



GRID
PROTECTION
ALLIANCE



User Interfaces Reimagined

General Updates to UI


- Removal of current Manager
 - Technology is outdated
 - Requires direct Server access
- Addition of new Web-based UI
 - Allows access from workstations
 - Modern Technology
- Customizable Themes
 - “Dark Theme”
 - Corporate Logos etc
- Provide an updated manager application
 - Uses the same interfaces as the web-based version

Security



- Continue to support authentication
 - Local AD
 - SSO services
- Continue to support Group Access Management
 - Viewers – for people who need to get data
 - Editors – for engineers maintaining configuration of PMUs
 - Admins – for engineers/IT Personnel maintaining the system

Goal – Configure everything via UI

- Current version requires database access for some changes
 - Changing Set of Interconnections
 - Changing Vendor/Device Setup
- Current version requires Config file changes
 - Direct server access needed
 - Edit and save config files for some changes
- Current version supports some config changes on web
 - Requires manager app for most Adapter changes
 - Poor handling of Bulk updates (e.g. turn off multiple devices)

openHistorian EE Sign out 




Overview

-  System
-  Devices



Devices

- Devices
- Phasors
- Measurements

Adapters

- Action Adapters
-  Input Adapters
-  Output Adapters
-  Filter Adapters

Metadata

-  Companies
-  Vendors
- Vendor Devices
- Interconnections
- Signal Types

Version 1.0


Companies

Add Filter

Found 4 Companies

| Name | Map Acronym | Acronym | URL | Load Order |
|-----------|-------------|---------|----------------------|------------|
| Company 1 | C1 | C1 | https://company1.com | 1 |
| Company 2 | C2 | C2 | https://company2.com | 2 |
| Company 3 | C3 | C3 | https://company3.com | 3 |
| Company 4 | C4 | C4 | https://company4.com | 4 |

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General 

Name **URL**

Map Acronym **Acronym**

Load Order

Goal – Simplify Adapter Configuration

- Custom interfaces for GPA Adapters
 - Commonly used Adapters (e.g. Power computation)
 - Commonly used Protocols
- Ability for Developers to implement their own
 - GPA provides examples and documentation
- Include Visualization of Input/Outputs
 - Easier to debug configuration

- Overview
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- Interconnex
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- Event
- Report
- Reports

Search: Add Filter

Found 3 Connection(s)

Actions

Add New Connection

| Name | Source Protocol | Phasor Protocol | Proxy Dest(s) | Enabled |
|--------------------------|-----------------|---------------------|--|---------|
| Chattanooga Connection 1 | Tcp | IEEE C37.118.2-2011 | TCP Port 4712 | ✓ |
| Knoxville Connection 1 | Udp | IEEE C37.118-2005 | UDP Endpoints gridprotectionalliance.org:4712 gridprotectionalliance.org:4712 ... | ✗ |
| Nashville Connection 1 | Tcp | IEEE C37.118 | TCP Port 4712 | ✓ |

Knoxville Connection 1

Save Connection (Up to date)

✗ Source Interface must be a valid IPv4/IPv6 address or DNS hostname (host:port).

✗ Proxy Interface must be a valid IPv4/IPv6 address or DNS hostname (host:port).

General

Name:

Disabled Enabled

Source Connection

Transport Protocol: TCP UDP

Use Remote UDP

UDP Listening Port:

Access ID:

Source Interface:

Use Alternate TCP Command Channel

Alternate TCP Command Channel Endpoints: ✗ +

Phasor Protocol

Protocol:

Required Connection Parameters: ProtocolVersion

Proxy Destination(s)

Proxy Connection(s) Protocol: TCP Proxy Point UDP Rebroadcasts

Duration (sec):

Goal – Quick & Configurable Overview

- Systemwide Configuration includes interfaces
 - Standard Timezones (e.g. ET or MET)
 - Standard Nominal Frequency (50 Hz vs 60 Hz)
 - Standard Phase Reference
- User based configuration
 - Configure home page
 - Configurable System overview
 - Preferred Display formats

Historian EE

Overview
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Companies

Search Name
Found 4 Companies

| Name | Map Acronym | Acronym |
|-----------|-------------|---------|
| Company 1 | C1 | C1 |
| Company 2 | C2 | C2 |
| Company 3 | C3 | C3 |
| Company 4 | C4 | C4 |

User Settings

General System Overview Devices

Card Open by Default

Settings

Measurement

Measurement Data

Phasor

Phasor Data

Stats

Save

Home Page
System Overview

Time Format
HH:mm:ss.SSS

Update Interval (s)
300

Default Data Duration (s)
30

Date Time Mode
Start Window

URL
https://company1.com

Acronym
C1

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User Settings

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Phasor

Phasor Data

Stats

Save

URL
https://company1.com

Acronym
C1

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System Status

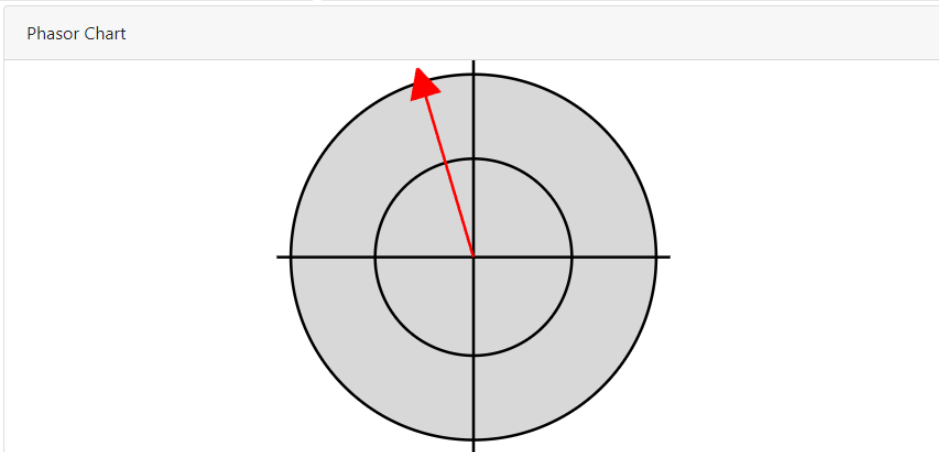
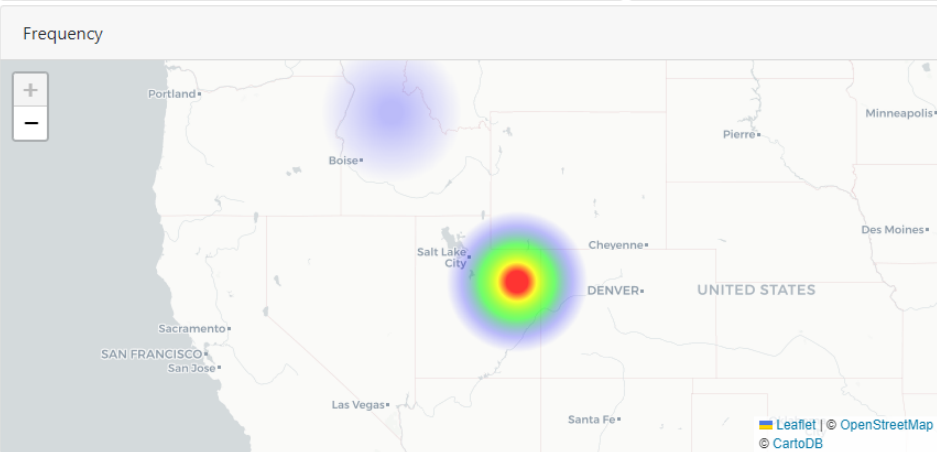
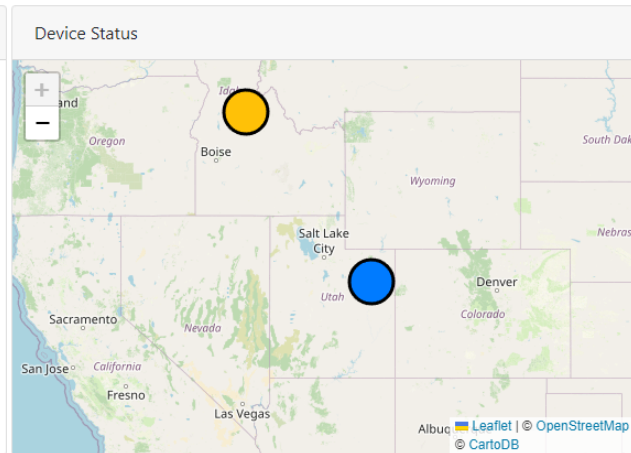
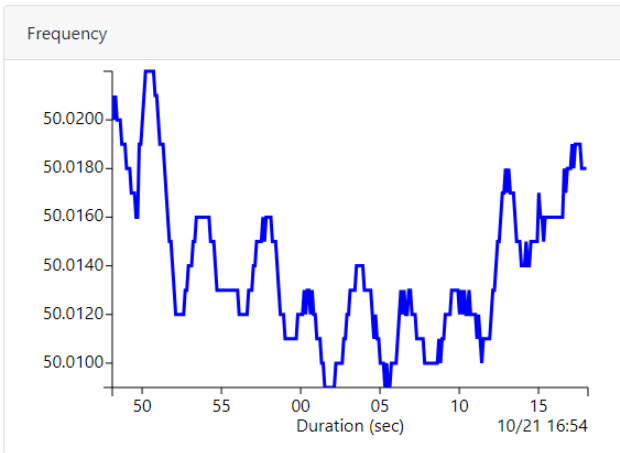
WARNING

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Active Alarms

| Alarm | Severity | Time of Alarm |
|--------------------------|----------|---------------|
| System Frequency Low | Warning | 11:46:50.000 |
| Islanding Detected PMU 1 | Error | 17:12:34.000 |
| Frequency PMU 1 HIGH | Info | 13:46:23.000 |

Previous 1 Next

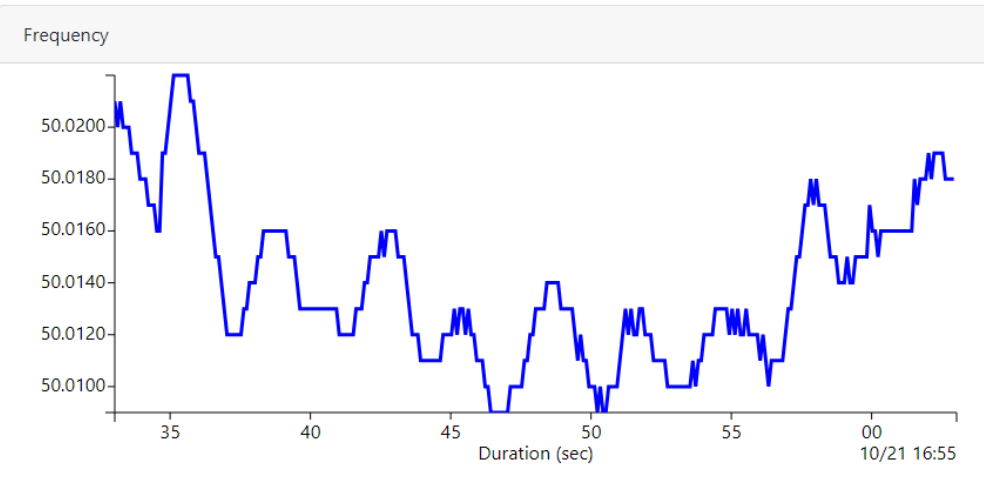


System Status

WARNING

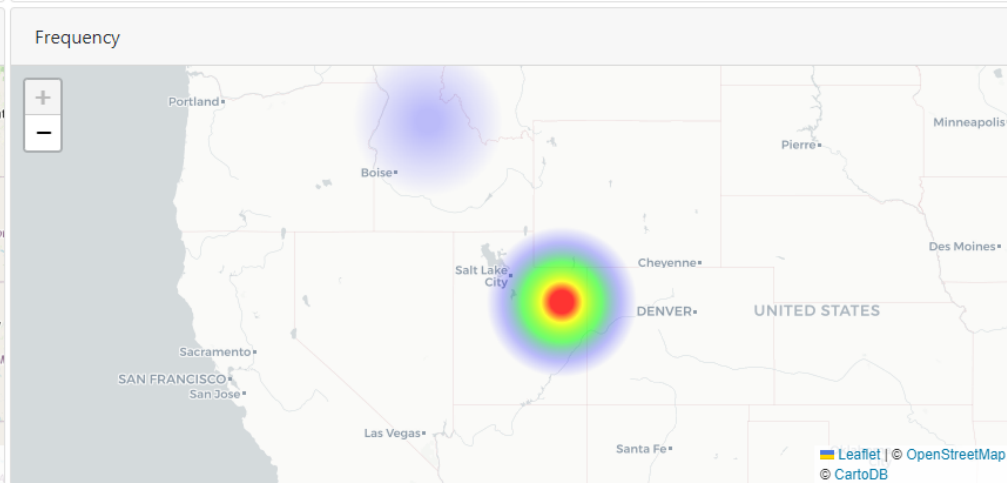
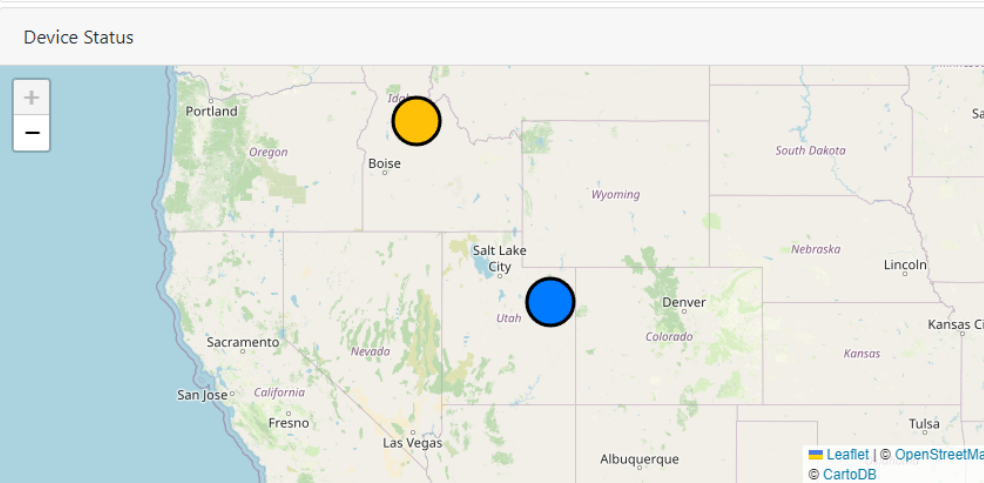
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Device Status

| |
|------------------------|
| Device 1 Time Error |
| Device 2 Data Error |



Event Data

Date/Time Filter:

Start of Time Window:

10/22/2024 03:05:50 PM

Time Window(+):

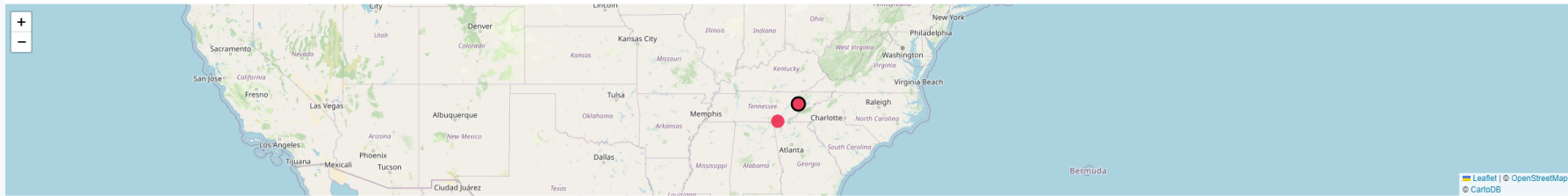
30

Second(s)

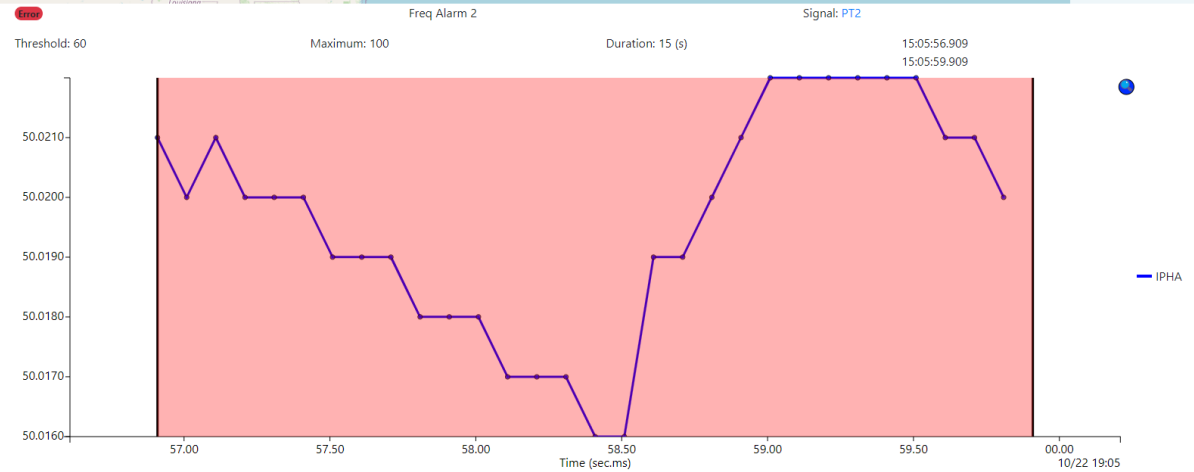
| | | |
|-----------------|---------------|---------------|
| This Hour | Today | This Week |
| Last Hour | Yesterday | Last Week |
| Last 60 Minutes | Last 24 Hours | Last 7 Days |
| This Month | This Quarter | This Year |
| Last Month | Last Quarter | Last Year |
| Last 30 Days | Last 90 Days | Last 365 Days |

Map

All Selected



| | | |
|---------------------|-----------------------------|---------|
| Freq Alarm 1 | 15:05:50.909 - 15:05:53.909 | Error |
| Alarm 1 | | Warning |
| Freq Alarm 2 | 15:05:56.909 - 15:05:59.909 | |
| Alarm 2 | | Error |
| 0.837Hz Oscillation | | |
| Oscillation 3 | 15:06:02.909 - 15:06:05.909 | |
| 0.142Hz Oscillation | | |
| Oscillation 4 | 15:06:08.909 - 15:06:11.909 | |
| EventType-5 5 | 15:06:14.909 - 15:06:17.909 | |

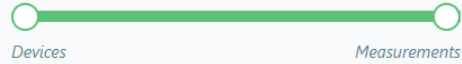


Goal – Common Workflows Simplified

- Common workflows have been simplified
 - Trending Data
 - Exporting Data
 - Adding Devices
- Feedback from various utilities has been included

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Trend Data



Search Point

Found 2 Measurement(s)

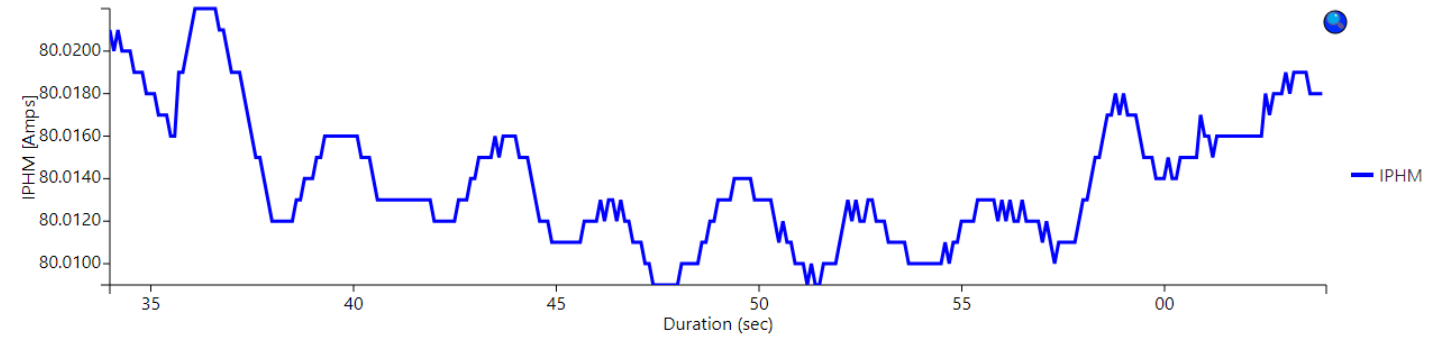
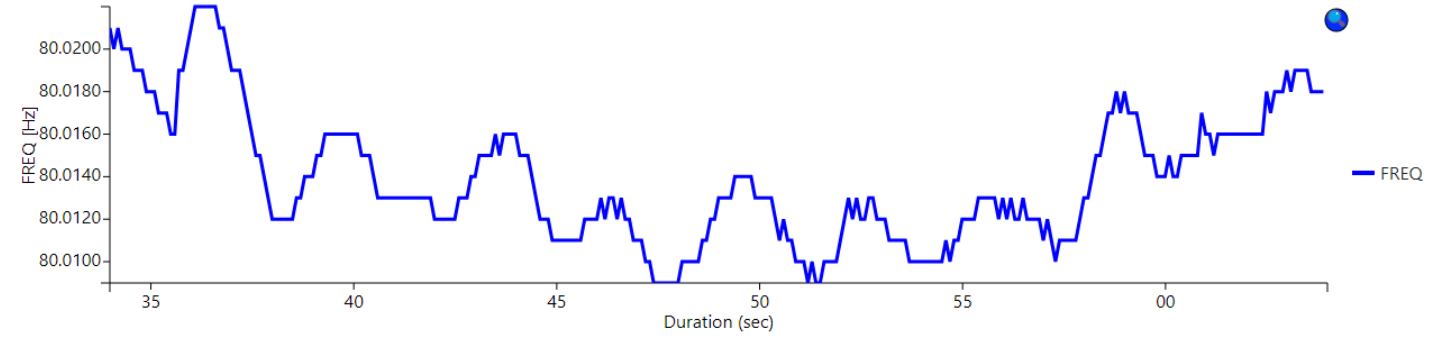
| Point Tag | Description | Signal Type |
|--------------|-------------|-------------------|
| Measurement1 | Description | Current Magnitude |
| Measurement5 | Description | Frequency |

Date/Time Filter:

Start of Time Window:

Time Window(+):

- | | | |
|-----------------|---------------|---------------|
| This Hour | Today | This Week |
| Last Hour | Yesterday | Last Week |
| Last 60 Minutes | Last 24 Hours | Last 7 Days |
| This Month | This Quarter | This Year |
| Last Month | Last Quarter | Last Year |
| Last 30 Days | Last 90 Days | Last 365 Days |



Previous Next

Historian EE Sign out

Export Data

Devices

Search Point Tag Add Filter

Found 4 Measurement(s)

| Point Tag | Description | |
|--------------|-------------|-------------------|
| Measurement7 | Description | Analog Value |
| Measurement1 | Description | Current Magnitude |
| Measurement5 | Description | Frequency |
| Measurement3 | Description | Voltage Magnitude |

Reset Defaults

Table Columns

| | | |
|---|---|---|
| <input checked="" type="checkbox"/> Point Tag | <input type="checkbox"/> Signal | <input type="checkbox"/> Adder |
| <input type="checkbox"/> Multiplier | <input type="checkbox"/> Reference | <input type="checkbox"/> Subscribed |
| <input type="checkbox"/> Enabled | <input checked="" type="checkbox"/> Description | <input checked="" type="checkbox"/> Signal Type |
| <input type="checkbox"/> Phasor Source | <input type="checkbox"/> Internal | <input type="checkbox"/> Device |
| <input type="checkbox"/> Index | <input type="checkbox"/> Historian | <input type="checkbox"/> Updated By |
| <input type="checkbox"/> Alternate Tag | <input type="checkbox"/> Updated On | |
| <input type="checkbox"/> Created On | <input type="checkbox"/> Created By | |

Window: 5:58:20 PM

| | | |
|-----------------|---------------|---------------|
| This Hour | Today | This Week |
| Last Hour | Yesterday | Last Week |
| Last 60 Minutes | Last 24 Hours | Last 7 Days |
| This Month | This Quarter | This Year |
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Second(s)

Comma Separated Values (CSV)

Use Combined File Format (CFF) for COMTRADE export

First Timestamp Based On

Frame rate starting at top of second

Frame Rate: 30

Frame Rate Unit: Frames per second

Align Timestamps

Export Missing Values AsNaN

Fill In Missing Timestamps

Round To Frame Rate Timestamps

Previous 1 Next

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Connection Statuses

Last Update: 1:25:18 PM

| | | | | |
|---|---|---|---|---|
| Chattanooga Connection 1 Disconnected | Knoxville Connection 1 Disabled | Nashville Connection 1 Disconnected | Chattanooga Connection 1 Disabled | Knoxville Connection 1 Connected (No Data) |
| Nashville Connection 1 Disconnected | Chattanooga Connection 1 Connected (No Data) | Knoxville Connection 1 Connected (No Data) | Nashville Connection 1 Connected | Chattanooga Connection 1 Disabled |
| Knoxville Connection 1 Connected | Nashville Connection 1 Disconnected | Chattanooga Connection 1 Connected (No Data) | Knoxville Connection 1 Disabled | Nashville Connection 1 Connected (No Data) |
| Chattanooga Connection 1 Connected (No Data) | Knoxville Connection 1 Disconnected | Nashville Connection 1 Connected | Knoxville Connection 1 Disabled | Nashville Connection 1 Disconnected |
| Chattanooga Connection 1 Connected | Knoxville Connection 1 Disconnected | Nashville Connection 1 Disabled | Knoxville Connection 1 Connected (No Data) | Nashville Connection 1 Connected (No Data) |

Enabled Connections

Last Update: 1:25:18 PM



Connected Connections

Last Update: 1:25:18 PM

