



CYGNET SCADA V8.5 RELEASE AND ROADMAP

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May 2017

CYGNET 8.5 ENHANCEMENTS

- Redundancy
- Replication
- EIE improvements
- Logging changes
- UIS Changes
- Generic Grid Control

REDUNDANCY

**IMPROVED
SYSTEM UPTIME**

**MANUAL FAILOVER
(WITH AUTOMATIC
FAILOVER IN 8.5.1)**

Productized redundancy

- Replaces script-based solutions
- Defined redundancy relationships

Tools to define and monitor redundancy

- Redundancy Relationship Editor
- Redundancy Dashboard
- RSM Diagnostic Tool

REPLICATION ENHANCEMENTS

IMPROVED REPLICATION SYNCHRONIZATION

ALLOWS FOR
BETTER REPORTING OF
REPLICATION STATUS

New Synchronization Configuration File Keywords

- Replication Check Interval
 - Interval (in seconds) to check before performing the next replication synchronization.
- Replication Max Delay
 - Time (in seconds) a service is allowed to be behind in replication before it is considered lagging.

REPLICATION ENHANCEMENTS

IMPROVED REPLICATION SYNCHRONIZATION

ALLOWS FOR
BETTER REPORTING OF
REPLICATION STATUS

New Info Items

- Change Queue GUID
- Replication Delay
- Max Replication Delay
- Replication Validation State
- Replication Source Change GUID
- Replication Status
- Replication Summary State

EQUIPMENT INTERFACE ENGINE (EIE) ENHANCEMENTS

ENHANCEMENTS AND MODIFICATIONS ALWAYS UNDERWAY

- Audit History button for all EIEs
- devRevDeid for Modbus-based EIEs
- TotalFlow support for Liquid App rev81
- Emerson ROC supports FMS data groups for FloBoss 107 devices running the V-Cone Flow Calc user program
- Emerson ROCPlus support for 800 firmware on Series 2 hardware
- “Migrate Data Groups” option for Emerson devices in FMS Toolbox (for history point mapping to FMS process variables)
- Realflo support for firmware v6.93.2

AUDIT HISTORY

**REMOTE DEVICE
AN EASIER WAY TO
TRACK AUDITS PER
DEVICE**

- Audit Button added to Remote Device editor
 - Track device audits easily

Properties for: 'WELLPLT_00' - Type: 'Weatherford Common'

Device | Facilities | Data Group | UIS Commands | Time Zone

Manufacturer / Model / Firmware: Weatherford - Common (3.2)

Device ID: WELLPLT_00

Description: Well Pile

Device address: 1

Address in Hex: 01

Communications: Comm ID: KSERIES_SIM

Enable device:

Comm Data | **Audit History** | OK | Cancel | Apply

Audit History for WELLPLT_00 Refresh Audit Trail

Time of change	Attribute changed	Original value	New value
4/6/2017 2:14:57 PM	comm_id1	TCP_COMM	KSERIES_SIM
9/1/2016 10:54:17 AM	DataGroup		DataGroup: Ctd-history_0 crea
6/28/2016 1:28:14 PM	Time	9	8
6/28/2016 1:25:06 PM	UisCommand		UisCommand: CONTRACTHR n
6/28/2016 1:23:50 PM	UisCommand		UisCommand: CONTRACTHR c
6/28/2016 1:23:25 PM	UisCommand		UisCommand: EDITS deleted
6/28/2016 1:23:19 PM	UisCommand		UisCommand: EDITS created
6/28/2016 12:49:12 PM	DataElementID		DataElementID: CurrState mo
6/28/2016 12:49:12 PM	FacilityId	WELLPLT_00	ALPHA_WELL
6/28/2016 12:49:12 PM	UniformDataCode	SWELLT	SWELLT
6/28/2016 12:49:02 PM	DataElementID		DataElementID: CurrState mo
6/28/2016 12:49:02 PM	FacilityId	WELLPLT_00	WELLPLT_00
6/28/2016 12:49:02 PM	UniformDataCode	SWELL	SWELLT
6/28/2016 9:23:25 AM	DataElementID		DataElementID: CurrState cre
6/28/2016 9:23:25 AM	FacilityId	WELLPLT_00	WELLPLT_00
6/28/2016 9:23:25 AM	UniformDataCode	SWELL	SWELL
6/28/2016 9:23:25 AM	DataGroup		DataGroup: HurrTmrCfg_0 cre
6/28/2016 9:21:59 AM	FacilityId	WELLPLT_00	WELLPLT_00
6/28/2016 9:21:59 AM	UniformDataCode	AIN	AIN
6/28/2016 9:21:59 AM	DataElementID		DataElementID: EventFo cre

Retrieved 104 changes

Close

SERVICE LOGGING

**CONFIGURABLE
NUMBER OF FILES**

**CONFIGURABLE
LIMIT**

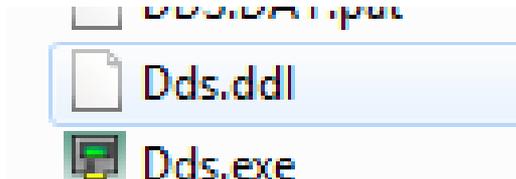
New service configuration file keywords for log files

- LOGFILE_MODE (Legacy or Extended)
- LOGFILE_LIMIT_MODE (Line or Size)
- LOGFILE_LINE_COUNT
- LOGFILE_FILE_SIZE
- LOGFILE_FILE_COUNT

SERVICE LOGGING

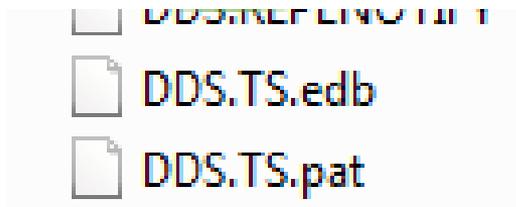
**CONFIGURABLE
NUMBER OF FILES**

**CONFIGURABLE
LIMIT**



```

4/17/2017 10:08:08.748 | 444740 | Free of data dict took 0.33 ms | DbsService.cpp | 40
4/17/2017 10:08:08.748 | 444740 | SHUTDOWN | DbsService.cpp | 472 | nLOG_CONTROL
4/17/2017 10:08:08.761 | 444740 | Overall CPU usage for service was 8.89% (89.83 CPU :
4/17/2017 10:08:08.762 | 444740 | Log file closed
*****
TimeStamp          | Thrd  | Text | File | Line number | Category
4/17/2017 10:16:19.518 | 429936 | Log file opened for C:\CygNet\Services\DDS\Dds.exe v
4/17/2017 10:16:19.518 | 429936 | LogManager max number of log file lines set to 10000
    
```



UIS ADVANCED CONFIGURATION SETTINGS

INFORMATION
NO LONGER STORED
IN REGISTRY

DEPRECATES
“UIS ADVANCED
CONFIGURATION
SETTINGS” UTILITY

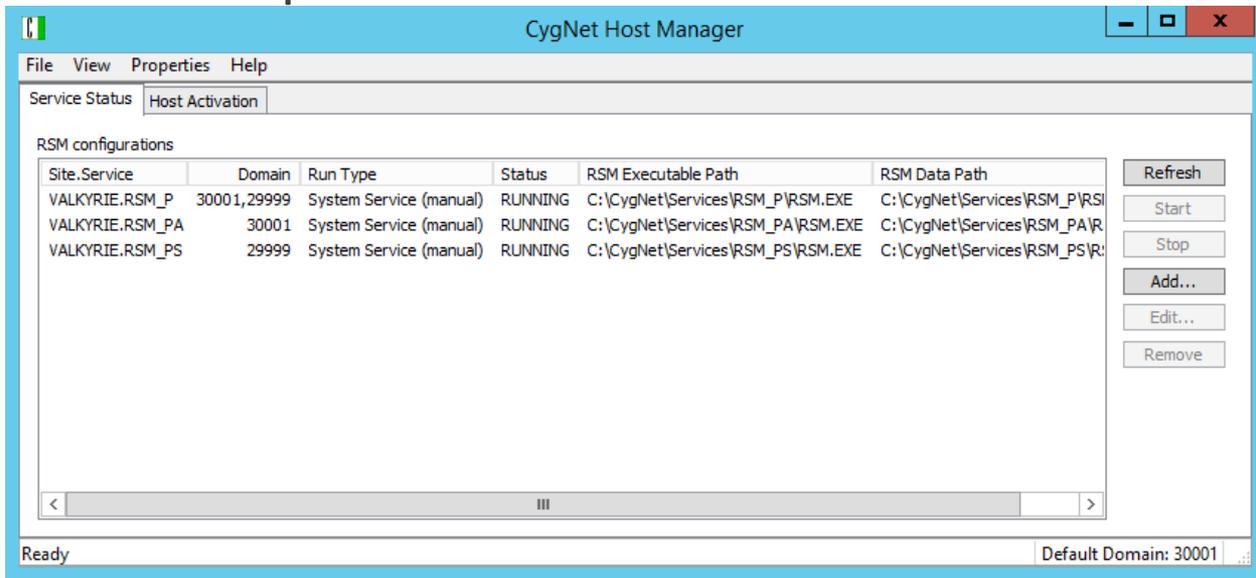
```
#-----Override Keywords-----  
#TCPIP_DRIVER_THREAD_STACKRESERVE_KB  
#IPTHROTTLE_ADDRESS_LIST  
#IPTHROTTLE_WILDCARD_MASK_LIST  
#IPTHROTTLE_CONCURRENT_IO_LIST  
#IPTHROTTLE_RELEASE_RATE_MS_LIST  
#TOTALFLOW_ALLOW_API_VERSION  
#TOTALFLOW_NO_EXTRA_DATA  
#  
#
```

CYGNET HOST MANAGER ENHANCEMENTS

SERVER
UTILIZATION

NETWORK
DOMAIN IDS

- Multi-domain support
 - Multiple domains on the same machine

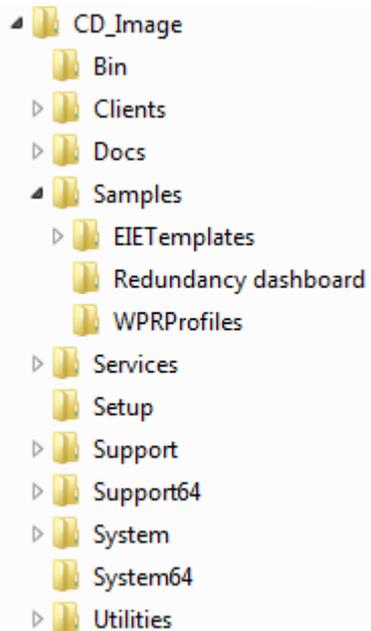


The screenshot shows the CygNet Host Manager application window. The title bar reads "CygNet Host Manager". The menu bar includes "File", "View", "Properties", and "Help". Below the menu bar, there are two tabs: "Service Status" and "Host Activation". The main area displays "RSM configurations" in a table format. The table has six columns: "Site.Service", "Domain", "Run Type", "Status", "RSM Executable Path", and "RSM Data Path". There are three rows of data, all with a status of "RUNNING". To the right of the table are five buttons: "Refresh", "Start", "Stop", "Add...", and "Remove". At the bottom of the window, the status bar shows "Ready" on the left and "Default Domain: 30001" on the right.

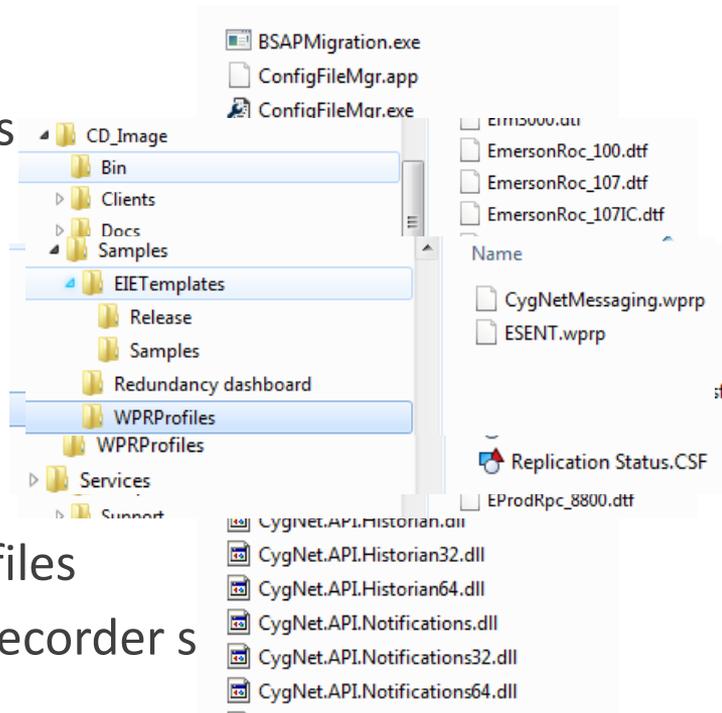
Site.Service	Domain	Run Type	Status	RSM Executable Path	RSM Data Path
VALKYRIE.RSM_P	30001,29999	System Service (manual)	RUNNING	C:\CygNet\Services\RSM_P\RSM.EXE	C:\CygNet\Services\RSM_P\RSM.DAT
VALKYRIE.RSM_PA	30001	System Service (manual)	RUNNING	C:\CygNet\Services\RSM_PA\RSM.EXE	C:\CygNet\Services\RSM_PA\RSM.DAT
VALKYRIE.RSM_PS	29999	System Service (manual)	RUNNING	C:\CygNet\Services\RSM_PS\RSM.EXE	C:\CygNet\Services\RSM_PS\RSM.DAT

NEW PRODUCT IMAGE FOLDERS

NEW FOLDERS ON PRODUCT IMAGE



- \Bin
 - .NET applications/utilities
 - BSAP Migration Utility
 - Config File Manager
 - .NET API files
- \Samples
 - EIE Templates
 - Redundancy Dashboard files
 - Windows Performance Recorder s



CONFIG FILE MANAGER

**NEW UTILITY FOR
MODIFYING SERVICE
CONFIGURATION FILES**

CONFIGFILEMGR.EXE
LOCATED IN THE
"CYGNET\BIN" FOLDER

- 
Local file edits and Remote file edits
 (for any running service)

Config file management has changed in a big way
 April 21, 2017 / 0 Comments / in General / by Jon Brausch

With the 8.5 release came the birth of a brand-new tool: Config File Manager. Designed to improve upon Config File Updater, this utility makes everything relating to configuration files simpler and more manageable. It allows you to edit any configuration file, validate values in the files and update the file version all from one interface. Let me show you what I mean.

- Compare settings between services**

[Read more →](#)

- Dropdowns for consistent data entry**
 (where applicable)



STUDIO TOOL ENHANCEMENTS

STUDIO/VISION SUPPORT CONTINUES

NO EOL DATE SET

Generic Grid Demo (Preview)

Generic Grid Demo

Features:

- Display any data
- Export to CSV
- Sort / Group / Filter
- Frozen columns
- Automatic column sizing
- Custom context menu support
- Data storage for rows and cells
- Input validation
- Custom text / cell coloring
- Cell types:
 - Text
 - Combo box
 - Check box
 - Hyperlink

Facilities

ODBC

Cell Types

Drag a column header here to group by that column.

Facility	ID	Type	Service	Link	Area
<all>	<all>	<all>	<all>	<all>	<all>
Well Alpha	ALPHA_WELL	WELL	JAKKU.UIS		
Antier POC Remote Device	ANTIERPOC_RD	REMDEV	JAKKU.UIS		
Antier Gas Meter	ANTIER_GM	MTRRUN	JAKKU.UIS		Lafayette
Antier Oil Meter	ANTIER_OM	MTRRU...	JAKKU.UIS		Lafayette
Antier POC	ANTIER_POC	RPC	JAKKU.UIS		Lafayette
Antier Remote Device	ANTIER_RD	REMDEV	JAKKU.UIS		
Antier Well	ANTIER_WL	WELL	JAKKU.UIS		Lafayette
Antier Water Meter	ANTIER_WM	MTRRU...	JAKKU.UIS		Lafayette
ARGH	ARGH		JAKKU.UIS		
Ash Gas Meter	ASH_GM	MTRRUN	JAKKU.UIS		Alexandria
Ash Plunger	ASH_PL	PLNGR	JAKKU.UIS		Alexandria
Ash Remote Device	ASH_RD	REMDEV	JAKKU.UIS		
Ash Well	ASH_WL	WELL	JAKKU.UIS		Alexandria
Aubrey Gas Meter	AUBREY_GM	MTRRUN	JAKKU.UIS		Alexandria
Aubrey Plunger	AUBREY_PL	PLNGR	JAKKU.UIS		Alexandria
Aubrey Remote Device	AUBREY_RD	REMDEV	JAKKU.UIS		
Aubrey Well	AUBREY_WL	WELL	JAKKU.UIS		Alexandria
Aububon Gas Meter	AUDUBON_GM	MTRRUN	JAKKU.UIS		Lafayette
Audubon Remote Device	AUDUBON_RD	REMDEV	JAKKU.UIS		
Audubon Well	AUDUBON_WL	WELL	JAKKU.UIS		Lafayette
BAM	BAM		JAKKU.UIS		
	BNU_01_FG_GM02	MTRRUN	JAKKU.UIS		
BOB	BOB		JAKKU.UIS		

ENHANCEMENTS WITH .NET

.NET ASSEMBLIES

VERSION MANAGED

NEW .NET Assemblies

- CygNet.API.ServiceManager
- CygNet.API.ServiceManager.COM
- CygNet.Data.ServiceManager
- CygNet.Data.ServiceManager.COM
- CygNet.Data.ServiceManager.Redundancy

CygNet Version Manager

- Added support for .NET assemblies assembly registration utility (applicable to C# and .NET)

MASTER SCHEDULING SERVICE COMMAND TASK PARAMETERS

**MORE
OPTIONS**

**ADDS
FLEXIBILITY**

All Facility Service attributes available

UIS Service: LUCILLE.UIS
Cmd Type: BASICPOLL
Cmd Priority: Low
Status UDC: []

Device Descriptor(s)
Logical operator: And Or

Parameter	Operator	Value	Tag Type	Tag ID
Facility Info1	=	1	For Long ID	[]
Attribute 28	<>	1	For Long ID	CMDSTAT
Attribute 29	<>	1	For Long ID	CMDSTAT
Table Attrib 0	=	[]	For Long ID	[]
Table Attrib 1	=	[]	For Long ID	[]
Table Attrib 2	=	[]	For Long ID	[]
Table Attrib 3	=	[]	For Long ID	[]
Table Attrib 4	=	[]	For Long ID	[]
Table Attrib 5	=	[]	For Long ID	[]
Table Attrib 6	=	[]	For Long ID	[]
Table Attrib 7	=	[]	For Long ID	[]
Table Attrib 8	=	[]	For Long ID	[]
Table Attrib 9	=	[]	For Long ID	[]
Table Attrib 10	=	[]	For Long ID	[]
Table Attrib 11	=	[]	For Long ID	[]

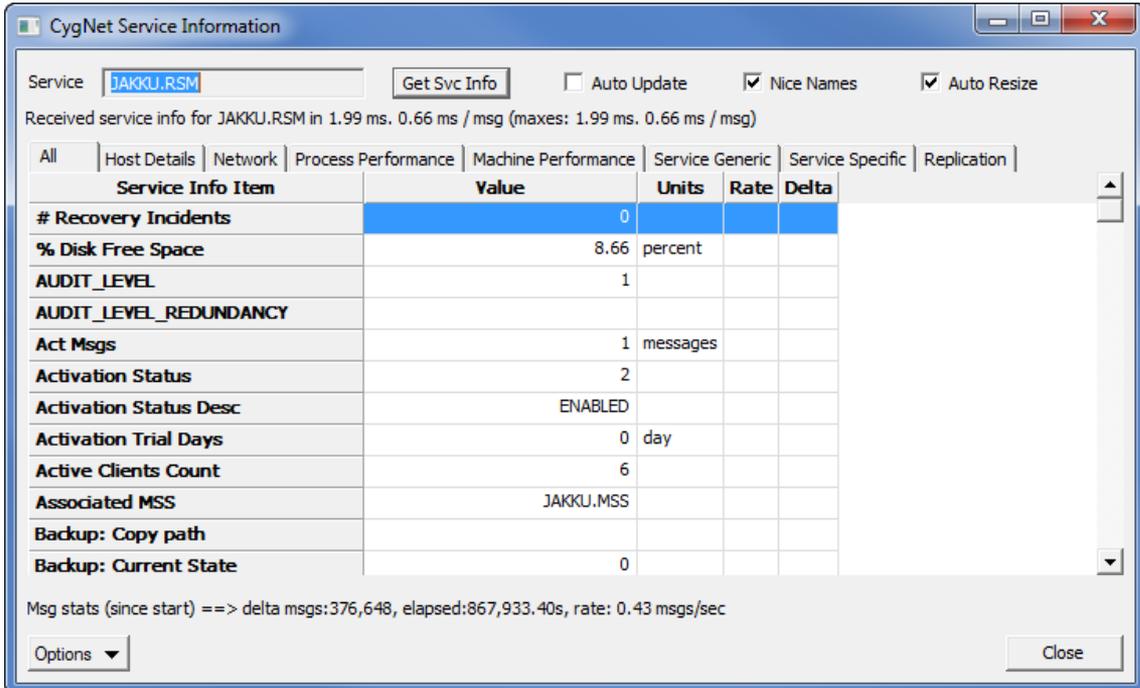
Where 'Facility Contact' = "1" and where 'Point Value' <> "1" for long point ID

CXDIALOGS SCRIPTING LIBRARY

**CYGNET DIALOGS
WITHOUT IMPORTING
THE LIBRARY**

**ALL METHODS
INTEGRATED WITH
CYGNET STUDIO**

- Allows access to dialog boxes from a common location



The screenshot shows the 'CygNet Service Information' window. The 'Service' field is set to 'JAKKU.RSM'. The window displays a table of service information with columns for 'Service Info Item', 'Value', 'Units', 'Rate', and 'Delta'. The table is currently displaying the 'Service Specific' tab.

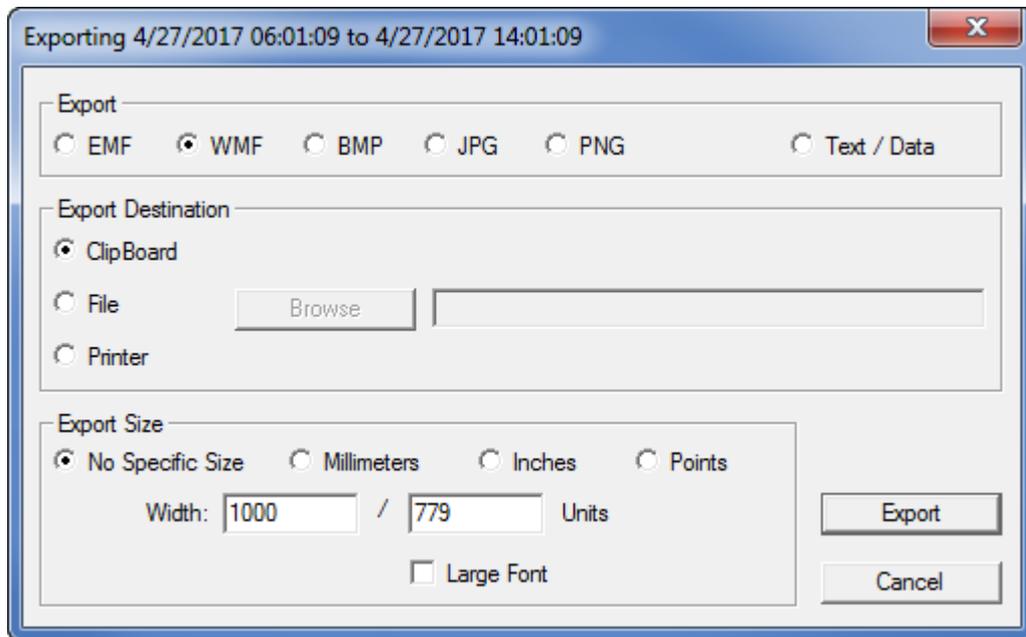
Service Info Item	Value	Units	Rate	Delta
# Recovery Incidents	0			
% Disk Free Space	8.66	percent		
AUDIT_LEVEL	1			
AUDIT_LEVEL_REDUNDANCY				
Act Msgs	1	messages		
Activation Status	2			
Activation Status Desc	ENABLED			
Activation Trial Days	0	day		
Active Clients Count	6			
Associated MSS	JAKKU.MSS			
Backup: Copy path				
Backup: Current State	0			

Msg stats (since start) ==> delta msgs:376,648, elapsed:867,933.40s, rate: 0.43 msgs/sec

EXPORTING TRENDS

STUDIO TREND TOOL

EXPORTS SUPPORTED IN THE UI AND VBSCRIPT





EARLY PREVIEW

A LOOK AT 8.5.1

8.5.1 Preview

- Redundancy Auto Failover
- BSAP FMS support
- CygNet Broadcast
- Enhanced UIS Command Comm Stats
- Service Startup Groups
- Import data to a replicating VHS

NEW UIS COMMAND SUCCESS/FAILURE MONITORING

**ADDITIONAL
COMMUNICATION
DEVICE FEEDBACK**

**NEW
COMMUNICATION
STATISTICS FOR UIS
COMMANDS**

- UIS Statistics for entire UIS Command

New UIS Command Statistics					
Total successful UIS cmds	7	SYCSSUTT	Total failed UIS cmds	1	SYCSFUTT
Last successful UIS cmd - desc	BASICPOLL	SYCSLSUD	Last failed UIS cmd - desc	RtuConfig:0:F	SYCSLFUD
Last succ UIS cmd - time numeric	859.8138021991	SYCSLSUN	Last failed UIS cmd - time numeric	859.7104957523	SYCSLFUN
Last succ UIS cmd - time in text	05/04 19:31:52	SYCSLSUT	Last failed UIS cmd - time in text	05/04 17:03:06	SYCSLFUT
Last succ UIS cmd - Device ID	ANTIER_RD	SYCSLSUI	Last failed UIS cmd - Device ID	ANTIER_RD	SYCSLFUI

Seconds Since Last Success/Failure

Seconds since last succ comm	0	SYCSLSCS
Seconds since last failed comm	8925	SYCSLFCS

NEW UIS COMMAND SUCCESS/FAILURE MONITORING

ADDITIONAL COMMUNICATION DEVICE FEEDBACK

DIFFERENTIATE BETWEEN COMMUNICATION TIME AND UIS COMMAND TIME

- Drain Device
 - Better monitoring of communication devices/infrastructure
- Communication Time
 - Elapsed time (in seconds) since the last failed/successful communication.

Communication Time vs. UIS Command Time

Last succ comm time text **05/04 20:13:25** SYCSLSCT

Last succ UIS cmd - time in text **5/4 17:03:06** SYCSLSUT

Last failed comm time text **05/04 20:22:59** SYCSLFCT

Last failed UIS cmd - time in text **05/04 20:22:59** SYCSLFUT

PRODUCT LIFECYCLE EVENTS - VERSION

VERSION	LIFECYCLE PHASE
CYGNET V8.2.0	Limited Support begins November 25, 2017
CYGNET V8.1.3	Limited Support as of February 20, 2017
CYGNET V8.1.2	Retired as of August 22, 2017
GAS MEASUREMENT REPOSITORY (GMR)	Retired March 31, 2016. Not supported in v8.5.0+
VALUE HISTORY SERVICE LEGACY DATASTORE	Retired with v8.1.3 (February 20, 2018). Currently in Limited Support.



DEMO

V8.5 AND V8.5.1



FALL PREVIEW

COMING LATER THIS YEAR

FALL PREVIEW

- DNP3 EIE – support of the DNP3 protocol
- IPv6 Communication Device support
- Canvas

FALL PREVIEW - IPV6 SUPPORT

IPV6

VERIZON WILL STOP
ISSUING STATIC IPV4
ADDRESSES AS OF
JUNE 30, 2017

- Device communication
 - TCP/IP
 - TCP/IP MultiPoint
 - TCP Modem
 - UDP

FALL PREVIEW - CANVAS

NEW CYGNET HMI

ADDRESSING HIGHLY REQUESTED FEATURES AND SUPPORT IN OUR NEXT HMI

- Updated HMI Development Environment
- Full support for C# and VB.NET
- Some of the most important controls (i.e. data grid, trend, etc.)
- Integrated debugging and assembly linking
- Support for user created controls to support internal business logic



QUESTIONS & ANSWERS

THANK YOU FOR ATTENDING WESC 2017