



DELTA V™

DeltaV Continuous Historian

Frequently Asked Questions

Data Analysis

Integrated Configuration

Scalable

Flexible Architecture

Contents

1. Introduction

- 1.1. What is the DeltaV Continuous Historian? 5
- 1.2. What features are available in the DeltaV Continuous Historian? 5
- 1.3. When was the DeltaV Continuous Historian released? 5

2. Architecture

- 2.1. What database technology is used with the DeltaV Continuous Historian? 5
- 2.2. Why not use a relational database, like the DeltaV Batch Historian? 5
- 2.3. Who built the DeltaV Continuous Historian? 5
- 2.4. Can the DeltaV Continuous Historian be used outside the DeltaV system? 5
- 2.5. What is the maximum size of the DeltaV Continuous Historian database? 5
- 2.6. How do I configure the size of the DeltaV Continuous Historian database? 6
- 2.7. What happens when the DeltaV Continuous Historian database is full? 6
- 2.8. What are historical data sets? 6
- 2.9. Is the exported DeltaV Continuous Historian data available for later use? 6
- 2.10. Where does the data in the DeltaV Continuous Historian get its timestamp? 6
- 2.11. Can I use the DeltaV Continuous Historian in a validated system? 6

3. Installation

- 3.1. Which DeltaV workstations support the DeltaV Continuous Historian? 7
- 3.2. What is the tag limit of the DeltaV Continuous Historian? 7
- 3.3. What is the performance of the DeltaV Continuous Historian? 7
- 3.4. How do I install the DeltaV Continuous Historian? 7
- 3.5. Does status collection count against DeltaV Continuous Historian license? 7
- 3.6. Is the parameter status available for use in the DeltaV system? 7
- 3.7. How do I configure data collection in the DeltaV Continuous Historian? 7
- 3.8. Does the DeltaV Continuous Historian use data compression? 7
- 3.9. Does the DeltaV Continuous Historian have bulk edit capability? 7
- 3.10. Is Process History View affected by the upgrade to the DeltaV Continuous Historian from the Legacy Historian? 7
- 3.11. Are configuration changes made to the DeltaV Continuous Historian captured in VCAT? 7
- 3.12. Will the DeltaV advanced control applications have access to historical data in the DeltaV Continuous Historian? 8
- 3.13. I need to estimate the amount of disk space required to store one year's worth of DeltaV Continuous Historian data. Is there a tool available to help? 8
- 3.14. What are the DeltaV Continuous Historian scale up license sizes? 8
- 3.15. Does use of the embedded trends in DeltaV Operate require a separate license? 8

4. Configuration and Operation	8
4.1. Can I view historian data in a spreadsheet?	8
4.2. Can I input non-DeltaV data into the DeltaV Continuous Historian?	8
4.3. Are there limitations on the non-DeltaV data I can add to the DeltaV Continuous Historian?	8
4.4. Can I delete non-DeltaV parameters in the DeltaV Continuous Historian?	8
4.5. Can I rename non-DeltaV parameters in the DeltaV Continuous Historian?	9
4.6. Can I edit data that has been collected in the DeltaV Continuous Historian?	9
4.7. Is it possible to add historical data trends to my operator displays?	9
4.8. Can I edit the embedded trend configuration in run-time?	9
4.9. Is a license required for the DeltaV Reporter?	9
4.10. How many copies of DeltaV Reporter can I use in my DeltaV system?	9
4.11. Can the DeltaV Reporter run on a non-DeltaV workstation?	9
4.12. What are the requirements to run DeltaV Reporter on a non-DeltaV workstation?	9
4.13. What data retrieval functions does the DeltaV Reporter support?	9
4.14. What data aggregates are supported by the DeltaV Reporter?	9
4.15. Does the DeltaV Reporter allow addition of manually collected, post-dated data?	10
4.16. I want to add manually collected data to the DeltaV Continuous Historian. Do these parameters have to exist in the DeltaV Continuous Historian to use the historical data entry feature?	10
4.17. Are there additional tag naming rules for adding my own historical data to the DeltaV Continuous Historian?	10
4.18. Can I control access to the historical data entry feature in DeltaV Continuous Historian?	10
4.19. Is the historical data entry feature available on a non-DeltaV workstation?	10
4.20. Are the historical data entry parameter tag name additions/deletions/modifications captured by VCAT?	10
4.21. Is DeltaV Reporter installed with the DeltaV system?	10
4.22. What version of Microsoft Excel is required for DeltaV Reporter?	10
4.23. Is the DeltaV Reporter different from XLReporter from SyTech?	11
4.24. Can I schedule reports for automatic generation using DeltaV Reporter?	11
4.25. Can DeltaV Reporter access other historical data?	11
4.26. What do I use to manage the historian data sets, backups, exports, etc?	11
4.27. Can the DeltaV Continuous Historian Administration utility manage multiple DeltaV Continuous Historians?	11
4.28. Can I backup and restore my DeltaV Continuous Historian data?	11
4.29. Does the DeltaV Continuous Historian Administration utility allow creation of Extended Data Sets from other DeltaV Continuous Historians?	11

4.30. Can I automatically schedule backups of my DeltaV Continuous Historian data?	11
4.31. I want to use my own automated utility to back up my DeltaV Continuous Historian data. Can I do this?	11
4.32. How do I access the historical data in the DeltaV Continuous Historian for use in third party client applications?	11
4.33. Which DeltaV workstations support the OPC History Server?	12
4.34. Does the OPC History Server require a license?	12
4.35. How much data is available through the OPC History Server?	12
4.36. What type of information is available through the OPC History Server?	12
4.37. What version of the OPC Historical Data Access specification is supported?	12
4.38. What are Web services and XML?	12
4.39. Are there differences in features between the OPC History Server and the DeltaV History Web Service?	12
4.40. Should I use the OPC History Server or the DeltaV History Web Service to access data from the DeltaV Continuous Historian?	12
4.41. Does the DeltaV Continuous Historian support ODBC?	12
4.42. Can the DeltaV Continuous Historian accept data from other real-time data sources such as a third party control system?	13
4.43. How much information can I obtain from the OPC History Server for each parameter collected in the DeltaV Continuous Historian?	13
5. Migration	13
5.1. What are the supported migration paths for the DeltaV Historians?	13
5.2. Will I have to add new licenses to use the DeltaV Continuous Historian after I upgrade to the latest DeltaV release?	13
5.3. I have upgraded to the latest DeltaV release and also upgraded the legacy historian to the DeltaV Continuous Historian. Can I scale up the DeltaV Continuous Historian?	13
5.4. Are there differences in the license costs between the legacy historian and the DeltaV Continuous Historian?	13
5.5. I have a 1,000 tag scale up license on the legacy historian and I want to upgrade to the DeltaV Continuous Historian. Do I get to use the 1,000 tag scale up license with the DeltaV Continuous Historian?	13

1. Introduction

1.1. What is the DeltaV Continuous Historian?

The DeltaV Continuous Historian is one of several Emerson's historian offerings for a process data historian in the DeltaV system. The others are the Advanced DeltaV Continuous Historian and the enterprise historian. The DeltaV Continuous Historian is built, sold, and supported by Emerson. It is Emerson's base-level historian product and meets the needs of most users looking for basic historian functionality.

1.2. What features are available in the DeltaV Continuous Historian?

The DeltaV Continuous Historian provides all the historian features required by the DeltaV system: collects data from a single DeltaV system, configured with DeltaV engineering tools, and integrated with DeltaV client applications. In addition, the DeltaV Continuous Historian collects status along with the value for each parameter and displays this status in the operator trend displays, provides a complete set of data aggregate functions, enables post-dated, historical data entry, supports embedded trend displays in the operator displays, provides easy configuration of the historian database size and individual historian data set sizes, includes an Administration utility for managing the historian database and individual data sets, and includes a Microsoft Excel-based reporting and analysis tool (DeltaV Reporter).

1.6. When was the DeltaV Continuous Historian released?

The DeltaV Continuous Historian was released in DeltaV v7.4 and available in the DeltaV v7.4 and later releases.

2. Architecture

2.1. What database technology is used with the DeltaV Continuous Historian?

The DeltaV Continuous Historian uses Objectivity as the database engine. Objectivity is a high performance and robust Object-Oriented Database Management System. Objectivity is same database technology used for the DeltaV configuration database. Emerson owns the source code for Objectivity and is at liberty to make extensions to the database as required to suit the needs of the DeltaV system.

2.2. Why not use a relational database, like the DeltaV Batch Historian?

A relational database stores data in the form of tables which have rows and columns to show the relationships between items, from which data can be accessed or reassembled in many different ways without having to reorganize the database. Relational databases are great for some things, like the DeltaV Batch Historian, where the data is more transactional and different elements of the batch execution cycle can be captured and stored in their own tables, but are related by a few common elements like Batch ID. However, due to the complex structure of a relational database, data access can be too slow for certain types of data. Data access from a process historian must be as fast as possible, and a relational database imposes additional overhead and inefficiencies that are not acceptable with the real-time nature of process data. Process historian data is generated in a time-series fashion, where a flat file database structure is more efficient for data storage and retrieval.

2.3. Who built the DeltaV Continuous Historian?

The DeltaV Continuous Historian was completely built by Emerson, with the database engine built by the DeltaV database development group in Leicester, England, and the interfaces between the DeltaV Continuous Historian database engine and the DeltaV system built by the DeltaV system development group in Austin.

2.4. Can the DeltaV Continuous Historian be used outside the DeltaV system?

No. The DeltaV Continuous Historian was designed to be used as an embedded process historian. The DeltaV Continuous Historian is installed on every DeltaV workstation as part of the DeltaV system software installation.

2.5. What is the maximum size of the DeltaV Continuous Historian database?

The DeltaV Continuous Historian database may be configured contain up to 10 GB or 9999 days' worth of data (whichever comes first). Each individual historical data set may be configured up to 600 MB or one month's worth of data (whichever comes first). Note the size of an Extended Data Set does not count against the total DeltaV Continuous Historian database size.

2.6. How do I configure the size of the DeltaV Continuous Historian database?

The DeltaV Continuous Historian Properties dialog (available in DeltaV Explorer) has an advanced tab that is used to configure the historian database size, historian data set size, and historian data set export behavior. The historian database and historian data sets may be configured by size or time. For example, the historian database may be configured to hold one gigabyte (1 GB) of data and each historian data sets may be configured to hold 100 megabytes (MB) data or the historian database may be configured to hold 365 days of data and each historian data set may be configured to hold 7 days of data. The historian database and historian data sets are sized independently of each other so that the historian database may be configured based on size and the historian data sets may be configured based on time or vice versa.

2.7. What happens when the DeltaV Continuous Historian database is full?

The DeltaV Continuous Historian is configurable to either overwrite oldest Current Data Set if the database is full or to automatically export the oldest Current Data Set to a safe storage location. The export behavior is configured in the DeltaV Continuous Historian Properties dialog. When the historian database is full, the DeltaV Continuous Historian will discard the oldest Current Data Set and create a new Active Data Set if the export option is not selected or it will export the oldest Current Data Set to the configured storage location if the export option is chosen. The default behavior is to discard the oldest Current Data Set.

2.8. What are historical data sets?

Historical data sets are the files that are created when a DeltaV Continuous Historian is configured and enabled. The historical data sets contain a collection of historical data values for the parameters that have been configured for historical data collection on the DeltaV workstation. The historical data sets are similar in concept to the archive data files contained in the legacy historian. The historical data sets are configured to be size or time based. Each DeltaV Continuous Historian contains one Active Data Set which is the historical data set that is currently collecting data. When an Active Data Set is full, the Active Data Set becomes a Current Data Set and a new Active Data Set is created. The DeltaV Continuous Historian database is comprised of one Active and any number of Current Data Sets, up to the maximum size or time duration of the historian database. For example, if a DeltaV Continuous Historian is configured with a historian database of one GB and historian data sets of 100 MB, then the DeltaV Continuous Historian will contain one Active Data Set and up to nine Current Data Sets. The historical data in the Active and Current Data Sets are available to the DeltaV historian client applications. The DeltaV Continuous Historian may also contain Extended Data Sets, which are discussed below.

2.9. Is the exported DeltaV Continuous Historian data available for later use?

Yes. When the Current Data Set is exported, it is removed from the DeltaV Continuous Historian database and converted to a compressed, off-line data format. When the data is in the exported data format, it is not available to the DeltaV historian view clients (for example, Process History View). To make this data available to the DeltaV historian client applications, use the DeltaV Continuous Historian Administration utility to import the data set and create an Extended Data Set. The data in an Extended Data Set is available to the DeltaV historian client applications, but the Extended Data Set does not count against the historian database size or time duration limits. Any number of Extended Data Sets may be created in the DeltaV Continuous Historian database. The Extended Data Sets will remain in the DeltaV Continuous Historian database until they are manually removed (using the Administration utility).

2.10. Where does the data in the DeltaV Continuous Historian get its timestamp?

The timestamp is applied by the DeltaV Continuous Historian when the data is written to the database.

2.11. Can I use the DeltaV Continuous Historian in a validated system?

Yes. The DeltaV Continuous Historian was developed and tested by Emerson using the same methods and procedures in place for the entire DeltaV system. The validation requirements placed on the DeltaV system may be applied to the DeltaV Continuous Historian. In addition, there are no mechanisms available for altering the data once it is collected in the DeltaV Continuous Historian. The only manipulation of the DeltaV Continuous Historian is through the configuration interface. The DeltaV Version Control and Audit Trail feature captures all configuration changes made to the DeltaV Continuous Historian, ensuring that any change made to historical data collection is recorded.

3. Installation

3.1. Which DeltaV workstations support the DeltaV Continuous Historian?

The DeltaV Continuous Historian is automatically installed on all DeltaV workstation types.

3.2. What is the tag limit of the DeltaV Continuous Historian?

A 250 tag DeltaV Continuous Historian is included on each DeltaV workstation. The 250 tag DeltaV Continuous Historian on the Application Station may be licensed for up to 30,000 additional tags for a maximum of 30,250 per Application Station.

3.3. What is the performance of the DeltaV Continuous Historian?

The recommended scan rate is 3,000 tags per second, maximum. So if a historian has 30,000 tags the average scan rate configured for the tags should be 10 seconds. The tags/items scanned per second value is visible in DeltaV Diagnostics under the Continuous Historian subsystem.

3.4. How do I install the DeltaV Continuous Historian?

The DeltaV Continuous Historian is installed automatically with the DeltaV system software.

3.5. Does status collection count against DeltaV Continuous Historian license?

No. Status is automatically collected with the parameter value and does not count against the historian license.

3.6. Is the parameter status available for use in the DeltaV system?

Yes. The parameter status is available for use in the DeltaV Reporter, Process History View, and the DeltaV advanced control applications Predict, Predict Pro, and Neural. In DeltaV Reporter, you have the ability to add parameter values, time stamps, and status to the spreadsheet. In Process History View, you have the ability to change the pen color based on the parameter status for both historical and real-time data as well as view the status in the Legend. In the advanced control applications, the parameter status is automatically displayed in the data model to highlight areas that have non-good status, enabling you to include or exclude the non-good areas from the model.

3.7. How do I configure data collection in the DeltaV Continuous Historian?

DeltaV Continuous Historian configuration may be done in DeltaV Explorer or Control Studio. History collection is configured at the Control Module level and assigned at the Area level.

3.8. Does the DeltaV Continuous Historian use data compression?

Yes. The DeltaV Continuous Historian uses a sloping boxcar compression algorithm and a horizontal boxcar compression algorithm based on the type of display representation chosen during history collection configuration. The sloping boxcar algorithm is used if the history tag collection is configured for Line Display Representation. The horizontal boxcar algorithm is used if the history tag collection is configured for Step Display Representation. Line Display Representation is typically chosen for numerical data that is constantly changing, such as a process variable. Step Display Representation is typically chosen for numerical data that has infrequent step changes, such as a set point. If the Display Representation is set to Automatic, the DeltaV Continuous Historian uses the data type to determine which data compression algorithm to use – Line Display for floating point, Step Display for signed and unsigned integers. String and enumerated data use an identical value match compression. For these data types, the user configured Data Compression Deviation numeric value is not used. Data compression settings are accessible on the Advanced Tab in the Modify History Collection dialog.

3.9. Does the DeltaV Continuous Historian have bulk edit capability?

Yes. Bulk editing of historical data collection configuration information is available.

3.10. Is Process History View affected by the upgrade to the DeltaV Continuous Historian from the Legacy Historian?

No. Operation of Process History View is identical with the DeltaV Continuous Historian. The configuration, viewing, and navigation of the trend displays are the same. If you are upgrading to the DeltaV Continuous Historian, all saved trend display files will connect to the DeltaV Continuous Historian and display data just as they did before the upgrade with no user interaction required.

3.11. Are configuration changes made to the DeltaV Continuous Historian captured in VCAT?

Yes. The DeltaV Version Control and Audit Trail (VCAT) feature captures all configuration changes made to the DeltaV Continuous Historian. There is no change in the behavior of VCAT associated with the DeltaV Continuous Historian.

3.12. Will the DeltaV advanced control applications have access to historical data in the DeltaV Continuous Historian?

Yes. The DeltaV advanced control applications that make use of historical data (Predict, Predict Pro, and Neural) are capable of accessing historical data from any of DeltaV's historian options. However, the specific advantage to using the DeltaV Continuous Historian is that the advanced control applications can also make use of the parameter status stored with the historical data by providing detection and removal of the data with unwanted status as discussed above.

3.13. I need to estimate the amount of disk space required to store one year's worth of DeltaV Continuous Historian data. Is there a tool available to help?

There is not a specific tool available for this calculation. However, as a rule of thumb, you may estimate that each sample stored in the DeltaV Continuous Historian database requires 12 bytes of disk space in the worst case scenario (all data values and status changing each scan). You may use this figure in conjunction with your historian configuration information to determine the total disk space required. Note that if data compression is turned on, it becomes more difficult to determine when samples are recorded in the database. The collection rate of compressed data depends on the compression deviation and the variability of the measured process.

3.14. What are the DeltaV Continuous Historian scale up license sizes?

Each DeltaV workstation includes a 250 tag DeltaV Continuous Historian. Additional scale up licenses may be added to the DeltaV Continuous Historian on the Application Station in increments of 1,000, 5,000, and 10,000 tags, up to a maximum of 30,250 tags per Application Station.

3.15. Does use of the embedded trends in DeltaV Operate require a separate license?

No. Use of the embedded trend control in DeltaV Operate is included in the DeltaV Operate license.

4. Configuration and Operation

4.1. Can I view historian data in a spreadsheet?

Yes, an Excel Add-in called DeltaV Reporter allows data from the DeltaV Continuous Historian to be read into the Excel spreadsheet for further analysis and/or the creation of reports. DeltaV Reporter is also the interface to add post-dated, manually collected data into the DeltaV Continuous Historian. With DeltaV Reporter, you can create and publish reports, automatically update them, perform complex database queries, analyze your plant processes, and add manually collected historical data. DeltaV Reporter gives you instant access to all of the historical data stored in the DeltaV Continuous Historian with the full power and flexibility of Excel to manipulate the data as required.

4.2. Can I input non-DeltaV data into the DeltaV Continuous Historian?

Yes. Historical data that is not collected by the DeltaV runtime can be added into the DeltaV Continuous Historian in two ways. First, the data may be entered manually using a historical data entry feature in DeltaV Reporter. Second, in DeltaV v12.3 and later, there is an interface that allows historical data to be written programmatically using a .NET client. The ability to add non-DeltaV historical data to the DeltaV Continuous Historian is enabled in the DeltaV Continuous Historian Properties dialog on an individual DeltaV Continuous Historian basis.

4.3. Are there limitations on the non-DeltaV data I can add to the DeltaV Continuous Historian?

Yes. The time stamps for the non-DeltaV data must exist in the time range covered by the DeltaV Continuous Historian Active or Current data sets. The parameter path syntax for the non-DeltaV data can be any string of 160 characters (subject to a few character limitations) and must include the field extension ".HDE", for example TAG1.HDE or MODULE1/BLOCK1/TAG1.HDE. The DeltaV Continuous Historian is limited to 2000 historical data entry parameters, but there can be any number of samples added to each of the 2000 parameters (subject to any size limitations of the applicable data set).

4.4. Can I delete non-DeltaV parameters in the DeltaV Continuous Historian?

No, but they can be disabled from counting against the 2000 parameter limit. If an ".HDE" parameter is no longer desired, create a new Active data set without writing to this parameter. Another option is to delete all sample data associated with this parameter in the Active set. Doing either of these two things will prevent the parameter from counting against the 2000 limit.

4.5. Can I rename non-DeltaV parameters in the DeltaV Continuous Historian?

No. Once “.HDE” parameters are created they cannot be renamed. This is desired behavior to ensure data integrity and reliability for environments that have stringent requirements on protecting data. If an “.HDE” parameter needs to be renamed, create a new Active data set with the new parameter name. Next, retrieve all the data from the Active and Current data sets of the parameter with the old name to DeltaV Reporter. In DeltaV Reporter, copy the data from the parameter with the old name to the parameter with the new name and execute a write.

4.6. Can I edit data that has been collected in the DeltaV Continuous Historian?

No. Once data is entered, it cannot be changed. This is desired behavior to ensure data integrity and reliability for environments that have stringent requirements on protecting data.

4.7. Is it possible to add historical data trends to my operator displays?

Yes. DeltaV Operate includes a historical trend object that can be embedded into any operator display. The embedded trend has access to any DeltaV Continuous Historian in the system. The embedded trend uses the same trend control as the trend display (Chart, E+Chart) in Process History View, so configuration of the embedded trend is very similar to configuration of the trend display in Process History View. The embedded trend is limited to 8 pens per trend and it is recommended to have no more than 20 embedded trends per operator display. Note that adding more pens, configuring long time spans, and/or adding many embedded trends increase the amount of historical data required which could affect operator display call up times.

4.8. Can I edit the embedded trend configuration in run-time?

No. The embedded trend is only configurable in the DeltaV Operate configuration environment. In the run-time environment, you can scroll forward/backward, zoom in/out, increase/decrease time span, and launch Process History View in context to the embedded trend. All other embedded trend modification must be done in the DeltaV Operate configuration environment.

4.9. Is a license required for the DeltaV Reporter?

No. The DeltaV Reporter is provided free of charge with the DeltaV Continuous Historian on each DeltaV workstation. Note the DeltaV Reporter requires that Microsoft Excel is installed on the DeltaV workstation.

4.10. How many copies of DeltaV Reporter can I use in my DeltaV system?

There is no limit to the number of instances of DeltaV Reporter that can be used in the DeltaV system. The only limitation is the number of copies of Microsoft Excel available in the DeltaV system.

4.11. Can the DeltaV Reporter run on a non-DeltaV workstation?

Yes. The DeltaV Reporter is capable of operation on a DeltaV or non-DeltaV workstation. If you use the DeltaV Reporter on a non-DeltaV workstation you must have the proper DeltaV security credentials. See the DeltaV Reporter help in DeltaV Books On-Line for more details.

4.12. What are the requirements to run DeltaV Reporter on a non-DeltaV workstation?

In order to run the DeltaV Reporter on a non-DeltaV workstation, the non-DeltaV workstation should meet the minimum hardware and software requirements of a DeltaV workstation. The DeltaV workstation requirements can be found in the DeltaV System Planning Guide.

4.13. What data retrieval functions does the DeltaV Reporter support?

The DeltaV Reporter supports the following data retrieval commands: read single data value, read raw data, read interpolated data, and read aggregate (calculated) data.

4.14. What data aggregates are supported by the DeltaV Reporter?

The DeltaV Reporter supports minimum / maximum timestamp, minimum / maximum value, minimum / maximum parameter status, minimum / maximum collection status, time-weighted average, average, total range, standard deviation, count, percent history available, percent status good / not limited / not bad, composite parameter / collection status.

4.15. Does the DeltaV Reporter allow addition of manually collected, post-dated data?

Yes. Manually collected, post-dated data values and status can be added to the DeltaV Continuous Historian using the DeltaV Reporter historical data entry feature. The historical data must include a parameter name, a time stamp, and a value. A parameter status value (0 – 255) and a data validity bit (True or False) can be added with the data, but are optional. Up to 2,000 individual historical data entry parameters can be added to the DeltaV Continuous Historian using the write historical data interface.

4.16. I want to add manually collected data to the DeltaV Continuous Historian. Do these parameters have to exist in the DeltaV Continuous Historian to use the historical data entry feature?

No. DeltaV Reporter and the programmatic write interface allow the user to create their own parameter tag names in the interface, independently of any existing parameters in the DeltaV Continuous Historian. The parameters entered for the manually collected data must include the extension .HDE to distinguish them from parameters collected automatically by the DeltaV Continuous Historian.

4.17. Are there additional tag naming rules for adding my own historical data to the DeltaV Continuous Historian?

Yes. The rules for the historical data entry parameter tag names are: each name must have at most 160 UNICODE characters, all characters must be alphanumeric, at least one character must be alphabetic, alphabetic characters are upper case. The following special characters may also be used: \$, -, /, [,], and _.

4.18. Can I control access to the historical data entry feature in DeltaV Continuous Historian?

Yes. There are two ways to limit access to the historical data entry feature. Each DeltaV Continuous Historian must be enabled to accept manually collected historical data from the DeltaV Continuous Historian Properties dialog in DeltaV Explorer. The status of the enable checkbox is tracked in VCAT, so you will know when and if this feature was enabled. In addition, the historical data entry feature requires the user have the DeltaV Restricted Control security key.

4.19. Is the historical data entry feature available on a non-DeltaV workstation?

Yes. The programmatic write interface may use a client that is installed on a non-DeltaV workstation. For DeltaV Reporter, the historical data entry feature is only available on a DeltaV workstation. However, the historical data entry feature on one DeltaV workstation can access the DeltaV Continuous Historian on another DeltaV workstation within the same system.

4.20. Are the historical data entry parameter tag name additions/deletions/modifications captured by VCAT?

No. Since the addition of historical data entry parameter tags are added through the DeltaV Reporter or through the programmatic write interface, they are not captured in VCAT. Typically, only the items configured in the DeltaV configuration environment are captured in VCAT.

4.21. Is DeltaV Reporter installed with the DeltaV system?

No. The DeltaV Reporter is not installed with the DeltaV system software as it requires Microsoft Excel which may or may not be present. The setup file for the DeltaV Reporter is located in the DV_Extras\DeltaVReporter directory on the DeltaV media or in the DeltaV | bin directory on a DeltaV workstation. To install DeltaV Reporter, click on the setup file (setup.exe) and follow the prompts. When the installation is complete, you will see a new Excel file menu selection called DeltaV (just to the left of the Help menu selection) which contains the DeltaV Reporter helper dialogs used for building your data queries.

4.22. What version of Microsoft Excel is required for DeltaV Reporter?

The DeltaV Reporter requires the supported version of Microsoft Excel on the specific version of DeltaV. The supported version of Excel can be found in the DeltaV System Planning Guide.

4.23. Is the DeltaV Reporter different from XLReporter from SyTech?

Yes. However, there are similarities between the applications. Both applications provide a quick and easy way to get historical data from the DeltaV system into Excel for use in data analysis and reporting. With both applications the full functionality of Excel is available for you to create data summaries or reports. Both applications are approved for use with the DeltaV system, though XLReporter is only approved for use with the ProfessionalPlus or Application Station workstation types. The differences lie in the amount of effort required to create reports and the cost of each application. DeltaV Reporter is provided free of charge with the DeltaV Continuous Historian, but does not provide all the functionality of XLReporter. With DeltaV Reporter, you must create the analysis or report templates and manage the output using the tools provided by Excel. XLReporter requires the purchase of a license from SyTech, but it is a full featured reporting package. With XLReporter, all the tools necessary to design report templates, automatically manage and create worksheet reports, and publish the results are provided with the application.

4.24. Can I schedule reports for automatic generation using DeltaV Reporter?

Yes. DeltaV Reporter provides a report scheduling and automatic report generation feature.

4.25. Can DeltaV Reporter access other historical data?

Yes. DeltaV Reporter provides access to historical alarm and event data contained in the DeltaV Event Chronicle. DeltaV Reporter can access historical alarms and events in the same manner it can access continuous historical data.

4.26. What do I use to manage the historian data sets, backups, exports, etc?

The historian database is managed using a tool called the DeltaV Continuous Historian Administration utility. It consists of a graphical user interface that exposes the historical data sets resident in the DeltaV Continuous Historian database. The Administration utility may be used to manage the historical data sets and includes the following functions: backup, restore, export, archive, delete, create new Active Data Sets, and create Extended Data Sets. In addition, the Administration utility provides diagnostics information on the historical data sets and historian database and tools for monitoring the disk space usage.

4.27. Can the DeltaV Continuous Historian Administration utility manage multiple DeltaV Continuous Historians?

No. The DeltaV Continuous Historian Administration utility is installed on each DeltaV workstation and is designed to operate only with the local DeltaV Continuous Historian.

4.28. Can I backup and restore my DeltaV Continuous Historian data?

Yes. The DeltaV Continuous Historian Administration utility provides backup and restore functions for the Active and Current Data Sets in the DeltaV Continuous Historian database. The restore function may be used to restore any data sets that have been backed up. Note that the DeltaV Continuous Historian backup function does not back up Extended Data Sets that may exist in the database.

4.29. Does the DeltaV Continuous Historian Administration utility allow creation of Extended Data Sets from other DeltaV Continuous Historians?

Yes. The DeltaV Continuous Historian Administration utility allows the creation of Extended Data Sets from other DeltaV Continuous Historians. The DeltaV Continuous Historian does not allow data set time ranges to overlap, so the time range of an Extended Data Sets created from another DeltaV Continuous Historian must not overlap with the time range of an existing data set.

4.30. Can I automatically schedule backups of my DeltaV Continuous Historian data?

Yes. The DeltaV Continuous Historian includes an automated backup feature that allows the backup function to be automatically scheduled directly from the DeltaV Continuous Historian Administration utility.

4.31. I want to use my own automated utility to back up my DeltaV Continuous Historian data. Can I do this?

Yes. The DeltaV Continuous Historian automated backup feature has also been implemented as a command line argument, so any application that can interface with a command line argument can schedule DeltaV Continuous Historian backups.

4.32. How do I access the historical data in the DeltaV Continuous Historian for use in third party client applications?

The DeltaV system supports open interfaces, and the DeltaV Continuous Historian is no exception. The DeltaV OPC History Server (OPC History Server), based on the OPC Historical Data Access (HDA) standard, and the DeltaV History Web Service are available with the DeltaV Continuous Historian. OPC HDA is an industry standard, open interface for accessing historical data from a historian database. The OPC HDA standard is maintained by the OPC Foundation. The History Web Service provides a Web service interface to the DeltaV Continuous Historian which provides historical data in the industry standard XML format.

4.33. Which DeltaV workstations support the OPC History Server?

The OPC History Server is available on the Professional Plus and Application Station workstation types. When the DeltaV Continuous Historian is enabled, tags are configured for collection, and the historian is downloaded, the OPC History Server is activated.

4.34. Does the OPC History Server require a license?

The OPC History Server allows one concurrent OPC HDA client connection to be made without the need for a license. Additional concurrent OPC HDA client connections require the purchase of the OPC History Server license. The OPC History Server may be licensed for additional concurrent OPC HDA client connections on the Professional Plus and Application Station workstations. The OPC History Server license is VE2227. Refer to the Price Book for pricing information.

4.35. How much data is available through the OPC History Server?

The OPC History Server exposes all of the data available in the DeltaV Continuous Historian. This includes data that is currently being scanned by the historian and data that is no longer being scanned but still resides in the historian database.

4.36. What type of information is available through the OPC History Server?

The OPC History Server provides all of the interfaces and methods required by the OPC Historical Data Access specification. In addition, the OPC History Server provides the optional ReadProcessed method on the ReadRaw interface. With these features, the OPC History Server is able to provide read-only raw data for a range of time, processed data (interpolated and calculated data) for a range of time, and data at a given point in time. The OPC History Server will be enhanced to support additional optional interfaces and methods in future releases.

4.37. What version of the OPC Historical Data Access specification is supported?

The OPC History Server was developed using version 1.20 of the OPC Historical Data Access Custom Interface specification and version 1.0 of the OPC Historical Data Access Automation Interface specification.

4.38. What are Web services and XML?

In simplest terms, a Web service is any piece of software that makes information available to other applications over the Internet and uses a standardized XML messaging system. XML is the acronym for eXtensible Markup Language, the universal format for structured documents and data on the Internet. XML is an industry-standard protocol administered by the World Wide Web Consortium (W3C), which is similar to HTML, the language used to build Web pages.

4.39. Are there differences in features between the OPC History Server and the DeltaV History Web Service?

The OPC History Server and the DeltaV History Web Service use different interfaces to the data in the Continuous Historian, but each interface has the same basic features and can return the same data from DeltaV Continuous Historian.

4.40. Should I use the OPC History Server or the DeltaV History Web Service to access data from the DeltaV Continuous Historian?

The interface you use depends on how you want to get the data out of the historian and where the client application is located. The OPC History Server provides the simplest way to get data from the DeltaV Continuous Historian. The OPC History Server will interface with any third party OPC HDA client. There are many off-the-shelf OPC HDA clients available for viewing, trending, analyzing, and reporting historical data. All you need to do is purchase the third party OPC HDA client and connect it to the OPC History Server. One limitation of OPC is that it does not transport well over the Internet. The DeltaV History Web Service provides a more complicated interface, and there are fewer third party client applications available, which may require you to develop your own application that interfaces with the Web service. However, the DeltaV History Web Service provides a more flexible interface that allows clients to connect over the Internet.

4.41. Does the DeltaV Continuous Historian support ODBC?

The DeltaV Continuous Historian supports the OPC Historical Data Access standard for all external connectivity. If ODBC connectivity is required, an interface between ODBC and OPC HDA must be purchased. There are third party suppliers of OPC connectivity products that have developed OPC HDA to ODBC interfaces.

4.42. Can the DeltaV Continuous Historian accept data from other real-time data sources such as a third party control system?

Not directly, but there are other good options. First, you can bring the third party real-time data into a DeltaV Control Module through the DeltaV OPC Data Access Server and then add the data to the historian. Second, historical data may be added manually to the DeltaV Continuous Historian using the historical data entry feature in DeltaV Reporter or the programmatic write interface.

4.43. How much information can I obtain from the OPC History Server for each parameter collected in the DeltaV Continuous Historian?

The OPC History Server provides the timestamp, value, parameter status, and collection status for each parameter. In addition, the OPC History Server provides the following attributes: data type, stepped, itemID, maximum time interval, minimum time interval, exception deviation (result expressed in engineering units), module description, engineering units, engineering unit 100% (EU100), engineering unit 0% (EU0), currently on scan, time of last download, and DeltaV named set details. The module description, engineering units, currently on scan, time of last download, and DeltaV named set details represent the current value of the attribute as retrieved from the run-time system. The remaining attributes are stored in the DeltaV Continuous Historian.

5. Migration

5.1. What are the supported migration paths for the DeltaV Historians?

Refer to the DeltaV Continuous Historian Upgrade Planning Guide whitepaper for details on the migration paths between the current and previous DeltaV historian products: legacy historian, DeltaV Continuous Historian, Advanced Continuous Historian, and enterprise historian.

5.2. Will I have to add new licenses to use the DeltaV Continuous Historian after I upgrade to the latest DeltaV release?

No. The DeltaV Continuous Historian licenses that are present in your previous DeltaV system will automatically recognize the DeltaV Continuous Historian after upgrade.

5.3. I have upgraded to the latest DeltaV release and also upgraded the legacy historian to the DeltaV Continuous Historian. Can I scale up the DeltaV Continuous Historian?

Yes. The DeltaV Continuous Historian scale up licenses may be used to scale up the DeltaV Continuous Historian regardless of whether it is a new installation or an upgrade from the legacy historian.

5.4. Are there differences in the license costs between the legacy historian and the DeltaV Continuous Historian?

Yes. The costs for the scale up licenses on the DeltaV Continuous Historian are lower than the cost for the scale up licenses for the legacy historian. The costs for the scale up licenses for the legacy historian have increased to account for the commercial changes associated with the new legacy historian agreement as discussed in Section 1.

5.5. I have a 1,000 tag scale up license on the legacy historian and I want to upgrade to the DeltaV Continuous Historian. Do I get to use the 1,000 tag scale up license with the DeltaV Continuous Historian?

Yes. Any existing scale up licenses that were used with the legacy historian will apply to the DeltaV Continuous Historian after upgrade. This license assignment will be made automatically - you do not have to do anything to transfer the scale up licenses from the legacy historian to the DeltaV Continuous Historian.

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