OPCHub Version Information Log

VERSION: 4.0.1.505
Released: May 5, 2015

New Features & Additions

New USB Flash Drive Dongle : The software authorization dongle has been upgraded from the **Sentinel USB Key** to a specially configured **USB Flash Drive** ; the new Flash Drive is an improvement over the Sentinel Key because it has **3.67 GB of storage available for backing-up** the **OPCHubInstall program** and the **OPCHub project**. These backups can be used from the key to restore OPCHub with a functioning project in the event of a computer failure.

Changes & Improvements

Installation ID replaced by Serial Number : The Installation ID has been renamed to "**Serial Number**", and entering a serial number no longer requires the user to send an email with a "computer fingerprint".

Resolved Issues

System-Time-Change Adjustments : Numerous time-sensitive features which were not keeping track of system time changes now do. The features which were not keeping track of system time changes would be susceptible to minor or major malfunctions when the daylight savings time changes occur.

Version: 3.0.18.929
Released: September 29, 2014

Resolved Issues

- **The MutualExclusion mechainism which limits OPCHub to a single running instance had a flaw** which allowed multiple instances of OPCHub to run simultaneously if the names of the EXE files were different (e.g. **OPCHub.exe** & **OPCHub2.exe**)

- **OPCHub Install.exe opens the permissions for the necessary Registry Keys** so that there are no **Access Violations** when OPCHub is being run under a user profile lacking **Administrator Access Rights.** This was working in previous versions, but the **Access Control List** was left **out-of-order** (according to Windows **RegEdit** utility).

Version: 3.0.17.512
Released: May 12, 2014

New Features & Additions

- **Support for multiple network cards** : Both the **TTP Server** and the **Web Server** features can now be assigned (bound) to a specific **Network Interface Card (NIC).**

- **New Web Server interface** allows users to monitor and modify tag values in OPCHub via any standard web browser. This feature is optional.

Changes & Improvements

Added Digital Signature to all ScadaTEC EXE files; this prevents anti-virus software from becoming suspicious of and quarantining (or deleting) the various **.EXE** files installed by **OPCHubInstall.exe**.

Resolved Issues

- **Project changes made after last save-to-disk were not being included in the Project Export ZIP file.** OPCHub now forces a **Project | Save** before zipping the project files for **Export**.

- **TTP Writes were not being serviced in projects lacking OPC or CTAPI connections.** The problem was due to the **WriteQueue.ServiceWrites** procedure only being called from the **PollingThread.Execute** procedure; **TTP Client** connections have *their own* polling threads, and they were unaware of items queued into **OPCHub's WriteQueue**. OPCHub's main-logic loop now checks the **WriteQueue** for **TTP Writes** and forwards them to the appropriate **TTP Client** connection to be serviced.

Version: 3.0.16.304
Released: March 16, 2014

Resolved Issues

The LastValidResponse property for each server connection was using the latest time-stamp from the OPC Server. The problem with this is that some OPC Servers specify the item time-stamps in **Universal Time Coordinated** (UTC) instead of local-time; this was causing false **Update Frequency** and **Unresponsive Server** alarms to be triggered. Valid responses now set the **LastValidResponse** property to the current **local-time**.

Version: 3.0.15.226
Released: February 26, 2014

Changes & Improvements

The Installation ID feature no longer prompts the user to obtain and Installation ID from **sales@scadatec.com** when the Installation ID is blank.

Resolved Issues

- **A one-minute polling stall was occurring** when the connection to an unresponsive server was cycled (disconnected and reconnected). The problem was due to the **DisconnectClient** procedure acquiring but not releasing the **ServerList.CriticalSection**.

- **The Performance Log had output-formatting limitations** which caused some of the logged values to be crammed together without any delimiting spaces. This was causing **graphing-anomalies** in the **Performance Log Graph** window because the poorly-delimited values were causing certain fields (such as the Windows Memory Usage) to be interpreted as zero.

Version: 3.0.14.1001
Released: October 1, 2013

Changes & Improvements

Discrete Sustain : This feature allows the system designer to specify a list of discrete tags which will are known to pulse **ON/OFF** too quickly to be detected by other software (such as ScadaPhone). Entries in the **Discrete Sustain Tags** list can be configured to hold their value at either the **OFF** or **ON** state for a minimum amout of time to ensure that short pulses are sustained long enough for any client connected to OPCHub to be able to read the pulsed value.

Resolved Issues

Both the Run Log Graph and the Performance Log Graph windows were susceptible to errors caused by importing projects from advanced time-zones. The problem was due to the assumption that the current day's data should be shown at index zero in both list-oriented graphs. If an exported project contained date-stamps from *tomorrow* (due to the time-zone difference), tomorrow's data was being directed to index -1 (instead of index zero); these log-graphing windows now scan through the log data to use the highest date logged as the zero index.

Version: 3.0.13.808
Released: August 8, 2013

New Features & Additions

Discrete Sustain : This feature allows the system designer to specify a list of discrete tags which will are known to pulse **ON/OFF** too quickly to be detected by other software (such as ScadaPhone). Entries in the **Discrete Sustain Tags** list can be configured to hold their value at either the **OFF** or **ON** state for a minimum amout of time to ensure that short pulses are sustained long enough for any client connected to OPCHub to be able to read the pulsed value.

Changes & Improvements

- New **/NoLog** command-line parameter has been added. This has been defined for the purpose of importing and examining projects without adding additional (extraneous) information to any of the logs; this is intended for use in troubleshooting only.

The Polling Response Log has been improved. There are new columns which show the following information:

- **Last Read: Local time-stamp** of the last successful **READ** of each **Tag Value** from the server.
- **Time Stamp: Data-point time-stamp** from the server; this can be given in **GMT** (Greenwich Mean Time) or local time depending upon what type of server is being polled.

Resolved Issues

The Colored Log I/O Error window was being displayed when **any** attempt to save log data to disk was denied for **any** reason. This was too sensitive due to the fact that write-access to**.CLog** files can be *temporarily*

denied if some other program (such as a back-up or virus-scanning application) is reading the file at the same moment OPCHub attempts to write to that file. The I/O Error window is now delayed until **3 consecutive attempts** to write a**.CLog** file to disk have failed.

Version: 3.0.12.725
Released: July 27, 2013

Changes & Improvements

- **The Polling List has been optimized.** Previous versions held all of the polling information in **one list** and each **Polling Thread** had to compete for access to this list by acquiring and releasing the **Polling List Critical Section**. The **Polling List** is now broken down into **separate lists for each server;** this eliminates the bottleneck caused by multiple servers competing for access to one critical section.

- **Server Name changes now propagated to tag lists.** When a **Server Name** is changed in the **Configure Servers** window, all of the tags which were defined under the **Old Server Name** are now moved to the **New Server Name**. In older versions, the tags were discarded.

Version: 3.0.11.627
Released: June 27, 2013

New Features & Additions

Added CheckPointTracker external "Watchdog" (helper application). OPCHub now has an option to launch an external watchdog application named **OPCHubCheckPointTracker.exe** which monitors OPCHub's execution and will forcibly restart OPCHub if needed (due to OPCHub malfunction or lock-up)

Version: 3.0.10.625
Released: June 25, 2013

Changes & Improvements

- **The PollingThread has been divided into multiple threads.** In order to stop one unresponsive server from slowing down the polling of responsive servers, each server connection has it's own polling thread.
- **The OPC Tag Browser now runs from a separate execution thread.** This was changed so that OPCHub's operator interface will not be stalled during lengthy browse operations.
- **The following windows have been updated**; they now use common library code (standardized for use in other **ScadaTEC** products such as **ScadaPhone**).

    1. **Performance Log**
    2. **Performance Log Graph**
    3. **PollingResponseLog**
    4. **TTP Tag Browser**
    5. **OPC TagBrowser**

Version: 3.0.8.603
Released: June 3, 2013

New Features & Additions

New **Tag Value Change Log** feature. System administrators can now select a set of tags in OPCHub's tag database to be logged whenever their value changes. This is useful for troubleshooting.

Changes & Improvements

- **Scan-rate-limiting logic** has been added to **OPCHub's OPC-DA Server** ; this logic prevents ill-behaved OPC-DA Clients from bogging-down OPCHub's performance by requesting excessively fast scan rates.
- **TagDatabase tag-lookup function (GetItemIndex) has been optimized for better performance.** Older versions were using a **linear search** when looking up tag-database items by name; this could cause significant **CPU-processing delays** when clients (OPC or TTP) were requesting tag information upon connection to large OPCHub projects. The tag name look-up is now done with a **binary search** which is much faster.

Version: 3.0.7.409
Released: April 9, 2013

New Features & Additions

- New **TTPClient BackupLink Expedite Override** option : Normally, the **TTPClient BackupLink** will only become active after the **TTPClient** connection becomes unresponsive. This can take up to **20-30 seconds** depending upon the network time-out settings; the **Expedite** option allows the system designer to force the **BackupLink fail-over** to happen much more quickly on systems where quick performance is important. The downside to using this option (especially if the **Expedite time-out** is set very low) is that the **BackupLink** may oscillate off-and-on unnecessarily.

- New **Delayed Update Frequency Alarm** option : If this option is enabled, **UFAs** are delayed until **UFAThreshold** seconds have elapsed since **RunModeStart**; otherwise, the **UFA** goes **TRUE** as soon as **AllTagsPolled** and the elapsed time from the **LastValidResponse** exceeds the **UFAThreshold.** The **LastValidResponse** times are saved from the previous run, so they can all be expired upon start-up; if the SCADA Server is not fully initialized, but is responding to polling, the **AllTagsPolled** could go **TRUE** in a matter of seconds after start-up. By delaying these alarms until one or two minutes after start-up, annoying (and often false) Update Frequency Alarms at OPCHub start-up and be avoided.

Changes & Improvements

- The **ClientSocketRecycler** feature has been removed. This was mechanism added in an attempt to prevent a **TCP Port** allocation problem in the **TTP Client** (it was ineffective).

- The **Update Frequency, Read Frequency** and **Unresponsive Server** thresholds can now be set to values below one minute. This is now supported via the additional "**Seconds**" scroll bar on the **Set Threshold** window.

- **AutoAdd Tags** feature now accepts tag names without requiring the **\\HostName\ProgID** prefix. Tags submitted to **AutoAdd** which lack this prefix are now added to the **SelectedServerPath** (i.e. the Server Path of the active tab on the Main Window).

Resolved Issues

- **Some of the TTPClient Communications Logging features were not thread-safe.** This created the potential for sporadic error messages to be reported when using **TTP Client** connections.

- **Various windows** were being displayed incorrectly (at **DesktopCenter**) on **multi-monitor systems**. This does not work as intended on **multi-monitor systems:** the windows are centered on the space between the monitors; the default position for several windows has been changed from **DesktopCenter** to **ScreenCenter**.

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