



Canary Enterprise Historian Specification

shep - Enterprise Historian Administrator

File Logger Admin DSSync Admin Help

General | DataSets | Clients | Performance | Audit Trail | Details | UA Security

Canary Enterprise Historian (shep)

- TH Audit
- TH Performance
- LIFTSTATIONS
- CaseCount
- K1
- K1Env
- K2
- K2Env
- MoreData
- MyData
- PlantC
- Sample Data
 - Sample Data.index
 - Sample Data 20100630 08.hdb2
 - Sample Data 20100709 08.hdb2
 - \$SysBatchInfo
 - 1minRamp
 - 1minSine
 - Ramp
 - SineRamp
 - Tag0001
 - Tag0002
 - Description
 - Eng Units
 - Default High Scale
 - Default Low Scale
 - High Limit
 - Low Limit
 - Sample Interval

	TimeStamp	Value	Type	Quality
1	7/09/2010 08:24:47.500	-1.740287	R4	Good (0xC0)
2	7/09/2010 08:24:48.500	-1.094607	R4	Good (0xC0)
3	7/09/2010 08:24:49.500	-1.746391	R4	Good (0xC0)
4	7/09/2010 08:24:50.500	-1.325388	R4	Good (0xC0)
5	7/09/2010 08:24:51.500	-1.717399	R4	Good (0xC0)
6	7/09/2010 08:24:52.500	-2.534593	R4	Good (0xC0)
7	7/09/2010 08:24:53.500	-3.239967	R4	Good (0xC0)
8	7/09/2010 08:24:54.500	-2.262917	R4	Good (0xC0)
9	7/09/2010 08:24:55.500	-3.02475	R4	Good (0xC0)
10	7/09/2010 08:24:56.500	-4.006927	R4	Good (0xC0)
11	7/09/2010 08:24:57.500	-3.943602	R4	Good (0xC0)
12	7/09/2010 08:24:58.500	-3.740074	R4	Good (0xC0)
13	7/09/2010 08:24:59.500	-4.407605	R4	Good (0xC0)
14	7/09/2010 08:25:00.500	-4.506027	R4	Good (0xC0)
15	7/09/2010 08:25:01.500	-5.391949	R4	Good (0xC0)
16	7/09/2010 08:25:02.500	-4.825312	R4	Good (0xC0)
17	7/09/2010 08:25:03.500	-4.785546	R4	Good (0xC0)
18	7/09/2010 08:25:04.500	-4.033601	R4	Good (0xC0)
19	7/09/2010 08:25:05.500	-3.121799	R4	Good (0xC0)
20	7/09/2010 08:25:06.500	-3.043092	R4	Good (0xC0)
21	7/09/2010 08:25:07.500	-3.118931	R4	Good (0xC0)
22	7/09/2010 08:25:08.500	-2.394452	R4	Good (0xC0)
23	7/09/2010 08:25:09.500	-1.835139	R4	Good (0xC0)
24	7/09/2010 08:25:10.500	-0.8415478	R4	Good (0xC0)
25	7/09/2010 08:25:11.500	-0.618549	R4	Good (0xC0)
26	7/09/2010 08:25:12.500	-1.086123	R4	Good (0xC0)
27	7/09/2010 08:25:13.500	-0.405835	R4	Good (0xC0)

40 Object(s) Sample Data.Tag0002 7/09/2010 08:24:47.500

Historian: shep 00:12:32 DataSets: 29 Total Tags: 60,269 Version: 9.0.0.09070x64 License: Unlimited Tags

Application Deployment

- ✓ Logger Service
- ✓ Historian Service
- ✓ Logger Administrator
- ✓ Historian Administrator
- ✓ DataSet Synchronization
 - Bandwidth Configurable
 - File Zipping
- ✓ Quick & Easy Installation
- ✓ Software license
 - License Administrator
 - License by tag count

Communication

- ✓ Communicates through TCP
- ✓ Well defined security model using software certificates
 - Eliminates DCOM security hassles
 - Easier access through firewalls

Historian

- ✓ Stores & Retrieves Trend Data
- ✓ Timestamp (100ns Resolution)
- ✓ OPC UA (Unified Architecture) Server
- ✓ Dynamic tag properties

- ✓ Variants: Boolean, Integers, (I1,I2,I4), Floating point real numbers (R4,R8) and Strings (1 and 2 byte encoding)
- ✓ Data storage compression
- ✓ Multi-Threaded
- ✓ 32 bit version capacity 100,000 tags
- ✓ 64 bit version capacity 1 Million tags
- ✓ Historical Data Base (.hdb2) files
- ✓ User readable .hdb2 file naming (DataSet and creation time)
- ✓ File Management
 - Rollover: Time of day, File size, Time interval
 - RollUp: Daily, Weekly, Monthly, Quarterly
 - Move older files into Archive directory
 - Delete outdated data files
 - Hot-Swap (Automatically bring historical data from CD on-line)
- ✓ OPCHDA compliant
- ✓ Tag Indexing
- ✓ Background validation

Historian Administrator

- ✓ Administrator Email notification on problem
- ✓ Historian Status: Up time and Total Run time
- ✓ Disk Space Warning Thresholds
- ✓ Remote Historian Administration
- ✓ System Tray Icon
 - Status & Quick Launch
- ✓ Historian Status Overview Table
 - DataSets
 - Status & Number of Files
 - Viewer Client Activity
 - Logger Client Activity & Performance
 - Disk Space available
- ✓ Client Activity Table
 - Logger Clients
 - Viewer Clients
- ✓ Performance Monitoring Trend Chart:
 - % CPU, Tag Readers, Tags being Logged, Historical TVQs/sec, Live TVQs/sec & Updates/sec
- ✓ Audit Trail of Historian activity
- ✓ Background file validation
- ✓ Drill down and view data values
- ✓ Perform validation checks
 - Auto Recovery of available data
- ✓ License Status
- ✓ Version Information
- ✓ OnLine Helps
 - Contents, Index & Search
- ✓ Error Log Viewer
- ✓ Importing

Performance

Performance parameters are dependent on hardware platform, with 2-2.5Ghz quad core processors and 16GB of memory:

- ✓ Peak Logging: 3.8Million updates/sec
- ✓ Sustained Logging: 1Million updates/sec
- ✓ Retrieval rate: 12 clients, 13.0M TVQs/sec
- ✓ Historian Tag capacity: 1 Million
- ✓ Tag capacity per single Dataset: 10,000 recommended

Logger

- ✓ Acquires data from OPC Data Access standard
- ✓ Sends trend data to Historian (on local or remote computer)
- ✓ Handles multiple Log Sessions
- ✓ Handles multiple groups per Log session
- ✓ Store and Forward Technology

- Memory cache
- Disk cache (Local Historian)
- ✓ Logger Automation interface (scripting)
 - 33 methods
 - 48 properties
- ✓ Command Line Driven
- ✓ Auto start on system boot

Logger Administrator

- ✓ Access Logger services on either local or remote computer
- ✓ Administrator Email notification when problem occurs
- ✓ System Tray Icon
 - Current status
 - Quick Launch
- ✓ Logger Configuration File (.lcf) (stores a single Log Session)
- ✓ Create, Open, Save and Close Log Sessions
- ✓ Session Configuration
 - Historian computer
- ✓ Add / Remove Groups
- ✓ Group Configuration
 - Name
 - Update Rate
 - OPC-DA Server (browse and select)
 - OPC Deadband (percentage)
 - Normalization
 - Batch Dataset & Item ID
 - Trigger Item ID and Expression
- ✓ Browse OPC-DA Server
 - Tag Filtering
 - Attribute Branching
- ✓ Add / Remove Logging Tags
 - Cut, Copy / Paste from Tag Configuration
 - Find and Replace
- ✓ Tag Configuration
 - Name
 - Dynamic property syntax
 - Item ID
 - Access Path
 - Type
 - Description
 - Engineering Units
 - Log Rate
 - High / Low Scale
 - High / Low Limits
 - Deadband (absolute)
 - Data Transform
- ✓ Real-time display and update of current value, timestamp and quality



Exporting

- ✓ Export of data to CSV file through Trend Link
 - Export Object (usable from VB)
 - Command-line driven export
- ✓ Trend Export program available for stand alone exporting

Version Information

- ✓ Current version is 9.0.0
- ✓ New updated releases of the product have occurred at least once a year incorporating improvements and technology upgrades

Helps

- ✓ On-line helps
 - Contents
 - Index
 - Search facilities
- ✓ Context sensitive helps (F1 key)
- ✓ Dialog box helps
- ✓ Error Log Facilities
- ✓ Automation Interfaces Documentation

Operating Systems Requirements

- ✓ Windows XP, 2003 server or higher
- ✓ Dot Net Framework 3.5 SP1

Systems Recommendations

- ✓ 2 Ghz CPU or greater
- ✓ 2 GB memory
- ✓ UPS (highly recommended)

Logger Session

MyData (shep) - Canary Logger Administrator

File Edit Historian Admin Help

General MyData

Edit Stop Save Apply Cancel D:\History Data\MyData.lcf

Name: MyData Historian Computer: Create new file when logging starts

Ramp Random Sine Discrete

Group Name: Random Computer: Update Rate: 00:00:01.000 OPC Server: CanaryLabs.SimDataServer OPC Deadband: 0 Normalization Time: 00:00:00.000 Batch Data Set: Batch Item ID: Trigger Item ID: Trigger Expression:

500	Name	Item ID	Time	Value	Quality	Type	Description	Eng. Units	Log Rate	High Scale
1	MyData.Random.Tag0001	Random.Tag0001	7/12/2010 11:15:03.105 AM	-0.426465631	0xC0	R4	Random.Tag0001		00:00:01	100
2	MyData.Random.Tag0002	Random.Tag0002	7/12/2010 11:15:03.105 AM	-5.64177465	0xC0	R4	Random.Tag0002		00:00:01	100
3	MyData.Random.Tag0003	Random.Tag0003	7/12/2010 11:15:03.105 AM	-2.99423265	0xC0	R4	Random.Tag0003		00:00:01	100
4	MyData.Random.Tag0004	Random.Tag0004	7/12/2010 11:15:03.105 AM	-2.397168	0xC0	R4	Random.Tag0004		00:00:01	100
5	MyData.Random.Tag0005	Random.Tag0005	7/12/2010 11:15:03.105 AM	3.55742121	0xC0	R4	Random.Tag0005		00:00:01	100
6	MyData.Random.Tag0006	Random.Tag0006	7/12/2010 11:15:03.105 AM	-3.63774419	0xC0	R4	Random.Tag0006		00:00:01	100
7	MyData.Random.Tag0007	Random.Tag0007	7/12/2010 11:15:03.105 AM	0.230353832	0xC0	R4	Random.Tag0007		00:00:01	100
8	MyData.Random.Tag0008	Random.Tag0008	7/12/2010 11:15:03.105 AM	6.916349	0xC0	R4	Random.Tag0008		00:00:01	100
9	MyData.Random.Tag0009	Random.Tag0009	7/12/2010 11:15:03.105 AM	2.573504	0xC0	R4	Random.Tag0009		00:00:01	100
10	MyData.Random.Tag0010	Random.Tag0010	7/12/2010 11:15:03.105 AM	4.705406	0xC0	R4	Random.Tag0010		00:00:01	100
11	MyData.Random.Tag0011	Random.Tag0011	7/12/2010 11:15:03.105 AM	-1.74364436	0xC0	R4	Random.Tag0011		00:00:01	100
12	MyData.Random.Tag0012	Random.Tag0012	7/12/2010 11:15:03.105 AM	-6.00531	0xC0	R4	Random.Tag0012		00:00:01	100
13	MyData.Random.Tag0013	Random.Tag0013	7/12/2010 11:15:03.105 AM	6.90542269	0xC0	R4	Random.Tag0013		00:00:01	100
14	MyData.Random.Tag0014	Random.Tag0014	7/12/2010 11:15:03.105 AM	3.889769	0xC0	R4	Random.Tag0014		00:00:01	100
15	MyData.Random.Tag0015	Random.Tag0015	7/12/2010 11:15:03.105 AM	1.51493907	0xC0	R4	Random.Tag0015		00:00:01	100
16	MyData.Random.Tag0016	Random.Tag0016	7/12/2010 11:15:03.105 AM	-2.27137136	0xC0	R4	Random.Tag0016		00:00:01	100
17	MyData.Random.Tag0017	Random.Tag0017	7/12/2010 11:15:03.105 AM	-4.66213036	0xC0	R4	Random.Tag0017		00:00:01	100
18	MyData.Random.Tag0018	Random.Tag0018	7/12/2010 11:15:03.105 AM	9.194737	0xC0	R4	Random.Tag0018		00:00:01	100
19	MyData.Random.Tag0019	Random.Tag0019	7/12/2010 11:15:03.105 AM	-0.735068	0xC0	R4	Random.Tag0019		00:00:01	100
20	MyData.Random.Tag0020	Random.Tag0020	7/12/2010 11:15:03.105 AM	-2.9452796	0xC0	R4	Random.Tag0020		00:00:01	100
21	MyData.Random.Tag0021	Random.Tag0021	7/12/2010 11:15:03.105 AM	0.9230018	0xC0	R4	Random.Tag0021		00:00:01	100
22	MyData.Random.Tag0022	Random.Tag0022	7/12/2010 11:15:03.105 AM	-2.11737442	0xC0	R4	Random.Tag0022		00:00:01	100
23	MyData.Random.Tag0023	Random.Tag0023	7/12/2010 11:15:03.105 AM	-1.52989292	0xC0	R4	Random.Tag0023		00:00:01	100
24	MyData.Random.Tag0024	Random.Tag0024	7/12/2010 11:15:03.105 AM	-5.176244	0xC0	R4	Random.Tag0024		00:00:01	100
25	MyData.Random.Tag0025	Random.Tag0025	7/12/2010 11:15:03.105 AM	4.125552	0xC0	R4	Random.Tag0025		00:00:01	100

Logger: shep 2000 trends Session: 2000 trends Version: 9.0.0.09070