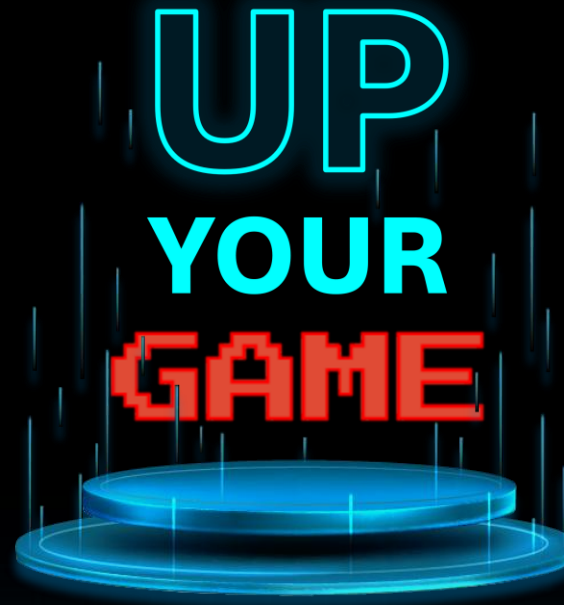




SCADA FEST

ORLANDO | 2026

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Trihedral
A Delta Group Company



RPC Services Page

Paul Dexter
Project Engineer



What is RPC?

Remote Procedural Call

- VTScada to VTScada communications
- Synchronize data
- Failover and redundancy
- Services are responsible for doing things





Single Server



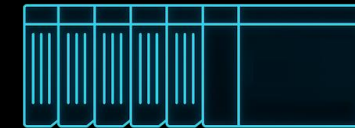
Thin Client

HTTPS



- Drivers
- Historians
- Alarms

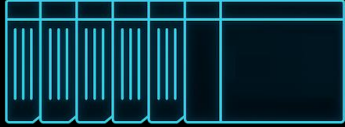
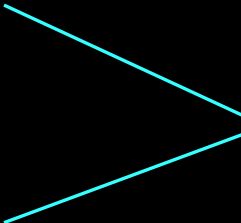
DNP3



PLCs & RTUs



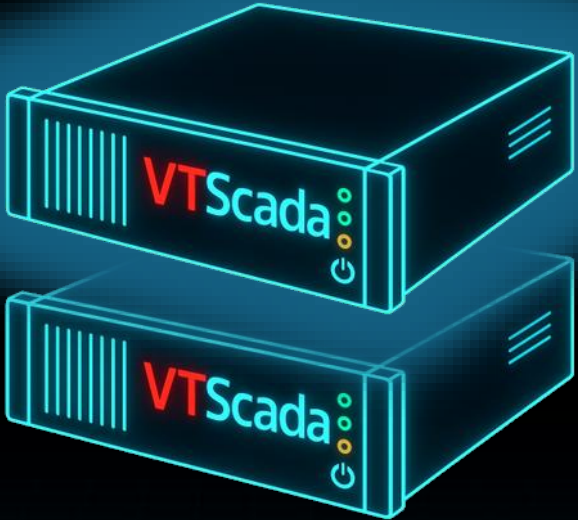
Dual Server



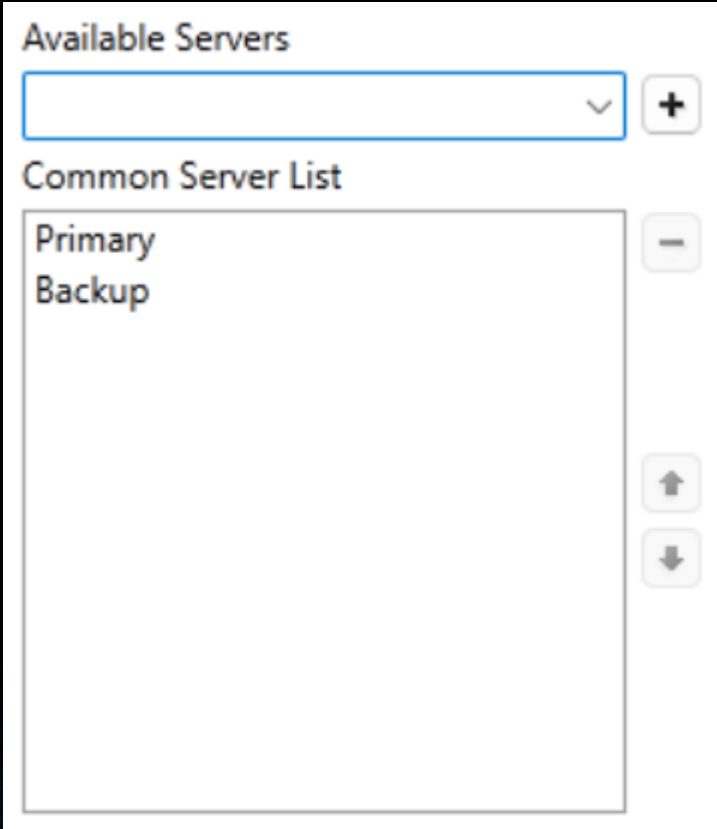
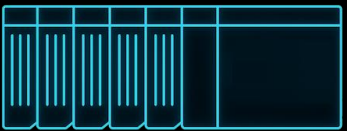


Dual Server VTScada

Primary (Server)



Backup (Client)





Failover

Primary (Offline)



Backup (Server)

Available Servers

[Dropdown menu] +

Common Server List

- Primary
- Backup

[-] [Up arrow] [Down arrow]



Recovery – Sync from Backup to Primary



Primary (Client)



Get Client Revision



Backup (Server)



Recovery – Sync from Backup to Primary



Primary (Client)



Get Client Changes
(Optional)



Backup (Server)



Recovery – Sync from Backup to Primary



Primary (Client)



Get Server Changes



Backup (Server)



Recovery – Servership to Primary



Primary (Server)



Backup (Client)



Recovery – Sync from Primary to Backup



Primary (Server)



Get Client Revision



Backup (Client)



Recovery – Sync from Primary to Backup



Primary (Server)

← Get Client Changes



Backup (Client)



Recovery – Sync from Primary to Backup



Primary (Server)



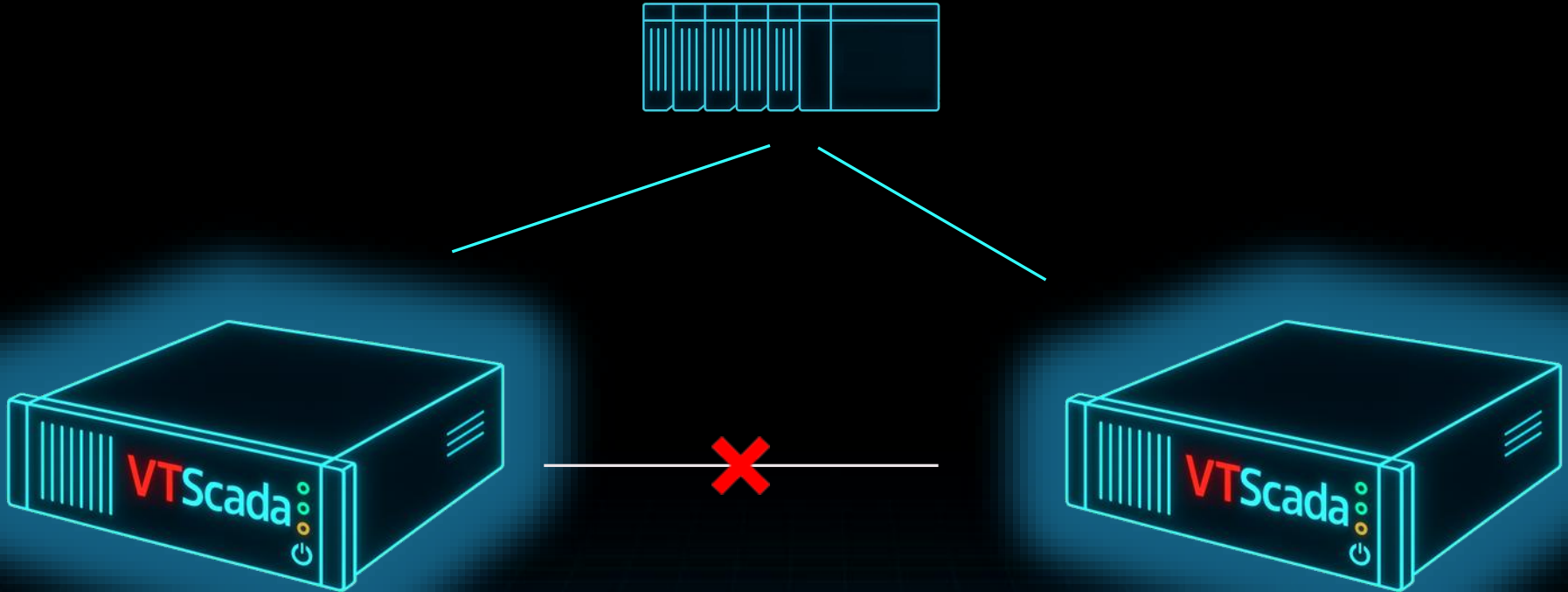
Get Server Changes



Backup (Client)



Isolated Server Synchronization



Primary (Server)

Backup (Server)



RPC Services Page

Switch Servers | Analysis | View

Service Status | Service Architecture | Search

Service	Server List	Current Server	This Workstation	Sticky
AlarmNotification	Default	DC01-HC3	Client	No
Configuration	Default	DC01-HC3	Client	No
ModemManager	Default	DC01-HC3	Client	No
NetworkValues	Default	DC01-HC3	Client	No
PageParms	Default	DC01-HC3	Client	No
ServiceCtrl	Default	DC01-HC3	Client	No
SlippyMapService	Default	DC01-HC3	Client	No
SMSManager	Default	DC01-HC3	Client	No
Station 1\Modbus Comms	Forest Station	HARVIEAA	★ Current Server	No
Station 2\Modbus Comms	Forest Station	HARVIEAA	★ Current Server	No
SystemAlarmHistorian	Default	DC01-HC3	Client	No
SystemHistorian	Default	DC01-HC3	Client	No
TimeSyncManager	Default	DC01-HC3	Client	No
ValueSyncService	Default	DC01-HC3	Client	No

Legend

- ★ The workstation is the current server for the service
- ≡ The workstation is synchronizing with the current server
- × The workstation is not connected to the current server

14 services

System Services

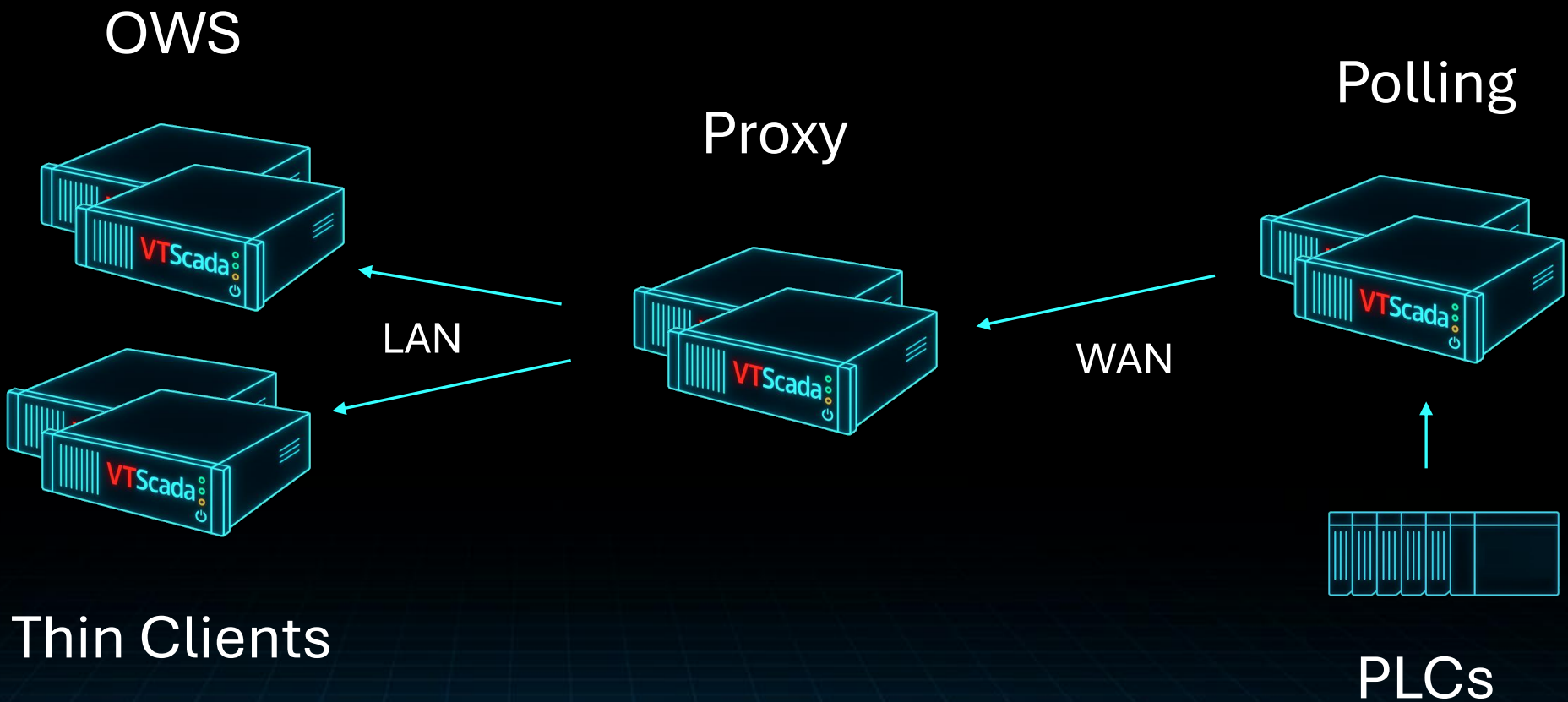
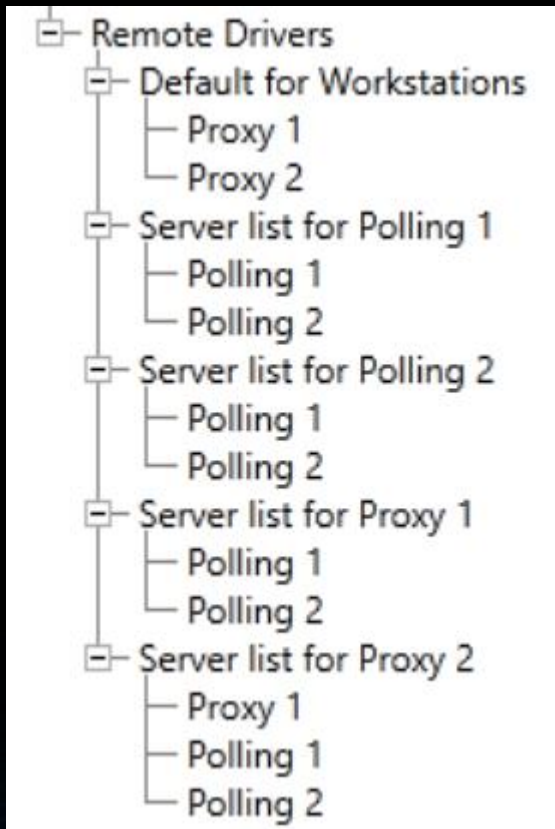
- Alarm Notification
- Modem/SMS Manager
- Value Sync
- Configuration
- Network Values
- Slippy Maps

Tag Services

- Drivers
- Historians
- Alarm Historians



Client of Clients





Client of Clients - Status

Polling 1

Service	Server List	Current Server	This Workstation
Station 1\Modbus Driver	Remote Drivers	Polling 1	★ Current Server

Polling 2, Proxy 1

Service	Server List	Current Server	This Workstation
Station 1\Modbus Driver	Remote Drivers	Polling 1	Client

Proxy 1, OWS, Thin Clients

Service	Server List	Current Server	This Workstation
Station 1\Modbus Driver	Remote Drivers	Proxy 1	Client



Client of Clients - Architecture



Troubleshooting – History

- Check Server Connections
- Check Historian Sync State
- Check Historian Status widget

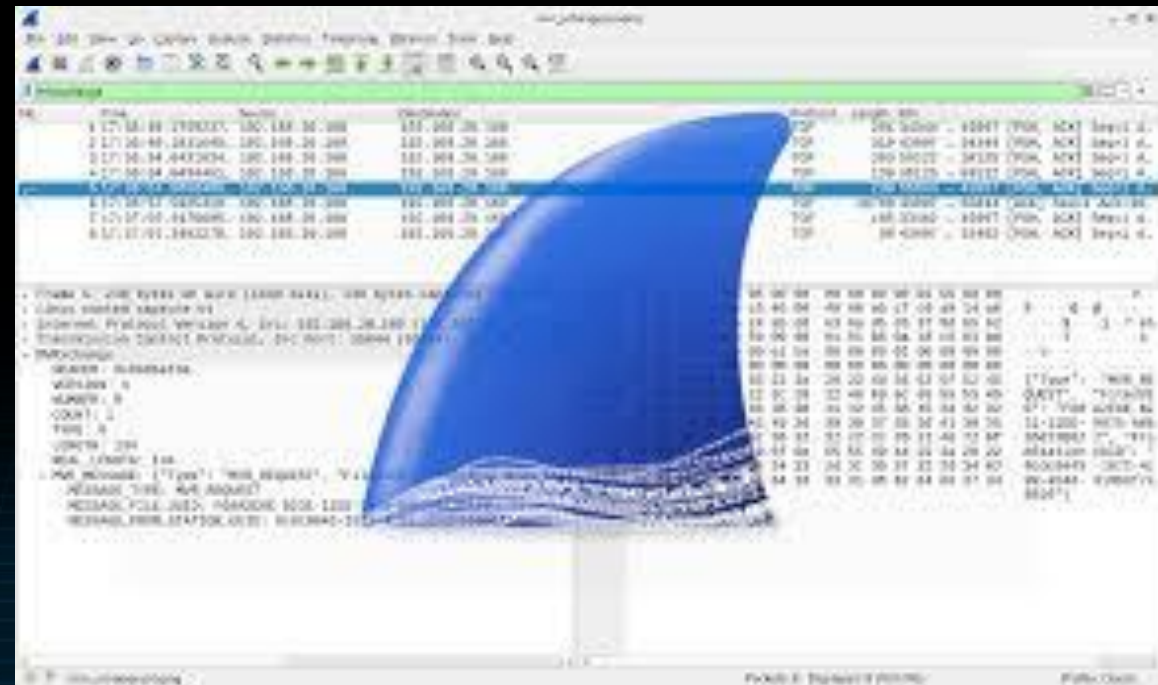
Historian Status

Name ^	Current Server	Connection Status	Queue Length	Write Rate	DB Store Rate	Service Status
SystemHistorian	ANDREWH	Connected	0	3	3	Ready



Troubleshooting – Drivers

- Check Server Connections
- Check Driver Sync State
- Ping / Telnet Tests
- Wireshark





Troubleshooting – Configuration

- Check Server Connections
- Check Sync State
- Check Auto-Deploy
- Check Version Log

Workstations			
Workstation	Last Update	Current Version	
DEXTERPA	Thu Mar 26, 2026, 00:41:26.726	DEXTERPA-D2	
DEXTERPB	Thu Mar 26, 2026, 00:41:30.262	DEXTERPA-D2	

Version Log for DEXTERPB (Total of 9 records in log)			
Version	Time Applied	User	Comment
DEXTERPA-D2	Thu Mar 26, 2026 00:41:30.262	Logged Off	Updating server list
DEXTERPB-D6	Thu Mar 26, 2026 00:39:02.499		Applying synchronization ChangeSet; Changes applied from DEXTERPA-D
DEXTERPB-D5	Thu Mar 26, 2026 00:38:58.291	Logged Off	Platform information changed
DEXTERPA-D0	Thu Mar 26, 2026 00:38:08.151	Logged Off	Keyword SCADAFEST has been added.
DEXTERPB-D4	Thu Mar 26, 2026 00:37:00.678	Logged Off	Updating server list
DEXTERPB-D3	Thu Mar 26, 2026 00:36:45.442	Logged Off	Keyword SCADAFEST has been added.
DEXTERPB-D2	Thu Mar 26, 2026 00:36:36.525	Logged Off	Fault recovery setting updated
DEXTERPB-D1	Thu Mar 26, 2026 00:36:35.912	Application	SecurityManager: System updated Accounts file Account "Logged Off
DEXTERPB-D0	Thu Mar 26, 2026 00:36:34.121		Setting Name and GUID for New Application.

Next 100 Show All [Reload](#)



Troubleshooting – RPC Logging

The screenshot displays the VT RPC Diagnostics interface. The main window shows a table of RPC logs with columns for Time, Direction, IP, Application, Service/Machine, and Data/Parameters. A dialog box titled 'Live Data Capture - Selection' is open, allowing users to choose which data sources to view or log. The 'RPC Diagnostics' source is selected for both viewing and logging.

Time	Direction	IP	Application	Service/Machine	Data/Parameters
11:30:01.285	from	PC-VTS	APSC	ValueSyncS	cy{joz-2v1\~+9hdm#szqa1~3@8g)or4z\p~fn5ak8)\$\},p
11:30:01.288	from	PC-VTS	APSC	ValueSyncS	7c.~}Ls);q{u55.+3sfo~lv8iu8wt%@k;lz4d6%.yp\},pz
11:30:01.291	from	PC-VTS	APSC	ValueSyncS	7c.~}Ls);q\9~qbi0.@w\hjha5ixLL{bks-hko;1\8wq7,#
11:30:01.292	from	PC-VTS	APSC	ValueSyncS	7c.~}Ls);q\zsn2zwf++\)+u0nq5d2&lLL})+rid1\8wq7,#
11:30:01.295					dLo\7d)8xk;0L3\ns@
11:30:01.311					p_v\7jsty7kr)p\8wq7,#
11:30:01.319					}&\\$~@7xx4d-&l8wq
11:30:01.322					j4l-edd#q17g!\n%5-@
11:30:01.325					@!\n\~99iz2w)fd\8w
11:30:01.331					m\$vb6\5.n1o8\;nb-l8w
11:30:01.334					q85&\^%{0&Lea}\n\8w
11:30:01.337					zsglg7L%ibbad.\ns@
18:14:56.883					figuration-8b6957cd-a
18:14:56.885					rNetworkValues-8b69
18:15:47.595					957cd-a1c5-44c7-856
18:15:56.917					figuration-8b6957cd-a
18:15:56.950					rNetworkValues-8b69
18:16:56.933					figuration-8b6957cd-a
18:16:56.965	to	DEXTERPA		DEXTERPA	RPCManager\RPCTagDB\LayerNetworkValues-8b69
18:17:56.964	to	DEXTERPA		DEXTERPA	RPCManager\RPCTagDB\Configuration-8b6957cd-a
18:17:56.996	to	DEXTERPA		DEXTERPA	RPCManager\RPCTagDB\LayerNetworkValues-8b69
18:17:57.951	to	PC-VTS		PC-VTS	RPCScopes\Configuration-8b6957cd-a1c5-44c7-856
18:18:08.305	from	PC-VTS		DEXTERPB	RPCScopes\Configuration-8b6957cd-a1c5-44c7-856
18:18:56.947	to	DEXTERPA		DEXTERPA	RPCManager\RPCTagDB\Configuration-8b6957cd-a
18:18:56.949	to	DEXTERPA		DEXTERPA	RPCManager\RPCTagDB\LayerNetworkValues-8b69
18:18:56.948	to	DEXTERPA		DEXTERPA	RPCManager\RPCTagDB\Configuration-8b6957cd-a

VT Live Data Capture - Selection

Data Source	View	Log
Driver Trace for RPC Services 1	<input type="checkbox"/>	<input type="checkbox"/>
Historian Diagnostics for RPC Services 1	<input type="checkbox"/>	<input type="checkbox"/>
RPC Diagnostics	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
SOAP Message Tracing	<input type="checkbox"/>	<input type="checkbox"/>

Data Source Selection

To view a live data source, check its View box. Only one data source can be viewed at a time and only if it is being logged.

To log a live data source, check its Log box. Any number of

Close



Thank you for attending this session!

- Fill out the 2-question feedback survey via the App! *Ukova*
- Especially if you need a Continuing Education Credit or Professional Development Hours certificate.
- Don't have the app, fill out the paper form included in your conference kit and hand into Natasha.

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