year and will never increase while you continue to renew.
- Covers issues specific to VTScada. Does not include hardware troubleshooting, training, or system design.
- 24/7 and application-specific packages also available.

SYSTEM REQUIREMENTS

Applications require one or more VTScada licenses each installed on separate Windows operating systems.

HARDWARE - Systems (under 10K I/O) typically don't require server-grade computers.

OPERATING SYSTEMS - VTScada supports Windows 7 up to the latest version of Windows.

THIN CLIENTS - Accessible from any device that supports HTML5 - compliant browsers.

Actual requirements depend upon your specific needs. See detailed requirements and recommendations at: VTScada.com/requirements

LICENSE TYPES

	INTEGRATED COMPONENTS INCLUDED (SINGLE INSTALLATION)	RUNTIME	DEVELOPMENT RUNTIME
RUN AND OPERATE	Application Server (primary or redundant)	✓	✓
	Runtime Client	✓	✓
	Widgets and Graphics Library	✓	✓
	Historian	✓	✓
	Security	✓	✓
	Network and Computer Resource Monitoring with SNMP Agent	✓	✓
	Alarms and Events Database	✓	✓
	Trending and Reporting	✓	✓
	Slippy Maps Integration	✓	✓
	Electronic Operator Logbooks	✓	✓
I/O DRIVERS	Common (e.g., Modbus, DF1, OPC Client, Omron, GE, Siemens)	✓	✓
	Advanced (e.g., DNP3, SNMP, Enron Modbus, BSAP)	✓	✓
	Proprietary (e.g., DataFlow Systems, Dexter Fortson, Aquatrol)	✓	✓
	Proprietary (e.g., Campbell Scientific, DF1, SCADAPack)	✓	✓
DEVELOP	Automatic Version Control (system-wide disaster recovery, audit tools)		✓
	Idea Studio Efficient Development Environment (online, multi-developer)		✓
	Change Deployment		✓
	Scripting and Debugging Tools		✓
	ODBC Server, OPC Server, Web Services		✓

SUPPORT, UPGRADES AND RENEWALS

MODERN SECURITY THAT'S SCALABLE

MORE CONTROL, LESS COMPLEXITY

Built-in Security Management STANDARD

VTScada makes security management simple, scalable, and infinitely configurable. Authorized users can manage security within the standard operator interface, then instantly deploy their changes across the entire system without restarting.

WINDOWS® SECURITY INTEGRATION (OPTIONAL)

- Configure VTScada to use your Windows log-in account.
- No need to manage Windows and VTScada accounts.

PROXIMITY CARD READERS

- Log on the same way you enter a secured building.
- Configure Operator Notes to require authentication.

WORK DIRECTLY WITH YOUR DATA

Each application includes security accounts and settings that control system-wide access to workstations, Thin Clients, and alarm notification. Rather than choosing from an ever-growing list of privileges, VTScada uses 'Rules' and 'Roles' to allow you to quickly generate and manage highly-specialized user accounts.

RULES - A combination of tags, privileges, and locations that allows you to finely tune what users can do and from where. Grant different users access to different areas without creating new privileges.

ROLES - Combinations of Rules and other Roles that match the duties of specific jobs (e.g., Plant 1 Operator).

UNPARALLELED TRACEABILITY

OPERATIONS - Operator activity such as setpoint changes, log on/off, and security modifications are recorded as events in the Alarm Manager (P. 8). This includes actions performed via servers, Thin Clients, and the Alarm Notification System.

CONFIGURATION - Integrated Application Version Control (P. 13) automatically tracks all changes on all workstations. It detects manual changes to configuration files made by unauthorized users or malware, and automatically restores them.

REMOTE ACCESS - Thin Client Monitor displays and logs remote activity and allows you to message or disconnect clients. Logs user IP, computer name, screens viewed, and session length.

ADVANCED ENCRYPTION AND NETWORK PROTECTION

INDUSTRY-STANDARD SECURITY - Security Manager complies with industry-standard RFCs for security.

ADVANCED ENCRYPTION - For the Security Database and security credentials passed between clients and servers.

IPV4 AND IPV6 ADDRESSING - IPv4 addresses are running out. IPv6 provides improved performance and security.

ENCRYPTED NOTES - Time-stamped operator and trend notes cannot be deleted or modified.

HASHED USER PASSWORDS - Login credentials are never held in a form that anyone can decrypt and recover.

TLS/VPN SUPPORT - Thin Clients support Transport Layer Security (TLS), firewalls, and VPN access.

TLS EMAIL SUPPORT - The Alarm Notification System supports SMTP email servers requiring TLS (e.g., Gmail®).

BLOCK/ALLOW IP ADDRESSES - Optionally control which IPs may or may not connect to your application.

CODE TAMPERING DETECTION - On startup, VTScada automatically detects unauthorized changes to source files, and restores the currently approved files from the tamper-proof repository.

SERVER AND PORT FAILOVER - Easily configure automatic failover for SCADA servers and communication ports.

SINGLE LOGIN - OpenID Connect lets Thin Client users login with the same credentials across all Enterprise applications.

SINGLE SIGN-IN & TWO-FACTOR AUTHENTICATION

OpenID Connect®

Permits integration of VTScada Security with third-party authentication servers on VTScada Anywhere Clients.

- SINGLE SIGN-IN - One password to access to many systems.
- TWO-FACTOR AUTHENTICATION - E.g., Google Authenticator or Apple Touch sensor.

SOFTWARE **TRAINING** COURSES

REGISTER FOR SCHEDULED COURSES ON OUR WEBSITE OR REQUEST A COURSE AT YOUR OFFICES.

OPERATION & CONFIGURATION

An introduction to VTScada for SIs, OEMs, consultants, operators, maintenance, and IT staff.

ADVANCED CONFIGURATION

Customization and configuration using VTScada Script for advanced developers.

SCRIPTING & PROGRAMMING

For advanced integrators and OEMs. Custom courses can be created based on specific requirements.

COURSE REGISTRATION: VTScada.com/training

MOVING FORWARD

DOWNLOAD OUR PRICELISTS
vtscada.com/pricing

DOWNLOAD THE 90-DAY TRIAL
vtscada.com/trial

WATCH VIDEO TUTORIALS
vtscada.com/tutorials

SALES INQUIRIES: info@trihedral.com

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			Distributor BettsM Controls

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